EDITION 2025 2027

# APPLITEC
## CUTTING TOOLS

Schwartz tools + more



GENERAL CATALOGUE

## PERFORMANCE | PRECISION | RIGIDITY





TOP-Line 1


TOP-Watch 2


ONE-Line 3


ONE-Watch 4


PRO-Line 5


ECO-Line 6

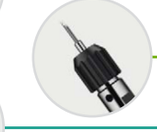

TRIO-Line 7


TURN-Line 8


ISO-Line 9


EVOCUT-Line 10


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IN-Line 12


SWITCH-Line 13


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TOOLING-Line 15


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# TOP-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide
> 1.04

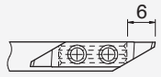
Infos et avantages
Infos und Vorteile
Infos and advantages
> 1.05

Nuances
Sorten
Grades
> 1.12

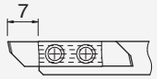
Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data
> 1.18

Nuances PCD
PKD Sorten
PCD grades
> 1.20

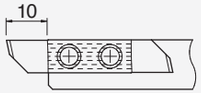
Paramètres de coupe indicatifs PCD
PKD empfohlene Schnittwerte
PCD standard machining data
> 1.21

710 / 720
Pour machines à cames
Für kurvengesteuerte Maschinen
For cam driven machines


> 1.22

730 / 740
Main series
Small type


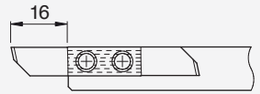
> 1.34

750 / 760
Main series
Large type


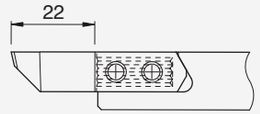
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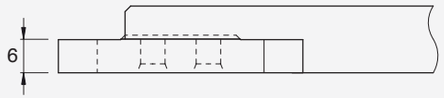


770 / 780
Tronçonnage de grande capacité
Abstechen für grössere Durchmesser
High capacity parting off


> 1.164

7050 / 7060
Tronçonnage de grande capacité
Abstechen für grössere Durchmesser
High capacity parting


> 1.176

W750 / W760
Outils avec plaquettes ébauches larges pour profilage
Werkzeuge mit breiten WSP-Rohlingen für Profilschleifen
Tools with wide blank inserts for profiling


> 1.184

Porte-outils spécifiques
Spezifische Werkzeughalter
Specific tool holders

> 1.192

Pièces de rechange
Ersatzteile
Spare parts
> 1.214

| 7 | 6 | 4 | X | – | 2.0 | – | R20 | – | HTA |
|---|---|---|---|---|---|---|---|---|---|

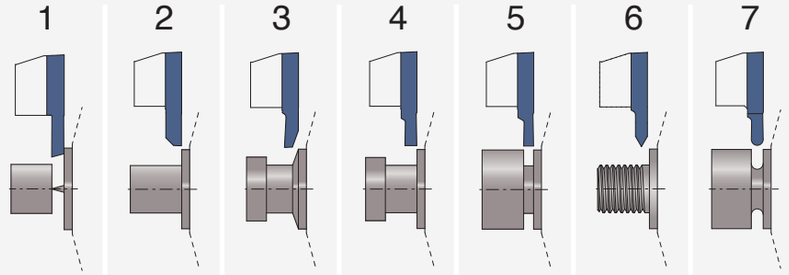
Dimension
Abmessung
Dimension

Rayon
Radius
Radius

Nuance
Sorte
Grade

Géométrie de coupe / Brise-copeaux / Particularités
Schneidgeometrie / Spanbrecher / Sondereigenschaften
Cutting geometry / Chip breaker / Special features

Géométrie d'usinage
Bearbeitungsgeometrie
Machining geometry

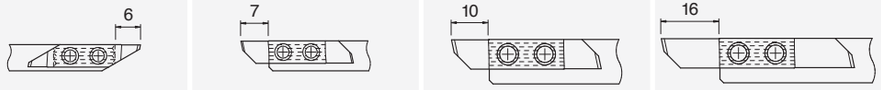



Gamme de produit
Produktserie
Product series

définit la compatibilité des plaquettes avec le porte-outils
definiert die Kompatibilität der Wendeschneidplatten mit dem Werkzeughalter
defines the compatibility between inserts and toolholders

L = 1, 3, 5, 7 (chiffre impair / ungerade Zahl / uneven number)
R = 2, 4, 6, 8 (chiffre pair / gerade Zahl / even number)

| L 710 | R 720 | L 730 | R 740 | L 750 | R 760 | L 770 | R 780 |
|---|---|---|---|---|---|---|---|




pour machines à cames
für kurvengesteuerte Maschinen
for cam driven machines

main series
small type

main series
large type

tronçonnage uniquement
nur für abstechen
only for parting off

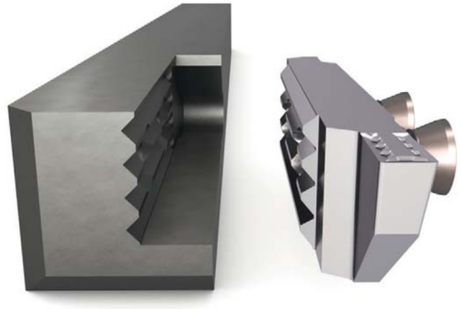
Applitec série 700 — Système de serrage à denture décalée avec 2 vis de fixation
Applitec 700 Serie — Spannsystem mit 2 Schrauben und verschobener Verzahnung
Applitec 700 series — Shifted teeth clamping system with 2 screws

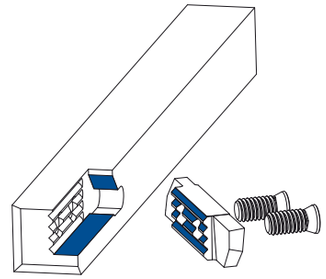


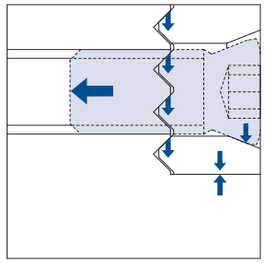


# 100% rigid !

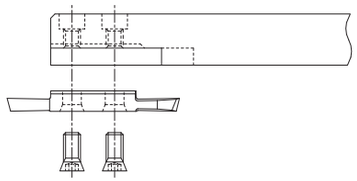
Système de serrage Applitec à denture décalée
Applitec-Spannsystem mit verschobener Verzahnung
Applitec clamping system with shifted teeth

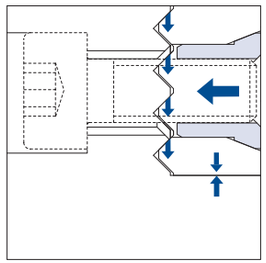






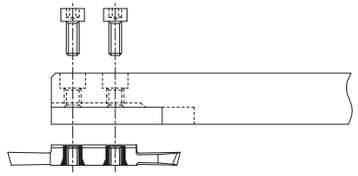
Serrage standard (A)
Standard Spannsystem (A)
Standard clamping system (A)





Serrage type B*
Spannsystem Typ B*
Clamping system type B*

ajouter -B après le numéro d'article
-B nach der Artikelreferenz hinzufügen
add -B after the article number



Changement de la plaquette possible dans la machine, sans démontage du porte-outil
WSP-Austauschmöglichkeit in der Maschine ohne Halterausbau
The insert can be changed in the machine without removing the tool holder

* =sur demande / auf Anfrage / on request

★ 1er choix / 1. Wahl / 1st choice

☆ Recommandé / Empfohlen / Recommended

Pour pièces fragiles de très petits diamètres / Für empfindliche und sehr kleine Werkstücke / For fragile and very small work pieces

Conseils d'utilisation / Anwendungsempfehlungen / Application recommendations

Tronçonnage / Abstechen / Parting off



| Géométries decoupe / Spanformgeometrien / Cuttinggeometries | | Arêtedecoupe / Schneidkante / Cuttingedge | Series 710/720 | 730/740 | 750/760 | 770/780 | 7050/7060 | P: Acier dedécolletage / Automatenstahl / Free-cuttingsteel | P: Acier allié / Stahl / Alloyed steel | M: Acier inoxydable / Rostfreistahl / Stainless steel | N: Aluminium | N: Laiton, bronze / Messing & Bronze / Brass & bronze | N: Laiton sans plomb (CuZn42, …) / Bleifreies Messing / Lead-freebrass | N: Ecobrass | N: Cuivre / Kupfer / Copper | S: Titane / Titan / Titanium | Conseils et avantages / Tipps undVorteile / Tips andbenefits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | 0° |  | ● | ● | ● | ● | ● | ★ | ✓ | ✓ | ✓ | ★ | | ✓ | ✓ | ✓ | Permet un réaffûtageaisé<br>Erlaubt einfaches Nachschleifen<br>Allowseasyregrinding |
|  | 0° PCD |  | | ● | ● | | | | | | ☆ | ☆ | ☆ | ★ | ☆ | ☆ | Duréedevienettement prolongée<br>Deutlich verlängerteLebensdauer<br>Significantlyextendedtool life |
|  | X4° |  | | ● | ● | | | ★ | ★ | ★ | ✓ | | ☆ | | ✓ | ✓ | Réduit l'effort decoupe,réaffûtable<br>Reduziert Schneidkräfte,nachschleifbar<br>Decreasescuttingforce,allowsregrinding |
|  | XF |  | | ● | ● | ● | ● | ☆ | ★ | ★ | | | | | ☆ | | Pour matièresdifficiles(pointerenforcée)<br>Für schwierigeWerkstoffe(verstärkteSpitze)<br>For difficult materials(reinforcedtip) |
|  | X12° |  | | ● | ● | | | | | ☆ | ★ | | ☆ | | ★ | ★ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | X25° |  | | ● | ● | | | | | ☆ | ★ | | | | ☆ | ☆ | Pour matières collantes faisant detrès longs copeaux<br>Für klebrigeWerkstoffemit sehr langen Spänen<br>For stickymaterials producing(very)longchips |
|  | U |  | | ● | ● | ● | | ☆ | ☆ | ☆ | | | | | | | Pour resserer lecopeau,réaffûtageaisé<br>Für Spanverschmälerung,einfaches Nachschleifen<br>Tonarrow thechips,easyregrinding |
|  | ZU8 |  | | | ● | | | ★ | ★ | ★ | ☆ <5% Si | ☆ | | | | ☆ | Géométrielaser avecunetrès bonnemaîtrise du copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | X840 |  | | | ● | | | | | | ☆ <5% Si | | ★ | | | ☆ | Pour l'usinagedes matières sans plomb<br>Bearbeitungbleifreier Werkstoffe<br>Machininglead-freematerials |
|  | RAS |  | | | ● | | | ★ | ★ | ☆ | | | | | | ☆ | Positif à7°,réduit l'effort decoupe,réaffûtable<br>Reduziert Schneidkräfte,nachschleifbar<br>7° positive,Reduces cuttingforce,allows regrinding |

★ 1er choix
1. Wahl
1st choice

☆ Recommandé
Empfohlen
Recommended

✓ Pour pièces fragiles de très petits diamètres
Für empfindliche und sehr kleine Werkstücke
For fragile and very small work pieces

Conseils d'utilisation
Anwendungsempfehlungen
Application recommendations

Tournage avant
Vorwärts drehen
Front turning



| Géométries decoupe Spanformgeometrien Cuttinggeometries | | Arêtedecoupe Schneidkante Cuttingedge | Series 710/720 | Series 730/740 | Series 750/760 | P Acier dedécolletage Automatenstahl Free-cuttingsteel | P Acier allié Stahl Alloyed steel | M Acier inoxydable Rostfreistahl Stainless steel | N Aluminium | N Laiton, bronze Messing & Bronze Brass & bronze | N Laiton sans plomb (CuZn42, …) Bleifreies Messing Lead-freebrass | N Ecobrass | N Cuivre Kupfer Copper | S Titane Titan Titanium | Conseils et avantages Tipps undVorteile Tips and benefits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | 0° |  | • | • | • | ★ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | Permet un réaffûtageaisé<br>Erlaubt einfaches Nachschleifen<br>Allowseasyregrinding |
|  | 0° PCD |  | | • | | | | | ☆ | ☆ | ☆ | ★ | ☆ | ☆ | Duréedevienettement prolongée<br>Deutlich verlängerteLebensdauer<br>Significantlyextendedtool life |
|  | PX |  | | • | • | ★ | ☆ | ☆ | ✓ | | ☆ | | ☆ | ☆ | Très bonnemaîtrisedu copeau (7°)<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | X |  | | • | • | ★ | ★ | ★ | ★ | | ☆ | | ★ | ★ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | X5-EP |  | | | • | ★ | ★ | ☆ | | | | | | | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | X10-EP |  | | | • | ☆ | ☆ | ★ | ☆ | | | | | ☆ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | VS |  | | • | • | ☆ | | ☆ | ✓ | | | | ✓ | ✓ | Brise-copeau pour usinageléger en finition<br>Spanbrecherfür leichteSchlichtbearbeitung<br>Chip-breaker for light finishingoperation |
|  | ZX10 |  | | • | • | ★ | ★ | ★ | ☆ <5% Si | ☆ | ☆ | | | ☆ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | ZX17 |  | | • | | | | ☆ | ★ <5% Si | | | | ★ | ★ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | ZX25 |  | | | • | | | ☆ | ★ <5% Si | | | | ★ | ★ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | ZXB10 |  | | | • | ★ | ★ | ★ | ☆ <5% Si | ☆ | ☆ | | | ☆ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | ZXT |  | | | • | ★ | ★ | ★ | ☆ <5% Si | ☆ | ☆ | | | ☆ | Très bonnemaîtrisedu copeau<br>Sehr guteSpankontrolle<br>Veryefficient chipcontrol |
|  | ZF-X |  | | • | • | | | | | | ★ | | | | Pour l'usinagedes matières sans plomb<br>Bearbeitungbleifreier Werkstoffe<br>Machininglead-freematerials |
|  | VX-800 |  | | | • | ★ | ★ | ☆ | ☆ | | | | ☆ | ☆ | Pour l'usinagedes matières sans plomb<br>Bearbeitungbleifreier Werkstoffe<br>Machininglead-freematerials |
|  | VUX |  | | | • | ☆ | ☆ | ★ | ☆ | | | | ☆ | ★ | Roule-copeau bidirectionnel<br>Bidirektionaler Spanroller<br>Bi-directional chip-breaker |

★ 1er choix / 1. Wahl / 1st choice

☆ Recommandé / Empfohlen / Recommended

✓ Pour pièces fragiles de très petits diamètres / Für empfindliche und sehr kleine Werkstücke / For fragile and very small work pieces

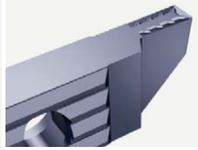
Conseils d'utilisation / Anwendungsempfehlungen / Application recommendations

Tournage arrière / Rückwärts drehen / Back turning



| Géométries decoupe / Spanformgeometrien / Cuttinggeometries | | Arêtedecoupe / Schneidkante / Cuttingedge | Series 710/720 | Series 730/740 | Series 750/760 | P Acier dedécolletage / Automatenstahl / Free-cuttingsteel | P Acier allié / Stahl / Alloyed steel | M Acier inoxydable / Rostfreistahl / Stainless steel | N Aluminium | N Laiton, bronze / Messing & Bronze / Brass & bronze | N Laiton sans plomb (CuZn42, …) / Bleifreies Messing / Lead-freebrass | N Ecobrass | N Cuivre / Kupfer / Copper | S Titane / Titan / Titanium | Conseils et avantages / Tipps und Vorteile / Tips and benefits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | 0° |  | ● | ● | ● | ★ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | Permet un réaffûtageaisé / Erlaubt einfaches Nachschleifen / Allowseasyregrinding |
|  | 0° PCD |  | | ● | | | | | ☆ | ☆ | ☆ | ★ | ☆ | ☆ | Duréedevienettement prolongée / Deutlich verlängerteLebensdauer / Significantlyextendedtool life |
|  | X |  | | ● | ● | ★ | ★ | ★ | ★ | | ☆ | | ★ | ★ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |
|  | VX-8° |  | | ● | ● | ★ | ★ | ☆ | ☆ | | ☆ | | ☆ | ☆ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |
|  | VX-800 |  | | ● | ● | ★ | ★ | ☆ | ☆ | | | | ☆ | ☆ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |
|  | VX-15° |  | | ● | ● | ☆ | | ☆ | ★ | | | | ★ | ★ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |
|  | VUX |  | | | ● | ☆ | ☆ | ★ | ☆ | | | | ☆ | ★ | Roule-copeau bidirectionnel / Bidirektionaler Spanroller / Bi-directional chipbreaker |
|  | ZX10 |  | | ● | ● | ★ | ★ | ★ | ☆ <5% Si | ☆ | ☆ | | | ☆ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |
|  | ZXB |  | | | ● | ★ | ★ | ★ | ☆ <5% Si | ☆ | ☆ | | | ☆ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |
|  | ZXT |  | | ● | ● | ★ | ★ | ★ | ☆ <5% Si | ☆ | ☆ | | | ☆ | Très bonnemaîtrisedu copeau / Sehr guteSpankontrolle / Veryefficient chipcontrol |

## TiAlN



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F **M** E

| | |
|---|---|
| P | ★★★★★ |
| M | ★★★★★ |
| N | ★★★★☆ |
| S | ★★★★☆ |

µK20

- excellente nuance universelle
- 1er choix pour l'usinage des aciers, aciers inoxydables et alliages de titane
- très bonne résistance à la température

- beste Universalsorte
- erste Wahl von Stahl, rostfreiem Stahl und Titanlegierungen
- sehr gute Warmfestigkeit

- best universal grade
- first choice for steel, stainless steel and titanium alloys machining
- very good heat resistance

## TiAlX



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF **F** M E

| | |
|---|---|
| P | ★★★★☆ |
| M | ★★★★★ |
| N | ★☆☆☆☆ |
| S | ★★★★★ |

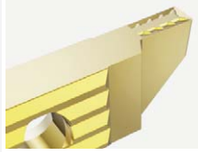
µK20

- nuance très résistante à l'usure et à la température, recommandée pour l'usinage des matières suivantes: inox 304, 316L, 317L, 904, Phynox
- aciers alliés contenant: chrome nickel, vanadium, molybdène, …

- sehr verschleissfeste und temperaturbeständige Sorte. Für folgende Materialien empfohlen: Inox 304, 316L, 317L, 904, Phynox
- legierter Stahl enthaltend: Chrom-Nickel, Vanadium, Molybdän, …

- very wear and high temperature resistant grade. Recommended for following material : Inox 304, 316L, 317L, 904, Phynox
- alloy steel containing: Chrome-nickel, Vanadium, Molybdenum, …

## TiN



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F **M** E

| | |
|---|---|
| P | ★★★★☆ |
| M | ★★★★☆ |
| N | ★★★☆☆ |
| S | ☆☆☆☆☆ |

µK20

- nuance pour l'usinage des matières peu résistantes qui créent des arêtes rapportées
- très faible coefficient de frottement
- à éviter pour l'usinage du titane

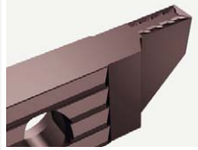
- Sorte für die Bearbeitung von weichen Werkstoffen mit Tendenz zur Bildung von Aufbauschneiden
- sehr geringer Reibwert
- für die Bearbeitung von Titan nicht geeignet

- grade for the machining of low resistance materials which causes edge build-up
- very low friction ratio
- not suitable for titanium machining





## ST



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F **M** E

| | |
|---|---|
| P | ★★★★★ |
| M | ★★★★★ |
| N | ★★★★☆ |
| S | ★★★★☆ |

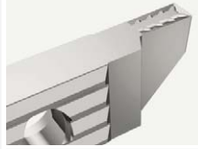
µK20

- nuance résistante à la température, destinée à l'usinage des matières suivantes: inox, titane allié, alliages à base de nickel, chrome cobalt, les matières avec une dureté supérieure à > 50 HRC

- verschleissfeste und temperaturbeständige Sorte. Für folgende Materialien empfohlen: Inox, legiertes Titan, Nickellegierungen, Chrom-Kobalt, materialien härter als > 50 HRC

- wear and temperature-resistant grade. Recommended for following materials: Inox, titanium alloys, nickel-based alloys, chrome-cobalt, and materials harder than > 50 HRC

## N



K20

Non revêtu
Unbeschichtet
Uncoated

| | |
|---|---|
| P | ★☆☆☆☆ |
| M | ★☆☆☆☆ |
| N | ★★★☆☆ |
| S | ★★★☆☆ |

µK20

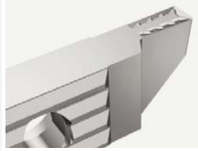
- supporte les coupes interrompues et autres conditions d'usinage défavorables

- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen geeignet

- suitable for interrupted cut and other unfavourable machining conditions

µK10 - µK20

## KCR



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★★
S ★★★★☆

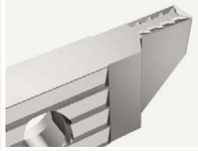
- nuance spécifique aux matériaux non ferreux tels que cuivre, laiton, laiton sans plomb, bronze, maillechort
- réduit le collage. Alternative aux revêtements DLC pour certains domaines d'applications

- spezifische Sorte, für Nichteisenmetalle wie Kupfer, Messing, bleifreies Messing, Bronze, Neusilber
- Verringerung des Klebens. Alternative zu DLC-Beschichtungen in gewissen Einsatzbereichen

- specific grade for non-ferrous materials such as copper, brass, lead-free brass, bronze and nickel silver
- reduces sticking. Alternative to DLC coatings for certain applications

µK10 - µK20

## KCRF



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF **F** M E

P ★★★★★
M ★★★★★
N ★★★★★
S ★★★★☆

- nuance spécifique aux matériaux non ferreux tels que cuivre, laiton, laiton sans plomb, bronze, maillechort
- réduit le collage. Alternative aux revêtements DLC pour certains domaines d'applications

- spezifische Sorte, für Nichteisenmetalle wie Kupfer, Messing, bleifreies Messing, Bronze, Neusilber
- Verringerung des Klebens. Alternative zu DLC-Beschichtungen in gewissen Einsatzbereichen

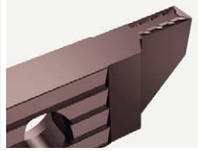
- specific grade for non-ferrous materials such as copper, brass, lead-free brass, bronze and nickel silver
- reduces sticking. Alternative to DLC coatings for certain applications



TOP-Line
Nuances
Sorten
Grades
K10 - K20

µK10 - µK20

## KST



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★★

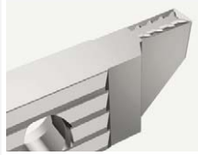
- nuance présentant d'excellentes propriétés de résistance à l'usure et ténacité, destinée à l'usinage des matières suivantes: inox, titane allié, alliages à base de nickel, chrome cobalt, les matières avec une dureté supérieure à > 50 HRC

- verschleissfeste und zähe Sorte. Für folgende Materialienempfohlen: Inox, legiertes Titan, Nickellegierungen, Chrom-Kobalt, materialien härter als > 50 HRC

- grade with excellent wear resistance and toughness properties. Recommended for following materials: Inox, titanium alloys, nickel-based alloys, chrome-cobalt, and materials harder than > 50 HRC

µK10 - µK20

## KN



K10 - K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

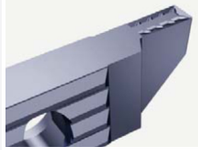
- nuance micro-grain, alliant une très bonne résistance à l'usure et une bonne ténacité.
- recommandé pour l'usinage des matières ne nécessitant aucun revêtement, par exemple le titane pur.

- verschleißfeste Feinkornsorte, unbeschichtet, die eine sehr gute Verschleißfestigkeit mit guter Zähigkeit kombiniert.
- empfohlen für die Bearbeitung von Werkstoffen, die keine Beschichtung erfordern, wie zum Beispiel reines Titan.

- micro-grain grade, combining excellent wear resistance with good toughness.
- recommended for machining materials that do not require any coating, such as pure titanium.

µK10

## HTA



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

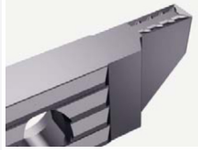
- nuance très résistante à l'usure
- pour l'usinage en finition dans des conditions favorables des aciers, aciers inoxydables et alliages de titane

- sehr verschleissfeste Sorte
- für die Feinbearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bei guten Bearbeitungsbedingungen

- very wear resistant grade
- for light machining of steel, stainless steel and titanium alloys under favourable machining conditions

µK10

## HTAX



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF **F** M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

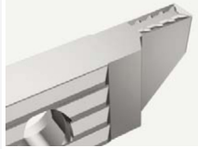
- nuance très résistante à l'usure et à la température, pour l'usinage en finition avec faible avance de petites pièces. Recommandée pour l'usinage des matières suivantes: inox 304, 316L, 317L, 904, Phynox

- sehr verschleissfeste und temperaturbeständige Sorte, für Feinbearbeitung von kleinen Teilen mit geringer Vorschub. Für folgende Materialien empfohlen: Inox 304, 316L, 317L, 904, Phynox

- very wear and high temperature resistant grade, for light machining of small parts with low cutting feed. Recommended for following material : Inox 304, 316L, 317L, 904, Phynox

µK10

## HCR-TF



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

**TF** F M E

P ☆☆☆☆☆
M ☆☆☆☆☆
N ★★★★★
S ★★★★☆

- nuance spécifique aux matériaux non ferreux tels que cuivre, laiton, laiton sans plomb, bronze, maillechort. Réduit le collage. Alternative aux revêtements DLC pour certains domaines d'applications

- spezifische Sorte, für Nichteisenmetalle wie Kupfer, Messing, bleifreies Messing, Bronze, Neusilber. Verringerung des Klebens. Alternative zu DLC-Beschichtungen in gewissen Einsatzbereichen

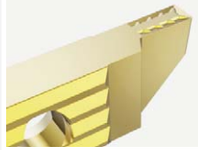
- specific grade for non-ferrous materials such as copper, brass, lead-free brass, bronze and nickel silver. Reduces sticking. Alternative to DLC coatings for certain applications





µK10

## HTiN



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F **M** E

P ★★★★☆
M ★★★★☆
N ★★★☆☆
S ☆☆☆☆☆

- nuance pour l'usinage en finition des matières peu résistantes qui créent des arêtes rapportées
- très faible coefficient de frottement
- à éviter pour l'usinage du titane

- Sorte für die Feinbearbeitung von weichen Werkstoffen mit Tendenz zur Bildung von Aufbauschneiden
- sehr geringer Reibwert
- für die Bearbeitung von Titan nicht geeignet

- grade for light machining of low resistance materials which causes edge build-up
- very low friction ratio
- not suitable for titanium machining

µK10

## HAC



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F **M** E

P ☆☆☆☆☆
M ☆☆☆☆☆
N ★★★★★
S ★★★★★

- nuance pour métaux non ferreux
- très faible coefficient de frottement
- 1er choix pour l'usinage des aluminiums jusqu'à 5% Si, des cuivres et titanes faiblement alliés

- Sorte für Nichteisenmetalle
- sehr geringer Reibwert
- erste Wahl von Aluminium bis 5% Si, Kupfer und niedrigleigiertem Titan

- grade non-ferrous materials
- very low fiction ration
- first choice for aluminium up to 5% Si, copper and low alloyed titanium

µK10

## HN



K10

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du titane faiblement allié
- déconseillé en cas de coupe interrompue

- verschleissfeste Feinkornsorte
- für die Bearbeitung von niedrig legiertem Titan empfehlenswert
- für unterbrochene Schnitte nicht geeignet

- wear resistant micro-grain grade
- suitable for the machining of low alloyed titanium
- not suitable for interrupted cut

| Matière<br>Werkstoff<br>Material | | Tournage<br>Drehen<br>Turning | | | Tronçonnage<br>Abstechen<br>Parting off | | |
|---|---|---|---|---|---|---|---|
| | | VC | Prof. depasse<br>Schnitttiefe<br>Depth of cut | Avance<br>Vorschub<br>Feed | VC | Largeur decoupe<br>Abstechbreite<br>Cuttingwidth | Avance<br>Vorschub<br>Feed |
| | | (m/min) | (mm) | (mm/U) | (m/min) | (mm) | (mm/U) |
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 120 - 200 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 | 80 - 150 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.08<br>0.03 - 0.15 |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 80 - 160 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 | 70 - 120 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.06<br>0.03 - 0.12 |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 60 - 120 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.10<br>0.05 - 0.20 | 60 - 100 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.05<br>0.03 - 0.10 |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 50 - 100 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 | 40 - 80 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.04<br>0.03 - 0.08 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | M | 60 - 120 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 | 60 - 100 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.04<br>0.03 - 0.08 |
| Aluminium Si <12% | N | 200 - 1000 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 | 180 - 400 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Aluminium Si >12% | N | 180 - 800 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 | 150 - 300 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 500 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.35 | 100 - 300 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Titane<br>Titan<br>Titanium | S | 30 - 70 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.08<br>0.05 - 0.15 | 30 - 50 | 0.50 - 1.50<br>1.50 - 3.50 | 0.01 - 0.03<br>0.03 - 0.06 |





| Ébauche<br>Schruppen<br>Roughing | Finition<br>Schlichten<br>Finishing |
|---|---|
| • vitesse de coupe moyenne<br>• avance élevée | • vitesse de coupe élevée<br>• avance faible |
| • durchschnittliche Schnittgeschwindigkeit<br>• hoher Vorschub | • hohe Schnittgeschwindigkeit<br>• niedriger Vorschub |
| • average cutting speed<br>• high feed rate | • high cutting speed<br>• low cutting feed |

## Remarques importantes
## Wichtige Bemerkungen
## Important remarks

- en raison des limites de la machine, il n'est souvent pas possible d'atteindre les vitesses de coupe préconisées
- les outils Applitec sont spécialement développés pour permettre de hautes performances, même dans des conditions de coupe défavorables
- des applications non préconisées dans le tableau ci-contre peuvent également s'avérer efficaces

- wegen begrenzter Maschinenleistung ist es oft nicht möglich, die vorgeschlagenen Schnittgeschwindigkeiten zu erreichen
- Applitec Werkzeuge sind besonders dazu entwickelt, um sogar bei ungünstigen Schnittdaten leistungsfähig zu sein
- die in der nebenstehender Tabelle nicht erwähnten Anwendungsfälle können sich auch effizient erweisen

- due to the limitations of the machine, it is often not possible to achieve the recommended cutting speeds
- Applitec tools are specially developed to deliver high performance, even in unfavorable cutting conditions
- applications not mentioned in the opposite table can also be efficient

PCD/ PKD

## PCD/ PKD



Diamant polycristallin
Polykristalliner Diamant
Polycrystalline diamond

| | |
|---|---|
| P | ☆☆☆☆☆ |
| M | ☆☆☆☆☆ |
| N | ★★★★★ |
| S | ★★★★★ |

- le PCD est principalement utilisé pour l'usinage de matériaux non ferreux très abrasifs
- il offre une haute dureté, une faible friction et une excellente conductivité thermique, des caractéristiques qui permettent d'atteindre des vitesses de coupe élevées et d'augmenter la durée de vie des outils

- PKD wird hauptsächlich für die Zerspanung hochabrasiver, nicht eisenhaltiger Werkstoffe verwendet
- er zeichnet sich durch hohe Härte, geringe Reibung und exzellente Wärmeleitfähigkeit aus – Eigenschaften, die hohe Schnittgeschwindigkeiten ermöglichen und die Standzeit der Werkzeuge erhöhen

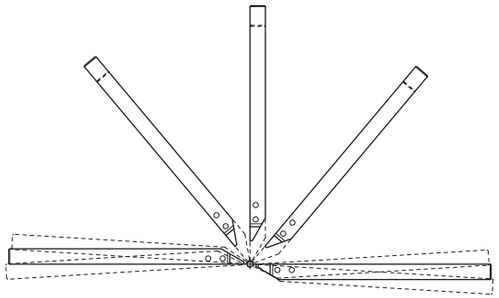
- PCD is primarily used for machining highly abrasive non-ferrous materials
- it features high hardness, low friction, and excellent thermal conductivity - characteristics that enable high cutting speeds and extend tool life





| Matière<br>Werkstoff<br>Material | | Tournage et tronçonnage<br>Drehen und Abstechen<br>Turning and parting off | | |
|---|---|---|---|---|
| | | VC<br>(m/min) | Prof. de passe<br>Schnitttiefe<br>Depth of cut<br>(mm) | Avance<br>Vorschub<br>Feed<br>(mm/U) |
| Aluminium Si <12% | N | 250 - 350 | 0.05 - 1.0<br>1.0 - 4.0 | 0.04 - 0.07<br>0.05 - 0.10 |
| Aluminium Si >12% | N | 180 - 250 | 0.05 - 1.0<br>1.0 - 4.0 | 0.10 - 0.25<br>0.12 - 0.36 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 350 - 450 | 0.05 - 1.0<br>1.0 - 4.0 | 0.04 - 0.08<br>0.05 - 0.11 |
| Alliage de cuivre sans plomb (ECOBRASS)<br>Kupferlegierung ohne Blei (ECOBRASS)<br>Lead-free copper alloy (ECOBRASS) | N | 320 - 420 | 0.05 - 1.0<br>1.0 - 4.0 | 0.03 - 0.07<br>0.04 - 0.09 |
| Plastique renforcé de fibres de verre, graphite<br>Glasfaserverstärkter Kunststoff, Graphit<br>Glass fiber reinforced plastic, graphite | N | 450 - 600 | 0.05 - 1.0<br>1.0 - 4.0 | 0.04 - 0.08<br>0.05 - 0.11 |
| Thermoplastique renforcé de fibres de carbone, téflon<br>Kohlenstofffaserverstärkter Thermoplast, Teflon<br>Carbon fiber reinforced thermoplastic, Teflon | N | 450 - 600 | 0.05 - 1.0<br>1.0 - 4.0 | 0.04 - 0.08<br>0.05 - 0.11 |
| Or, argent et platine<br>Gold, Silber und Platin<br>Gold, silver and platinum | N | 320 - 370 | 0.05 - 1.0<br>1.0 - 4.0 | 0.03 - 0.06<br>0.04 - 0.07 |

| L | | R | |
|---|---|---|---|
| Type | Page | Type | Page |
| 710 | 1.24 | 720 | 1.24 |
| 710-NOVIBRA | 1.25 | 721 | 1.26 |
| 711 | 1.26 | 721-EP | 1.33 |
| 711-EP | 1.33 | 722 | 1.27 |
| 712 | 1.27 | 723-30 | 1.28 |
| 713-30 | 1.28 | 723-45 | 1.29 |
| 713-45 | 1.29 | 723-60 | 1.30 |
| 713-60 | 1.30 | 724 | 1.31 |
| 714 | 1.31 | 726 | 1.32 |
| 716 | 1.32 | | |

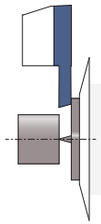


Porte-outils et plaquettes pour machines à cames
Halter und WSPfür kurvengesteuerte Maschinen
Tool holders and inserts for cam driven machines

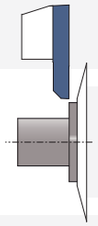




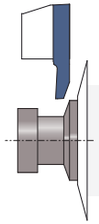
710 / 720
Porte-outils
Halter
Holders
>1.24



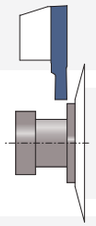
711 / 721
Tronçonnage
Abstechen
Parting off
>1.26



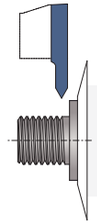
712 / 722
Tournage avant
Vorwärts drehen
Front turning
>1.27



713 / 723
Tournage arrière
Rückwärts drehen
Back turning
>1.28



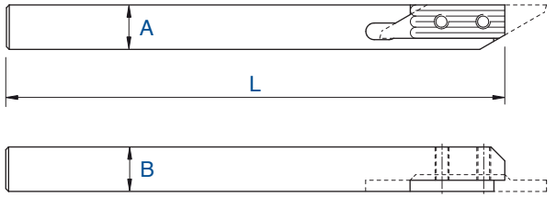
714 / 724
Fonçage-tournage
Einstechen und drehen
Grooving and turning
>1.31



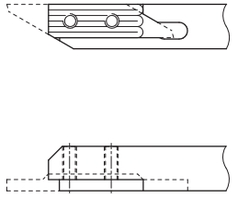
716 / 726
Filetage
Gewinde drehen
Threading
>1.32

Plaquettes ébauches
WSP-Rohlinge
Blank inserts
>1.33

L




R





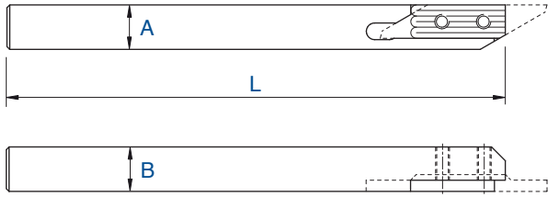
| A x B | L | Serrage Spannsystem Clamping | L<br>Art. N° | R<br>Art. N° |
|---|---|---|---|---|
| 6 x 6 | 115 | A | 710-6 | - |
| 7 x 7 | 115 | A | 710-7 | 720-7 |
| 8 x 8 | 115 | A | 710-8 | 720-8 |
| 8 x 8 | 140 | A | 710-8-140 | - |
| 10 x 10 | 115 | A | 710-10 | 720-10 |
| 12 x 12 | 130 | A | 710-12 | 720-12 |

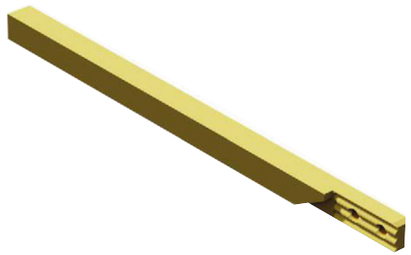
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





L

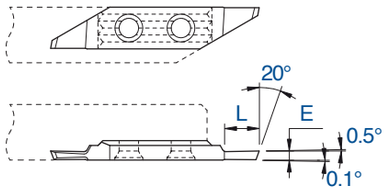


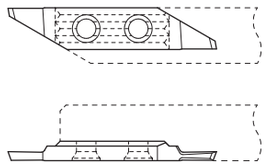
| A x B | L | Serrage Spannsystem Clamping | L<br>Art. N° |
|---|---|---|---|
| 6 x 6 | 115 | A | 710-6-NOVIBRA |
| 7 x 7 | 115 | A | 710-7-NOVIBRA |
| 8 x 8 | 115 | A | 710-8-NOVIBRA |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

L



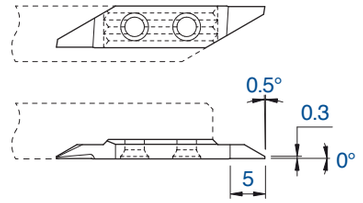

R



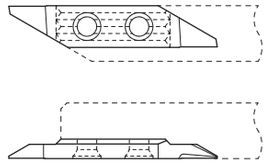


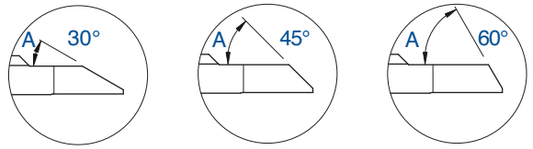
| L | | | | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.5 | 2 | 711-0.5 | ● | ● | ● | ● | | ● | - | | | | | | |
| 0.8 | 3 | 711-0.8 | ● | ● | ● | ● | ● | ● | 721-0.8 | ● | ● | ● | | | |
| 0.9 | 3 | 711-0.9 | ● | ● | ● | ● | ● | ● | - | | | | | | |
| 1.0 | 4 | 711-1.0 | ● | ● | ● | ● | ● | ● | 721-1.0 | ● | ● | ● | ● | | ● |
| 1.1 | 4 | 711-1.1 | ● | ● | ● | ● | ● | ● | - | | | | | | |
| 1.2 | 5 | 711-1.2 | ● | ● | ● | ● | ● | ● | 721-1.2 | ● | ● | ● | ● | | ● |
| 1.3 | 5 | 711-1.3 | ● | ● | ● | ● | ● | ● | - | | | | | | |
| 1.4 | 5 | 711-1.4 | ● | ● | ● | | | | - | | | | | | |
| 1.5 | 6.5 | 711-1.5 | ● | ● | ● | ● | ● | ● | 721-1.5 | ● | ● | ● | ● | | ● |
| 1.8 | 6.5 | 711-1.8 | ● | ● | ● | ● | | ● | 721-1.8 | ● | ● | ● | | | |
| 2.0 | 6.5 | 711-2.0 | ● | ● | ● | | | | 721-2.0 | ● | ● | ● | | | |

L



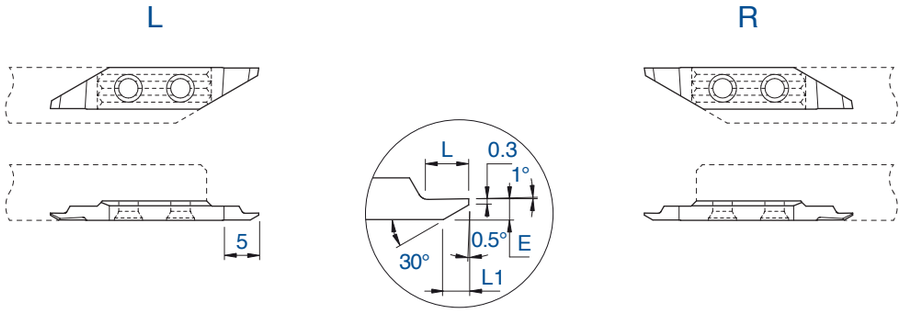

R








| L | | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 30° | 712-30 | ● | ● | ● | ● | | ● | 722-30 | ● | ● | ● | ● | | ● |
| 45° | 712-45 | ● | ● | ● | ● | ● | ● | 722-45 | ● | ● | ● | ● | | ● |
| 60° | 712-60 | ● | ● | ● | ● | | ● | 722-60 | ● | ● | ● | ● | | ● |

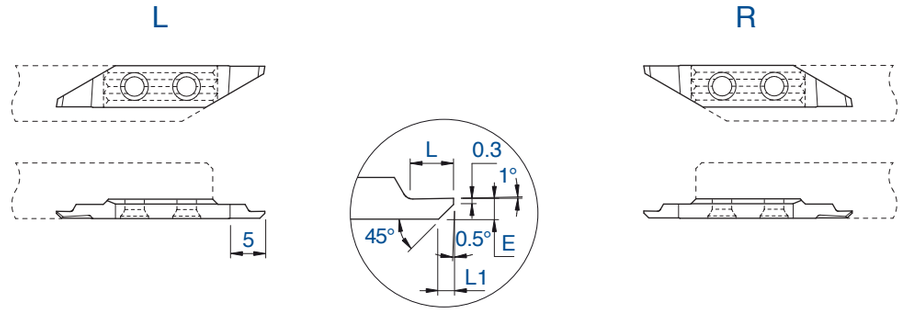





| L | | | | | | | | | | R | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | L1 | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.8 | 1.6 | 0.85 | 713-30-0.8 | ● | ● | ● | | | | 723-30-0.8 | ● | ● | ● | ● | | ● |
| 0.9 | 1.6 | 1.05 | 713-30-0.9 | ● | ● | ● | | | | - | | | | | | |
| 1.0 | 2.0 | 1.2 | 713-30-1.0 | ● | ● | ● | ● | ● | ● | 723-30-1.0 | ● | ● | ● | ● | | ● |
| 1.1 | 2.0 | 1.4 | 713-30-1.1 | ● | ● | ● | | | | - | | | | | | |
| 1.2 | 2.5 | 1.55 | 713-30-1.2 | ● | ● | ● | | | | 723-30-1.2 | ● | ● | ● | | | |
| 1.3 | 2.5 | 1.7 | 713-30-1.3 | ● | ● | ● | | | | - | | | | | | |
| 1.4 | 3.0 | 1.9 | 713-30-1.4 | ● | ● | ● | | | | - | | | | | | |
| 1.5 | 3.0 | 2.1 | 713-30-1.5 | ● | ● | ● | ● | ● | ● | 723-30-1.5 | ● | ● | ● | | | |
| 1.8 | 4.0 | 2.6 | 713-30-1.8 | ● | ● | ● | | | | 723-30-1.8 | ● | ● | ● | | | |
| 2.0 | 4.0 | 2.9 | 713-30-2.0 | ● | ● | ● | ● | ● | ● | 723-30-2.0 | ● | ● | ● | | | |

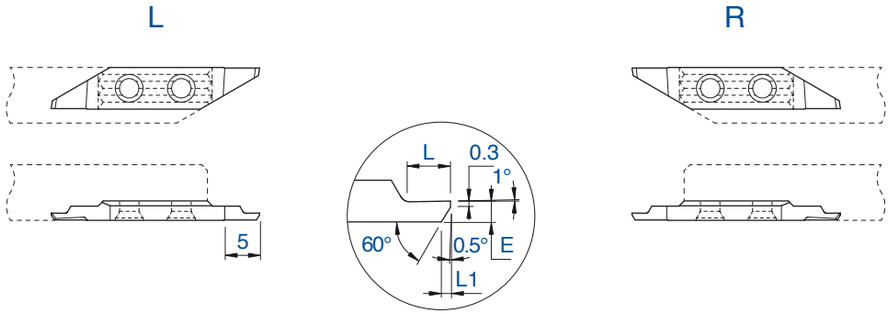






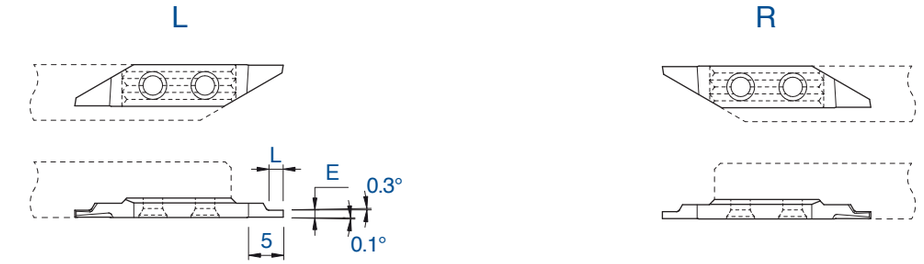



| L | | | | | | | | | | R | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | L1 | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.8 | 1.6 | 0.5 | 713-45-0.8 | ● | ● | ● | ● | | ● | 723-45-0.8 | ● | ● | ● | | | |
| 0.9 | 1.6 | 0.6 | 713-45-0.9 | ● | ● | ● | | | | - | | | | | | |
| 1.0 | 2.0 | 0.7 | 713-45-1.0 | ● | ● | ● | ● | | ● | 723-45-1.0 | ● | | ● | | | |
| 1.1 | 2.0 | 0.8 | 713-45-1.1 | ● | ● | ● | | | | - | | | | | | |
| 1.2 | 2.5 | 0.9 | 713-45-1.2 | ● | ● | ● | | | | 723-45-1.2 | ● | ● | ● | | | |
| 1.3 | 2.5 | 1.0 | 713-45-1.3 | ● | ● | ● | | | | - | | | | | | |
| 1.4 | 3.0 | 1.1 | 713-45-1.4 | ● | ● | ● | | | | - | | | | | | |
| 1.5 | 3.0 | 1.2 | 713-45-1.5 | ● | ● | ● | ● | ● | ● | 723-45-1.5 | ● | ● | ● | | | |
| 1.8 | 4.0 | 1.5 | 713-45-1.8 | ● | ● | ● | | | | 723-45-1.8 | ● | | ● | | | |
| 2.0 | 4.0 | 1.7 | 713-45-2.0 | ● | ● | ● | | | | 723-45-2.0 | ● | ● | ● | | | |



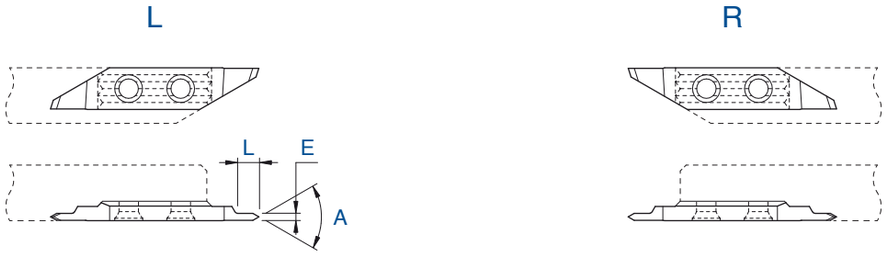



| | | | L | | | | | R | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | L1 | Art. N° | TiAlN | TiN | N (µk20) | | Art. N° | TiAlN | TiN | N (µk20) |
| 0.8 | 1.6 | 0.3 | 713-60-0.8 | ● | ● | ● | | 723-60-0.8 | ● | ● | ● |
| 0.9 | 1.6 | 0.35 | 713-60-0.9 | ● | ● | ● | | - | | | |
| 1.0 | 2.0 | 0.4 | 713-60-1.0 | ● | ● | ● | | 723-60-1.0 | ● | | ● |
| 1.1 | 2.0 | 0.45 | 713-60-1.1 | ● | ● | ● | | - | | | |
| 1.2 | 2.5 | 0.5 | 713-60-1.2 | ● | ● | ● | | 723-60-1.2 | ● | | ● |
| 1.3 | 2.5 | 0.6 | 713-60-1.3 | ● | ● | ● | | - | | | |
| 1.4 | 3.0 | 0.65 | 713-60-1.4 | ● | ● | ● | | - | | | |
| 1.5 | 3.0 | 0.7 | 713-60-1.5 | ● | ● | ● | | 723-60-1.5 | ● | ● | ● |
| 1.8 | 4.0 | 0.9 | 713-60-1.8 | ● | ● | ● | | 723-60-1.8 | ● | | ● |
| 2.0 | 4.0 | 1.0 | 713-60-2.0 | ● | ● | ● | | 723-60-2.0 | ● | ● | ● |






| | | L | | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.5 | 1.0 | 714-0.5 | ● | ● | ● | | | | 724-0.5 | ● | ● | ● | ● | | ● |
| 0.6 | 1.0 | 714-0.6 | ● | ● | ● | | | | 724-0.6 | ● | ● | ● | | | |
| 0.7 | 1.5 | 714-0.7 | ● | ● | ● | | | | 724-0.7 | ● | ● | ● | | | |
| 0.8 | 1.5 | 714-0.8 | ● | ● | ● | ● | ● | ● | 724-0.8 | ● | ● | ● | | | |
| 0.9 | 2.0 | 714-0.9 | ● | ● | ● | | | | 724-0.9 | ● | | ● | | | |
| 1.0 | 2.0 | 714-1.0 | ● | ● | ● | ● | ● | ● | 724-1.0 | ● | ● | ● | | | |
| 1.1 | 2.0 | 714-1.1 | ● | ● | ● | | | | 724-1.1 | ● | | ● | | | |
| 1.2 | 2.5 | 714-1.2 | ● | ● | ● | | | | 724-1.2 | ● | | ● | | | |
| 1.3 | 2.5 | 714-1.3 | ● | ● | ● | | | | 724-1.3 | ● | ● | ● | | | |
| 1.4 | 3.0 | 714-1.4 | ● | ● | ● | | | | 724-1.4 | ● | | ● | | | |
| 1.5 | 3.0 | 714-1.5 | ● | ● | ● | ● | ● | ● | 724-1.5 | ● | ● | ● | | | |

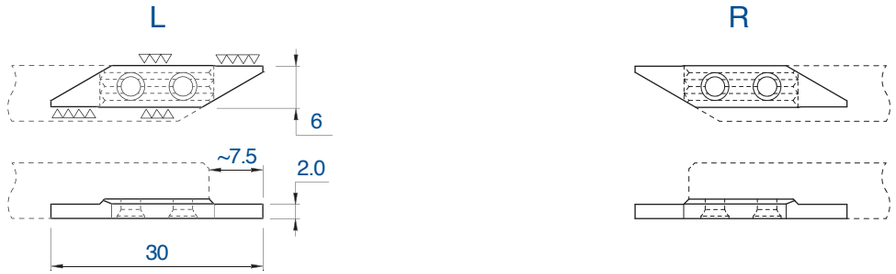





| | | | L | | | | R | | |
|---|---|---|---|---|---|---|---|---|---|
| A | E | L | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
| 60° | 1.0 | 3 | 716-60-1.0 | ● | ● | ● | 726-60-1.0 | ● | ● | ● |
| 60° | 1.5 | 4 | 716-60-1.5 | ● | ● | ● | 726-60-1.5 | ● | ● | ● |
| 55° | 1.0 | 3 | 716-55-1.0 | ● | ● | ● | 726-55-1.0 | ● | | ● |
| 55° | 1.5 | 4 | 716-55-1.5 | ● | ● | ● | 726-55-1.5 | ● | | ● |










| | L | | | | R | | |
|---|---|---|---|---|---|---|---|
| Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 711-EP | ● | ● | ● | ● | ● | ● | 721-EP | ● | | ● | ● | | ● |

| L | | | R | | |
|---|---|---|---|---|---|
| Type | | Page | Type | | Page |
| 730 | 730 | 1.36 | 740 | 740 | 1.36 |
| | 730-JET | 1.37 | | 740-C | 1.38 |
| | 730-NOVIBRA | 1.40 | | 740-D-JET | 1.42 |
| | 730RC | 1.39 | | 740-JET | 1.37 |
| 731 | 731 | 1.43 | | 740-NOVIBRA | 1.40 |
| | 731-E | 1.88 | | 740/730-D | 1.41 |
| | 731-EP | 1.89 | 741 | 741 | 1.43 |
| | 731N | 1.49/1.57 | | 741-E | 1.88 |
| | 731R | 1.51 | | 741-EP | 1.89 |
| | 731R-PCD | 1.58 | | 741-PCD | 1.50 |
| | 731RU | 1.56 | | 741L | 1.51 |
| | 731RX12 | 1.54 | | 741LX12 | 1.54 |
| | 731RX25 | 1.55 | | 741LX25 | 1.55 |
| | 731RX4 | 1.52 | | 741LX4 | 1.52 |
| | 731RXF | 1.53 | | 741LXF | 1.53 |
| | 731U | 1.48 | | 741N | 1.49/1.57 |
| | 731X12 | 1.46 | | 741U | 1.48 |
| | 731X25 | 1.47 | | 741X12 | 1.46 |
| | 731X4 | 1.44 | | 741X25 | 1.47 |
| | 731XF | 1.45 | | 741X4 | 1.44 |
| 732 | 732 | 1.59 | | 741XF | 1.45 |
| | 732PX | 1.60 | 742 | 742 | 1.59 |
| | 732X | 1.61 | | 742-PCD | 1.64 |
| 733 | 733 | 1.65 | | 742PX | 1.60 |
| | 733P | 1.73 | | 742VUX | 1.62 |
| | 733VX-15° | 1.70 | | 742X | 1.61 |
| | 733VX-8° | 1.68 | | 742ZF-X | 1.63 |
| | 733VX-805 | 1.69 | 743 | 743 | 1.65 |
| | 733X | 1.66 | | 743-PCD | 1.74 |
| | 733ZX | 1.72 | | 743P | 1.73 |
| 734 | 734 | 1.75 | | 743VX-15° | 1.70 |
| | 734VS | 1.76 | | 743VX-8° | 1.68 |
| | 734X | 1.77 | | 743VX-805 | 1.69 |
| | 734ZX | 1.78 | | 743VUX | 1.71 |
| 735 | 735 | 1.82 | | 743VUX8 | 1.67 |
| | 735X-90 | 1.83 | | 743X | 1.66 |
| 736 | 736 | 1.84 | | 743ZX | 1.72 |
| | 736-A60° | 1.85 | 744 | 744 | 1.75 |
| | 736-M | 1.86 | | 744-PCD | 1.81 |
| 737 | 737 | 1.87 | | 744VS | 1.76 |
| | | | | 744X | 1.77 |
| | | | | 744ZF-X | 1.80 |
| | | | | 744ZX | 1.78 |
| | | | | 744ZXT | 1.79 |
| | | | 745 | 745 | 1.82 |
| | | | | 745X-90 | 1.83 |
| | | | 746 | 746 | 1.84 |
| | | | | 746-A60° | 1.85 |
| | | | | 746-M | 1.86 |
| | | | 747 | 747 | 1.87 |





730 / 740
Porte-outils
Halter
Holders
>1.36

731 / 741
Tronçonnage
Abstechen
Parting off
>1.43

741L/ 731R
Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line
>1.51

732 / 742
Tournage avant
Vorwärts drehen
Front turning
>1.59

733 / 743
Tournage arrière
Rückwärts drehen
Back turning
>1.65

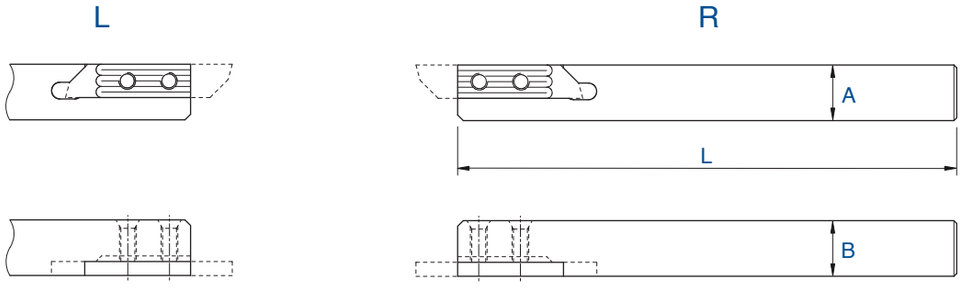
734 / 744
Fonçage-tournage
Einstechen und drehen
Grooving and turning
>1.75

735 / 745
Gorges
Einstechen
Grooving
>1.82

736 / 746
Filetage
Gewinde drehen
Threading
>1.84

737 / 747
Plaquettes à rayon
Radius Wendeplatten
Radius inserts
>1.87

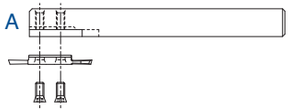
Plaquettes ébauches
WSP-Rohlinge
Blank inserts
>1.88



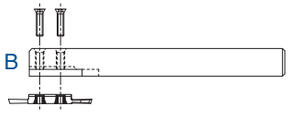



| A x B | L | Serrage Spannsystem Clamping | L | R | Art. N° | Art. N° |
|---|---|---|---|---|---|---|
| 7 x 7 | 115 | A | | | 730-7 | 740-7 |
| 8 x 8 | 115 | A + B | | | 730-8 | 740-8 |
| 8 x 8 | 140 | A + B | | | 730-8-140 | - |
| 9.52 x 9.52 | 115 | A + B | | | 730-9.52 | 740-9.52 |
| 10 x 10 | 115 | A + B | | | 730-10 | 740-10 |
| 10 x 10 | 50 | A + B | | | 730-10-50 | 740-10-50 |
| 12 x 12 | 130 | A + B | | | 730-12 | 740-12 |
| 12 x 12 | 90 | A + B | | | 730-12-90 | 740-12-90 |
| 12.7 x 12.7 | 130 | A + B | | | 730-12.7 | 740-12.7 |
| 16 x 16 | 130 | A + B | | | 730-16 | 740-16 |
| 16 x 16 | 75 | A + B | | | 730-16-75 | 740-16-75 |
| 20 x 20 | 120 | A + B | | | 730-20 | 740-20 |

Serrage standard A
Standard Spannsystem A
Standard clamping system A



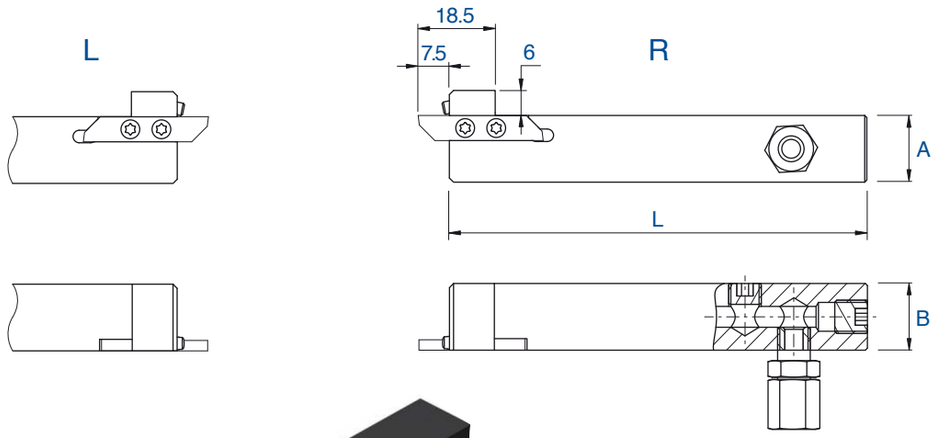

Serrage B
Spannsystem B
Clamping system B




Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





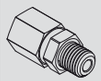




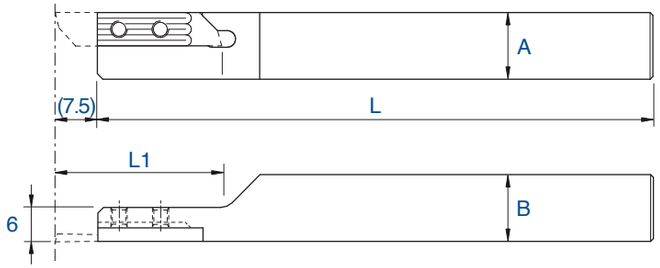

| A x B | L | Serrage Spannsystem Clamping | L | R | Art. N° | Art. N° |
|---|---|---|---|---|---|---|
| 8 x 10 | 100 | A + B | | | - | 740-0810-JET |
| 10 x 12 | 100 | A + B | | | 730-1012-JET | 740-1012-JET |
| 10 x 12 | 80 | A + B | | | - | 740-1012-80-JET |
| 12 x 12 | 100 | A + B | | | 730-12-JET | 740-12-JET |
| 12.7 x 12.7 | 100 | A + B | | | 730-12.7-JET | 740-12.7-JET |
| 16 x 16 | 100 | A + B | | | 730-16-JET | 740-16-JET |
| 20 x 20 | 100 | A + B | | | 730-20-JET | 740-20-JET |

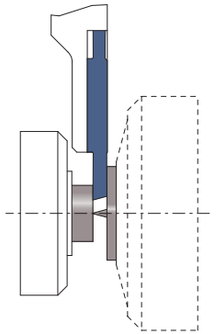


Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

| Pièces de rechange Ersatzteile Spare parts |  |  | Buses Düsen Nozzles  | Option  |
|---|---|---|---|---|
| | Art. N° | Art. N° | Art. N° | Art. N° |
| 740-0810-JET | J-M5-D5 | JB-M5 | – | JC-M5-D5 |
| 730-JET / 740-JET | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 | – |
| | | | | More option see JET-Line |

R



| A x B | L | L1 | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|---|
| 8 x 8 | 115 | 24 | A | 740-C-8 |
| 10 x 10 | 115 | 24 | A | 740-C-10 |
| 12 x 12 | 130 | 30 | A | 740-C-12 |
| 12.7 x 12.7 | 130 | 30 | A | 740-C-12.7 |
| 16 x 16 | 130 | 40 | A | 740-C-16 |

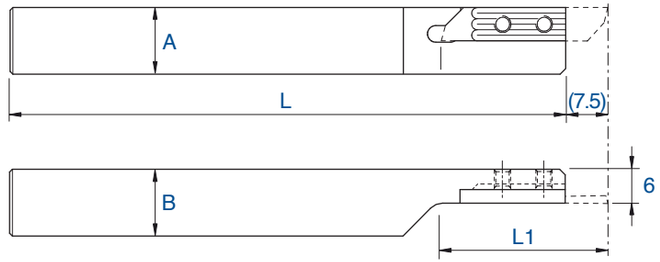
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

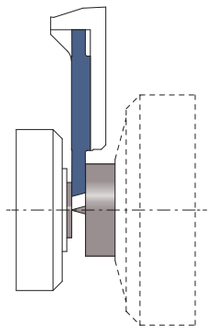




Utiliser des plaquettes type 731R
WSP Typ 731R verwenden
Use inserts type 731R

Voir pages 1.51 - 1.58
Siehe Seiten 1.51 - 1.58
See pages 1.51 - 1.58

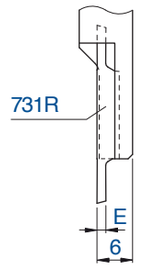


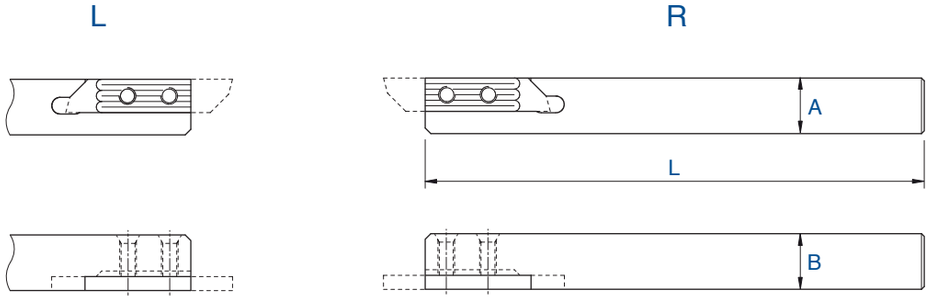
L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 8 x 8 | 115 | 24 | 730RC-8 |
| 10 x 10 | 115 | 24 | 730RC-10 |
| 12 x 12 | 130 | 30 | 730RC-12 |
| 12.7 x 12.7 | 130 | 30 | 730RC-12.7 |
| 16 x 16 | 130 | 40 | 730RC-16 |




Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

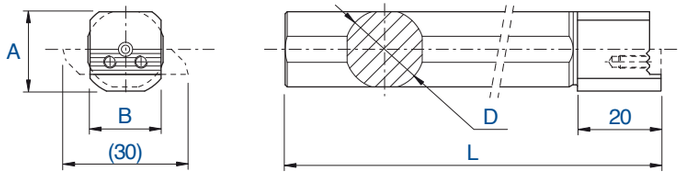





| A x B | L | Serrage Spannsystem Clamping | L | R |
|---|---|---|---|---|
| | | | Art. N° | Art. N° |
| 7 x 7 | 115 | A | 730-7-NOVIBRA | 740-7-NOVIBRA |
| 8 x 8 | 115 | A + B | 730-8-NOVIBRA | 740-8-NOVIBRA |
| 8 x 8 | 80 | A + B | - | 740-8-80-NOVIBRA |
| 10 x 10 | 115 | A + B | - | 740-10-NOVIBRA |
| 12 x 12 | 130 | A + B | - | 740-12-NOVIBRA |

Chaquesupport est livré avecune ou plusieurs vis. Lesclés sont àcommander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. DieSchlüssel sind separat zu bestellen.
Each holder is supplied with oneor more screws. The keys must be ordered separately.

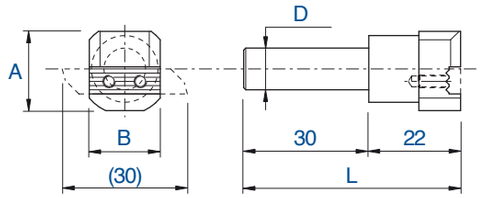








| A x B | L | D | Art. N° |
|---|---|---|---|
| 19 x 17 | 160 | 16 | 740/730-D16 |
| 19 x 17 | 160 | 19.05 | 740/730-D19.05 |
| 19 x 17 | 110 | 19.05 | 740/730-D19.05-S |
| 19.5 x 17 | 160 | 20 | 740/730-D20 |
| 20 x 17 | 110 | 22 | 740/730-D22 |
| 22 x 17 | 200 | 25 | 740/730-D25 |
| 22 x 17 | 200 | 25.4 | 740/730-D25.4 |

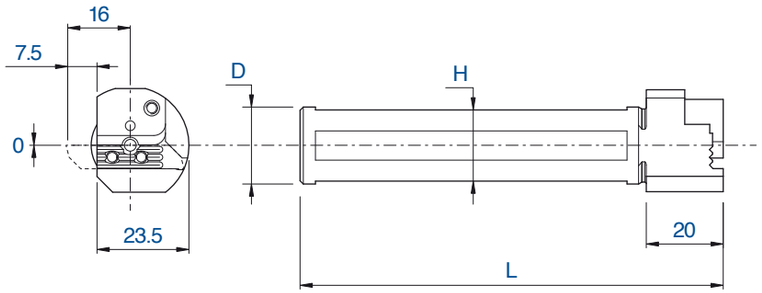


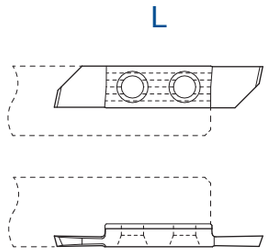


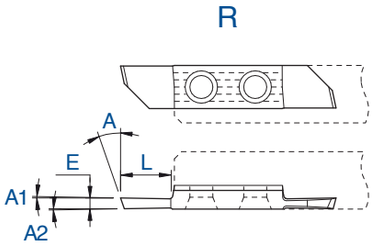


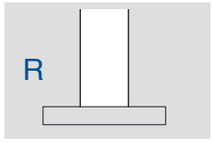
| A x B | L | D | Art. N° |
|---|---|---|---|
| 19 x 17 | 52 | 10 | 740/730-D10 |

Chaquesupport est livré avecune ou plusieurs vis. Lesclés sont àcommander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. DieSchlüssel sind separat zu bestellen.
Each holder is supplied with oneor more screws. The keys must be ordered separately.

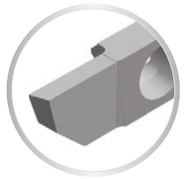



| D | H | L | Art. N° |
|---|---|---|---|
| 16 | 15 | 160 | 740-D16-160-JET |
| 19.05 | 18 | 160 | 740-D19.05-160-JET |
| 19.05 | 18 | 110 | 740-D19.05-110-JET |
| 20 | 19 | 110 | 740-D20-110-JET |
| 22 | 20 | 110 | 740-D22-110-JET |
| 25 | 24 | 200 | 740-D25-200-JET |
| 25.4 | 24 | 200 | 740-D25.4-200-JET |

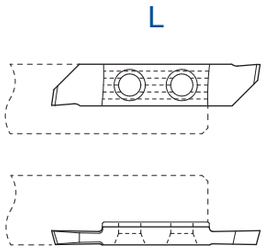


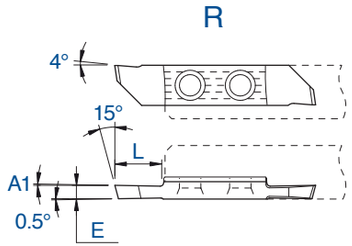
| | | | | | L | | | | | | | R | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | P M N S | P M N | P | P M N S | P M N | P N S | | P M N S | P M N S | P M N | P | P M N S | P M N S | P M N | P | P M N S | P M N S |
| E | A | A1 | A2 | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 0.6 | 18° | 2.5° | 0.5° | 3 | 731-0.6 | ● | | ● | ● | | ● | 741-0.6 | ● | ● | | ● | ● | | ● | | |
| 0.8 | 20° | 0.3° | 0.3° | 5 | 731-0.8 | ● | ● | ● | ● | | ● | 741-0.8 | ● | ● | ● | ● | ● | ● | ● | | |
| 1.0 | 20° | 0.3° | 0.3° | 5 | 731-1.0 | ● | ● | ● | ● | ● | ● | 741-1.0 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.2 | 20° | 0.3° | 0.3° | 5 | 731-1.2 | ● | ● | ● | ● | | ● | 741-1.2 | ● | ● | ● | ● | ● | ● | ● | | |
| 1.5 | 20° | 0.3° | 0.3° | 7 | 731-1.5 | ● | ● | ● | ● | ● | ● | 741-1.5 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.8 | 20° | 0.3° | 0.3° | 7 | 731-1.8 | ● | ● | ● | ● | | ● | 741-1.8 | ● | ● | ● | ● | ● | | ● | | |
| 2.0 | 20° | 0.3° | 0.3° | 7 | 731-2.0 | ● | ● | ● | ● | | ● | 741-2.0 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.5 | 20° | 0.3° | 0.3° | 7 | 731-2.5 | ● | ● | ● | | | | 741-2.5 | | ● | ● | ● | ● | | ● | | ● |

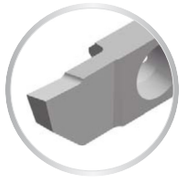
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

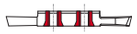


| L | | | | | | | | | | | | R | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | A1 | L | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HN (µK10) | KST | KN (µK10-20) |
| 0.6 | 2.5° | 3 | 731X4-0.6 | ● | | ● | ● | | ● | 741X4-0.6 | ● | ● | | ● | ● | | ● | | |
| 0.8 | 0.5° | 4 | - | | | | | | | 741X4-0.8 | | | | | ● | | ● | | |
| 1.0 | 0.5° | 5 | 731X4-1.0 | ● | ● | ● | | | | 741X4-1.0 | ● | ● | ● | ● | ● | | ● | ● | ● |
| 1.5 | 0.5° | 7 | 731X4-1.5 | ● | ● | ● | ● | | ● | 741X4-1.5 | ● | ● | ● | ● | ● | | ● | ● | ● |
| 2.0 | 0.5° | 7 | 731X4-2.0 | ● | ● | ● | | | | 741X4-2.0 | ● | ● | ● | ● | | | | | |

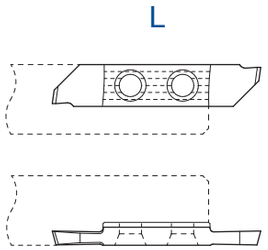
7XX-XX-B

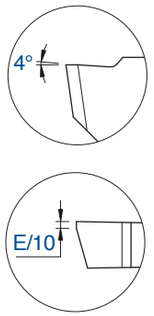


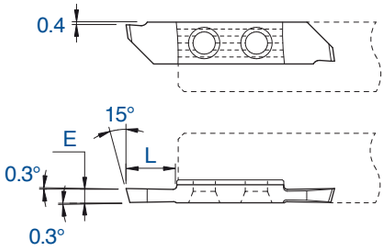
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

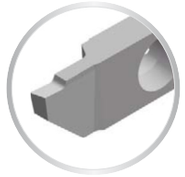






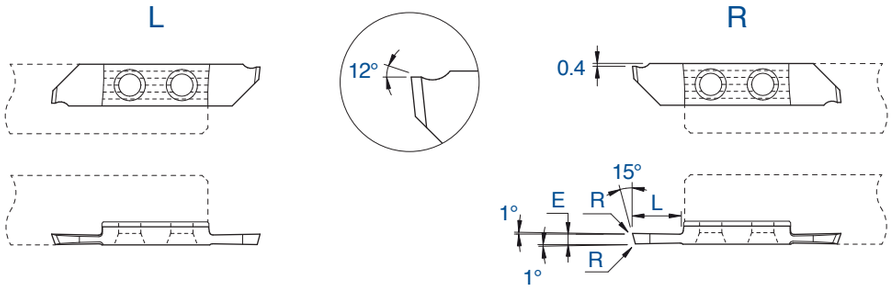



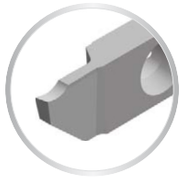
| L | | | R | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | KST | KN (µK10-20) |
| 1.2 | 5 | - | | | | | | | 741XF-1.2 | ● | | ● | | | | | |
| 1.5 | 7 | 731XF-1.5 | ● | ● | ● | ● | ● | ● | 741XF-1.5 | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 7 | 731XF-2.0 | ● | ● | ● | | | | 741XF-2.0 | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.5 | 7 | 731XF-2.5 | ● | ● | ● | | | | 741XF-2.5 | ● | ● | ● | | | | | |

7XX-XX-B



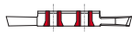
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



| | | | L | | | | | | | R | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 0.5 | 3 | 0.03 | - | | | | | | | 741X12-0.5 | | | | | ● | | ● | | |
| 1.0 | 5 | 0.03 | 731X12-1.0 | ● | ● | ● | | | | 741X12-1.0 | ● | ● | ● | ● | ● | | ● | ● | ● |
| 1.5 | 7 | 0.03 | 731X12-1.5 | ● | ● | ● | | | | 741X12-1.5 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 7 | 0.03 | 731X12-2.0 | ● | ● | ● | | | | 741X12-2.0 | ● | ● | ● | ● | ● | | ● | | |

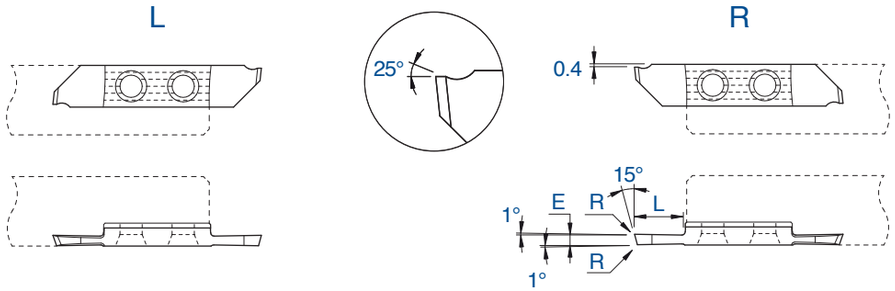
7XX-XX-B

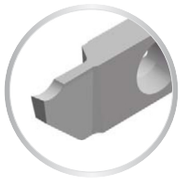


Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







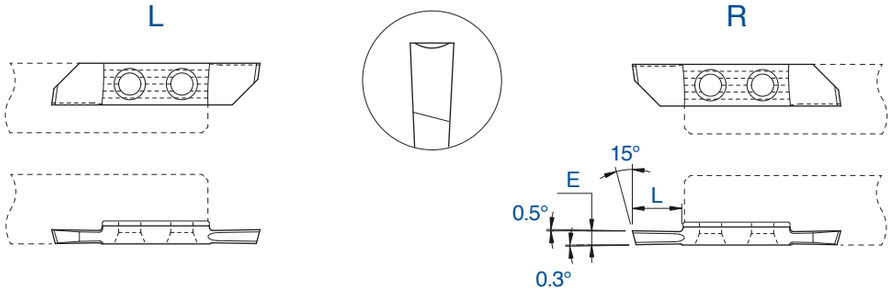



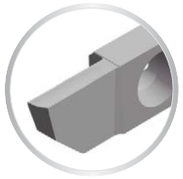
| | | L | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.0 | 5 | 731X25-1.0 | ● | ● | ● | | | | 741X25-1.0 | ● | | ● | ● | ● | | ● |
| 1.5 | 7 | 731X25-1.5 | ● | ● | ● | | | | 741X25-1.5 | ● | | ● | ● | ● | | ● |
| 2.0 | 7 | 731X25-2.0 | ● | ● | ● | | | | 741X25-2.0 | ● | ● | ● | ● | ● | | ● |

7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



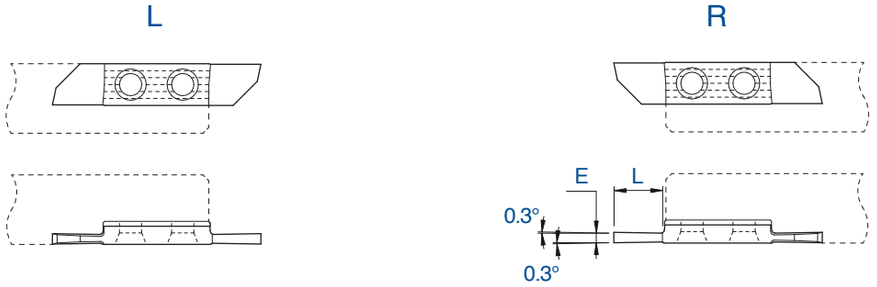
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | | | R | | | | | | |
| 1.5 | 7 | 731U-1.5 | ● | ● | ● | ● | | ● | 741U-1.5 | ● | ● | ● | ● | ● | ● |
| 2.0 | 7 | 731U-2.0 | ● | ● | ● | ● | | ● | 741U-2.0 | ● | ● | ● | ● | | ● |

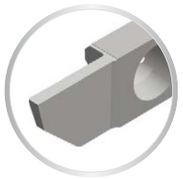
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | | | R | | | | | | |
| 1.0 | 5 | 731N-1.0 | ● | ● | ● | ● | | ● | 741N-1.0 | ● | ● | ● | ● | | ● |
| 1.5 | 7 | 731N-1.5 | ● | ● | ● | ● | | ● | 741N-1.5 | ● | ● | ● | ● | | ● |

7XX-XX-B

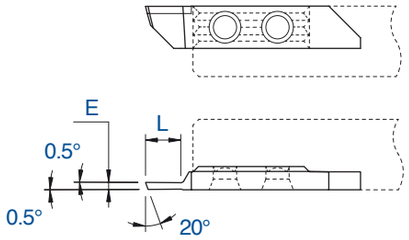
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line



## R





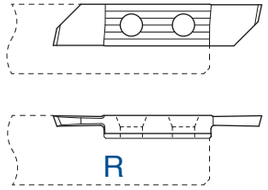

| E | L | Art. N° | R<br>PCD |
|---|---|---|---|
| 0.8 | 5 | 741-0.8 | ● |
| 1.0 | 5 | 741-1.0 | ● |
| 1.2 | 5 | 741-1.2 | ● |
| 1.5 | 7 | 741-1.5 | ● |
| 1.8 | 7 | 741-1.8 | ● |
| 2.0 | 7 | 741-2.0 | ● |
| 2.5 | 7 | 741-2.5 | ● |

Uniquement 1 arête de coupe
Nur 1 Schneidekante
Only 1 cutting edge

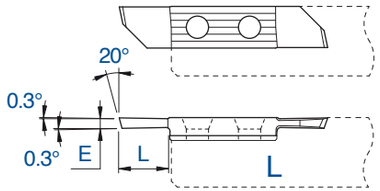
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

## Cut L

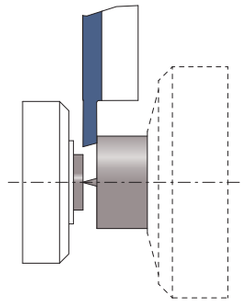



## Cut R





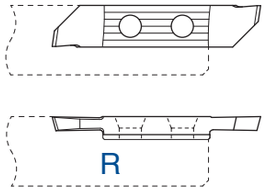

| E | L | R (L)<br>Coupe à gauche déportée<br>Versetztes Linksschneiden<br>Left cut off line<br>Art. N° | P M N S<br>TiAlN | P M N<br>TiN | P S<br>N (µK20) | P M N S<br>HTA | P M N<br>HTiN | P M N S<br>HN (µK10) | L (R)<br>Coupe à droite déportée<br>Versetztes Rechtsschneiden<br>Right cut off line<br>Art. N° | P M N S<br>TiAlN | P M N<br>TiN | P S<br>N (µK20) | P M N S<br>HTA | P M N<br>HTiN | P M N S<br>HN (µK10) | P M N S<br>KST | P M N S<br>KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 5 | 741L-1.0 | ● | ● | ● | ● | | ● | 731R-1.0 | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.2 | 5 | 741L-1.2 | ● | ● | ● | ● | | ● | 731R-1.2 | ● | ● | ● | ● | ● | ● | | |
| 1.5 | 7 | 741L-1.5 | ● | ● | ● | ● | ● | ● | 731R-1.5 | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 7 | 741L-2.0 | ● | ● | ● | ● | | ● | 731R-2.0 | ● | ● | ● | ● | | ● | ● | ● |
| 2.5 | 7 | 741L-2.5 | ● | ● | ● | | | | 731R-2.5 | ● | ● | ● | | | | | |



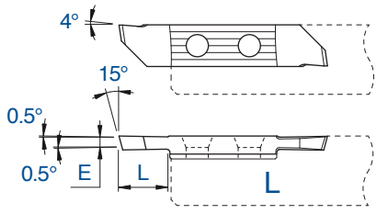
7XX-XX-B

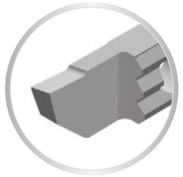
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

## Cut L




## Cut R



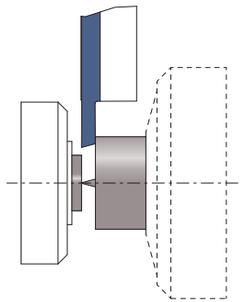
### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | P M N S | P M N | P S | P M N S | P M N | P N S | | P M N S | P M N | P S | P M N S | P M N | P N S |
| 1.5 | 5 | 741LX4-1.5 | ● | ● | ● | | | | 731RX4-1.5 | ● | ● | ● | ● | ● | ● |



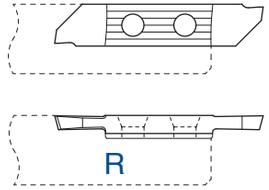
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

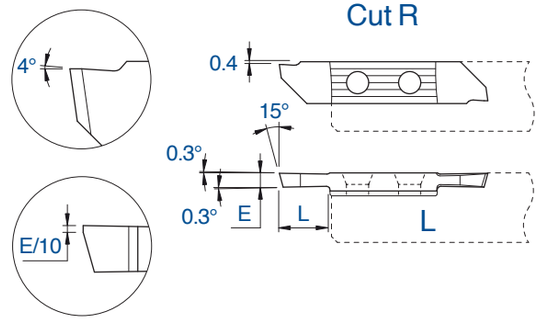


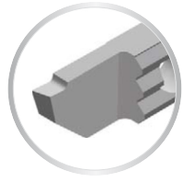


## Cut L




## Cut R



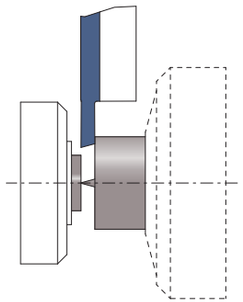
### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | P M N S | P M N | P S | P M N S | P M N | P N S | | P M N S | P M N | P S | P M N S | P M N | P N S |
| 1.5 | 7 | 741LXF-1.5 | ● | ● | ● | | | | 731RXF-1.5 | ● | ● | ● | ● | ● | ● |
| 2.0 | 7 | 741LXF-2.0 | ● | ● | ● | | | | 731RXF-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 7 | 741LXF-2.5 | ● | ● | ● | | | | 731RXF-2.5 | ● | ● | ● | | | |



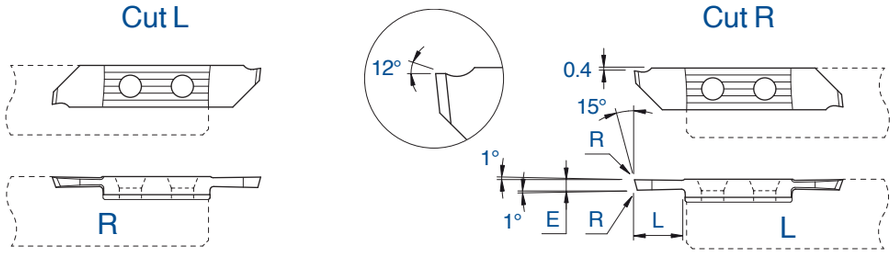
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

Tronçonnage
Abstechen
Parting off

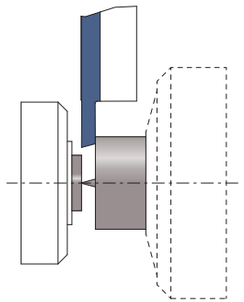
Coupe déportée
Versetztes Schneiden
Cut off line





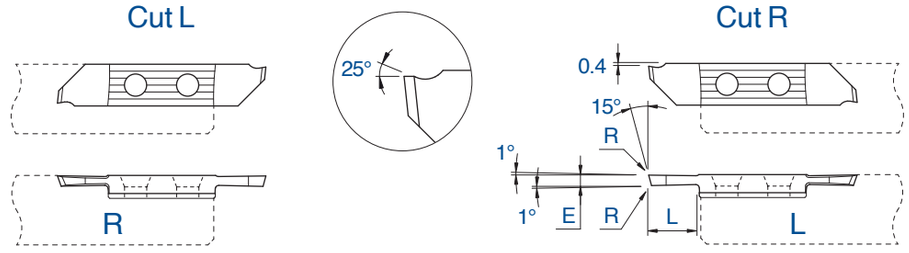



| | R (L) Coupe à gauche déportée Versetztes Linksschneiden Left cut off line | | | | | | | | | L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 1.0 | 5 | 0.03 | - | | | | | | | 731RX12-1.0 | ● | ● | ● | | | | ● | ● |
| 1.5 | 7 | 0.03 | 741LX12-1.5 | ● | ● | ● | | | | 731RX12-1.5 | ● | ● | ● | ● | ● | ● | ● | ● |



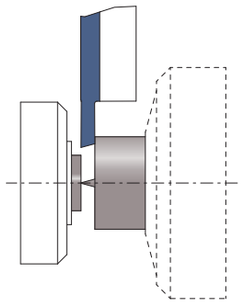
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





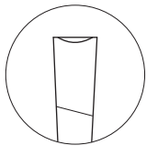

| | R (L) Coupe à gauche déportée Versetztes Linksschneiden Left cut off line | | | | | | L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) | | |
| 1.5 | 7 | 0.03 | 741LX25-1.5 | ● | ● | ● | 731RX25-1.5 | ● | ● | ● | | |

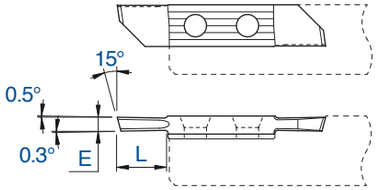


7XX-XX-B

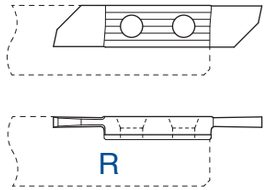
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

## Cut R

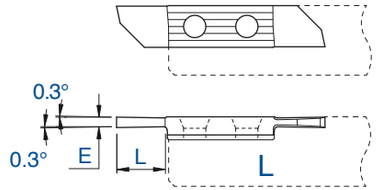


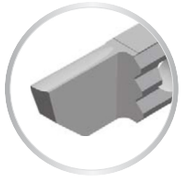



## Cut L




## Cut R

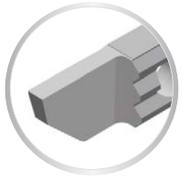


### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|
| 1.0 | 5 | 731RU-1.0 | ● | | ● | | | |
| 1.2 | 5 | 731RU-1.2 | ● | | ● | | | |
| 1.5 | 7 | 731RU-1.5 | ● | | ● | ● | | ● |
| 2.0 | 7 | 731RU-2.0 | ● | | ● | | | |



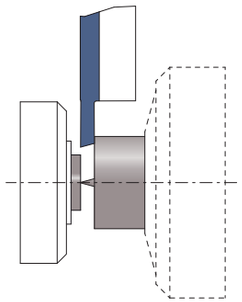
### R (L)

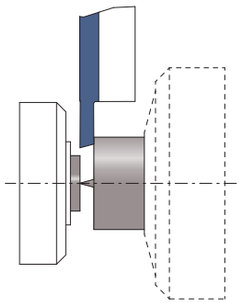
Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 5 | 741N-1.0 | ● | ● | ● | ● | | ● | 731N-1.0 | ● | ● | ● | ● | | ● |
| 1.5 | 7 | 741N-1.5 | ● | ● | ● | ● | | ● | 731N-1.5 | ● | ● | ● | ● | | ● |





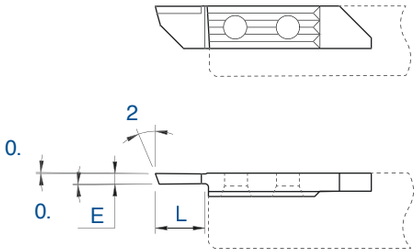
7XX-XX-B

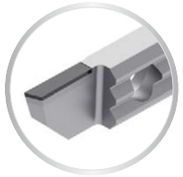
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

## Cut R



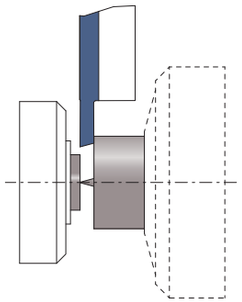



### L (R)

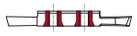
Coupe à droite déportée
Versetztes Linksschneiden
Left cut off line

| E | L | Art. N° | PCD |
|---|---|---|---|
| 0.8 | 5 | 731R-0.8 | ● |
| 1.0 | 5 | 731R-1.0 | ● |
| 1.2 | 5 | 731R-1.2 | ● |
| 1.5 | 7 | 731R-1.5 | ● |
| 2.0 | 7 | 731R-2.0 | ● |
| 2.5 | 7 | 731R-2.5 | ● |

Uniquement 1 arête de coupe
Nur 1 Schneidekante
Only 1 cutting edge

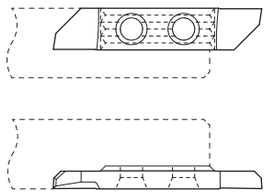


7XX-XX-B

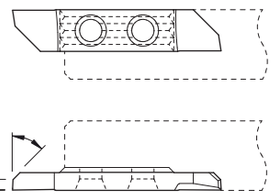


Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

## L



## R



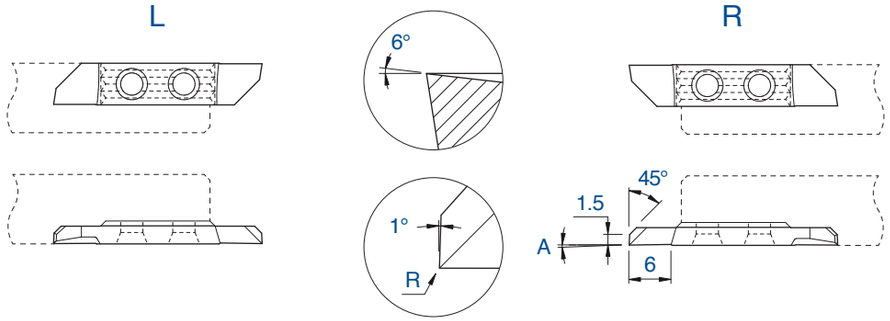



| A | R | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HN (µK10) | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | | | | R | | | | | | | | |
| 0° | 0 | 732 | ● | ● | ● | ● | ● | ● | 742 | ● | ● | ● | ● | ● | ● | ● | | |
| 2° | 0 | 732-2° | ● | ● | ● | ● | | ● | 742-2° | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 2° | 0 | | | | | | | | 742-2°-R08 | ● | ● | ● | ● | ● | ● | ● | | |

7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



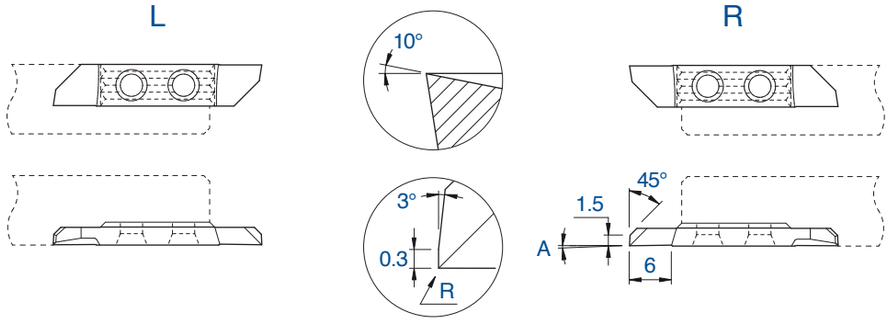



| A | R | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | R | | |
| 0° | 0 | 732PX | ● | ● | ● | 742PX | ● | ● | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



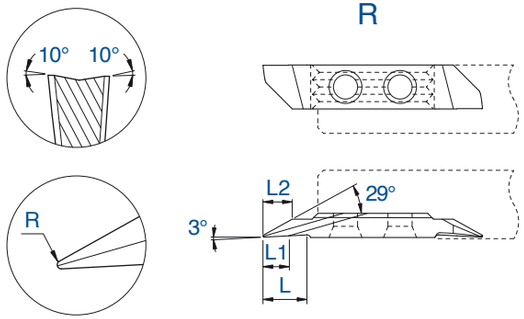


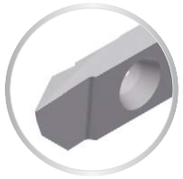





| A | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | | | | R | | | | | | | | |
| 0° | 0 | 732X | ● | ● | ● | ● | ● | ● | 742X | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 2° | 0 | | | | | | | | 742X-2° | ● | ● | ● | ● | ● | ● | ● | | |
| 2° | 0.08 | | | | | | | | 742X-2°-R08 | ● | ● | ● | ● | ● | ● | ● | | |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



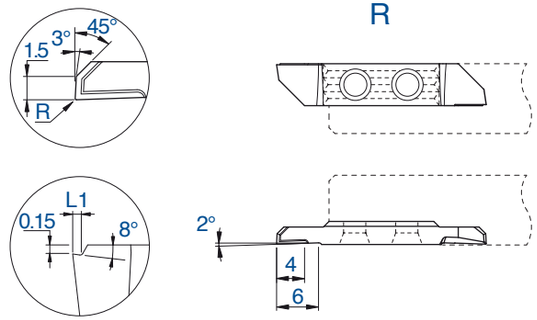
| L | L1 | L2 | R | Art. N° | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| 6 | 3.5 | 4.2 | 0.08 | 742VUX10-29°-R08 | ● | ● |
| 6 | 3.5 | 4 | 0.15 | 742VUX10-29°-R15 | ● | ● |

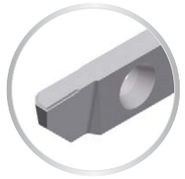
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







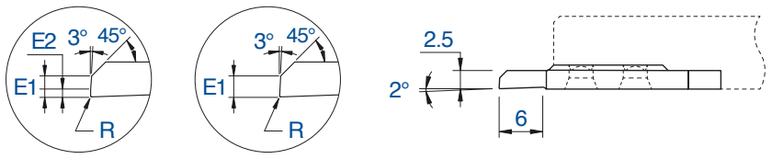



| L1 | R | Art. N° | KCRF | KN (µx10-20) |
|---|---|---|---|---|
| 0.12 | 0.03 | 742ZF-X812-R03 | ● | ● |
| 0.24 | 0.03 | 742ZF-X824-R03 | ● | ● |
| 0.36 | 0.08 | 742ZF-X836-R08 | ● | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

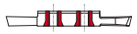
R






| R | | | | |
|---|---|---|---|---|
| E1 | E2 | R | Art. N° | PCD |
| 1.5 | 0.3 | 0 | 742-2° | ● |
| 1.5 | - | 0.08 | 742-2°-R08 | ● |
| 1.5 | - | 0.15 | 742-2°-R15 | ● |
| 1.5 | - | 0.20 | 742-2°-R20 | ● |

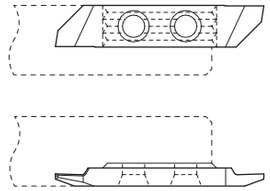
Uniquement 1 arête decoupe
Nur 1Schneidekante
Only1 cutting edge

7XX-XX-B 

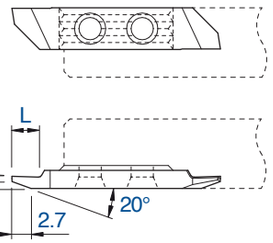
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

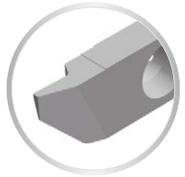


L



R

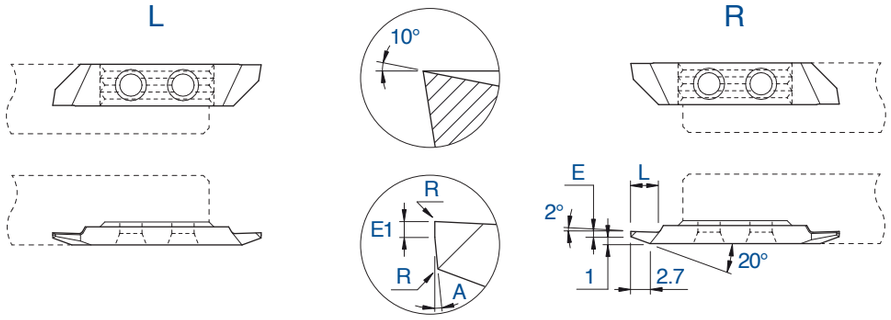


| L | | | | | | R | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E1 | A | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.5 | 0.25 | 3° | 3 | 0 | 733-0.5 | ● | ● | ● | ● | | ● | 743-0.5 | ● | ● | ● | ● | ● | ● | ● |
| 0.5 | - | 2° | 3 | 0.08 | 733-0.5-R08 | ● | ● | ● | ● | | ● | 743-0.5-R08 | ● | | ● | ● | ● | | ● |
| 0.8 | 0.30 | 3° | 4 | 0 | 733-0.8 | ● | ● | ● | | | | 743-0.8 | ● | ● | ● | ● | ● | | ● |
| 1.0 | 0.40 | 3° | 4 | 0 | 733-1.0 | ● | ● | ● | ● | | ● | 743-1.0 | ● | | ● | ● | ● | | ● |
| 1.2 | 0.50 | 3° | 5 | 0 | 733-1.2 | ● | ● | ● | ● | | ● | 743-1.2 | ● | | ● | ● | ● | | ● |
| 1.5 | 0.50 | 3° | 6 | 0 | 733-1.5 | ● | ● | ● | ● | | ● | 743-1.5 | ● | | ● | ● | ● | | ● |

7XX-XX-B 

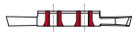
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05






| L | | | | | | R | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E1 | A | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTAX | HTiN | HN (µk10) |
| 0.5 | 0.25 | 3° | 3 | 0 | 733X-0.5 | ● | ● | ● | ● | | ● | 743X-0.5 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.5 | - | 2° | 3 | 0.08 | 733X-0.5-R08 | ● | ● | ● | | | | 743X-0.5-R08 | ● | ● | ● | ● | ● | | | ● |
| 0.8 | 0.30 | 3° | 4 | 0 | 733X-0.8 | ● | ● | ● | | | | 743X-0.8 | ● | | ● | ● | ● | | ● | ● |
| 1.0 | 0.40 | 3° | 4 | 0 | 733X-1.0 | ● | ● | ● | | | | 743X-1.0 | ● | | ● | ● | ● | | | ● |
| 1.2 | 0.50 | 3° | 5 | 0 | 733X-1.2 | ● | ● | ● | | | | 743X-1.2 | ● | | ● | ● | ● | | | ● |
| 1.5 | 0.50 | 3° | 6 | 0 | 733X-1.5 | ● | ● | ● | | | | 743X-1.5 | ● | | ● | ● | ● | | | ● |

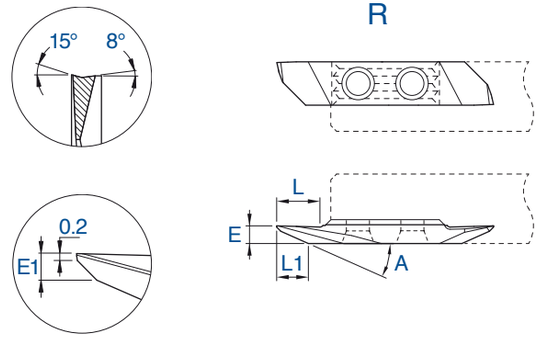
7XX-XX-B

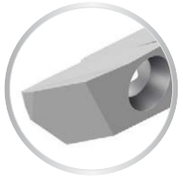


Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







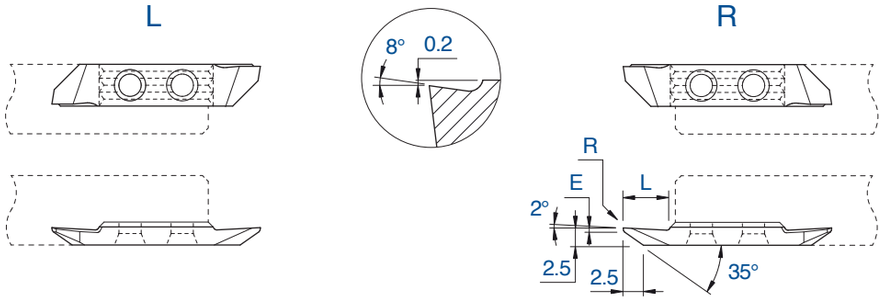



| R | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | E1 | A | L | L1 | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTAX | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 1.5 | 0.75 | 24° | 3 | 2.3 | 743VUX8-0.2-1.5 | ● | ● | | ● | ● | ● | | ● | ● | ● |
| 2.5 | 0.75 | 24° | 6 | 4.4 | 743VUX8-0.2-2.5 | ● | ● | | ● | ● | ● | | ● | ● | ● |

7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





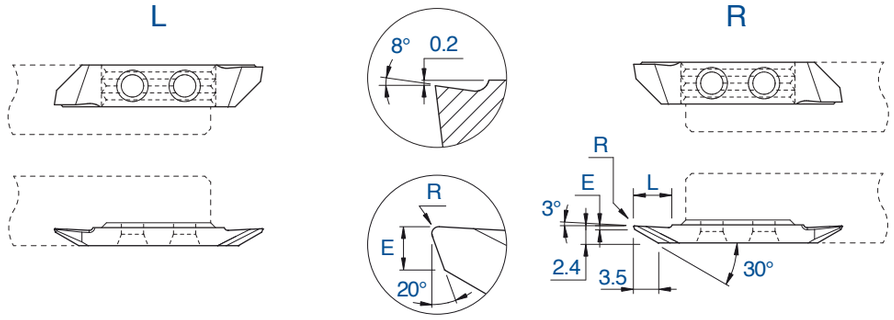

| E | L | R | L Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | R Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 6.5 | 0 | 733VX-8° | ● | ● | ● | ● | ● | ● | 743VX-8° | ● | ● | ● | ● | ● | ● | | |
| 1.0 | 6.5 | 0.08 | 733VX-8°-R08 | ● | ● | ● | ● | | ● | 743VX-8°-R08 | ● | ● | ● | ● | | ● | ● | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





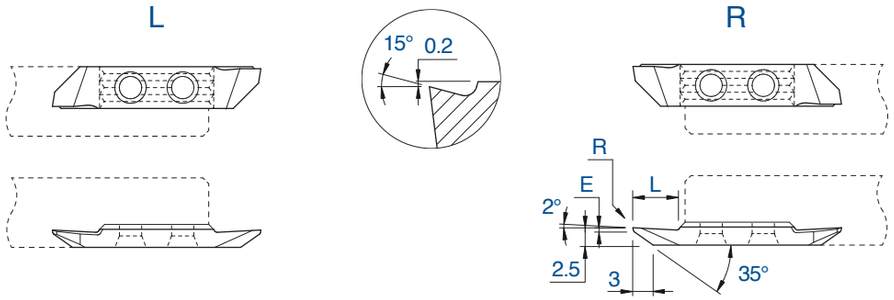





| E | L | R | L Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | R Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 | 6 | 0.08 | 733VX-805-R08 | ● | | ● | ● | | ● | 743VX-805-R08 | ● | ● | ● | ● | | ● | ● | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





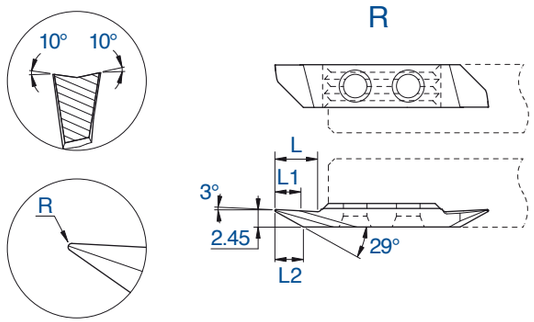

| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | | | |
| 0.6 | 6.5 | 0 | 733VX-15° | ● | ● | ● | ● | | ● |
| 0.6 | 6.5 | 0.08 | 733VX-15°-R08 | ● | ● | ● | | | |

| Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|
| R | | | | | | |
| 743VX-15° | ● | ● | ● | ● | | ● |
| 743VX-15°-R08 | ● | ● | ● | ● | | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



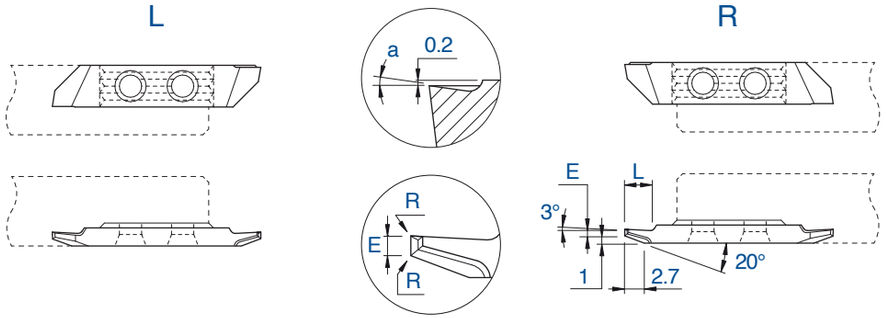





| L | L1 | L2 | R | Art. N° | KST | KN (µk10-20) |
|---|---|---|---|---|---|---|
| | | | | R | | |
| 6 | 3.5 | 4 | 0.08 | 743VUX10-29°-R08 | ● | ● |
| 6 | 3.5 | 4 | 0.15 | 743VUX10-29°-R15 | ● | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05






Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

| a | E | L | R | L Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | R Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10° | 1.0 | 4 | 0.01 | 733ZX10-1.0 | ● | | | | | | 743ZX10-1.0 | ● | | | ● | | |
| | 1.0 | 4 | 0.08 | 733ZX10-1.0-R08 | ● | | | | | | 743ZX10-1.0-R08 | ● | | | ● | | |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

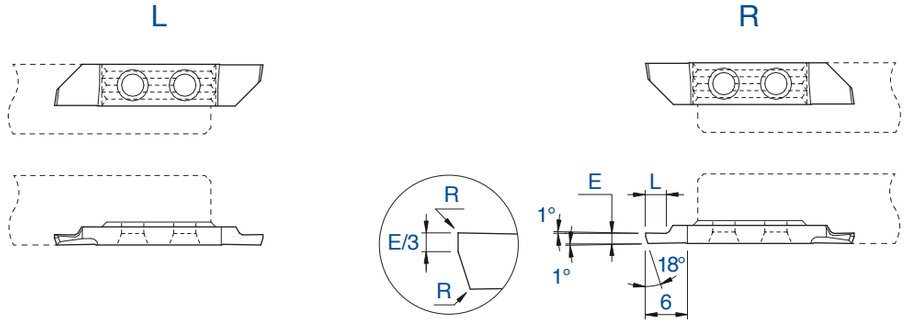
f min: 0.02mm/U

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







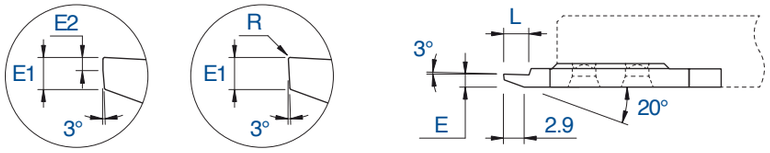



| E | L | R | L Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | R Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.8 | 2 | 0 | 733P-0.8 | ● | ● | ● | | | | 743P-0.8 | ● | ● | ● | ● | | ● |
| 1.0 | 2 | 0 | 733P-1.0 | ● | ● | ● | | | | 743P-1.0 | ● | ● | ● | | | |
| 1.2 | 2.5 | 0 | 733P-1.2 | ● | ● | ● | | | | 743P-1.2 | ● | ● | ● | | | |
| 1.5 | 3 | 0 | 733P-1.5 | ● | ● | ● | | | | 743P-1.5 | ● | ● | ● | | | |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

R

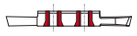





| | | | | | R | |
|---|---|---|---|---|---|---|
| E | E1 | E2 | L | R | Art. N° | PCD |
| 1.5 | 0.5 | 0.15 | 3 | 0 | 743-0.5 | ● |
| 1.5 | 0.5 | - | 3 | 0.08 | 743-0.5-R08 | ● |
| 1.8 | 0.8 | 0.25 | 4 | 0 | 743-0.8 | ● |
| 1.8 | 0.8 | - | 4 | 0.08 | 743-0.8-R08 | ● |
| 2.0 | 1 | 0.30 | 4 | 0 | 743-1.0 | ● |
| 2.0 | 1 | - | 4 | 0.08 | 743-1.0-R08 | ● |
| 2.2 | 1.2 | 0.35 | 5 | 0 | 743-1.2 | ● |
| 2.2 | 1.2 | - | 5 | 0.08 | 743-1.2-R08 | ● |
| 2.5 | 1.5 | 0.45 | 6 | 0 | 743-1.5 | ● |
| 2.5 | 1.5 | - | 6 | 0.08 | 743-1.5-R08 | ● |

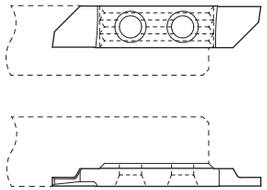
Uniquement 1 arête de coupe
Nur 1 Schneidekante
Only 1 cutting edge

7XX-XX-B

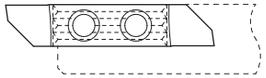


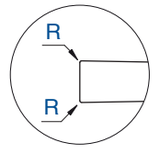
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

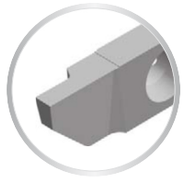
L



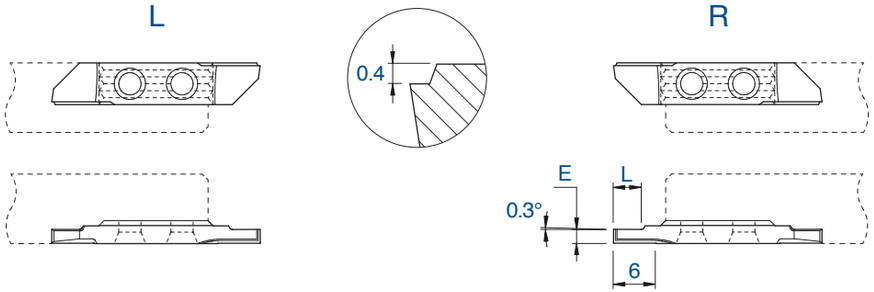
R





| | | | L | | | | | | | R | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTAX | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 0.5 | 1.5 | 0 | 734-0.5 | ● | ● | ● | ● | | ● | 744-0.5 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.6 | 1.8 | 0 | 734-0.6 | ● | ● | ● | ● | | ● | 744-0.6 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.75 | 2 | 0 | 734-0.75 | ● | ● | ● | | | | 744-0.75 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.8 | 2 | 0 | 734-0.8 | ● | ● | ● | ● | | ● | 744-0.8 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.8 | 2 | 0.08 | - | | | | | | | 744-0.8-R08 | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| 0.9 | 2.5 | 0 | - | | | | | | | 744-0.9 | ● | ● | ● | ● | ● | ● | | ● | | |
| 0.95 | 3 | 0 | 734-0.95 | ● | ● | ● | | | | 744-0.95 | ● | ● | ● | ● | ● | ● | | ● | | |
| 1.0 | 2.5 | 0 | 734-1.0 | ● | ● | ● | ● | ● | ● | 744-1.0 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.0 | 2.5 | 0.08 | 734-1.0-R08 | ● | ● | ● | ● | ● | ● | 744-1.0-R08 | ● | ● | ● | ● | ● | ● | | ● | | |
| 1.2 | 3 | 0 | 734-1.2 | ● | ● | ● | ● | | ● | 744-1.2 | ● | ● | ● | ● | ● | ● | ● | ● | | |
| 1.5 | 3 | 0 | 734-1.5 | ● | ● | ● | ● | ● | ● | 744-1.5 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.5 | 3 | 0.08 | 734-1.5-R08 | ● | ● | ● | ● | | ● | 744-1.5-R08 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.5 | 3 | 0.15 | - | | | | | | | 744-1.5-R15 | ● | ● | | ● | ● | ● | | ● | | |
| 1.5 | 3 | 0.20 | - | | | | | | | 744-1.5-R20 | ● | ● | ● | ● | ● | ● | | ● | | |
| 1.8 | 4 | 0 | 734-1.8 | ● | ● | ● | ● | | ● | 744-1.8 | ● | ● | ● | ● | ● | ● | | ● | | |
| 2.0 | 4 | 0 | 734-2.0 | ● | ● | ● | ● | | ● | 744-2.0 | ● | ● | ● | ● | ● | ● | | ● | | |
| 2.0 | 4 | 0.08 | 734-2.0-R08 | ● | ● | ● | ● | | ● | 744-2.0-R08 | ● | ● | ● | ● | ● | ● | | ● | | |
| 2.0 | 4 | 0.15 | - | | | | | | | 744-2.0-R15 | ● | ● | | ● | ● | ● | | ● | | |
| 2.0 | 4 | 0.20 | - | | | | | | | 744-2.0-R20 | ● | ● | ● | ● | ● | ● | | ● | | |
| 2.5 | 6 | 0 | 734-2.5 | ● | ● | ● | | | | 744-2.5 | | ● | ● | ● | ● | ● | | ● | | |





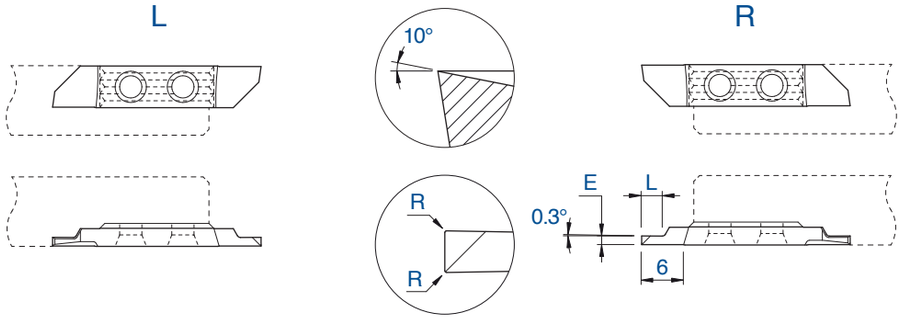

| L | | | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.0 | 2 | 734VS-1.0 | ● | ● | ● | ● | ● | ● | 744VS-1.0 | ● | ● | ● | ● | | ● |
| 1.2 | 2.5 | 734VS-1.2 | ● | ● | ● | ● | ● | ● | 744VS-1.2 | ● | ● | ● | ● | | ● |
| 1.5 | 3 | 734VS-1.5 | ● | ● | ● | ● | ● | ● | 744VS-1.5 | ● | ● | ● | ● | | ● |
| 1.8 | 4 | 734VS-1.8 | ● | ● | ● | ● | ● | ● | 744VS-1.8 | ● | ● | ● | | | |
| 2.0 | 4 | 734VS-2.0 | ● | ● | ● | ● | ● | ● | 744VS-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 6 | 734VS-2.5 | ● | ● | ● | ● | ● | ● | 744VS-2.5 | ● | ● | ● | | | |

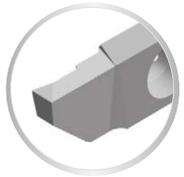
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





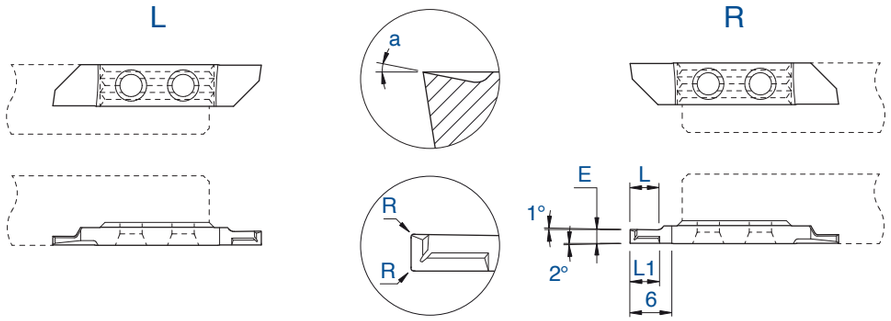


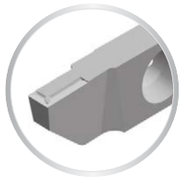



| L | | | | | | | | | | R | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | ST | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTAX | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 0.5 | 2 | 0 | | | | | | | | 744X-0.5 | | | | | | | | | | ● | ● |
| 0.8 | 2 | 0 | 734X-0.8 | ● | ● | ● | ● | | ● | 744X-0.8 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.0 | 2.5 | 0 | 734X-1.0 | ● | ● | ● | ● | | ● | 744X-1.0 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.0 | 2.5 | 0.08 | 734X-1.0-R08 | ● | ● | ● | ● | | ● | 744X-1.0-R08 | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| 1.2 | 3 | 0 | 734X-1.2 | ● | ● | ● | ● | | ● | 744X-1.2 | | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| 1.5 | 3 | 0 | 734X-1.5 | ● | ● | ● | ● | ● | ● | 744X-1.5 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.5 | 3 | 0.08 | 734X-1.5-R08 | ● | ● | ● | ● | | ● | 744X-1.5-R08 | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| 1.5 | 3 | 0.15 | - | | | | | | | 744X-1.5-R15 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| 1.5 | 3 | 0.20 | - | | | | | | | 744X-1.5-R20 | ● | ● | ● | ● | ● | ● | ● | | ● | | |
| 1.8 | 4 | 0 | 734X-1.8 | ● | ● | ● | | | | 744X-1.8 | | ● | ● | ● | ● | ● | ● | | ● | | |
| 2.0 | 4 | 0 | 734X-2.0 | ● | ● | ● | ● | | ● | 744X-2.0 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 4 | 0.08 | 734X-2.0-R08 | ● | ● | ● | ● | | ● | 744X-2.0-R08 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| 2.0 | 4 | 0.15 | - | | | | | | | 744X-2.0-R15 | ● | ● | ● | ● | ● | ● | ● | | ● | | |
| 2.0 | 4 | 0.20 | 734X-2.0-R20 | ● | ● | ● | ● | ● | ● | 744X-2.0-R20 | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● |
| 2.5 | 6 | 0 | 734X-2.5 | ● | ● | ● | ● | | ● | 744X-2.5 | | | ● | ● | ● | ● | | | ● | | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

| a | E | L | L1 | R | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HAC | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HAC | HN (µK10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | L | | | | | | | | R | | | | | | | |
| 10° | 1.0 | 2.5 | 3 | 0.01 | 734ZX10-1.0 | ● | ● | | | | | | 744ZX10-1.0 | ● | ● | ● | | ● | | | |
| | 1.5 | 4 | 4 | 0.01 | 734ZX10-1.5 | ● | ● | | | | | | 744ZX10-1.5 | ● | ● | | | ● | ● | | |
| | 1.5 | 4 | 4 | 0.08 | 734ZX10-1.5-R08 | ● | ● | | | | | | 744ZX10-1.5-R08 | ● | ● | ● | | ● | | | |
| | 2.0 | 4 | 4 | 0.01 | 734ZX10-2.0 | ● | ● | | | | | | 744ZX10-2.0 | ● | ● | | | ● | | | |
| | 2.0 | 4 | 4 | 0.08 | 734ZX10-2.0-R08 | ● | ● | | | | | | 744ZX10-2.0-R08 | ● | ● | | | ● | | | |
| | 2.5 | 6 | 4 | 0.01 | 734ZX10-2.5 | ● | ● | | | | | | 744ZX10-2.5 | ● | ● | | | ● | | | |
| | 2.5 | 6 | 4 | 0.08 | - | | | | | | | | 744ZX10-2.5-R08 | ● | ● | | | ● | | | |
| 17° | 1.0 | 2.5 | 3 | 0.01 | - | | | | | | | | 744ZX17-1.0 | | | | | ● | | ● | |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

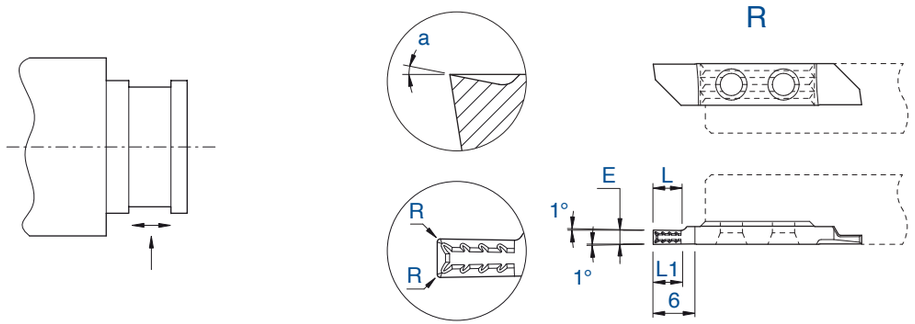
f min: 0.02mm/U

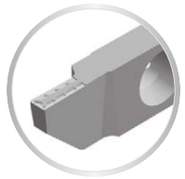
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

| a | E | L | L1 | R | Art. N° | ST | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HN (µK10) | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | R | | | | | | | | | |
| 10° | 1.0 | 2.5 | 2.5 | 0.01 | 744ZXT10-1.0 | ● | ● | ● | ● | | ● | | | ● | ● |
| | 1.5 | 4 | 4 | 0.01 | 744ZXT10-1.5 | ● | ● | ● | | | ● | | | ● | ● |
| | 1.5 | 4 | 4 | 0.08 | 744ZXT10-1.5-R08 | ● | ● | ● | ● | | ● | | | ● | ● |
| | 2.0 | 4 | 4 | 0.01 | 744ZXT10-2.0 | ● | ● | ● | | | ● | | | ● | ● |
| | 2.0 | 4 | 4 | 0.08 | 744ZXT10-2.0-R08 | ● | ● | ● | | | ● | | | ● | ● |
| | 2.5 | 5 | 5 | 0.01 | 744ZXT10-2.5 | ● | ● | ● | | | ● | | | ● | ● |
| | 2.5 | 5 | 5 | 0.08 | 744ZXT10-2.5-R08 | ● | ● | ● | | | ● | | | ● | ● |

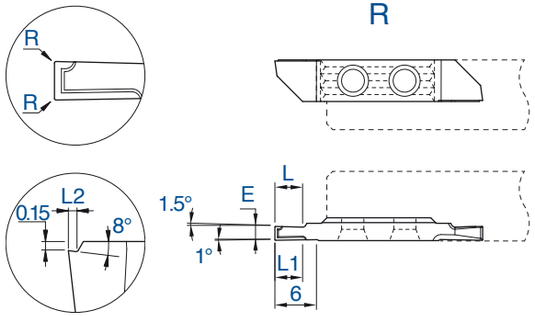


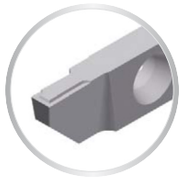
Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

7XX-XX-B

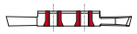
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



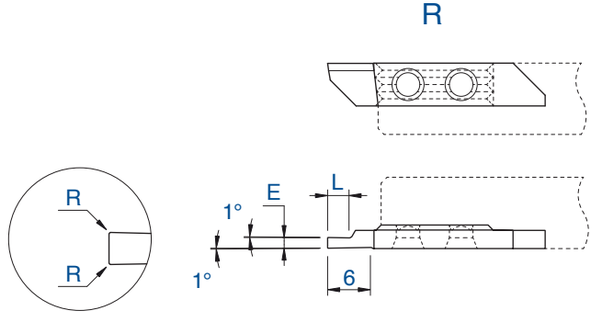



| E | L | L1 | L2 | R | Art. N° | KCRF | KN (µk10-20) |
|---|---|---|---|---|---|---|---|
| 1.0 | 2.5 | 2 | 0.12 | 0.03 | 744ZF-X812-1.0-R03 | ● | ● |
| | 2.5 | 2 | 0.24 | 0.03 | 744ZF-X824-1.0-R03 | ● | ● |
| 1.5 | 3 | 2.5 | 0.12 | 0.03 | 744ZF-X812-1.5-R03 | ● | ● |
| | 3 | 2.5 | 0.24 | 0.03 | 744ZF-X824-1.5-R03 | ● | ● |
| | 3 | 2.5 | 0.36 | 0.08 | 744ZF-X836-1.5-R08 | ● | ● |
| 2.0 | 4 | 3 | 0.24 | 0.03 | 744ZF-X812-1.5-R03 | ● | ● |
| | 4 | 3 | 0.36 | 0.08 | 744ZF-X824-1.5-R03 | ● | ● |
| | 4 | 3 | 0.36 | 0.15 | 744ZF-X836-1.5-R08 | ● | ● |
| 2.5 | 6 | 4 | 0.24 | 0.03 | 744ZF-X824-2.5-R03 | ● | ● |
| | 6 | 4 | 0.36 | 0.08 | 744ZF-X836-2.5-R08 | ● | ● |
| | 6 | 4 | 0.36 | 0.15 | 744ZF-X836-2.5-R15 | ● | ● |

7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





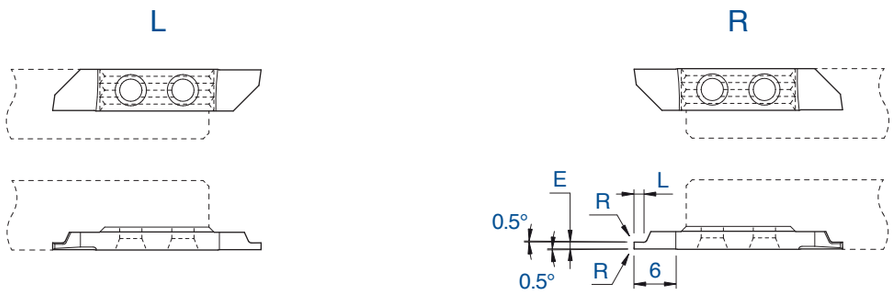

| E | L | R | Art. N° | PCD |
|---|---|---|---|---|
| 0.8 | 2 | 0 | 744-0.8 | ● |
| 0.8 | 2 | 0.08 | 744-0.8-R08 | ● |
| 1.0 | 2.5 | 0 | 744-1.0 | ● |
| 1.0 | 2.5 | 0.08 | 744-1.0-R08 | ● |
| 1.5 | 3 | 0 | 744-1.5 | ● |
| 1.5 | 3 | 0.08 | 744-1.5-R08 | ● |
| 1.5 | 3 | 0.15 | 744-1.5-R15 | ● |
| 1.5 | 3 | 0.20 | 744-1.5-R20 | ● |
| 2.0 | 4 | 0 | 744-2.0 | ● |
| 2.0 | 4 | 0.08 | 744-2.0-R08 | ● |
| 2.0 | 4 | 0.15 | 744-2.0-R15 | ● |
| 2.0 | 4 | 0.20 | 744-2.0-R20 | ● |
| 2.5 | 6 | 0 | 744-2.5 | ● |
| 2.5 | 6 | 0.08 | 744-2.5-R08 | ● |
| 2.5 | 6 | 0.15 | 744-2.5-R15 | ● |
| 2.5 | 6 | 0.20 | 744-2.5-R20 | ● |

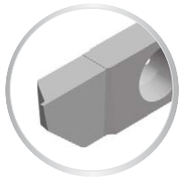
Uniquement 1 arête de coupe
Nur 1 Schneidekante
Only 1 cutting edge

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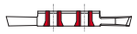
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



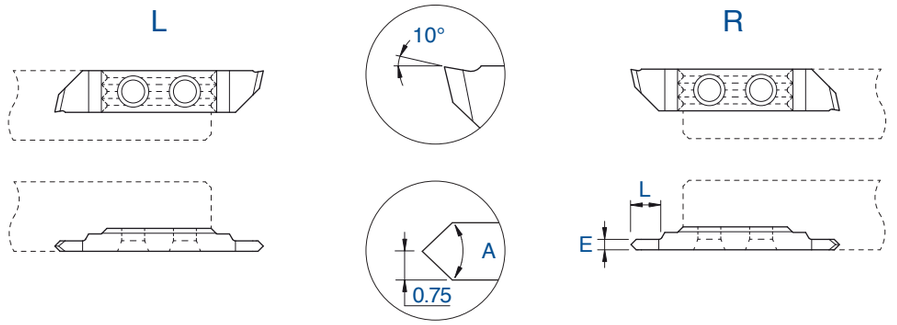



| | L | | | R | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E ± 0.01 | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.2 | 0.2 | 0 | 735-0202 | ● | ● | ● | | | | 745-0202 | ● | ● | ● | ● | | ● |
| 0.3 | 0.3 | 0 | 735-0303 | ● | ● | ● | | | | 745-0303 | ● | ● | ● | ● | | ● |
| 0.4 | 0.4 | 0 | 735-0404 | ● | ● | ● | | | | 745-0404 | ● | ● | ● | ● | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



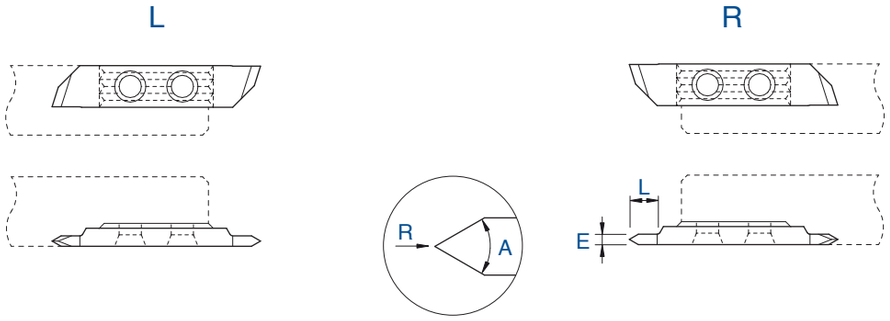


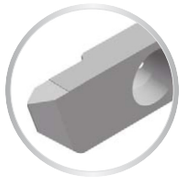

| | L | | | R | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 90° | 1.5 | 4 | 735X-90-1.5 | ● | | ● | | | | 745X-90-1.5 | ● | | ● | | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



Profil partiel
Teilprofil
Partial profile

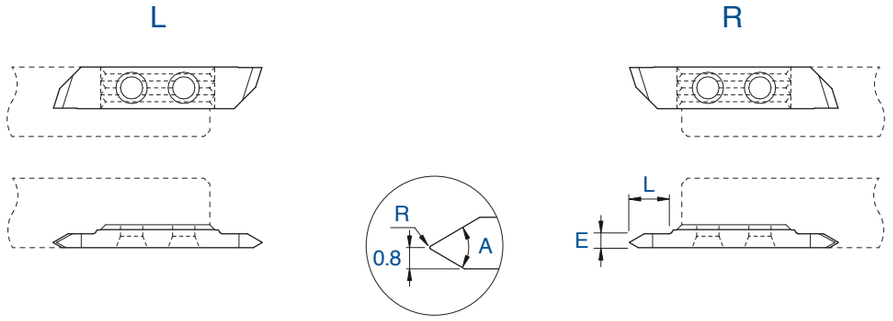
| | | | | | L | | | | | | | R | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N | P | P M N S | P M N | P N | | P M N S | P M | P | P M N S | P M N | P N | P M N S | P M N S |
| A | E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
| 60° | 1.5 | 4 | 0 | 736-60-1.5 | ● | ● | ● | | | | 746-60-1.5 | ● | ● | ● | | | | ● | ● |
| 60° | 1.5 | 4 | 0.02 | 736-60-1.5-R02 | ● | ● | ● | ● | ● | ● | 746-60-1.5-R02 | ● | ● | ● | ● | | ● | ● | ● |
| 60° | 2.0 | 6 | 0 | 736-60-2.0 | ● | ● | ● | | | | 746-60-2.0 | ● | ● | ● | | | | ● | ● |
| 60° | 2.0 | 6 | 0.02 | 736-60-2.0-R02 | ● | ● | ● | ● | ● | ● | 746-60-2.0-R02 | ● | ● | ● | ● | ● | ● | | |
| 55° | 1.5 | 4 | 0 | 736-55-1.5 | ● | ● | ● | | | | 746-55-1.5 | ● | ● | ● | | | | | |
| 55° | 1.5 | 4 | 0.02 | 736-55-1.5-R02 | ● | ● | ● | | | | 746-55-1.5-R02 | ● | ● | ● | | | | | |
| 55° | 2.0 | 6 | 0 | 736-55-2.0 | ● | ● | ● | | | | 746-55-2.0 | ● | ● | ● | | | | | |
| 55° | 2.0 | 6 | 0.02 | 736-55-2.0-R02 | ● | ● | ● | | | | 746-55-2.0-R02 | | ● | ● | | | | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05









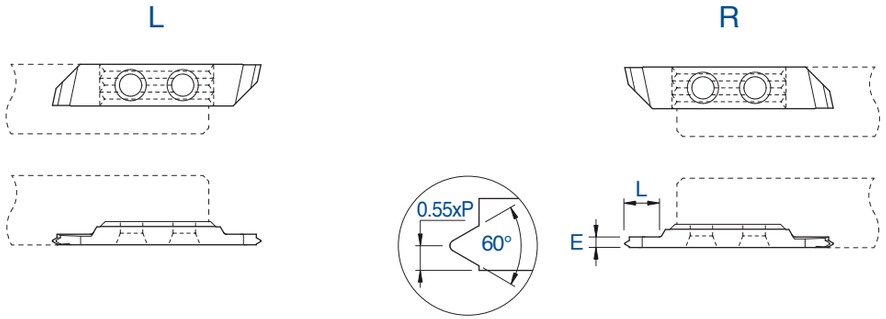

Profil partiel
Teilprofil
Partial profile

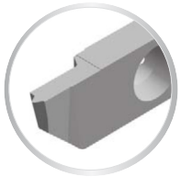
| | | | | L | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N | P | P M N S | P M N | P N | P M N S | P M | P | P M N S | P M N | P N | P M N S |
| A | E | L | R | Pas Steigung Pitch P | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 60° | 2.0 | 6 | 0.06 | 0.50-1.50 | 736-A60° | ● | ● | ● | | | | 746-A60° | ● | ● | ● | ● | | ● |

Plaquettes de filetage avec coupe positive 2°, voir page 1.157
WSP Gewindedrehen mit positivem Schnitt 2°, siehe Seite 1.157
Threading inserts with positive cut 2°, see page 1.157

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



Profil complet métrique
Metrisches Vollprofil
Metric full profile

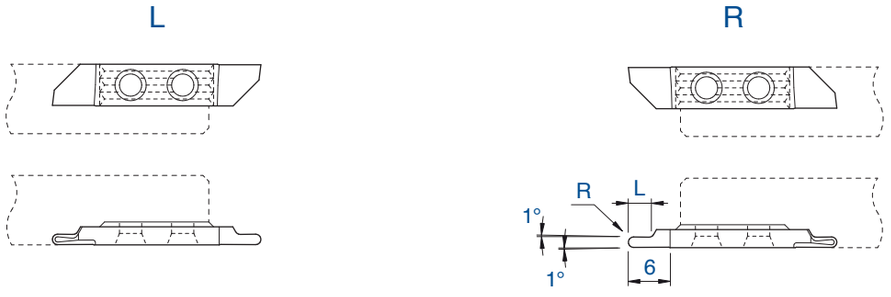
| Pas Steigung Pitch P | E | L | L Art. N° | L TiAlN | L TiN | L N (µx20) | R Art. N° | R TiAlN | R TiN | R N (µx20) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.25 | 1.0 | 3 | 736-M-0.25 | ● | ● | ● | 746-M-0.25 | ● | ● | ● |
| 0.30 | 1.0 | 3 | 736-M-0.30 | ● | ● | ● | 746-M-0.30 | ● | ● | ● |
| 0.35 | 1.0 | 3 | 736-M-0.35 | ● | ● | ● | 746-M-0.35 | ● | ● | ● |
| 0.40 | 1.0 | 3 | 736-M-0.40 | ● | ● | ● | 746-M-0.40 | ● | ● | ● |
| 0.45 | 1.0 | 3 | 736-M-0.45 | ● | ● | ● | 746-M-0.45 | ● | ● | ● |
| 0.50 | 1.0 | 3 | 736-M-0.50 | ● | ● | ● | 746-M-0.50 | ● | ● | ● |
| 0.60 | 1.0 | 3 | 736-M-0.60 | ● | ● | ● | 746-M-0.60 | ● | ● | ● |
| 0.70 | 1.0 | 3 | 736-M-0.70 | ● | ● | ● | 746-M-0.70 | ● | ● | ● |
| 0.75 | 1.0 | 3 | 736-M-0.75 | ● | ● | ● | 746-M-0.75 | ● | ● | ● |
| 0.80 | 1.5 | 4.5 | 736-M-0.80 | ● | ● | ● | 746-M-0.80 | ● | ● | ● |
| 1.00 | 1.5 | 4.5 | 736-M-1.00 | ● | ● | ● | 746-M-1.00 | ● | ● | ● |
| 1.25 | 1.5 | 4.5 | 736-M-1.25 | ● | ● | ● | 746-M-1.25 | ● | ● | ● |
| 1.50 | 2.0 | 6 | 736-M-1.50 | ● | ● | ● | 746-M-1.50 | ● | ● | ● |
| 1.75 | 2.0 | 6 | 736-M-1.75 | ● | ● | ● | 746-M-1.75 | ● | ● | ● |

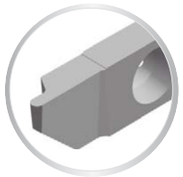
Plaquettes de filetage avec coupe positive 2°, voir page 1.158
WSP Gewindedrehen mit positivem Schnitt 2°, siehe Seite 1.158
Threading inserts with positive cut 2°, see page 1.158

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





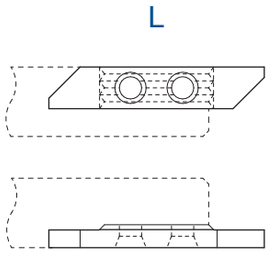
| R | L | L Art. N° | L TiAlN | L TiN | L N (µx20) | R Art. N° | R TiAlN | R TiN | R N (µx20) |
|---|---|---|---|---|---|---|---|---|---|
| 0.25 | 1.5 | - | | | | 747-R0.25 | ● | ● | ● |
| 0.40 | 2 | - | | | | 747-R0.4 | ● | ● | ● |
| 0.50 | 2.5 | 737-R0.5 | ● | ● | ● | 747-R0.5 | ● | ● | ● |
| 0.60 | 2.5 | 737-R0.6 | ● | ● | ● | 747-R0.6 | ● | ● | ● |
| 0.75 | 3 | 737-R0.75 | ● | ● | ● | 747-R0.75 | ● | ● | ● |
| 0.80 | 3 | 737-R0.8 | ● | ● | ● | 747-R0.8 | ● | ● | ● |
| 1.00 | 4 | 737-R1.0 | ● | ● | ● | 747-R1.0 | ● | ● | ● |

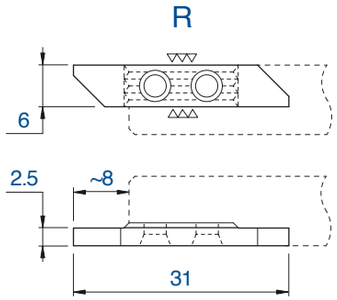
7XX-XX-B

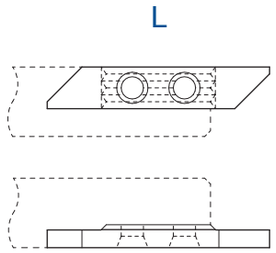
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

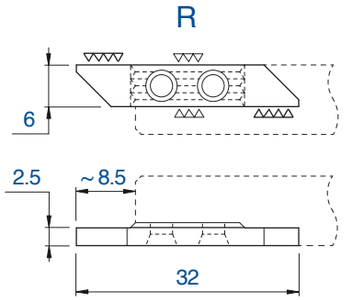
Plaquettes ébauches
WSP-Rohlinge
Blank inserts





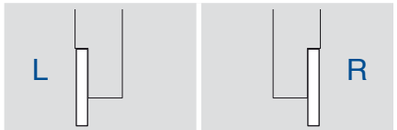








Face de coupe polie
Polierte Schneidfläche
Polished cutting face




| Art. N° | P | M | N | S | N (µk20) | HN (µk10) | Art. N° | N (µk20) | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|
| 731-E | ● | | | | ● | | 741-E | ● | |
| | | | ● | | | ● | | | ● |
| | | | | ● | ● | ● | | ● | ● |




| Art. N° | P | M | N | S | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | KST | KN (µk10-20) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 731-EP | ● | | | | ● | ● | | ● | ● | | ● | | 741-EP | ● | ● | | ● | | ● | ● | |
| | | ● | | | | | | | | | | ● | | | | | | | | | ● |
| | | | ● | | | | | | | | | | | | | | | | | | |
| | | | | ● | | | ● | | | ● | | | | | | ● | | | | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

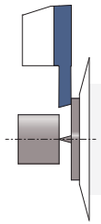
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

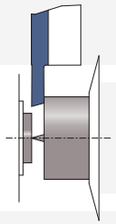
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750 / 760


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| | 753VX-805 | 1.141 | | 762ZF-X | 1.134 |
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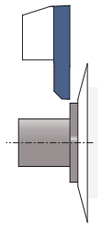
750 / 760
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Halter
Holders
> 1.92



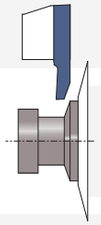
751 / 761
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Abstechen
Parting off
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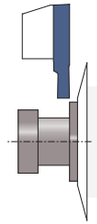
761L/ 751R
Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line
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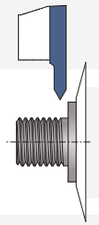
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Tournage avant
Vorwärts drehen
Front turning
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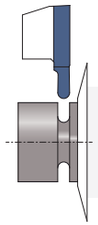
753 / 763
Tournage arrière
Rückwärts drehen
Back turning
> 1.137



754 / 764
Fonçage-tournage
Einstechen und drehen
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> 1.147

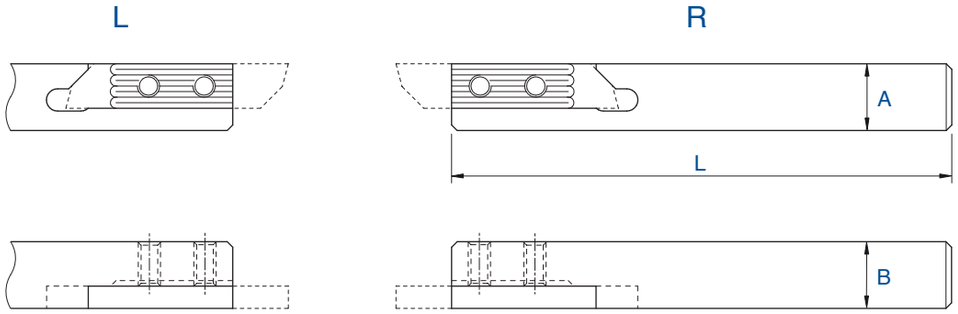


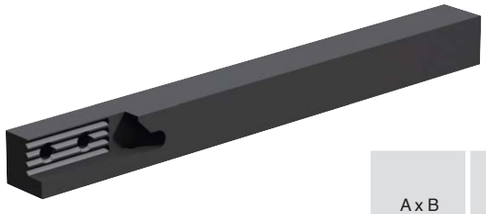
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Gewinde drehen
Threading
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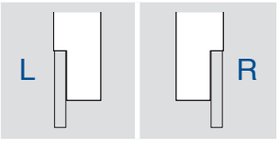


757 / 767
Plaquettes à rayon
Radius Wendeplatten
Radius inserts
> 1.160

Plaquettes ébauches
WSP-Rohlinge
Blank inserts
> 1.162

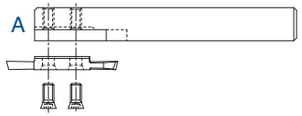


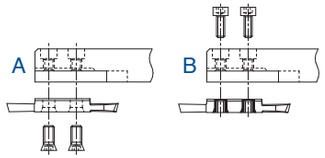



| A x B | L | Serrage Spannsystem Clamping | Art. N° | Art. N° |
|---|---|---|---|---|
| 10 x 10 | 115 | A | 750-10 | 760-10 |
| 10 x 10 | 115 | A + B | 750-10-AB | 760-10-AB |
| 10 x 10 | 50 | A | 750-10-50 | 760-10-50 |
| 12 x 12 | 130 | A | 750-12 | 760-12 |
| 12 x 12 | 130 | A + B | 750-12-AB | 760-12-AB |
| 12 x 12 | 90 | A | 750-12-90 | 760-12-90 |
| 12 x 12 | 90 | A + B | 750-12-90-AB | 760-12-90-AB |
| 12.7 x 12.7 | 130 | A + B | 750-12.7 | 760-12.7 |
| 14 x 14 | 130 | A + B | 750-14 | 760-14 |
| 16 x 16 | 130 | A + B | 750-16 | 760-16 |
| 16 x 16 | 75 | A + B | 750-16-75 | 760-16-75 |
| 20 x 20 | 120 | A + B | 750-20 | 760-20 |
| 25 x 25 | 140 | A | 760/750-25 | |

Serrage standard A
Standard Spannsystem A
Standard clamping system A




Serrage A + B
Spannsystem A + B
Clamping system A + B



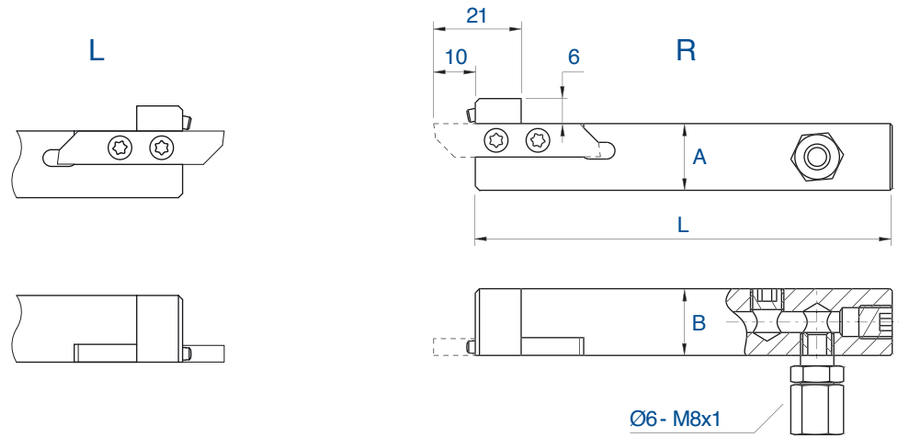

760/750-25
R + L

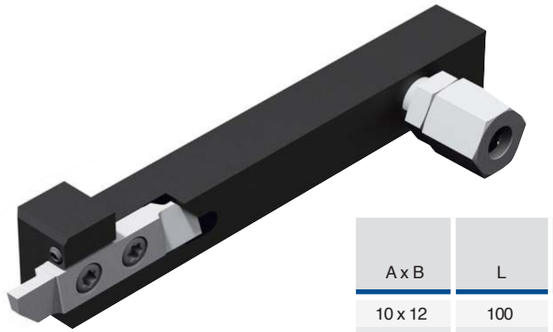


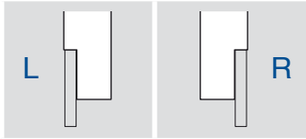

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.







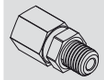



| A x B | L | Serrage Spannsystem Clamping | Art. N° | Art. N° |
|---|---|---|---|---|
| 10 x 12 | 100 | A + B | 750-1012-JET | 760-1012-JET |
| 10 x 12 | 80 | A + B | - | 760-1012-80-JET |
| 12 x 12 | 100 | A + B | 750-12-JET | 760-12-JET |
| 12.7 x 12.7 | 100 | A + B | 750-12.7-JET | 760-12.7-JET |
| 16 x 16 | 100 | A + B | 750-16-JET | 760-16-JET |
| 20 x 20 | 100 | A + B | 750-20-JET | 760-20-JET |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

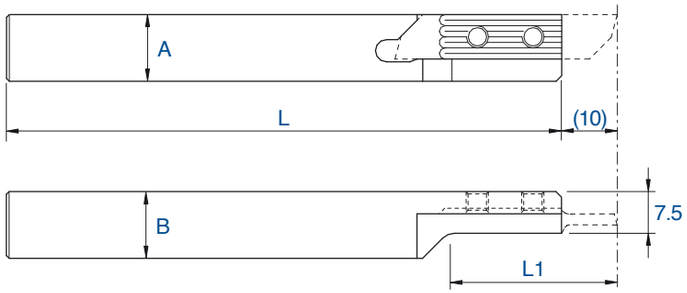
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

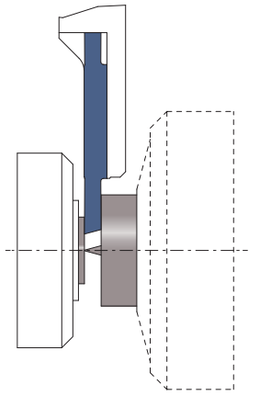
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Pièces de rechange Ersatzteile Spare parts |  |  | Buses Düsen Nozzles  |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| 750-JET / 760-JET | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 |
| | | | More option see JET-Line |

Utiliser des plaquettes type 751R
WSP Typ 751R verwenden
Use inserts type 751R

Voir pages 1.114 - 1.127
Siehe Seiten 1.114 - 1.127
See pages 1.114 - 1.127

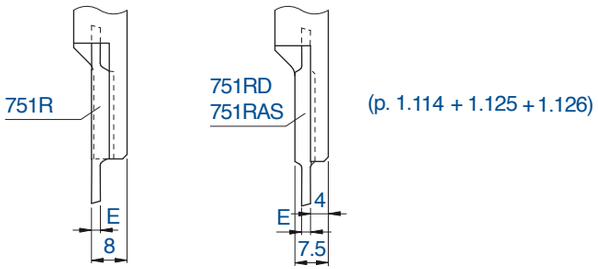


## L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 12 x 12 | 130 | 30 | 750RC-12 |
| 12.7 x 12.7 | 130 | 30 | 750RC-12.7 |
| 16 x 16 | 130 | 40 | 750RC-16 |




(p. 1.114 + 1.125 + 1.126)

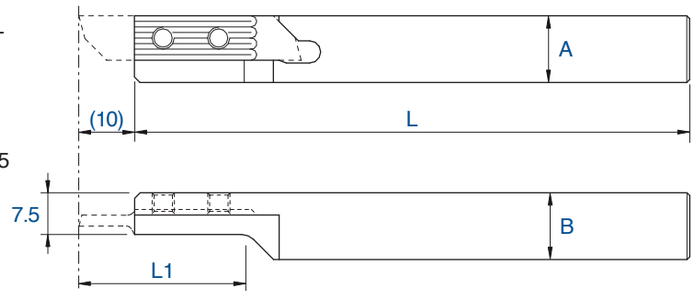
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

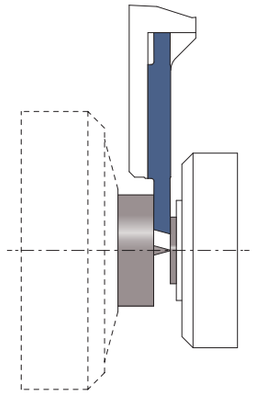




Utiliser des plaquettes type 761L
WSP Typ 761L verwenden
Use insets type 761L

Voir pages 1.114 - 1.120 + 1.125
Siehe Seiten 1.114 - 1.120 + 1.125
See pages 1.114 - 1.120 + 1.125

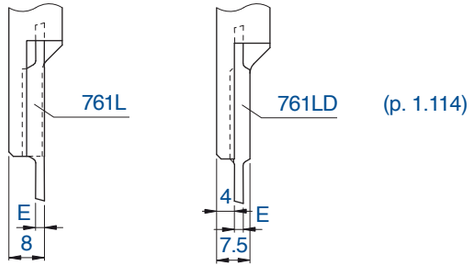


## R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

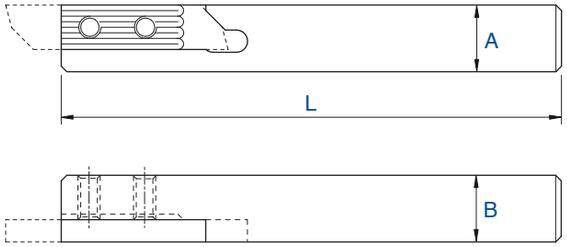
| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 16 x 16 | 130 | 40 | 760LC-16 |

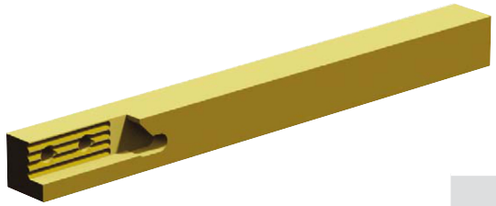


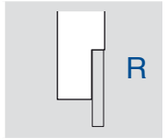

(p. 1.114)

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

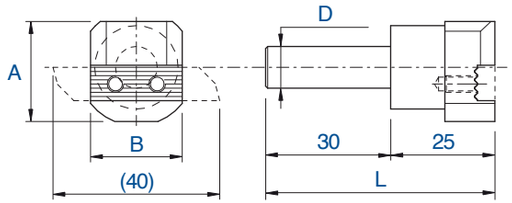
## R

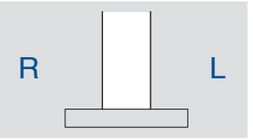





| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 10 x 10 | 115 | A | 760-10-NOVIBRA |
| 12 x 12 | 115 | A | 760-12-NOVIBRA |

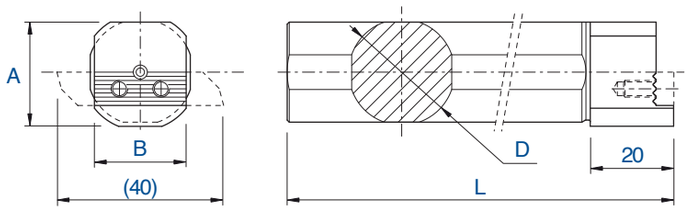


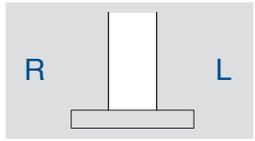




| A x B | L | D | Art. N° |
|---|---|---|---|
| 24 x 22 | 55 | 10 | 760/750-D10 |

Chaquesupport est livré avecune ou plusieurs vis. Les clés sont àcommander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. DieSchlüssel sind separat zu bestellen.
Each holder is supplied with oneor more screws. The keys must be ordered separately.

Chaquesupport est livré avecune ou plusieurs vis. Les clés sont àcommander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. DieSchlüssel sind separat zu bestellen.
Each holder is supplied with oneor more screws. The keys must be ordered separately.



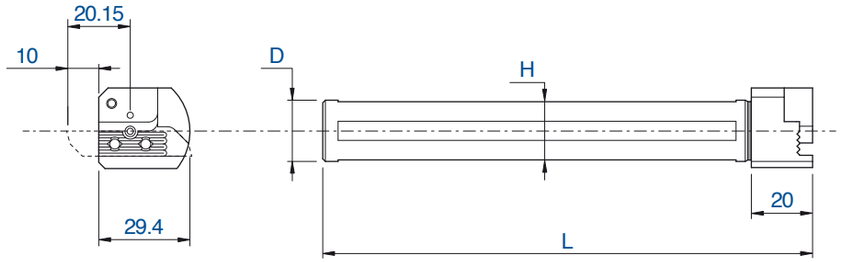



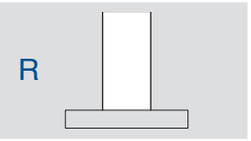

| A x B | L | D | Art. N° |
|---|---|---|---|
| 25 x 22 | 160 | 16 | 760/750-D16 |
| 25 x 22 | 160 | 19.05 | 760/750-D19.05 |
| 25 x 22 | 110 | 19.05 | 760/750-D19.05-S |
| 25 x 22 | 160 | 20 | 760/750-D20 |
| 25 x 22 | 110 | 22 | 760/750-D22 |
| 25 x 22 | 200 | 25 | 760/750-D25 |
| 25 x 22 | 200 | 25.4 | 760/750-D25.4 |
| 25 x 22 | 125 | 25.4 | 760/750-D25.4-S |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.



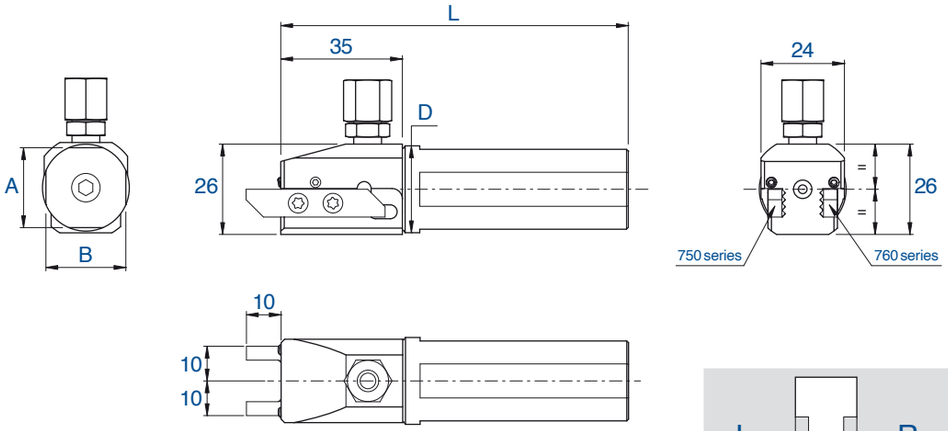




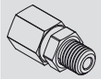

| D | H | L | Art. N° |
|---|---|---|---|
| 16 | 15 | 160 | 760-D16-160-JET |
| 19.05 | 18 | 160 | 760-D19.05-160-JET |
| 19.05 | 18 | 110 | 760-D19.05-110-JET |
| 20 | 19 | 160 | 760-D20-160-JET |
| 22 | 20 | 110 | 760-D22-110-JET |
| 25 | 24 | 200 | 760-D25-200-JET |
| 25.4 | 24 | 200 | 760-D25.4-200-JET |
| 25.4 | 24 | 125 | 760-D25.4-125-JET |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.




| L | R |
|---|---|

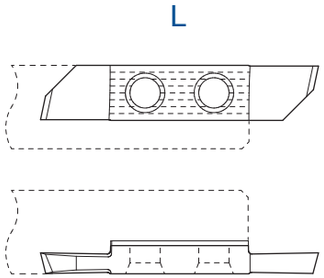
| A x B | L | D | Art. N° |
|---|---|---|---|
| 23 x 23 | 100 | 25 | 760/750-AX-D25-JET |
| 23 x 23 | 100 | 25.4 | 760/750-AX-D25.4-JET |

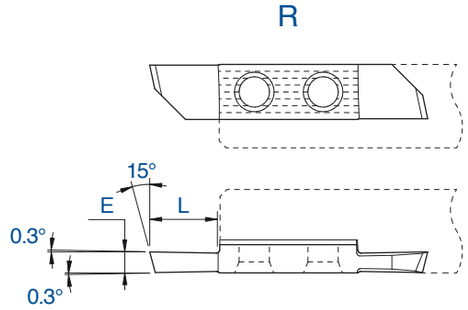
| Pièces de rechange<br>Ersatzteile<br>Spare parts |  |  | Buses<br>Düsen<br>Nozzles  |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| 760/750-AX | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 |
| | | | More option see JET-Line |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.



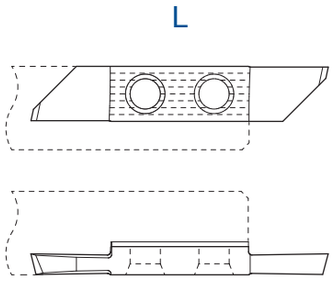



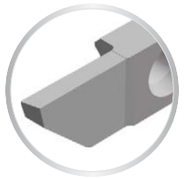



| | L | | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.0 | 5 | 751-1.0 | ● | ● | ● | ● | ● | ● | 761-1.0 | ● | ● | ● | ● | ● | ● | ● |
| 1.2 | 5 | 751-1.2 | ● | ● | ● | | | | 761-1.2 | ● | ● | ● | ● | ● | | ● |
| 1.5 | 7.5 | 751-1.5 | ● | ● | ● | ● | | ● | 761-1.5 | ● | ● | ● | ● | ● | ● | ● |
| 1.8 | 7.5 | 751-1.8 | ● | ● | ● | | | | 761-1.8 | ● | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 751-2.0 | ● | ● | ● | ● | ● | ● | 761-2.0 | ● | ● | ● | ● | ● | ● | ● |
| 2.2 | 10 | 751-2.2 | ● | ● | ● | | | | 761-2.2 | ● | ● | ● | ● | ● | | ● |
| 2.5 | 10 | 751-2.5 | ● | ● | ● | ● | | ● | 761-2.5 | ● | ● | ● | ● | ● | ● | ● |
| 3.0 | 10 | 751-3.0 | ● | ● | ● | | | | 761-3.0 | ● | ● | ● | ● | ● | | ● |

7XX-XX-B 

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

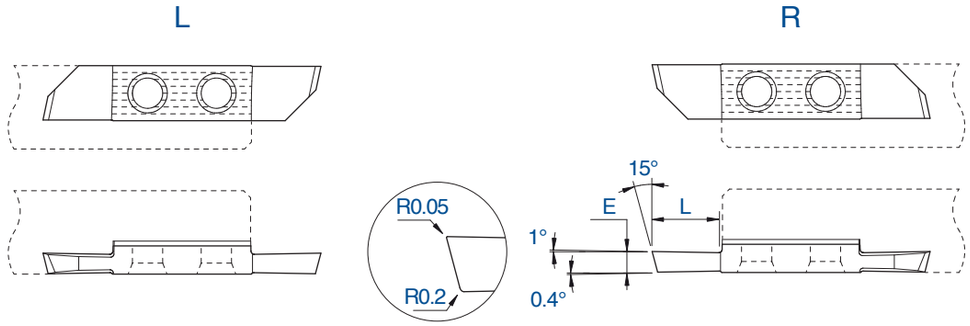


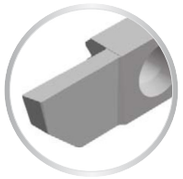



| E | L | L Art. N° | L TiAlN | L TiN | L N (µk20) | L HTA | L HTiN | L HN (µk10) | R Art. N° | R TiAlN | R TiAlX | R TiN | R N (µk20) | R HTA | R HTiN | R HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 11.5 | 751S-2.0 | ● | ● | ● | ● | | ● | 761S-2.0 | ● | ● | ● | ● | ● | | ● |
| 2.2 | 11.5 | 751S-2.2 | ● | ● | ● | | | | 761S-2.2 | ● | ● | ● | ● | ● | | ● |
| 2.5 | 11.5 | 751S-2.5 | ● | ● | ● | ● | | ● | 761S-2.5 | ● | ● | ● | ● | ● | | ● |
| 3.0 | 11.5 | 751S-3.0 | ● | ● | ● | | | | 761S-3.0 | ● | ● | ● | ● | ● | | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

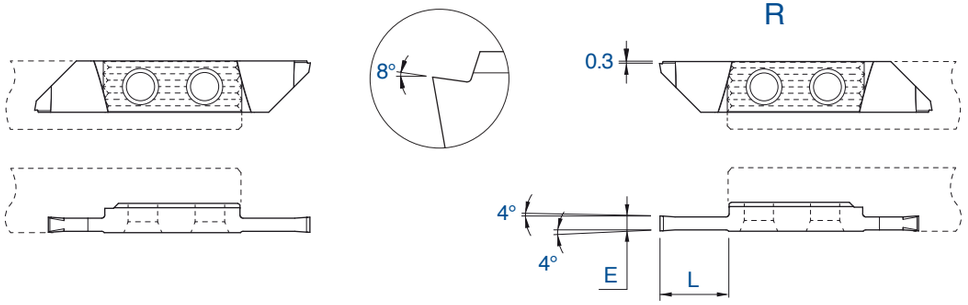


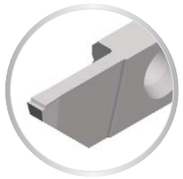



| E | L | L Art. N° | L TiAlN | L TiN | L N (µk20) | L HTA | L HTiN | L HN (µk10) | R Art. N° | R TiAlN | R TiAlX | R TiN | R N (µk20) | R HTA | R HTiN | R HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 7.5 | 751-1.5-R05 | ● | ● | ● | | | | 761-1.5-R05 | ● | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 751-2.0-R05 | ● | ● | ● | | | | 761-2.0-R05 | ● | ● | ● | ● | ● | | ● |
| 2.5 | 10 | 751-2.5-R05 | ● | ● | ● | | | | 761-2.5-R05 | ● | ● | ● | ● | | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



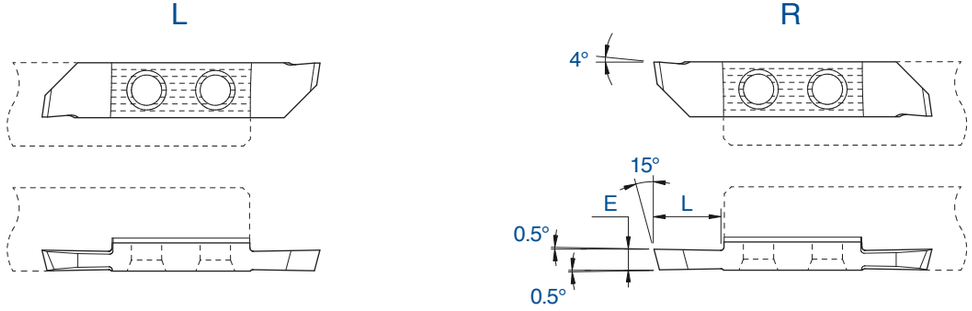



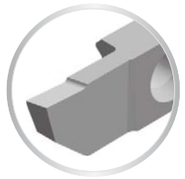
| | | L | | | R | | |
|---|---|---|---|---|---|---|---|
| E | L | Art. N° | HCR-TF | HN (µk10) | Art. N° | HCR-TF | HN (µk10) |
| 1.5 | 10 | 751NX840-1.5 | ● | ● | 761NX840-1.5 | ● | ● |
| 2.0 | 11 | 751NX840-2.0 | ● | ● | 761NX840-2.0 | ● | ● |
| 2.5 | 11 | 751NX840-2.5 | ● | ● | 761NX840-2.5 | ● | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



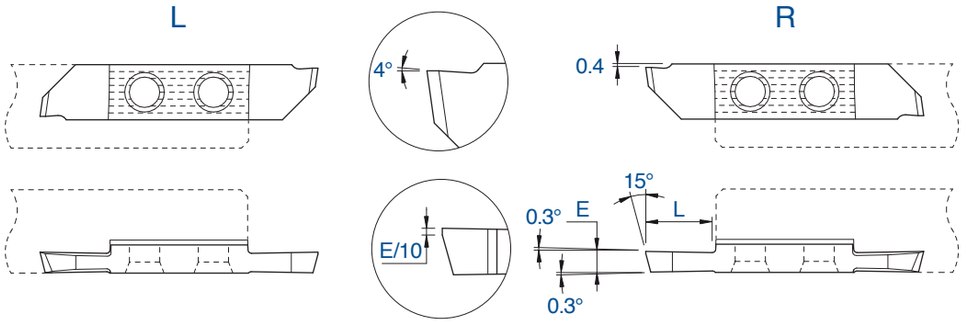


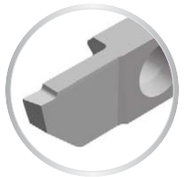


| | | L | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.5 | 7.5 | - | | | | | | | 761X4-1.5 | ● | ● | ● | | | |
| 2.0 | 10 | 751X4-2.0 | ● | ● | ● | ● | | ● | 761X4-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 10 | - | | | | | | | 761X4-2.5 | ● | ● | ● | | | |

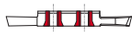
7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



| L | | | | | | | | R | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.5 | 7.5 | 751XF-1.5 | ● | ● | ● | ● | | ● | 761XF-1.5 | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 751XF-2.0 | ● | ● | ● | ● | ● | ● | 761XF-2.0 | ● | ● | ● | ● | ● | ● |
| 2.2 | 10 | 751XF-2.2 | ● | ● | ● | | | | 761XF-2.2 | ● | ● | ● | | | |
| 2.5 | 10 | 751XF-2.5 | ● | ● | ● | ● | | ● | 761XF-2.5 | ● | ● | ● | | | |
| 3.0 | 10 | 751XF-3.0 | ● | ● | ● | | | | 761XF-3.0 | ● | ● | ● | ● | | ● |

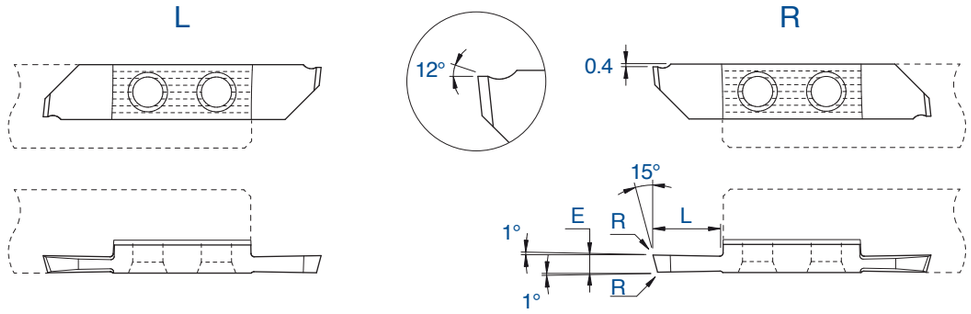
7XX-XX-B

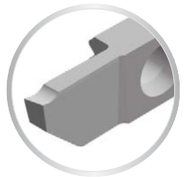


Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







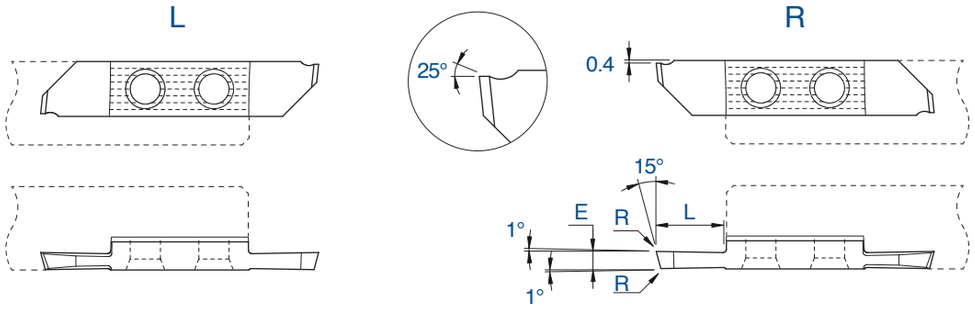



| L | | | | R | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.5 | 7.5 | 0.03 | 751X12-1.5 | ● | ● | ● | ● | | ● | 761X12-1.5 | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 0.03 | 751X12-2.0 | ● | ● | ● | ● | | ● | 761X12-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 10 | 0.03 | 751X12-2.5 | ● | ● | ● | | | | 761X12-2.5 | ● | ● | ● | ● | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





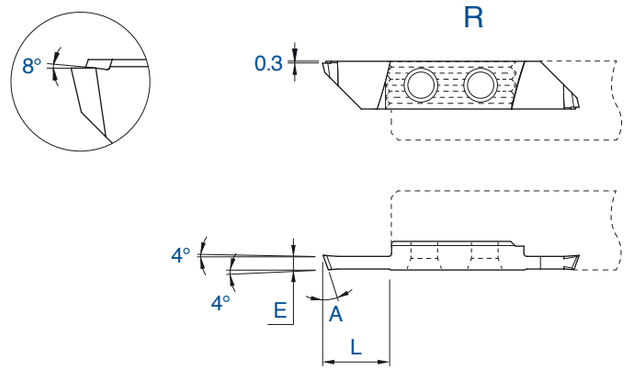

| L | | | | | | | | | | R | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.5 | 7.5 | 0.03 | 751X25-1.5 | ● | ● | ● | ● | | ● | 761X25-1.5 | ● | ● | ● | | | |
| 2.0 | 10 | 0.03 | 751X25-2.0 | ● | ● | ● | | | | 761X25-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 10 | 0.03 | 751X25-2.5 | ● | ● | ● | | | | 761X25-2.5 | ● | ● | ● | ● | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





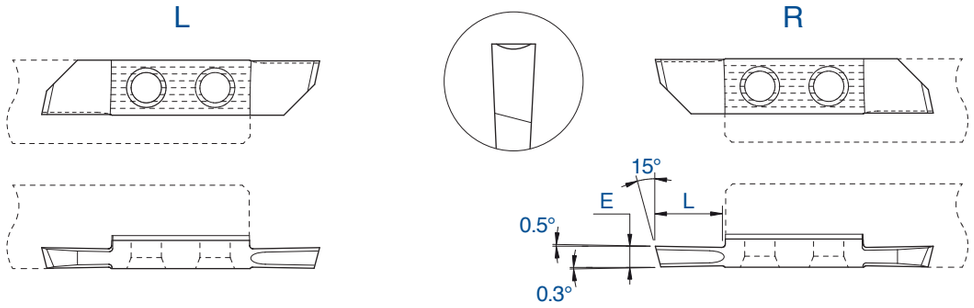


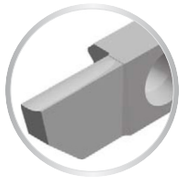



| R | | | | |
|---|---|---|---|---|
| E | L | A | Art. N° | HCR-TF | HN (µk10) |
| 1.4 | 10 | 20° | 761X840-1.4-20 | ● | ● |
| 2 | 11 | 5° | 761X840-2.0-5 | ● | ● |
| 2.5 | 11 | 5° | 761X840-2.5-5 | ● | ● |
| 1.9 | 11 | 20° | 761X840-1.9-20 | ● | ● |
| 2.4 | 11 | 20° | 761X840-2.4-20 | ● | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



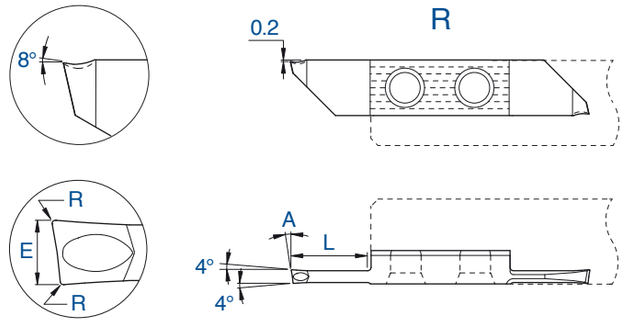
| E | L | Art. N° | L: TiAlN | L: TiN | L: N (µk20) | L: HTA | L: HTiN | L: HN (µk10) | Art. N° | R: TiAlN | R: TiN | R: N (µk20) | R: HTA | R: HTiN | R: HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 7.5 | - | | | | | | | 761U-1.5 | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 751U-2.0 | ● | ● | ● | | | | 761U-2.0 | ● | ● | ● | | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05










| E | A | L | R | Art. N° | R: TiAlN | R: N (µk20) |
|---|---|---|---|---|---|---|
| 2.0 | 0° | 11 | 0.10 | 761ZU8-2.0-R10 | ● | |
| 2.0 | 8° | 11 | 0.10 | 761ZU8-2.0-8°-R10 | ● | |

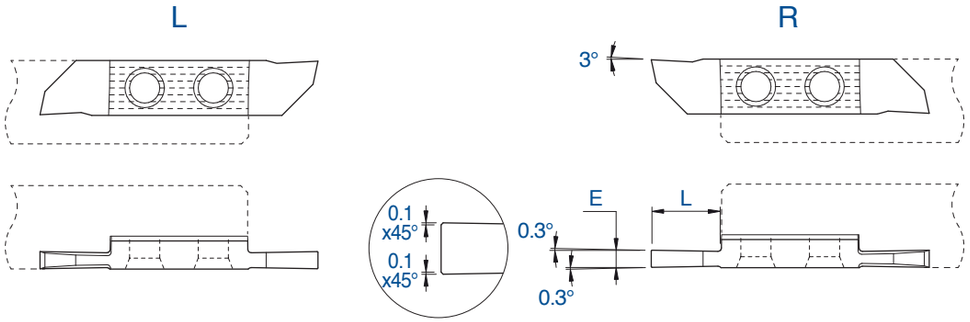


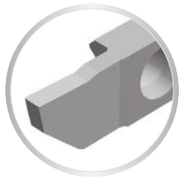
Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

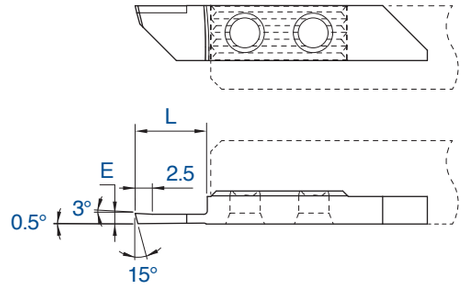


| L | | | | | | | | | R | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 2.0 | 10 | 751NXF-2.0 | ● | ● | ● | ● | | ● | 761NXF-2.0 | ● | ● | ● | ● | ● | ● |
| 2.5 | 10 | 751NXF-2.5 | ● | ● | ● | | | | 761NXF-2.5 | ● | ● | ● | | | |
| 3.0 | 10 | 751NXF-3.0 | ● | ● | ● | | | | 761NXF-3.0 | ● | ● | ● | | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05






| R | | | |
|---|---|---|---|
| E | L | Art. N° | PCD |
| 1.5 | 10 | 761-1.5-PCD | ● |
| 2 | 11 | 761-2.0-PCD | ● |
| 2.5 | 11 | 761-2.5-PCD | ● |

7XX-XX-B

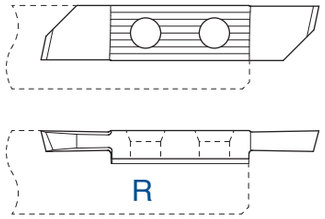
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

Tronçonnage
Abstechen
Parting off

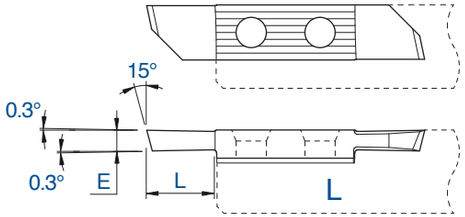
Coupe déportée
Versetztes Schneiden
Cut off line



## Cut L




## Cut R





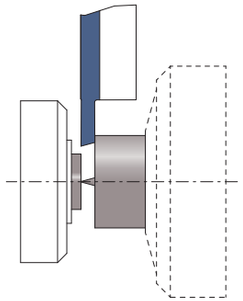

### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

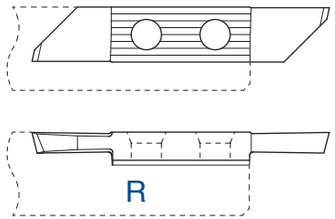
### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

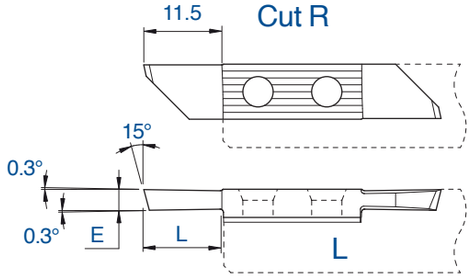
| E | L | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 5 | 761L-1.0 | ● | ● | ● | ● | | ● | 751R-1.0 | ● | ● | ● | ● | ● | | ● |
| 1.5 | 7.5 | 761L-1.5 | ● | ● | ● | ● | | ● | 751R-1.5 | ● | ● | ● | ● | ● | | ● |
| 1.8 | 7.5 | 761L-1.8 | ● | ● | ● | | | | 751R-1.8 | ● | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 761L-2.0 | ● | ● | ● | ● | | ● | 751R-2.0 | ● | ● | ● | ● | ● | ● | ● |
| 2.2 | 10 | 761L-2.2 | ● | ● | ● | | | | 751R-2.2 | ● | ● | ● | ● | | | |
| 2.5 | 10 | 761L-2.5 | ● | ● | ● | ● | | ● | 751R-2.5 | ● | ● | ● | ● | ● | ● | ● |
| 3.0 | 10 | 761L-3.0 | ● | ● | ● | | | | 751R-3.0 | ● | ● | ● | ● | ● | | ● |

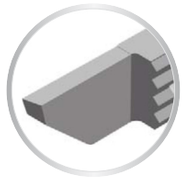


## Cut L




## Cut R



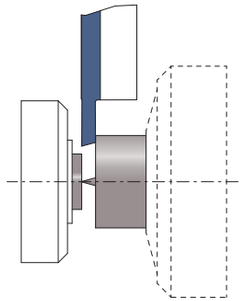
### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

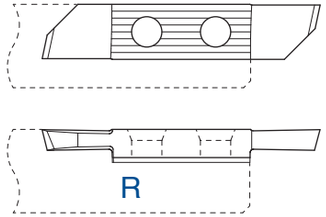
### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

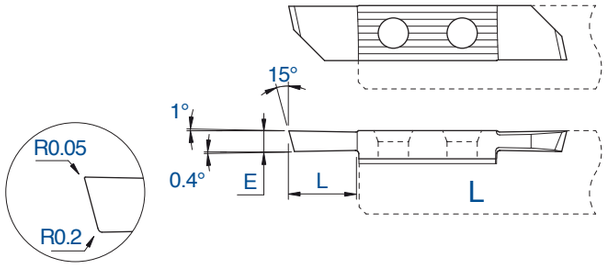
| E | L | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 5.5 | 761LS-1.0 | ● | ● | ● | ● | | ● | 751RS-1.0 | ● | ● | ● | ● | ● | | ● |
| 1.5 | 8 | 761LS-1.5 | ● | ● | ● | ● | | ● | 751RS-1.5 | ● | ● | ● | ● | ● | | ● |
| 2.0 | 11.5 | 761LS-2.0 | ● | ● | ● | | | | 751RS-2.0 | ● | ● | ● | ● | ● | ● | ● |
| 2.2 | 11.5 | 761LS-2.2 | ● | ● | ● | | | | 751RS-2.2 | ● | ● | ● | ● | ● | | ● |
| 2.5 | 11.5 | 761LS-2.5 | ● | ● | ● | | | | 751RS-2.5 | ● | ● | ● | ● | ● | ● | ● |
| 3.0 | 11.5 | 761LS-3.0 | ● | ● | ● | | | | 751RS-3.0 | ● | ● | ● | ● | ● | | ● |



## Cut L




## Cut R





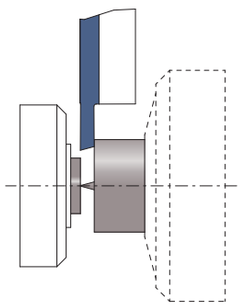

### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

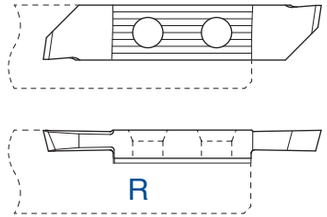
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 7.5 | 761L-1.5-R05 | ● | ● | ● | | | | 751R-1.5-R05 | ● | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 761L-2.0-R05 | ● | ● | ● | | | | 751R-2.0-R05 | ● | ● | ● | ● | | | |



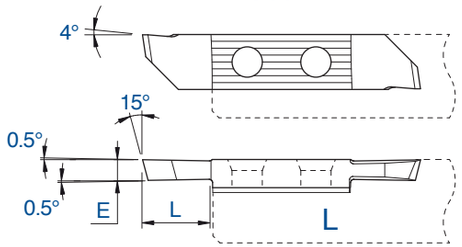




## Cut L




## Cut R





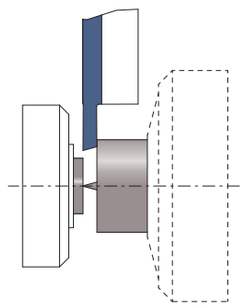

### R (L)

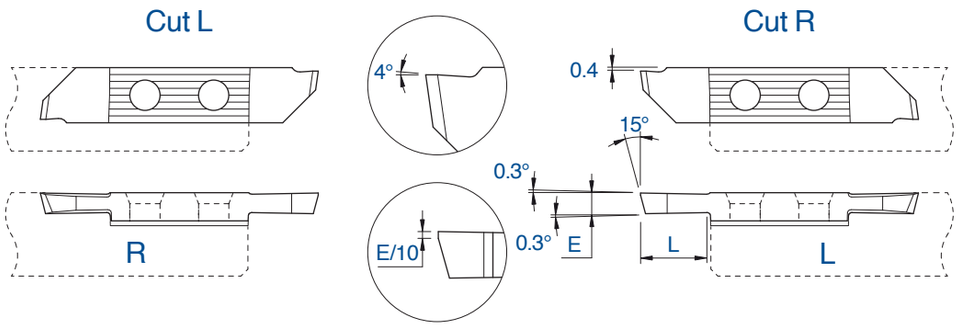
Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

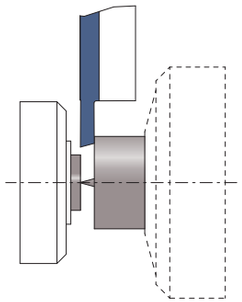
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 7.5 | - | | | | | | | 751RX4-1.5 | ● | ● | ● | ● | ● | ● |
| 2.0 | 10 | 761LX4-2.0 | ● | ● | ● | | | | 751RX4-2.0 | ● | ● | ● | ● | ● | ● |
| 2.5 | 10 | - | | | | | | | 751RX4-2.5 | ● | ● | ● | | | |

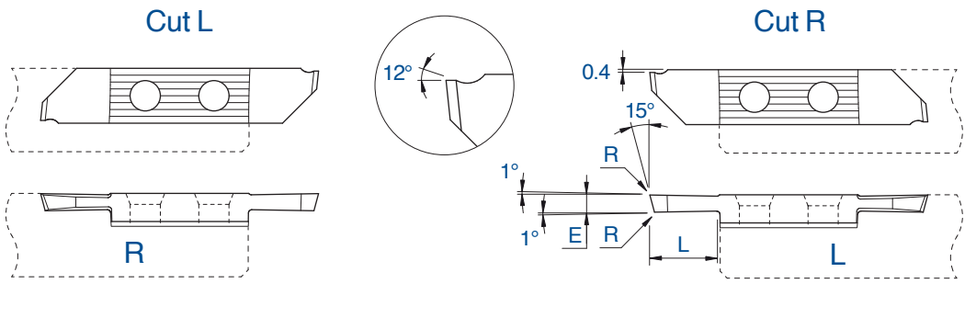






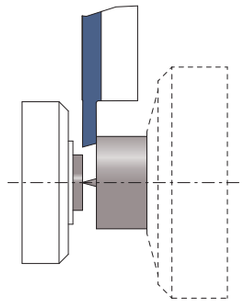

| | | R (L) Coupe à gauche déportée Versetztes Linksschneiden Left cut off line | | | | | | | L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.5 | 7.5 | - | | | | | | | 751RXF-1.5 | ● | ● | ● | ● | | ● |
| 2.0 | 10 | 761LXF-2.0 | ● | ● | ● | | | | 751RXF-2.0 | ● | ● | ● | ● | ● | ● |
| 2.5 | 10 | 761LXF-2.5 | ● | ● | ● | | | | 751RXF-2.5 | ● | ● | ● | ● | | ● |
| 3.0 | 10 | 761LXF-3.0 | ● | ● | ● | | | | 751RXF-3.0 | ● | ● | ● | ● | | ● |







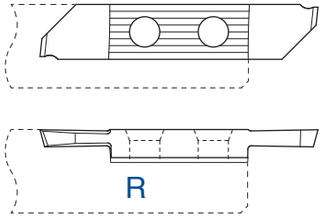

| | | | R (L) Coupe à gauche déportée Versetztes Linksschneiden Left cut off line | | | | | | | L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.5 | 7.5 | 0.03 | - | | | | | | | 751RX12-1.5 | ● | ● | ● | | | |
| 2.0 | 10 | 0.03 | 761LX12-2.0 | ● | ● | ● | | | | 751RX12-2.0 | ● | ● | ● | ● | ● | ● |

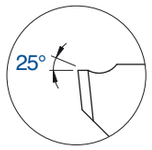


Tronçonnage
Abstechen
Parting off

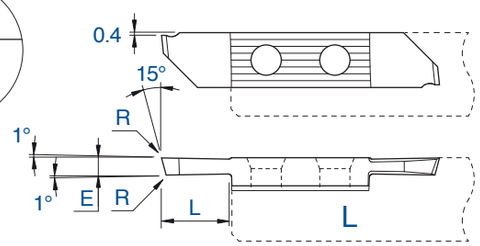


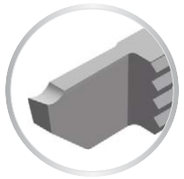
## Cut L




## Cut R



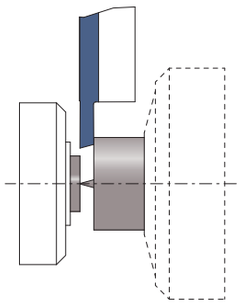
### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

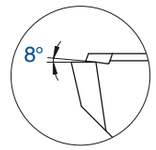
### L (R)

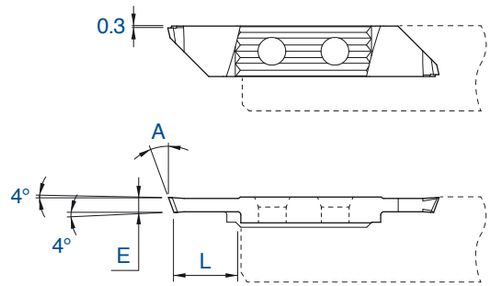
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 10 | 0.03 | 761LX25-2.0 | ● | ● | ● | 751RX25-2.0 | ● | ● | ● |



## Cut R



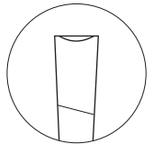


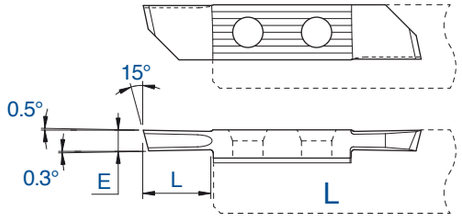

### L (R)

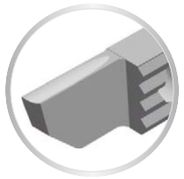
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | A | Art. N° | HCR-TF | HN (µk10) |
|---|---|---|---|---|---|
| 1.4 | 10 | 20° | 751RX840-1.4-20 | ● | ● |
| 1.5 | 10 | 5° | 751RX840-1.5-5 | ● | ● |
| 2 | 11 | 5° | 751RX840-2.0-5 | ● | ● |
| 2.5 | 11 | 5° | 751RX840-2.5-5 | ● | ● |
| 1.9 | 11 | 20° | 751RX840-1.9-20 | ● | ● |
| 2.4 | 11 | 20° | 751RX840-2.4-20 | ● | ● |

## Cut R



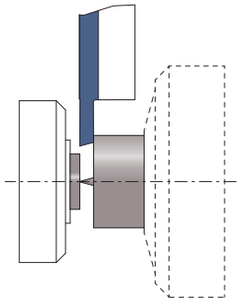


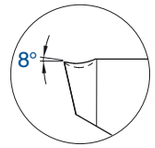



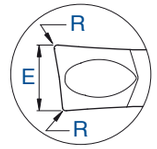
### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

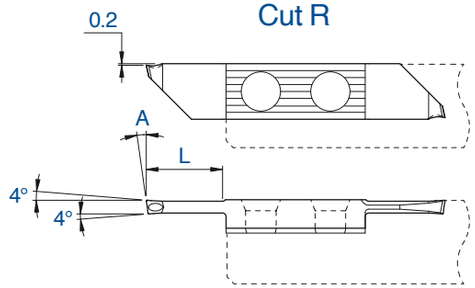
| E | L | Art. N° | P M N S TiAlN | P M N TiN | P S N (µk20) |
|---|---|---|---|---|---|
| 1.5 | 7.5 | 751RU-1.5 | ● | ● | ● |
| 2.0 | 10 | 751RU-2.0 | ● | ● | ● |






## Cut R






### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

| E | A | L | R | Art. N° | P M N S TiAlN | P M N TiN | P S N (µk20) |
|---|---|---|---|---|---|---|---|
| 2.0 | 8° | 11.0 | 0.10 | 751RZU8-2.0-8°-R10 | ● | | |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

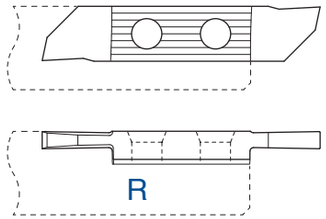
f min: 0.02mm/U

Tronçonnage
Abstechen
Parting off

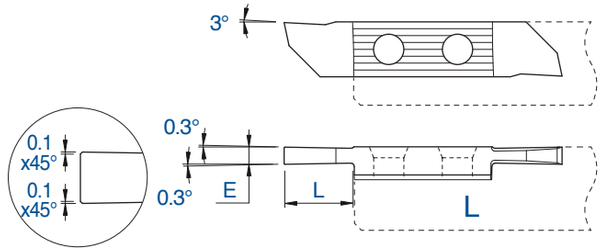
Coupe déportée
Versetztes Schneiden
Cut off line



## Cut L




## Cut R





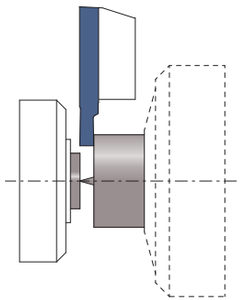

### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

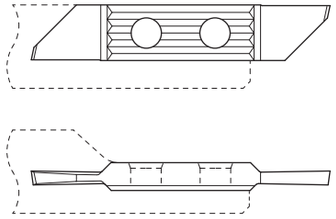
### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

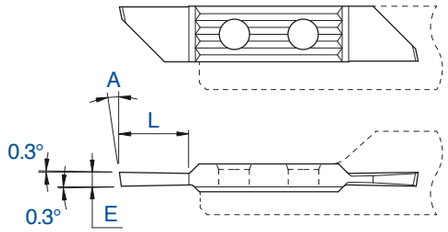
| E | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 10 | 761NXF-2.0 | ● | ● | ● | ● | | ● | 751NXF-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 10 | 761NXF-2.5 | ● | ● | ● | | | | 751NXF-2.5 | ● | ● | ● | | | |
| 3.0 | 10 | 761NXF-3.0 | ● | ● | ● | | | | 751NXF-3.0 | ● | ● | ● | | | |

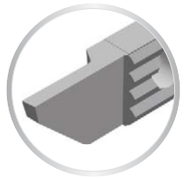


## Cut L




## Cut R



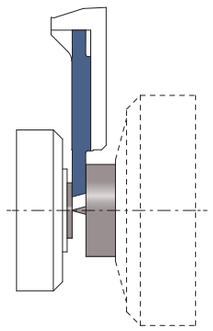
### R (L)

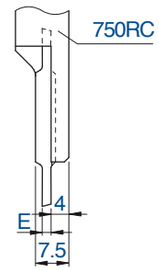
Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | A | L | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 8° | 5 | 761LD-1.0-8° | ● | ● | ● | ● | | ● | 751RD-1.0-8° | ● | ● | ● | ● | | ● |
| 1.0 | 15° | 5 | 761LD-1.0-15° | ● | ● | ● | ● | | ● | 751RD-1.0-15° | ● | ● | ● | ● | | ● |
| 1.2 | 8° | 5 | 761LD-1.2-8° | ● | ● | ● | | | | 751RD-1.2-8° | ● | ● | ● | ● | ● | ● |
| 1.5 | 8° | 8 | 761LD-1.5-8° | ● | ● | ● | | | | 751RD-1.5-8° | ● | ● | ● | ● | ● | ● |
| 1.5 | 15° | 8 | 761LD-1.5-15° | ● | ● | ● | | | | 751RD-1.5-15° | ● | ● | ● | ● | | ● |
| 1.6 | 8° | 8 | 761LD-1.6-8° | ● | ● | ● | | | | 751RD-1.6-8° | ● | ● | ● | | | |
| 1.8 | 8° | 10 | 761LD-1.8-8° | ● | ● | ● | | | | 751RD-1.8-8° | ● | ● | ● | ● | | ● |
| 2.0 | 8° | 10 | 761LD-2.0-8° | ● | ● | ● | | | | 751RD-2.0-8° | ● | ● | ● | ● | | ● |
| 2.0 | 15° | 10 | 761LD-2.0-15° | ● | ● | ● | ● | | ● | 751RD-2.0-15° | ● | ● | ● | ● | | ● |
| 2.5 | 8° | 10 | - | | | | | | | 751RD-2.5-8° | ● | ● | ● | ● | | ● |



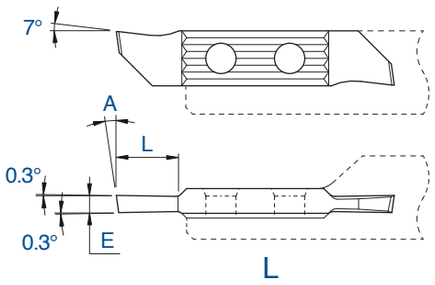


Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line



## Cut R

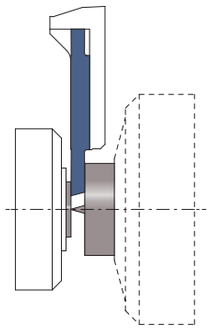


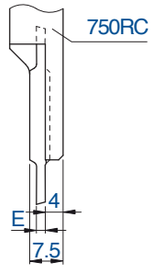



### L (R)

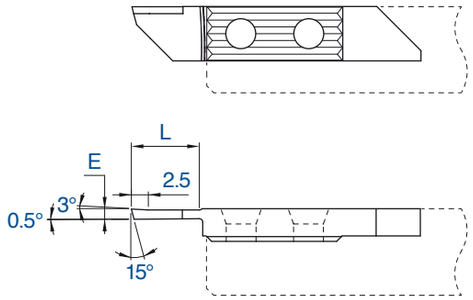
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

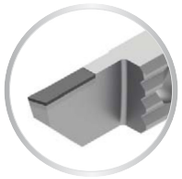
| E | A | L | Art. N° | TiAlN | TiN | N (µx20) | HTA | HTiN | HN (µx10) |
|---|---|---|---|---|---|---|---|---|---|
| 1.6 | 8° | 7.5 | 751RAS-1.6-8° | ● | ● | ● | | | |
| 1.6 | 15° | 7.5 | 751RAS-1.6-15° | ● | ● | ● | ● | | ● |
| 2.0 | 8° | 9 | 751RAS-2.0-8° | ● | ● | ● | ● | | ● |
| 2.0 | 15° | 9 | 751RAS-2.0-15° | ● | ● | ● | | | |
| 2.5 | 8° | 9 | 751RAS-2.5-8° | ● | ● | ● | | | |
| 2.5 | 15° | 9 | 751RAS-2.5-15° | ● | ● | ● | | | |






## Cut R

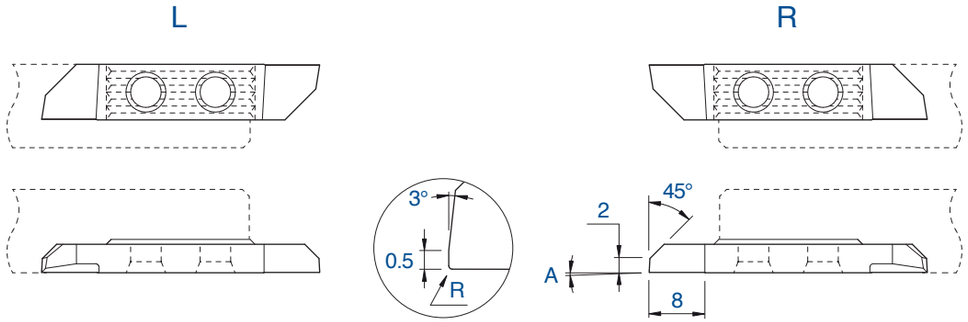


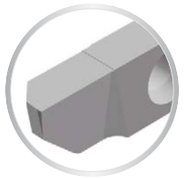



### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | Art. N° | PCD |
|---|---|---|---|
| 1.5 | 10 | 751R-1.5-PCD | ● |
| 2 | 11 | 751R-2.0-PCD | ● |
| 2.5 | 11 | 751R-2.5-PCD | ● |



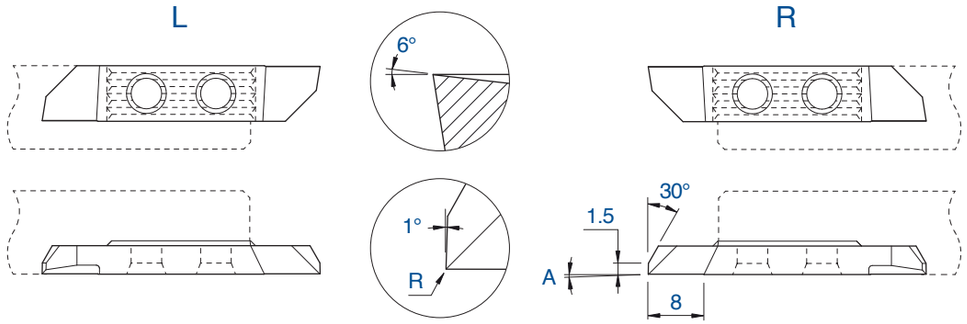
| A | R | L Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | R Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 0 | 752 | ● | ● | ● | ● | | ● | 762 | ● | ● | ● | ● | | ● |
| 0° | 0.20 | - | | | | | | | 762-R20 | ● | ● | ● | ● | | ● |
| 3° | 0 | 752-3° | ● | ● | ● | ● | | ● | 762-3° | ● | ● | ● | ● | | ● |
| 3° | 0.20 | - | | | | | | | 762-3°-R20 | ● | ● | ● | ● | ● | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





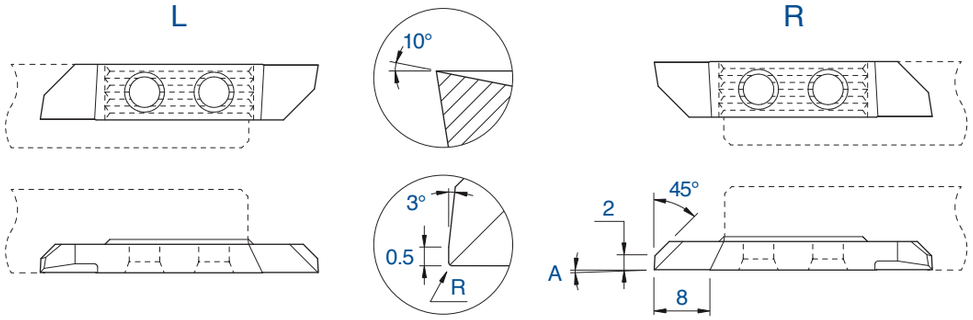





| A | R | L Art. N° | TiAlN | TiN | N (µk20) | R Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 0° | 0 | 752PX | ● | ● | ● | 762PX | ● | ● | ● |

7XX-XX-B

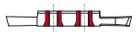
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05






| L | | | | | | | | R | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0° | 0 | 752X | ● | ● | ● | ● | ● | ● | 762X | ● | ● | ● | ● | ● | ● |
| 0° | 0.20 | 752X-R20 | ● | ● | ● | | | | 762X-R20 | ● | ● | ● | ● | ● | ● |
| 3° | 0 | - | | | | | | | 762X-3° | ● | ● | ● | ● | ● | ● |
| 3° | 0.20 | - | | | | | | | 762X-3°-R20 | ● | ● | ● | ● | ● | ● |

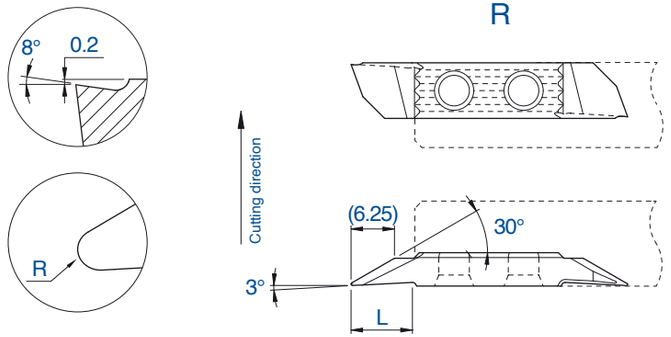
7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







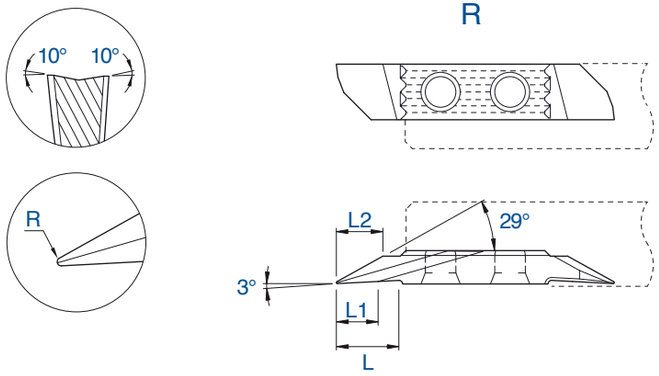



| R | | | | | | |
|---|---|---|---|---|---|---|
| L | R | Art. N° | HTA | HTiN | HN (µk10) | |
| 9 | 0.15 | 762VX-800-R15 | ● | | ● | |

7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





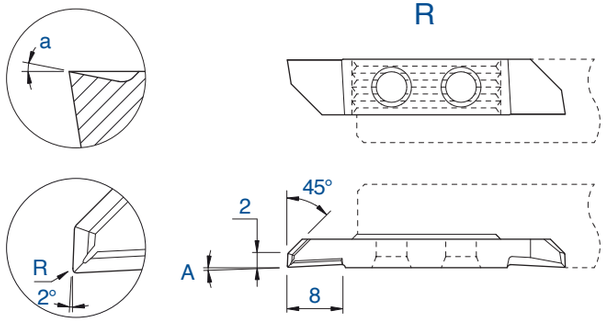

| L | L1 | L2 | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|
| 9 | 6 | 6.9 | 0.08 | 762VUX10-29°-R08 | ● | ● | ● | ● |
| 9 | 6 | 6.7 | 0.15 | 762VUX10-29°-R15 | ● | ● | ● | ● |
| 9 | 6 | 6.1 | 0.35 | 762VUX10-29°-R35 | ● | ● | ● | ● |
| 9 | 6 | 4.9 | 0.75 | 762VUX10-29°-R75 | ● | ● | ● | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05










| a | A | R | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|
| 10° | 3° | 0.08 | 762ZX10-R08 | ● | | |
| | 3° | 0.20 | 762ZX10-R20 | ● | ● | |

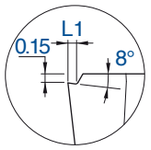


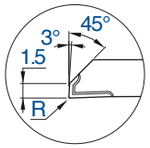
Arête de coupe honée
Gehonte Schneidkante
Honed edge

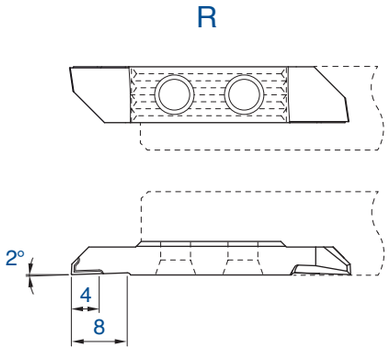
f min: 0.02mm/U

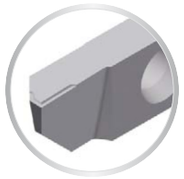
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



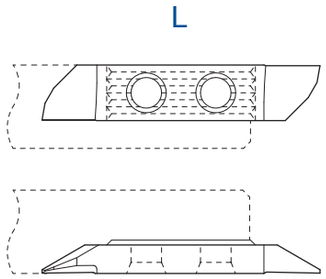
| L1 | R | Art . N° | R KCR | R KN (µk10-20) |
|---|---|---|---|---|
| 0.24 | 0.03 | 762ZF-X824-R03 | ● | ● |
| 0.36 | 0.08 | 762ZF-X836-R08 | ● | ● |
| 0.48 | 0.08 | 762ZF-X848-R08 | ● | ● |

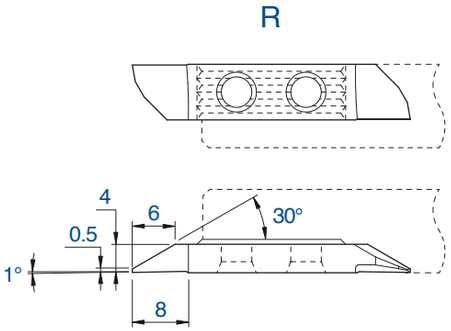
7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







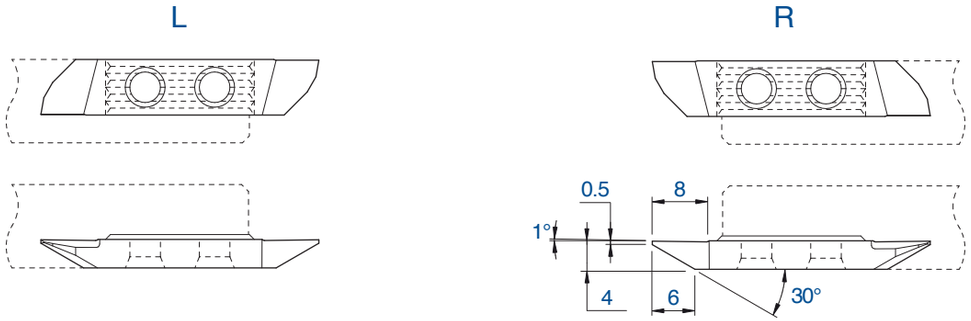



Tournage avant
Vorwärts drehen
Front turning

| L Art. N° | L TiAlN | L TiN | L N (µk20) | L HTA | L HTiN | L HN (µk10) | R Art. N° | R TiAlN | R TiAlX | R TiN | R N (µk20) | R HTA | R HTiN | R HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 752S05 | ● | ● | ● | ● | | ● | 762S05 | ● | ● | ● | ● | ● | ● | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





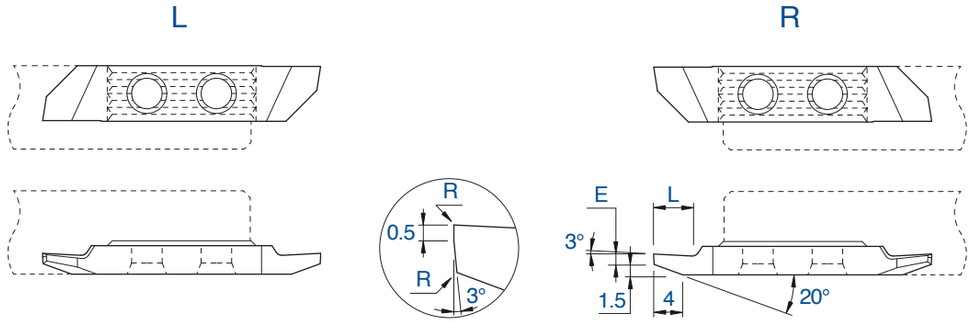

Tournage arrière
Rückwärts drehen
Back turning

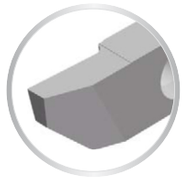
| L | | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiAlX | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 753S05 | ● | ● | ● | ● | ● | ● | 763S05 | ● | ● | ● | ● | ● | ● | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



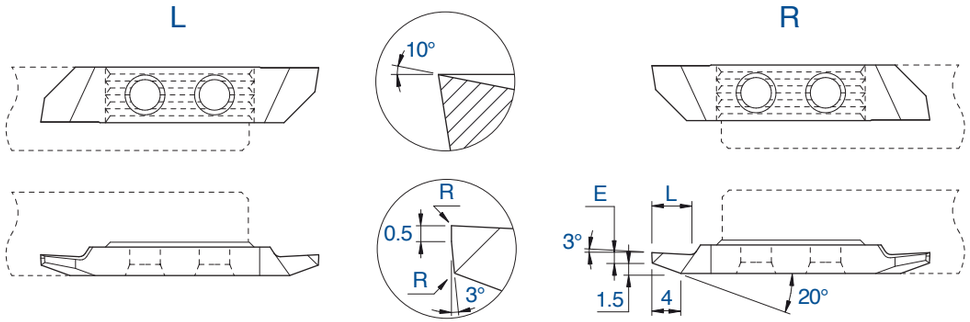




| L | | | | | | | | | | R | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.0 | 5 | 0 | 753-1.0 | ● | ● | ● | ● | | ● | 763-1.0 | ● | ● | ● | ● | ● | ● |
| 1.0 | 5 | 0.08 | 753-1.0-R08 | ● | ● | ● | | | | 763-1.0-R08 | ● | ● | ● | ● | | ● |
| 1.5 | 6 | 0 | 753-1.5 | ● | ● | ● | | | | 763-1.5 | ● | ● | ● | ● | | ● |
| 2.0 | 7.5 | 0 | 753-2.0 | ● | ● | ● | | | | 763-2.0 | ● | ● | ● | ● | | ● |
| 2.5 | 9 | 0 | 753-2.5 | ● | ● | ● | | | | 763-2.5 | ● | ● | ● | ● | | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





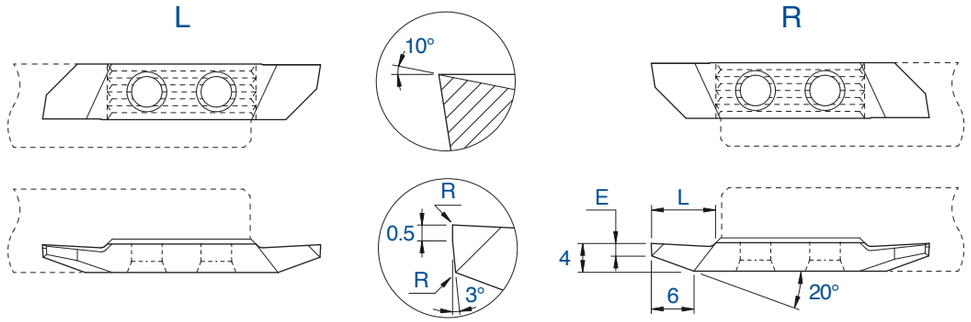

| | | | L | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N | P | P M N S | P M N | | P M N S | P M N | P | P M N S | P M N S |
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.0 | 5 | 0 | 753X-1.0 | ● | ● | ● | | | 763X-1.0 | ● | ● | ● | ● | | ● |
| 1.0 | 5 | 0.08 | 753X-1.0-R08 | ● | ● | ● | ● | | 763X-1.0-R08 | ● | ● | ● | ● | | ● |
| 1.0 | 5 | 0.20 | 753X-1.0-R20 | ● | ● | ● | | | 763X-1.0-R20 | ● | ● | ● | | | |
| 1.5 | 6 | 0 | 753X-1.5 | ● | ● | ● | | | 763X-1.5 | ● | ● | ● | ● | | ● |
| 1.5 | 6 | 0.20 | 753X-1.5-R20 | ● | ● | ● | | | 763X-1.5-R20 | ● | ● | ● | | | |
| 2.0 | 7.5 | 0 | 753X-2.0 | ● | ● | ● | | | 763X-2.0 | ● | ● | ● | | | |
| 2.0 | 7.5 | 0.20 | 753X-2.0-R20 | ● | ● | ● | | | 763X-2.0-R20 | ● | ● | ● | | | |
| 2.5 | 9 | 0 | 753X-2.5 | ● | ● | ● | | | 763X-2.5 | ● | ● | ● | | | |
| 2.5 | 9 | 0.20 | 753X-2.5-R20 | ● | ● | ● | | | 763X-2.5-R20 | ● | ● | ● | | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





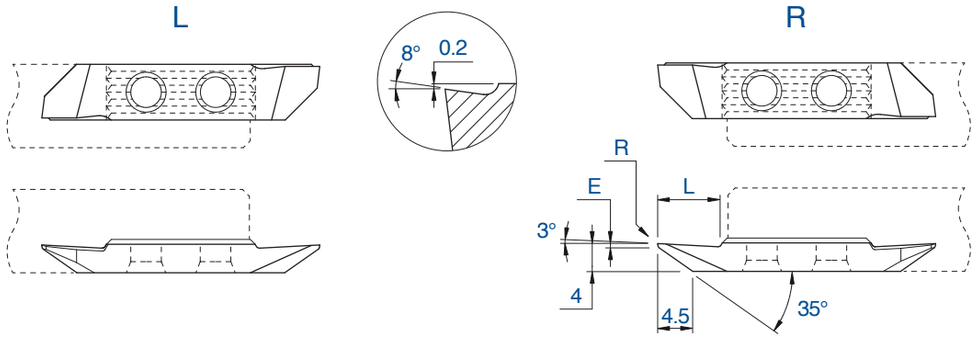


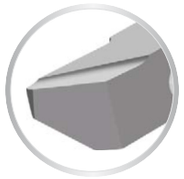



| | | | L | | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N | P | P M N S | P M N | P M N S | | P M N S | P M N | P | P M N S | P M N S | P M N S |
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 1.8 | 9 | 0 | 753XS-1.8 | ● | ● | ● | | | | 763XS-1.8 | ● | ● | ● | ● | | ● |
| 1.8 | 9 | 0.20 | 753XS-1.8-R20 | ● | ● | ● | | | | 763XS-1.8-R20 | ● | ● | ● | | | |

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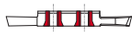
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



| | L | | | R | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | | |
| 1.0 | 9 | 0 | 753VX-8° | ● | ● | ● | | | | 763VX-8° | ● | ● | ● | ● | ● | ● | | |
| 1.0 | 9 | 0.08 | 753VX-8°-R08 | ● | ● | ● | | | | 763VX-8°-R08 | ● | ● | ● | ● | | ● | | |
| 1.0 | 9 | 0.20 | - | | | | | | | 763VX-8°-R20 | ● | ● | ● | | | | | |

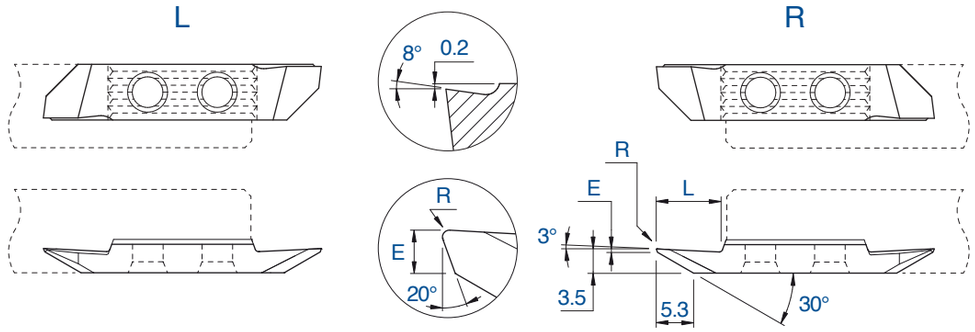
7XX-XX-B



Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05







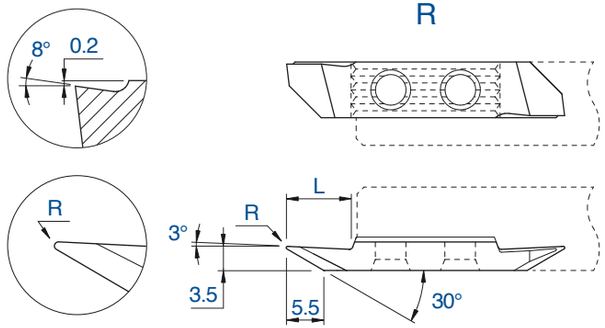



| | L | | | R | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | | |
| 0.5 | 9 | 0.08 | 753VX-805-R08 | ● | ● | ● | ● | | ● | 763VX-805-R08 | ● | ● | ● | ● | | ● | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





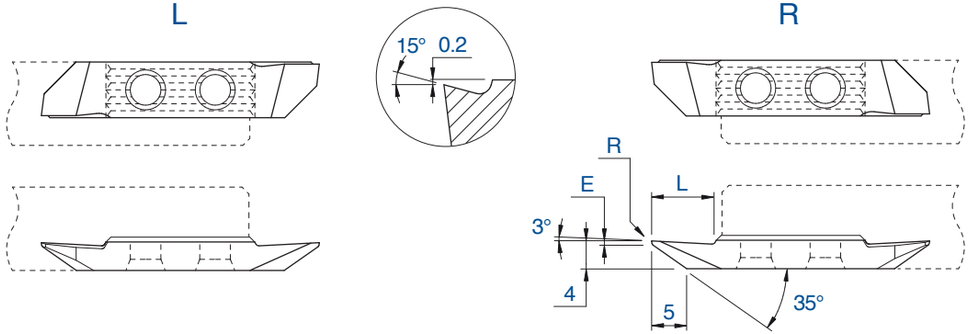

| L | R | Art. N° | R | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 9 | 0.08 | 763VX-800-R08 | ● | ● | ● | ● | | ● |
| 9 | 0.20 | 763VX-800-R20 | ● | ● | ● | ● | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





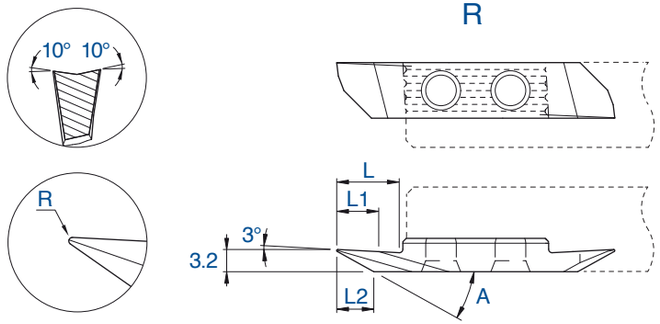





| E | L | R | Art. N° | L | | | | | | Art. N° | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
| 0.6 | 9 | 0 | 753VX-15° | ● | ● | ● | | | | 763VX-15° | ● | ● | ● | ● | | ● |
| 0.6 | 9 | 0.08 | 753VX-15°-R08 | ● | ● | ● | | | | 763VX-15°-R08 | ● | ● | ● | ● | | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





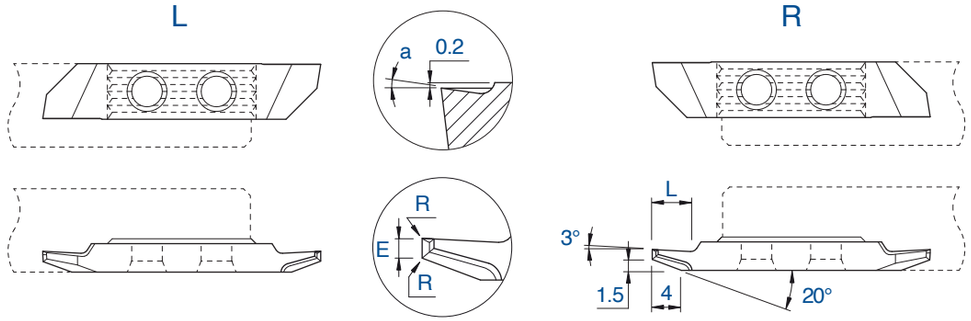

| | | | | | | R | |
|---|---|---|---|---|---|---|---|
| L | L1 | L2 | A | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
| 9 | 6 | 5.6 | 29° | 0.05 | 763VUX10-29°-R05 | ● | ● | ● | ● |
| 9 | 6 | 5.5 | 29° | 0.08 | 763VUX10-29°-R08 | ● | ● | ● | ● |
| 9 | 6 | 5.3 | 29° | 0.15 | 763VUX10-29°-R15 | ● | ● | ● | ● |
| 9 | 6 | 4.7 | 29° | 0.35 | 763VUX10-29°-R35 | ● | ● | ● | ● |
| 9 | 6 | 3.6 | 29° | 0.75 | 763VUX10-29°-R75 | ● | ● | ● | ● |
| 9 | 6 | 4.2 | 35° | 0.15 | 763VUX10-35°-R15 | ● | ● | ● | ● |
| 9 | 6 | 3.8 | 35° | 0.35 | 763VUX10-35°-R35 | ● | ● | ● | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05










Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

| | | | | L | | | | R | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a | E | L | R | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
| 10° | 1.0 | 5 | 0.01 | 753ZX10-1.0 | ● | | | 763ZX10-1.0 | ● | ● | |
| | 1.0 | 5 | 0.08 | - | | | | 763ZX10-1.0-R08 | ● | ● | |
| | 1.0 | 5 | 0.20 | - | | | | 763ZX10-1.0-R20 | ● | ● | |

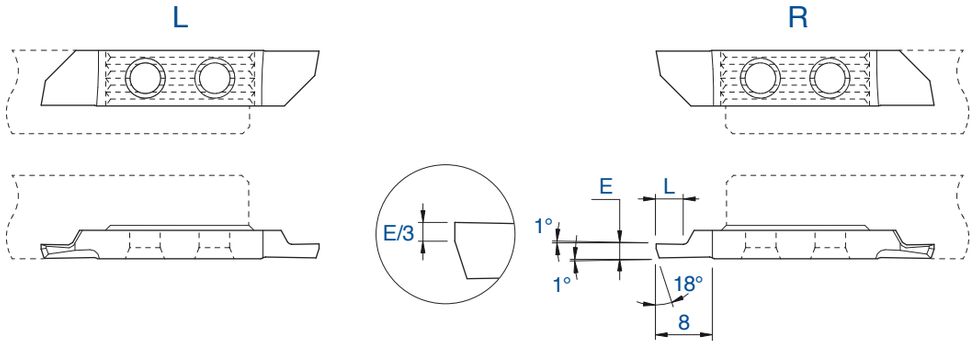


Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





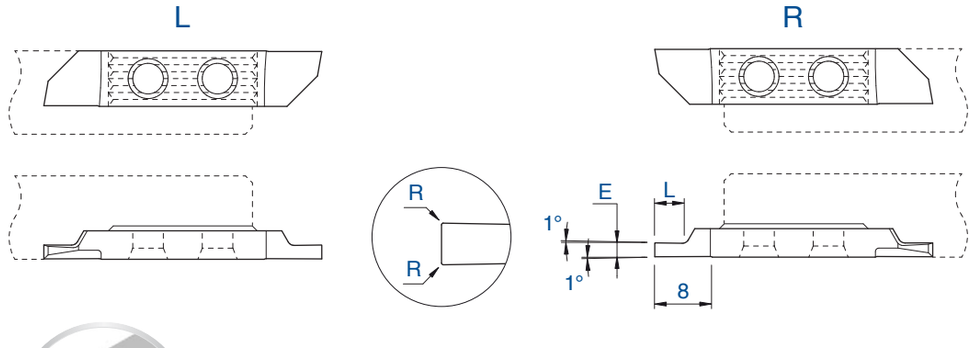

| | | | L | | | R | | |
|---|---|---|---|---|---|---|---|---|
| | | | P M N S | P M N | P S | | P M N S | P M N | P S |
| E | L | Art. N° | TiAlN | TiN | N (µK20) | Art. N° | TiAlN | TiN | N (µK20) |
| 1.5 | 3 | 753P-1.5 | ● | ● | ● | 763P-1.5 | ● | ● | ● |
| 1.8 | 3.5 | 753P-1.8 | ● | ● | ● | 763P-1.8 | ● | ● | ● |
| 2.0 | 4 | 753P-2.0 | ● | ● | ● | 763P-2.0 | ● | ● | ● |
| 2.2 | 5 | 753P-2.2 | ● | ● | ● | 763P-2.2 | ● | ● | ● |
| 2.5 | 6 | 753P-2.5 | ● | ● | ● | 763P-2.5 | ● | ● | ● |
| 3.0 | 6 | 753P-3.0 | ● | ● | ● | 763P-3.0 | ● | ● | ● |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

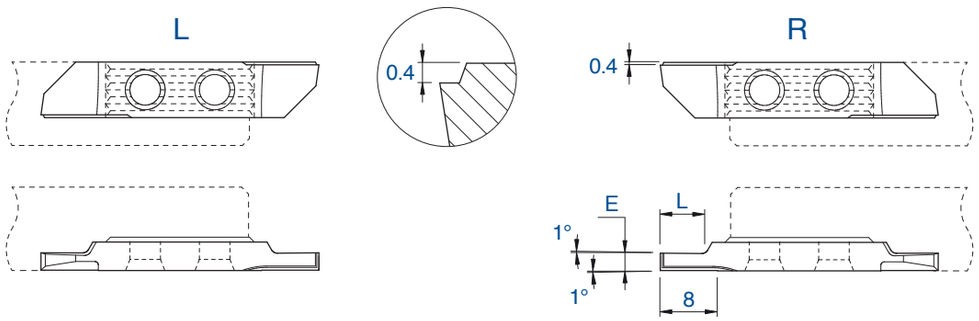









| | | | L | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | P M N S | P M N | P S | P M N S | P M N | P S | P M N S | P M N S | P M N | P S | P M N S | P M N | P S |
| E | L | R | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HN (µK10) |
| 0.5 | 1.5 | 0 | 754-0.5 | ● | ● | ● | | | | 764-0.5 | ● | ● | ● | ● | ● | ● | ● |
| 0.75 | 2 | 0 | 754-0.75 | ● | ● | ● | | | | 764-0.75 | ● | ● | ● | ● | | | |
| 0.8 | 2 | 0 | - | | | | | | | 764-0.8 | ● | ● | ● | ● | ● | | ● |
| 0.95 | 3 | 0 | 754-0.95 | ● | ● | ● | ● | | ● | 764-0.95 | ● | ● | ● | ● | | | |
| 1.0 | 2.5 | 0 | 754-1.0 | ● | ● | ● | ● | | ● | 764-1.0 | ● | ● | ● | ● | ● | ● | ● |
| 1.0 | 2.5 | 0.08 | 754-1.0-R08 | ● | ● | ● | | | | 764-1.0-R08 | ● | ● | ● | ● | ● | | ● |
| 1.2 | 3 | 0 | 754-1.2 | ● | ● | ● | | | | 764-1.2 | ● | ● | ● | ● | ● | | ● |
| 1.5 | 3 | 0 | 754-1.5 | ● | ● | ● | ● | | ● | 764-1.5 | ● | ● | ● | ● | ● | ● | ● |
| 1.5 | 3 | 0.08 | 754-1.5-R08 | ● | ● | ● | ● | | ● | 764-1.5-R08 | ● | ● | ● | ● | ● | | ● |
| 1.5 | 3 | 0.15 | - | | | | | | | 764-1.5-R15 | ● | ● | | ● | ● | | ● |
| 1.5 | 3 | 0.20 | - | | | | | | | 764-1.5-R20 | ● | ● | ● | ● | ● | ● | ● |
| 1.8 | 4 | 0 | 754-1.8 | ● | ● | ● | | | | 764-1.8 | ● | ● | ● | ● | | | |
| 2.0 | 4 | 0 | 754-2.0 | ● | ● | ● | ● | ● | ● | 764-2.0 | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 4 | 0.08 | 754-2.0-R08 | ● | ● | ● | ● | | ● | 764-2.0-R08 | ● | ● | ● | ● | ● | | ● |
| 2.0 | 4 | 0.15 | - | | | | | | | 764-2.0-R15 | ● | ● | | ● | ● | | ● |
| 2.0 | 4 | 0.20 | 754-2.0-R20 | ● | ● | ● | | | | 764-2.0-R20 | ● | ● | ● | ● | ● | ● | ● |
| 2.5 | 6 | 0 | 754-2.5 | ● | ● | ● | | | | 764-2.5 | ● | ● | ● | ● | ● | | ● |
| 2.5 | 6 | 0.15 | - | | | | | | | 764-2.5-R15 | ● | ● | | ● | ● | | ● |
| 2.5 | 6 | 0.20 | - | | | | | | | 764-2.5-R20 | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0 | 754-3.0 | ● | ● | ● | ● | | ● | 764-3.0 | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0.08 | 754-3.0-R08 | ● | ● | ● | | | | 764-3.0-R08 | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0.15 | - | | | | | | | 764-3.0-R15 | ● | ● | | ● | ● | | ● |
| 3.0 | 6 | 0.20 | 754-3.0-R20 | ● | ● | ● | ● | | ● | 764-3.0-R20 | ● | ● | ● | ● | | | |
| 4.0 | 8 | 0 | 754-4.0 | ● | ● | ● | ● | ● | ● | 764-4.0 | ● | ● | ● | ● | ● | | ● |





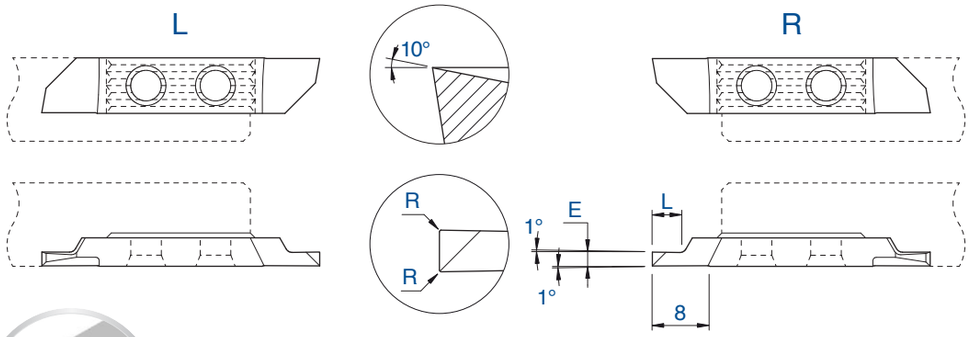

| E | L | Art. N° | L: TiAlN | L: TiN | L: N (µk20) | L: HTA | L: HTiN | L: HN (µk10) | Art. N° | R: TiAlN | R: TiN | R: N (µk20) | R: HTA | R: HTiN | R: HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 2 | 754VS-1.0 | ● | ● | ● | | | | 764VS-1.0 | ● | ● | ● | | | |
| 1.2 | 2.5 | 754VS-1.2 | ● | ● | ● | ● | | ● | 764VS-1.2 | ● | ● | ● | | | |
| 1.5 | 3 | 754VS-1.5 | ● | ● | ● | | | | 764VS-1.5 | ● | ● | ● | | | |
| 2.0 | 4 | 754VS-2.0 | ● | ● | ● | | | | 764VS-2.0 | ● | ● | ● | | | |
| 2.5 | 6 | 754VS-2.5 | ● | ● | ● | | | | 764VS-2.5 | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 754VS-3.0 | ● | ● | ● | | | | 764VS-3.0 | ● | ● | ● | | | |

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Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

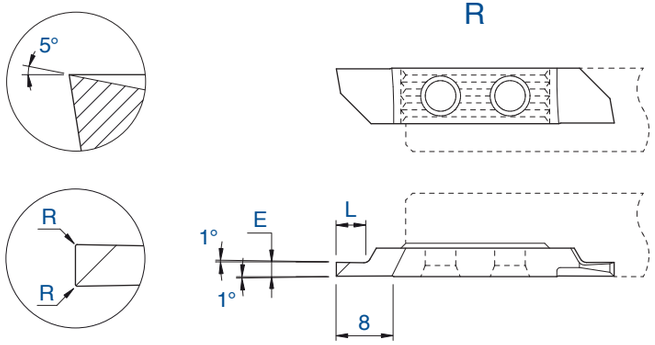









| E | L | R | L: Art. N° | L: TiAlN | L: TiN | L: N (µk20) | L: HTA | L: HTiN | L: HN (µk10) | R: Art. N° | R: ST | R: TiAlN | R: TiAlX | R: TiN | R: N (µk20) | R: HTA | R: HTiN | R: HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 2.5 | 0 | 754X-1.0 | ● | ● | ● | ● | ● | ● | 764X-1.0 | | ● | ● | ● | ● | ● | | ● |
| 1.0 | 2.5 | 0.08 | 754X-1.0-R08 | ● | ● | ● | ● | | ● | 764X-1.0-R08 | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.0 | 2.5 | 0.20 | - | | | | | | | 764X-1.0-R20 | ● | ● | ● | ● | ● | | | |
| 1.2 | 3 | 0 | 754X-1.2 | ● | ● | ● | | | | 764X-1.2 | | ● | ● | ● | ● | ● | | ● |
| 1.2 | 3 | 0.08 | - | | | | | | | 764X-1.2-R08 | ● | ● | ● | ● | ● | | | |
| 1.5 | 3 | 0 | 754X-1.5 | ● | ● | ● | ● | | ● | 764X-1.5 | | ● | ● | ● | ● | ● | ● | ● |
| 1.5 | 3 | 0.08 | 754X-1.5-R08 | ● | ● | ● | ● | | ● | 764X-1.5-R08 | ● | ● | ● | ● | ● | ● | | ● |
| 1.5 | 3 | 0.15 | - | | | | | | | 764X-1.5-R15 | ● | ● | ● | | ● | ● | | ● |
| 1.5 | 3 | 0.20 | 754X-1.5-R20 | ● | ● | ● | | | | 764X-1.5-R20 | ● | ● | ● | ● | ● | ● | ● | ● |
| 1.8 | 4 | 0 | 754X-1.8 | ● | ● | ● | | | | 764X-1.8 | | ● | ● | ● | ● | ● | | ● |
| 1.8 | 4 | 0.20 | - | | | | | | | 764X-1.8-R20 | ● | ● | ● | ● | ● | | | |
| 2.0 | 4 | 0 | 754X-2.0 | ● | ● | ● | ● | | ● | 764X-2.0 | | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 4 | 0.08 | 754X-2.0-R08 | ● | ● | ● | ● | | ● | 764X-2.0-R08 | ● | ● | ● | ● | ● | ● | ● | ● |
| 2.0 | 4 | 0.15 | - | | | | | | | 764X-2.0-R15 | ● | ● | ● | | ● | ● | | ● |
| 2.0 | 4 | 0.20 | 754X-2.0-R20 | ● | ● | ● | ● | | ● | 764X-2.0-R20 | ● | ● | ● | ● | ● | ● | | ● |
| 2.0 | 4 | 0.35 | - | | | | | | | 764X-2.0-R35 | ● | ● | ● | | ● | ● | | ● |
| 2.5 | 6 | 0 | 754X-2.5 | ● | ● | ● | ● | ● | ● | 764X-2.5 | | ● | ● | ● | ● | ● | ● | ● |
| 2.5 | 6 | 0.15 | - | | | | | | | 764X-2.5-R15 | ● | ● | ● | | ● | ● | | ● |
| 2.5 | 6 | 0.20 | 754X-2.5-R20 | ● | ● | ● | ● | | ● | 764X-2.5-R20 | ● | ● | ● | ● | ● | ● | | ● |
| 2.5 | 6 | 0.35 | - | | | | | | | 764X-2.5-R35 | ● | ● | ● | | ● | ● | | ● |
| 3.0 | 6 | 0 | 754X-3.0 | ● | ● | ● | | | | 764X-3.0 | | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0.08 | 754X-3.0-R08 | ● | ● | ● | | | | 764X-3.0-R08 | ● | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0.15 | - | | | | | | | 764X-3.0-R15 | ● | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0.20 | 754X-3.0-R20 | ● | ● | ● | | | | 764X-3.0-R20 | ● | ● | ● | ● | ● | ● | | ● |
| 3.0 | 6 | 0.35 | - | | | | | | | 764X-3.0-R35 | ● | ● | ● | | ● | ● | | ● |
| 4.0 | 8 | 0 | 754X-4.0 | ● | ● | ● | | | | 764X-4.0 | | ● | ● | ● | ● | ● | | ● |
| 4.0 | 8 | 0.20 | 754X-4.0-R20 | ● | ● | ● | | | | 764X-4.0-R20 | ● | ● | ● | ● | ● | ● | | ● |
| 4.0 | 8 | 0.35 | - | | | | | | | 764X-4.0-R35 | ● | ● | ● | | ● | ● | | ● |






R

| E | L | R | Art. N° | ST | TiAlN | TiAlX | TiN | N (µK20) |
|---|---|---|---|---|---|---|---|---|
| 1.5 | 3 | 0.08 | 764X5-1.5-R08-EP | ● | ● | ● | ● | ● |
| 2.0 | 4 | 0.08 | 764X5-2.0-R08-EP | ● | ● | ● | ● | ● |
| 2.5 | 6 | 0.08 | 764X5-2.5-R08-EP | ● | ● | ● | ● | ● |
| 2.5 | 6 | 0.15 | 764X5-2.5-R15-EP | ● | ● | ● | ● | ● |
| 3.0 | 6 | 0.08 | 764X5-3.0-R08-EP | ● | ● | ● | ● | ● |
| 3.0 | 6 | 0.15 | 764X5-3.0-R15-EP | ● | ● | ● | ● | ● |
| 4.0 | 8 | 0.15 | 764X5-4.0-R15-EP | ● | ● | ● | ● | ● |
| 4.0 | 8 | 0.35 | 764X5-4.0-R35-EP | ● | ● | ● | ● | ● |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

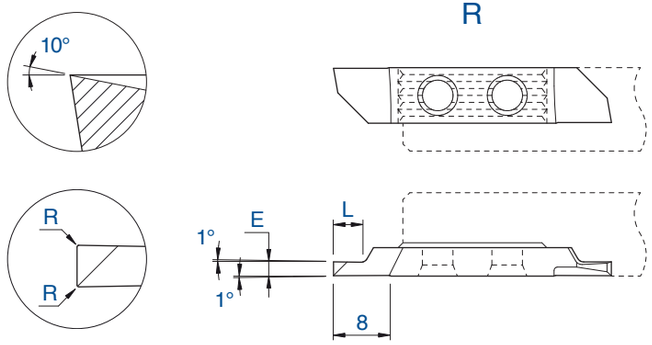
f min: 0.02mm/U

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05










R

| E | L | R | Art. N° | ST | TiAlN | TiAlX | TiN | N (µK20) |
|---|---|---|---|---|---|---|---|---|
| 1.5 | 3 | 0.08 | 764X10-1.5-R08-EP | ● | ● | ● | ● | ● |
| 2.0 | 4 | 0.08 | 764X10-2.0-R08-EP | ● | ● | ● | ● | ● |
| 2.5 | 6 | 0.08 | 764X10-2.5-R08-EP | ● | ● | ● | ● | ● |
| 2.5 | 6 | 0.15 | 764X10-2.5-R15-EP | ● | ● | ● | ● | ● |
| 3.0 | 6 | 0.08 | 764X10-3.0-R08-EP | ● | ● | ● | ● | ● |
| 3.0 | 6 | 0.15 | 764X10-3.0-R15-EP | ● | ● | ● | ● | ● |
| 4.0 | 8 | 0.15 | 764X10-4.0-R15-EP | ● | ● | ● | ● | ● |
| 4.0 | 8 | 0.35 | 764X10-4.0-R35-EP | ● | ● | ● | ● | ● |

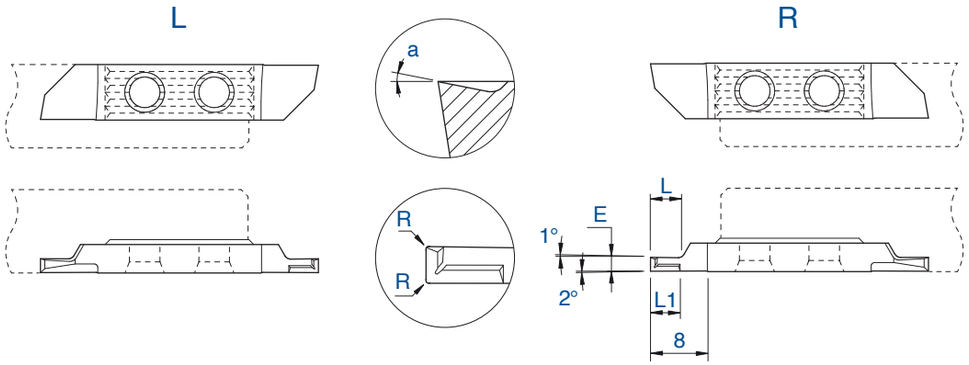


Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05






Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

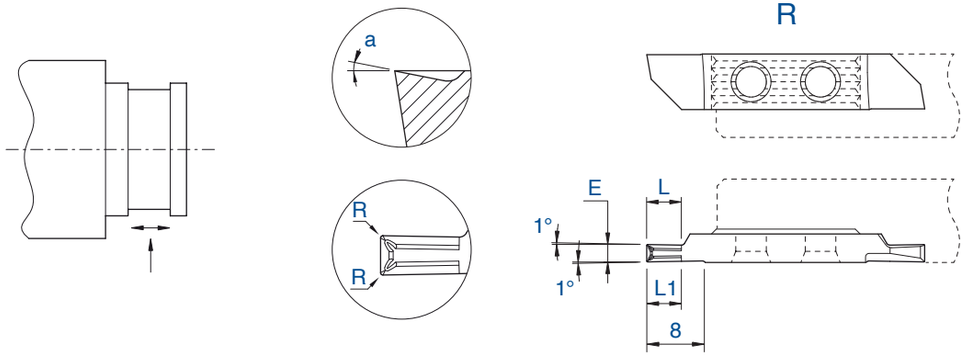
| | | | | | | L | | | | | | | | R | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| a | E | L | L1 | R | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HAC | HN (µK10) | Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTiN | HAC | HN (µK10) |
| 10° | 1.5 | 4 | 4 | 0.03 | 754ZX10-1.5-R03 | ● | | | | | | | 764ZX10-1.5-R03 | ● | ● | ● | | | | | |
| | 1.5 | 4 | 4 | 0.08 | 754ZX10-1.5-R08 | ● | | | | | | | 764ZX10-1.5-R08 | ● | ● | ● | | | | | |
| | 2.0 | 4 | 4 | 0.08 | 754ZX10-2.0-R08 | ● | | | | | | | 764ZX10-2.0-R08 | ● | ● | ● | | | | | |
| | 2.0 | 4 | 4 | 0.20 | - | | | | | | | | 764ZX10-2.0-R20 | ● | ● | ● | | | | | |
| | 2.5 | 5 | 5 | 0.08 | 754ZX10-2.5-R08 | ● | ● | | | | | | 764ZX10-2.5-R08 | ● | ● | ● | | | | | |
| | 2.5 | 5 | 5 | 0.20 | - | | | | | | | | 764ZX10-2.5-R20 | ● | ● | ● | | | | | |
| | 3.0 | 6 | 6 | 0.08 | 754ZX10-3.0-R08 | ● | | | | | | | 764ZX10-3.0-R08 | ● | ● | ● | | | | | |
| | 3.0 | 6 | 6 | 0.20 | - | | | | | | | | 764ZX10-3.0-R20 | ● | ● | ● | | | | | |
| | 4.0 | 6 | 6 | 0.20 | - | | | | | | | | 764ZX10-4.0-R20 | ● | ● | | | | | | |
| 25° | 2.0 | 4 | 4 | 0.08 | - | | | | | | | | 764ZX25-2.0-R08 | | | | | ● | | ● | |
| | 2.0 | 4 | 4 | 0.20 | - | | | | | | | | 764ZX25-2.0-R20 | | | | | ● | | ● | |
| | 2.5 | 5 | 5 | 0.08 | - | | | | | | | | 764ZX25-2.5-R08 | | | | | ● | | ● | |
| | 2.5 | 5 | 5 | 0.20 | - | | | | | | | | 764ZX25-2.5-R20 | | | | | ● | | ● | |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05











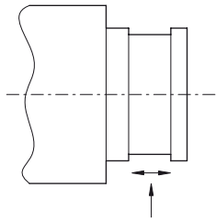

Arête de coupe honée
Gehonte Schneidkante
Honed edge

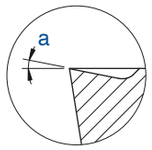
f min: 0.02mm/U

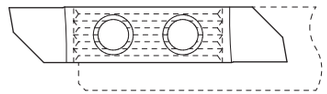
| | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a | E | L | L1 | R | Art. N° | ST | TiAlN | TiAlX | TiN | N (µK20) |
| 10° | 1.5 | 4 | 4 | 0.08 | 764ZXB10-1.5-R08 | ● | ● | ● | | |
| | 2.0 | 4 | 4 | 0.08 | 764ZXB10-2.0-R08 | ● | ● | ● | | |
| | 2.0 | 4 | 4 | 0.15 | 764ZXB10-2.0-R15 | ● | ● | ● | | |
| | 2.0 | 4 | 4 | 0.35 | 764ZXB10-2.0-R35 | ● | ● | ● | | |
| | 2.5 | 5 | 5 | 0.08 | 764ZXB10-2.5-R08 | ● | ● | ● | | |
| | 2.5 | 5 | 5 | 0.15 | 764ZXB10-2.5-R15 | ● | ● | ● | | |
| | 2.5 | 5 | 5 | 0.35 | 764ZXB10-2.5-R35 | ● | ● | ● | | |
| | 3.0 | 6 | 6 | 0.08 | 764ZXB10-3.0-R08 | ● | ● | ● | | |
| | 3.0 | 6 | 6 | 0.15 | 764ZXB10-3.0-R15 | ● | ● | ● | | |
| | 3.0 | 6 | 6 | 0.35 | 764ZXB10-3.0-R35 | ● | ● | ● | | |

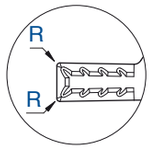
7XX-XX-B

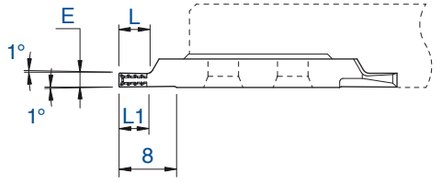
Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

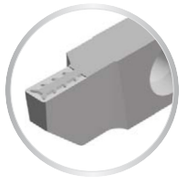




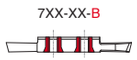
Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

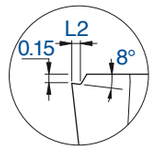
| a | E | L | L1 | R | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | ST | TiAlN | TiAlX | TiN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | L | | | R | | | | | | | |
| | 1.5 | 4 | 4 | 0.03 | - | | | | 764ZXT10-1.5-R03 | ● | ● | ● | | | | |
| | 1.5 | 4 | 4 | 0.08 | 754ZXT10-1.5-R08 | ● | | | 764ZXT10-1.5-R08 | ● | ● | ● | ● | | | |
| | 1.5 | 4 | 4 | 0.20 | 754ZXT10-1.5-R20 | ● | | | - | | | | | | | |
| | 2.0 | 4 | 4 | 0.08 | 754ZXT10-2.0-R08 | ● | | | 764ZXT10-2.0-R08 | ● | ● | ● | ● | | | |
| | 2.0 | 4 | 4 | 0.20 | 754ZXT10-2.0-R20 | ● | | | 764ZXT10-2.0-R20 | ● | ● | ● | ● | | | |
| | 2.0 | 4 | 4 | 0.40 | - | | | | 764ZXT10-2.0-R40 | ● | ● | ● | | | | |
| | 2.5 | 5 | 5 | 0.08 | 754ZXT10-2.5-R08 | ● | | | 764ZXT10-2.5-R08 | ● | ● | ● | ● | | | |
| 10° | 2.5 | 5 | 5 | 0.20 | 754ZXT10-2.5-R20 | ● | | | 764ZXT10-2.5-R20 | ● | ● | ● | | | | |
| | 2.5 | 5 | 5 | 0.40 | - | | | | 764ZXT10-2.5-R40 | ● | ● | ● | | | | |
| | 3.0 | 6 | 6 | 0.08 | 754ZXT10-3.0-R08 | ● | ● | | 764ZXT10-3.0-R08 | ● | ● | ● | | | | |
| | 3.0 | 6 | 6 | 0.20 | - | | | | 764ZXT10-3.0-R20 | ● | ● | ● | | | ● | |
| | 3.0 | 6 | 6 | 0.40 | - | | | | 764ZXT10-3.0-R40 | ● | ● | ● | | | | |
| | 4.0 | 8 | 8 | 0.20 | - | | | | 764ZXT10-4.0-R20 | ● | ● | ● | ● | | | |
| | 4.0 | 8 | 8 | 0.40 | - | | | | 764ZXT10-4.0-R40 | ● | ● | ● | ● | | | |
| | 4.0 | 8 | 8 | 0.80 | - | | | | 764ZXT10-4.0-R80 | ● | ● | ● | | | | |

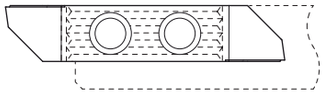


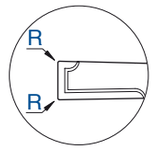

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

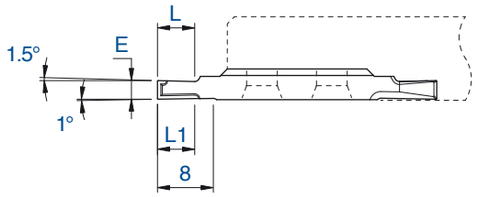




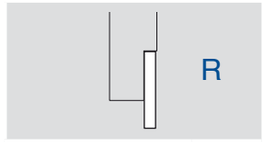


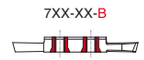





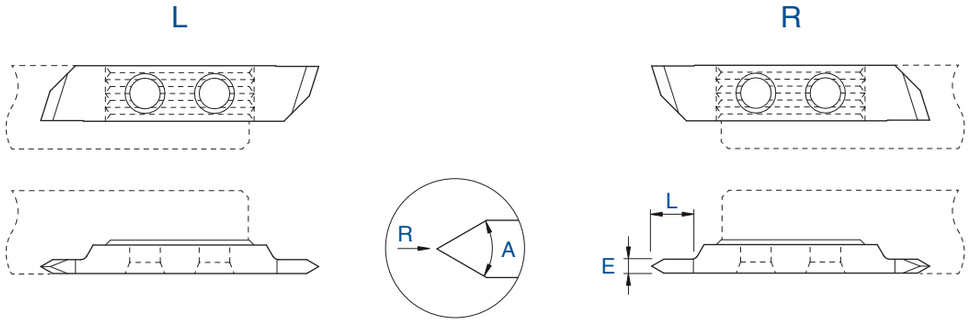

| E | L | L1 | L2 | R | Art. N° | KCR | KN (µk10-20) |
|---|---|---|---|---|---|---|---|
| 1.5 | 3 | 2.5 | 0.24 | 0.08 | 764ZF-X824-1.5-R08 | ● | ● |
| 1.5 | 3 | 2.5 | 0.36 | 0.08 | 764ZF-X836-1.5-R08 | ● | ● |
| 2.0 | 4 | 3 | 0.24 | 0.08 | 764ZF-X824-2.0-R08 | ● | ● |
| 2.0 | 4 | 3 | 0.36 | 0.08 | 764ZF-X836-2.0-R08 | ● | ● |
| 2.0 | 4 | 3 | 0.48 | 0.15 | 764ZF-X848-2.0-R15 | ● | ● |
| 2.5 | 6 | 4 | 0.24 | 0.08 | 764ZF-X824-2.5-R08 | ● | ● |
| 2.5 | 6 | 4 | 0.36 | 0.08 | 764ZF-X836-2.5-R08 | ● | ● |
| 2.5 | 6 | 4 | 0.48 | 0.15 | 764ZF-X848-2.5-R15 | ● | ● |
| 3.0 | 6 | 4 | 0.36 | 0.08 | 764ZF-X836-3.0-R08 | ● | ● |
| 3.0 | 6 | 4 | 0.48 | 0.15 | 764ZF-X848-3.0-R15 | ● | ● |




Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

Filetage
Gewinde drehen
Threading







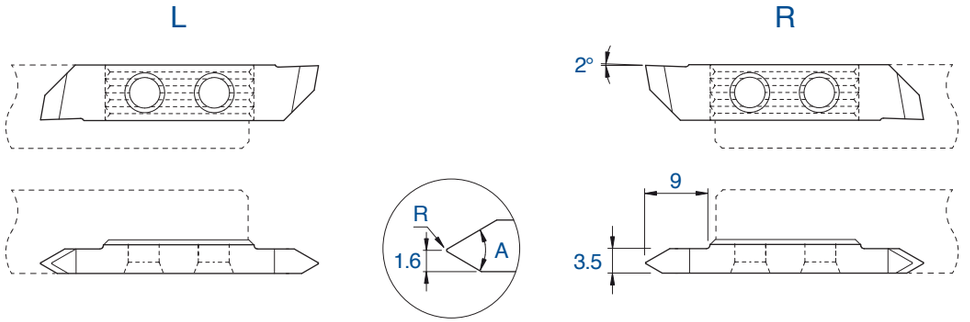

Profil partiel
Teilprofil
Partial profile

| A | E | L | R | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | L | | | | | | | R | | | | | |
| 60° | 2.0 | 6 | 0 | 756-60-2.0 | ● | ● | ● | | | | 766-60-2.0 | ● | ● | ● | | | |
| 60° | 2.0 | 6 | 0.02 | 756-60-2.0-R02 | ● | ● | ● | ● | | ● | 766-60-2.0-R02 | ● | ● | ● | ● | | ● |
| 60° | 3.0 | 8 | 0 | 756-60-3.0 | ● | ● | ● | | | | 766-60-3.0 | ● | ● | ● | | | |
| 60° | 3.0 | 8 | 0.02 | 756-60-3.0-R02 | ● | ● | ● | ● | | ● | 766-60-3.0-R02 | ● | ● | ● | ● | | ● |
| 55° | 2.0 | 6 | 0 | 756-55-2.0 | ● | ● | ● | | | | 766-55-2.0 | ● | ● | ● | | | |
| 55° | 2.0 | 6 | 0.02 | 756-55-2.0-R02 | ● | ● | ● | | | | 766-55-2.0-R02 | ● | ● | ● | | | |
| 55° | 3.0 | 8 | 0 | 756-55-3.0 | ● | ● | ● | | | | 766-55-3.0 | ● | ● | ● | | | |
| 55° | 3.0 | 8 | 0.02 | 756-55-3.0-R02 | ● | ● | ● | | | | 766-55-3.0-R02 | ● | ● | ● | | | |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





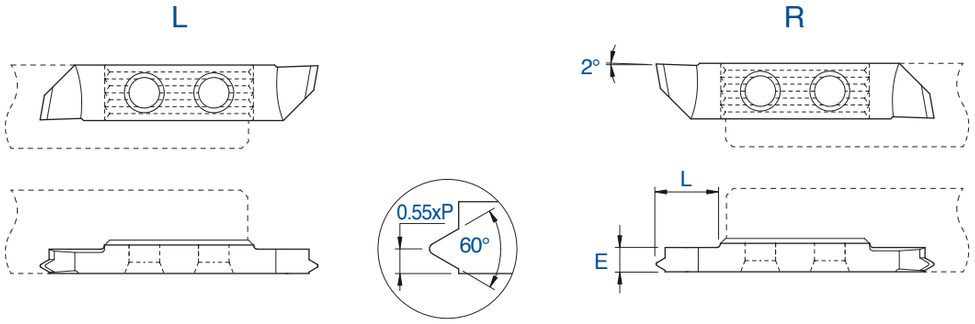



Profil partiel
Teilprofil
Partial profile

| A | R | Pas Steigung Pitch P | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | R | | | |
| 60° | 0.06 | 0.50-1.50 | 756-AG60° | ● | ● | ● | 766-AG60° | ● | ● | ● |
| 60° | 0.20 | 1.75-3.00 | 756-G60° | ● | ● | ● | 766-G60° | ● | ● | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





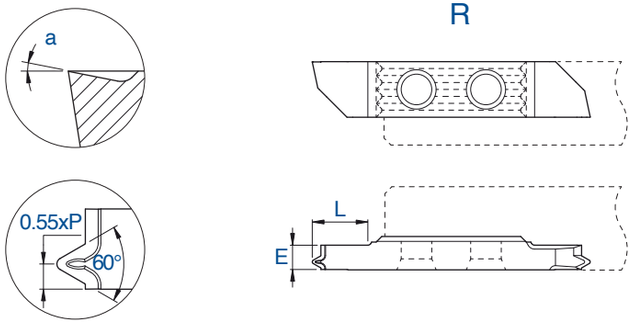

Profil complet métrique
Metrisches Vollprofil
Metric full profile

| E | L | Pas Steigung Pitch P | Art. N° | TiAlN | TiN | N (µK20) | Art. N° | TiAlN | TiN | N (µK20) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | R | | | |
| 2.5 | 8 | 0.80 | 756-M-0.80 | ● | ● | ● | 766-M-0.80 | ● | ● | ● |
| 2.5 | 8 | 1.00 | 756-M-1.00 | ● | ● | ● | 766-M-1.00 | ● | ● | ● |
| 2.5 | 8 | 1.25 | 756-M-1.25 | ● | ● | ● | 766-M-1.25 | ● | ● | ● |
| 3.5 | 9 | 1.50 | 756-M-1.50 | ● | ● | ● | 766-M-1.50 | ● | ● | ● |
| 3.5 | 9 | 1.75 | 756-M-1.75 | ● | ● | ● | 766-M-1.75 | ● | ● | ● |
| 3.5 | 9 | 2.00 | 756-M-2.00 | ● | ● | ● | 766-M-2.00 | ● | ● | ● |

Pour de plus petits pas, voir page 1.86
Für kleinere Steigungen, siehe Seite 1.86
For smaller pitches, see page 1.86

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05






Profil partiel
Teilprofil
Partial profile

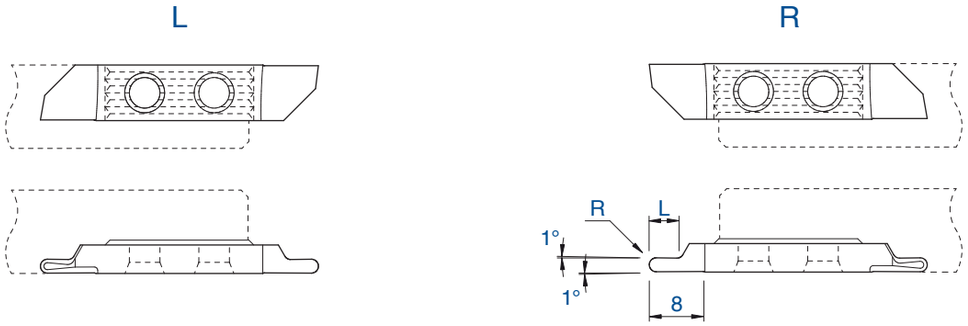
| a | E | L | P | Art. N° | ST | TiAlN |
|---|---|---|---|---|---|---|
| | | | | R | | |
| 10° | 2.5 | 8 | 0.80 | 766ZX10-M-0.80 | ● | ● |
| | 2.5 | 8 | 1.00 | 766ZX10-M-1.00 | ● | ● |
| | 2.5 | 8 | 1.25 | 766ZX10-M-1.25 | ● | ● |
| | 3.5 | 9 | 1.50 | 766ZX10-M-1.50 | ● | ● |
| | 3.5 | 9 | 1.75 | 766ZX10-M-1.75 | ● | ● |
| | 3.5 | 9 | 2.00 | 766ZX10-M-2.00 | ● | ● |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05





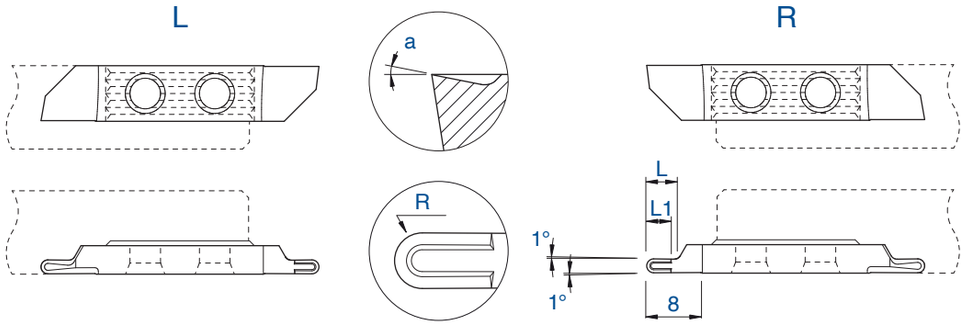

| R | L | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| | | | L | | | | R | | |
| 0.5 | 2.5 | 757-R0.5 | ● | ● | ● | 767-R0.5 | ● | ● | ● |
| 1.0 | 4 | 757-R1.0 | ● | ● | ● | 767-R1.0 | ● | ● | ● |
| 1.5 | 6 | 757-R1.5 | ● | ● | ● | 767-R1.5 | ● | ● | ● |
| 2.0 | 8 | 757-R2.0 | ● | ● | ● | 767-R2.0 | ● | ● | ● |

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05










Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

| a | R | L | L1 | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | | | | R | | | | | |
| 10° | 1.0 | 4 | 3.5 | 757ZX10-R1.0 | ● | | | 767ZX10-R1.0 | ● | ● | | | |
| | 1.5 | 6 | 4.0 | 757ZX10-R1.5 | ● | | | 767ZX10-R1.5 | ● | ● | | | |
| | 2.0 | 8 | 4.5 | 757ZX10-R2.0 | ● | | | 767ZX10-R2.0 | ● | ● | | ● | |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

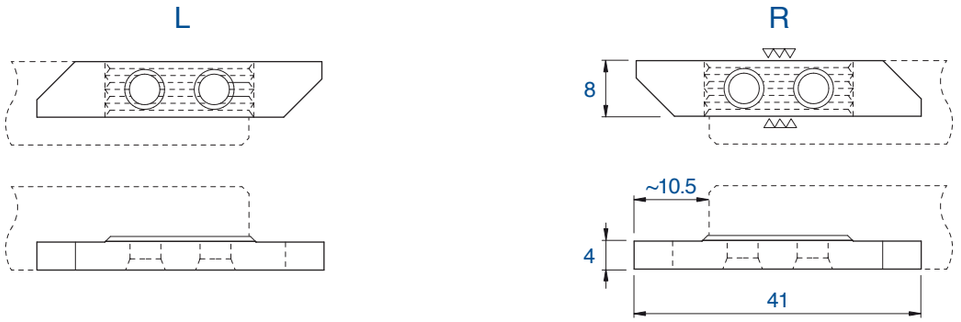
f min: 0.02mm/U

7XX-XX-B

Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

Plaquettes ébauches
WSP-Rohlinge
Blank inserts

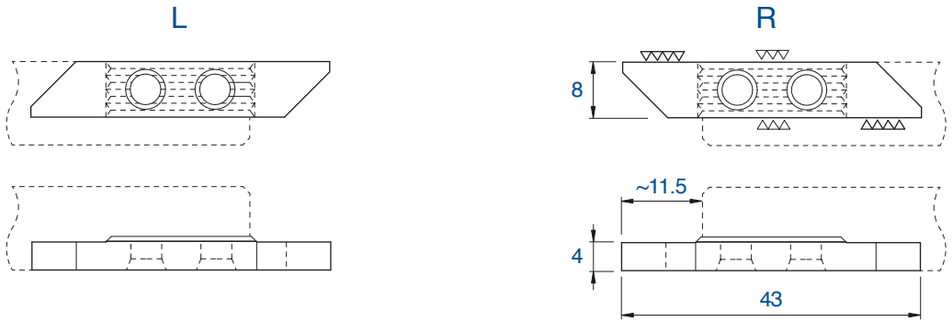


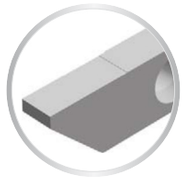





| L | | | R | | |
|---|---|---|---|---|---|
| Art. N° | N (µK20) | HN (µK10) | Art. N° | N (µK20) | HN (µK10) |
| 751-E | ● | ● | 761-E | ● | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05



Face de coupe polie
Polierte Schneidfläche
Polished cutting face

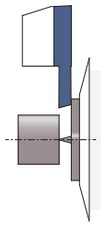
| L | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) |
| 751-EP | ● | ● | ● | ● | | ● | 761-EP | ● | ● | ● | ● | | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 1.05
Auf Anfrage für B-Spannsystem, siehe Seite 1.05
On request for B clamping system, see page 1.05

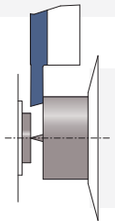
Index
TOP-Line
770 / 780

| L | | | R | | |
|---|---|---|---|---|---|
| | Type | Page | | Type | Page |
| 770 | 770 | 1.166 | 780 | 780 | 1.167 |
| | 770-JET | 1.167 | | 780-JET | 1.167 |
| | 770RC | 1.168 | 781 | 781 | 1.169 |
| 771 | 771 | 1.169 | | 781-E | 1.175 |
| | 771-E | 1.175 | | 781L | 1.171 |
| | 771R | 1.171 | | 781LXF | 1.173 |
| | 771RD | 1.174 | | 781XF | 1.170 |
| | 771RU | 1.172 | | | |
| | 771RXF | 1.173 | | | |
| | 771XF | 1.170 | | | |

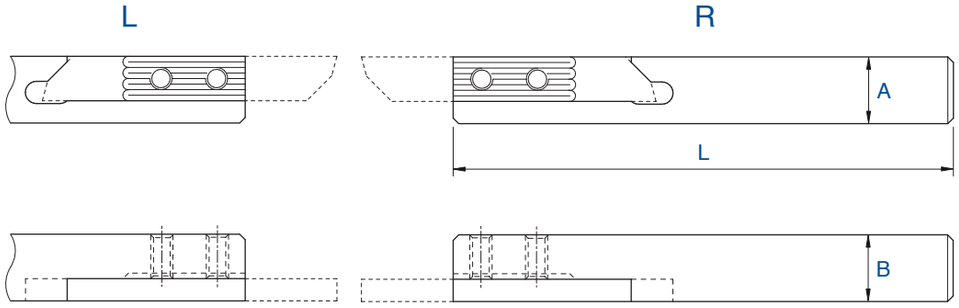
770 / 780
Porte-outils
Halter
Holders
> 1.166



771 / 781
Tronçonnage
Abstechen
Parting off
> 1.169



781L / 771R
Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line
> 1.171

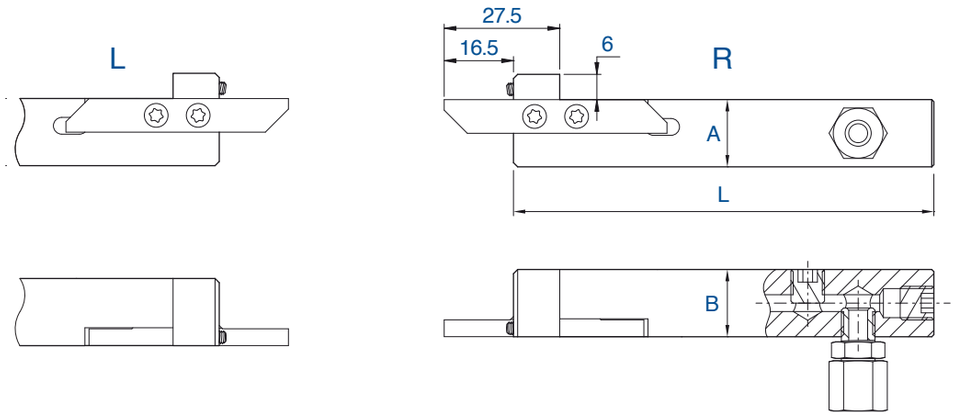



| A x B | L | Serrage Spannsystem Clamping | L Art. N° | R Art. N° |
|---|---|---|---|---|
| 10 x 10 | 115 | A | 770-10 | 780-10 |
| 12 x 12 | 130 | A | 770-12 | 780-12 |
| 12 x 12 | 90 | A | 770-12-90 | 780-12-90 |
| 12.7 x 12.7 | 130 | A | 770-12.7 | 780-12.7 |
| 14 x 14 | 130 | A | 770-14 | 780-14 |
| 16 x 16 | 130 | A | 770-16 | 780-16 |
| 16 x 16 | 75 | A | 770-16-75 | 780-16-75 |
| 20 x 20 | 120 | A | 770-20 | 780-20 |
| 25 x 25 | 140 | A | 770-25 | 780-25 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.







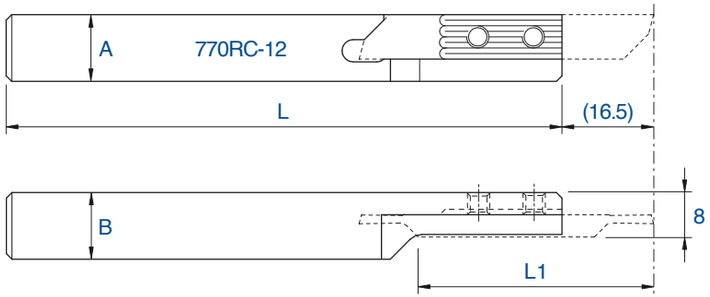

| A x B | L | Serrage Spannsystem Clamping | L Art. N° | R Art. N° |
|---|---|---|---|---|
| 16 x 16 | 100 | A | 770-16-JET | 780-16-JET |

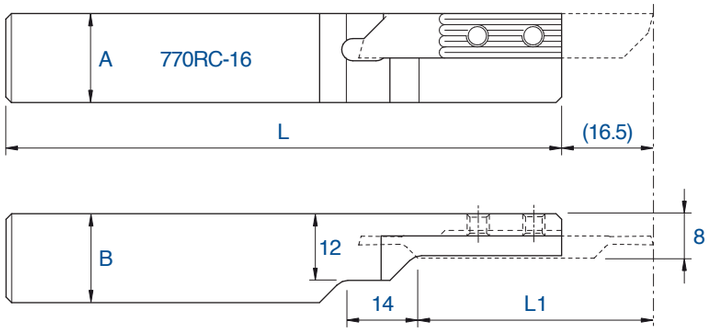
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

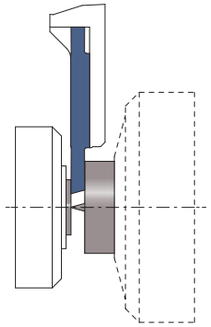
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Pièces de rechange Ersatzteile Spare parts | | | Buses Düsen Nozzles |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| 770-JET / 780-JET | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 |
| | | | More option see JET-Line |



Utiliser des plaquettes type 771R
WSP Typ 771R verwenden
Use inserts type 771R

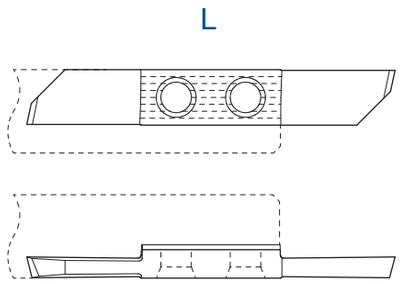
Voir pages 1.171 - 1.174
Siehe Seiten 1.171 - 1.174
See pages 1.171 - 1.174

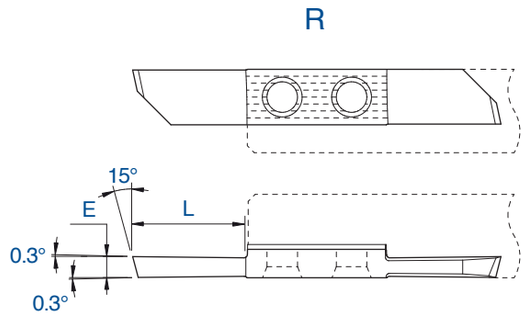
L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| A x B | L | L1 | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|---|
| 12 x 12 | 130 | 42 | A | 770RC-12 |
| 16 x 16 | 130 | 42 | A | 770RC-16 |

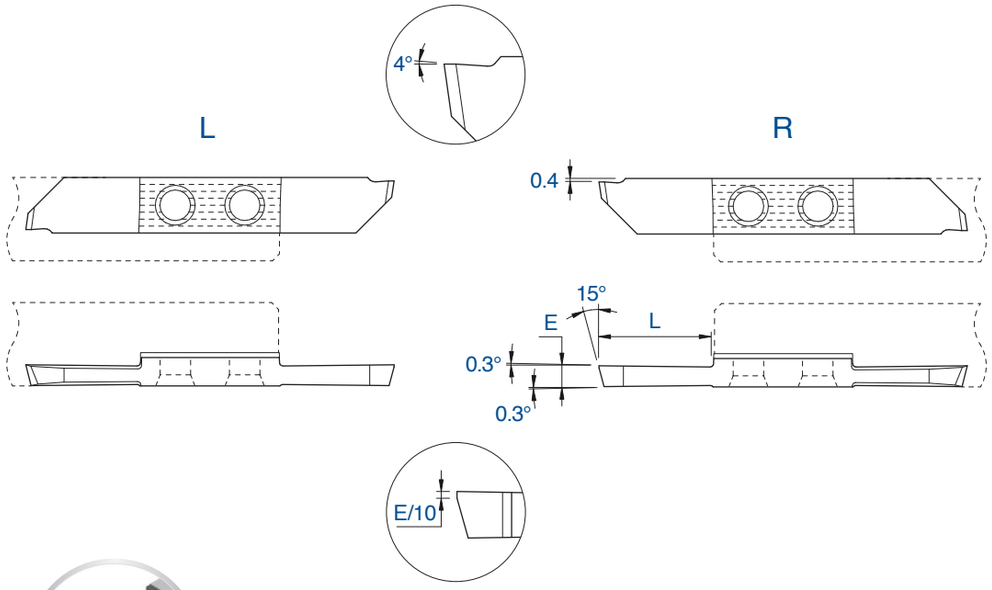
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

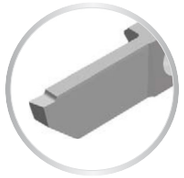





| | | L | | | | R | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | P M N S | P M N | P | | P M N S | P M N | P |
| E | L | Art. N° | TiAlN | TiN | N (µK20) | Art. N° | TiAlN | TiN | N (µK20) |
| 1.5 | 16 | - | | | | 781-1.5 | ● | ● | ● |
| 2.0 | 16 | 771-2.0 | ● | ● | ● | 781-2.0 | ● | ● | ● |
| 2.5 | 16 | 771-2.5 | ● | ● | ● | 781-2.5 | ● | ● | ● |
| 3.0 | 16 | 771-3.0 | ● | ● | ● | 781-3.0 | ● | ● | ● |
| 3.5 | 16 | 771-3.5 | ● | ● | ● | 781-3.5 | ● | ● | ● |

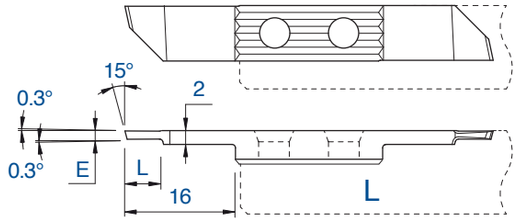


| E | L | L Art. N° | TiAlN | TiN | N (µk20) | R Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 16 | - | | | | 781XF-2.0 | ● | ● | ● |
| 2.5 | 16 | 771XF-2.5 | ● | ● | ● | 781XF-2.5 | ● | ● | ● |
| 3.0 | 16 | 771XF-3.0 | ● | ● | ● | 781XF-3.0 | ● | ● | ● |
| 3.5 | 16 | 771XF-3.5 | ● | ● | ● | 781XF-3.5 | ● | ● | ● |



## Cut R

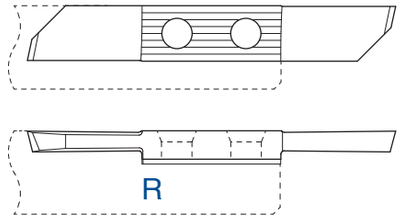




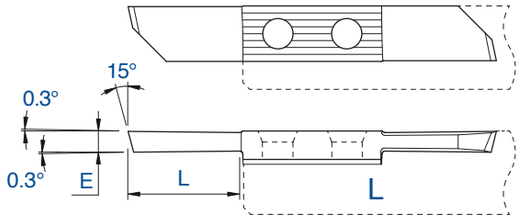

**L (R)**
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

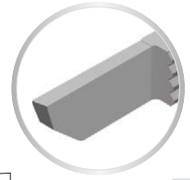
| E | L | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|
| 1.0 | 5 | 771R-1.0 | ● | ● | ● |
| 1.2 | 5 | 771R-1.2 | ● | ● | ● |
| 1.5 | 8.5 | 771R-1.5 | ● | ● | ● |

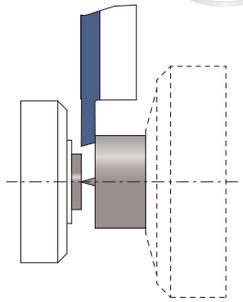
## Cut L




## Cut R



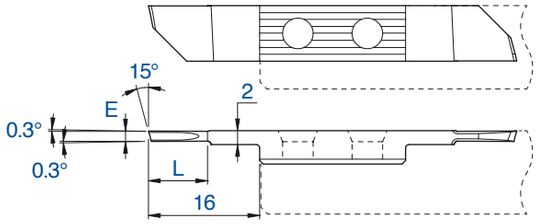


**R (L)**
Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

**L (R)**
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | L Art. N° | TiAlN | TiN | N (µk20) | R Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 16 | 781L-2.0 | ● | ● | ● | 771R-2.0 | ● | ● | ● |
| 2.5 | 16 | 781L-2.5 | ● | ● | ● | 771R-2.5 | ● | ● | ● |
| 3.0 | 16 | 781L-3.0 | ● | ● | ● | 771R-3.0 | ● | ● | ● |
| 3.5 | 16 | 781L-3.5 | ● | ● | ● | 771R-3.5 | ● | ● | ● |

## Cut R

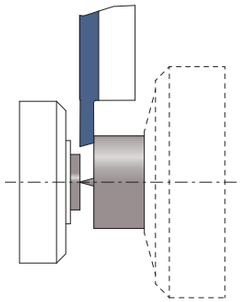




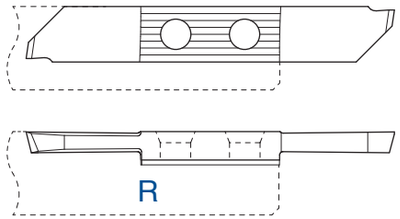

### L (R)

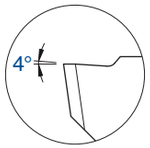
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

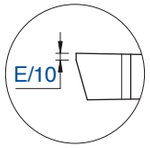
| E | L | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|
| 1.0 | 5 | 771RU-1.0 | ● | | ● |
| 1.5 | 8.5 | 771RU-1.5 | ● | | ● |



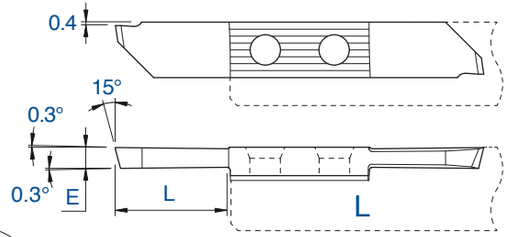
## Cut L




## Cut R





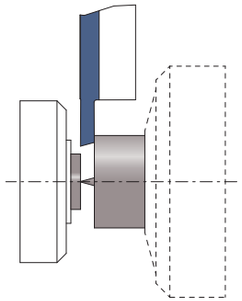

### R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

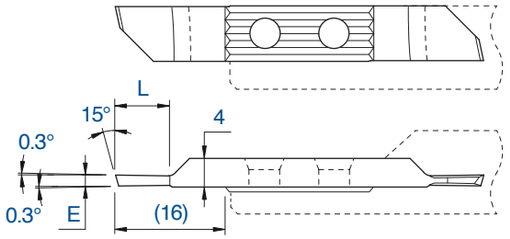
### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

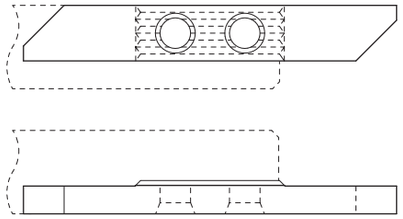
| E | L | Art. N° | TiAlN | TiN | N (µk20) | Art. N° | TiAlN | TiN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 16 | - | | | | 771RXF-2.0 | ● | ● | ● |
| 2.5 | 16 | 781LXF-2.5 | ● | ● | ● | 771RXF-2.5 | ● | ● | ● |
| 3.0 | 16 | 781LXF-3.0 | ● | ● | ● | 771RXF-3.0 | ● | ● | ● |
| 3.5 | 16 | 781LXF-3.5 | ● | ● | ● | 771RXF-3.5 | ● | ● | ● |



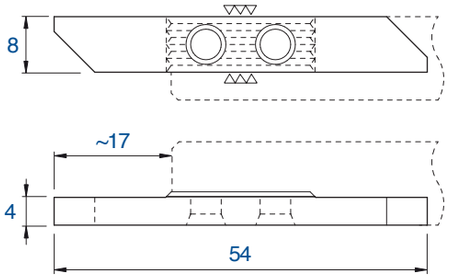
## Cut R

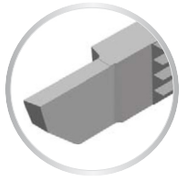



## L



## R



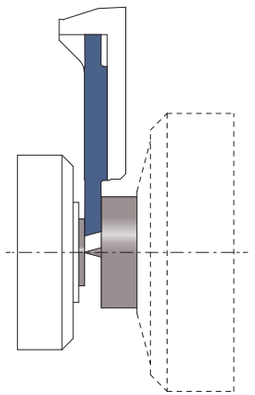


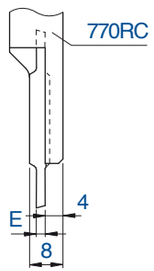
### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | Art. N° | TiAlN | TiN | N (µK20) |
|---|---|---|---|---|---|
| 1.2 | 5 | 771RD-1.2 | ● | ● | ● |
| 1.5 | 7.5 | 771RD-1.5 | ● | ● | ● |
| 2.0 | 10 | 771RD-2.0 | ● | ● | ● |

| L | | R | |
|---|---|---|---|
| Art. N° | N (µK20) | Art. N° | N (µK20) |
| 771-E | ● | 781-E | ● |



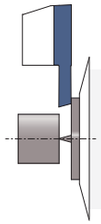


| L | | | R | | |
|---|---|---|---|---|---|
| Type | | Page | Type | | Page |
| 7050 | 7050 | 1.178 | 7060 | 7060 | 1.178 |
| | 7051 | 1.179 | | 7061 | 1.179 |
| | 7051-E | 1.183 | | 7061-E | 1.183 |
| | 7051R | 1.181 | | 7061L | 1.181 |
| | 7051RXF | 1.182 | | 7061LXF | 1.182 |
| | 7051XF | 1.180 | | 7061XF | 1.180 |

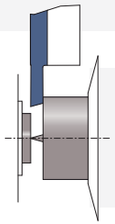


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7050 / 7060
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> 1.178

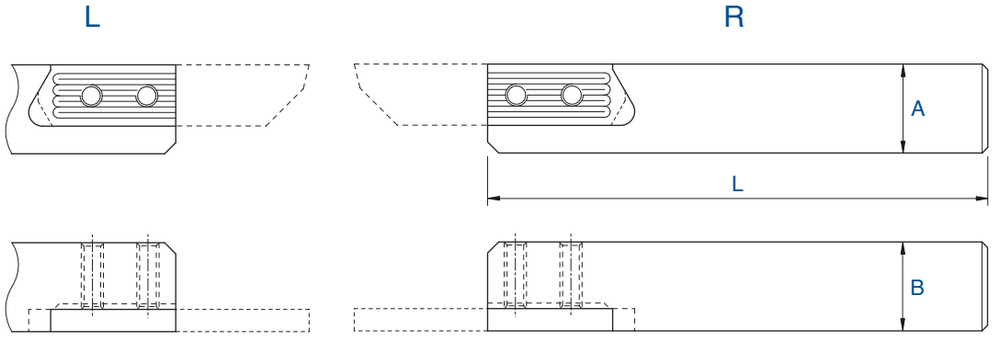


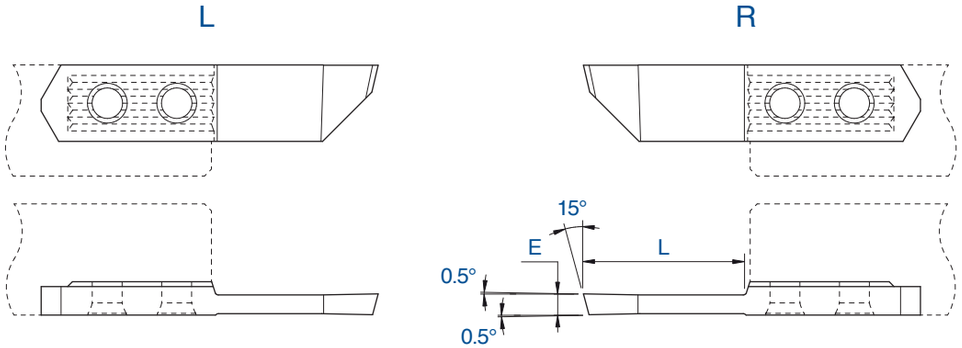
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Abstechen
Parting off
> 1.179

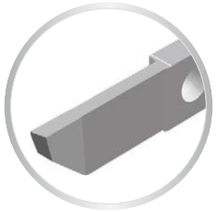


7051R / 7061L
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Abstechen - versetztes Schneiden
Parting off - cut off line
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WSP-Rohlinge
Blank inserts
> 1.183



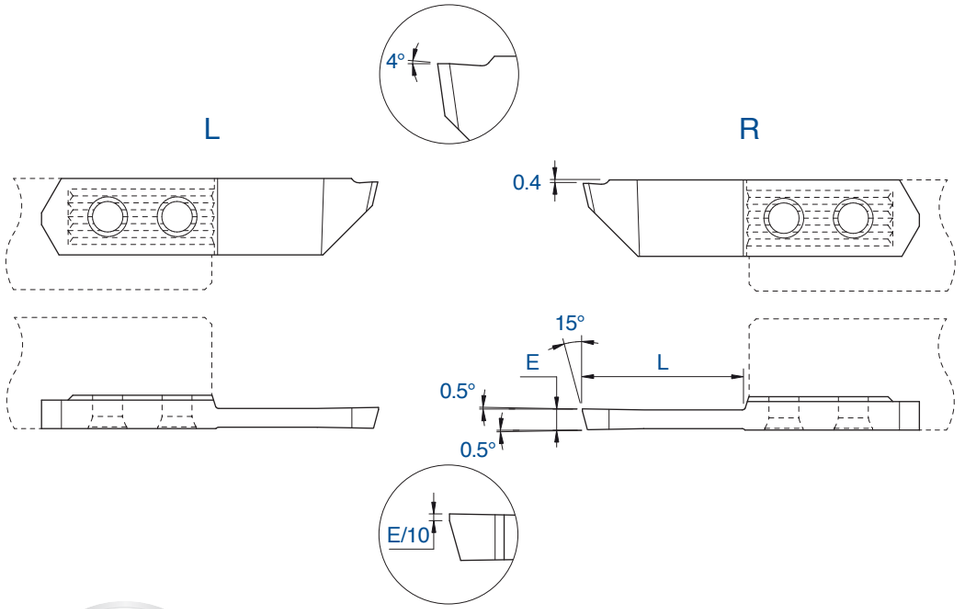
| A x B | L | Serrage Spannsystem Clamping | L Art. N° | R Art. N° |
|---|---|---|---|---|
| 16 x 16 | 130 | A | 7050-16 | 7060-16 |
| 16 x 16 | 75 | A | 7050-16-75 | 7060-16-75 |
| 20 x 20 | 120 | A | 7050-20 | 7060-20 |
| 25 x 25 | 140 | A | 7050-25 | 7060-25 |

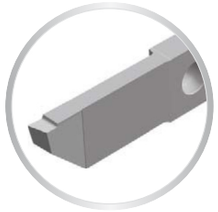
| E | L | L Art. N° | P M N S TiAlN | P M N TiN | P S N (µK20) | R Art. N° | P M N S TiAlN | P M N TiN | P S N (µK20) |
|---|---|---|---|---|---|---|---|---|---|
| 2.5 | 22 | - | | | | 7061-2.5 | ● | ● | ● |
| 3.0 | 22 | 7051-3.0 | ● | ● | ● | 7061-3.0 | ● | ● | ● |
| 3.5 | 22 | - | | | | 7061-3.5 | ● | ● | ● |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

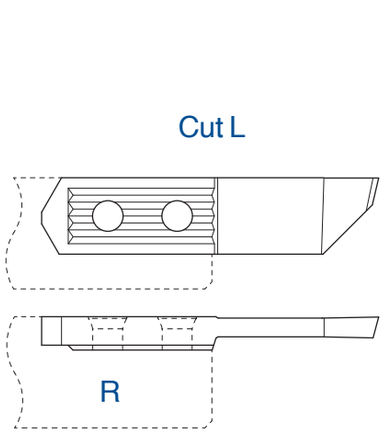
Tronçonnage
Abstechen
Parting off



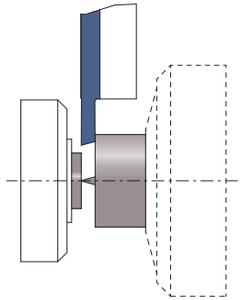


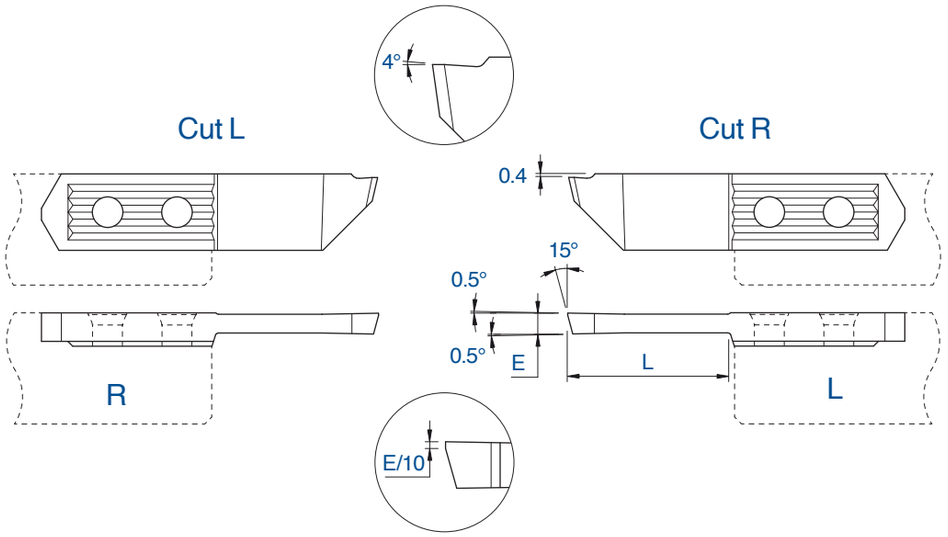
| E | L | L Art. N° | TiAlN | TiN | N (µK20) | R Art. N° | TiAlN | TiN | N (µK20) |
|---|---|---|---|---|---|---|---|---|---|
| 3.0 | 22 | 7051XF-3.0 | ● | ● | ● | 7061XF-3.0 | ● | ● | ● |

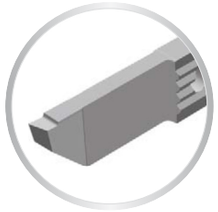




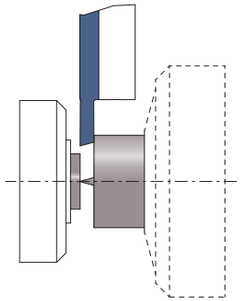



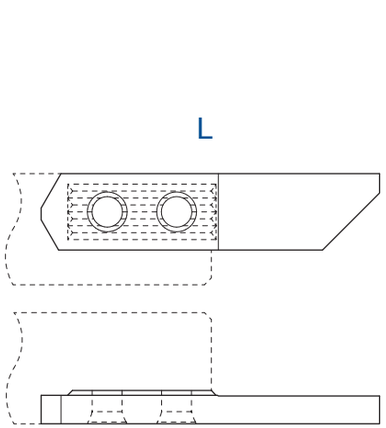
| E | L | R (L) Coupe à gauche déportée Versetztes Linksschneiden Left cut off line Art. N° | TiAlN | TiN | N (µK20) | L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line Art. N° | TiAlN | TiN | N (µK20) |
|---|---|---|---|---|---|---|---|---|---|
| 2.5 | 22 | - | | | | 7051R-2.5 | ● | ● | ● |
| 3.0 | 22 | 7061L-3.0 | ● | ● | ● | 7051R-3.0 | ● | ● | ● |
| 3.5 | 22 | - | | | | 7051R-3.5 | ● | ● | ● |

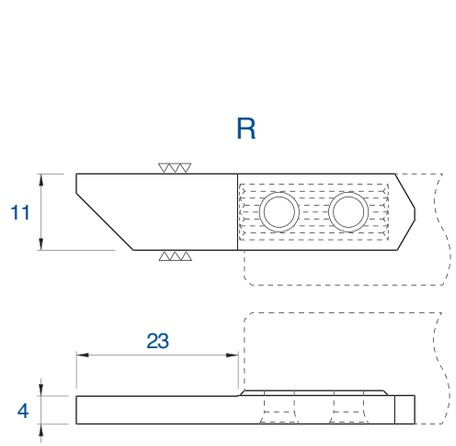


| | | R (L) Coupe à gauche déportée Versetztes Linksschneiden Left cut off line | | | | L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | | | |
|---|---|---|---|---|---|---|---|---|---|
| E | L | Art. N° | P M N S TiAlN | P M N TiN | P S N (µK20) | Art. N° | P M N S TiAlN | P M N TiN | P S N (µK20) |
| 3.0 | 22 | 7061LXF-3.0 | ● | ● | ● | 7051RXF-3.0 | ● | ● | ● |








| L | | R | |
|---|---|---|---|
| Art. N° | P S N (µK20) | Art. N° | P S N (µK20) |
| 7051-E | ● | 7061-E | ● |

| L | | | R | | |
|---|---|---|---|---|---|
| Type | | Page | Type | | Page |
| W750 | W750 | 1.186 | W760 | W760 | 1.186 |
| | W750-JET | 1.187 | | W760-JET | 1.187 |
| W751 | W751-E5 | 1.188 | W761 | W761-E5 | 1.188 |
| | W751-E6 | 1.190 | | W761-E6 | 1.190 |
| | W751-EP5 | 1.189 | | W761-EP5 | 1.189 |
| | W751-EP6 | 1.191 | | W761-EP6 | 1.191 |

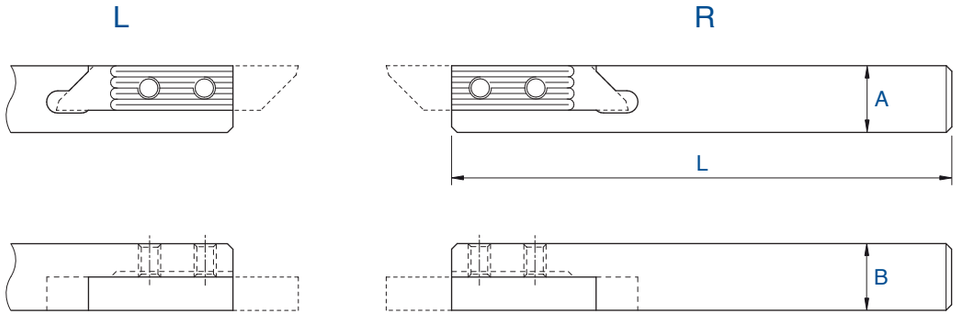


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W750 / W760
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Holders
> 1.186

W750-JET / W760-JET
Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
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> 1.187

W751-E / W761-E
Plaquettes ébauches
WSP-Rohlinge
Blank inserts
> 1.188

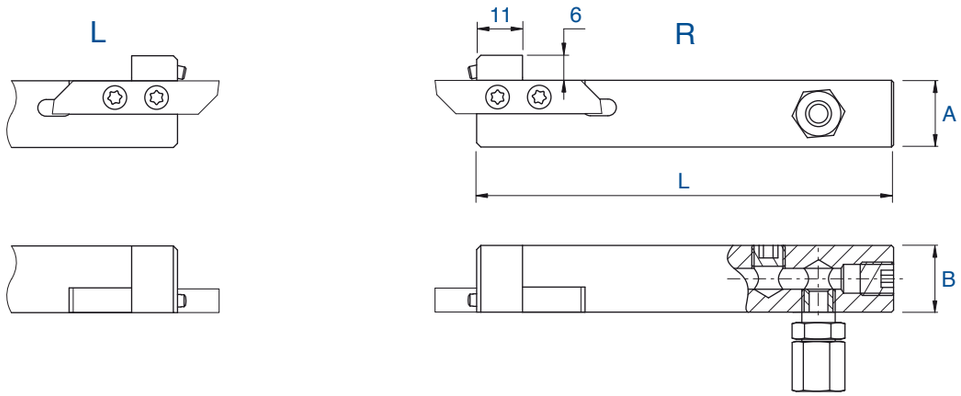



| A x B | L | Serrage Spannsystem Clamping | L Art. N° | R Art. N° |
|---|---|---|---|---|
| 12 x 12 | 130 | A | W750-12 | W760-12 |
| 16 x 16 | 130 | A | W750-16 | W760-16 |
| 20 x 20 | 120 | A | W750-20 | W760-20 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





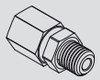



| A x B | L | Serrage Spannsystem Clamping | L Art. N° | R Art. N° |
|---|---|---|---|---|
| 16 x 16 | 100 | A | W750-16-JET | W760-16-JET |
| 20 x 20 | 100 | A | W750-20-JET | W760-20-JET |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

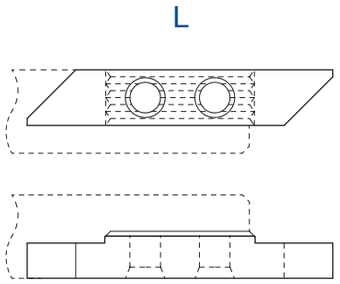
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

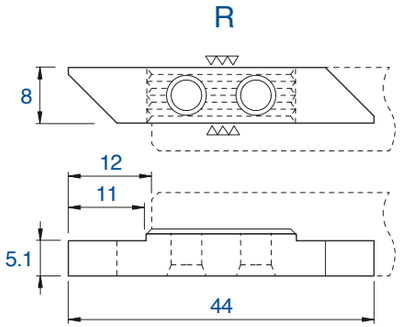
Each holder is supplied with one or more screws.
The keys must be ordered separately.

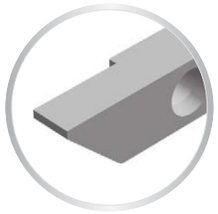
| Pièces de rechange Ersatzteile Spare parts |  Art. N° |  Art. N° | Buses Düsen Nozzles  Art. N° |
|---|---|---|---|
| W750-JET / W760-JET | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 |
| | | | More option see JET-Line |

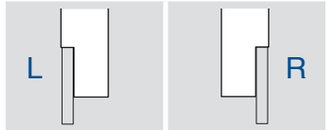
Plaquettes ébauches
WSP-Rohlinge
Blank inserts



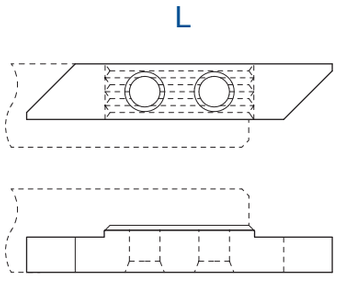


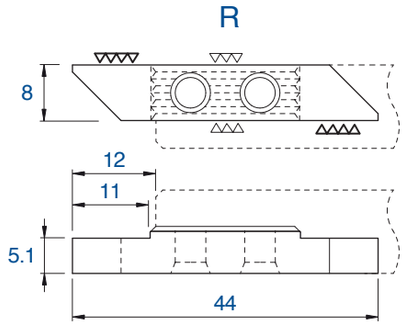



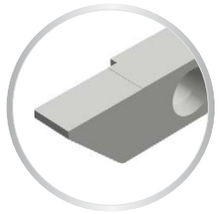



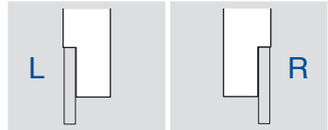



| Art. N° | P | S | N (µK20) | Art. N° | P | S | N (µK20) |
|---|---|---|---|---|---|---|---|
| W751-E5 | | | ● | W761-E5 | | | ● |



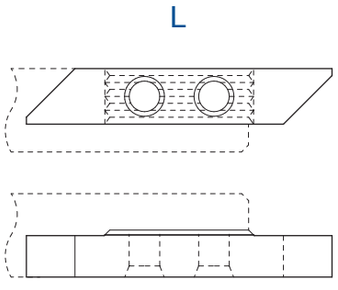



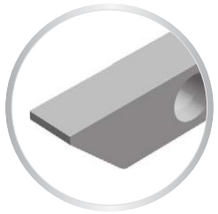


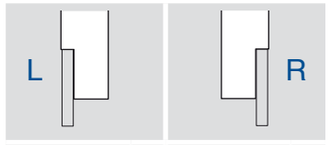

| Art. N° | P | S | N (µK20) | Art. N° | P | S | N (µK20) |
|---|---|---|---|---|---|---|---|
| W751-EP5 | | | ● | W761-EP5 | | | ● |

Plaquettes ébauches
WSP-Rohlinge
Blank inserts

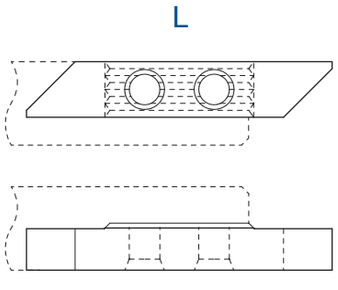


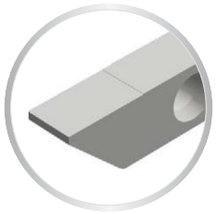


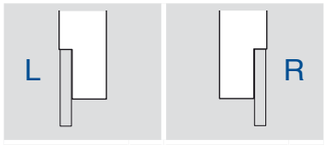






| Art. N° | P | S | N (µK20) | Art. N° | P | S | N (µK20) |
|---|---|---|---|---|---|---|---|
| W751-E6 | | | ● | W761-E6 | | | ● |






| Art. N° | P | S | N (µK20) | Art. N° | P | S | N (µK20) |
|---|---|---|---|---|---|---|---|
| W751-EP6 | | | ● | W761-EP6 | | | ● |

Polygonal interface PSC3/ PSC4/ HSK > 1.193

740Z / 760Z — Porte-outils pour usinage déporté / Halter für versetzte Bearbeitung / Tool holder for off line machining > 1.200

Star — SL7/10-JET > 1.201

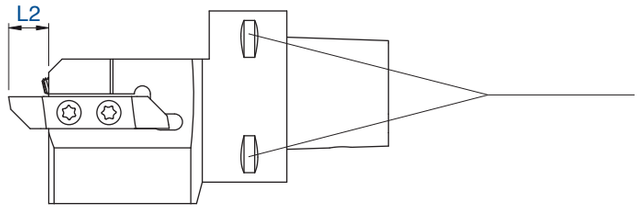
Tornos
- DECO7/10 - EvoDECO10 R > 1.202
- DECO7/10 - EvoDECO10 L > 1.204
- DECO13 - EvoDECO16 / DECO20 - EvoDECO20/32 > 1.206
- MultiSwiss 6x16 > 1.208
- AS14 / SAS16 > 1.209
- SwissNano > 1.210

Schütte > 1.211

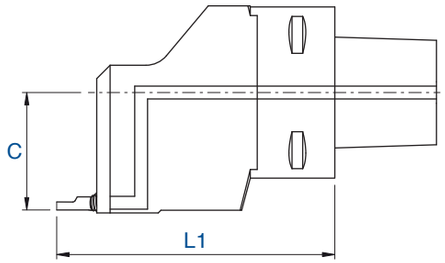
Arno > 1.212








Porte-outils pour changeur automatique
Halter für Werkzeugwechsler
Holder for automatic changer



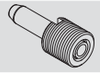



| Type | Plaquettes type WSP Typ Insert type | Pages Seiten Pages | L1 | C | L2 | Art. N° | Buses Düsen Nozzles Art. N° |
|---|---|---|---|---|---|---|---|
| PSC3 | 740 | > 1.43 | 52 | 22 | 7.5 | PSC3-740-22052-G | JJ-M3X6-D1.5 |
| PSC3 | 760 | > 1.101 | 59 | 22 | 10 | PSC3-760-22059-G | |
| PSC4 | 740 | > 1.43 | 62 | 27 | 7.5 | PSC4-740-27062-G | |
| PSC4 | 760 | > 1.101 | 67 | 27 | 10 | PSC4-760-27067-G | |

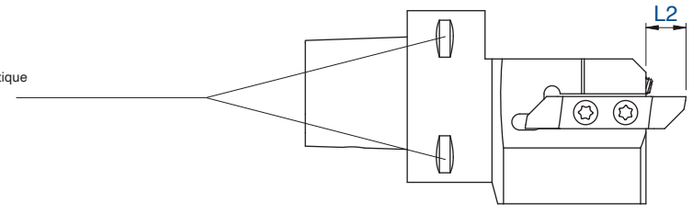
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

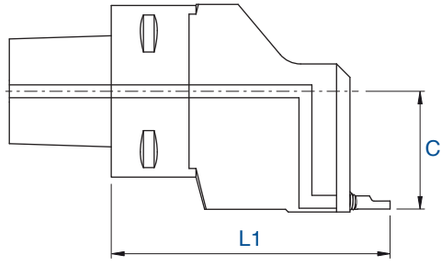
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Options | |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |

Porte-outils pour changeur automatique
Halter für Werkzeugwechsler
Holder for automatic changer






| Type | Plaquettes type WSP Typ Insert type | Pages Seiten Pages | L1 | C | L2 | Art. N° | Buses Düsen Nozzles Art. N° |
|---|---|---|---|---|---|---|---|
| PSC3 | 730 | >1.43 | 52 | 22 | 7.5 | PSC3-730-22052-G | JJ-M3X6-D1.5 |
| PSC3 | 750 | >1.101 | 59 | 22 | 10 | PSC3-750-22059-G | |
| PSC4 | 730 | >1.43 | 62 | 27 | 7.5 | PSC4-730-27062-G | |
| PSC4 | 750 | >1.101 | 67 | 27 | 10 | PSC4-750-27067-G | |

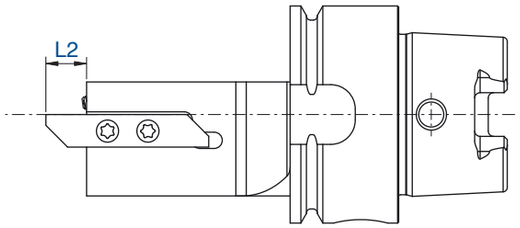
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Options | |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |

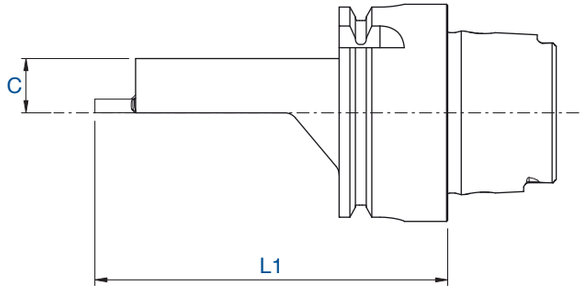





Utilisable sur toutes les machines avec broches HSK-T ou HSK-A

Einsetzbar auf allen Maschinen, mit HSK-T oder HSK-A Pin

Usable on all machines with HSK-T or HSK-A spindles




| Plaquettes type WSP Typ Insert type | Pages Seiten Pages | L1 | L2 | C | Art. N° | Buses Düsen Nozzles Art. N° |
|---|---|---|---|---|---|---|
| 740 | >1.43 | 65 | 7.5 | 15 | HSK-A40-S191-740-0065-JET | JJ-M3X6-D1.5 |
| 760 | >1.101 | 70 | 10 | 15 | HSK-A40-S191-760-0070-JET | JJ-M3X6-D1.5 |

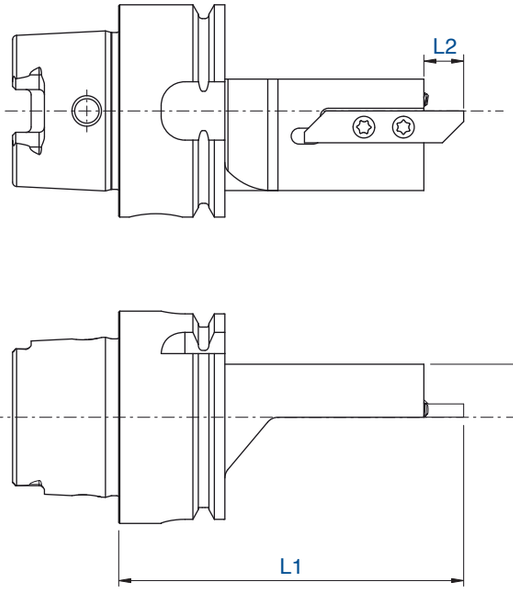
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Options | |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |






Utilisable sur toutes les machines avec broches HSK-T ou HSK-A

Einsetzbar auf allen Maschinen, mit HSK-T oder HSK-A Pin

Usable on all machines with HSK-T or HSK-A spindles

| Plaquettes type WSP Typ Insert type | Pages Seiten Pages | L1 | L2 | C | Art. N° | Buses Düsen Nozzles Art. N° |
|---|---|---|---|---|---|---|
| 730 | > 1.43 | 65 | 7.5 | 10 | HSK-T40-730-0065-JET | JJ-M3X6-D1.5 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

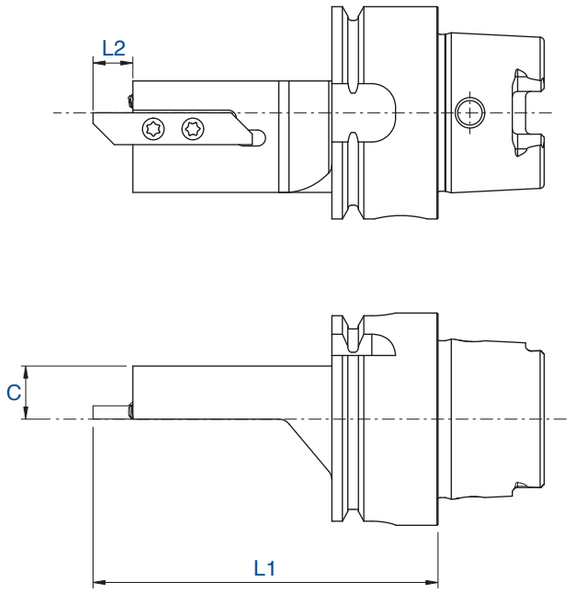
Each holder is supplied with one or more screws. The keys must be ordered separately.

| Options | |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |










Utilisable sur toutes les machines avec broches HSK-T ou HSK-A

Einsetzbar auf allen Maschinen, mit HSK-T oder HSK-A Pin

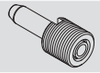
Usable on all machines with HSK-T or HSK-A spindles

| Plaquettes type WSP Typ Insert type | Pages Seiten Pages | L1 | L2 | C | Art. N° | Buses Düsen Nozzles Art. N° |
|---|---|---|---|---|---|---|
| 740 | > 1.43 | 65 | 7.5 | 10 | HSK-T40-740-0065-JET | JJ-M3X6-D1.5 |
| 760 | > 1.101 | 70 | 10 | 15 | HSK-T40-760-0070-JET | JJ-M3X6-D1.5 |

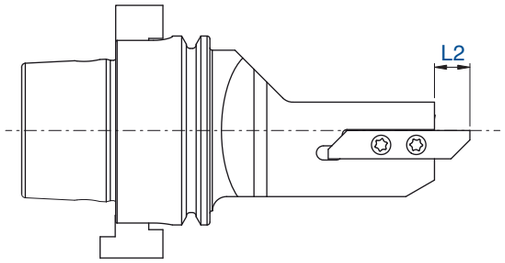
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.

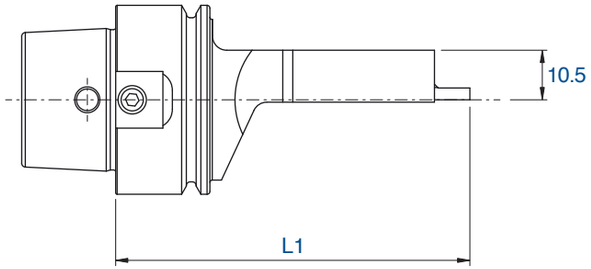
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws. The keys must be ordered separately.

| Options | |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |






| Plaquettes type<br>WSP Typ<br>Insert type | Pages<br>Seiten<br>Pages | L1 | L2 | Art. N° | Buses<br>Düsen<br>Nozzles<br>Art. N° |
|---|---|---|---|---|---|
| 730 | > 1.43 | 75 | 7.5 | HSK-E40-730-0075-JET-WM | JJ-M3X6-D1.5 |
| 750 | > 1.101 | 75 | 10 | HSK-E40-750-0075-JET-WM | JJ-M3X6-D1.5 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

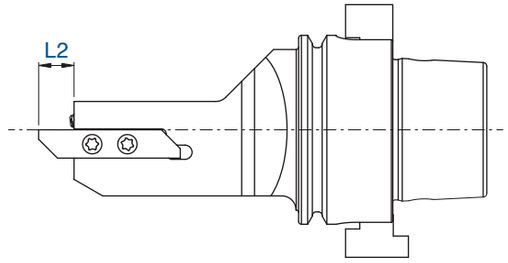
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

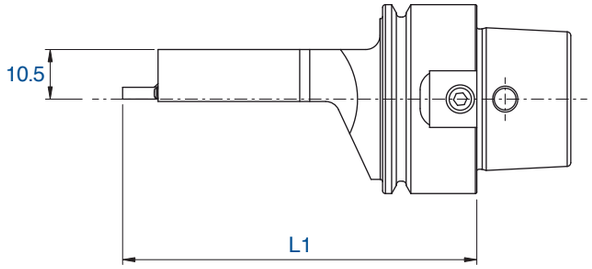
Each holder is supplied with one or more screws.
The keys must be ordered separately.



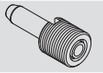






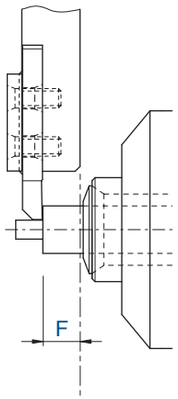

| Plaquettes type<br>WSP Typ<br>Insert type | Pages<br>Seiten<br>Pages | L1 | L2 | Art. N° | Buses<br>Düsen<br>Nozzles<br>Art. N° |
|---|---|---|---|---|---|
| 740 | > 1.43 | 75 | 7.5 | HSK-E40-740-0075-JET-WM | JJ-M3X6-D1.5 |
| 760 | > 1.101 | 75 | 10 | HSK-E40-760-0075-JET-WM | JJ-M3X6-D1.5 |

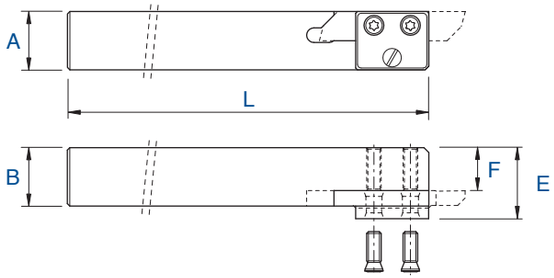
| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options |
|---|---|
|  |  |
| Art. N° | Art. N° |
| HSK-40-JET-M12X1 | C-HSK-40-JET |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.




740 Series

| A x B | L | F | E | Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|---|---|---|---|
| 12 x 12 | 130 | 9.5 | 14.5 | 740Z-12 | 741 - 747 | > 1.43 |
| 16 x 16 | 130 | 13.5 | 18.5 | 740Z-16 | 741 - 747 | > 1.43 |

760 Series

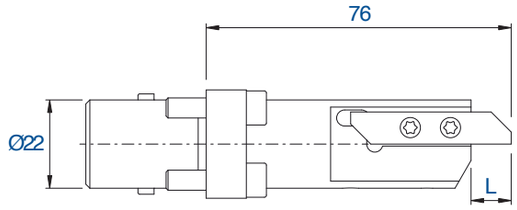
| A x B | L | F | E | Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|---|---|---|---|
| 12 x 12 | 130 | 8 | 15 | 760Z-12 | 761 - 767 | > 1.101 |
| 16 x 16 | 130 | 12 | 19 | 760Z-16 | 761 - 767 | > 1.101 |

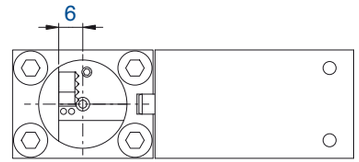
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

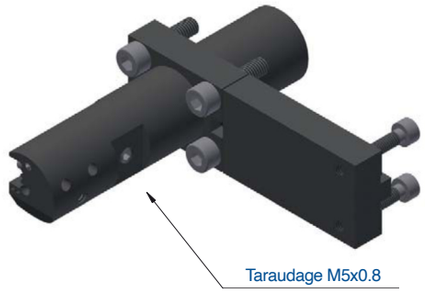








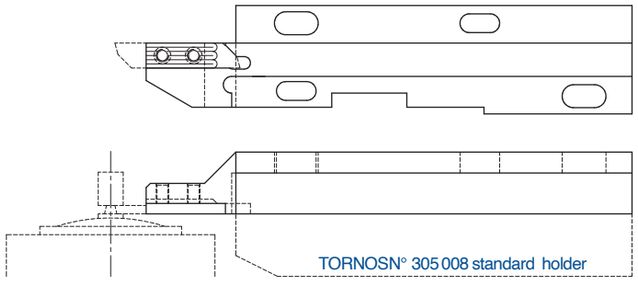




| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 740-SL7/10-JET | 740 | > 1.43 |
| 760-SL7/10-JET | 760 | > 1.101 |

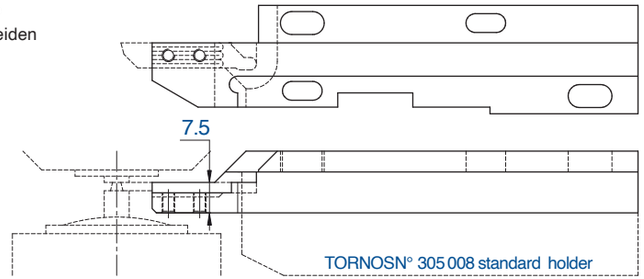
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

Coupe à droite
Rechtsschneiden
Right hand cut




| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 740-DECO10 | 741 - 747 | >1.43 |

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line




| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 730R-DECO10 | 731R / 731N | 1.51 - 1.58 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.



TOP-Line

DECO7/10
EvoDECO 10

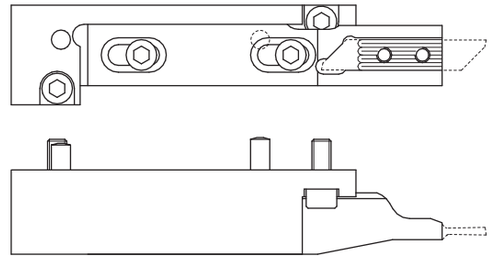
R

Porte-outils pour machine Tornos
Halter für Tornos Maschine
Holders for Tornos machine

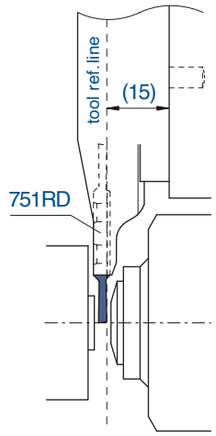
Pour le tronçonnage de petites pièces
Zum Abstechen von kleinen Werkstücken
For small parts parting off

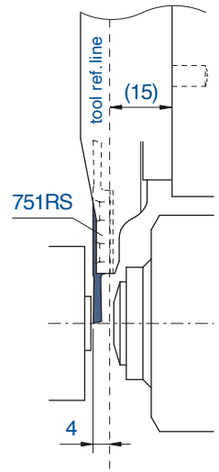


Réglable en longueur
Längseinstellbar
Adjustable length



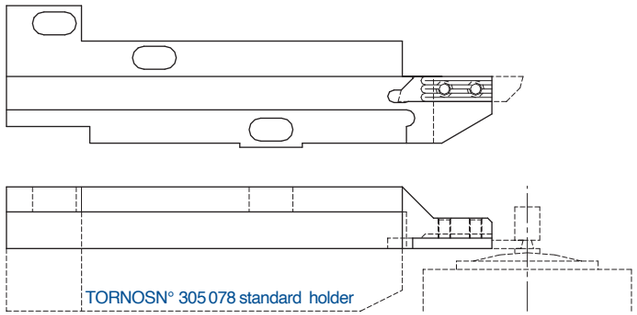
| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 750R-DECO10 | 751R / 751N | >1.104 |



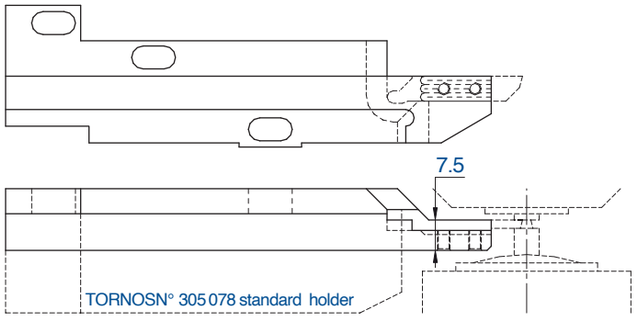

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

Coupe à gauche
Linksschneiden
Left hand cut




| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 730-DECO10 | 731 - 737 | >1.43 |

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line




| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 740L-DECO10 | 741L / 741N | >1.49 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.



TOP-Line

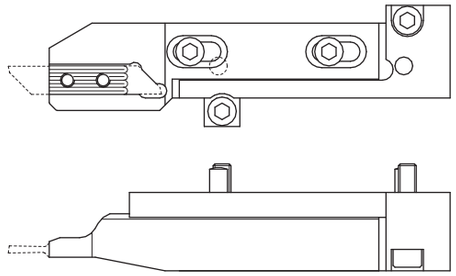
DECO7/10
EvoDECO 10

L

Porte-outils pour machine Tornos
Halter für Tornos Maschine
Holders for Tornos machine

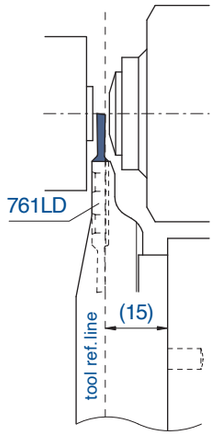
Pour le tronçonnage de petites pièces
Zum Abstechen von kleinen Werkstücken
For small parts parting off

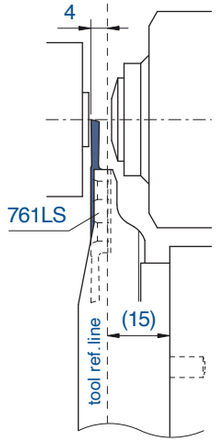




Réglable en longueur
Längseinstellbar
Adjustable length

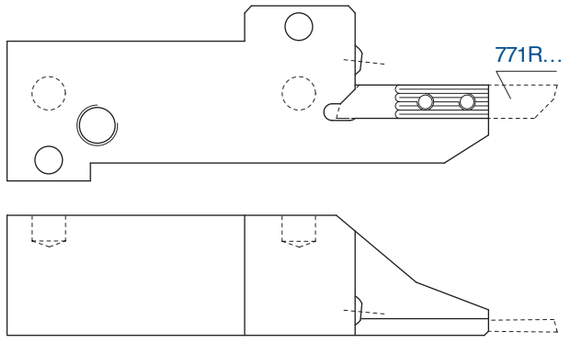
| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 760L-DECO10 | 761L / 761N | 1.104 - 1.125 |



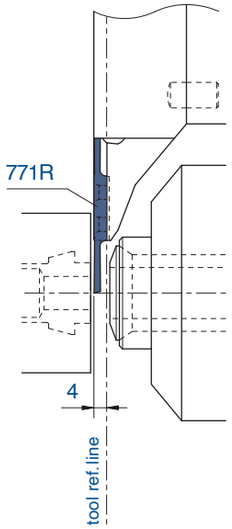



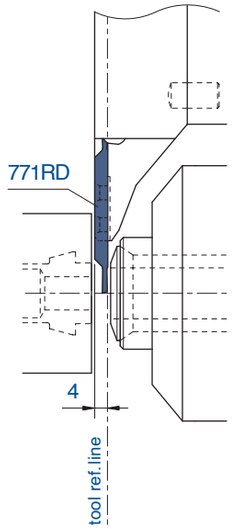

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

Pour le tronçonnage de petites pièces
Zum Abstechen von kleinen Werkstücken
For small parts parting off




| Art. N° | Plaquettes type<br>WSP Typ<br>Inserts type | Pages<br>Seiten<br>Pages |
|---|---|---|
| 770R-DECO13 | 771R | 1.171 - 1.174 |



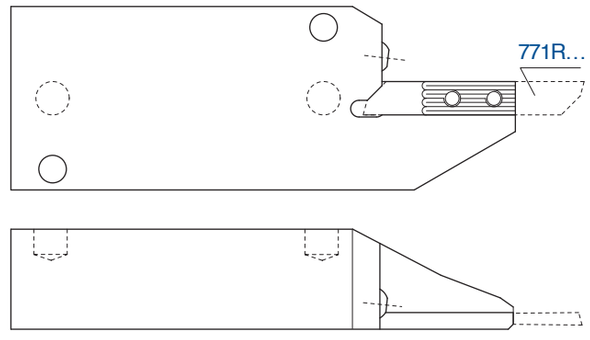




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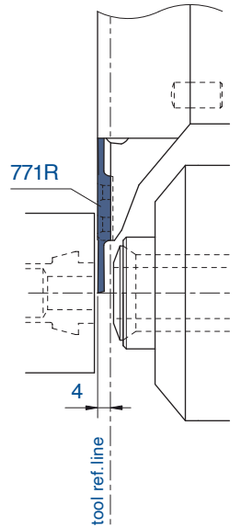


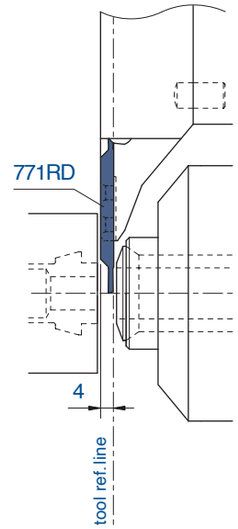


Pour le tronçonnage de petites pièces
Zum Abstechen von kleinen Werkstücken
For small parts parting off

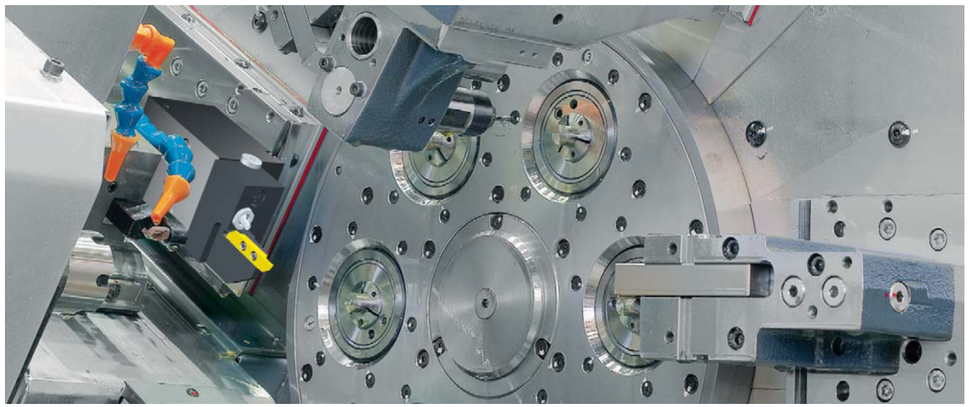


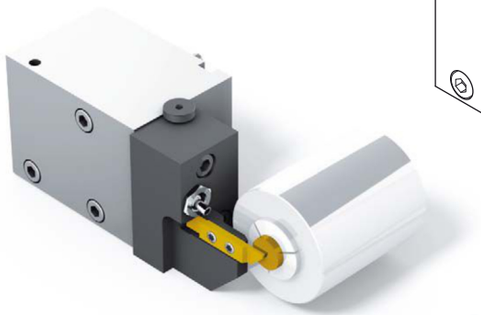

| Art. N° | Plaquettes type<br>WSP Typ<br>Inserts type | Pages<br>Seiten<br>Pages |
|---|---|---|
| 770R-DECO20 | 771R | 1.171 - 1.174 |

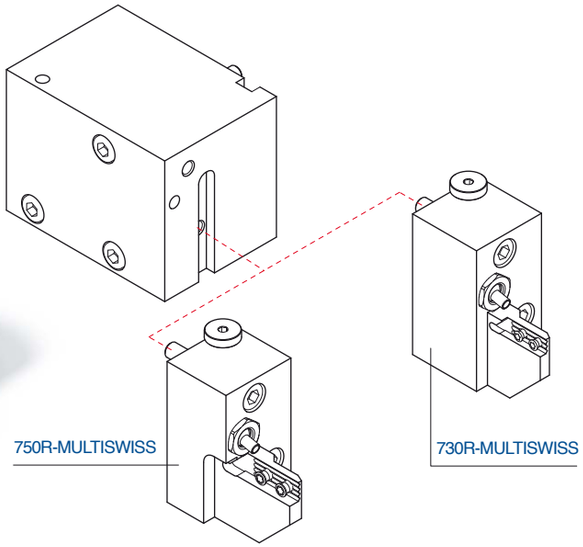



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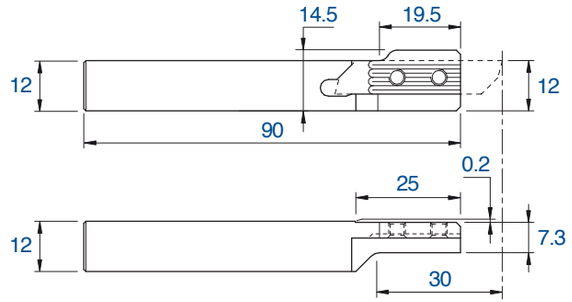



| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 730R-MULTISWISS | 731R / 731N | 1.49 - 1.57 |
| 750R-MULTISWISS | 751R / 751N | 1.103 - 1.126 |

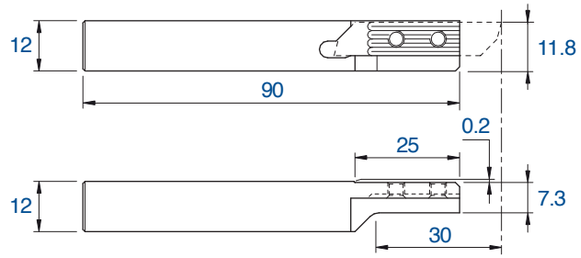
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

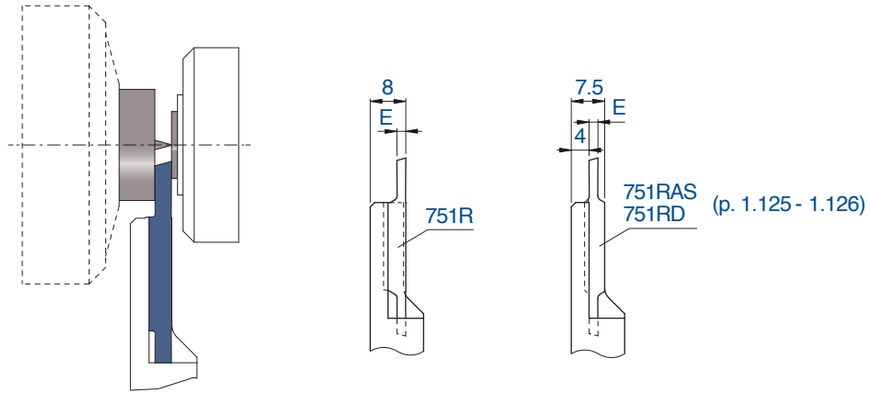
Each holder is supplied with one or more screws.
The keys must be ordered separately.




| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 750RAS-12 | 751R | 1.114 - 1.127 |



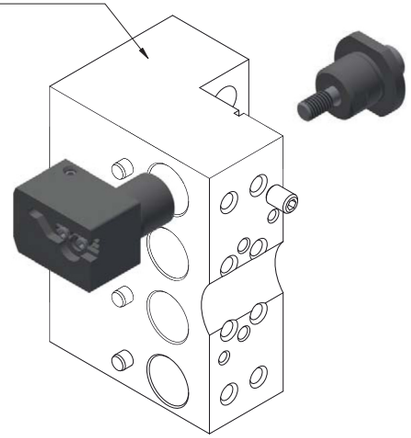

| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 750RAS-12-H11.8 | 751R | 1.114 - 1.127 |




Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
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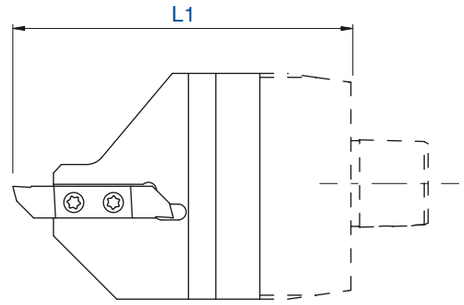


Compatible avecporte-outils Tornos 312022
Kompatibel mit Tornos-Werkzeughalter 312022
Compatible with Tornos tool holder 312022

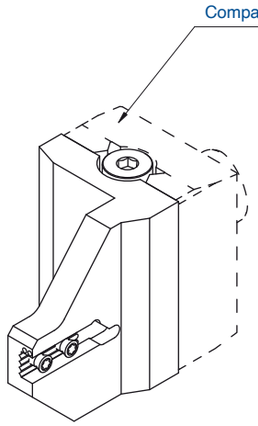


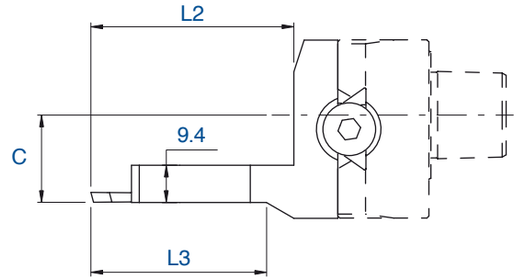
| Art. N° | Plaquettes type WSP Typ Inserts type | Pages Seiten Pages |
|---|---|---|
| 740-SN-312022 | 740 | 1.43 - 1.89 |

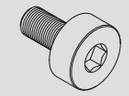





Compatibility Schütte

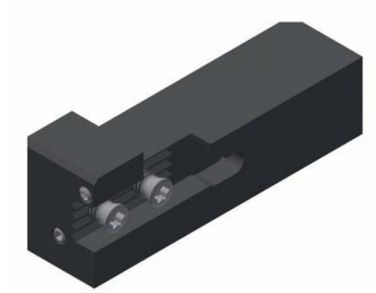


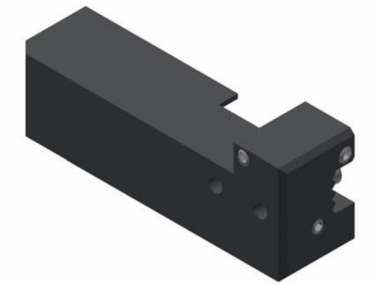


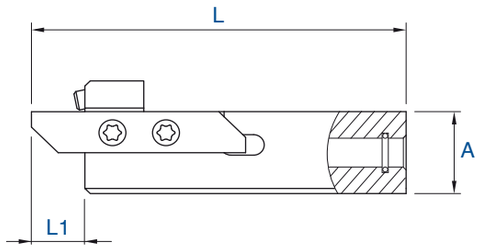

| Plaquettes type WSP Typ Inserts type | Pages Seiten Pages | L1 | C | L2 | L3 | Art. N° | Compatibility Schütte |  Art. N° |
|---|---|---|---|---|---|---|---|---|
| 761-767 | > 1.101 | 86 | 22 | 51 | 44 | DT20-760-JET | C3-75870949 | V-M6X0.5-14-L18 |
| | | 83 | 27.5 | 48 | – | DT30-760-JET | C4-75836783 | |

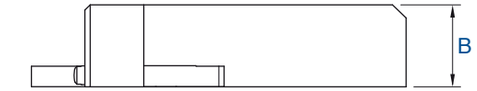
Chaquesupport est livré avecune ou plusieurs vis. Les clés sont àcommander séparément.
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À monter exclusivement avec les butées ARNOAHA…-UN…-AFC
Ausschließlich mit ARNOAHA…-UN…-AFCAnschlagssystemen montieren
To be assembled exclusively with ARNOAHA…-UN…-AFCstop systems

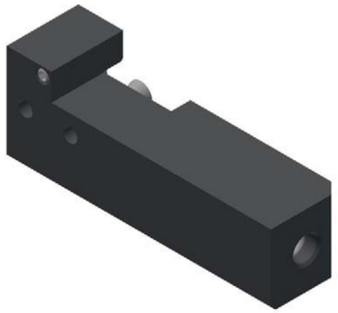
| Plaquettes type<br>WSP Typ<br>Insert type | Pages<br>Seiten<br>Pages | AxB | L | L1 | Art. N° | Buses<br>Düsen<br>Nozzles<br>Art. N° |
|---|---|---|---|---|---|---|
| 740 | > 1.43 | 12x12 | 70 | 7.5 | AFC-740-12-JET | JJ-M3X6-D1.5 |
| 740 | > 1.43 | 16x16 | 70 | 7.5 | AFC-740-16-JET | JJ-M3X6-D1.5 |
| 760 | > 1.101 | 12x12 | 70 | 10 | AFC-760-12-JET | JJ-M3X6-D1.5 |
| 760 | > 1.101 | 16x16 | 70 | 10 | AFC-760-16-JET | JJ-M3X6-D1.5 |
| | | | | | | More option<br>see JET-Line |

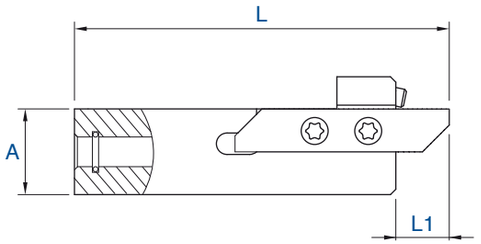
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Each holder is supplied with one or more screws. The keys must be ordered separately.

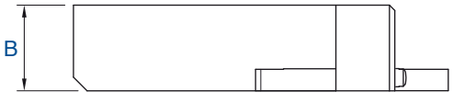











À monter exclusivement avec les butées ARNOAHA…-UN…-AFC
Ausschließlich mit ARNOAHA…-UN…-AFCAnschlagssystemen montieren
To be assembled exclusively with ARNOAHA…-UN…-AFCstop systems

| Plaquettes type<br>WSP Typ<br>Insert type | Pages<br>Seiten<br>Pages | AxB | L | L1 | Art. N° | Buses<br>Düsen<br>Nozzles<br>Art. N° |
|---|---|---|---|---|---|---|
| 730 | > 1.43 | 12x12 | 70 | 7.5 | AFC-730R-12-JET | JJ-M3X6-D1.5 |
| 730 | > 1.43 | 16x16 | 70 | 7.5 | AFC-730R-16-JET | JJ-M3X6-D1.5 |
| 750 | > 1.101 | 12x12 | 70 | 10 | AFC-750R-12-JET | JJ-M3X6-D1.5 |
| 750 | > 1.101 | 16x16 | 70 | 10 | AFC-750R-16-JET | JJ-M3X6-D1.5 |
| | | | | | | More option<br>see JET-Line |

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Each holder is supplied with one or more screws. The keys must be ordered separately.

| | Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage type B<br>Spannsystem Typ B<br>Clamping system type B | Options |
|---|---|---|---|---|---|
| 710 | 710-6 / - NOVIBRA | V-M2.5X5.8-T8 | C-T8 | - | - |
| | 710-7 / - NOVIBRA | V-M2.5X6.5-T8 | | | |
| | 710-8 / - NOVIBRA | V-M2.5X7.8-T8 | | | |
| | 710-10 - 710-12 | | | | |
| 720 | 720-7 | V-M2.5X6.5-T8 | C-T8 | - | - |
| | 720-8 - 720-12 | V-M2.5X7.8-T8 | | | |
| 730 | 730-7 /- JET / -NOVIBRA | V-M3X7-T8 | C-T8 | - | - |
| | 730-8 / -NOVIBRA | | | V-M2.5X7.8-T8 | C-T8 |
| | 730-9.52 - 730-20 | | | - | - |
| | 730-DECO10 | | | | |
| | 730R-DECO10 | | | | |
| | 730RC | V-M3X5.5-T8 | | | |
| 740 | 740-7 /-JET /-NOVIBRA | V-M3X7-T8 | C-T8 | - | - |
| | 740-8 /-NOVIBRA - | | | V-M2.5X7.8-T8 | C-T8 |
| | 740-12 /-JET /-NOVIBRA | | | | |
| | 740-16 - 740-20 | | | - | - |
| | 740/730-D | | | | |
| | 740-C | V-M3X5.5-T8 | | | |
| | 740-D-JET | | | | |
| | 740-DECO10 | V-M3X7-T8 | | | |
| | 740L-DECO10 | | | | |
| | 740-Z | V-M3X9-T8 | | | |

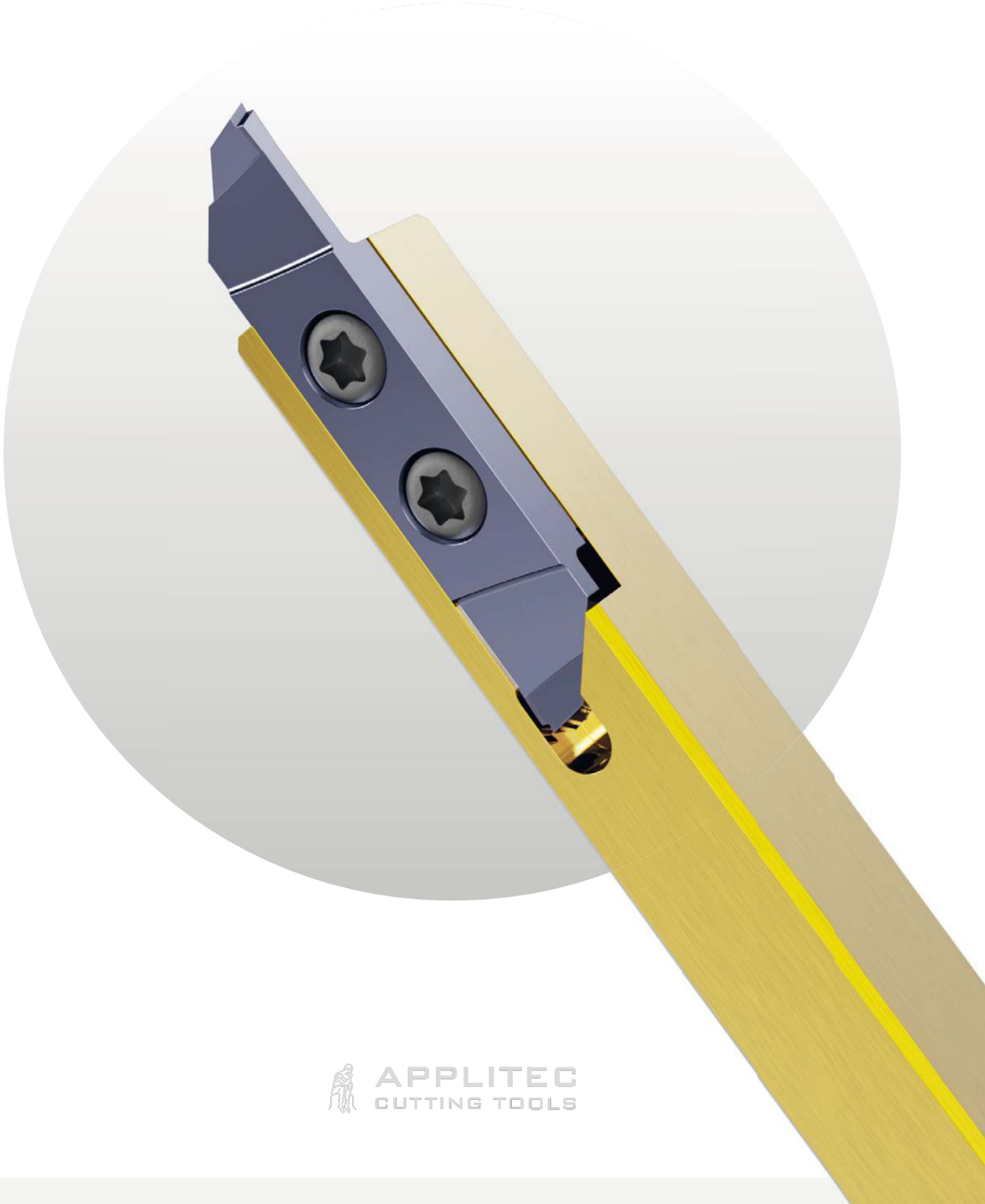
| | Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage type B<br>Spannsystem Typ B<br>Clamping system type B<br>BN11 BN21 | |
|---|---|---|---|---|---|
| 750 | 750-10 - 750-12 /-JET | V-M4X9-T15 | C-T15 | - | - |
| | 750-10-AB | | | V-M3X10-BN21 | C-6P-2.0 |
| | 750-12-AB | | | V-M3X8-BN11 | C-6P-2.5 |
| | 750-12.7 - 750-14 | | | V-M3X10-BN11 | |
| | 750-16 | | | V-M3X12-BN11 | |
| | 750-20 | | | V-M3X16-BN11 | |
| | 750RAS- 750-RC | V-M4X7.3-T15 | | - | - |
| | 750R-DECO10 | V-M4X5.6-T15 | | | |
| 760 | 760-10 - 760-12 /-JET / -NOVIBRA / 760/750 | V-M4X9-T15 | C-T15 | - | - |
| | 760-10-AB | | | V-M3X10-BN21 | C-6P-2.0 |
| | 760-12-AB | | | V-M3X8-BN11 | C-6P-2.5 |
| | 760-12.7 - 760-14 | | | V-M3X10-BN11 | |
| | 760-16 | | | V-M3X12-BN11 | |
| | 760-20 | | | V-M3X16-BN11 | |
| | 760-D-JET | | | | |
| | 760LC | V-M4X7.3-T15 | | - | - |
| | 760L-DECO10 | V-M4X5.6-T15 | | | |
| | 760-Z | V-M4X12-T15 | | | |



TOP-Line
Vis et clés de rechange
Ersatzschrauben und Schlüsseln
Spare screws and keys

| | Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage type B<br>Spannsystem Typ B<br>Clamping system type B | |
|---|---|---|---|---|---|
| 770 | 770 / -JET | V-M4X9-T15 | C-T15 | - | - |
| | 770RC | V-M4X7.3-T15 | | | |
| 780 | 780 / -JET | V-M4X9-T15 | C-T15 | - | - |
| 7050 | 7050 | V-M4X9-T15 | C-T15 | - | - |
| | 7051 | | | | |
| 7060 | 7060 | V-M4X9-T15 | C-T15 | - | - |
| | 7061 | | | | |
| W | W750 / W760 /-JET | V-M4X11.5-T15 | C-T15 | - | - |
| PSC3 | PSC3-730 | V-M3X7-T8 | C-T8 | - | - |
| | PSC3-740 | | | | |
| | PSC3-750 | | | | |
| | PSC3-760 | V-M4X9-T15 | C-T15 | | |
| PSC4 | PSC4-730 | V-M4X9-T15 | C-T15 | - | - |
| | PSC4-740 | | | | |
| | PSC4-750 | | | | |
| | PSC4-760 | | | | |
| HSK | HSK-A40-E40-T40-740 | V-M3X7-T8 | C-T8 | - | - |
| | HSK-A40-E40-T40-760 | V-M4X9-T15 | C-T15 | | |
| STAR | SL7/10-JET | V-M3X7-T8 | C-T8 | - | - |
| DECO7/10<br>EvoDECO10 | 730-DECO10 | V-M3X5.5-T8 | C-T8 | - | - |
| | 730R-DECO10 | | | | |
| | 740-DECO10 | | | | |
| | 740L-DECO10 | | | | |
| | 750R-DECO10 | | | | |
| | 760L-DECO10 | | | | |
| DECO13<br>EvoDECO16 | 770R-DECO13 | V-M3X5.5-T8 | C-T8 | - | - |
| DECO20<br>EvoDECO20/32 | 770R-DECO20 | V-M3X5.5-T8 | C-T8 | - | - |
| MultiSwiss | 730R-MULTISWISS | V-M3X5.5-T8 | C-T8 | - | - |
| | 750R-MULTISWISS | V-M4X7.3-T15 | C-T15 | | |
| SwissNano | 740-SN-312022 | V-M3X5.5-T8 | C-T8 | - | - |
| Schütte | DT20-760-JET | V-M4X9-T15 | C-T15 | - | - |
| | DT30-760-JET | | | | |
| Arno | AFC-730R | V-M3X5.5-T8 | C-T8 | - | - |
| | AFC-740 | | | | |
| | AFC-750R | | | | |
| | AFC-760 | | | | |

# TOP-Watch



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide > 2.04

Infos et avantages
Infos und Vorteile
Infos and advantages > 2.05

Nuances
Sorten
Grades > 2.06

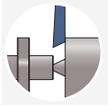
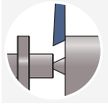
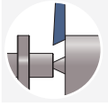
| | pour machines à cames<br>für kurvengesteuerte Maschinen<br>for cam driven machines | pour machines CNC<br>für CNC-Maschinen<br>for CNCdriven machines | |
|---|---|---|---|
| | L | L | R |
|  | 710<br>710-SF<br>710-NOVIBRA > 2.13 | 730<br>730-NOVIBRA | 740<br>740SF<br>740-NOVIBRA > 2.23 |
|  | 711SF > 2.16 | | 741SF > 2.27 |
|  | 712SF > 2.18 | | 742SF > 2.32 |
|  | 713SF > 2.20 | | 743SF > 2.37 |
|  | | | 744SF > 2.43 |
|  | | 736SF | 746SF > 2.44 |
|  | | | 748SF > 2.46 |
|  | | | 749SF > 2.47 |





| | pour machines à cames<br>für kurvengesteuerte Maschinen<br>for cam driven machines | pour machines CNC<br>für CNC-Maschinen<br>for CNCdriven machines | |
|---|---|---|---|
| | L | L | R |
|  | 711-ESF > | 731-ESF | 741-ESF > 2.48 |

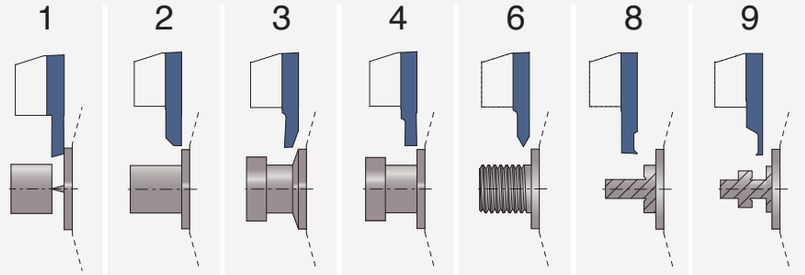
Coupeà droite déportée I Versetztes Rechtsschneidenl Right cut off line

| | | |
|---|---|---|
|  | 730RC | > 2.49 |
|  | 731NSF | > 2.50 |
|  | 731RSF | > 2.51 |
|  | 750RC | > 2.54 |
|  | 751RDSF | > 2.55 |
|  | 770-SN-SF | > 2.56 |
|  | 771RVSF | > 2.58 |

Porte-outils pour SwissNano
Halter für SwissNano
Holder for SwissNano MODU-Line ML12 > 2.59

| 7 | 4 | 4 | SF | – | X412 | – | 0.8 | – | HTAXF |
|---|---|---|---|---|---|---|---|---|---|

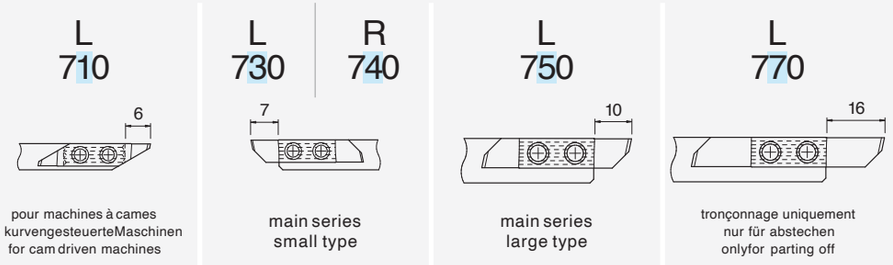
- SF: Super finish
- 0.8: Dimension / Abmessung / Dimension
- HTAXF: Nuance / Sorte / Grade
- X412: Géométrie de coupe / Brise-copeaux / Particularités / Schneidgeometrie / Spanbrecher / Sondereigenschaften / Cutting geometry / Chip breaker / Special features
- 4: Géométrie d'usinage / Bearbeitungsgeometrie / Machining geometry




- 7: Gamme de produit / Produktserie / Product series — définit la compatibilité des plaquettes avec le porte-outil / definiert die Kompatibilität der Wendeschneidplatten mit dem Werkzeughalter / define the compatibility of the inserts with the toolholder

L = 1, 3, 5, 7 (chiffre impair / ungerade Zahl / uneven number)

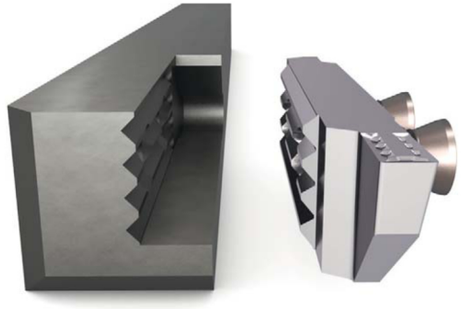
R = 4 (chiffre pair / gerade Zahl / even number)

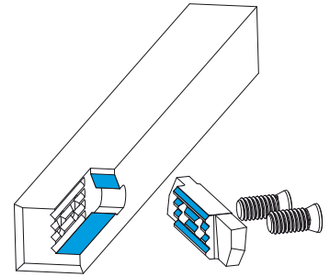


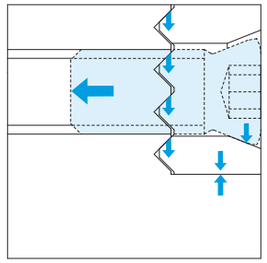

- Applitec série 700 / Applitec 700 Serie / Applitec 700 series — Système de serrage à denture décalée avec 2 vis de fixation / Spannsystem mit 2 Schrauben und verschobener Verzahnung / Shifted teeth clamping system with 2 screws

# 100% rigid!

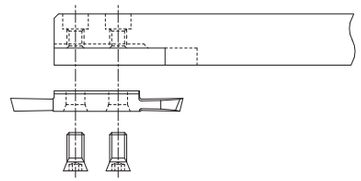
Système de serrage Applitec à denture décalée
Applitec-Spannsystem mit verschobener Verzahnung
Applitec clamping system with shifted teeth

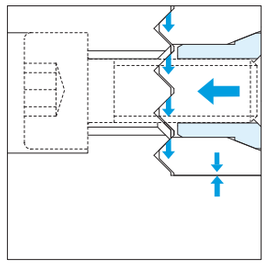






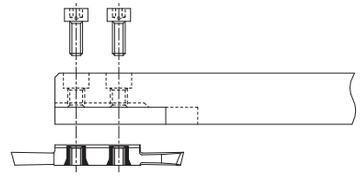
Serrage standard (A)
Standard Spannsystem (A)
Standard clamping system (A)





Serrage type B*
Spannsystem Typ B*
Clamping system type B*

ajouter -B après le numéro d'article
-B nach der Artikelreferenz hinzufügen
add -B after the article number



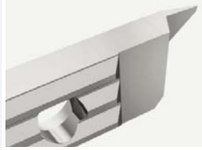
Changement de la plaquette possible dans la machine, sans démontage du porte-outil
WSP-Austauschmöglichkeit in der Maschine ohne Halterausbau
The insert can be changed in the machine without removing the tool holder

* =sur demande / auf Anfrage / on request

TOP-Watch
Nuances
Sorten
Grades

## µK20

### N



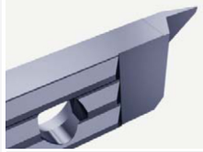
K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance micro-grain tenace, résistante aux conditions défavorables, recommandée pour des opérations de coupe dans des matières ne nécessitant aucun revêtement
- zähe Feinkornsorte, in ungünstige Bearbeitungskonditionen widerstandsfähig, für Schnittbearbeitung von Stahl und rostfreiem Stahl empfohlen
- tough micro-grain grade, suitable for unfavorable machining conditions, suitable for cutting in material that not necessitate any tool coating

### TAF



K20

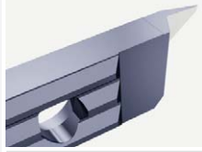
µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F M E

P ★★★★☆
M ★★★★☆
N ★★★★☆
S ★★★★☆

- nuance très résistante aux conditions défavorables, recommandée pour des opérations de coupes dans les aciers et aciers inoxydables
- zähe widerstandsfähige Sorte in ungünstigen Bearbeitungskonditionen, für Schnittbearbeitung von Stahl und rostfreiem Stahl empfohlen
- tough grade, resistant to unfavorable machining conditions, suitable for cutting of steel and stainless steel

### TAF-RE



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

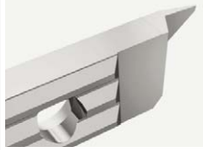
TF F M E

P ★★★★☆
M ★★★★☆
N ★★★★☆
S ★★★★☆

- nuance identique à TAF avec dépouilles rectifiées après revêtement pour des opérations de finition
- gleiche Sorte wie TAF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- same grade as TAF, after coating grounded clearance, recommended for finishing

## µK10 - µK20

### KN



K10 - K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance de base non revêtue micro-grain, alliant une très bonne résistance à l'usure et une bonne ténacité
- recommandé pour l'usinage des matières ne nécessitant aucun revêtement, par exemple le titane pur
- verschleißfeste Feinkornsorte, unbeschichtet, mit hoher Zähigkeit und guter Widerstandsfähigkeit
- empfohlen für die Bearbeitung von Werkstoffen, die keine Beschichtung erfordern, zum Beispiel reines Titan
- wear-resistant micro-grain grade, uncoated, with high toughness and good resistance
- recommended for machining materials that do not require coating, such as pure titanium

### KSTF



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance très résistante à l'usure et à la température
- 1er choix pour les aciers > 50 HRC, les aciers à base de nickel, chrome-cobalt, inox et titane allié.
- verschleißfeste Sorte, beständig gegen hohe Temperaturen
- erste Wahl für Stähle > 50 HRC, Nickelbasislegierungen, Chrom-Kobalt, rostfreien Stahl und legiertes Titan
- wear-resistant grade, highly resistant to temperature
- first choice for steels > 50 HRC, nickel-based alloys, chrome-cobalt, stainless steel, and alloyed titanium

### KSTF-RE



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

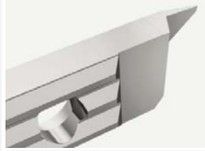
P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance identique à KSTF avec dépouilles rectifiées après revêtement pour des opérations de finition
- gleiche Sorte wie KSTF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- same grade as KSTF, after coating grounded clearance, recommended for finishing,

TOP-Watch
Nuances
Sorten
Grades

µK10

## HN



K10

Non revêtu
Unbeschichtet
Uncoated

P ★ ☆ ☆ ☆ ☆
M ★ ☆ ☆ ☆ ☆
N ★★★ ☆ ☆
S ★★★ ☆ ☆

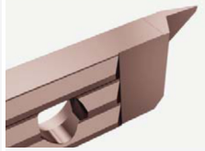
- nuance micro-grain, bonne résistance à l'usure
- recommandé pour des opérations d'ébauche et de finition pour des matières ou usinages ne nécessitant aucun revêtement

- verschleissfeste Feinkornsorte
- für Schruppen und Schlichtbearbeitung empfohlen oder für Werkstoffe oder Bearbeitungen, die keine Beschichtung erfordern

- wear resistant micro-grain carbide
- recommended for roughing and finishing and for materials or operations that do not necessitate any tool coating

µK10

## HTC



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance résistante à l'usure, faible coefficient de frottement, recommandée pour des opérations d'ébauche et de finition
- conseillé pour l'usinage de la matière 20AP

- verschleissfeste Sorte, geringer Reibwert, für Schruppen und Schlichtbearbeitung empfohlen
- für Bearbeitung von 20AP geeignet

- wear resistant grade, low friction ratio, recommended for roughing and finishing
- suitable for machining of 20AP material

µK10

## HTC-RE



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

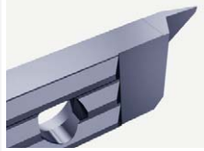
- nuance identique à HTC avec dépouilles rectifiées après revêtement pour des opérations de finition
- conseillé pour l'usinage de la matière 20AP

- gleiche Sorte wie HTC nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- für Bearbeitung von 20AP geeignet

- same grade as HTC, after coating grounded clearance, recommended for finishing
- suitable for machining of 20AP material

µK10

## HTAF



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

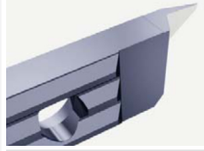
- nuance résistante à l'usure, recommandée pour des opérations d'ébauche et de finition
- conseillé pour l'usinage des matières Finemac et inox 4c27a

- verschleissfeste Sorte, für Schruppen und Schlichtbearbeitung empfohlen
- für Bearbeitung von Finemac und 4c27a-Rostfreiem Stahl geeignet

- wear resistant grade, recommended for roughing and finishing
- suitable for machining of Finemac and 4c27a stainless steel

µK10

## HTAF-RE



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

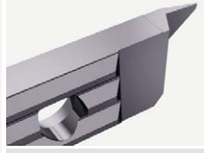
- nuance identique à HTAF avec dépouilles rectifiées après revêtement pour des opérations de finition
- recommandé pour les matières Finemac et inox 4c27a

- gleiche Sorte wie HTAF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- für Bearbeitung von Finemac und 4c27a-Rostfreiem Stahl geeignet

- same grade as HTAF, after coating grounded clearance, recommended for finishing
- suitable for machining of Finemac and 4c27a stainless steel

µK10

## HTAXF



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance complémentaire, résistante à l'usure et à la température pour l'usinage ébauche et finition des matières inox 304, 316L, 317L, 904, Phynox
  Aciers alliés contenant : chrome nickel, vanadium, molybdène…

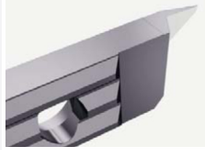
- komplementäre Sorte, verschleissfest und temperaturbeständig. Für Schruppen und Schlichtbearbeitung von Materialien Inox 304, 316L, 317L, 904, Phynox
  Legierter Stahl enthaltend Chrom-Nickel, Vanadium, Molybdän...

- complementary grade, wear and temperature resistant four roughing and finishing of following materials :
  Inox 304, 316L, 317L, 904, Phynox
  Alloy steel containing Chrome-nickel, Vanadium, Molybdenum…

TOP-Watch
Nuances
Sorten
Grades

µK10

## HTAXF-RE



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

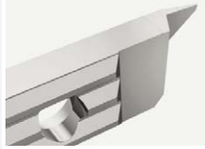
TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance identique à HTAXF avec dépouilles rectifiées après revêtement pour des opérations de finition
- gleiche Sorte, wie HTAXF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- same grade as HTAXF, after coating grounded clearance, recommended for finishing

µK10

## HCR-TF



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

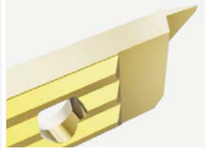
TF F M E

P ☆☆☆☆☆
M ☆☆☆☆☆
N ★★★★★
S ★★★★☆

- nuance spécifique aux matériaux non ferreux tels que cuivre, laiton, laiton sans plomb, bronze, maillechort. Réduit le collage. Alternative aux revêtements DLC pour certains domaines d'applications
- spezifische Sorte, für Nichteisenmetalle wie Kupfer, Messing, bleifreies Messing, Bronze, Neusilber. Verringerung des Klebens. Alternative zu DLC-Beschichtungen in gewissen Einsatzbereichen
- specific grade for non-ferrous materials such as copper, brass, lead-free brass, bronze and nickel silver. Reduces sticking. Alternative to DLC coatings for certain applications

µK10

## HTiN



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

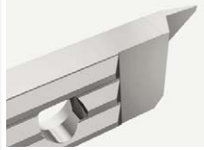
TF F M E

P ★★★★☆
M ★★★★☆
N ★★★☆☆
S ☆☆☆☆☆

- nuance résistante à l'usure, faible coefficient de frottement, recommandée pour des opérations d'ébauche et de finition
- verschleisste Sorte, geringer Reibwert, für Schruppen und Schlichtbearbeitung empfohlen
- wear resistant grade low friction ratio, recommended for roughing and finishing

µK01

## XN



K01

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance micro-grain très résistante à l'usure, recommandée pour des opérations d'ébauche et de finition pour des matières ou usinages ne nécessitant aucun revêtement
- sehr verschleissfeste Sorte, für Schruppen und Schlichtbearbeitung empfohlen oder für Werkstoffe oder Bearbeitungen, die keine Beschichtung erfordern
- wear resistant micro-grain carbide, recommended for roughing and finishing and for materials or operations that do not necessitate any tool coating

µK01

## XTC



K01

µK01 + revêtement PVD
µK01 + PVD Beschichtung
µK01 + PVD coating

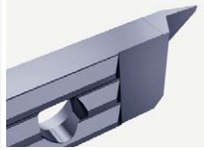
TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance très résistante à l'usure, faible coefficient de frottement, recommandée pour des opérations de finition
- sehr verschleissfeste Sorte, geringer Reibwert, für Schlichtbearbeitung empfohlen
- very wear resistant grade, recommended for finishing, suitable for machining of very abrasive materials

µK01

## XTAF



K01

µK01 + revêtement PVD
µK01 + PVD Beschichtung
µK01 + PVD coating

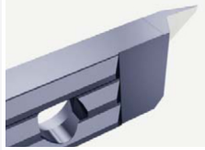
TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance très résistante à l'usure, recommandée pour des opérations de finition, conseillée pour l'usinage des matières très abrasives
- sehr verschleissfeste Sorte, für Schlichtbearbeitung empfohlen, für die Bearbeitung von sehr abrasive Rohstoffe geeignet
- very wear resistant grade, recommended for finishing, suitable for machining of very abrasive materials

µK01

## XTAF-RE



K01

µK01 + revêtement PVD
µK01 + PVD Beschichtung
µK01 + PVD coating

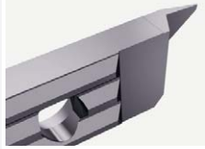
TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance identique à HTAF avec dépouilles rectifiées après revêtement pour des opérations de finition
- gleiche Sorte wie XTAF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- same grade as XTAF, after coating grounded clearance, recommended for finishing

µK01

## XTAXF



K01

µK01 + revêtement PVD
µK01 + PVD Beschichtung
µK01 + PVD coating

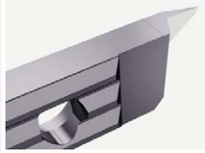
TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★☆

- nuance complémentaire très résistante à l'usure et à la température pour la finition des matières inox 304, 316L, 317L, 904, Phynox
  Aciers alliés contenant : chrome nickel, vanadium, molybdène...
- komplementäre Sorte, sehr veschleissfest und temperaturbeständig. Für Schlichtbearbeitung von Materialien Inox 304, 316L, 317L, 904, Phynox
  Legierter Stahl enthaltend Chrom-Nickel, Vanadium, Molybdän...
- complementary grade, very wear and temperature resistant for finishing of following materials: Inox 304, 316L, 317L, 904, Phynox
  Alloy steel containing Chrome-nickel, Vanadium, Molybdenum...

µK01

## XTAXF-RE



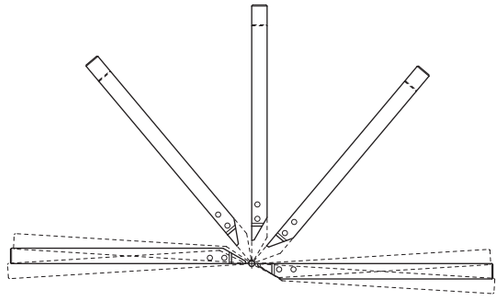
K01

µK01 + revêtement PVD
µK01 + PVD Beschichtung
µK01 + PVD coating

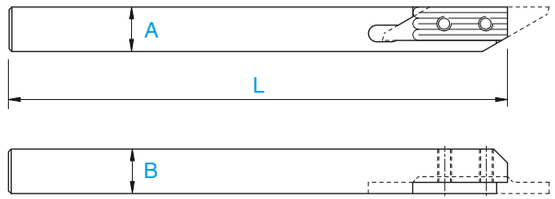
TF F M E

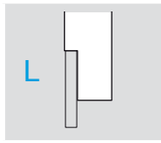
P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance identique à HTAXF avec dépouilles rectifiées après revêtement pour des opérations de finition
- gleiche Sorte wie XTAXF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- same grade as XTAXF, after coating grounded clearance, recommended for finishing,



Porte-outils pour machines à cames à gauche
Halter für linksdrehende kurvengesteuerte Maschinen
Tool holders for left hand turning cam driven machines




| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 6 x 6 | 115 | A | 710-6 |
| 7 x 7 | 115 | A | 710-7 |
| 8 x 8 | 115 | A | 710-8 |
| 8 x 8 | 140 | A | 710-8-140 |
| 10 x 10 | 115 | A | 710-10 |
| 12 x 12 | 130 | A | 710-12 |

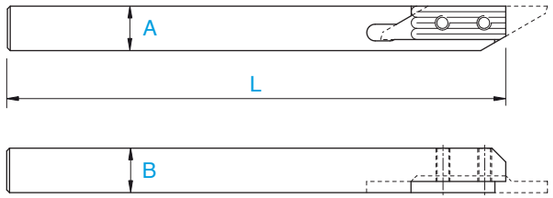


| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options |
|---|---|---|
| 710-6 | V-M2.5X5.8-T8 | C-T8 |
| 710-7 | V-M2.5X6.5-T8 | |
| 710-8 | V-M2.5X7.8-T8 | |
| 710-10 | | |
| 710-12 | | |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.




Super finition des 4 faces
4 seitig feinstgeschliffen
4 sides superfinish

| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 7 x 7 | 140 | A | 710-7-140-SF |
| 8 x 8 | 140 | A | 710-8-140-SF |



| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options |
|---|---|---|
| 710-7-SF | V-M2.5X6.5-T8 | C-T8 |
| 710-8-SF | V-M2.5X7.8-T8 | |

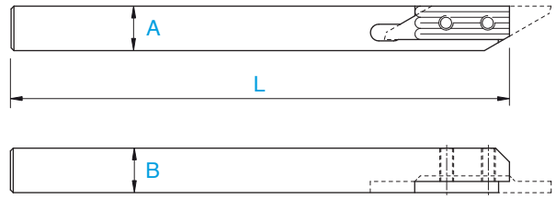
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schraubengeliefert.
Die Schlüssel sind separat zu bestellen.

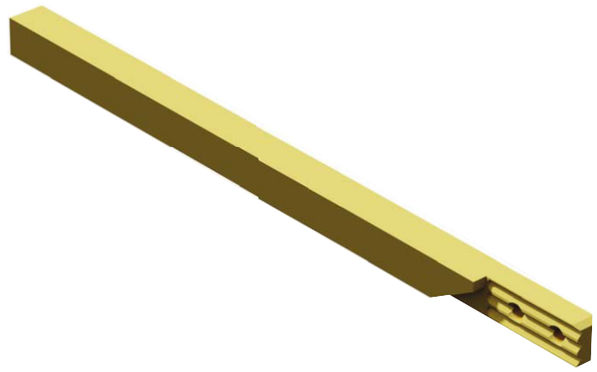
Each holder is supplied with one or more screws.
The keys must be ordered separately.








| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 6 x 6 | 115 | A | 710-6-NOVIBRA |
| 7 x 7 | 115 | A | 710-7-NOVIBRA |
| 8 x 8 | 115 | A | 710-8-NOVIBRA |

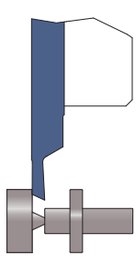


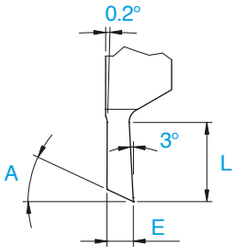
| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options |
|---|---|---|
| 710-6-NOVIBRA | V-M2.5X5.8-T8 | C-T8 |
| 710-7-NOVIBRA | V-M2.5X6.5-T8 | |
| 710-8-NOVIBRA | V-M2.5X7.8-T8 | |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schraubengeliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.







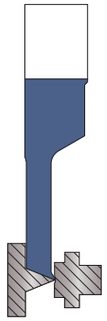


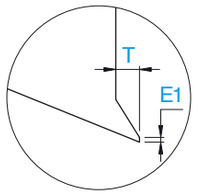


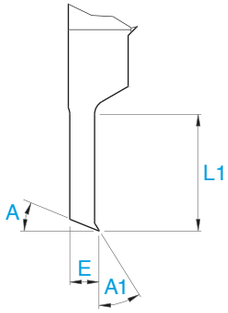
| E | L | A | Art. N° | HTC | HTC-RE | HTAF | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| | | | | P | P | P M N S | P M N S | N S |
| 0.8 | 3.0 | 25° | 711SF-0.8-25° | ● | ● | ● | ● | ● |
| 1.0 | 3.0 | 25° | 711SF-1.0-25° | ● | | ● | ● | |



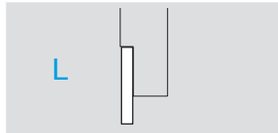






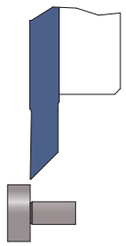


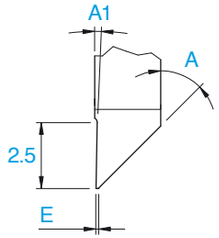




| E1 | E | A | A1 | T | L1 | Art. N° | N | TAF-RE |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | N S | P M N S |
| 0.03 | 0.8 | 22° | 32° | 0.15 | 4 | 711SF-0.8-22°-A3215 | ● | ● |
| 0.03 | 1.0 | 22° | 32° | 0.15 | 4 | 711SF-1.0-22°-A3215 | ● | ● |

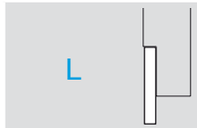
712SF

Tournage avant ébauche / finition
Vorwärts drehen schruppen / schlichten
Front turning for roughing / finishing








| E | A | A1 | Art. N° | HTC | HTC-RE | HTAF | HTiN | HN (µx10) |
|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N S | P M N S | P M N S | N S |
| 0.03 | 45° | 3° | 712SF-3/3-45° | ● | | ● | | ● |
| 0.08 | 45° | 1° | 712SF-8/8-45° | ● | ● | ● | ● | ● |

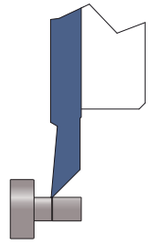


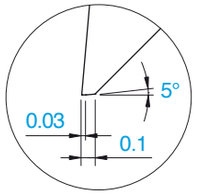
Zurück zum Kapitelanfang

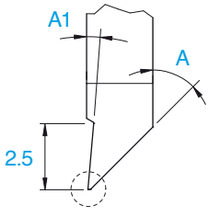


712SF-10/3

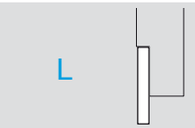
Tournage avant finition (pivotage)
Vorwärts drehen schlichten
Front turning for finishing





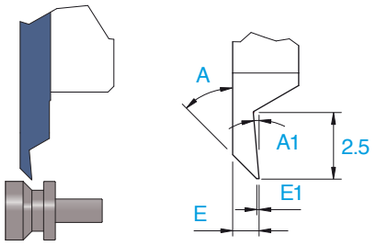





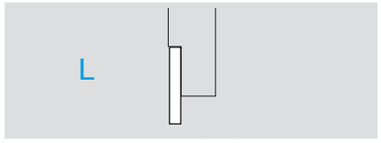




| A | A1 | Art. N° | HTC | HTC-RE | HTAF | HTiN | HN (µx10) |
|---|---|---|---|---|---|---|---|
| | | | P M N S | P M N S | P M N S | P M N S | N S |
| 45° | 3° | 712SF-10/3 | ● | ● | ● | ● | ● |

Zurück zum Index



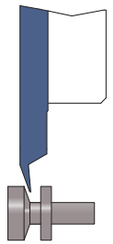


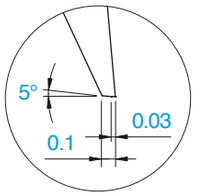



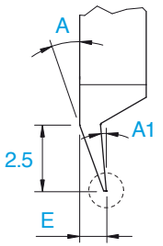

| E1 | E | A | A1 | Art. N° | HTC | HTC-RE | HTAF | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|
| 0.03 | 1.0 | 45° | 5° | 713SF-3/3-45°-1.0 | ● | | ● | | ● |
| 0.10 | 1.0 | 45° | 5° | 713SF-10/10-45°-1.0 | ● | | ● | | ● |



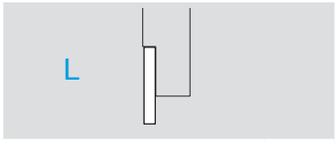




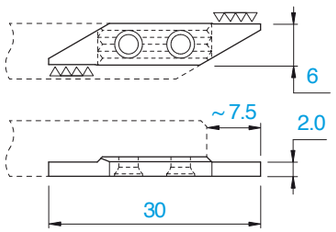




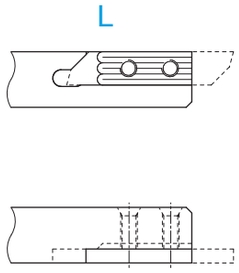



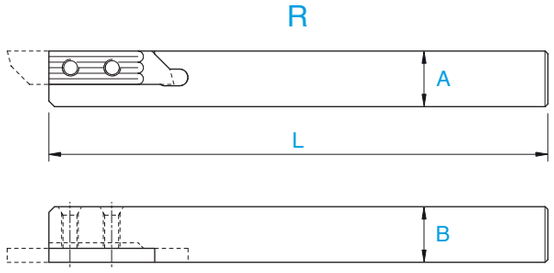

| E | A | A1 | Art. N° | HTC | HTC-RE | HTAF | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|
| 1.0 | 20° | 5° | 713SF-10/3 | ● | | ● | ● | ● |






| Art. N° | HTC | HTAF | HTiN | HN (µk10) | XTAF | XN (µk01) | XTC |
|---|---|---|---|---|---|---|---|
| | P | P M N S | P M N S | N S | P M N S | N S | P |
| 711-ESF | ● | ● | | ● | ● | ● | ● |




| A x B | L | Serrage Spannsystem Clamping | L Art. N° | R Art. N° |
|---|---|---|---|---|
| 7 x 7 | 115 | A | 730-7 | 740-7 |
| 8 x 8 | 115 | A + B | 730-8 | 740-8 |
| 8 x 8 | 140 | A + B | 730-8-140 | - |
| 10 x 10 | 115 | A + B | 730-10 | 740-10 |
| 12 x 12 | 130 | A + B | 730-12 | 740-12 |
| 12 x 12 | 90 | A + B | 730-12-90 | 740-12-90 |

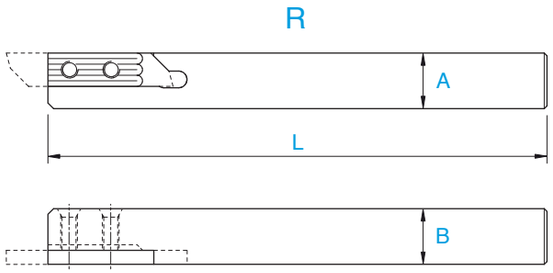


Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws. The keys must be ordered separately.

| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options | Serrage standard (B) Standard Spannsystem (B) Standard clamping system (B) | Options |
|---|---|---|---|---|
| 730/740-7 | V-M3X7-T8 | C-T8 | - | - |
| 730/740-8 | | | | |
| 730/740-10 | | | V-M2.5X7.8-T8 | C-T8 |
| 730/740-12 | | | | |




Super finition des 4 faces
4 seitig feinstgeschliffen
4 sides superfinish

| A x B | L | Serrage Spannsystem Clamping | R<br>Art. N° |
|---|---|---|---|
| 7 x 7 | 90 | A | 740-7-90-SF |
| 8 x 8 | 115 | A + B | 740-8-SF |
| 8 x 8 | 90 | A + B | 740-8-90-SF |
| 10 x 10 | 115 | A + B | 740-10-SF |
| 10 x 10 | 90 | A + B | 740-10-90-SF |
| 12 x 12 | 130 | A + B | 740-12-SF |
| 12 x 12 | 90 | A + B | 740-12-90-SF |



Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.

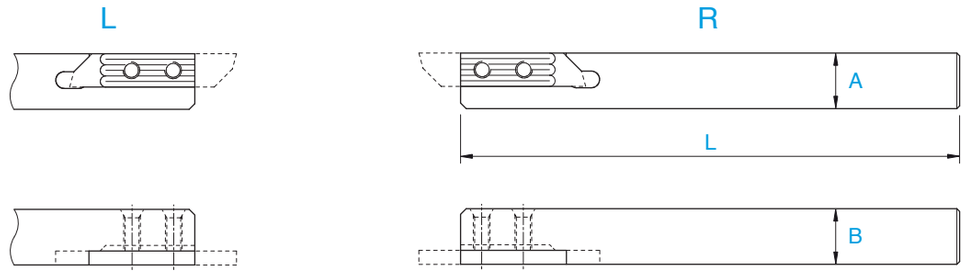
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws. The keys must be ordered separately.

| Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage standard (B)<br>Standard Spannsystem (B)<br>Standard clamping system (B) | Options |
|---|---|---|---|---|
| 740-SF-7 | V-M3X7-T8 | C-T8 | - | - |
| 740-SF-8 | | | V-M2.5X7.8-T8 | C-T8 |
| 740-SF-10 | | | | |
| 740-SF-12 | | | | |








| A x B | L | Serrage Spannsystem Clamping | L<br>Art. N° | R<br>Art. N° |
|---|---|---|---|---|
| 7 x 7 | 115 | A | 730-7-NOVIBRA | 740-7-NOVIBRA |
| 8 x 8 | 115 | A + B | 730-8-NOVIBRA | 740-8-NOVIBRA |
| 8 x 8 | 80 | A + B | - | 740-8-80-NOVIBRA |
| 10 x 10 | 115 | A + B | - | 740-10-NOVIBRA |
| 12 x 12 | 130 | A + B | - | 740-12-NOVIBRA |

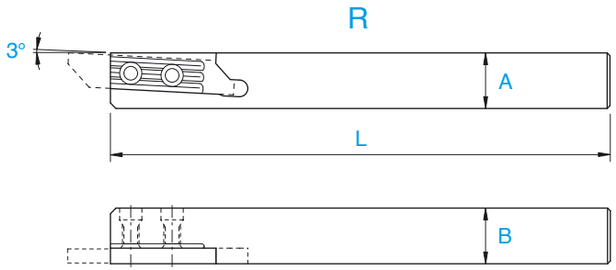


Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws. The keys must be ordered separately.

| Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage standard (B)<br>Standard Spannsystem (B)<br>Standard clamping system (B) | Options |
|---|---|---|---|---|
| 730/740-NOVIBRA-7 | V-M3X7-T8 | C-T8 | - | - |
| 730/740-NOVIBRA-8 | | | V-M2.5X7.8-T8 | C-T8 |
| 740-NOVIBRA-10 | | | | |
| 740-NOVIBRA-12 | | | | |




Super finition des 4 faces
4 seitig feinstgeschliffen
4 sides superfinish

R

| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 8 x 8 | 115 | A + B | 740X3-8-SF |
| 10 x 10 | 115 | A + B | 740X3-10-SF |
| 12 x 12 | 130 | A + B | 740X3-12-SF |

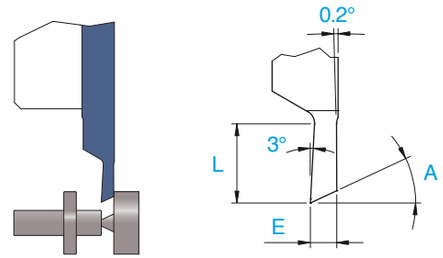


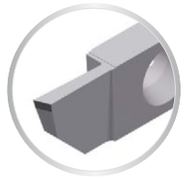
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws. The keys must be ordered separately.

| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options | Serrage standard (B) Standard Spannsystem (B) Standard clamping system (B) | Options |
|---|---|---|---|---|
| 740X-SF-8 | V-M3X7-T8 | C-T8 | V-M2.5X7.8-T8 | C-T8 |
| 740X-SF-10 | | | | |
| 740X-SF-12 | | | | |



R

| E | L | A | Art. N° | KSTF | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTAXF | HTAXF-RE | HTTN | HN (µk10) | XTAF | XTAXF | XTAXF-RE | XN (µk01) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N S | P | P | P M N S | P M N S | P M S | P M | P M N S | P M N S | P M N S | P M S | P M S | P M N S |
| 0.5 | 2.0 | 25° | 741SF-0.5-25° | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | | ● |
| 0.8 | 3.0 | 25° | 741SF-0.8-25° | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ● | | ● |
| 1.0 | 3.0 | 25° | 741SF-1.0-25° | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |
| 1.2 | 6.0 | 22° | 741SF-1.2-22° | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |

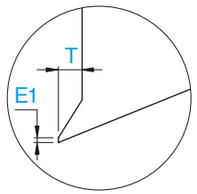
7XX-XX-B

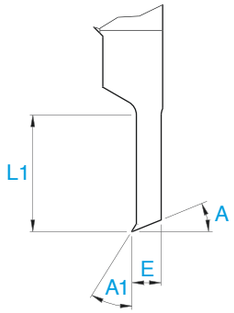
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

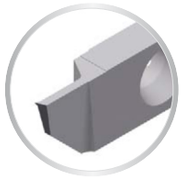
# 741SF-A

Couperentrante
Abstechen Zentrumfrei
Pip-free back parting off



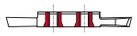


| E1 | E | A | A1 | T | L1 | Art. N° | TAF-RE | N |
|---|---|---|---|---|---|---|---|---|
| 0.03 | 0.8 | 22° | 32° | 0.15 | 4 | 741SF-0.8-22°-A3215 | ● | ● |
| 0.03 | 1.0 | 22° | 32° | 0.15 | 4 | 741SF-1.0-22°-A3215 | ● | ● |
| 0.03 | 1.2 | 22° | 32° | 0.20 | 6 | 741SF-1.2-22°-A3220 | ● | ● |

7XX-XX-B



Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

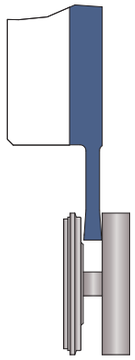


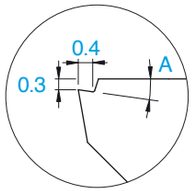
Zurück zum Kapitelanfang

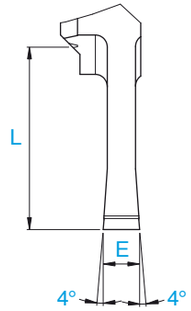


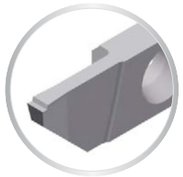
# 741NSF-X

Tronçonnage
Abstechen
Parting off



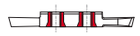


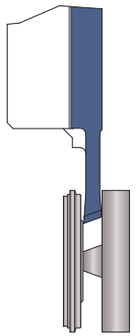
| E | A | L | Art. N° | HCR-TF | HN (µk10) |
|---|---|---|---|---|---|
| 1.5 | 8° | 7.5 | 741NSF-X840-1.5 | ● | ● |
| 2.0 | 8° | 8.0 | 741NSF-X840-2.0 | ● | ● |

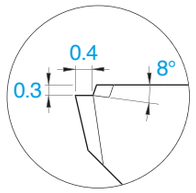
7XX-XX-B

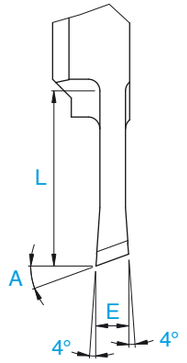


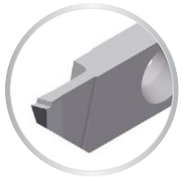
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

Zurück zum Index





| E | A | L | Art. N° | HCR-TF | HN (µk10) |
|---|---|---|---|---|---|
| | | | | N | N S |
| 1.1 | 20° | 5.0 | 741SF-X840-1.1-20° | ● | ● |
| 1.4 | 20° | 7.5 | 741SF-X840-1.4-20° | ● | ● |
| 1.5 | 5° | 7.5 | 741SF-X840-1.5-5° | ● | ● |
| 1.9 | 20° | 8.0 | 741SF-X840-1.9-20° | ● | ● |

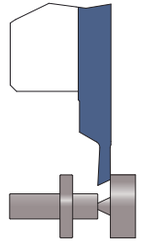
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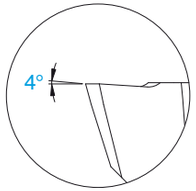
7XX-XX-B

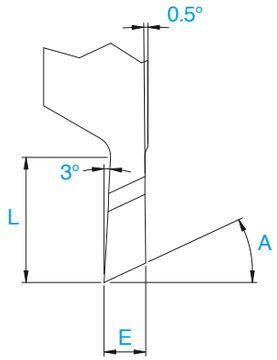
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05









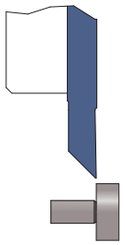


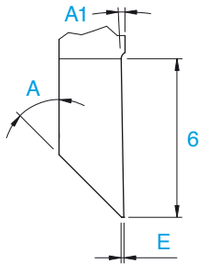

| E | A | L | Art. N° | KSTF | KN (µk10-20) |
|---|---|---|---|---|---|
| | | | | P M N S | P M N S |
| 0.8 | 25° | 3.0 | 741SF-X4-0.8-25 | ● | ● |
| 1.0 | 25° | 3.0 | 741SF-X4-1.0-25 | ● | ● |

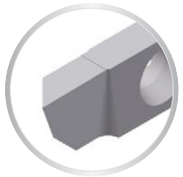
R

7XX-XX-B

Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05



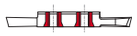


R

| E | A | A1 | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTAXF | HTAXF-RE | HTiN | HN (µk10) | XTAF | XTAXF | XTAF-RE | XN (µk01) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.03 | 45° | 3° | 742SF-3/3-45° | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.05 | 45° | 3° | 742SF-5/5-45° | | | | | ● | ● | ● | | | | ● | | | | |
| 0.08 | 45° | 1° | 742SF-8/8-45° | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● |

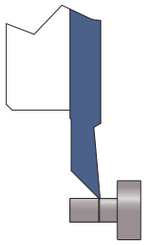
7XX-XX-B

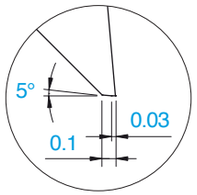


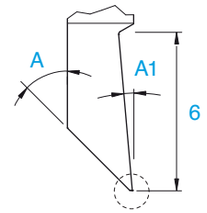
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

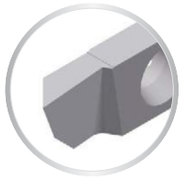








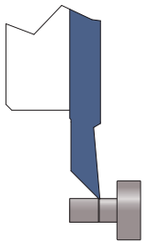
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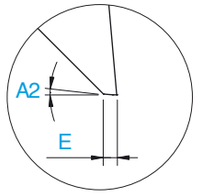
| A | A1 | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTAXF | HTAXF-RE | HTiN | HN (µk10) | XTAF | XTAXF | XTAXF-RE | XN (µk01) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45° | 5° | 742SF-10/3 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

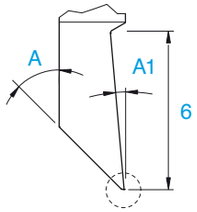
7XX-XX-B

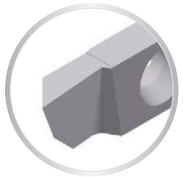


Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05





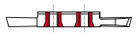



| E | A | A1 | A2 | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTAF-RE | XTAF-RE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S | P M N S | P M N S | P M N S |
| 0.10 | 45° | 5° | 5° | 742SF-10/0-5°-45° | ● | ● | ● | ● | ● |
| 0.15 | 30° | 3° | 2° | 742SF-15/0-2°-30° | ● | ● | ● | ● | ● |

R

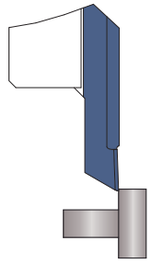
7XX-XX-B

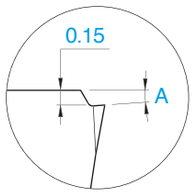


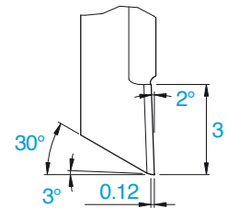
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05











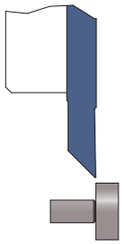

| A | Art. N° | HTAXF | HCR-TF | HN (µk10) |
|---|---|---|---|---|
| | | P M S | N | N S |
| 4° | 742SF-X412 | ● | ● | ● |
| 8° | 742SF-X812 | ● | ● | ● |
| 12° | 742SF-X1212 | ● | ● | ● |

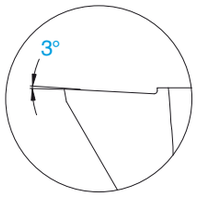
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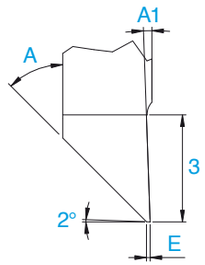
7XX-XX-B



Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05





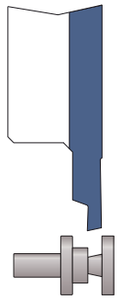


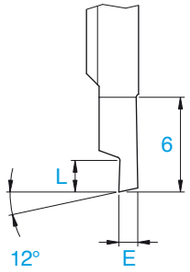

| E | A | A1 | Art. N° | R KSTF | R KN (µk10-20) |
|---|---|---|---|---|---|
| 0.05 | 43° | 2° | 742SF-XZ3-5/0-2-43 | ● | ● |
| 0.10 | 43° | 2° | 742SF-XZ3-10/0-2-43 | ● | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05







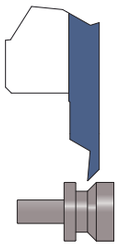


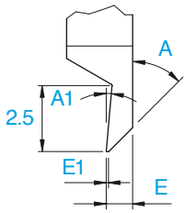



| E | L | Art. N° | R HTC | R HTAF | R HN (µk10) |
|---|---|---|---|---|---|
| 1.2 | 2.5 | 743SF-120/0-12° | ● | ● | ● |
| 1.4 | 3.0 | 743SF-140/0-12° | ● | ● | ● |
| 1.6 | 3.0 | 743SF-160/0-12° | ● | ● | ● |
| 1.8 | 4.0 | 743SF-180/0-12° | ● | ● | ● |

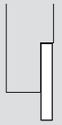
7XX-XX-B Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

Tournage arrière ébauche/ finition
Rückwärts drehen schruppen / schlichten
Back turning for roughing / finishing





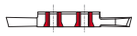


R

| E1 | E | A | A1 | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTAXF | HTAXF-RE | HTIN | HN (µk10) | XTAF | XTAXF | XTAXF-RE | XN (µk01) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S | P M N S | P | P | P M N S | P M N S | P M S | P M S | P M N S | N S | P M N S | P M S | P M S | N S |
| 0.03 | 1.0 | 45° | 5° | 743SF-3/3-45°-1.0 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.03 | 1.2 | 45° | 5° | 743SF-3/3-45°-1.2 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |
| 0.10 | 1.0 | 45° | 5° | 743SF-10/10-45°-1.0 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |
| 0.05 | 0.8 | 30° | 3° | 743SF-5/5-30°-0.8 | ● | ● | ● | | | | ● | | | | | | | | |
| 0.05 | 1.0 | 30° | 3° | 743SF-5/5-30°-1.0 | ● | ● | ● | | | | ● | | | | | | | | |

7XX-XX-B

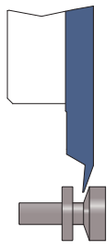


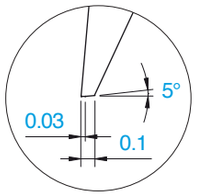
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

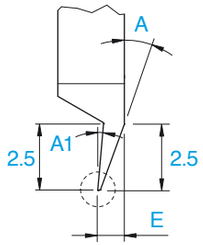




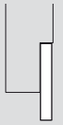
Tournage arrière finition
Rückwärts drehen schlichten
Back turning for finishing







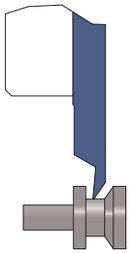
R

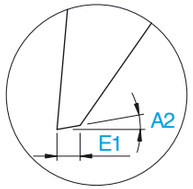
| E | A | A1 | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTAXF | HTAXF-RE | HTIN | HN (µk10) | XTAF | XTAXF | XTAXF-RE | XN (µk01) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N S | P M N S | P | P | P M N S | P M N S | P M S | P M S | P M N S | N S | P M N S | P M S | P M S | N S |
| 1.0 | 20° | 5° | 743SF-10/3 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

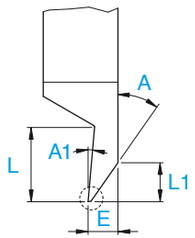
7XX-XX-B



Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05



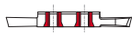





| | | | | | | | | R | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E1 | E | L1 | L | A | A1 | A2 | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTAF-RE | XTAF-RE |
| 0.08 | 1.0 | 1.6 | 2.5 | 30° | 5° | 2° | 743SF-8/0-2°-30°-1.0 | ● | ● | ● | ● | ● |
| 0.15 | 1.2 | 1.8 | 4.0 | 30° | 3° | 2° | 743SF-15/0-2°-30°-1.2 | ● | ● | ● | ● | ● |
| 0.10 | 1.0 | 1.3 | 2.5 | 35° | 5° | 10° | 743SF-10/0-10°-35°-1.0 | ● | ● | ● | ● | ● |

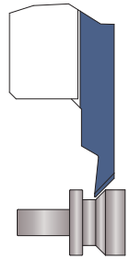
7XX-XX-B

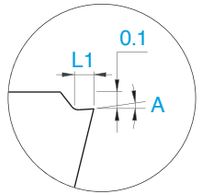


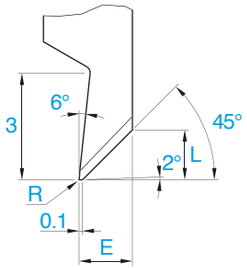
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

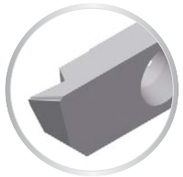








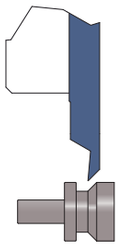



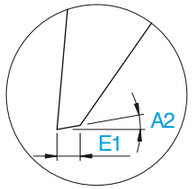
| | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E | L | L1 | A | R | Art. N° | KSTF | KN (µk10-20) | HTAXF | HCR-TF | HN (µk10) |
| 1.0 | 0.9 | 0.12 | 4° | 0 | 743SF-X412-45°-1.0 | | | ● | ● | ● |
| | | | 8° | 0 | 743SF-X812-45°-1.0 | | | ● | ● | ● |
| | | | 12° | 0 | 743SF-X1212-45°-1.0 | | | ● | ● | ● |
| 1.5 | 1.4 | 0.12 | 4° | 0 | 743SF-X412-45°-1.5 | | | ● | ● | ● |
| | | | 8° | 0 | 743SF-X812-45°-1.5 | | | ● | ● | ● |
| | | | 12° | 0 | 743SF-X1212-45°-1.5 | | | ● | ● | ● |
| 1.5 | 1.3 | 0.24 | 6° | 0.05 | 743SF-X624-45°-1.5-R05 | ● | ● | | | |

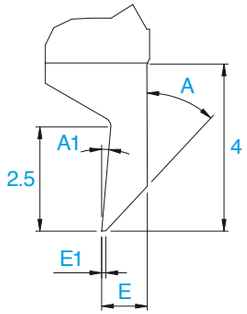
7XX-XX-B

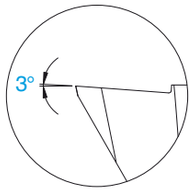


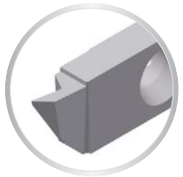
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

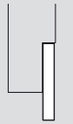




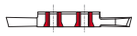





R

| E1 | E | A | A1 | A2 | Art. N° | KSTF | KN (µk10-20) |
|---|---|---|---|---|---|---|---|
| | | | | | | P M N S | P M N S |
| 0.05 | 1.0 | 30° | 5° | 5° | 743SF-XZ3-5/0-5-30-1.0 | ● | ● |
| 0.10 | 1.1 | 43° | 5° | 5° | 743SF-XZ3-10/0-5-43-1.1 | ● | ● |

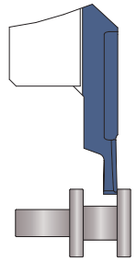
7XX-XX-B

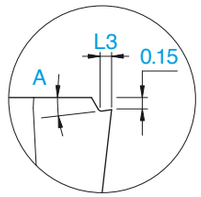


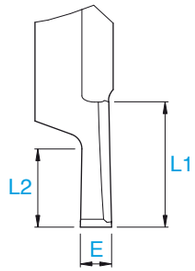
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05











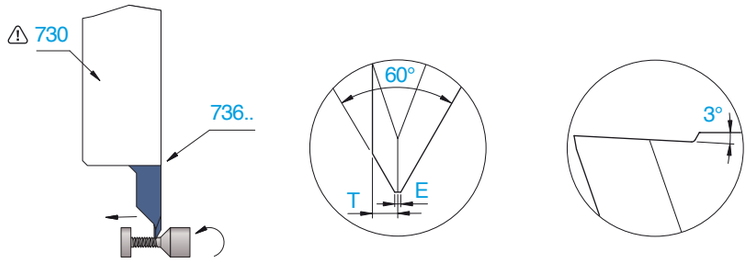

R

| A | E | L1 | L2 | L3 | Art. N° | HTAXF | HCR-TF | HN (µk10) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | P M S | N S | N S |
| 4° | 0.5 | 3 | 1.0 | 0.12 | 744SF-X412-0.5 | ● | ● | ● |
| | 0.6 | 3 | 1.5 | 0.12 | 744SF-X412-0.6 | ● | ● | ● |
| | 0.8 | 4 | 2.0 | 0.12 | 744SF-X412-0.8 | ● | ● | ● |
| | 1.0 | 4 | 2.5 | 0.12 | 744SF-X412-1.0 | ● | ● | ● |
| | 1.0 | 4 | 2.5 | 0.24 | 744SF-X424-1.0 | ● | ● | ● |
| | 1.0 | 4 | 2.5 | 0.36 | 744SF-X436-1.0 | ● | ● | ● |
| | 1.2 | 5 | 3.0 | 0.12 | 744SF-X412-1.2 | ● | ● | ● |
| 8° | 0.6 | 3 | 1.5 | 0.12 | 744SF-X812-0.6 | ● | ● | ● |
| | 0.8 | 4 | 2.0 | 0.12 | 744SF-X812-0.8 | ● | ● | ● |
| | 1.0 | 4 | 2.5 | 0.12 | 744SF-X812-1.0 | ● | ● | ● |
| | 1.2 | 5 | 3.0 | 0.12 | 744SF-X812-1.2 | ● | ● | ● |

7XX-XX-B



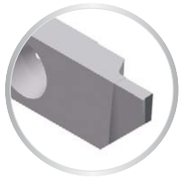
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05



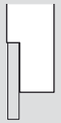

Filetage à droite
sens rotation machine M4

RechtgewindeDrehrichtung
der Maschine M4

Right-hand thread rotating
machinery M4

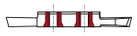


L



| Filetage Gewindedrehen Threading | Pas Steigung Pitch P | T | E 0/-0.01 | Art. N° | HTAF | HN (µK10) |
|---|---|---|---|---|---|---|
| S0.50 | 0.125 | 0.07 | 0.015 | 736SFX3-A60-S0.50-AR | ● | ● |
| S0.60 | 0.150 | 0.09 | 0.020 | 736SFX3-A60-S0.60-AR | ● | ● |
| S0.70 | 0.175 | 0.10 | 0.020 | 736SFX3-A60-S0.70-AR | ● | ● |
| S0.80 | 0.200 | 0.12 | 0.025 | 736SFX3-A60-S0.80-AR | ● | ● |
| S0.90 | 0.225 | 0.13 | 0.030 | 736SFX3-A60-S0.90-AR | ● | ● |
| S1.00 | 0.250 | 0.15 | 0.035 | 736SFX3-A60-S1.00-AR | ● | ● |

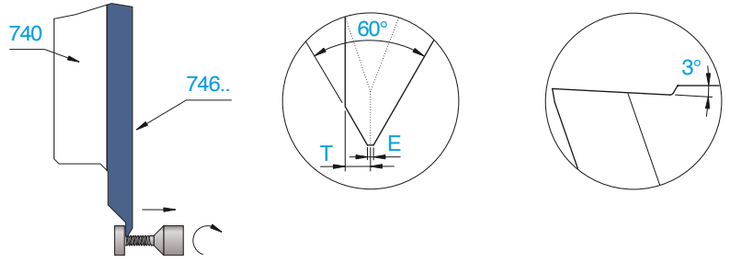
7XX-XX-B



Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05



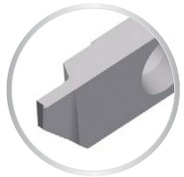




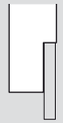

Filetage à droite
sens rotation machine M3

RechtgewindeDrehrichtung
der Maschine M3

Right-hand thread rotating
machinery M3



R



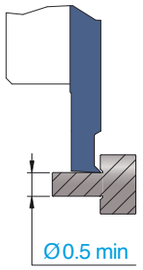
| Filetage Gewindedrehen Threading | Pas Steigung Pitch P | T | E 0/-0.01 | Art. N° | KSTF | KN (µK10-20) | HTAF | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| S0.50 | 0.125 | 0.07 | 0.015 | 746SFX3-A60-S0.50-AR | ● | ● | ● | ● |
| S0.60 | 0.150 | 0.09 | 0.020 | 746SFX3-A60-S0.60-AR | ● | ● | ● | ● |
| S0.70 | 0.175 | 0.10 | 0.020 | 746SFX3-A60-S0.70-AR | ● | ● | ● | ● |
| S0.80 | 0.200 | 0.12 | 0.025 | 746SFX3-A60-S0.80-AR | ● | ● | ● | ● |
| S0.90 | 0.225 | 0.13 | 0.030 | 746SFX3-A60-S0.90-AR | ● | ● | ● | ● |
| S1.00 | 0.250 | 0.15 | 0.035 | 746SFX3-A60-S1.00-AR | ● | ● | ● | ● |

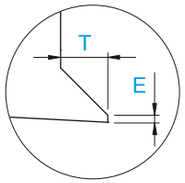
7XX-XX-B

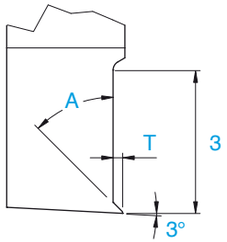


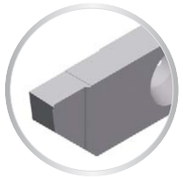
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

# Plaquettes piqûre avant
# Fronteinstich WSP
# Front grooving inserts



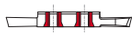



R

| E 0/-0.01 | A | T | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.03 | 45° | 0.2 | 748SF-E03-A45°-L20 | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.05 | 45° | 0.3 | 748SF-E05-A45°-L30 | ● | ● | ● | ● | ● | ● | | ● | ● |
| 0.08 | 45° | 0.5 | 748SF-E08-A45°-L50 | ● | ● | ● | ● | ● | ● | | ● | ● |

7XX-XX-B

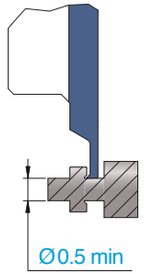


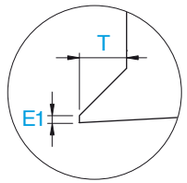
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

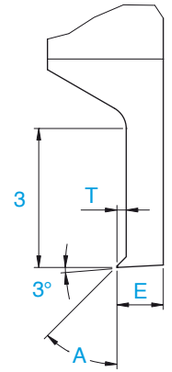


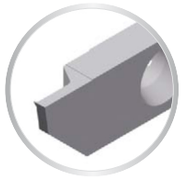


# Plaquettes piqûre arrière
# Rückeinstich WSP
# Back grooving inserts



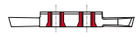



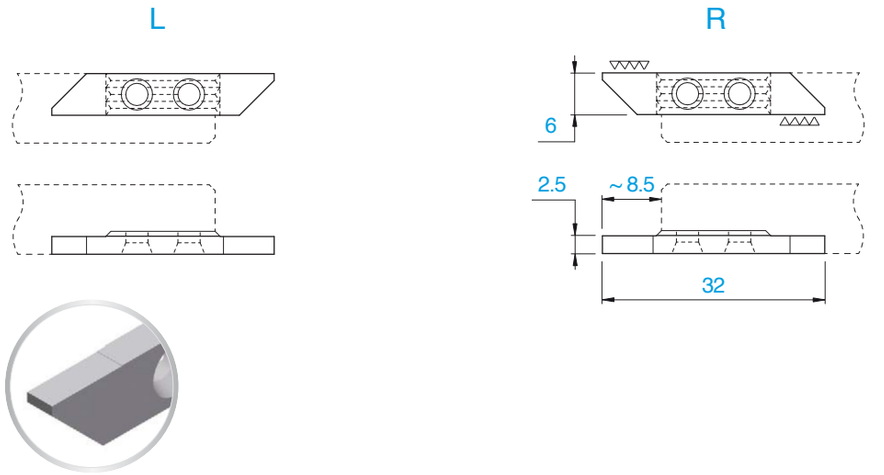
R

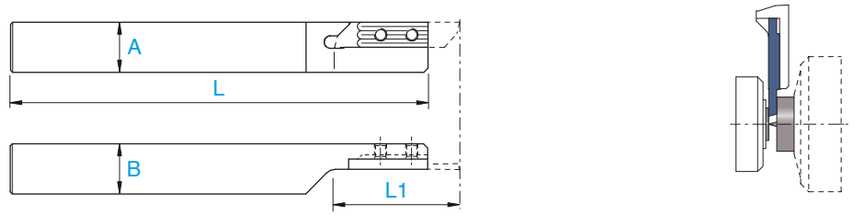
| E1 0/-0.01 | A | T | E | Art. N° | KSTF | KSTF-RE | KN (µk10-20) | HTC | HTC-RE | HTAF | HTAF-RE | HTiN | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.03 | 45° | 0.2 | 1.0 | 749SF-E03-A45°-L20-B100 | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.05 | 45° | 0.3 | 1.0 | 749SF-E05-A45°-L30-B100 | ● | ● | ● | ● | | ● | | | ● |
| 0.08 | 45° | 0.5 | 1.2 | 749SF-E08-A45°-L50-B120 | ● | ● | ● | ● | ● | ● | | | ● |

7XX-XX-B

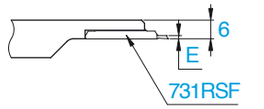


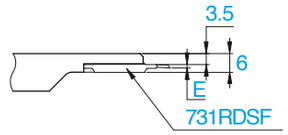
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05




| L | | | | | | | | | | | R | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Art. N° | KSTF | KN (µk10-20) | HTC | HTAF | HTAXF | HCR-TF | HTiN | HN (µk10) | XTC | XTAF | XN (µk01) | Art. N° | KSTF | KN (µk10-20) | HTC | HTAF | HTAXF | HCR-TF | HTiN | HN (µk10) | XTC | XTAF | XN (µk01) |
| 731-ESF | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 741-ESF | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

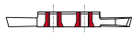



## L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 8 x 8 | 115 | 24 | 730RC-8 |
| 10 x 10 | 115 | 24 | 730RC-10 |
| 12 x 12 | 130 | 30 | 730RC-12 |
| 12.7 x 12.7 | 130 | 30 | 730RC-12.7 |
| 16 x 16 | 130 | 40 | 730RC-16 |



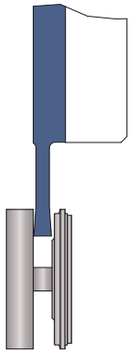

Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

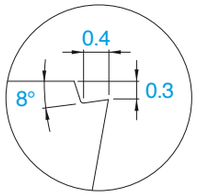
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

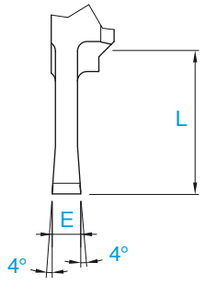
Jeder Halter wird mit einer oder mehreren Schraubengeliefert.
Die Schlüssel sind separat zu bestellen.

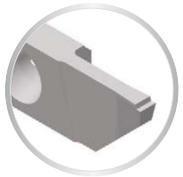
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options |
|---|---|---|
| 730RC | V-M3X5.5-T8 | C-T8 |





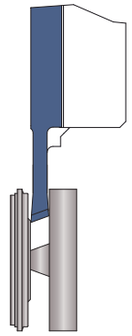
R

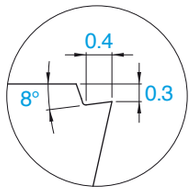
| E | L | Art. N° | HCR-TF | HN (µx10) |
|---|---|---|---|---|
| 1.5 | 7.5 | 731NSF-X840-1.5 | ● | ● |

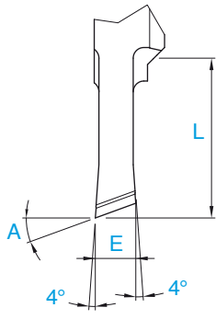
7XX-XX-B Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

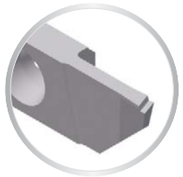








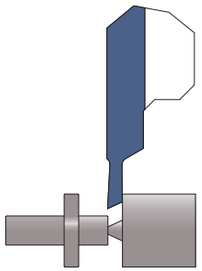



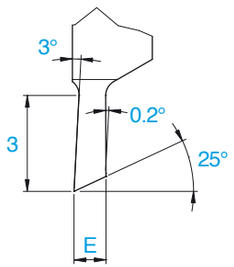
L (R)

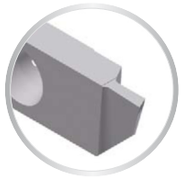
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | L | A | Art. N° | HCR-TF | HN (µx10) |
|---|---|---|---|---|---|
| 1.5 | 7.5 | 5° | 731RSF-X840-1.5-5 | ● | ● |
| 1.4 | 7.5 | 20° | 731RSF-X840-1.4-20 | ● | ● |
| 1.9 | 7.5 | 20° | 731RSF-X840-1.9-20 | ● | ● |

7XX-XX-B Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05





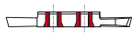



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | Art. N° | HTAF | HTiN | HN (µx10) |
|---|---|---|---|---|
| 1.0 | 731RSF-1.0-25° | ● | ● | ● |

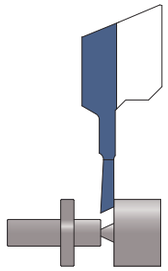
7XX-XX-B

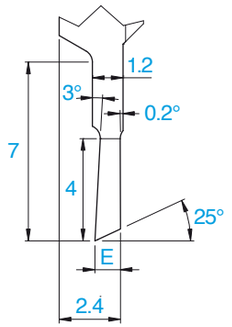


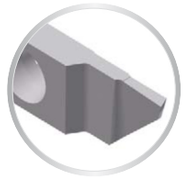
Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05









L (R)

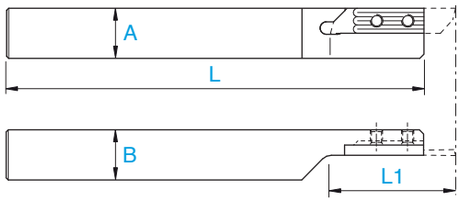
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

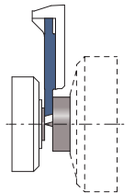
| E | Art. N° | HTAF | HTiN | HN (µx10) |
|---|---|---|---|---|
| 0.8 | 731RDSF-0.8-25° | ● | | ● |
| 1.0 | 731RDSF-1.0-25° | ● | ● | ● |

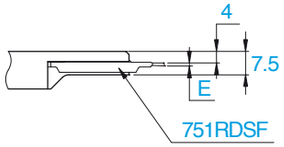
7XX-XX-B



Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05



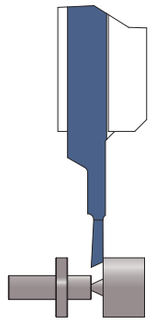



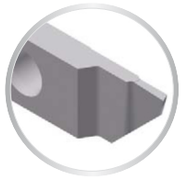


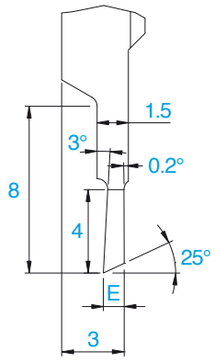

## L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 12 x 12 | 130 | 30 | 750RC-12 |
| 16 x 16 | 130 | 40 | 750RC-16 |








## L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | Art. N° | HTAF | HTiN | HN (µk10) |
|---|---|---|---|---|
| 0.8 | 751RDSF-0.8-25° | ● | | ● |
| 1.0 | 751RDSF-1.0-25° | ● | | ● |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

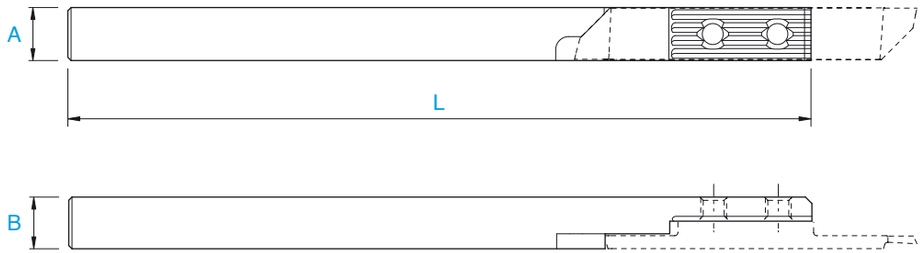
Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.

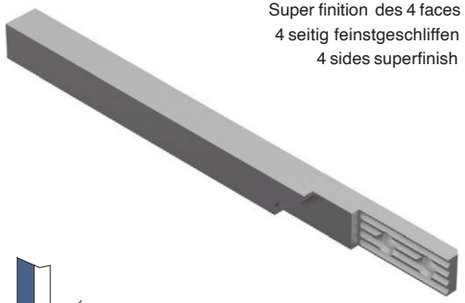
| Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options |
|---|---|---|
| 750RC | V-M4X7.3-T15 | C-T15 |

7XX-XX-B

Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

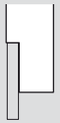



Super finition des 4 faces
4 seitig feinstgeschliffen
4 sides superfinish

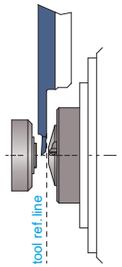


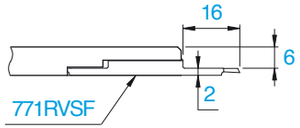
## L (R)

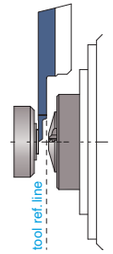
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

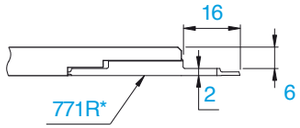


| A x B | L | Art. N° |
|---|---|---|
| 8.2 x 8 | 115 | 770-8.2X8-SN4-SF |




* voir TOP-Line
* siehe TOP-Line
* see TOP-Line

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

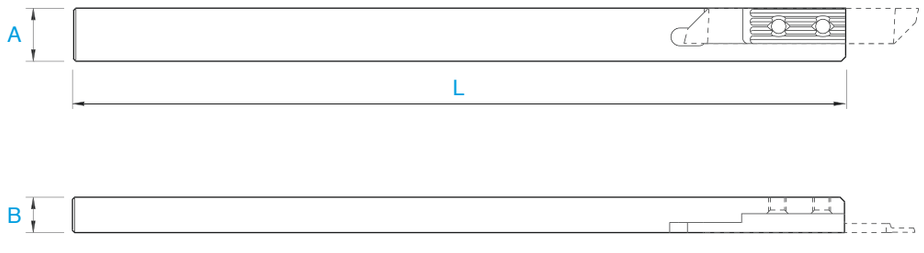
Jeder Halter wird mit einer oder mehreren Schraubengeliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.

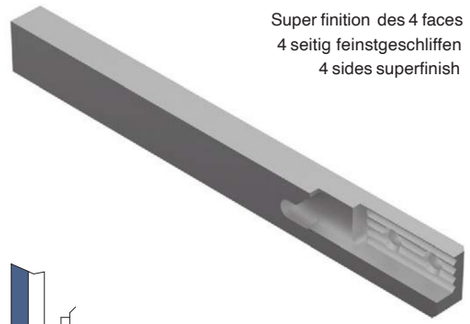
| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options |
|---|---|---|
| 770-SN-SF | V-M4X7.3-T15 | C-T15 |








Super finition des 4 faces
4 seitig feinstgeschliffen
4 sides superfinish

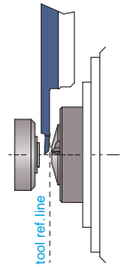


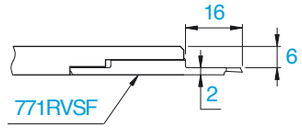
## L (R)

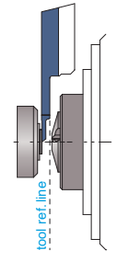
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

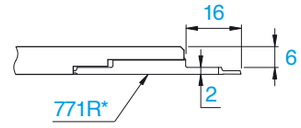


| A x B | L | Art. N° |
|---|---|---|
| 12 x 8 | 115 | 770-12X8-SN7-SF |



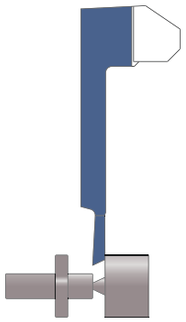

* voir TOP-Line
* siehe TOP-Line
* see TOP-Line

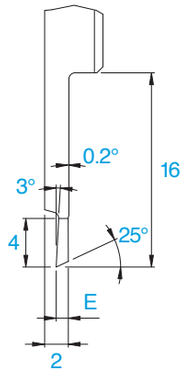
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

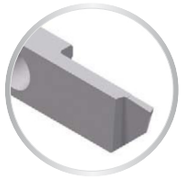
Jeder Halter wird mit einer oder mehreren Schraubengeliefert.
Die Schlüssel sind separat zu bestellen.

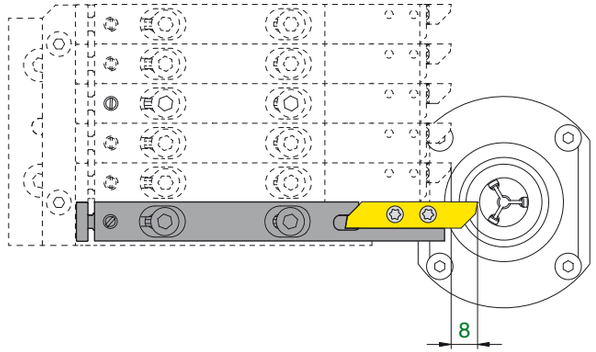
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Porte-outils Halter Holders | Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) | Options |
|---|---|---|
| 770-SN-SF | V-M4X7.3-T15 | C-T15 |








L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | Art. N° | TAF | N (µK20) |
|---|---|---|---|
| 1.0 | 771RVSF-1.0-25° | ● | ● |
| 1.2 | 771RVSF-1.2-25° | ● | ● |
| 1.5 | 771RVSF-1.5-25° | ● | ● |

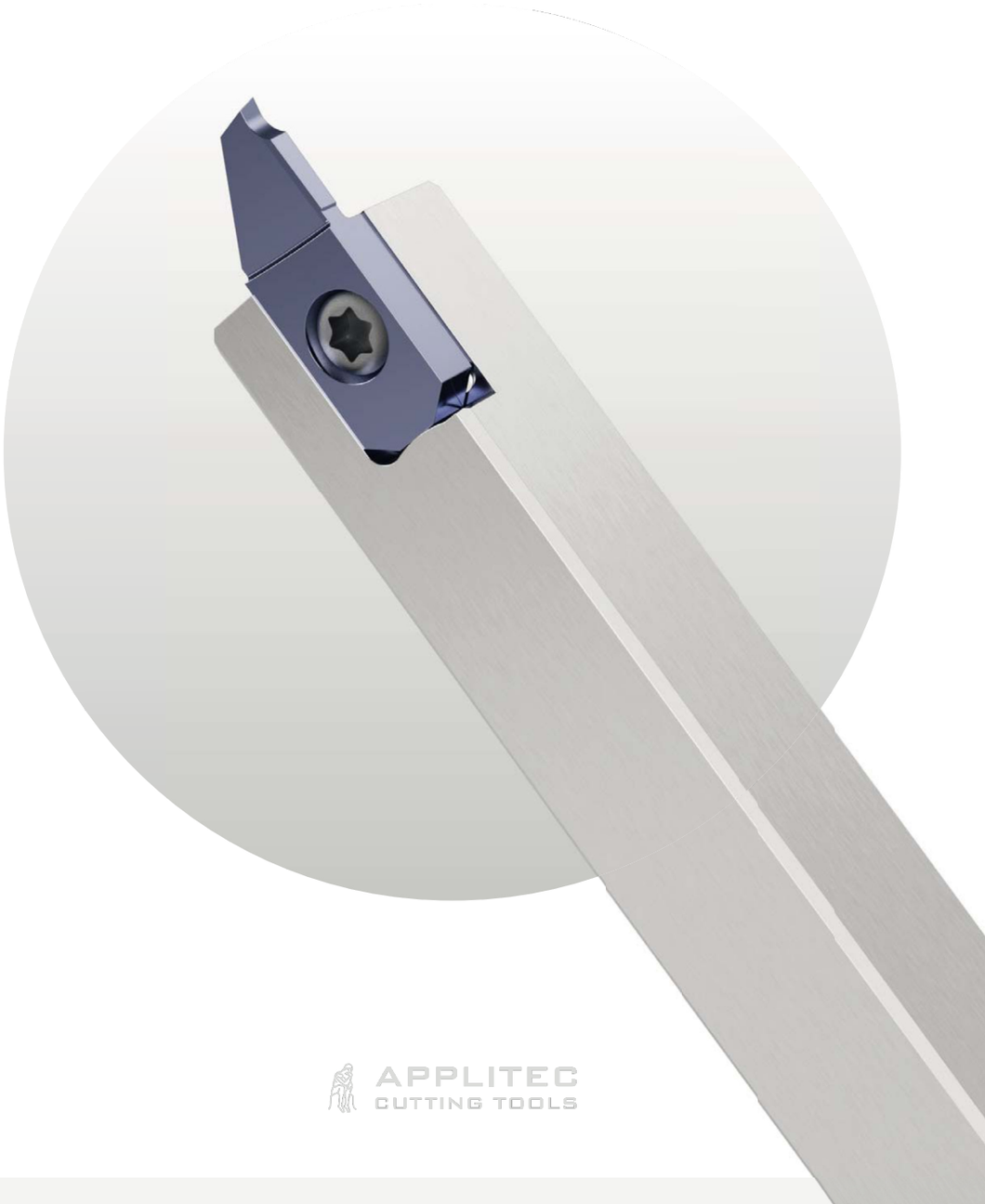
Voir chapitre MODU-Line
Siehe Kapitel MODU-Line
See chapter MODU-Line

| Type de machine<br>Maschinen-Typ<br>Type of machine | Porte-outils<br>Halter<br>Holders | Art. N° | Plaquettes type<br>WSP Typ<br>Inserts type |
|---|---|---|---|
| SwissNano | ML12 | ML12A-730RC-SWISS-NANO | 731RSF / 731RDSF |
| | | ML12A-750RC-SWISS-NANO | 751RDSF |

7XX-XX-B

Sur demande pour serrage type B, voir page 2.05
Auf Anfrage für B-Spannsystem, siehe Seite 2.05
On request for B clamping system, see page 2.05

# ONE-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide >3.03

Infos et avantages
Infos und Vorteile
Infos and advantages >3.04

Nuances
Sorten
Grades >3.06

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data >3.07

Porte-outils
Halter
Holder 130 / 140  >3.08

Tronçonnage
Abstechen
Parting off 131 / 141  >3.11

Tournage avant
Vorwärts drehen
Front turning 142  >3.19

Tournage arrière
Rückwärts drehen
Back turning 143  >3.21

Fonçage-tournage
Einstechen und drehen
Grooving and turning 144  >3.23

Filetage
Gewinde drehen
Threading 146  >3.25

Plaquettes à rayon
Radius Wendeplatten
Radius inserts 147  >3.27

Plaquettes ébauches
WSP-Rohlinge
Blank inserts 131-EP / 141-EP  >3.28

Pièces de rechange et accessoires
Ersatzteile und Zubehöre
Spare parts and accessories >3.29





| 1 | 3 | 4 | X | - | 2.0 | - | R20 | - | KST |
|---|---|---|---|---|---|---|---|---|---|

Dimension
Abmessung
Dimension

Rayon
Radius
Radius

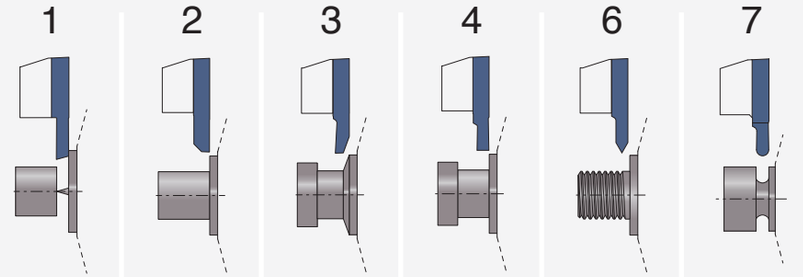
Nuance
Sorte
Grade

Géométrie de coupe
Schneidgeometrie
Cutting geometry

brise-copeaux
Spanbrecher
chip breaker

particularités
Sondereigenschaften
special features

Géométrie d'usinage
Bearbeitungsgeometrie
Machining geometry



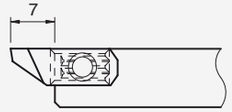

Gamme de produit
Produktserie
Product series

définit la compatibilité des plaquettes avec le porte-outils
definiert die Kompatibilität der Wendeschneidplatten mit dem Werkzeughalter
define the compatibility of the inserts with the toolholder

L = 3 (chiffre impair / ungerade Zahl / uneven number)

R = 4 (chiffre pair / gerade Zahl / even number)

| L | R |
|---|---|
| 130 | 140 |




Applitec série 100
Applitec 100 Serie
Applitec 100 series

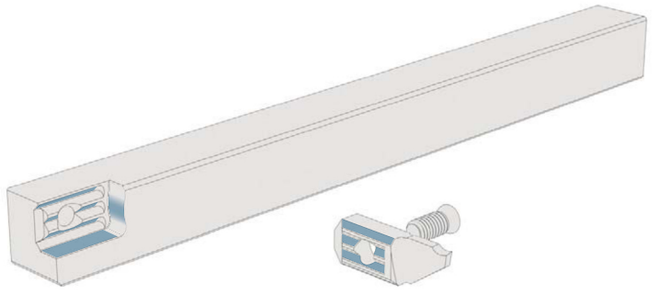
Système de serrage à denture décalée avec 1 vis de fixation
Spannsystem mit 1 Schraube und verschobener Verzahnung
Shifted teeth clamping system with 1 screw

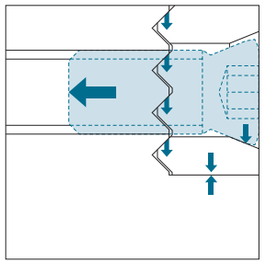
**ONE-Line**

Infos et avantages
Infos und Vorteile
Infos and advantages

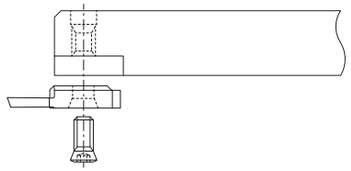
# Rigid!

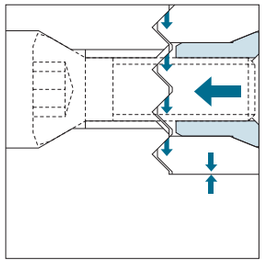
Système de serrage Applitec à denture décalée
Applitec-Spannsystem mit verschobener Verzahnung
Applitec clamping system with shifted teeth





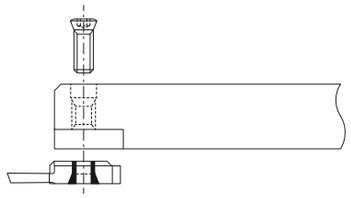
Serrage standard (A)
Standard Spannsystem (A)
Standard clamping system (A)





Serrage type B*
Spannsystem Typ B*
Clamping system type B*

ajouter -B après le numéro d'article
-B nach der Artikelreferenz hinzufügen
add -B after the article number

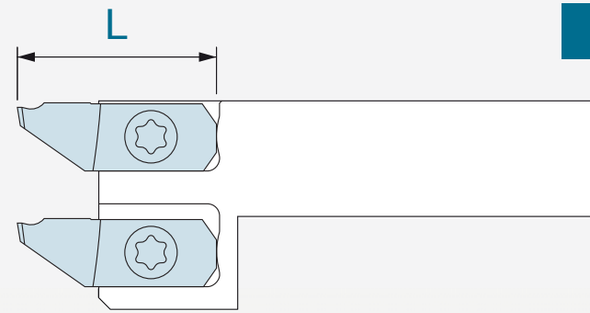


Changement de la plaquette possible dans la machine, sans démontage du porte-outil
WSP-Austauschmöglichkeit in der Maschine ohne Halterausbau
The insert can be changed in the machine without removing the tool holder

* = sur demande / auf Anfrage / on request

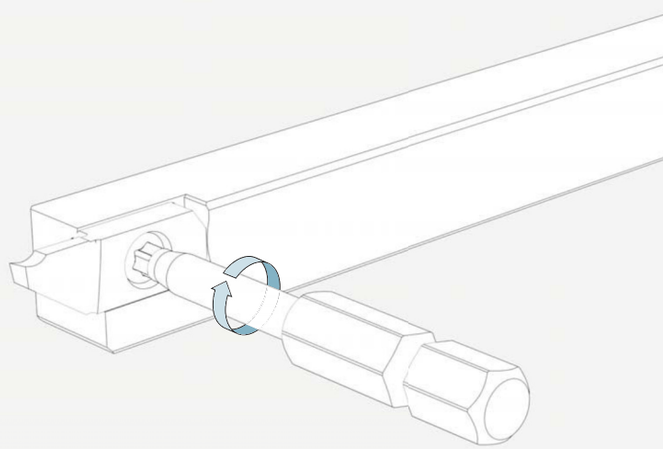
# Spacerequirement

Conçu pour maximiser l'efficacité dans les espaces les plus restreints
Entwickelt, um die Effizienz auf engstem Raum zu maximieren
Designed to maximize efficiency in the tightest spaces



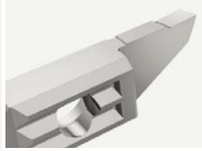

# Optimal clamping

Le couple de serrage recommandé est de 2 Nm
Das empfohlene Anzugsdrehmoment beträgt 2 Nm
The recommended tightening torque is 2 Nm



µK10 - µK20

## KN



K10 - K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

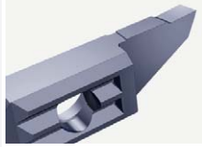
- nuance de base non revêtue micro-grain alliant une très bonne résistance à l'usure et ténacité
- recommandé pour l'usinage des matières ne nécessitant aucun revêtement par exemple le titane pur

- unbeschichtete Basis-Nuance mit feiner Körnung, die eine sehr gute Verschleißfestigkeit und Zähigkeit vereint
- empfohlen für die Bearbeitung von Materialien, die keine Beschichtung erfordern, wie z. B. reines Titan

- uncoated base grade with fine grain, combining excellent wear resistance and toughness
- recommended for machining materials that require no coating, such as pure titanium

µK10 - µK20

## KTA



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance universelle
- 1er choix pour l'usinage des aciers, aciers inoxydables et alliage de titane

- universelle Sorte
- erste Wahl für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen

- universal grade
- first choice for machining steel, stainless steel, and titanium alloys

µK10 - µK20

## KST



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

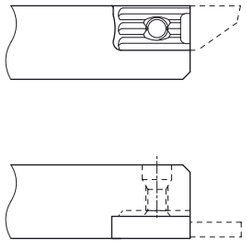
- nuance très résistante à l'usure et à la température
- 1er choix pour les aciers > 50 HRC, les alliages à base de nickel, chrome-cobalt, inox et titane allié

- sehr verschleiß- und temperaturbeständige Sorte
- erste Wahl für Stähle > 50 HRC, Nickelbasislegierungen, Chrom-Kobalt, Edelstahl und legiertes Titan

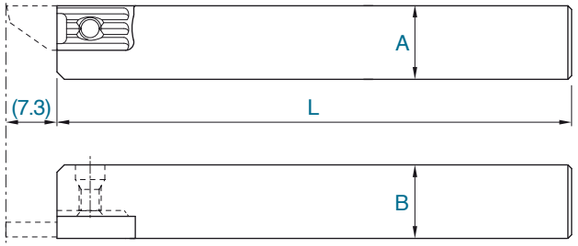
- highly wear- and temperature-resistant grade
- first choice for steels > 50 HRC, nickel-based alloys, chrome-cobalt, stainless steels, and alloyed titanium

| Matière<br>Werkstoff<br>Material | | Tournage<br>Drehen<br>Turning | | | Tronçonnage<br>Abstechen<br>Parting off | | |
|---|---|---|---|---|---|---|---|
| | | VC<br>(m/min) | Prof. depasse<br>Schnitttiefe<br>Depth of cut<br>(mm) | Avance<br>Vorschub<br>Feed<br>(mm/U) | VC<br>(m/min) | Largeur decoupe<br>Abstechbreite<br>Cuttingwidth<br>(mm) | Avance<br>Vorschub<br>Feed<br>(mm/U) |
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 120 - 200 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 | 80 - 150 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.08<br>0.03 - 0.15 |
| Acier<br>Stahl<br>Steel | P < 600 N/mm² | 80 - 160 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 | 70 - 120 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.06<br>0.03 - 0.12 |
| Acier<br>Stahl<br>Steel | P < 800 N/mm² | 60 - 120 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.10<br>0.05 - 0.20 | 60 - 100 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.05<br>0.03 - 0.10 |
| Acier<br>Stahl<br>Steel | P > 800 N/mm² | 50 - 100 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 | 40 - 80 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.04<br>0.03 - 0.08 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | M | 60 - 120 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 | 60 - 100 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.04<br>0.03 - 0.08 |
| Aluminium Si < 12% | N | 200 - 1000 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 | 180 - 400 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Aluminium Si > 12% | N | 180 - 800 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 | 150 - 300 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 500 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.35 | 100 - 300 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Titane<br>Titan<br>Titanium | S | 30 - 70 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.08<br>0.05 - 0.15 | 30 - 50 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.03<br>0.03 - 0.06 |

L



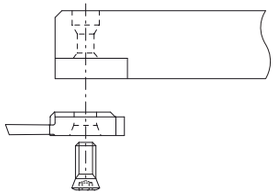
R



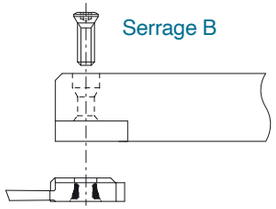



| A x B | L | Serrage Spannsystem Clamping | L | R |
|---|---|---|---|---|
| | | | Art. N° | Art. N° |
| 8 x 8 | 115 | A+B | 130-8 | 140-8 |
| 10 x 10 | 115 | A+B | 130-10 | 140-10 |
| 12 x 12 | 115 | A+B | 130-12 | 140-12 |

Serrage A



Serrage B



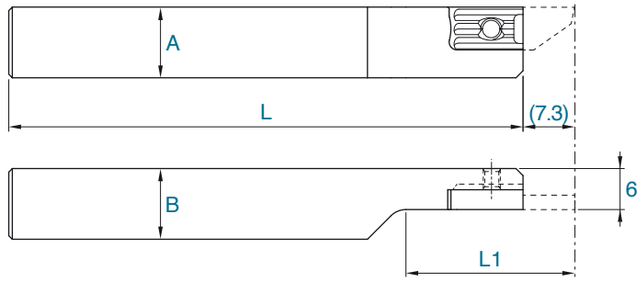
Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





Utiliser des plaquettes type 131R
WSP Typ 131R verwenden
Use inserts type 131R

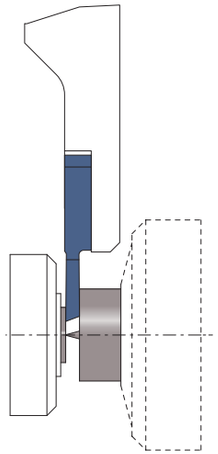
Voir pages 3.11 - 3.14
Siehe Seiten 3.11 - 3.14
See pages 3.11 - 3.14





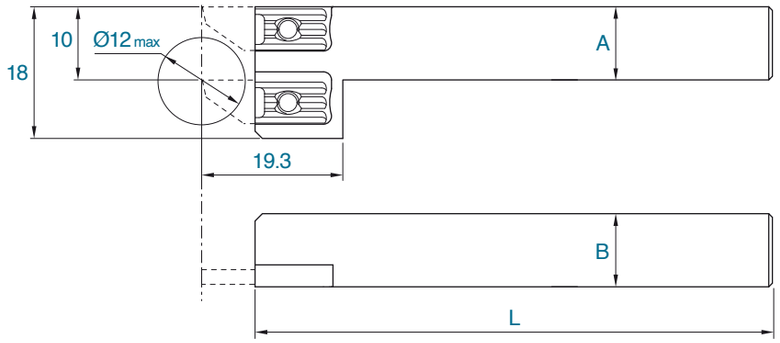

L (R)
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| AxB | L | L1 | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|---|
| 8 x 8 | 115 | 24 | A | 130RC-8 |
| 10 x 10 | 115 | 24 | A | 130RC-10 |
| 12 x 12 | 115 | 30 | A | 130RC-12 |



Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

## R





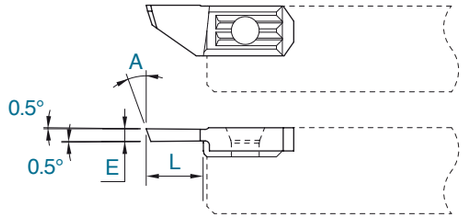



R

| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 8 x 8 | 115 | A+B | 140-8-H10-DUO |
| 10 x 10 | 115 | A+B | 140-10-H10-DUO |
| 12 x 12 | 115 | A+B | 140-12-H10-DUO |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

## Cut R

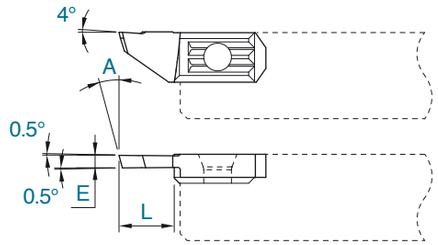



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | A | L | Art. N° | KTA | KST | KN (µk10-20) |
|---|---|---|---|---|---|---|
| 1.0 | 20° | 5 | 131R-1.0-20 | ● | ● | ● |
| 1.2 | 20° | 5 | 131R-1.2-20 | ● | ● | ● |
| 1.5 | 20° | 7 | 131R-1.5-20 | ● | ● | ● |
| 2.0 | 20° | 7 | 131R-2.0-20 | ● | ● | ● |

## Cut R






### L (R)

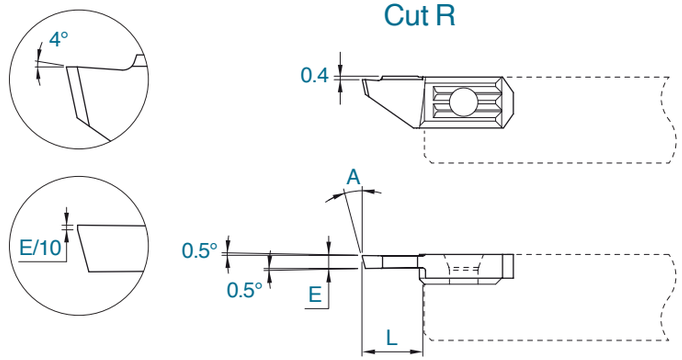
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | A | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| 1.0 | 15° | 5 | 131RX4-1.0 | ● | ● | ● |
| 1.5 | 15° | 7 | 131RX4-1.5 | ● | ● | ● |





## Cut R





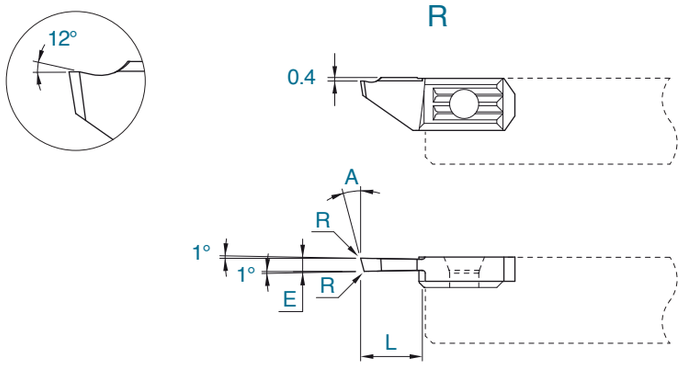

### L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | A | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| 1.0 | 15° | 5 | 131RXF-1.0 | ● | ● | ● |
| 1.5 | 15° | 7 | 131RXF-1.5 | ● | ● | ● |

Tronçonnage
Abstechen
Parting off



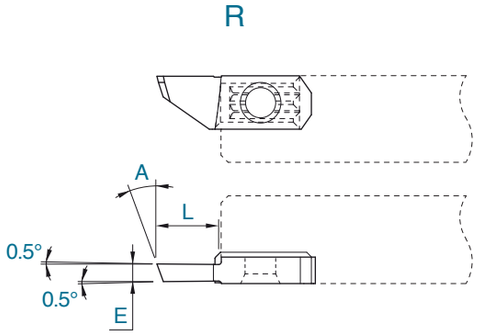


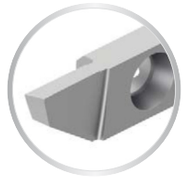



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

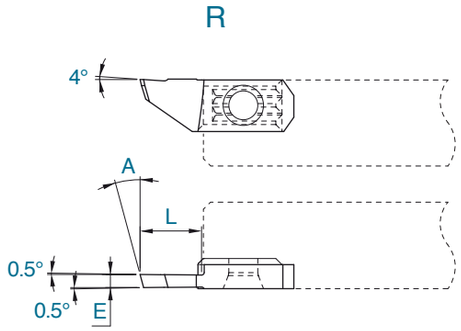
| E | A | L | R | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|---|
| 1.0 | 15° | 5 | 0.03 | 131RX12-1.0 | ● | ● | ● |
| 1.5 | 15° | 7 | 0.03 | 131RX12-1.5 | ● | ● | ● |



R

| E | A | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| 0.6 | 20° | 3 | 141-0.6-20 | ● | ● | ● |
| 0.8 | 20° | 5 | 141-0.8-20 | ● | ● | ● |
| 1.0 | 20° | 5 | 141-1.0-20 | ● | ● | ● |
| 1.2 | 20° | 5 | 141-1.2-20 | ● | ● | ● |
| 1.5 | 20° | 7 | 141-1.5-20 | ● | ● | ● |
| 2.0 | 20° | 7 | 141-2.0-20 | ● | ● | ● |
| 2.5 | 20° | 7 | 141-2.5-20 | ● | ● | ● |



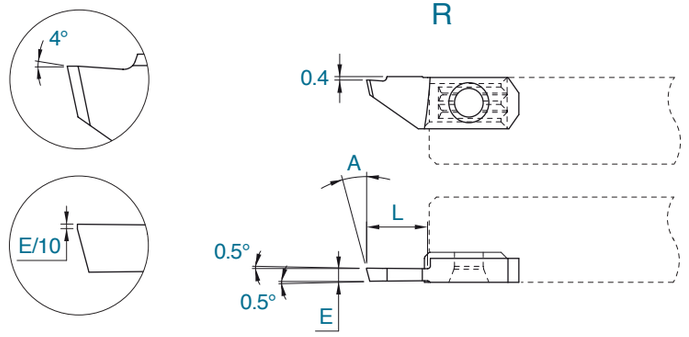



| E | A | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| | | | | R | | |
| 0.8 | 15° | 5 | 141X4-0.8 | ● | ● | ● |
| 1.0 | 15° | 5 | 141X4-1.0 | ● | ● | ● |
| 1.5 | 15° | 7 | 141X4-1.5 | ● | ● | ● |
| 2.0 | 15° | 7 | 141X4-2.0 | ● | ● | ● |

1XX-XX-B Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04



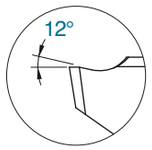


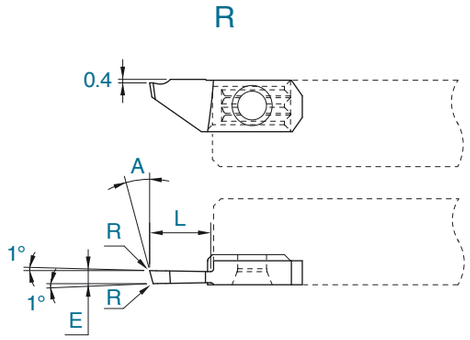





| E | A | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| | | | | R | | |
| 1.0 | 15° | 5 | 141XF-1.0 | ● | ● | ● |
| 1.2 | 15° | 5 | 141XF-1.2 | ● | ● | ● |
| 1.5 | 15° | 7 | 141XF-1.5 | ● | ● | ● |

1XX-XX-B Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04





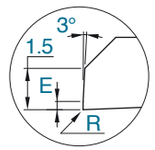

| E | A | L | R | Art. N° | R KTA | R KST | R KN (µx10-20) |
|---|---|---|---|---|---|---|---|
| 0.5 | 15° | 3 | 0.03 | 141X12-0.5 | ● | ● | ● |
| 1.0 | 15° | 5 | 0.03 | 141X12-1.0 | ● | ● | ● |
| 1.5 | 15° | 7 | 0.03 | 141X12-1.5 | ● | ● | ● |

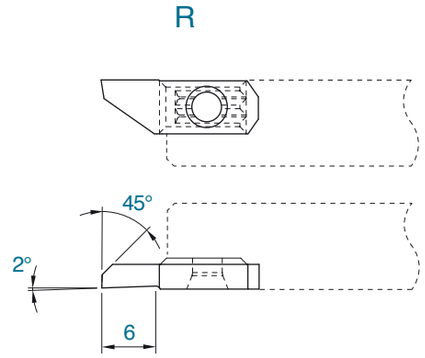
1XX-XX-B

Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04







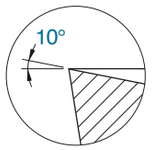



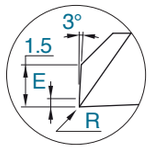


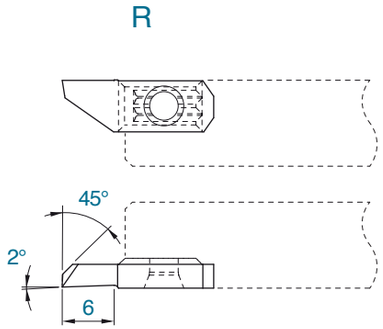

| E | R | Art. N° | R KTA | R KST | R KN (µx10-20) |
|---|---|---|---|---|---|
| 0.3 | 0 | 142-2 | ● | ● | ● |
| 0 | 0-0.01 | 142-2-R01 | ● | ● | ● |
| 0 | 0.08 | 142-2-R08 | ● | ● | ● |

1XX-XX-B

Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04



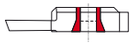






| E | R | Art. N° | R<br>KTA | R<br>KST | R<br>KN (µx10-20) |
|---|---|---|---|---|---|
| 0.3 | 0 | 142X10-2 | ● | ● | ● |
| 0 | 0-0.01 | 142X10-2-R01 | ● | ● | ● |
| 0 | 0.08 | 142X10-2-R08 | ● | ● | ● |

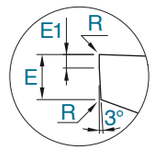
1XX-XX-B

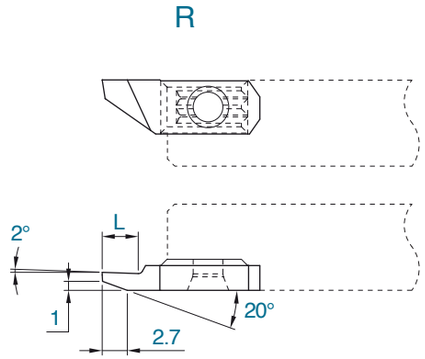


Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04





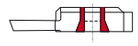


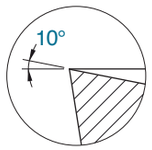


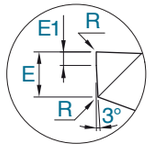

| E | E1 | L | R | Art. N° | R<br>KTA | R<br>KST | R<br>KN (µx10-20) |
|---|---|---|---|---|---|---|---|
| 0.5 | 0.15 | 3 | 0 | 143-0.5 | ● | ● | ● |
| 0.5 | 0 | 3 | 0-0.01 | 143-0.5-R01 | ● | ● | ● |
| 0.5 | 0 | 3 | 0.08 | 143-0.5-R08 | ● | ● | ● |
| 1.0 | 0.3 | 4 | 0 | 143-1.0 | ● | ● | ● |
| 1.0 | 0 | 4 | 0 | 143-1.0-R01 | ● | ● | ● |
| 1.0 | 0 | 4 | 0.08 | 143-1.0-R08 | ● | ● | ● |

1XX-XX-B

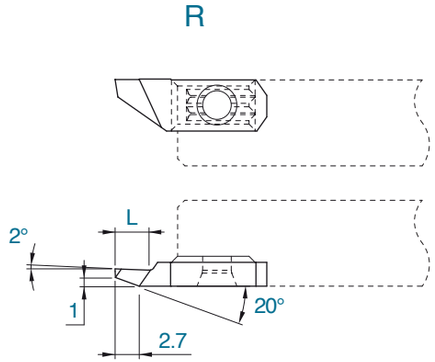


Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04



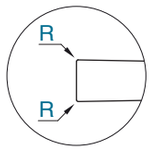

R



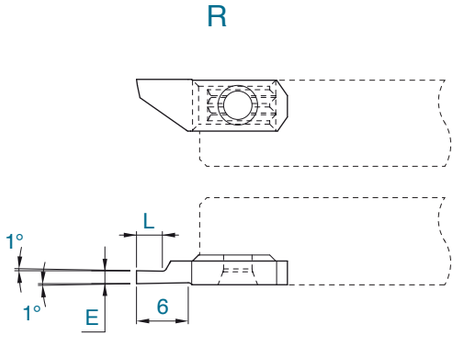


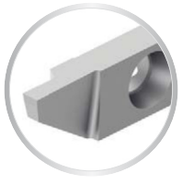

| E | E1 | L | R | Art. N° | KTA | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|---|
| 0.5 | 0.15 | 3 | 0 | 143X10-0.5 | ● | ● | ● |
| 0.5 | 0 | 3 | 0-0.01 | 143X10-0.5-R01 | ● | ● | ● |
| 0.5 | 0 | 3 | 0.08 | 143X10-0.5-R08 | ● | ● | ● |
| 1.0 | 0.3 | 4 | 0 | 143X10-1.0 | ● | ● | ● |
| 1.0 | 0 | 4 | 0-0.01 | 143X10-1.0-R01 | ● | ● | ● |
| 1.0 | 0 | 4 | 0.08 | 143X10-1.0-R08 | ● | ● | ● |



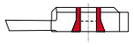




R

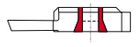


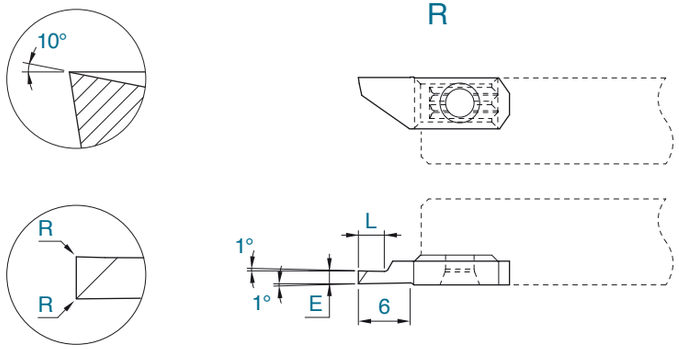
| E | L | R | Art. N° | KTA | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|
| 0.5 | 1.5 | 0 | 144-0.5 | ● | ● | ● |
| 0.6 | 1.8 | 0 | 144-0.6 | ● | ● | ● |
| 0.8 | 2 | 0 | 144-0.8 | ● | ● | ● |
| 1.0 | 2.5 | 0 | 144-1.0 | ● | ● | ● |
| 1.0 | 3 | 0.08 | 144-1.0-R08 | ● | ● | ● |
| 1.5 | 3 | 0 | 144-1.5 | ● | ● | ● |
| 1.5 | 3 | 0.08 | 144-1.5-R08 | ● | ● | ● |

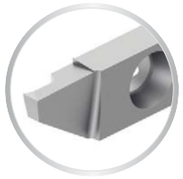



Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04




Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04



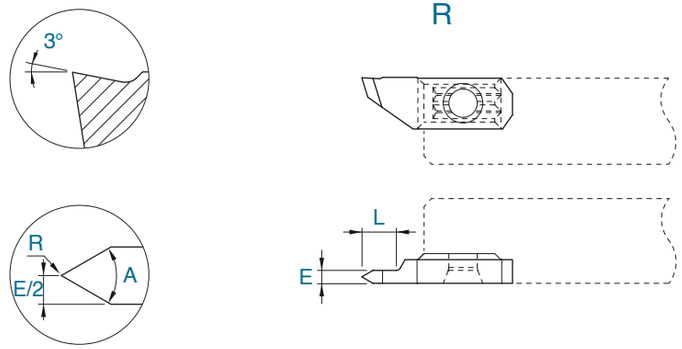
| E | L | R | Art. N° | KTA | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|
| 0.8 | 2 | 0 | 144X10-0.8 | ● | ● | ● |
| 1.0 | 2.5 | 0 | 144X10-1.0 | ● | ● | ● |
| 1.0 | 2.5 | 0.08 | 144X10-1.0-R08 | ● | ● | ● |
| 1.5 | 3 | 0 | 144X10-1.5 | ● | ● | ● |
| 1.5 | 3 | 0.08 | 144X10-1.5-R08 | ● | ● | ● |

1XX-XX-B

Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04









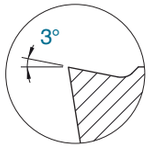

Profil partiel
Teilprofil
Partial profile

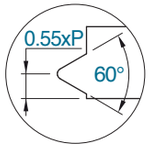
| A | E | L | R | Pas mm<br>Steigung mm<br>Pitch mm<br>P | Art. N° | KTA | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|
| 60° | 1.5 | 4 | 0 | - | 146X3-60-1.5 | ● | ● | ● |
| 60° | 1.5 | 4 | 0.03 | 0.25-0.35 | 146X3-60-1.5-R03 | ● | ● | ● |
| 60° | 2.0 | 6 | 0.06 | 0.40-0.70 | 146X3-60-2.0-R06 | ● | ● | ● |
| 60° | 2.0 | 6 | 0.12 | 0.8-1.25 | 146X3-60-2.0-R12 | ● | ● | ● |

| A | E | L | R | Pas TPI<br>Steigung TPI<br>Pitch TPI<br>P | Art. N° | KTA | KST | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|
| 55° | 1.5 | 4 | 0 | - | 146X3-55-1.5 | ● | ● | ● |
| 55° | 1.5 | 4 | 0.06 | 32-48 | 146X3-55-1.5-R06 | ● | ● | ● |
| 55° | 2.0 | 6 | 0.12 | 18-26 | 146X3-55-2.0-R12 | ● | ● | ● |

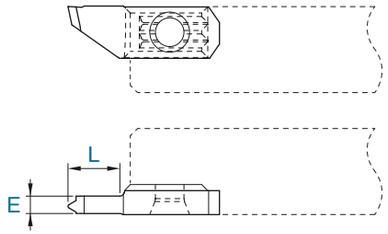
1XX-XX-B

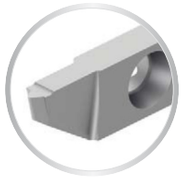
Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04



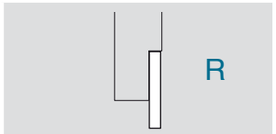




R



Profil complet métrique
Metrisches Vollprofil
Metric full profile

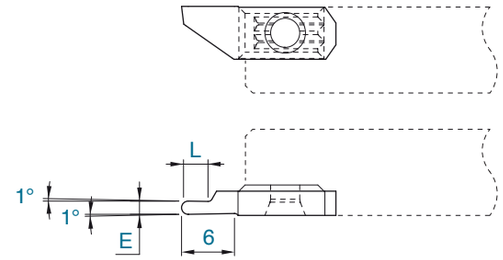


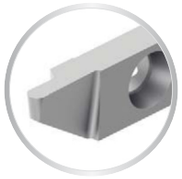

| Pas Steigung Pitch P | E | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|---|
| 0.25 | 1.0 | 3 | 146X3-M-0.25 | ● | ● | ● |
| 0.30 | 1.0 | 3 | 146X3-M-0.30 | ● | ● | ● |
| 0.35 | 1.0 | 3 | 146X3-M-0.35 | ● | ● | ● |
| 0.40 | 1.0 | 3 | 146X3-M-0.40 | ● | ● | ● |
| 0.45 | 1.0 | 3 | 146X3-M-0.45 | ● | ● | ● |
| 0.50 | 1.0 | 3 | 146X3-M-0.50 | ● | ● | ● |
| 0.60 | 1.0 | 3 | 146X3-M-0.60 | ● | ● | ● |
| 0.70 | 1.0 | 3 | 146X3-M-0.70 | ● | ● | ● |
| 0.75 | 1.0 | 3 | 146X3-M-0.75 | ● | ● | ● |
| 0.80 | 1.5 | 4.5 | 146X3-M-0.80 | ● | ● | ● |
| 1.00 | 1.5 | 4.5 | 146X3-M-1.00 | ● | ● | ● |
| 1.25 | 1.5 | 4.5 | 146X3-M-1.25 | ● | ● | ● |
| 1.50 | 2.0 | 6 | 146X3-M-1.50 | ● | ● | ● |
| 1.75 | 2.0 | 6 | 146X3-M-1.75 | ● | ● | ● |

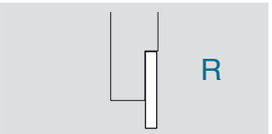
1XX-XX-B

Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04

R



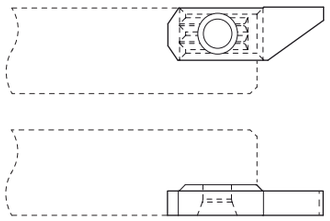



| R | L | Art. N° | KTA | KST | KN (µx10-20) |
|---|---|---|---|---|---|
| 0.25 | 1.5 | 147-R0.25 | ● | ● | ● |
| 0.40 | 2 | 147-R0.4 | ● | ● | ● |
| 0.50 | 2.5 | 147-R0.5 | ● | ● | ● |
| 0.60 | 2.5 | 147-R0.6 | ● | ● | ● |
| 0.75 | 3 | 147-R0.75 | ● | ● | ● |
| 0.80 | 3 | 147-R0.8 | ● | ● | ● |
| 1.0 | 4 | 147-R1.0 | ● | ● | ● |

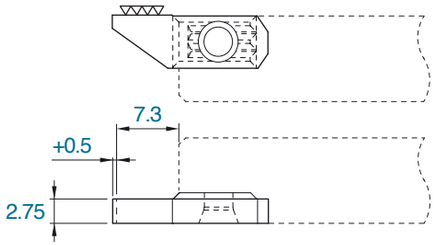
1XX-XX-B

Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04

L



R






Face de coupe polie
Polierte Schnittfläche
Polished cutting face

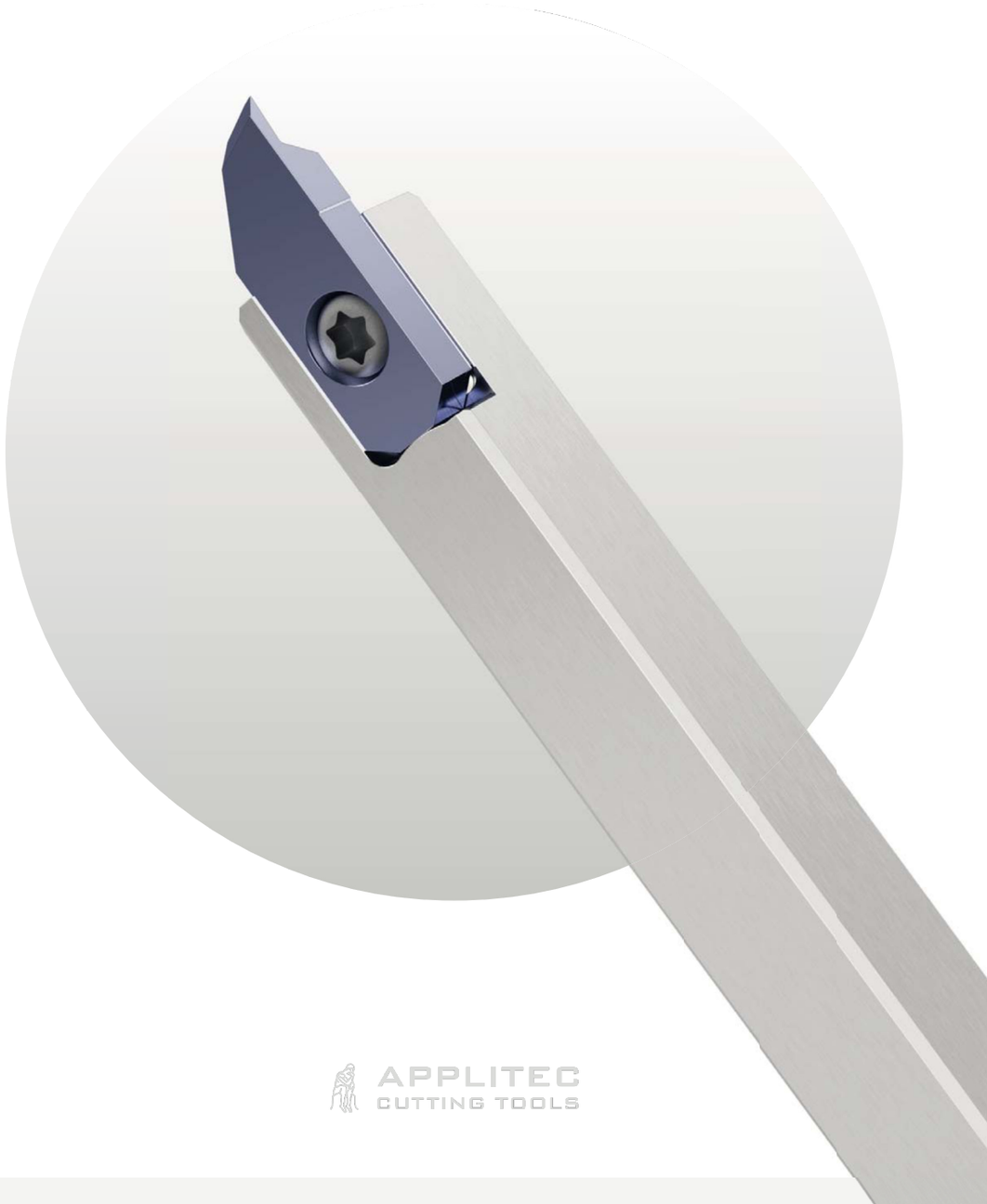
| L | | | | R | | | |
|---|---|---|---|---|---|---|---|
| Art. N° | KTA | KST | KN (µk10-20) | Art. N° | KTA | KST | KN (µk10-20) |
| 131-EP | ● | ● | ● | 141-EP | ● | ● | ● |

| | Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage type B<br>Spannsystem Typ B<br>Clamping system type B | Options |
|---|---|---|---|---|---|
| 130 | 130-8 | V-M3x7-T8 | C-T8 | V-M2.5X7.8-T8 | C-T8 |
| | 130-10 | | | | |
| | 130-12 | | | | |
| | 130RC-8 | V-M3x5.5-T8 | | - | |
| | 130RC-10 | | | | |
| | 130RC-12 | | | | |
| 140 | 140-8 | V-M3x7-T8 | C-T8 | V-M2.5X7.8-T8 | C-T8 |
| | 140-10 | | | | |
| | 140-12 | | | | |
| | 140-8-H10-DUO | | | | |
| | 140-10-H10-DUO | | | | |
| | 140-12-H10-DUO | | | | |

1XX-XX-B

Sur demande pour serrage type B, voir page 3.04
Auf Anfrage für B-Spannsystem, siehe Seite 3.04
On request for B clamping system, see page 3.04

# ONE-Watch



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide >4.03

Infos et avantages
Infos und Vorteile
Infos and advantages >4.04

Nuances
Sorten
Grades >4.05

Porte-outils
Halter
Holder 130 / 140  >4.07

Tronçonnage
Abstechen
Parting off 131SF / 141SF  >4.10

Tournage avant
Vorwärts drehen
Front turning 142SF  >4.13

Tournage arrière
Rückwärts drehen
Back turning 143SF  >4.16

Filetage
Gewinde drehen
Threading 146SFX3  >4.19

Plaquettes piqûre avant
Fronteinstich WSP
Front grooving inserts 148SF  >4.20

Plaquettes piqûre arrière
Rückeinstich WSP
Back grooving inserts 149SF  >4.21

Plaquettes ébauches
WSP-Rohlinge
Blank inserts 131-ESF / 141-ESF  >4.22

Pièces de rechange et accessoires
Ersatzteile und Zubehöre
Spare parts and accessories >4.23





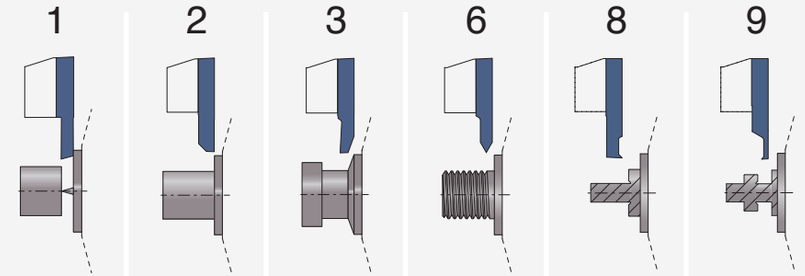
| 1 | 4 | 3 | SF | - | 3/3 | - | 45 | - | KSTF |
|---|---|---|---|---|---|---|---|---|---|

SF: Super finish

3/3: Dimension
Abmessung
Dimension

45: Nuance
Sorte
Grade

Géométrie d'usinage
Bearbeitungsgeometrie
Machining geometry



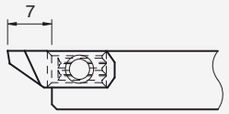

Gamme de produit
Produktserie
Product series

définit la compatibilité des plaquettes avec le porte-outils
bestimmt die WSP und Halter Kompatibilität
define the compatibility of the inserts with the toolholder

L = 3 (chiffre impair / ungerade Zahl / uneven number)

R = 4 (chiffre pair / gerade Zahl / even number)

| L | R |
|---|---|
| 130 | 140 |

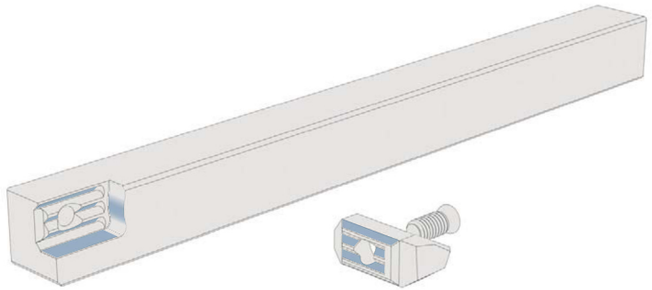


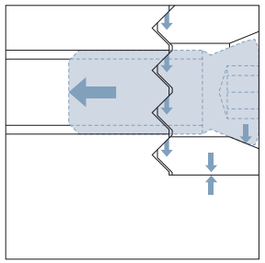

Applitec série 100
Applitec 100 Serie
Applitec 100 series

Système de serrage à denture décalée avec 1 vis de fixation
Spannsystem mit 1 Schraube und verschobener Verzahnung
Shifted teeth clamping system with 1 screw

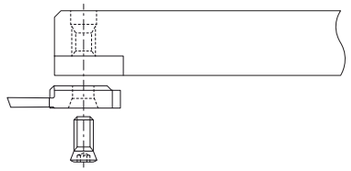
# Rigid!

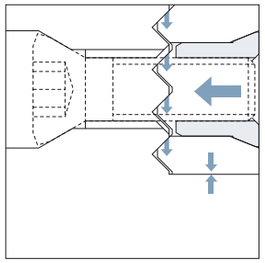
Système de serrage Applitec à denture décalée
Applitec-Spannsystem mit verschobener Verzahnung
Applitec clamping system with shifted teeth





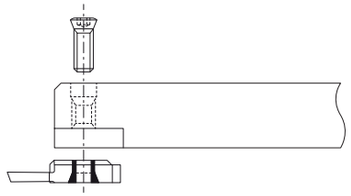
Serrage standard (A)
Standard Spannsystem (A)
Standard clamping system (A)





Serrage type B*
Spannsystem Typ B*
Clamping system type B*

ajouter -B après le numéro d'article
-B nach der Artikelreferenz hinzufügen
add -B after the article number



Changement de la plaquette possible dans la machine, sans démontage du porte-outil
WSP-Austauschmöglichkeit in der Maschine ohne Halterausbau
The insert can be changed in the machine without removing the tool holder

* = sur demande / auf Anfrage / on request





µK10 - µK20

## KTC



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

P ★★★★★
M ★★★☆☆
N ★★★★☆
S ★★★☆☆

- nuance résistante à l'usure, faible coefficient de frottement, recommandée pour des opérations d'ébauche et de finition
- conseillé pour l'usinage de la matière 20AP + aciers de décolletage

- verschleissfeste Sorte, geringer Reibwert, für Schruppen und Schlichtbearbeitung empfohlen
- empfohlen für die Bearbeitung von Material 20AP + Automatenstahl

- wear resistant grade, low friction ratio, recommended for roughing and finishing
- recommended for suitable for machining of 20AP material + Free-cutting steel

µK10 - µK20

## KTC-RE



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

P ★★★★★
M ★★★☆☆
N ★★★★☆
S ★★★☆☆

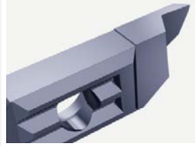
- nuance identique à KTC avec dépouilles rectifiées après revêtement pour des opérations de finition
- conseillé pour l'usinage de la matière 20AP + aciers de décolletage

- gleiche Sorte wie KTC nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- empfohlen für die Bearbeitung von Material 20AP + Automatenstahl

- same grade as KTC, after coating grounded clearance, recommended for finishing
- recommended for suitable for machining of 20AP material + Free-cutting steel

µK10 - µK20

## KTAF



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

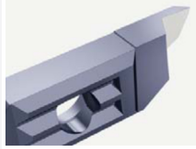
- nuance résistante à l'usure, recommandée pour des opérations d'ébauche et de finition
- conseillé pour l'usinage des matières Finemac et inox 4c27a

- verschleissfeste Sorte, für Schruppen und Schlichtbearbeitung empfohlen
- empfohlen für die Bearbeitung von Finemac und Inox 4c27a rostfreiem Stahl

- wear resistant grade, recommended for roughing and finishing
- recommended for suitable for machining of Finemac and 4c27a stainless steel

µK10 - µK20

## KTAF-RE



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF — F — M — E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance identique à KTAF avec dépouilles rectifiées après revêtement pour des opérations de finition
- recommandé pour les matières Finemac et inox 4c27a

- gleiche Sorte wie KTAF nach der Beschichtung geschliffener Freiwinkel, für Schlichtbearbeitung empfohlen
- empfohlen für die Bearbeitung von Finemac und Inox 4c27a rostfreiem Stahl

- same grade as KTAF, with clearance angles rectify after coating, recommended for finishing
- recommended for suitable for machining of Finemac and 4c27a stainless steel

µK10 - µK20

## KSTF



K10 - K20

µK10 - µK20 + revêtement PVD
µK10 - µK20 + PVD Beschichtung
µK10 - µK20 + PVD coating

TF — F — M — E

P ★★★★★
M ★★★★★
N ★★★☆☆
S ★★★★★

- nuance très résistante à l'usure et à la température
- 1er choix pour les aciers > 50 HRC, les aciers à base de nickel, chrome-cobalt, inox et titane allié

- verschleißfeste Sorte, beständig gegen hohe Temperaturen
- erste Wahl für Stähle > 50 HRC, Nickelbasislegierungen, Chrom-Kobalt, rostfreien Stahl und legiertes Titan

- wear-resistant grade, highly resistant to temperature
- first choice for steels > 50 HRC, nickel-based alloys, chrome-cobalt, stainless steel, and alloyed titanium

µK10 - µK20

## KN



K10 - K20

Non revêtu
Unbeschichtet
Uncoated

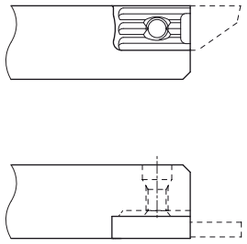
P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance de base non revêtue micro-grain, alliant une très bonne résistance à l'usure et une bonne ténacité
- recommandé pour l'usinage des matières ne nécessitant aucun revêtement, par exemple le titane pur

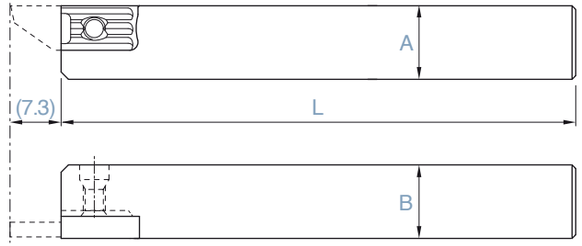
- verschleißfeste Feinkornsorte, unbeschichtet, mit hoher Zähigkeit und guter Widerstandsfähigkeit
- empfohlen für die Bearbeitung von Werkstoffen, die keine Beschichtung erfordern, zum Beispiel reines Titan

- wear-resistant micro-grain grade, uncoated, with high toughness and good resistance
- recommended for machining materials that do not require coating, such as pure titanium

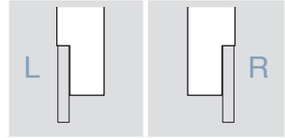
L



R

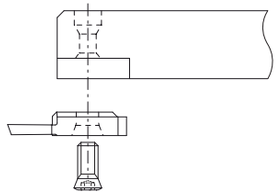




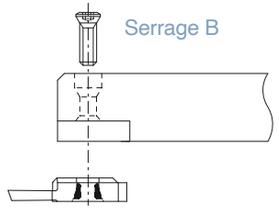




| A x B | L | Serrage Spannsystem Clamping | Art. N° | Art. N° |
|---|---|---|---|---|
| 8 x 8 | 115 | A+B | 130-8 | 140-8 |
| 10 x 10 | 115 | A+B | 130-10 | 140-10 |
| 12 x 12 | 115 | A+B | 130-12 | 140-12 |

Serrage A



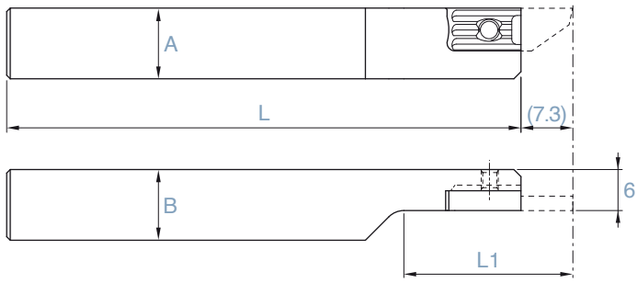
Serrage B



Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

Utiliser des plaquettes type 131R
WSP Typ 131R verwenden
Use inserts type 131R

Voir pages 4.10 - 4.11
Siehe Seiten 4.10 - 4.11
See pages 4.10 - 4.11

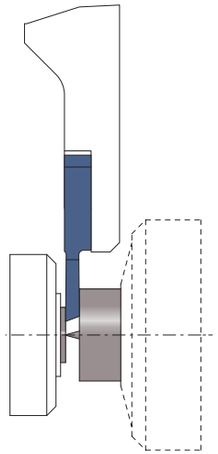





L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| AxB | L | L1 | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|---|
| 8 x 8 | 115 | 24 | A | 130RC-8 |
| 10 x 10 | 115 | 24 | A | 130RC-10 |
| 12 x 12 | 115 | 30 | A | 130RC-12 |

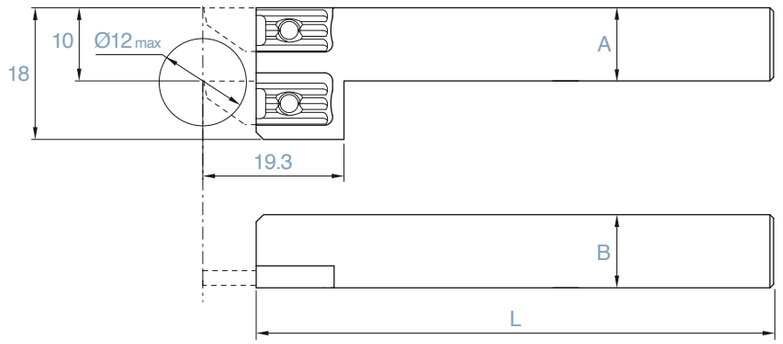


Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





R

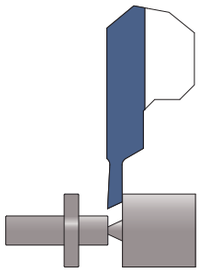


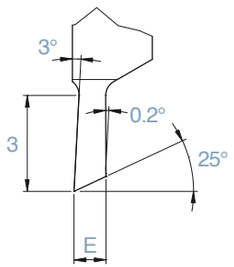



R

| A x B | L | Serrage Spannsystem Clamping | Art. N° |
|---|---|---|---|
| 8 x 8 | 115 | A+B | 140-8-H10-DUO |
| 10 x 10 | 115 | A+B | 140-10-H10-DUO |
| 12 x 12 | 115 | A+B | 140-12-H10-DUO |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





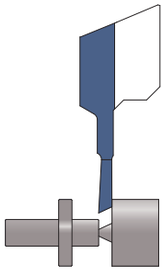


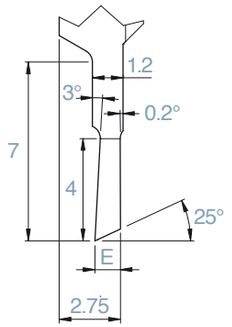

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | Art. N° | KTAF | KSTF | KN (µk10-20) |
|---|---|---|---|---|
| 1.0 | 131RSF-1.0-25 | ● | ● | ● |





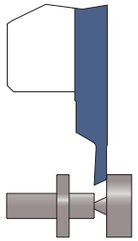


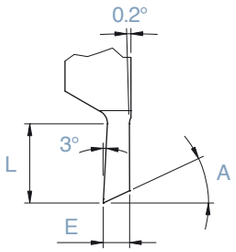


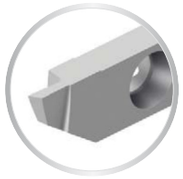

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | Art. N° | KTAF | KN (µk10-20) |
|---|---|---|---|
| 1.0 | 131RDSF-1.0-25 | ● | ● |





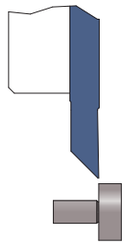
| A | E | L | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KSTF | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|---|
| 25° | 0.5 | 2 | 141SF-0.5-25 | ● | ● | ● | ● | ● | ● |
| | 0.8 | 3 | 141SF-0.8-25 | ● | ● | ● | ● | ● | ● |
| | 1.0 | 3 | 141SF-1.0-25 | ● | ● | ● | ● | ● | ● |
| 22° | 1.2 | 5 | 141SF-1.2-22 | ● | ● | ● | ● | ● | ● |

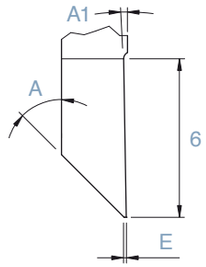
1XX-XX-B

Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04







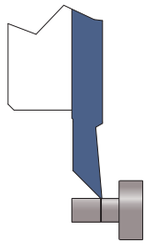


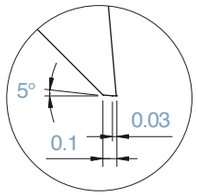


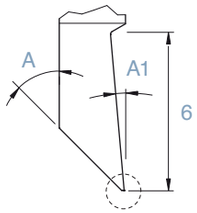

| E | A | A1 | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KSTF | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|---|
| 0.03 | 45° | 3° | 142SF-3/3-45 | ● | ● | ● | ● | ● | ● |
| 0.05 | 45° | 3° | 142SF-5/5-45 | ● | ● | ● | ● | ● | ● |
| 0.08 | 45° | 1° | 142SF-8/8-45 | ● | ● | ● | ● | ● | ● |

1XX-XX-B

Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04







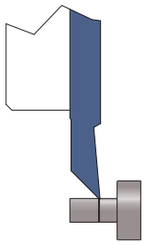

| A | A1 | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KSTF | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S | P M N S | P M N S |
| 45° | 5° | 142SF-10/3 | ● | ● | ● | ● | ● | ● |

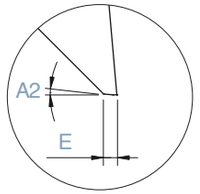
R

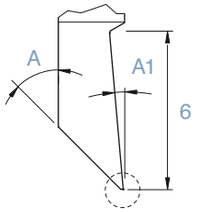
1XX-XX-B Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04











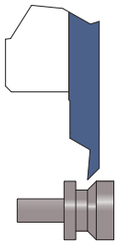

| E | A | A1 | A2 | Art. N° | KTAF-RE | KSTF | KN (µK10-20) |
|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S | P M N S |
| 0.1 | 45° | 5° | 5° | 142SF-10/0-5-45 | ● | ● | ● |
| 0.15 | 30° | 3° | 2° | 142SF-15/0-2-30 | ● | ● | ● |

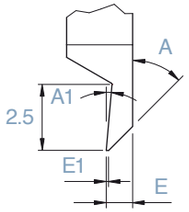
R

1XX-XX-B Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04

Tournage arrière
Rückwärts drehen
Back turning







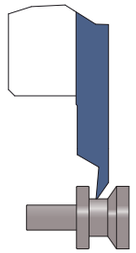


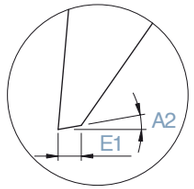

R

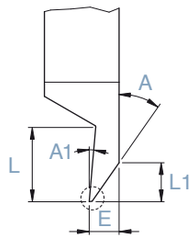
| E1 | E | A | A1 | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KSTF | KN (µk10-20) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S | P M N S | P M N S | P M N S | P M N S |
| 0.03 | 1.0 | 45° | 5° | 143SF-3/3-45-1.0 | ● | ● | ● | ● | ● | ● |
| 0.03 | 1.2 | 45° | 5° | 143SF-3/3-45-1.2 | ● | ● | ● | ● | ● | ● |
| 0.10 | 1.0 | 45° | 5° | 143SF-10/10-45-1.0 | ● | ● | ● | ● | ● | ● |
| 0.05 | 0.8 | 30° | 3° | 143SF-5/5-30-0.8 | | | | ● | | |

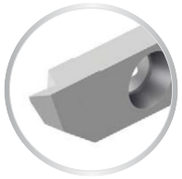
1XX-XX-B

Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04





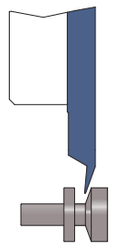



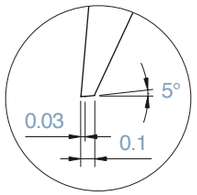
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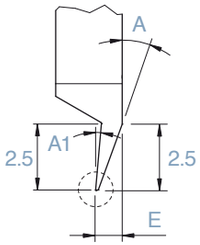
| E1 | E | L1 | L | A | A1 | A2 | Art. N° | KTAF-RE | KN (µk10-20) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | P M N S | P M N S |
| 0.08 | 1.0 | 1.6 | 2.5 | 30° | 5° | 2° | 143SF-8/0-2-30-1.0 | ● | ● |
| 0.15 | 1.2 | 1.8 | 4.0 | 30° | 3° | 2° | 143SF-15/0-2-30-1.2 | ● | ● |
| 0.10 | 1.0 | 1.3 | 2.5 | 35° | 5° | 10° | 143SF-10/0-10-35-1.0 | ● | ● |

1XX-XX-B

Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04





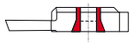






| E | A | A1 | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KN (µK10-20) |
|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M N S | P M N S | P M N S | P M N S |
| 1.0 | 20° | 5° | 143SF-10/3 | | ● | ● | ● | ● |

R

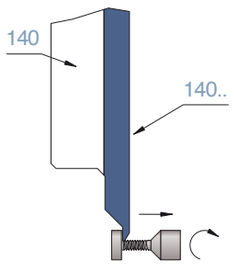
1XX-XX-B

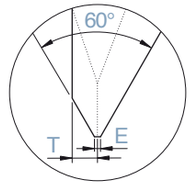


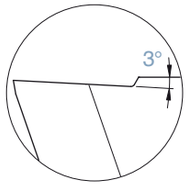
Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04







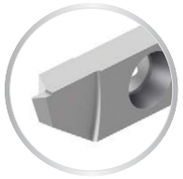




Filetageàdroite
sens rotation machine M3

RechtgewindeDrehrichtung
der Maschine M3

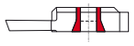
Right-hand thread rotating
machineryM3



| Filetage Gewindedrehen Threading | Pas Steigung Pitch P | T | E 0/-0.01 | Art. N° | KTAF | KN (µK10-20) |
|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S |
| S0.50 | 0.125 | 0.07 | 0.025 | 146SFX3-A60-S0.50-AR | ● | ● |
| S0.60 | 0.150 | 0.09 | 0.030 | 146SFX3-A60-S0.60-AR | ● | ● |
| S0.70 | 0.175 | 0.10 | 0.035 | 146SFX3-A60-S0.70-AR | ● | ● |
| S0.80 | 0.200 | 0.12 | 0.040 | 146SFX3-A60-S0.80-AR | ● | ● |
| S0.90 | 0.225 | 0.13 | 0.045 | 146SFX3-A60-S0.90-AR | ● | ● |
| S1.00 | 0.250 | 0.15 | 0.050 | 146SFX3-A60-S1.00-AR | ● | ● |

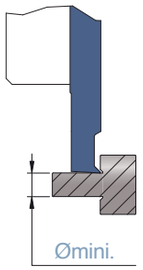
R

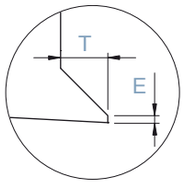
1XX-XX-B

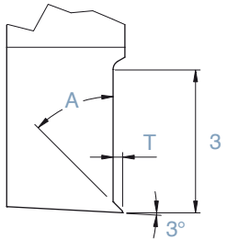


Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04

# Plaquettes piqûre avant
# Fronteinstich WSP
# Front grooving inserts



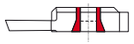






| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R | | | | | |
| E | A | T | Ømini. | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KN (µK10-20) | |
| 0.03 | 46° | 0.2 | 0.3 | 148SF-E03-A46-L20 | ● | ● | ● | ● | ● | |
| 0.05 | 46° | 0.3 | 0.4 | 148SF-E05-A46-L30 | ● | ● | ● | ● | ● | |
| 0.08 | 46° | 0.5 | 0.5 | 148SF-E08-A46-L50 | ● | ● | ● | ● | ● | |

1XX-XX-B

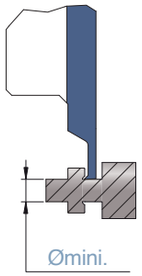


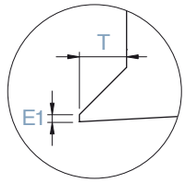
Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04

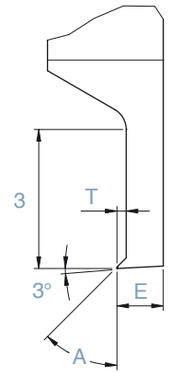


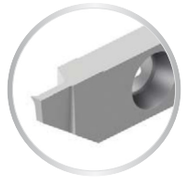


# Plaquettes piqûre arrière
# Rückeinstich WSP
# Back grooving inserts



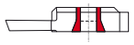



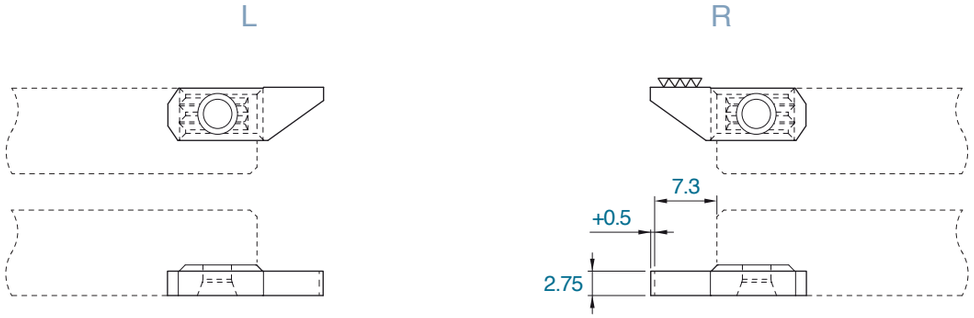



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R | | | | | |
| E1 | A | T | E | Ømini. | Art. N° | KTC | KTC-RE | KTAF | KTAF-RE | KN (µK10-20) |
| 0.03 | 46° | 0.2 | 1.0 | 0.3 | 149SF-E03-A46-L20-B100 | ● | ● | ● | ● | ● |
| 0.05 | 46° | 0.3 | 1.0 | 0.4 | 149SF-E05-A46-L30-B100 | ● | ● | ● | ● | ● |
| 0.08 | 46° | 0.5 | 1.2 | 0.5 | 149SF-E08-A46-L50-B120 | ● | ● | ● | ● | ● |

1XX-XX-B



Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04

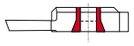





Face de coupe polie
Polierte Schnittfläche
Polished cutting face

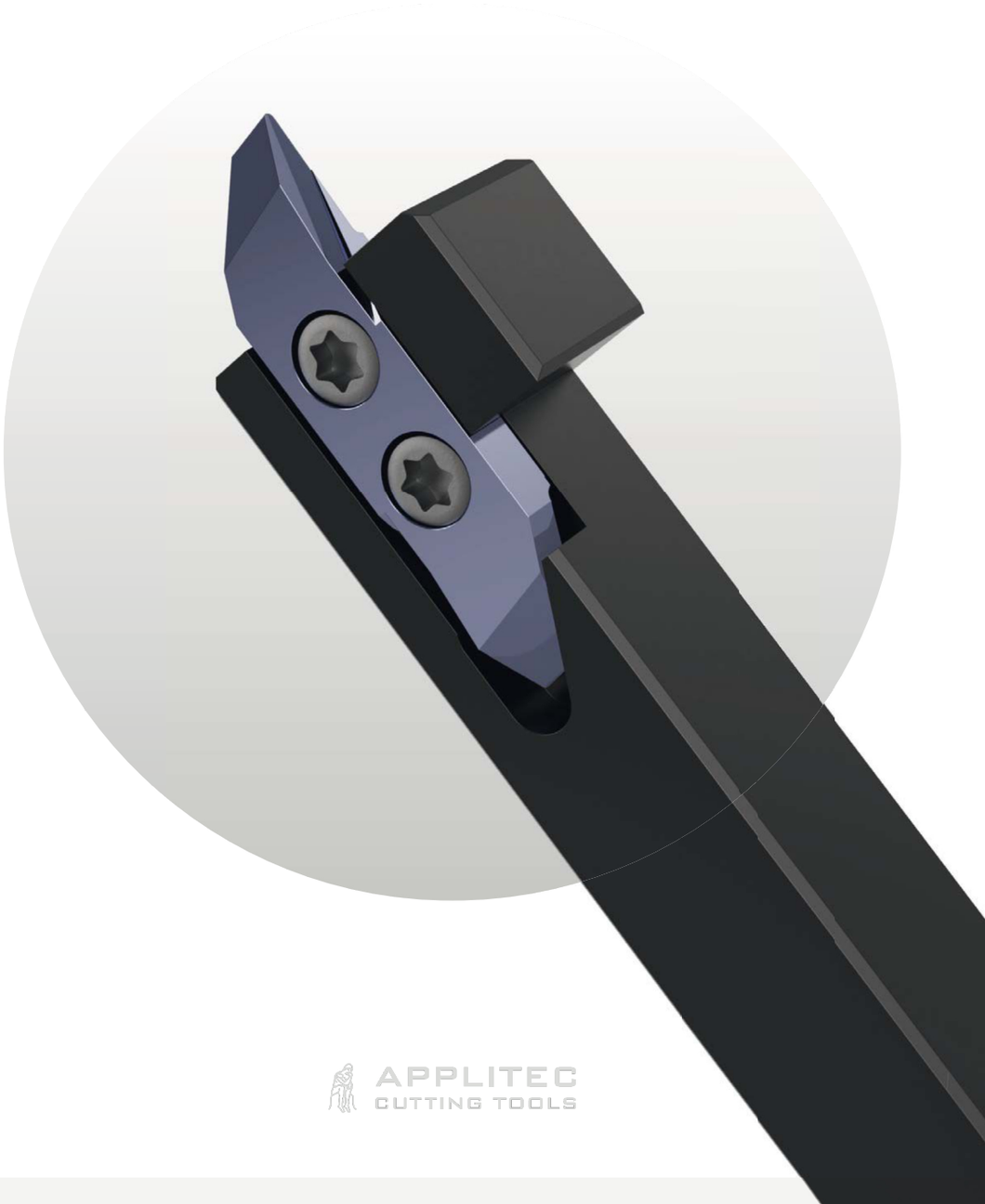
| L | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Art. N° | KTC | KTAF | KSTF | KCR-TF | KN (µk10-20) | Art. N° | KTC | KTAF | KSTF | KCR-TF | KN (µk10-20) |
| 131-ESF | ● | ● | ● | ● | ● | 141-ESF | ● | ● | ● | ● | ● |

| | Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Options | Serrage type B<br>Spannsystem Typ B<br>Clamping system type B | Options |
|---|---|---|---|---|---|
| 130 | 130-8 | V-M3x7-T8 | C-T8 | V-M2.5X7.8-T8 | C-T8 |
| | 130-10 | | | | |
| | 130-12 | | | | |
| | 130RC-8 | V-M3x5.5-T8 | | - | |
| | 130RC-10 | | | | |
| | 130RC-12 | | | | |
| 140 | 140-8 | V-M3x7-T8 | C-T8 | V-M2.5X7.8-T8 | C-T8 |
| | 140-10 | | | | |
| | 140-12 | | | | |
| | 140-8-H10-DUO | | | | |
| | 140-10-H10-DUO | | | | |
| | 140-12-H10-DUO | | | | |




Sur demande pour serrage type B, voir page 4.04
Auf Anfrage für B-Spannsystem, siehe Seite 4.04
On request for B clamping system, see page 4.04

# PRO-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide >5.06

Infos et avantages
Infos und Vorteile
Infos and advantages >5.08

Nuances
Sorten
Grades >5.09

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data >5.11

SERIES 630 / 640

Tournage et gorge

Drehen und Einstechen

Turning and grooving

Porte-outils
Halter
Holders  630 / 640 >5.12

Tournage avant
Vorwärts drehen
Front turning 632 / 642 >5.14

Tournage arrière
Rückwärts drehen
Back turning 633 / 643 >5.17

Fonçage-tournage
Einstechen und drehen
Grooving and turning 634 / 644 >5.25

Chanfreinage
Anfasen
Chamfering 635 / 645 >5.30

Filetage
Gewinde drehen
Threading 636 / 646 >5.32

Plaquettes à rayon
Radius Wendeplatten
Radius inserts 637 / 647 >5.34

Plaquettes ébauches
WSP-Rohlinge
Blank inserts 631-EP / 641-EP >5.36





SERIES 650 / 660

Tronçonnage

Abstechen

Parting off

Porte-outils
Halter
Holders  650 / 660 >5.37

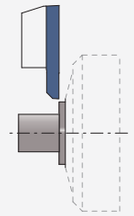
Tronçonnage
Abstechen
Parting off 651 / 661 >5.40

Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line 651R >5.45

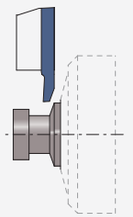
Plaquettes ébauches
WSP-Rohlinge
Blank inserts 651-EP / 661-EP >5.50

Pièces de rechange et accessoires
Ersatzteile und Zubehöre
Spare parts and accessories >5.51

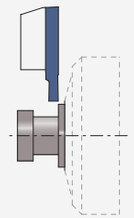
642



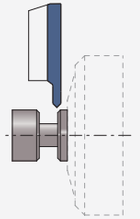
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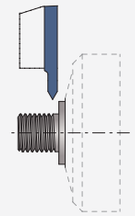
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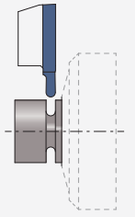
645



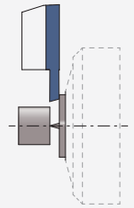
646



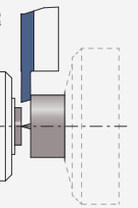
647



661



651R



| 6 | 4 | 4 | X | – | 2.0 | – | R15 | – | TiAlN |
|---|---|---|---|---|---|---|---|---|---|

Dimension
Abmessung
Dimension

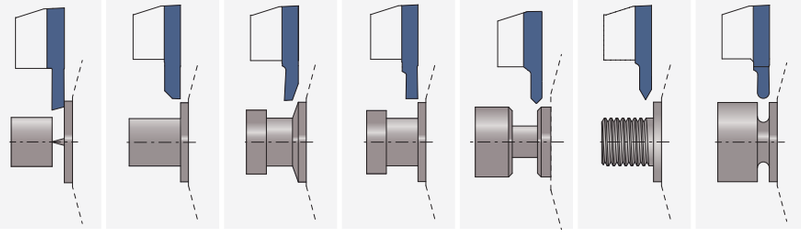
Rayon
Radius
Radius

Nuance
Sorte
Grade

Géométrie de coupe / Schneidgeometrie / Cutting geometry
brise-copeaux / Spanbrecher / chip breaker
particularités / Sondereigenschaften / special features

Géométrie d'usinage
Bearbeitungsgeometrie
Machining geometry

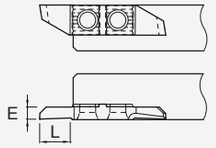
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|



Gamme de produit / Produktserie / Product series
définit la compatibilité des plaquettes avec le porte-outil
bestimmt die WSP und Halter Kompatibilität
shows the inserts and holder compatibility

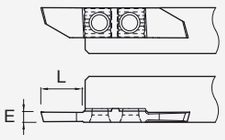
L = 3, 5 (chiffre impair / ungerade Zahl / uneven number)
R = 4, 6 (chiffre pair / gerade Zahl / even number)

| SERIES | L | R |
|---|---|---|
| Tournage et gorge<br>Drehen und Einstechen<br>Turning and grooving | 630 | 640 |



E max = 3 mm
L max = 8 mm

| SERIES | L | R |
|---|---|---|
| Tronçonnage<br>Abstechen<br>Parting off | 650 | 660 |

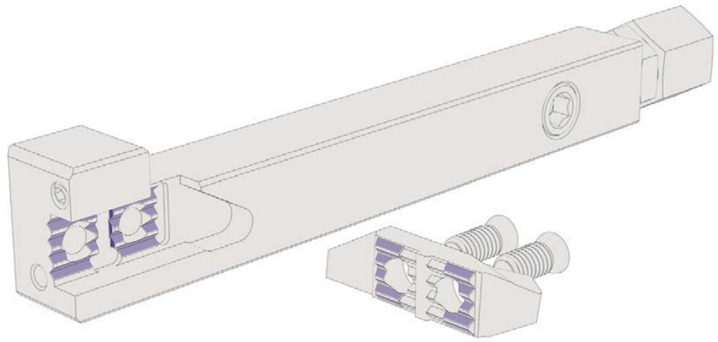


E max = 2.5 mm
L max = 11 mm

Applitec série 600 / Applitec 600 Serie / Applitec 600 series
Système de serrage à denture avec 2 vis de fixation
Spannsystem mit Verzahnung und 2 Schrauben
Teeth clamping system with 2 screws

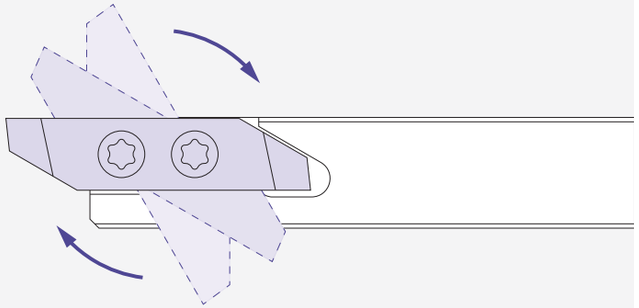
# Rigid!

Système de serrage à denture Applitec avec repositionnement sur la nervure centrale.
Applitec-Verzahnungsspannsystem mit Neupositionierung auf der Zentralrippe.
Applitec toothed clamping system with repositioning on the central rib.



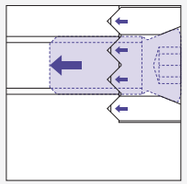
# Ultra precision

Grande précision lors du retournement de la plaquette
Hohe Präzision beim Wenden der Platte
High precision when flipping the insert



# Applitec toothing

Système de serrage en fond de denture
Klemmvorrichtung an der Prothesenbasis
Clamping system at the denture base

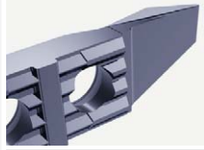






µK20

## TiAlN



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF — F — M — E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

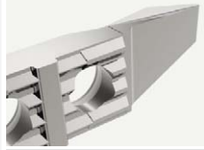
- excellente nuance universelle
- 1er choix pour l'usinage des aciers, aciers inoxydables et alliages de titane
- très bonne résistance à la température

- beste Universalsorte
- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bestens geeignet
- sehr gute Warmfestigkeit

- best universal grade
- first choice for steel, stainless steel and titanium alloys machining
- very good heat resistance

µK20

## N



K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

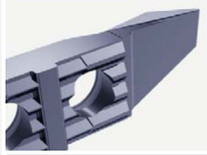
- nuance micro-grain tenace
- supporte les coupes interrompues et autres conditions d'usinage défavorables

- zähe Feinkornsorte
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen

- tough micro-grain grade
- suitable for interrupted cut and other unfavourable machining conditions

µK10

## HTA



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★★
S ★★★★★

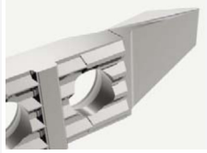
- nuance très résistante à l'usure
- pour l'usinage en finition dans des conditions favorables des aciers, aciers inoxydables et alliages de titane

- sehr verschleissfeste Sorte
- für die Feinbearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bei guten Bearbeitungsbedingungen

- very wear resistant grade
- for light machining of steel, stainless steel and titanium alloys under favourable machining conditions

µK10

## HN



K10

Non revêtu
Unbeschichtet
Uncoated

P ★
M ★
N ★★★
S ★★★

- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du titane faiblement allié
- déconseillé en cas de coupe interrompue et autres conditions d'usinage défavorables

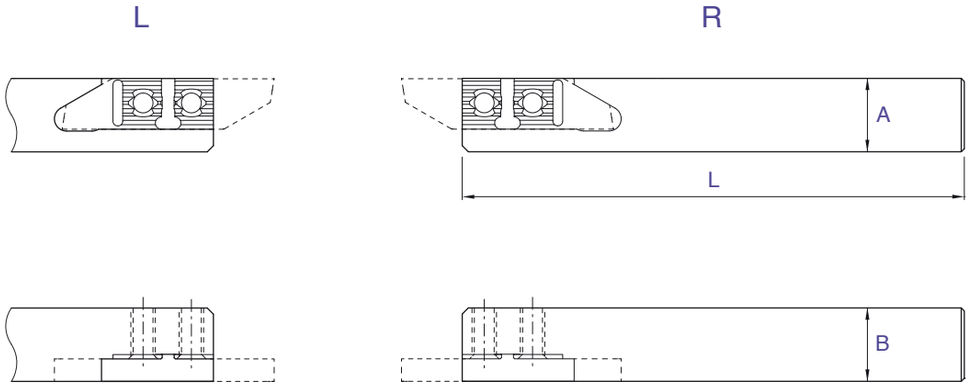
- verschleissfeste Feinkornsorte
- für die Bearbeitung von niedrig legiertem Titan empfehlenswert
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen nicht geeignet

- wear resistant micro-grain grade
- suitable for the machining of low alloyed titanium
- not suitable for interrupted cut and other unfavourable machining conditions





| Matière<br>Werkstoff<br>Material | | Tournage<br>Drehen<br>Turning 630/640 | | | Tronçonnage<br>Abstechen<br>Parting off 650/660 | | |
|---|---|---|---|---|---|---|---|
| | | VC<br>(m/min) | Prof. depasse<br>Schnitttiefe<br>Depth of cut<br>(mm) | Avance<br>Vorschub<br>Feed<br>(mm/U) | VC<br>(m/min) | Largeur decoupe<br>Abstechbreite<br>Cuttingwidth<br>(mm) | Avance<br>Vorschub<br>Feed<br>(mm/U) |
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 120 - 200 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 | 80 - 150 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.08<br>0.03 - 0.15 |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 80 - 160 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 | 70 - 120 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.06<br>0.03 - 0.12 |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 60 - 120 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.10<br>0.05 - 0.20 | 60 - 100 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.05<br>0.03 - 0.10 |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 50 - 100 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 | 40 - 80 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.04<br>0.03 - 0.08 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | M | 60 - 120 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 | 60 - 100 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.04<br>0.03 - 0.08 |
| Aluminium Si <12% | N | 200 - 1000 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 | 180 - 400 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Aluminium Si >12% | N | 180 - 800 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 | 150 - 300 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 500 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.35 | 100 - 300 | 0.50 - 1.50<br>1.50 - 2 .50 | 0.01 - 0.10<br>0.03 - 0.20 |
| Titane<br>Titan<br>Titanium | S | 30 - 70 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.08<br>0.05 - 0.15 | 30 - 50 | 0.50 - 1.50<br>1.50 - 2.50 | 0.01 - 0.03<br>0.03 - 0.06 |



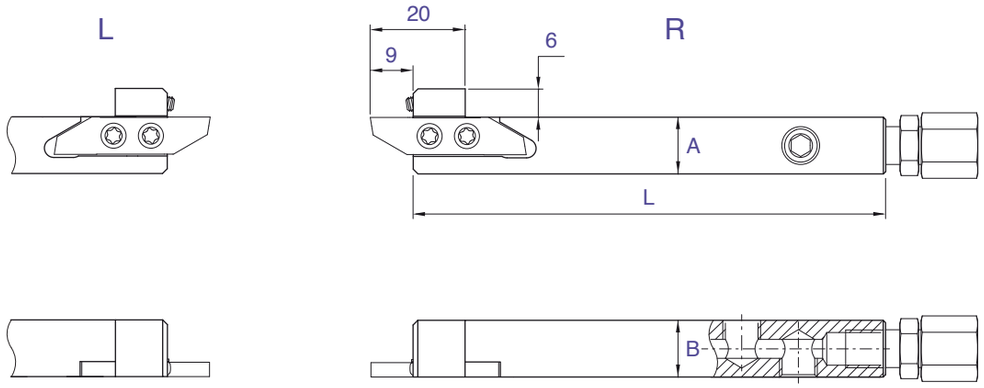



| A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|
| 8 x 8 | 115 | 630-8 | 640-8 |
| 10 x 10 | 115 | 630-10 | 640-10 |
| 10 x 10 | 50 | 630-10-50 | 640-10-50 |
| 12 x 12 | 130 | 630-12 | 640-12 |
| 12 x 12 | 90 | 630-12-90 | 640-12-90 |
| 12.7 x 12.7 | 130 | 630-12.7 | 640-12.7 |
| 16 x 16 | 130 | 630-16 | 640-16 |
| 16 x 16 | 75 | 630-16-75 | 640-16-75 |
| 20 x 20 | 120 | 630-20 | 640-20 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.



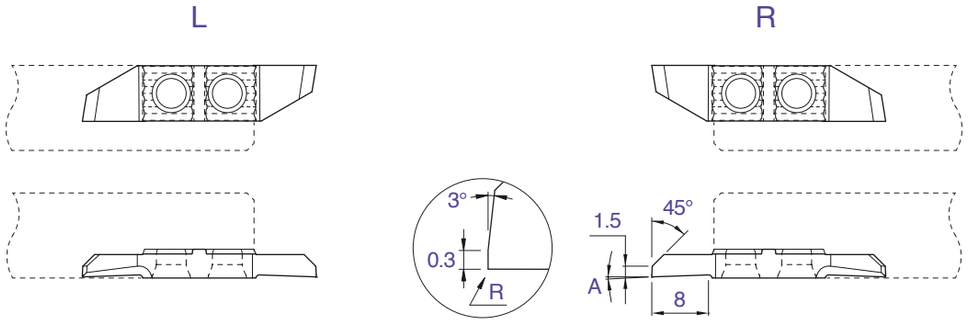







| A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|
| 10 x 12 | 100 | 630-1012-JET | 640-1012-JET |
| 12 x 12 | 100 | 630-12-JET | 640-12-JET |
| 12.7 x 12.7 | 100 | 630-12.7-JET | 640-12.7-JET |
| 16 x 16 | 100 | 630-16-JET | 640-16-JET |
| 20 x 20 | 100 | 630-20-JET | 640-20-JET |

Chaque support est livré avec vis, raccord droit et buse d'arrosage Ø1.5 mm. Les clés sont à commander séparément.
Jeder Halter wird mit Spannschraube(n), gerader Kühlmittelanschluss und Kühlmitteldüse Ø1.5 mm geliefert. Die Schlüssel sind separat zu bestellen.
Screw(s), straight connector and coolant nozzle Ø1.5 mm are included with each tool holder. The keys must be ordered separately.

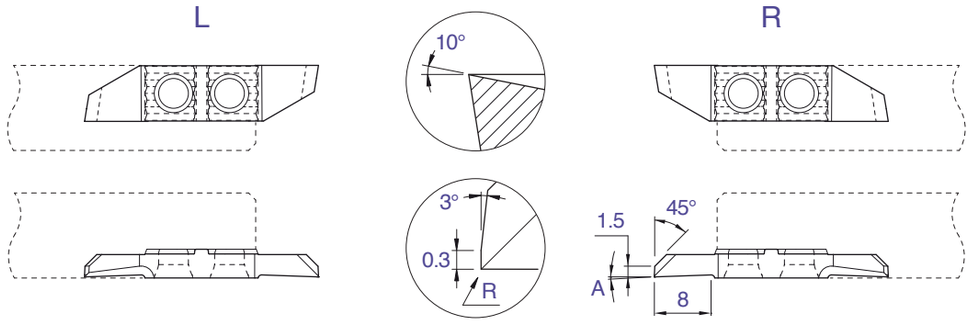


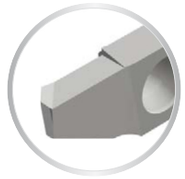



| A | R | L Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | R Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 0 | 632 | ● | ● | | | 642 | ● | ● | | |
| 0° | 0.08 | – | | | | | 642-R08 | ● | ● | | |
| 0° | 0.15 | – | | | | | 642-R15 | ● | ● | ● | |
| 2° | 0 | 632-2° | ● | ● | | | 642-2° | ● | ● | ● | |
| 2° | 0.08 | – | | | | | 642-2°-R08 | ● | ● | | |
| 2° | 0.15 | – | | | | | 642-2°-R15 | ● | ● | | |



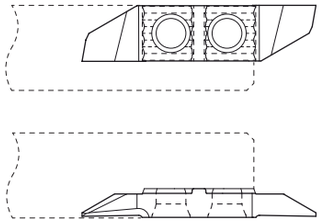




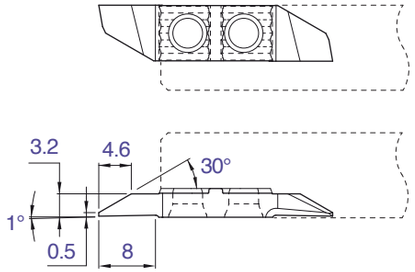



| A | R | L Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | R Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 0 | 632X10 | ● | ● | | | 642X10 | ● | ● | | |
| 0° | 0.08 | – | | | | | 642X10-R08 | ● | ● | | |
| 0° | 0.15 | – | | | | | 642X10-R15 | ● | ● | | |
| 2° | 0 | 632X10-2° | ● | ● | | | 642X10-2° | ● | ● | | |
| 2° | 0.08 | – | | | | | 642X10-2°-R08 | ● | ● | | ● |
| 2° | 0.15 | – | | | | | 642X10-2°-R15 | ● | ● | ● | ● |

L



R

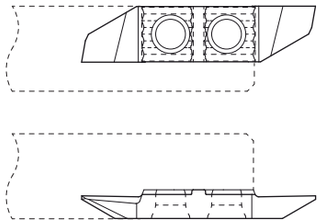




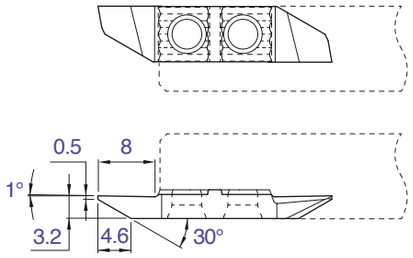

Tournage avant
Vorwärts drehen
Front turning

| L | | | | | R | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Art. N° | P M N S | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | P M N S | TiAlN | N (µk20) | HTA | HN (µk10) |
| 632S05 | | ● | ● | | | 642S05 | | ● | ● | ● | ● |

L



R



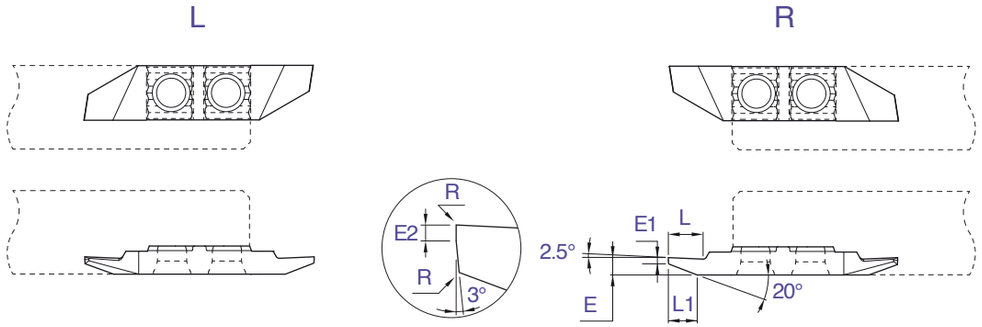



Tournage arrière
Rückwärts drehen
Back turning

| L | | | | | R | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Art. N° | P M N S | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | P M N S | TiAlN | N (µk20) | HTA | HN (µk10) |
| 633S05 | | ● | ● | | | 643S05 | | ● | ● | | ● |

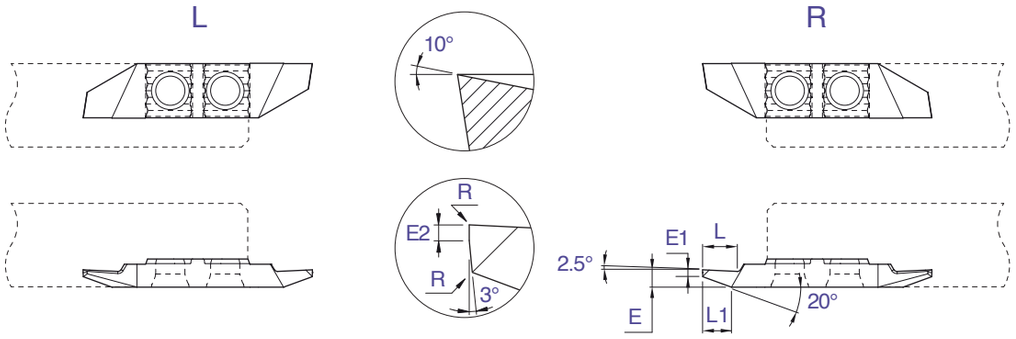
Tournage arrière
Rückwärts drehen
Back turning





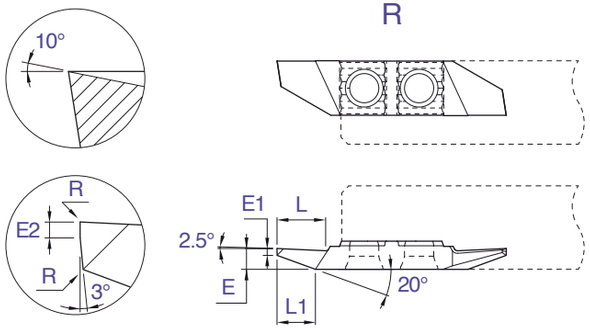



| L | | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E1 | E2 | L | L1 | E | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
| 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0 | 633-0.5 | ● | ● | | | 643-0.5 | ● | ● | | ● |
| 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0.08 | - | | | | | 643-0.5-R08 | ● | ● | | |
| 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0 | - | | | | | 643-0.8 | ● | ● | | |
| 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0.08 | - | | | | | 643-0.8-R08 | ● | ● | | |
| 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0 | - | | | | | 643-1.0 | ● | ● | | |
| 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0.08 | - | | | | | 643-1.0-R08 | ● | ● | | |
| 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0 | - | | | | | 643-1.5 | ● | ● | | |
| 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0.08 | - | | | | | 643-1.5-R08 | ● | ● | | |

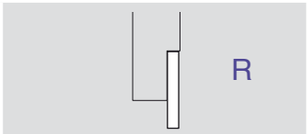





| L | | | | | | | R | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E1 | E2 | L | L1 | E | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
| 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0 | 633X10-0.5 | ● | ● | | | 643X10-0.5 | ● | ● | ● | ● |
| 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0.08 | - | | | | | 643X10-0.5-R08 | ● | ● | | |
| 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0 | - | | | | | 643X10-0.8 | ● | ● | | |
| 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0.08 | - | | | | | 643X10-0.8-R08 | ● | ● | | |
| 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0 | - | | | | | 643X10-1.0 | ● | ● | | |
| 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0.08 | - | | | | | 643X10-1.0-R08 | ● | ● | | |
| 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0 | - | | | | | 643X10-1.5 | ● | ● | | |
| 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0.08 | - | | | | | 643X10-1.5-R08 | ● | ● | | |



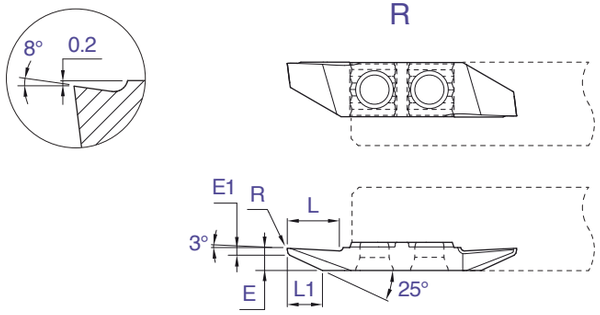


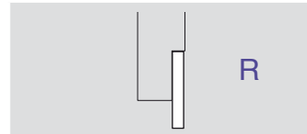

| E1 | E2 | L | L1 | E | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 0.4 | 7 | 5.5 | 3.0 | 0 | 643X10S-1.0 | ● | ● | | |
| 1.0 | 0.4 | 7 | 5.5 | 3.0 | 0.08 | 643X10S-1.0-R08 | ● | ● | | |



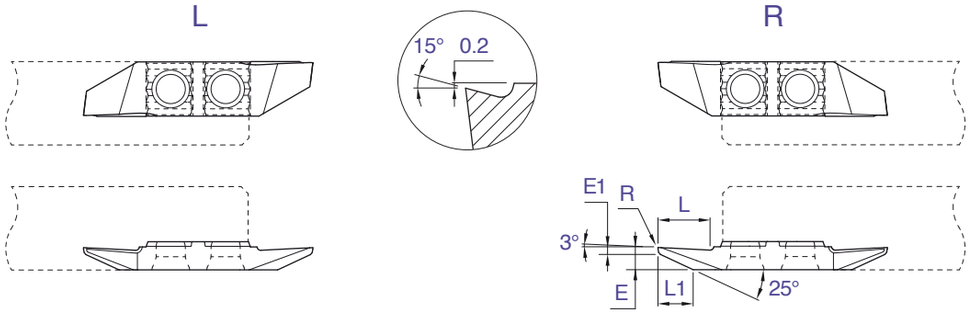







| E1 | L | L1 | E | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 7.5 | 5.0 | 3.2 | 0 | 643VX8 | ● | ● | | |
| 1.0 | 7.5 | 5.0 | 3.2 | 0.08 | 643VX8-R08 | ● | ● | | |



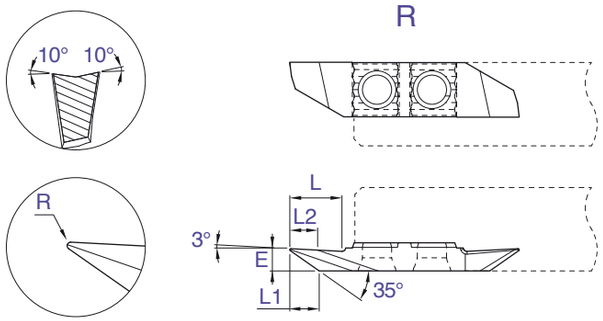



| L | R |
|---|---|

| E1 | L | L1 | E | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.6 | 7.5 | 5.2 | 3.2 | 0 | 633VX15 | ● | ● | | | 643VX15 | ● | ● | | ● |
| 0.6 | 7.5 | 5.2 | 3.2 | 0.08 | - | | | | | 643VX15-R08 | ● | ● | | |



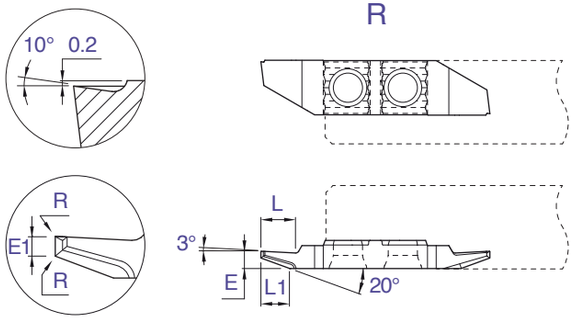






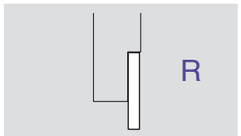

| R |
|---|

| L | L1 | L2 | E | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|
| 7.5 | 4.2 | 4.0 | 3.2 | 0.15 | 643VUX10-R15 | ● | ● | ● | ● |
| 7.5 | 3.8 | 3.8 | 3.2 | 0.35 | 643VUX10-R35 | ● | ● | | |

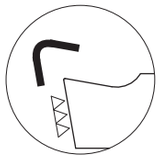





Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control

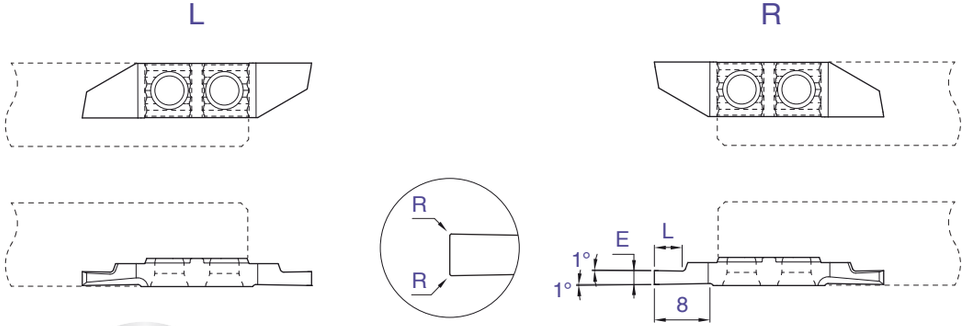



| E1 | L | L1 | E | R | Art. N° | P M N S TiAlN | N N (µk20) |
|---|---|---|---|---|---|---|---|
| 1.0 | 5 | 4 | 2.5 | 0.01 | 643ZX10-1.0 | ● | |
| 1.0 | 5 | 4 | 2.5 | 0.08 | 643ZX10-1.0-R08 | ● | |



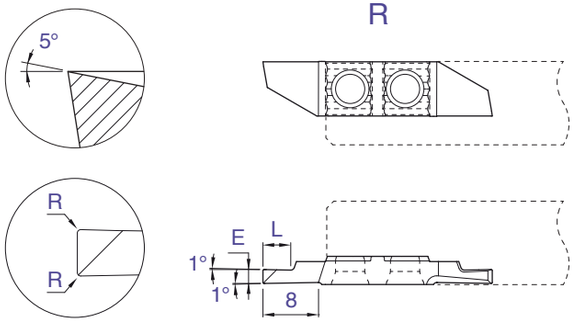
Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U






| E | L | R | Art. N° | P M N S TiAlN | N N (µk20) | P M N S HTA | N N HN (µk10) | Art. N° | P M N S TiAlN | N N (µk20) | P M N S HTA | N N HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | | | | | R | | | |
| 0.5 | 1.5 | 0 | 634-0.5 | ● | ● | | | 644-0.5 | ● | ● | | |
| 0.6 | 1.8 | 0 | - | | | | | 644-0.6 | ● | ● | | |
| 0.75 | 2 | 0 | - | | | | | 644-0.75 | ● | ● | | ● |
| 0.8 | 2 | 0 | 634-0.8 | ● | ● | | | 644-0.8 | ● | ● | | |
| 0.9 | 2.5 | 0 | - | | | | | 644-0.9 | ● | ● | | |
| 0.95 | 3 | 0 | - | | | | | 644-0.95 | ● | ● | | |
| 1.0 | 2.5 | 0 | 634-1.0 | ● | ● | | | 644-1.0 | ● | ● | | ● |
| 1.0 | 2.5 | 0.08 | - | | | | | 644-1.0-R08 | ● | ● | ● | ● |
| 1.2 | 3 | 0 | 634-1.2 | ● | ● | | | 644-1.2 | ● | ● | | |
| 1.2 | 3 | 0.08 | - | | | | | 644-1.2-R08 | ● | ● | | ● |
| 1.5 | 3 | 0 | 634-1.5 | ● | ● | | | 644-1.5 | ● | ● | ● | ● |
| 1.5 | 3 | 0.08 | - | | | | | 644-1.5-R08 | ● | ● | ● | ● |
| 1.5 | 3 | 0.15 | - | | | | | 644-1.5-R15 | ● | ● | | |
| 1.8 | 4 | 0 | - | | | | | 644-1.8 | ● | ● | ● | |
| 2.0 | 4 | 0 | 634-2.0 | ● | ● | | | 644-2.0 | ● | ● | | |
| 2.0 | 4 | 0.08 | - | | | | | 644-2.0-R08 | ● | ● | | ● |
| 2.0 | 4 | 0.15 | - | | | | | 644-2.0-R15 | ● | ● | | ● |
| 2.5 | 6 | 0 | 634-2.5 | ● | ● | | | 644-2.5 | ● | ● | | |
| 2.5 | 6 | 0.08 | - | | | | | 644-2.5-R08 | ● | ● | | |
| 2.5 | 6 | 0.15 | - | | | | | 644-2.5-R15 | ● | ● | | |
| 3 | 6 | 0 | 634-3.0 | ● | ● | | | 644-3.0 | ● | ● | ● | |
| 3 | 6 | 0.08 | - | | | | | 644-3.0-R08 | ● | ● | ● | ● |
| 3 | 6 | 0.15 | - | | | | | 644-3.0-R15 | ● | ● | | |








Arête de coupe vive
Scharfe Schneidkante
Sharp edge



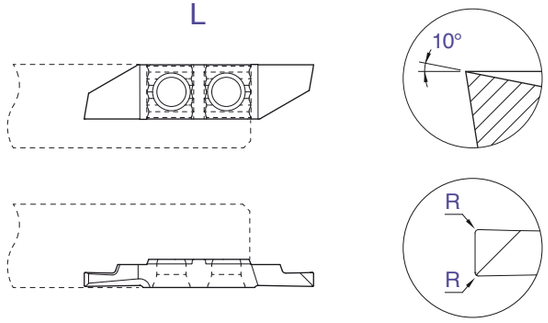
Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

| | | | | R | | | |
|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
| 1.5 | 3 | 0.08 | 644X5-1.5-R08 | ● | ● | | |
| 2 | 4 | 0.08 | 644X5-2.0-R08 | ● | ● | | |
| 2 | 4 | 0.15 | 644X5-2.0-R15 | ● | ● | | |
| 2.5 | 6 | 0.08 | 644X5-2.5-R08 | ● | ● | | |
| 2.5 | 6 | 0.15 | 644X5-2.5-R15 | ● | ● | | |
| 3 | 6 | 0.08 | 644X5-3.0-R08 | ● | ● | | |
| 3 | 6 | 0.15 | 644X5-3.0-R15 | ● | ● | | |
| 1.5 | 3 | 0.08 | 644X5-1.5-R08-EP | ● | ● | | |
| 2 | 4 | 0.08 | 644X5-2.0-R08-EP | ● | ● | | |
| 2 | 4 | 0.15 | 644X5-2.0-R15-EP | ● | ● | | |
| 2.5 | 6 | 0.08 | 644X5-2.5-R08-EP | ● | ● | | |
| 2.5 | 6 | 0.15 | 644X5-2.5-R15-EP | ● | ● | | |
| 3 | 6 | 0.08 | 644X5-3.0-R08-EP | ● | ● | | |
| 3 | 6 | 0.15 | 644X5-3.0-R15-EP | ● | ● | | |

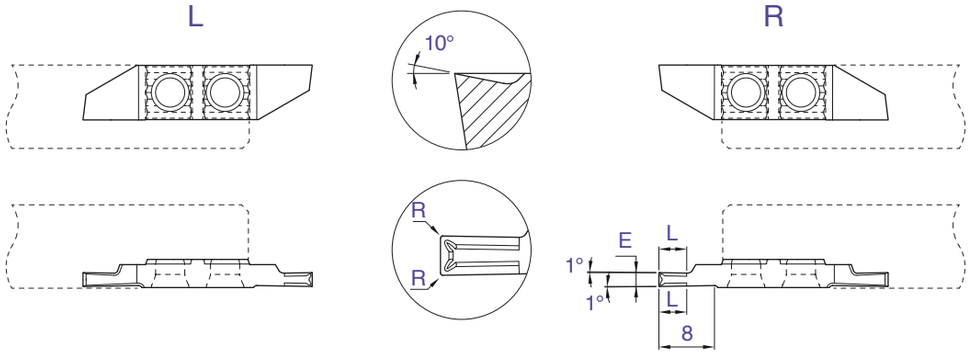









| | | | L | | | | R | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
| 0.8 | 2 | 0 | 634X10-0.8 | ● | ● | | | 644X10-0.8 | ● | ● | ● | ● |
| 1.0 | 2.5 | 0 | 634X10-1.0 | ● | ● | | | 644X10-1.0 | ● | ● | | |
| 1.0 | 2.5 | 0.08 | 634X10-1.0-R08 | ● | ● | | | 644X10-1.0-R08 | ● | ● | | |
| 1.2 | 3 | 0 | - | | | | | 644X10-1.2 | ● | ● | | ● |
| 1.2 | 3 | 0.08 | - | | | | | 644X10-1.2-R08 | ● | ● | | |
| 1.5 | 3 | 0 | 634X10-1.5 | ● | ● | | | 644X10-1.5 | ● | ● | | ● |
| 1.5 | 3 | 0.08 | 634X10-1.5-R08 | ● | ● | | | 644X10-1.5-R08 | ● | ● | | ● |
| 1.5 | 3 | 0.15 | 634X10-1.5-R15 | ● | ● | | | 644X10-1.5-R15 | ● | ● | | |
| 1.8 | 4 | 0 | - | | | | | 644X10-1.8 | ● | ● | | |
| 2 | 4 | 0 | 634X10-2.0 | ● | ● | | | 644X10-2.0 | ● | ● | | |
| 2 | 4 | 0.08 | 634X10-2.0-R08 | ● | ● | | | 644X10-2.0-R08 | ● | ● | | |
| 2 | 4 | 0.15 | 634X10-2.0-R15 | ● | ● | | | 644X10-2.0-R15 | ● | ● | | |
| 2.5 | 6 | 0 | 634X10-2.5 | ● | ● | | | 644X10-2.5 | ● | ● | | |
| 2.5 | 6 | 0.08 | 634X10-2.5-R08 | ● | ● | | | 644X10-2.5-R08 | ● | ● | | |
| 2.5 | 6 | 0.15 | 634X10-2.5-R15 | ● | ● | | | 644X10-2.5-R15 | ● | ● | | |
| 3 | 6 | 0 | 634X10-3.0 | ● | ● | | | 644X10-3.0 | ● | ● | | |
| 3 | 6 | 0.08 | 634X10-3.0-R08 | ● | ● | | | 644X10-3.0-R08 | ● | ● | | |
| 3 | 6 | 0.15 | 634X10-3.0-R15 | ● | ● | | | 644X10-3.0-R15 | ● | ● | | |






Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control

| E | L | R | L Art. N° | TiAlN | N (µK20) | R Art. N° | TiAlN | N (µK20) |
|---|---|---|---|---|---|---|---|---|
| 1.0 | 2.5 | 0.01 | 634ZXB10-1.0 | ● | | 644ZXB10-1.0 | ● | |
| 1.5 | 4 | 0.01 | 634ZXB10-1.5 | ● | | 644ZXB10-1.5 | ● | |
| 1.5 | 4 | 0.08 | 634ZXB10-1.5-R08 | ● | | 644ZXB10-1.5-R08 | ● | |
| 2.0 | 4 | 0.01 | 634ZXB10-2.0 | ● | | 644ZXB10-2.0 | ● | |
| 2.0 | 4 | 0.08 | 634ZXB10-2.0-R08 | ● | | 644ZXB10-2.0-R08 | ● | |
| 2.0 | 4 | 0.15 | 634ZXB10-2.0-R15 | ● | | 644ZXB10-2.0-R15 | ● | |
| 2.5 | 5 | 0.08 | 634ZXB10-2.5-R08 | ● | | 644ZXB10-2.5-R08 | ● | |
| 2.5 | 5 | 0.15 | 634ZXB10-2.5-R15 | ● | | 644ZXB10-2.5-R15 | ● | |
| 3.0 | 6 | 0.08 | 634ZXB10-3.0-R08 | ● | | 644ZXB10-3.0-R08 | ● | |
| 3.0 | 6 | 0.15 | 634ZXB10-3.0-R15 | ● | | 644ZXB10-3.0-R15 | ● | |
| 3.0 | 6 | 0.35 | 634ZXB10-3.0-R35 | ● | | 644ZXB10-3.0-R35 | ● | |

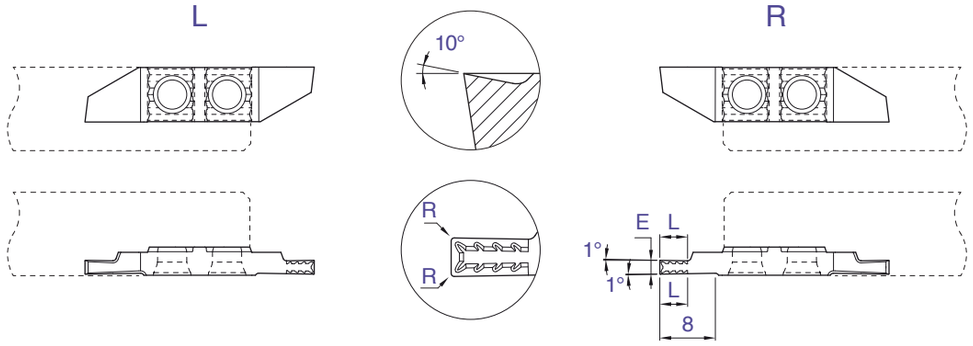


Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U









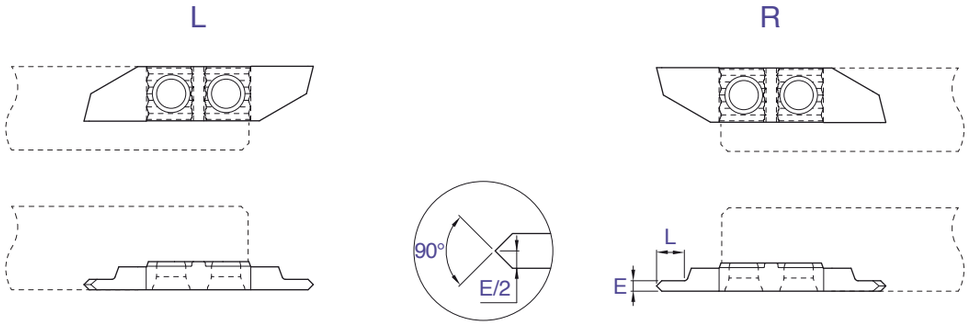

Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control

| E | L | R | L Art. N° | TiAlN | N (µK20) | R Art. N° | TiAlN | N (µK20) |
|---|---|---|---|---|---|---|---|---|
| 1.0 | 2.5 | 0.01 | 634ZXT10-1.0 | ● | | 644ZXT10-1.0 | ● | |
| 1.5 | 4 | 0.01 | 634ZXT10-1.5 | ● | | 644ZXT10-1.5 | ● | |
| 1.5 | 4 | 0.08 | 634ZXT10-1.5-R08 | ● | | 644ZXT10-1.5-R08 | ● | |
| 2.0 | 4 | 0.01 | 634ZXT10-2.0 | ● | | 644ZXT10-2.0 | ● | |
| 2.0 | 4 | 0.08 | 634ZXT10-2.0-R08 | ● | | 644ZXT10-2.0-R08 | ● | |
| 2.0 | 4 | 0.15 | 634ZXT10-2.0-R15 | ● | | 644ZXT10-2.0-R15 | ● | |
| 2.5 | 5 | 0.08 | 634ZXT10-2.5-R08 | ● | | 644ZXT10-2.5-R08 | ● | |
| 2.5 | 5 | 0.15 | 634ZXT10-2.5-R15 | ● | | 644ZXT10-2.5-R15 | ● | |
| 3.0 | 6 | 0.08 | 634ZXT10-3.0-R08 | ● | | 644ZXT10-3.0-R08 | ● | |
| 3.0 | 6 | 0.15 | 634ZXT10-3.0-R15 | ● | | 644ZXT10-3.0-R15 | ● | |
| 3.0 | 6 | 0.35 | - | | | 644ZXT10-3.0-R35 | ● | |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02mm/U

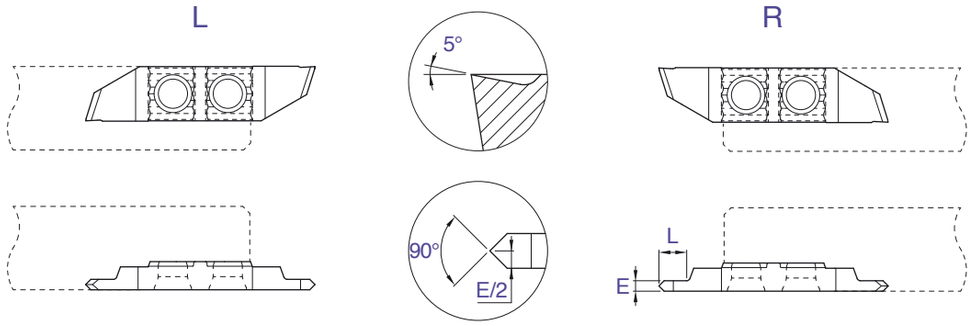





| E | L | L Art. N° | P M N S | TiAlN | N (µk20) | R Art. N° | P M N S | TiAlN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 4 | 635-90-1.5 | | ● | ● | 645-90-1.5 | | ● | ● |

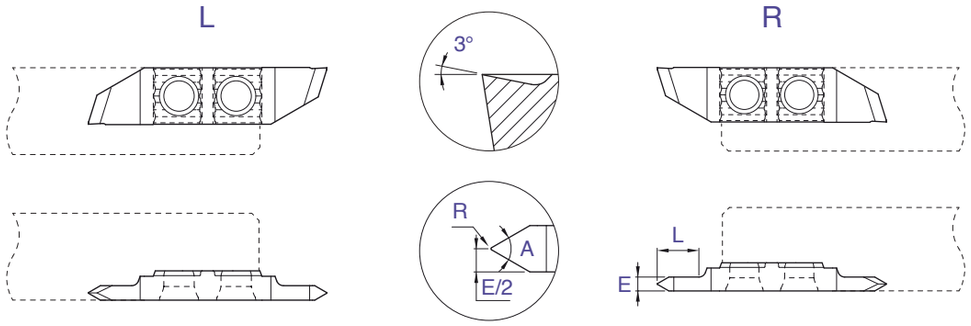









| E | L | L Art. N° | P M N S | TiAlN | N (µk20) | R Art. N° | P M N S | TiAlN | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 4 | 635X5-90-1.5 | | ● | ● | 645X5-90-1.5 | | ● | ● |



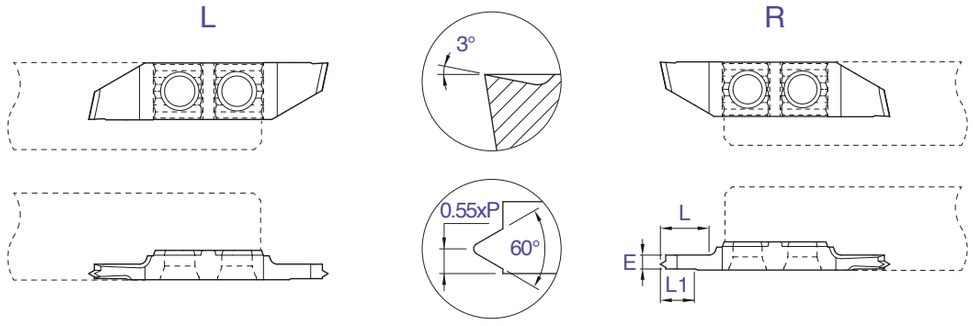



Profil partiel
Teilprofil
Partial profile

| L | | | | | | | R | | |
|---|---|---|---|---|---|---|---|---|---|
| A | E | L | R | Art. N° | TiAlN | N (µk20) | Art. N° | TiAlN | N (µk20) |
| 55° | 1.5 | 4 | 0 | 636X3-55-1.5 | ● | ● | 646X3-55-1.5 | ● | ● |
| 55° | 2.0 | 6 | 0.03 | 636X3-55-2.0-R03 | ● | ● | 646X3-55-2.0-R03 | ● | ● |
| 60° | 1.5 | 4 | 0 | 636X3-60-1.5 | ● | ● | 646X3-60-1.5 | ● | ● |
| 60° | 2.0 | 6 | 0.03 | 636X3-60-2.0-R03 | ● | ● | 646X3-60-2.0-R03 | ● | ● |
| 60° | 2.0 | 6 | 0.06 | 636X3-60-2.0-R06 | ● | ● | 646X3-60-2.0-R06 | ● | ● |
| 60° | 3.0 | 8 | 0.06 | 636X3-60-3.0-R06 | ● | ● | 646X3-60-3.0-R06 | ● | ● |
| 60° | 3.0 | 8 | 0.12 | 636X3-60-3.0-R12 | ● | ● | 646X3-60-3.0-R12 | ● | ● |



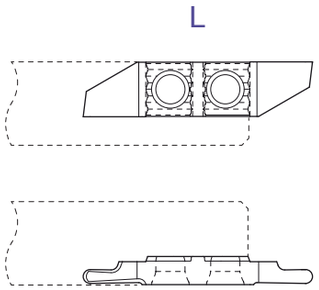


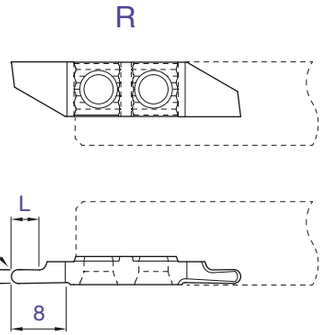





Profil complet métrique
Metrisches Vollprofil
Metric full profile

| L | | | | | | R | | |
|---|---|---|---|---|---|---|---|---|
| E | L | L1 | Pas Steigung Pitch P | Art. N° | TiAlN | N (µk20) | Art. N° | TiAlN | N (µk20) |
| 1.0 | 3 | 3 | 0.25 | 636X3-M-0.25 | ● | ● | 646X3-M-0.25 | ● | ● |
| 1.0 | 3 | 3 | 0.30 | 636X3-M-0.30 | ● | ● | 646X3-M-0.30 | ● | ● |
| 1.0 | 3 | 3 | 0.35 | 636X3-M-0.35 | ● | ● | 646X3-M-0.35 | ● | ● |
| 1.0 | 3 | 3 | 0.40 | 636X3-M-0.40 | ● | ● | 646X3-M-0.40 | ● | ● |
| 1.0 | 3 | 3 | 0.45 | 636X3-M-0.45 | ● | ● | 646X3-M-0.45 | ● | ● |
| 1.0 | 3 | 3 | 0.50 | 636X3-M-0.50 | ● | ● | 646X3-M-0.50 | ● | ● |
| 1.5 | 5 | 5 | 0.60 | 636X3-M-0.60 | ● | ● | 646X3-M-0.60 | ● | ● |
| 1.5 | 5 | 5 | 0.70 | 636X3-M-0.70 | ● | ● | 646X3-M-0.70 | ● | ● |
| 1.5 | 5 | 5 | 0.75 | 636X3-M-0.75 | ● | ● | 646X3-M-0.75 | ● | ● |
| 1.5 | 5 | 5 | 0.80 | 636X3-M-0.80 | ● | ● | 646X3-M-0.80 | ● | ● |
| 2.0 | 7 | 5 | 1.00 | 636X3-M-1.00 | ● | ● | 646X3-M-1.00 | ● | ● |
| 2.0 | 7 | 5 | 1.25 | 636X3-M-1.25 | ● | ● | 646X3-M-1.25 | ● | ● |
| 2.0 | 7 | 5 | 1.50 | 636X3-M-1.50 | ● | ● | 646X3-M-1.50 | ● | ● |



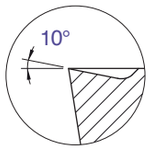



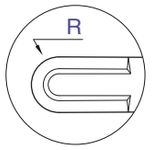


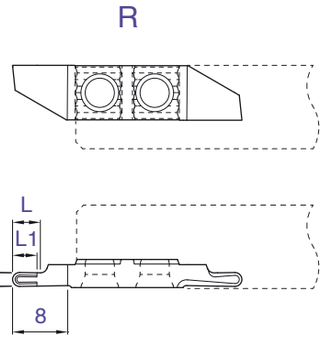

| R | L | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | | | | | R | | | | |
| 0.25 | 1.5 | - | | | | | 647-R0.25 | ● | ● | | |
| 0.4 | 2 | - | | | | | 647-R0.4 | ● | ● | | |
| 0.5 | 2.5 | 637-R0.5 | ● | ● | | | 647-R0.5 | ● | ● | ● | ● |
| 0.6 | 2.5 | - | | | | | 647-R0.6 | ● | ● | | |
| 0.75 | 3 | - | | | | | 647-R0.75 | ● | ● | | |
| 0.8 | 3 | - | | | | | 647-R0.8 | ● | ● | | |
| 1.0 | 4 | 637-R1.0 | ● | ● | | | 647-R1.0 | ● | ● | | |
| 1.5 | 6 | - | | | | | 647-R1.5 | ● | ● | | |










Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control

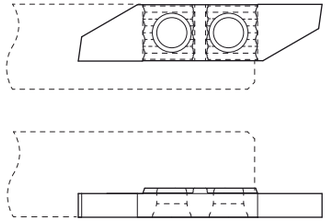
| R | L | L1 | Art. N° | TiAlN | N (µk20) |
|---|---|---|---|---|---|
| | | | R | | |
| 1.0 | 4 | 3.5 | 647ZX10-R1.0 | ● | |
| 1.5 | 6 | 4 | 647ZX10-R1.5 | ● | |



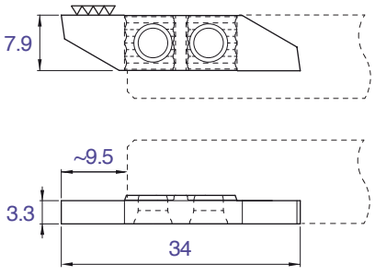
Arête de coupe honée
Gehonte Schneidkante
Honed edge

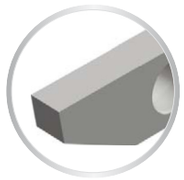
f min: 0.02mm/U

L



R

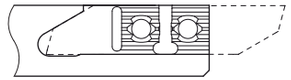


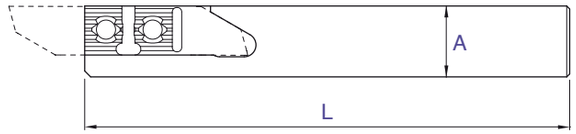
Face de coupe polie
Polierte Schneidfläche
Polished cutting face

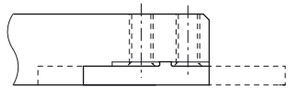
| L | | | | | R | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
| 631-EP | ● | ● | ● | ● | 641-EP | ● | ● | ● | ● |

L



R





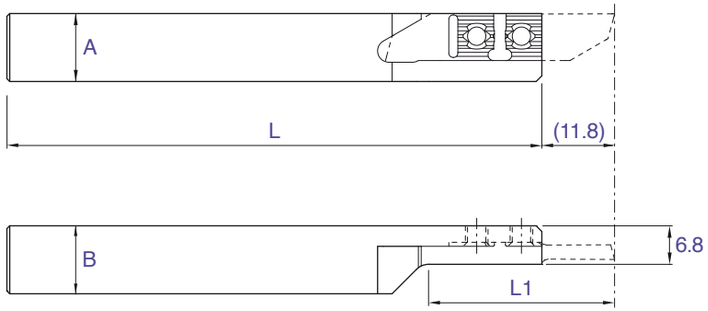


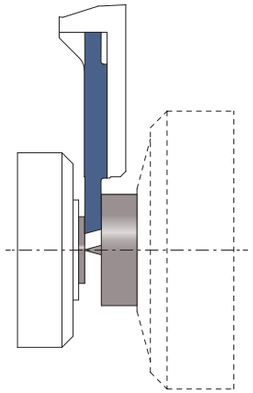

| A x B | L | L | R |
|---|---|---|---|
| | | Art. N° | Art. N° |
| 8 x 8 | 115 | 650-8 | 660-8 |
| 10 x 10 | 115 | 650-10 | 660-10 |
| 10 x 10 | 50 | 650-10-50 | 660-10-50 |
| 12 x 12 | 130 | 650-12 | 660-12 |
| 12 x 12 | 90 | 650-12-90 | 660-12-90 |
| 12.7 x 12.7 | 130 | 650-12.7 | 660-12.7 |
| 16 x 16 | 130 | 650-16 | 660-16 |
| 16 x 16 | 75 | 650-16-75 | 660-16-75 |
| 20 x 20 | 120 | 650-20 | 660-20 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.

Utiliser des plaquettes type 651R
WSP Typ 651R verwenden
Use inserts type 651R

Voir dès page 5.39
Siehe ab Seite 5.39
See from page 5.39



L (R)

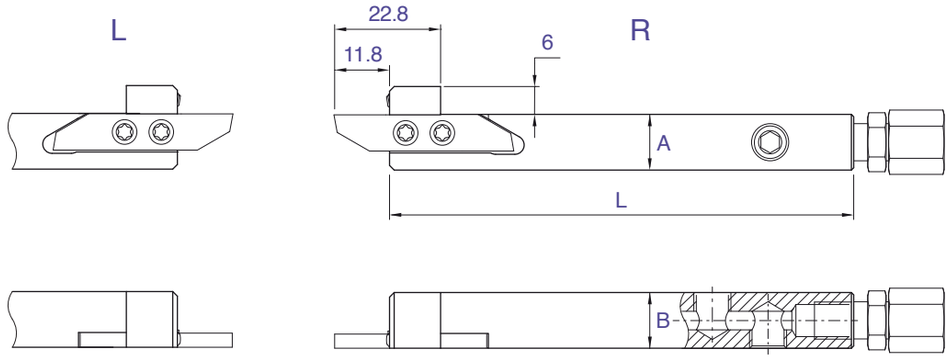
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

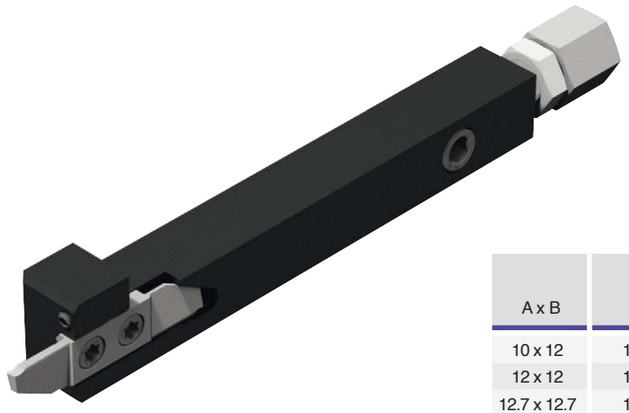
| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 10 x 10 | 115 | 32 | 650RC-10 |
| 12 x 12 | 130 | 32 | 650RC-12 |
| 16 x 16 | 130 | 42 | 650RC-16 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schraubengeliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.





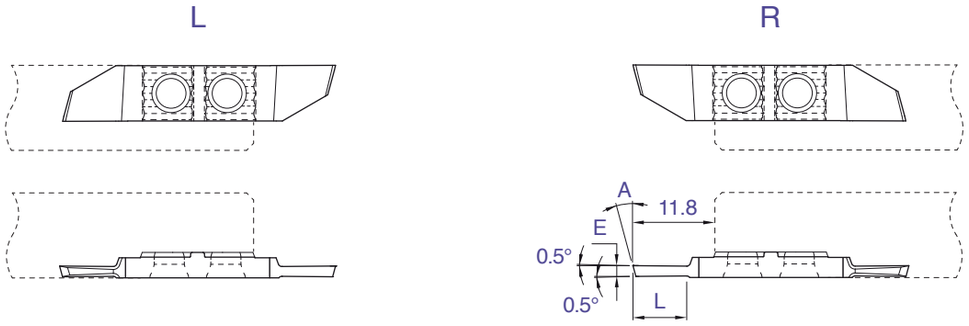


L R

| A x B | L | Art. N° | Art. N° |
|---|---|---|---|
| 10 x 12 | 100 | 650-1012-JET | 660-1012-JET |
| 12 x 12 | 100 | 650-12-JET | 660-12-JET |
| 12.7 x 12.7 | 100 | 650-12.7-JET | 660-12.7-JET |
| 16 x 16 | 100 | 650-16-JET | 660-16-JET |
| 20 x 20 | 100 | 650-20-JET | 660-20-JET |

Chaque support est livré avec vis, raccord droit et buse d'arrosage Ø1.5 mm. Les clés sont à commander séparément.
Jeder Halter wird mit Spannschraube(n), gerader Kühlmittelanschluss und Kühlmitteldüse Ø1.5 mm geliefert. Die Schlüssel sind separat zu bestellen.
Screw(s), straight connector and coolant nozzle Ø1.5 mm are included with each tool holder. The keys must be ordered separately.

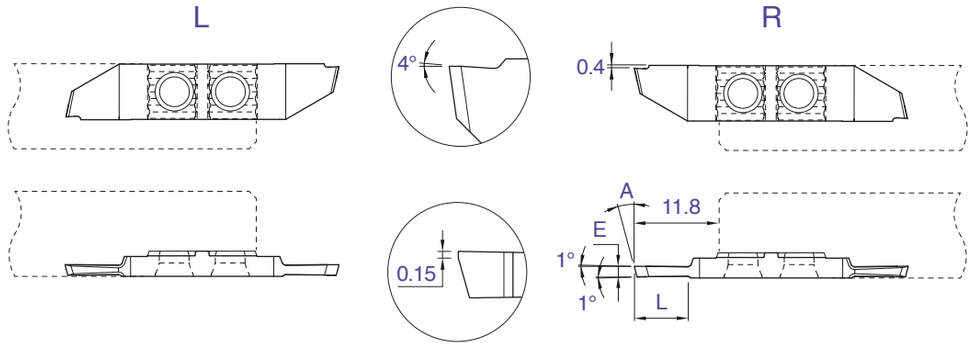





| E | A | L | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | | | | R | | | | |
| 0.8 | 20° | 5 | 651-0.8-20° | ● | ● | | | 661-0.8-20° | ● | ● | ● | ● |
| 1.0 | 15° | 5 | – | | | | | 661-1.0-15° | ● | ● | | |
| 1.0 | 20° | 5 | 651-1.0-20° | ● | ● | | | 661-1.0-20° | ● | ● | | |
| 1.2 | 15° | 5 | – | | | | | 661-1.2-15° | ● | ● | | |
| 1.2 | 20° | 5 | 651-1.2-20° | ● | ● | | | 661-1.2-20° | ● | ● | | |
| 1.5 | 15° | 7.5 | 651-1.5-15° | ● | ● | | | 661-1.5-15° | ● | ● | | |
| 1.5 | 20° | 7.5 | – | | | | | 661-1.5-20° | ● | ● | | |
| 1.8 | 15° | 9 | 651-1.8-15° | ● | ● | | | 661-1.8-15° | ● | ● | | |
| 2.0 | 15° | 11 | 651-2.0-15° | ● | ● | ● | | 661-2.0-15° | ● | ● | ● | ● |
| 2.5 | 15° | 11 | 651-2.5-15° | ● | ● | | | 661-2.5-15° | ● | ● | | |

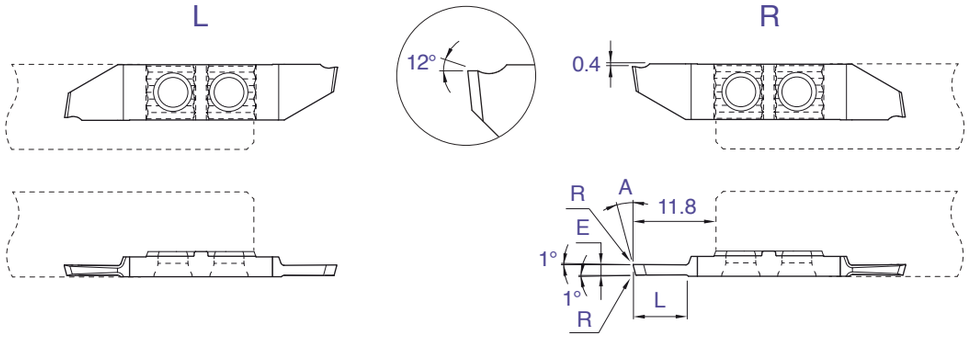









| E | A | L | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | L | | | | R | | | | |
| 1.5 | 15° | 7.5 | 651XF-1.5 | ● | ● | | | 661XF-1.5 | ● | ● | | |
| 2.0 | 15° | 11 | 651XF-2.0 | ● | ● | | | 661XF-2.0 | ● | ● | | |



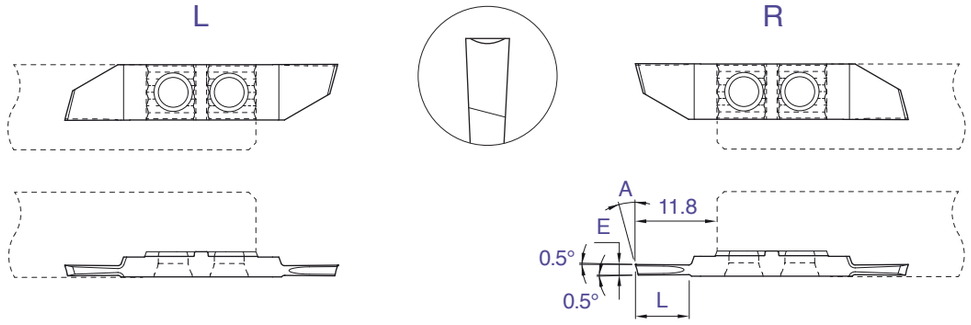



| E | A | L | R | L Art. N° | L TiAlN | L N (µk20) | L HTA | L HN (µk10) | R Art. N° | R TiAlN | R N (µk20) | R HTA | R HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 15° | 5 | 0.03 | 651X12-1.0 | ● | ● | | | 661X12-1.0 | ● | ● | | |
| 1.5 | 15° | 7.5 | 0.03 | 651X12-1.5 | ● | ● | | | 661X12-1.5 | ● | ● | | |
| 2.0 | 15° | 11 | 0.03 | 651X12-2.0 | ● | ● | | | 661X12-2.0 | ● | ● | | |



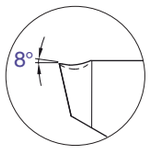
Tronçonnage
Abstechen
Parting off

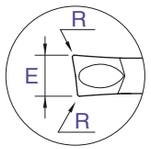


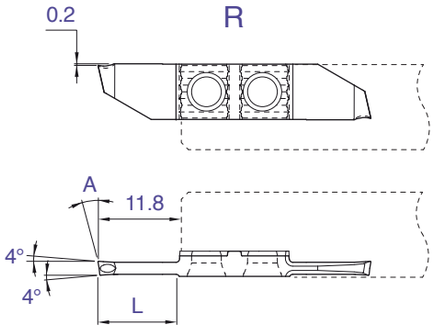


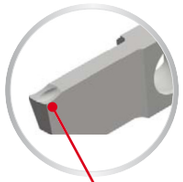


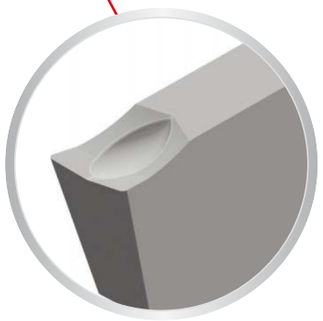

| E | A | L | L Art. N° | L TiAlN | L N (µk20) | R Art. N° | R TiAlN | R N (µk20) |
|---|---|---|---|---|---|---|---|---|
| 1.5 | 15° | 7.5 | 651U-1.5 | ● | ● | 661U-1.5 | ● | ● |
| 2.0 | 15° | 11 | 651U-2.0 | ● | ● | 661U-2.0 | ● | ● |





Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control

R

| E | A | L | R | Art. N° | TiAlN | N (µk20) |
|---|---|---|---|---|---|---|
| 2.0 | 8° | 11 | 0.10 | 661ZU8-2.0-8°-R10 | ● | |



Arête de coupe honée
Gehonte Schneidkante
Honed edge

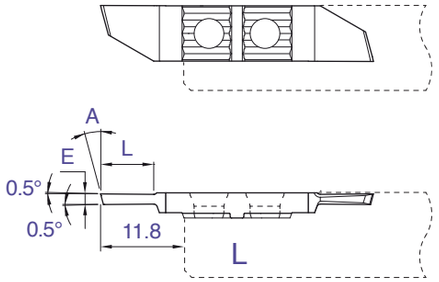
f min: 0.02mm/U

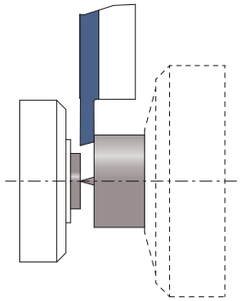






Cut R

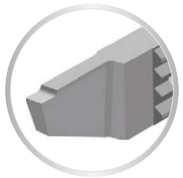


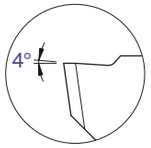



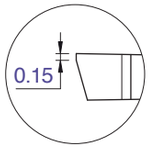
L (R)

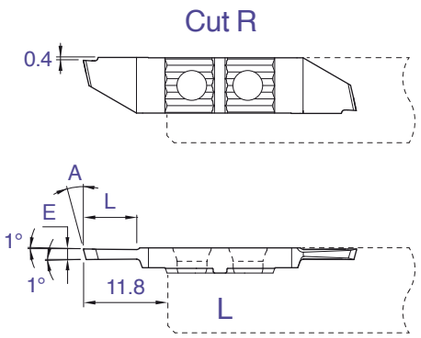
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

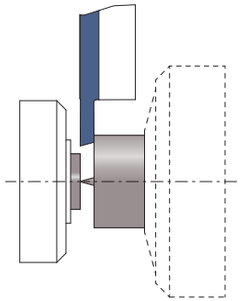
| E | A | L | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|
| 1.0 | 15° | 5 | 651R-1.0-15° | ● | ● | | |
| 1.2 | 15° | 5 | 651R-1.2-15° | ● | ● | | |
| 1.5 | 15° | 7.5 | 651R-1.5-15° | ● | ● | | |
| 2.0 | 15° | 11 | 651R-2.0-15° | ● | ● | | |
| 2.5 | 15° | 11 | 651R-2.5-15° | ● | ● | | |





L (R)

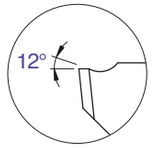
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

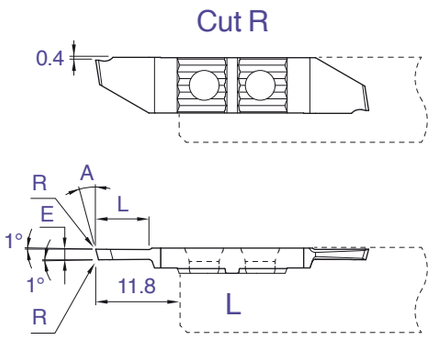
| E | A | L | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|
| 1.5 | 15° | 7.5 | 651RXF-1.5 | ● | ● | | |
| 2.0 | 15° | 11 | 651RXF-2.0 | ● | ● | | |

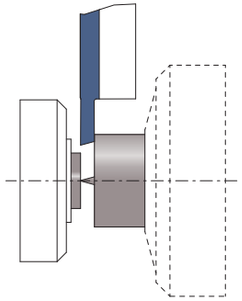








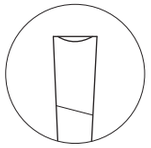



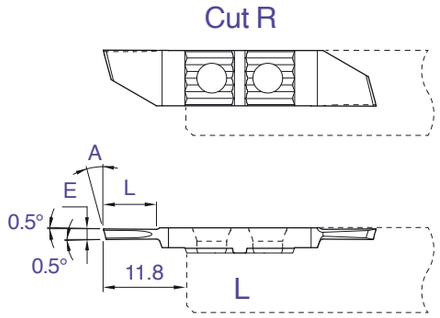
L (R)

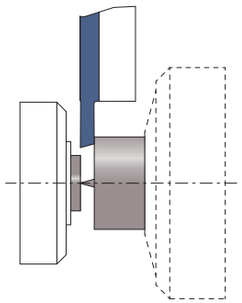
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | A | L | R | Art. N° | TiAlN | N (µk20) | HTA | HN (µk10) |
|---|---|---|---|---|---|---|---|---|
| 1.5 | 15° | 7.5 | 0.03 | 651RX12-1.5 | ● | ● | | |
| 2.0 | 15° | 11 | 0.03 | 651RX12-2.0 | ● | ● | | |







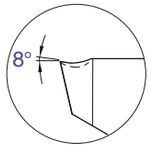
L (R)

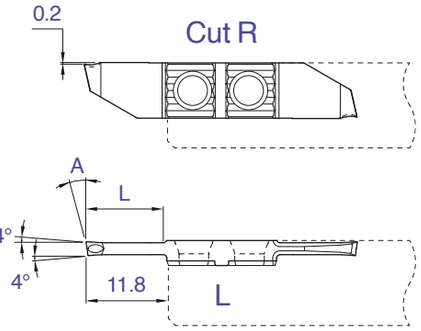
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

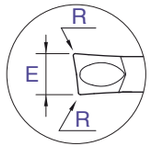
| E | A | L | Art. N° | TiAlN | N (μk20) |
|---|---|---|---|---|---|
| 1.5 | 15° | 7.5 | 651RU-1.5 | ● | ● |
| 2.0 | 15° | 11 | 651RU-2.0 | ● | ● |

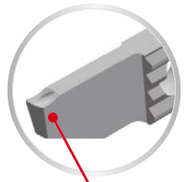




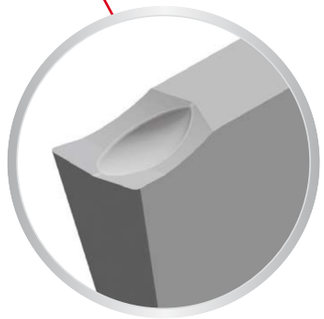


Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control



L (R)

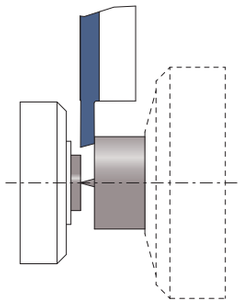
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| E | A | L | R | Art. N° | TiAlN | N (μk20) |
|---|---|---|---|---|---|---|
| 2.0 | 8° | 11 | 0.10 | 651RZU8-2.0-8°-R10 | ● | |

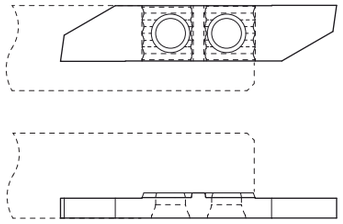


Arête de coupe honée
Gehonte Schneidkante
Honed edge

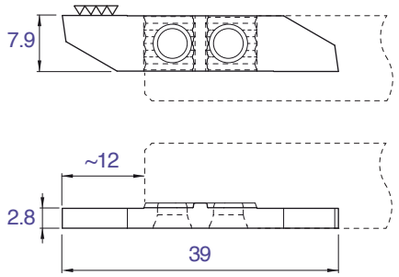
f min: 0.02mm/U



L



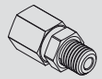
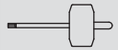
R



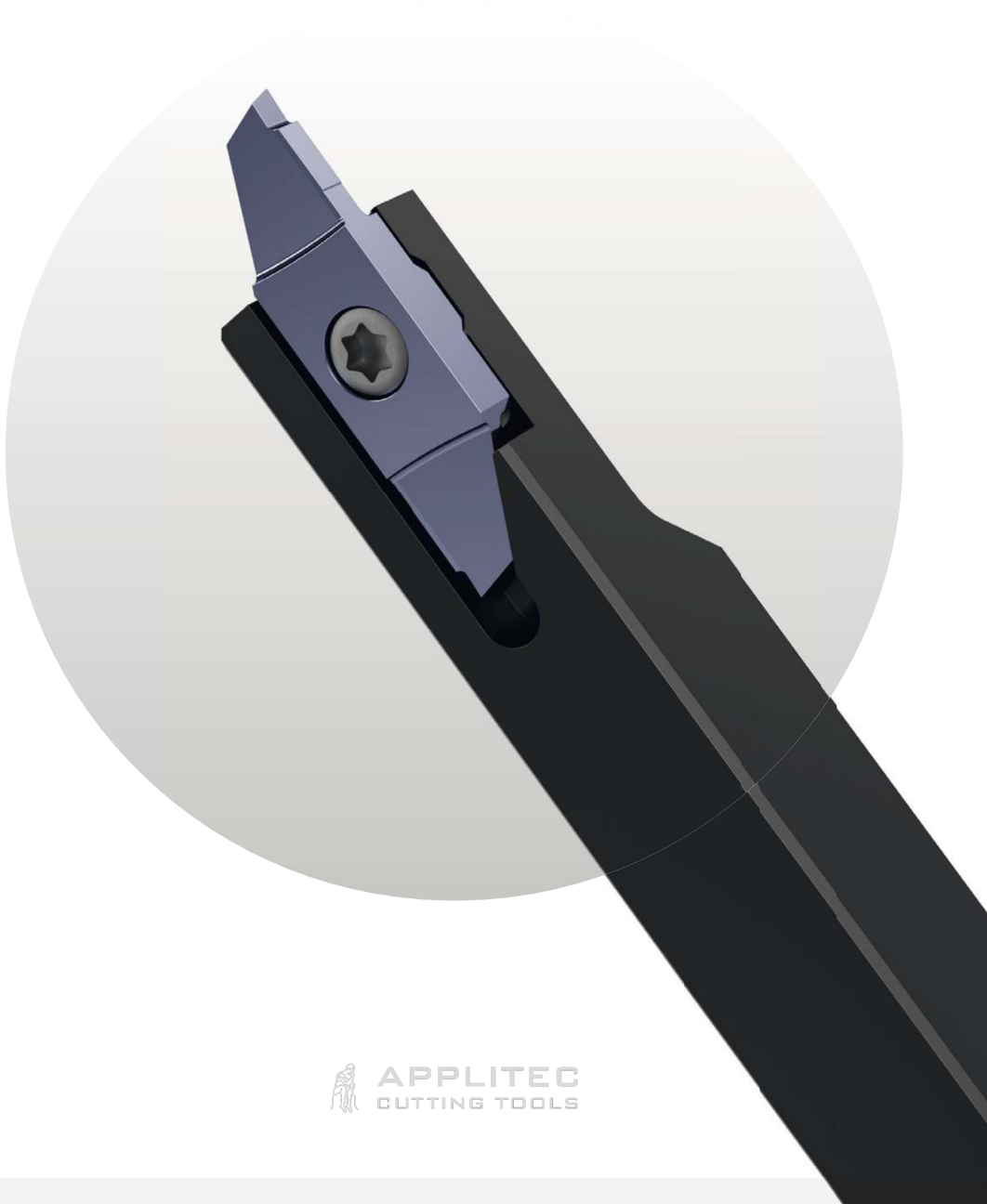



Face de coupe polie
Polierte Schneidfläche
Polished cutting face

| L | | | | | R | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Art. N° | TiAlN | N (μk20) | HTA | HN (μk10) | Art. N° | TiAlN | N (μk20) | HTA | HN (μk10) |
| 651-EP | ● | ● | ● | ● | 661-EP | ● | ● | ● | ● |

| Porte-outils Halter Holders | | | | | Options | | |
|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  | |
| | | | | | | Art. N° | Recommandation de serrage<br>Empfehlung zum Spannen<br>Clamping recommendation |
| 630<br>640 | V-M4X9-T15 | - | - | - | C-T15 | SET-NM3.0-TX15 | 3 Nm |
| 630-JET<br>640-JET | | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 | | | |
| 650<br>660 | | - | - | - | | | |
| 650-RC | V-M4X6.5-T15 | - | - | - | | | |
| 650-JET<br>660-JET | V-M4X9-T15 | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 | | | |

# ECO-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide >6.03

Infos et avantages
Infos und Vorteile
Infos and advantages >6.04

Nuances & paramètres de coupe indicatifs
Sorten & empfohlene Schnittwerte
Grades & standard machining data >6.05

Porte-outils
Halter
Holders  >6.08

Tronçonnage
Abstechen
Parting off 251 / 261  >6.12

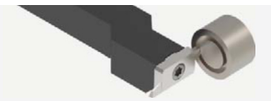
Tournage avant
Vorwärts drehen
Front turning 252 / 262  >6.16

Tournage arrière
Rückwärts drehen
Back turning 253 / 263  >6.19

Fonçage-tournage
Einstechen und drehen
Grooving and turning 254 / 264  >6.24

Filetage
Gewinde drehen
Threading 256 / 266  >6.26

Plaquettes ébauches
WSP-Rohlinge
Blank inserts 251E / 261E  >6.28

Usinage axial (porte-outils et plaquettes)
Axiale Bearbeitung (Halter und WSP)
Axial machining (holders and inserts) RFG  >6.29

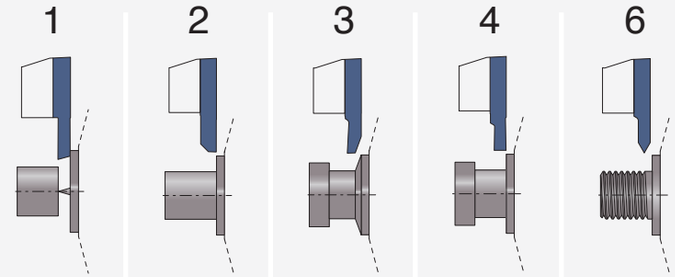
Pièces de rechange et accessoires
Ersatzteile und Zubehöre
Spare parts and accessories >6.31





| 2 | 6 | 4 | X | - | 2.0 | - | R20 | - | AP302 |
|---|---|---|---|---|---|---|---|---|---|

- 2.0: Dimension / Abmessung / Dimension
- R20: Rayon / Radius / Radius
- AP302: Nuance / Sorte / Grade
- X: Géométrie de coupe / Schneidgeometrie / Cutting geometry; brise-copeaux / Spanbrecher / chip breaker; particularités / Sondereigenschaften / special features
- 4: Géométrie d'usinage / Bearbeitungsgeometrie / Machining geometry

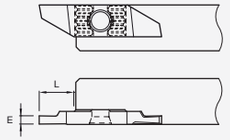



- 6: Gamme de produit / Produktserie / Product series — définit la compatibilité des plaquettes avec le porte-outil / bestimmt die WSP und Halter Kompatibilität / shows the inserts and holder compatibility

L = 5 (chiffre impair / ungerade Zahl / uneven number)

R = 6 (chiffre pair / gerade Zahl / even number)

| L | R |
|---|---|
| 250 | 260 |

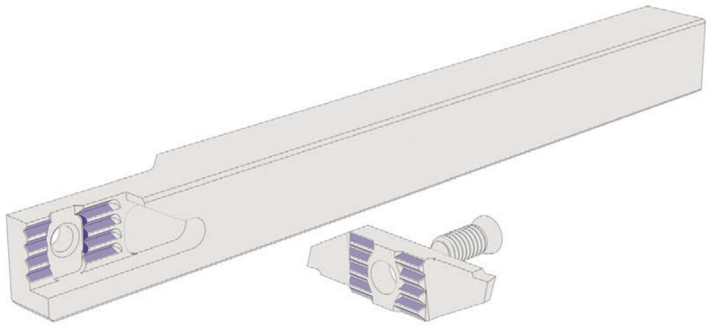



E max = 3.0 mm
L max = 8.5 mm

Applitec série 200 / Applitec 200 Serie / Applitec 200 series — Système de serrage à denture avec 1 vis de fixation / Spannsystem mit Verzahnung und 1 Schraube / Teeth clamping system with 1 screw

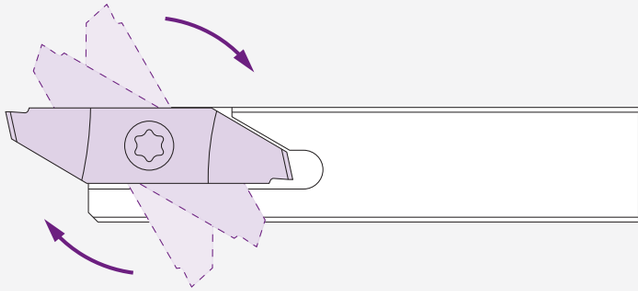
# Economic performance!

Système de serrage à denture Applitec avec repositionnement au centre
Applitec-Zahnklemmsystem mit zentraler Neupositionierung
Applitec toothed clamping system with central repositioning



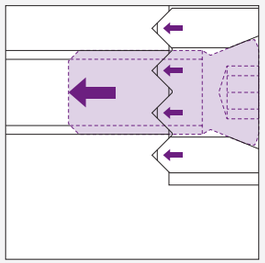
## High precision

Grande précision lors du retournement de la plaquette
Hohe Präzision beim Wenden der Platte
High precision when flipping the insert



## Applitec toothing

Système de serrage en fond de denture
Klemmvorrichtung an der Prothesenbasis
Clamping system at the denture base

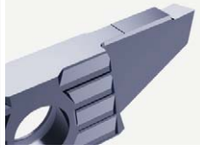






µK20

### AP302



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

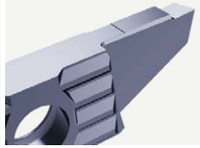
- excellente nuance universelle
- 1er choix pour l'usinage des aciers, aciers inoxydables et alliages de titane
- très bonne résistance à la température

- beste Universalsorte
- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bestens geeignet
- sehr gute Warmfestigkeit

- best universal grade
- first choice for steel, stainless steel and titanium alloys machining
- very good heat resistance

µK20

### AP202



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F M E

P ★★★★☆
M ★★★★☆
N ★★★☆☆
S ★★★☆☆

- nuance particulièrement adaptée aux faibles vitesses de coupe
- ancienne nuance, disponible uniquement sur demande

- besonders geeignete Sorte für niedrige Schnittgeschwindigkeiten
- ältere Sorte, nur auf Anfrage erhältlich

- grade particularly suitable for low cutting speeds
- previous grade, available on request only

µK20

### N



K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance micro-grain tenace
- supporte les coupes interrompues et autres conditions d'usinage défavorables

- zähe Feinkornsorte
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen

- tough micro-grain grade
- suitable for interrupted cut and other unfavourable machining conditions

µK10

## AH302



K10

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF — F — M — E

P ★★★★★
M ★★★★★
N ★★★★★
S ★★★★★

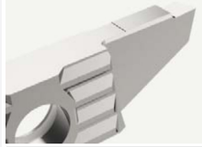
- nuance très résistante à l'usure
- pour l'usinage en finition dans des conditions favorables des aciers, aciers inoxydables et alliages de titanes

- sehr verschleissfeste Sorte
- für die Feinbearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bei guten Bearbeitungsbedingungen

- very wear resistant grade
- for light machining of steel, stainless steel and titanium alloys under favourable machining conditions

µK10

## HN



K10

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du titane faiblement allié
- déconseillé en cas de coupe interrompue et autres conditions d'usinage défavorables

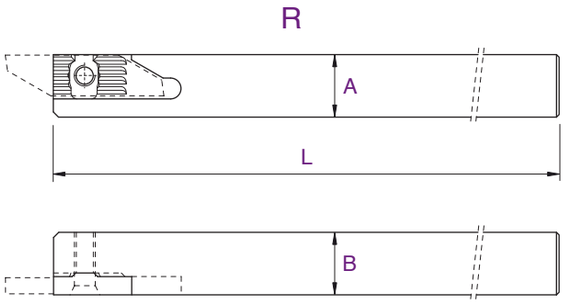
- verschleissfeste Feinkornsorte
- für die Bearbeitung von niedrig legiertem Titan empfehlenswert
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen nicht geeignet

- wear resistant micro-grain grade
- suitable for the machining of low alloyed titanium
- not suitable for interrupted cut and other unfavourable machining conditions





| Matière<br>Werkstoff<br>Material | | Tournage<br>Drehen<br>Turning | | Tronçonnage<br>Abstechen<br>Parting off | |
|---|---|---|---|---|---|
| | | VC<br>(m/min) | F<br>(mm/U) | VC<br>(m/min) | F<br>(mm/U) |
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 120 - 200 | 0.01 - 0.20 | 80 - 150 | 0.01 - 0.15 |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 80 - 160 | 0.01 - 0.18 | 70 - 120 | 0.01 - 0.12 |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 60 - 120 | 0.01 - 0.15 | 60 - 100 | 0.01 - 0.10 |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 50 - 100 | 0.01 - 0.12 | 40 - 80 | 0.01 - 0.08 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | M | 60 - 120 | 0.01 - 0.15 | 60 - 100 | 0.01 - 0.08 |
| Aluminium | N | 180 - 800 | 0.01 - 0.30 | 150 - 300 | 0.01 - 0.20 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 500 | 0.01 - 0.30 | 100 - 300 | 0.01 - 0.20 |
| Titane<br>Titan<br>Titanium | S | 30 - 70 | 0.01 - 0.12 | 30 - 50 | 0.01 - 0.06 |






| A x B | L | L | R |
|---|---|---|---|
| | | Art. N° | Art. N° |
| 8 x 8 | 115 | 250-8 | 260-8 |
| 10 x 10 | 115 | 250-10 | 260-10 |
| 12 x 12 | 130 | 250-12 | 260-12 |
| 12 x 12 | 90 | 250-12-90 | 260-12-90 |
| 12.7 x 12.7 | 130 | 250-12.7 | 260-12.7 |
| 16 x 16 | 130 | 250-16 | 260-16 |
| 16 x 16 | 75 | 250-16-75 | 260-16-75 |
| 20 x 20 | 120 | 250-20 | 260-20 |

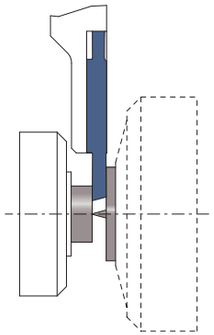
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

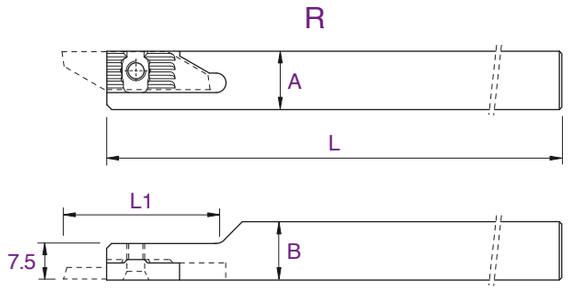
Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

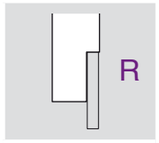
Each holder is supplied with one or more screws.
The keys must be ordered separately.





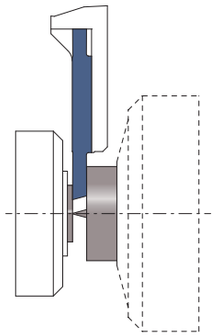


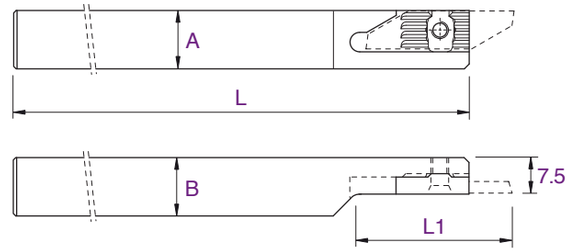



| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 12 x 12 | 130 | 30 | 260-C-12 |



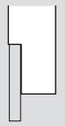





Utiliser des plaquettes type 251R
WSP Typ 251R verwenden
Use inserts type 251R

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

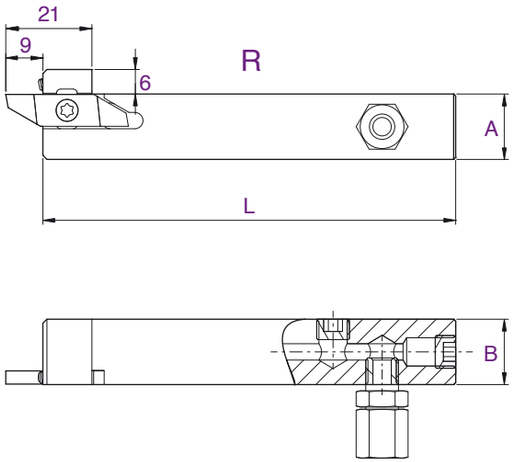


| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 12 x 12 | 130 | 30 | 250RC-12 |
| 16 x 16 | 130 | 40 | 250RC-16 |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.



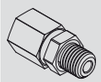



| A x B | L | L<br>Art. N° | R<br>Art. N° |
|---|---|---|---|
| 10 x 12 | 100 | 250-1012-JET | 260-1012-JET |
| 12 x 12 | 100 | 250-12-JET | 260-12-JET |
| 16 x 16 | 100 | 250-16-JET | 260-16-JET |
| 20 x 20 | 100 | 250-20-JET | 260-20-JET |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

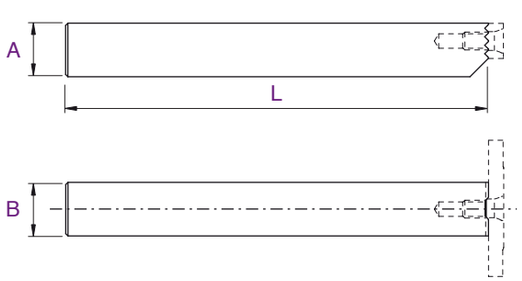
Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

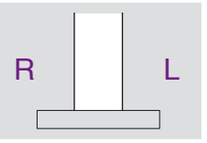
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Pièces de rechange<br>Ersatzteile<br>Spare parts |  |  | Buse<br>Düse<br>Nozzle  |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| 250-JET / 260-JET | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 |



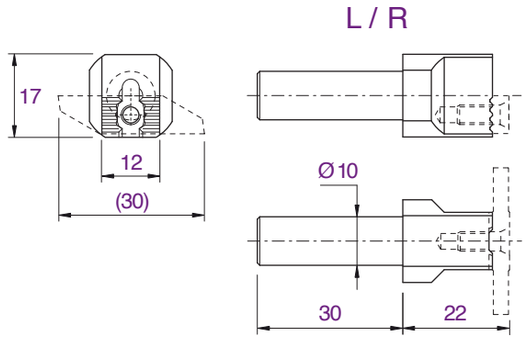


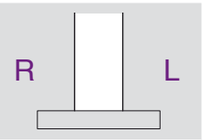



| A x B | L | Art. N° |
|---|---|---|
| 10 x 12 | 120 | 260/250F-1012 |
| 12 x 12 | 120 | 260/250F-1212 |





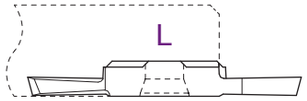



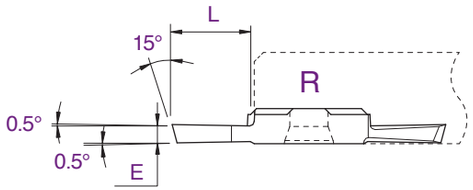

| Art. N° |
|---|
| 260/250-D10 |

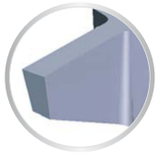
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.



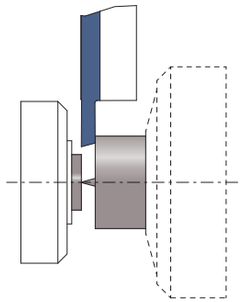



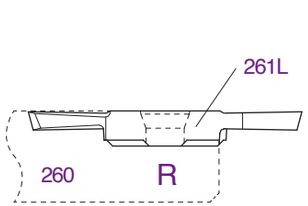



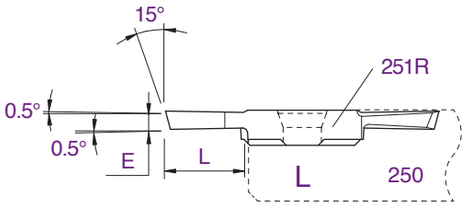
| E | L | L Art. N° | AP302 | AP202 | N (µk20) | R Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 0.8 | 4 | 251-0.8 | ● | ● | ● | 261-0.8 | ● | ● | ● |
| 1.0 | 5 | 251-1.0 | ● | ● | ● | 261-1.0 | ● | | ● |
| 1.2 | 5 | 251-1.2 | ● | ● | ● | 261-1.2 | ● | ● | ● |
| 1.5 | 7 | 251-1.5 | ● | | ● | 261-1.5 | ● | | ● |
| 2.0 | 8.5 | 251-2.0 | ● | | ● | 261-2.0 | ● | | ● |
| 2.5 | 8.5 | 251-2.5 | ● | ● | ● | 261-2.5 | ● | | ● |





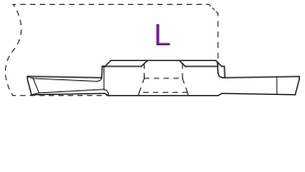




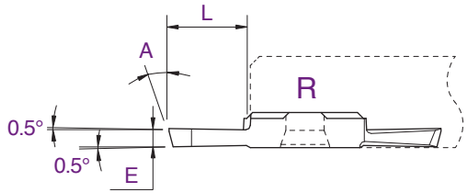



| E | L | R (L) Art. N° | AP302 | AP202 | N (µk20) | L (R) Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 5 | - | | | | 251R-1.0 | ● | | ● |
| 1.5 | 7 | - | | | | 251R-1.5 | ● | ● | ● |
| 2.0 | 8.5 | 261L-2.0 | ● | ● | ● | 251R-2.0 | ● | | ● |





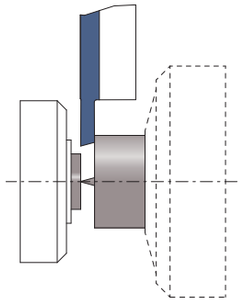




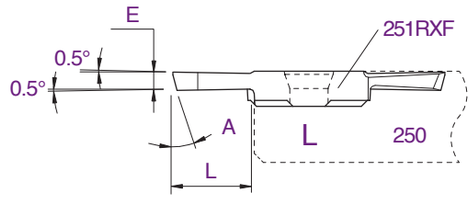



| a | E | L | A | L Art. N° | AP302 | AP202 | N (µk20) | R Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4° | 1.0 | 4 | 15° | - | | | | 261XF-1.0 | ● | | ● |
| 6° | 1.0 | 4 | 8° | - | | | | 261XF6°-1.0-8° | ● | | ● |
| 4° | 1.5 | 7 | 15° | 251XF-1.5 | ● | | ● | 261XF-1.5 | ● | ● | ● |
| 4° | 2.0 | 8.5 | 15° | 251XF-2.0 | ● | ● | ● | 261XF-2.0 | ● | ● | ● |







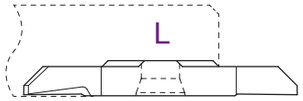



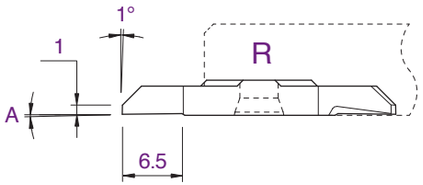



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

| a | E | L | A | Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|
| 6° | 1.0 | 4 | 8° | 251RXF6°-1.0-8° | ● | | ● |
| 4° | 1.5 | 7 | 15° | 251RXF-1.5 | ● | ● | ● |
| 4° | 2.0 | 8.5 | 15° | 251RXF-2.0 | ● | | ● |



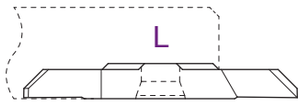






| A | L Art. N° | AP302 | AP202 | N (µk20) | R Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|
| 0° | 252 | ● | ● | ● | 262 | ● | | ● |
| 2° | 252-2° | ● | ● | ● | 262-2° | ● | ● | ● |

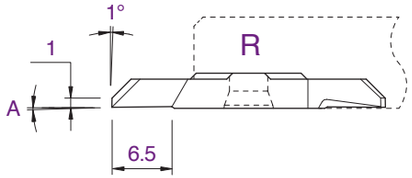


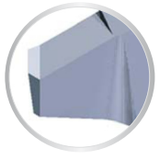




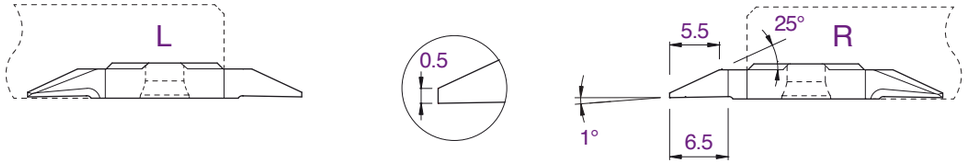






| A | L Art. N° | AP302 | AP202 | N (µk20) | R Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|
| 0° | 252X | ● | ● | ● | 262X | ● | | ● |
| 2° | 252X-2° | ● | ● | ● | 262X-2° | ● | ● | ● |



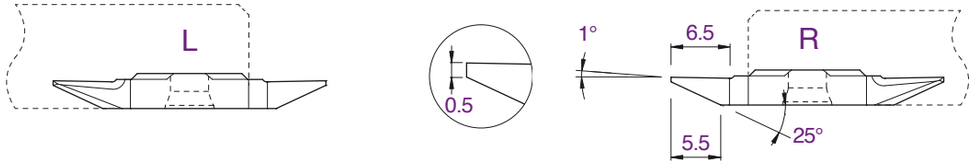



| L | | | | R | | | |
|---|---|---|---|---|---|---|---|
| Art. N° | AP302 | AP202 | N (µk20) | Art. N° | AP302 | AP202 | N (µk20) |
| 252S05 | ● | ● | ● | 262S05 | ● | ● | ● |

Zurück zum Kapitelanfang



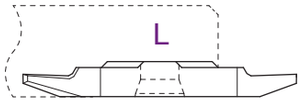


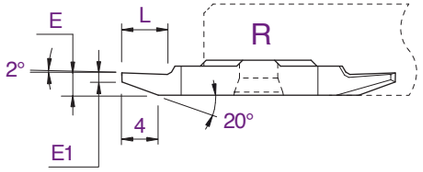





| L | | | | R | | | |
|---|---|---|---|---|---|---|---|
| Art. N° | AP302 | AP202 | N (µk20) | Art. N° | AP302 | AP202 | N (µk20) |
| 253S05 | ● | ● | ● | 263S05 | ● | ● | ● |

Zurück zum Index



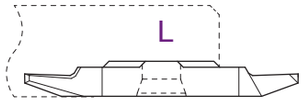






| E | E1 | L | L Art. N° | L AP302 | L AP202 | L N (µk20) | R Art. N° | R AP302 | R AP202 | R N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 0.5 | 4 | 253-0.5 | ● | ● | ● | 263-0.5 | ● | | ● |
| 2.5 | 1.0 | 5 | 253-1.0 | ● | ● | ● | 263-1.0 | ● | | ● |

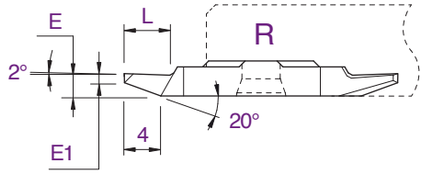






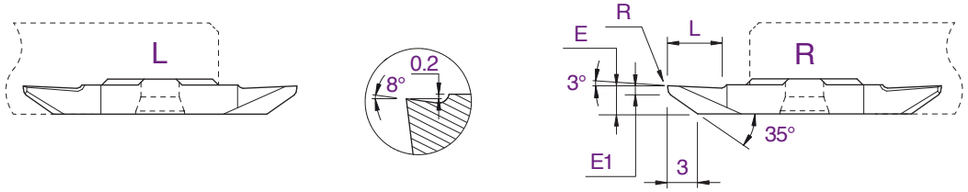









| E | E1 | L | L Art. N° | L AP302 | L AP202 | L N (µk20) | R Art. N° | R AP302 | R AP202 | R N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.0 | 0.5 | 5 | 253X-0.5 | ● | ● | ● | 263X-0.5 | ● | ● | ● |
| 2.5 | 1.0 | 5 | 253X-1.0 | ● | ● | ● | 263X-1.0 | ● | | ● |

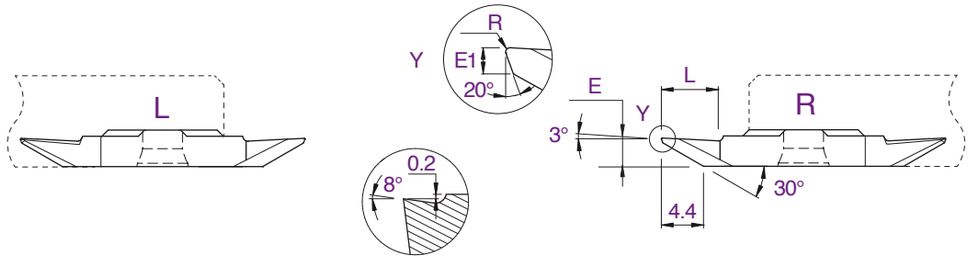





| E | E1 | L | R | Art. N° | AP302 | AP202 | N (µk20) | Art. N° | AP302 | AP202 | N (µk20) | AH302 | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.1 | 1.0 | 6 | 0 | 253VX-8° | ● | ● | ● | 263VX-8° | ● | | ● | | |
| 3.1 | 1.0 | 6 | 0.08 | - | | | | 263VX-8°-R08 | ● | ● | ● | ● | ● |
| 3.1 | 1.0 | 6 | 0.20 | - | | | | 263VX-8°-R20 | ● | | ● | ● | ● |

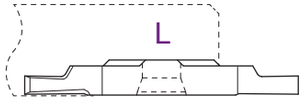


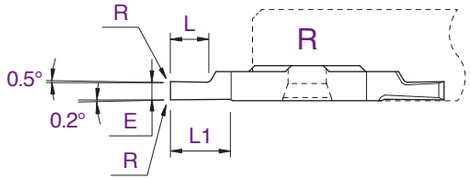




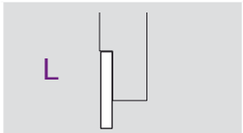


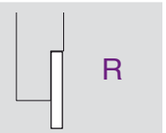

| E | E1 | L | R | Art. N° | AP302 | AP202 | N (µk20) | Art. N° | AP302 | AP202 | N (µk20) | AH302 | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.0 | 0.5 | 6 | 0.08 | 253VX-805-R08 | ● | ● | ● | 263VX-805-R08 | ● | | ● | ● | ● |





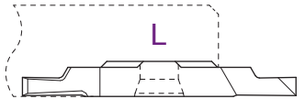



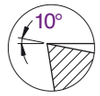



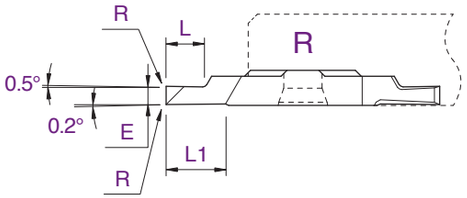

| E | L | L1 | R | Art. N° | AP302 | AP202 | N (µk20) | Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.8 | 2 | 4 | 0 | 254-0.8 | ● | | ● | 264-0.8 | ● | | ● |
| 1.0 | 2.5 | 4 | 0 | 254-1.0 | ● | ● | ● | 264-1.0 | ● | | ● |
| 1.2 | 3 | 4 | 0 | 254-1.2 | ● | ● | ● | 264-1.2 | ● | ● | ● |
| 1.5 | 3 | 4 | 0 | 254-1.5 | ● | ● | ● | 264-1.5 | ● | | ● |
| 1.8 | 4 | 6.5 | 0 | - | | | | 264-1.8 | ● | ● | ● |
| 2.0 | 4 | 6.5 | 0 | 254-2.0 | ● | ● | ● | 264-2.0 | ● | ● | ● |
| 2.5 | 6 | 6.5 | 0 | 254-2.5 | ● | ● | ● | 264-2.5 | ● | ● | ● |
| 3.0 | 6.5 | 6.5 | 0 | 254-3.0 | ● | ● | ● | 264-3.0 | ● | ● | ● |



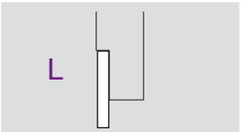


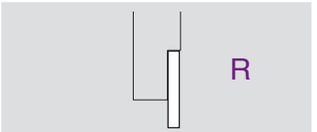


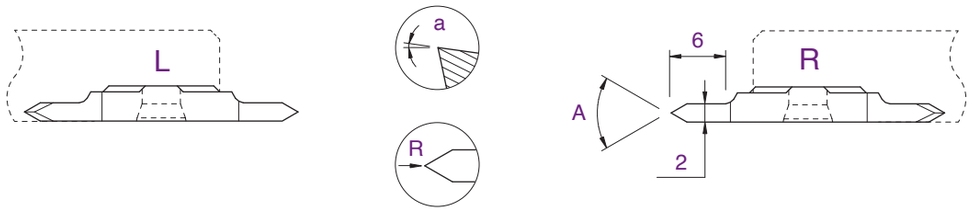






| E | L | L1 | R | Art. N° | AP302 | AP202 | N (µk20) | Art. N° | AP302 | AP202 | N (µk20) | AH302 | HN (µk10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.8 | 2 | 4 | 0 | 254X-0.8 | ● | ● | ● | 264X-0.8 | ● | ● | ● | | |
| 1.0 | 2.5 | 4 | 0 | 254X-1.0 | ● | ● | ● | 264X-1.0 | ● | ● | ● | | |
| 1.0 | 2.5 | 4 | 0.08 | - | | | | 264X-1.0-R08 | ● | ● | ● | ● | ● |
| 1.2 | 3 | 4 | 0 | 254X-1.2 | ● | ● | ● | 264X-1.2 | ● | ● | ● | | |
| 1.5 | 3 | 4 | 0 | 254X-1.5 | ● | ● | ● | 264X-1.5 | ● | | ● | | |
| 1.5 | 3 | 4 | 0.08 | - | | | | 264X-1.5-R08 | ● | ● | ● | ● | ● |
| 1.5 | 3 | 4 | 0.20 | - | | | | 264X-1.5-R20 | ● | ● | ● | ● | ● |
| 2.0 | 4 | 6.5 | 0 | 254X-2.0 | ● | | ● | 264X-2.0 | ● | ● | ● | | |
| 2.0 | 4 | 6.5 | 0.08 | - | | | | 264X-2.0-R08 | ● | ● | ● | ● | ● |
| 2.0 | 4 | 6.5 | 0.20 | - | | | | 264X-2.0-R20 | ● | | ● | ● | ● |
| 2.5 | 6 | 6.5 | 0 | 254X-2.5 | ● | ● | ● | 264X-2.5 | ● | ● | ● | | |
| 2.5 | 6.5 | 6.5 | 0.08 | - | | | | 264X-2.5-R08 | ● | ● | ● | ● | ● |
| 2.5 | 6.5 | 6.5 | 0.20 | - | | | | 264X-2.5-R20 | ● | ● | ● | ● | ● |
| 3.0 | 6.5 | 6.5 | 0 | 254X-3.0 | ● | ● | ● | 264X-3.0 | ● | | ● | | |
| 3.0 | 6.5 | 6.5 | 0.08 | - | | | | 264X-3.0-R08 | ● | ● | ● | ● | ● |
| 3.0 | 6.5 | 6.5 | 0.20 | - | | | | 264X-3.0-R20 | ● | ● | ● | ● | ● |

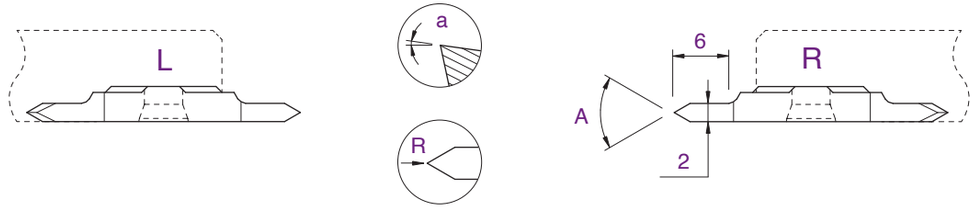





| A | R | a | L Art. N° | AP302 | AP202 | N (µk20) | R Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|
| 60° | 0 | 0° | 256-60-2.0 | ● | | ● | 266-60-2.0 | ● | | ● |
| 60° | 0.06 | 3° | 256-AG60° | ● | ● | ● | 266-AG60° | ● | | ● |

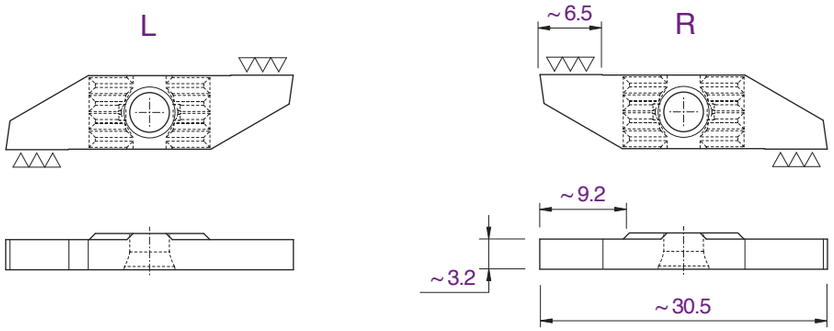






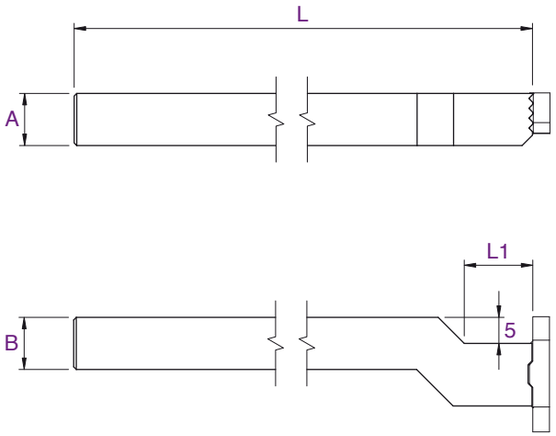


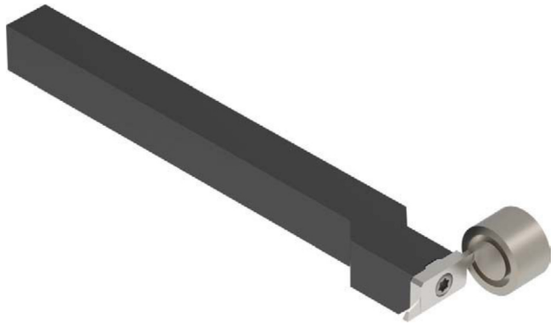

| A | R | a | L Art. N° | AP302 | AP202 | N (µk20) | R Art. N° | AP302 | AP202 | N (µk20) |
|---|---|---|---|---|---|---|---|---|---|---|
| 55° | 0 | 0° | 256-55-2.0 | ● | ● | ● | 266-55-2.0 | ● | ● | ● |
| 55° | 0.06 | 3° | 256-AG55° | ● | ● | ● | 266-AG55° | ● | ● | ● |






| | L | | | | | | R | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Art. N° | AP302 | AP202 | N (µk20) | AH302 | HN (µk10) | Art. N° | AP302 | AP202 | N (µk20) | AH302 | HN (µk10) |
| | P M N S | P M N S | N | P M N S | N | | P M N S | P M N S | N | P M N S | N |
| 251-E | ● | ● | ● | ● | ● | 261-E | ● | | ● | ● | ● |



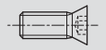



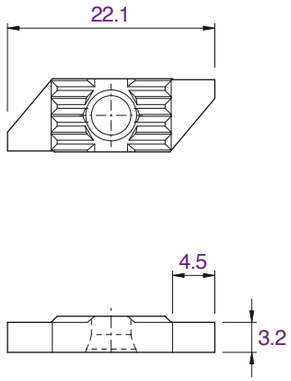
| A x B | L | L1 | Art. N° |
|---|---|---|---|
| 8x10 | 130 | 13 | 250RFG-0810 |
| 10x10 | 130 | 13 | 250RFG-1010 |
| 12x12 | 130 | 13 | 250RFG-1212 |
| 16x16 | 130 | 16 | 250RFG-1616 |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schraubengeliefert.
Die Schlüssel sind separat zu bestellen.

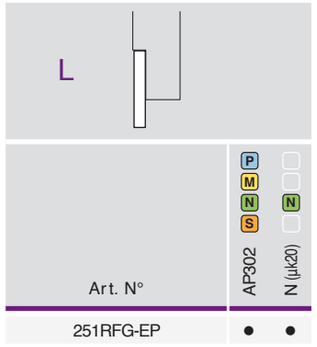
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options |
|---|---|
|  |  |
| Art. N° | Art. N° |
| V-M4X9-T15 | C-T15 |

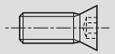
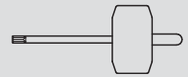




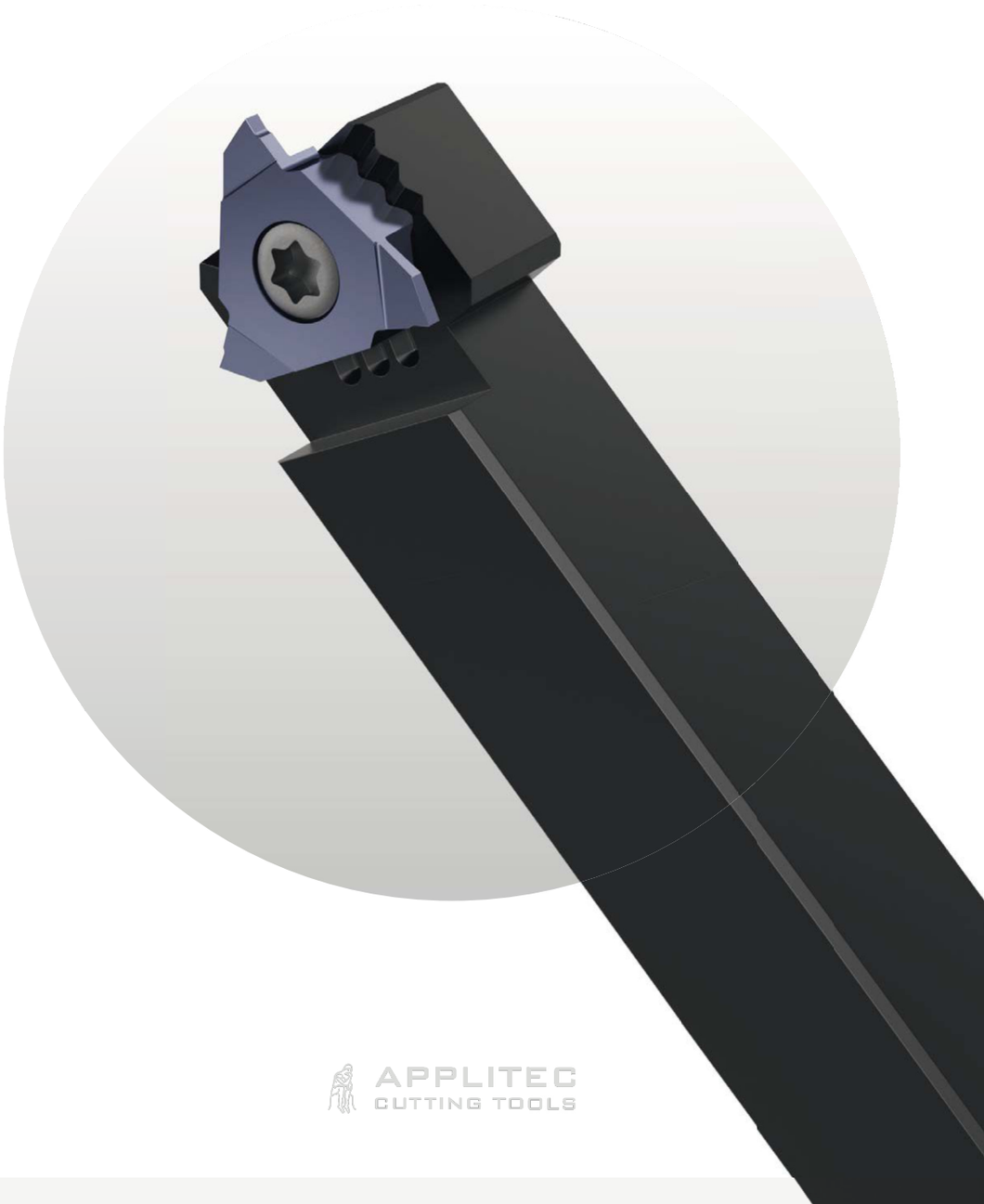

Plaquette ébauche pour porte-outils axial RFG(p. 6.29)
WSP-Rohling für axialen Halter RFG(S. 6.29)
Blank insert for axial holder RFG(p. 6.29)




| Art. N° | P | M | N | S | AP302 | N (µK20) |
|---|---|---|---|---|---|---|
| 251RFG-EP | | | | | ● | ● |

| Porte-outils Halter Holders |  | Options  |  Option Art. N° | Recommandation de serrage Drehmoment Empfehlung Clamping recommendation |
|---|---|---|---|---|
| 250-8 / 260-8 | V-M3.5X7.3-T15 | C-T15 | SET-NM3.0-TX15 | 3 Nm |
| 250-…/ 260-… | V-M4X9-T15 | | | |
| 260/250-… | | | | |
| 250RFG | | | | |
| 250RC/ 260-C | V-M4X7.3-T15 | | | |

# TRIO-Line



APPLITEC
CUTTING TOOLS

Infos et avantages
Infos und Vorteile
Infos and advantages >7.03

Codification
Bezeichnungssystem
Designation system >7.04

Nuances
Sorten
Grades >7.06

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data >7.07

Porte-outils
Halter
Holders >7.08

GX Plaquettes de gorge pour circlips
Einstechwendeplatte für Seegerring
Grooving inserts for retaining ring DIN6799 & DIN471 >7.09

FT Tournage avant
Vorwärts drehen
Front turning >7.10

GT Fonçage-tournage
Einstechen und drehen
Grooving and turning >7.11

GTX Fonçage-tournage avec coupe positive
Einstechen und drehen mit positivem Spanwinkel
Grooving and turning with positive cut >7.12

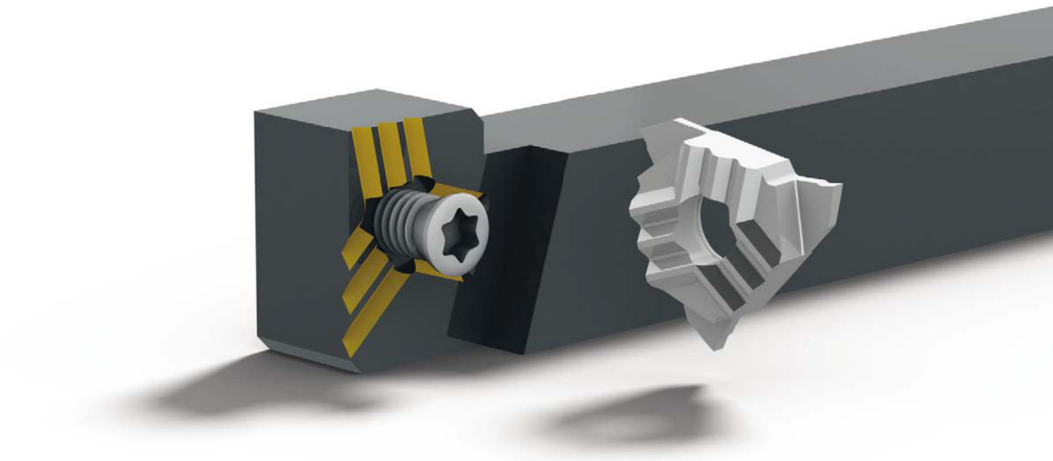
EP Plaquettes ébauches
WSP-Rohlinge
Blank inserts >7.13

Accessoires
Zubehöre
Accessories >7.13





# Rigid clamping system with the famous Applitec teeth clamping



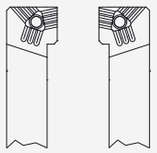
| Avantages<br>Vorteile<br>Advantages | | |
|---|---|---|
| • dimensions spécifiques<br>• système de serrage à denture à 1 vis<br>• pour opération de faible profondeur<br>• solution optimisée (proportion réduite de carbure pour un équilibre parfait entre coût et performance) | •spezifische Abmessungen<br>• Spannsystem mit 1 Schraube<br>• für geringe Tiefenbearbeitung<br>• optimierte Lösung (reduzierte Hartmetallschicht für ein perfektes Gleichgewicht zwischen Kosten und Leistung) | • specific dimensions<br>• clamping system with 1 screw<br>• for shallow operation<br>• optimized solution (reduced carbide layer for a perfect balance between cost and performance) |

# T 2 1 6 – H 0 8 1 0 R – 90

Ou / Oder / Or

Porte-outils
Halter
Holders

L R

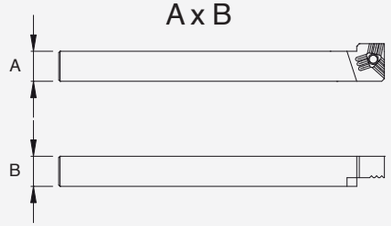


Longueur
Länge
Length

| A x B | L |
|---|---|
| 8x10 | 115 |
| 10x10 | 130 |
| 12x12 | 130 |
| 16x16 | 120 |
| 20x20 | 130 |




A x B




| | |
|---|---|
| Applitec TRIO-Line | Système de serrage à denture avec 1 vis de fixation |
| Applitec TRIO-Line | Spannsystem mit Verzahnung mit 1 Spannschraube |
| Applitec TRIO-Line | Teeth clamping system with 1 screw |





# T 2 1 6 R – GX 026 – HTA

L R



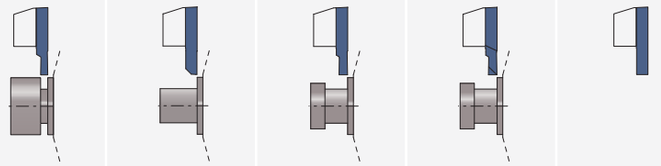
Nuance
Sorte
Grade

Épaisseur de coupe
Schnittbreite
Cutting thickness



Géométrie d'usinage
Bearbeitungsgeometrie
Machining geometry

| GX | FT | GT | GTX | EP |
|---|---|---|---|---|
| Grooving | Front turning | Grooving / turning | Grooving / turning positiv | Blank |



| | |
|---|---|
| Applitec TRIO-Line | Système de serrage à denture avec 1 vis de fixation |
| Applitec TRIO-Line | Spannsystem mit Verzahnung mit 1 Spannschraube |
| Applitec TRIO-Line | Teeth clamping system with 1 screw |

µK10

## HN



K10

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

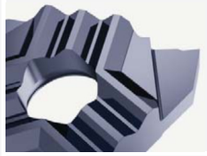
- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du laiton, de l'aluminium et du titane faiblement allié
- pour pièces fragiles de très petits diamètres

- sehr verschleissfeste Feinkornsorte
- für die Bearbeitung von Messing und niedrig legiertem Aluminium und Titan empfehlenswert
- für empfindliche und sehr kleine Werkstücke

- very wear resistant micro-grain grade
- suitable for the machining of brass and low alloyed aluminium and titanium
- for fragile and very small work pieces

µK10

## HTA



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F M E

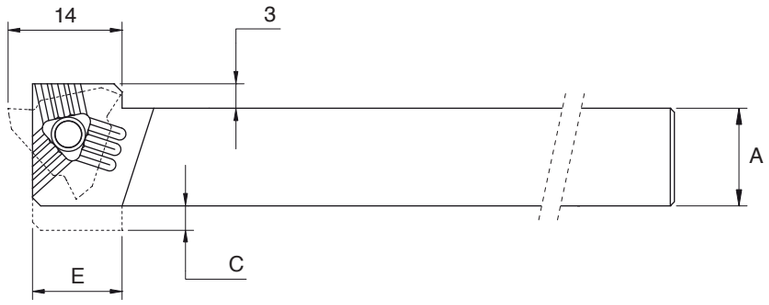
P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

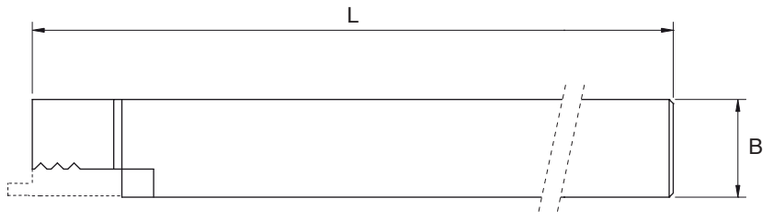
- nuance très résistante à l'usure
- pour l'usinage en finition dans des conditions favorables des aciers, aciers inoxydables et alliages de titane

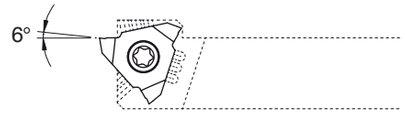
- sehr verschleissfeste Sorte
- für die Feinbearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bei guten Bearbeitungsbedingungen

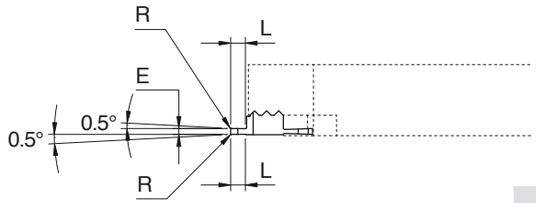
- very wear resistant grade
- for light machining of steel, stainless steel and titanium alloys under favourable machining conditions

| Matière<br>Werkstoff<br>Material | | FT GT GTX<br>Tournage<br>Drehen<br>Turning | | GX GT GTX<br>Foncer<br>Einstechen<br>Grooving | |
|---|---|---|---|---|---|
| | | VC<br>(m/min) | F<br>(mm/U) | VC<br>(m/min) | F<br>(mm/U) |
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 120 - 200 | 0.01 - 0.20 | 80 - 150 | 0.01 - 0.15 |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 80 - 160 | 0.01 - 0.18 | 70 - 120 | 0.01 - 0.12 |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 60 - 120 | 0.01 - 0.15 | 60 - 100 | 0.01 - 0.10 |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 50 - 100 | 0.01 - 0.12 | 40 - 80 | 0.01 - 0.08 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | M | 60 - 120 | 0.01 - 0.15 | 60 - 100 | 0.01 - 0.08 |
| Aluminium | N | 180 - 800 | 0.01 - 0.30 | 150 - 300 | 0.01 - 0.20 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 500 | 0.01 - 0.30 | 100 - 300 | 0.01 - 0.20 |
| Titane<br>Titan<br>Titanium | S | 30 - 70 | 0.01 - 0.12 | 30 - 50 | 0.01 - 0.06 |

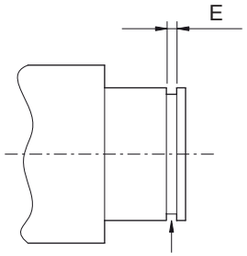





Selon DIN6799 et DIN471
Gemäss DIN6799 und DIN471
According to DIN6799 and DIN471





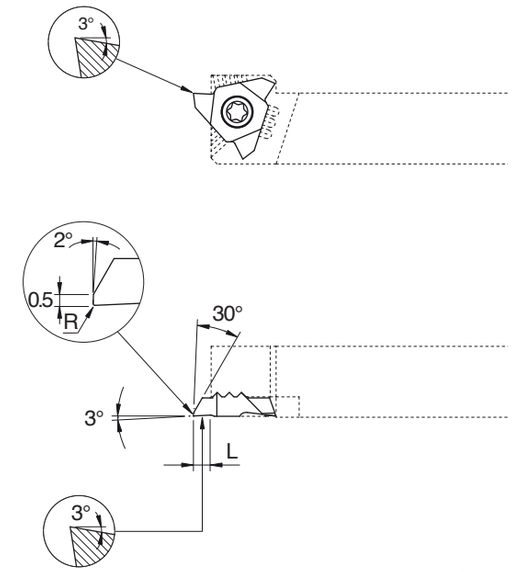
| AxB | C | E | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|
| 8x10 | 4 | 11 | 115 | T216-H0810L | T216-H0810R |
| 10x10 | 2 | 8 | 130 | T216-H1010L | T216-H1010R |
| 12x12 | - | - | 130 | T216-H1212L | T216-H1212R |
| 12x12 | - | - | 90 | T216-H1212L-90 | T216-H1212R-90 |
| 16x16 | - | - | 120 | T216-H1616L | T216-H1616R |
| 20x20 | - | - | 130 | T216-H2020L | T216-H2020R |

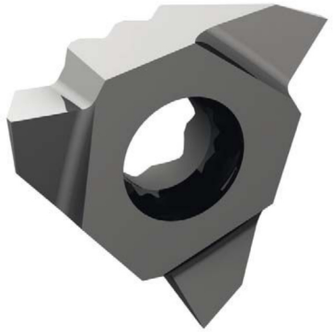
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

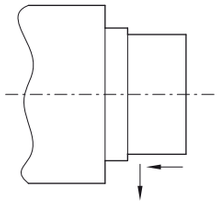
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.

| E ±0.01 | L | R | L Art. N° | HTA | HN (µx10) | R Art. N° | HTA | HN (µx10) |
|---|---|---|---|---|---|---|---|---|
| 0.26 | 0.8 | 0.03 | T216L-GX026 | ● | ● | T216R-GX026 | ● | ● |
| 0.36 | 0.8 | 0.03 | T216L-GX036 | ● | ● | T216R-GX036 | ● | ● |
| 0.46 | 0.8 | 0.03 | T216L-GX046 | ● | ● | T216R-GX046 | ● | ● |
| 0.50 | 1.5 | 0.03 | T216L-GX050 | ● | ● | T216R-GX050 | ● | ● |
| 0.57 | 1.5 | 0.03 | T216L-GX057 | ● | ● | T216R-GX057 | ● | ● |
| 0.67 | 1.5 | 0.03 | T216L-GX067 | ● | ● | T216R-GX067 | ● | ● |
| 0.77 | 2.0 | 0.03 | T216L-GX077 | ● | ● | T216R-GX077 | ● | ● |
| 0.87 | 2.0 | 0.03 | T216L-GX087 | ● | ● | T216R-GX087 | ● | ● |
| 0.97 | 2.5 | 0.03 | T216L-GX097 | ● | ● | T216R-GX097 | ● | ● |
| 1.00 | 2.5 | 0.03 | T216L-GX100 | ● | ● | T216R-GX100 | ● | ● |
| 1.10 | 2.5 | 0.03 | T216L-GX110 | ● | ● | T216R-GX110 | ● | ● |
| 1.20 | 2.5 | 0.03 | T216L-GX120 | ● | ● | T216R-GX120 | ● | ● |
| 1.30 | 2.5 | 0.03 | T216L-GX130 | ● | ● | T216R-GX130 | ● | ● |
| 1.50 | 2.5 | 0.03 | T216L-GX150 | ● | ● | T216R-GX150 | ● | ● |
| 1.60 | 2.5 | 0.03 | T216L-GX160 | ● | ● | T216R-GX160 | ● | ● |
| 1.85 | 2.5 | 0.03 | T216L-GX185 | ● | ● | T216R-GX185 | ● | ● |
| 2.00 | 2.5 | 0.03 | T216L-GX200 | ● | ● | T216R-GX200 | ● | ● |
| 2.50 | 2.5 | 0.03 | T216L-GX250 | ● | ● | T216R-GX250 | ● | ● |



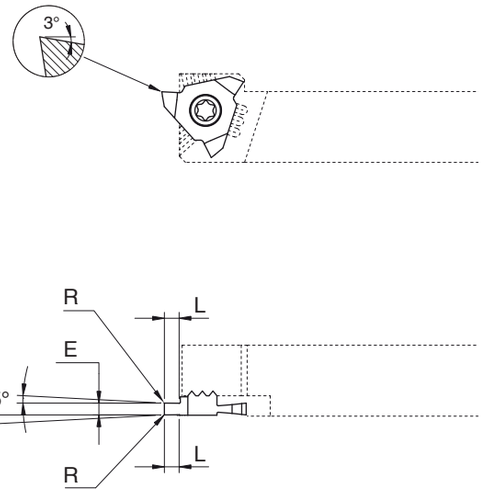





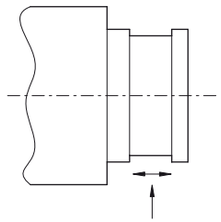
| L | R | Art. N° | HTA | HN (µx10) | Art. N° | HTA | HN (µx10) |
|---|---|---|---|---|---|---|---|
| 3.0 | 0.03 | T216L-FT | ● | ● | T216R-FT | ● | ● |
| 3.0 | 0.08 | T216L-FT-R08 | ● | ● | T216R-FT-R08 | ● | ● |



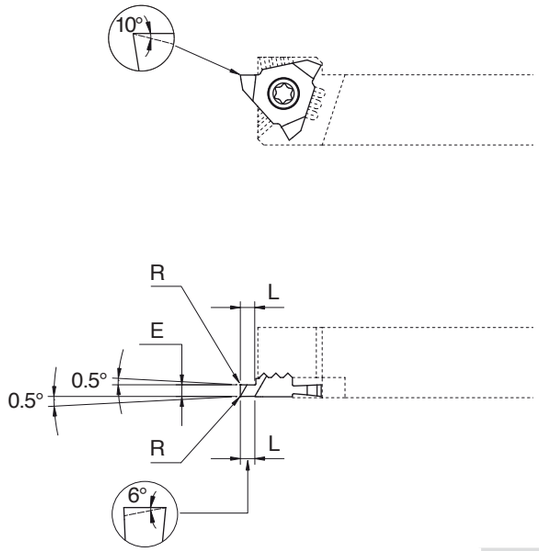


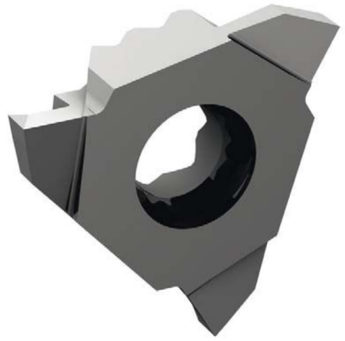


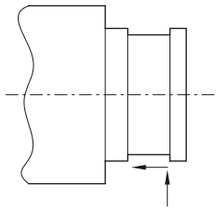


| E | L | R | Art. N° | HTA | HN (µx10) | Art. N° | HTA | HN (µx10) |
|---|---|---|---|---|---|---|---|---|
| 0.5 | 1.5 | 0.03 | T216L-GT050 | ● | ● | T216R-GT050 | ● | ● |
| 1.0 | 2.5 | 0.03 | T216L-GT100 | ● | ● | T216R-GT100 | ● | ● |
| 1.0 | 2.5 | 0.08 | T216L-GT100-R08 | ● | ● | T216R-GT100-R08 | ● | ● |
| 1.5 | 2.5 | 0.03 | T216L-GT150 | ● | ● | T216R-GT150 | ● | ● |
| 1.5 | 2.5 | 0.08 | T216L-GT150-R08 | ● | ● | T216R-GT150-R08 | ● | ● |
| 1.5 | 2.5 | 0.15 | T216L-GT150-R15 | ● | ● | T216R-GT150-R15 | ● | ● |
| 2.0 | 2.5 | 0.03 | T216L-GT200 | ● | ● | T216R-GT200 | ● | ● |
| 2.0 | 2.5 | 0.08 | T216L-GT200-R08 | ● | ● | T216R-GT200-R08 | ● | ● |
| 2.0 | 2.5 | 0.15 | T216L-GT200-R15 | ● | ● | T216R-GT200-R15 | ● | ● |
| 2.5 | 2.5 | 0.15 | T216L-GT250-R15 | ● | ● | T216R-GT250-R15 | ● | ● |



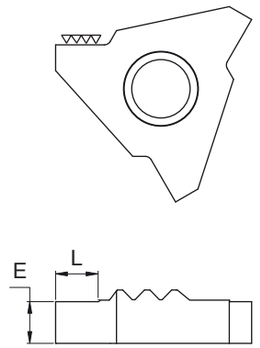





| | | | L | | | R | | |
|---|---|---|---|---|---|---|---|---|
| E | L | R | Art. N° | HTA | HN (µk10) | Art. N° | HTA | HN (µk10) |
| 1.0 | 2.5 | 0.03 | T216L-GTX100 | ● | ● | T216R-GTX100 | ● | ● |
| 1.0 | 2.5 | 0.08 | T216L-GTX100-R08 | ● | ● | T216R-GTX100-R08 | ● | ● |
| 1.5 | 2.5 | 0.03 | T216L-GTX150 | ● | ● | T216R-GTX150 | ● | ● |
| 1.5 | 2.5 | 0.08 | T216L-GTX150-R08 | ● | ● | T216R-GTX150-R08 | ● | ● |
| 1.5 | 2.5 | 0.15 | T216L-GTX150-R15 | ● | ● | T216R-GTX150-R15 | ● | ● |
| 2.0 | 2.5 | 0.03 | T216L-GTX200 | ● | ● | T216R-GTX200 | ● | ● |
| 2.0 | 2.5 | 0.08 | T216L-GTX200-R08 | ● | ● | T216R-GTX200-R08 | ● | ● |
| 2.0 | 2.5 | 0.15 | T216L-GTX200-R15 | ● | ● | T216R-GTX200-R15 | ● | ● |
| 2.5 | 2.5 | 0.15 | T216L-GTX250-R15 | ● | ● | T216R-GTX250-R15 | ● | ● |










| | | L | | | R | | |
|---|---|---|---|---|---|---|---|
| E | L | Art. N° | HTA | HN (µk10) | Art. N° | HTA | HN (µk10) |
| ~3 | 3 | T216L-EP | ● | | T216R-EP | ● | |

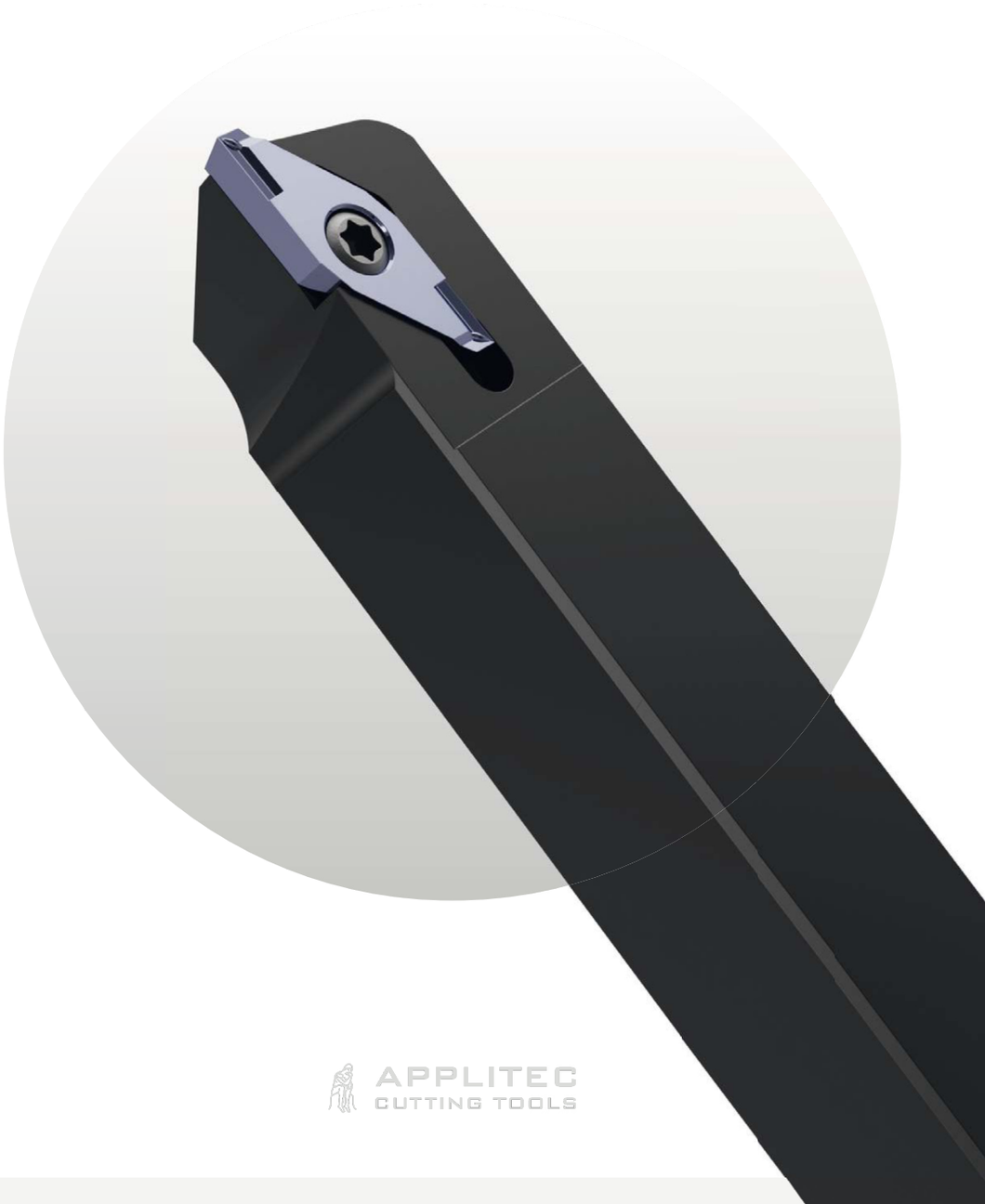
## Accessoires
## Zubehöre
## Accessories

| Porte-outils<br>Halter<br>Holders | | Options | |
|---|---|---|---|
| T216-H... | V-M4X9-T15 | C-T15 | SET-NM3.0-TX15 |

Recommandation de serrage
Drehmoment Empfehlung
Clamping recommendation

3.0 Nm

# TURN-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide >8.03

Infos et avantages
Infos und Vorteile
Infos and advantages >8.05

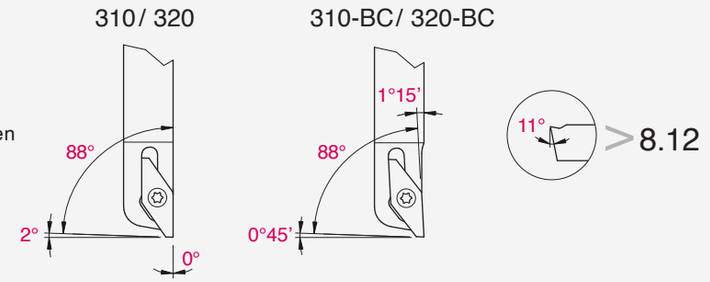
Conseils d'utilisation
Anwendungsempfehlungen
Application recommendations >8.06

Nuances
Sorten
Grades >8.07

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data >8.11

88°

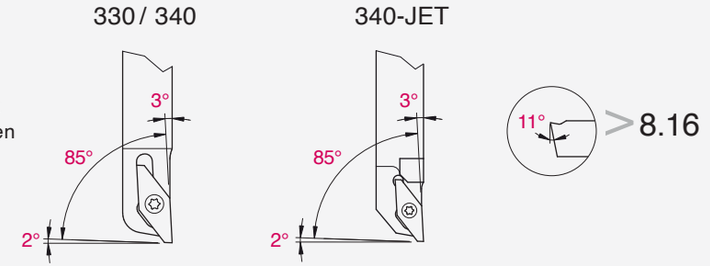
Tournage avant
Vorwärts drehen
Front turning




>8.12

85°

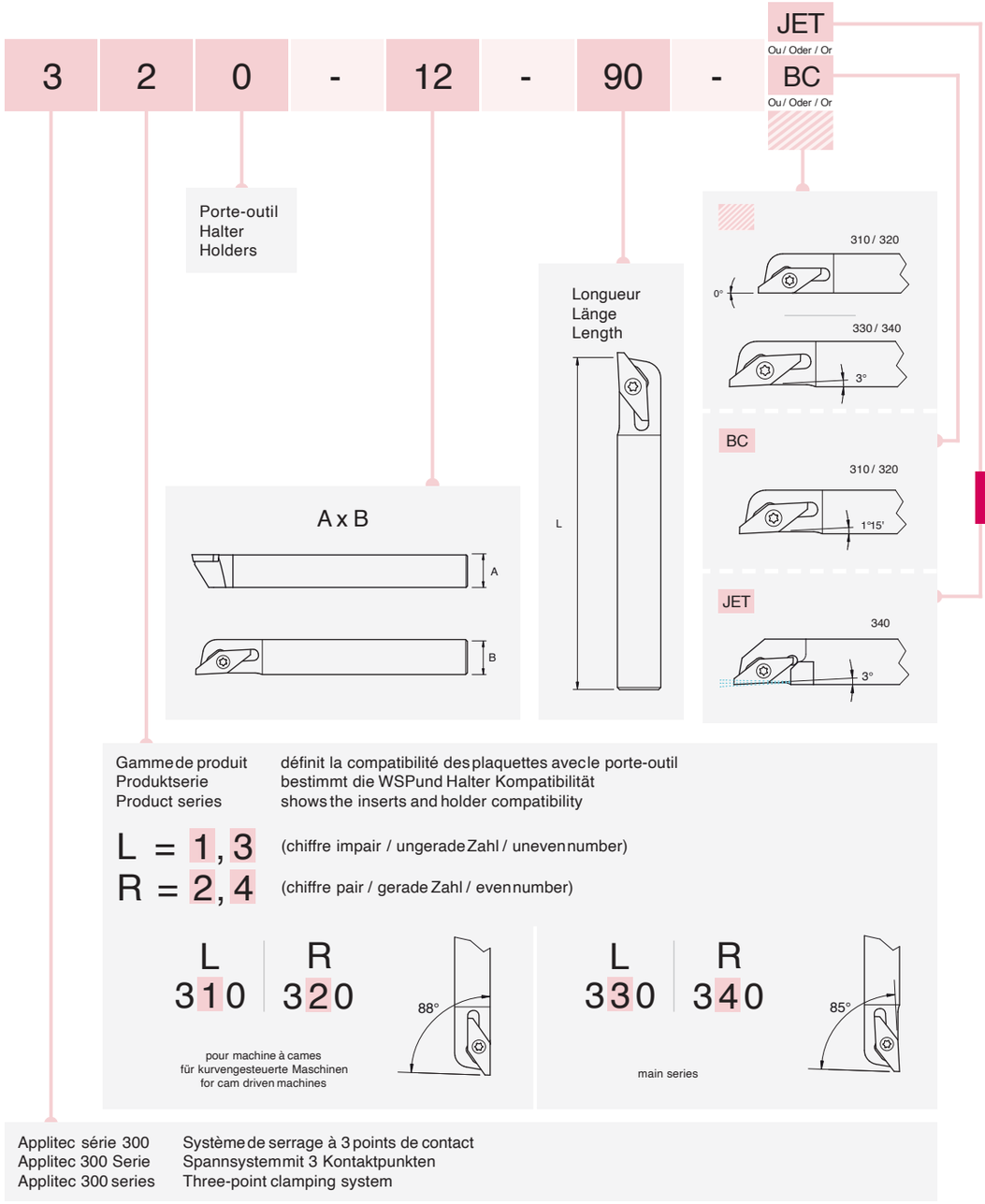
Tournage avant
Vorwärts drehen
Front turning



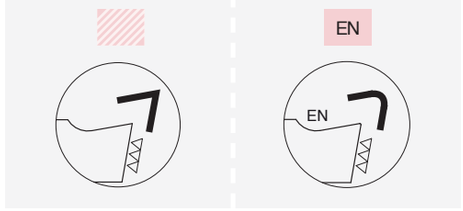

>8.16







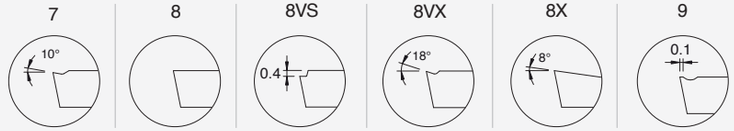
| 3 | 4 | 7 | - | EN | - | R10 | - | TIALX |
|---|---|---|---|---|---|---|---|---|
| | | | | Ou / Oder / Or | | Rayon<br>Radius<br>Radius | | Nuance<br>Sorte<br>Grade |




Géométrie de coupe
Schneidgeometrie
Cutting geometry

brise-copeau
Spanbrecher
chip breaker

particularités
Sondereigenschaften
special features



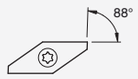

Gamme de produit
Produktserie
Product series

définit la compatibilité des plaquettes avec le porte-outil
bestimmt die WSP und Halter Kompatibilität
shows the inserts and holder compatibility

L = 1, 3 (chiffre impair / ungerade Zahl / uneven number)

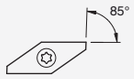
R = 2, 4 (chiffre pair / gerade Zahl / even number)

| L | R |
|---|---|
| 310 | 320 |




pour machine à cames
für kurvengesteuerte Maschinen
for cam driven machines

| L | R |
|---|---|
| 330 | 340 |



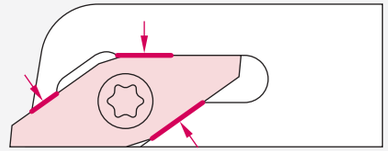

main series

Applitec série 300
Applitec 300 Serie
Applitec 300 series

Système de serrage à 3 points de contact
Spannsystem mit 3 Kontaktpunkten
Three-point clamping system

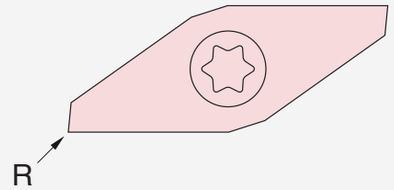
## 3 contact points

Pour de meilleures performances
Für bessere Leistung
For better performance



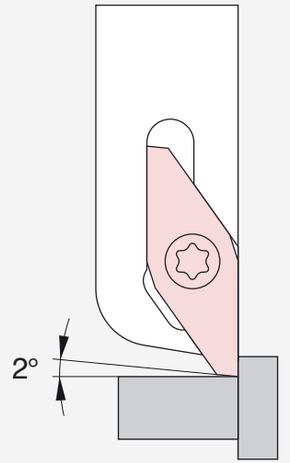
## R min = 0

Disponible avec et sans rayon
Verfügbar mit und ohne Radius
Available with and without radius




## Wiper effect

Pour un meilleur état de surface
Für eine bessere Oberflächengüte
For a better surface finish

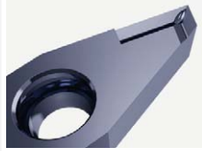


| Géométries de coupe<br>Spanformgeometrien<br>Cutting geometry | | P<br>Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P<br>Acier<br>Stahl<br>Steel | M<br>Acier inoxydable<br>Rostfreistahl<br>Stainless steel | N<br>Aluminium | N<br>Laiton, bronze<br>Messing, Bronze<br>Brass, bronze | N<br>Cuivre<br>Kupfer<br>Copper | S<br>Titane<br>Titane<br>Titanium | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | ★ 1er choix<br>1. Wahl<br>1st choice |
| | | | | | | | | | ☆ Recommandé<br>Empfohlen<br>Recommended |
| | | | | | | | | | ✓ Pour pièces fragiles de très petits diamètres<br>Für zerbrechliche Teile mit sehr kleinen Durchmessern<br>For fragile and very small work pieces |
|  | 3_7 | ★ | ★ | ★ | ★ | | ★ | ☆ | Géométrie universelle, très bonne maîtrise du copeau<br>Allgemeine Geometrie, sehr gute Spankontrolle<br>All-round insert with efficient chip control |
|  | 3_7-EN | ☆ | ★ | ☆ | | | | | Arête renforcée (augmente l'effort de coupe)<br>Verstärkte Schneidkante (Schneidkrafterhöhung)<br>Reinforced cutting edge (increases cutting force)<br>f min: 0.02mm/U |
|  | 3_8 | ✓ | ✓ | ✓ | | ★ | | | Géométrie plate classique<br>Standard flache Geometrie<br>Standard flat geometry |
|  | 3_8VS | ☆ | | ☆ | ✓ | | ✓ | ✓ | Brise-copeau pour usinage léger en finition<br>Spanbrecher für leichte Schlichtbearbeitung<br>Chip-breaker for light finishing operation |
|  | 3_8VX | ★ | ★ | ★ | ★ | | ★ | ★ | Très bonne maîtrise du copeau<br>Sehr gute Spankontrolle<br>Very efficient chip control |
|  | 3_8X | ★ | ★ | ★ | ☆ | | ☆ | ★ | Coupe positive traditionnelle<br>Standard positive Geometrie<br>Standard positive geometry |
|  | 3_9 | ☆ | ☆ | ☆ | | ☆ | | | Témoin plat sur la coupe pour réduire les vibrations<br>Vibrationsreduzierung durch einer Flachfase und der Schneidkante<br>Vibration reduction through flat ended cutting edge |





## µK20 — TiAlN



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF — F — **M** — E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- excellente nuance universelle
- 1er choix pour l'usinage des aciers, aciers inoxydables et alliages de titane
- très bonne résistance à la température

- beste Universalsorte
- erste Wahl für die Bearbeitung von Stahl, rostfreien Stähle und Titanlegierungen
- sehr gute Warmfestigkeit

- best universal grade
- first choice for steel, stainless steel and titanium alloys machining
- very good heat resistance

## µK20 — TiAlX



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF — **F** — M — E

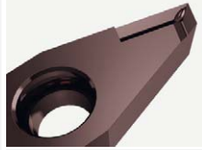
P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance très résistante à l'usure et à la température, recommandée pour l'usinage des matières suivantes: inox 304, 316L, 317L, 904, Phynox
- aciers alliés contenant : chrome nickel, vanadium, molybdène, …

- sehr verschleissfeste und temperaturbeständige Sorte, für folgende Materialien empfohlen: Inox 304, 316L, 317L, 904, Phynox
- legierter Stahl enthaltend: Chrom-Nickel, Vanadium, Molybdän, …

- very wear and high temperature resistant grade, recommended for following material : Inox 304, 316L, 317L, 904, Phynox
- alloy steel containing: Chrome-nickel, Vanadium, Molybdenum, …

## µK20 — ST



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF — F — **M** — E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance résistante à la température, destinée à l'usinage des matières suivantes: Inox, titane allié, alliages à base de nickel, chrome cobalt, les matières avec une dureté supérieure à >50 HRC

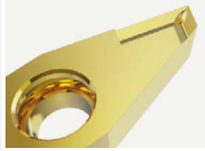
- verschleissfeste und temperaturbeständige Sorte, für folgende Materialien empfohlen: Inox, legiertes Titan, Nickellegierungen, Chrom-Kobalt, Materialien härter als >50 HRC

- wear and temperature-resistant grade, recommended for following materials: Inox, titanium alloys, nickel-based alloys, chrome-cobalt, and materials harder than >50 HRC

TURN-Line
Nuances
Sorten
Grades

µK20

## TiN



K20

µK20 + revêtement PVD
µK20 + PVD Beschichtung
µK20 + PVD coating

TF F **M** E

P ★★★★☆
M ★★★★☆
N ★★★☆☆
S ☆☆☆☆☆

- nuance pour l'usinage des matières peu résistantes qui créent des arêtes rapportées
- très faible coefficient de frottement
- à éviter pour l'usinage du titane

- Sorte für die Bearbeitung von weichen Werkstoffen mit Tendenz zur Bildung von Aufbauschneiden
- sehr geringer Reibwert
- bei der Bearbeitung von Titan zu vermeiden

- grade for the machining of low resistance materials which causes edge build-up
- very low friction ratio
- not suitable for titanium machining

µK20

## N



K20

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

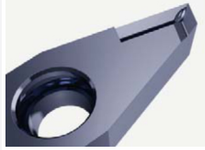
- supporte les coupes interrompues et autres conditions d'usinage défavorables

- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen geeignet

- suitable for interrupted cut and other unfavourable machining conditions

µK10

## HTA



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance très résistante à l'usure
- pour l'usinage en finition dans des conditions favorables des aciers, aciers inoxydables et alliages de titane

- sehr verschleissfeste Sorte
- für die Feinbearbeitung von Stähle, rostfreien Stähle und Titanlegierungen bei guten Bearbeitungsbedingungen

- very wear resistant grade
- for light machining of steel, stainless steel and titanium alloys under favourable machining conditions

µK10

## HTAX



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF **F** M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

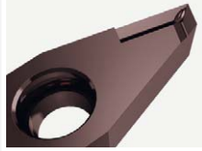
- nuance très résistante à l'usure et à la température, pour l'usinage en finition avec faible avance de petites pièces. Recommandée pour l'usinage des matières suivantes: inox 304, 316L, 317L, 904, Phynox
- aciers alliés contenant : chrome nickel, vanadium, molybdène, …

- sehr verschleissfeste und temperaturbeständige Sorte, für Feinbearbeitung von kleinen Teilen mit geringer Vorschub. Für folgende Materialien empfohlen: Inox 304, 316L, 317L, 904, Phynox
- legierter Stahl enthaltend: Chrom-Nickel, Vanadium, Molybdän, …

- very wear and high temperature resistant grade, for light machining of small parts with low cutting feed. Recommended for following material : Inox 304, 316L, 317L, 904, Phynox
- alloy steel containing: Chromenickel, Vanadium, Molybdenum, …

µK10

## HST



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

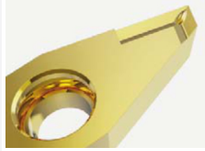
- nuance résistante à la température et à l'usure pour des opérations de finition
- recommandé pour l'usinage des matières suivantes: Inox, titane allié, alliages à base de nickel, chrome cobalt, les matières avec une dureté supérieure à >50 HRC

- verschleissfeste und temperaturbeständige Sorte für Feinbearbeitungen
- für folgende Materialien empfohlen: Inox, legiertes Titan, Nickellegierungen, Chrom-Kobalt, Materialien härter als >50 HRC

- wear- and temperature-resistant grade for finishing operations
- recommended for the following materials: Inox, titanium alloys, nickel-based alloys, chrome-cobalt, and materials harder than >50 HRC

µK10

## HTiN



K10

µK10 + revêtement PVD
µK10 + PVD Beschichtung
µK10 + PVD coating

TF — F — M — E

P ★★★★☆
M ★★★★☆
N ★★★☆☆
S ☆☆☆☆☆

- nuance pour l'usinage en finition des matières peu résistantes qui créent des arêtes rapportées
- très faible coefficient de frottement
- à éviter pour l'usinage du titane

- Sorte für die Feinbearbeitung von weichen Werkstoffen mit Tendenz zur Bildung von Aufbauschneiden
- sehr geringer Reibwert
- für die Bearbeitung von Titan nicht geeignet

- grade for light machining of low resistance materials which causes edge build-up
- very low friction ratio
- not suitable for titanium machining

µK10

## HN



K10

Non revêtu
Unbeschichtet
Uncoated

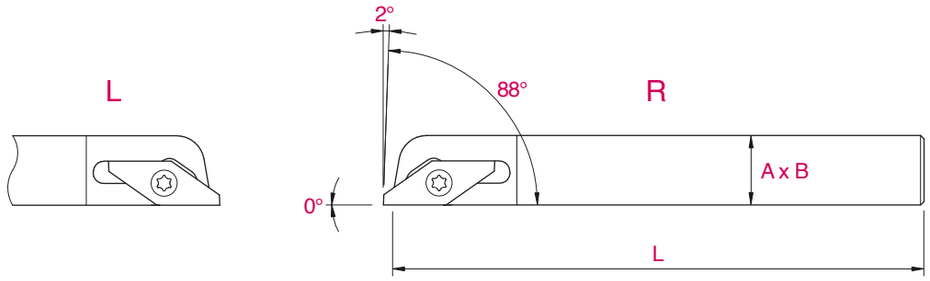
P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

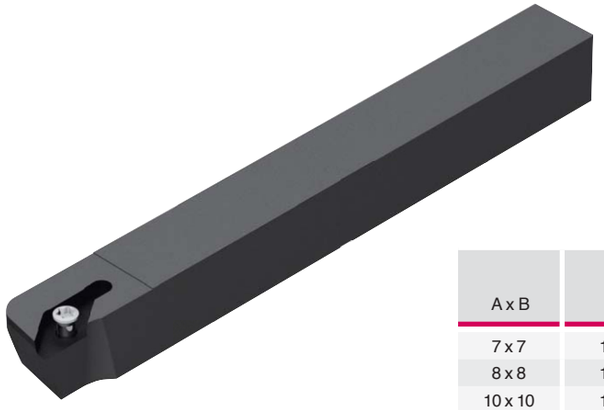
- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du titane faiblement allié
- déconseillé en cas de coupe interrompue et autres conditions d'usinage défavorables

- verschleissfeste Feinkornsorte
- für die Bearbeitung von niedrig legiertem Titan empfehlenswert
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen nicht geeignet

- wear resistant micro-grain grade
- suitable for the machining of low alloyed titanium
- not suitable for interrupted cut and other unfavourable machining conditions

| Matière<br>Werkstoff<br>Material | | | Tournage<br>Drehen<br>Turning<br>VC<br>(m/min) | Prof. depasse<br>Schnitttiefe<br>Depth of cut<br>(mm) | Avance<br>Vorschub<br>Feed<br>(mm/U) |
|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | | P | 120 - 200 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 |
| Acier<br>Stahl<br>Steel | < 600 N/mm² | P | 80 - 160 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.15<br>0.05 - 0.25 |
| Acier<br>Stahl<br>Steel | < 800 N/mm² | P | 60 - 120 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.10<br>0.05 - 0.20 |
| Acier<br>Stahl<br>Steel | > 800 N/mm² | P | 50 - 100 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | | M | 60 - 120 | 0.05 - 1.0<br>1.0 - 3.0 | 0.01 - 0.08<br>0.05 - 0.15 |
| Aluminium Si <12% | | N | 200 - 1000 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 |
| Aluminium Si >12% | | N | 180 - 800 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.40 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | | N | 100 - 500 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.20<br>0.05 - 0.35 |
| Titane<br>Titan<br>Titanium | | S | 30 - 70 | 0.05 - 1.0<br>1.0 - 4.0 | 0.01 - 0.08<br>0.05 - 0.15 |



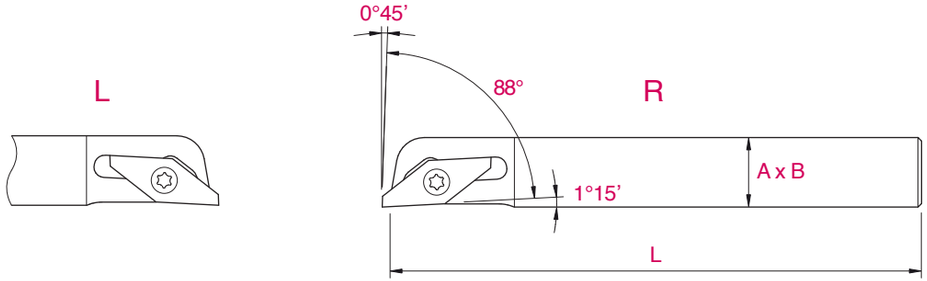



| A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|
| 7 x 7 | 115 | 310-7 | 320-7 |
| 8 x 8 | 115 | 310-8 | 320-8 |
| 10 x 10 | 115 | 310-10 | 320-10 |
| 10 x 10 | 140 | - | 320-10-140 |
| 12 x 12 | 115 | 310-12 | 320-12 |
| 12 x 12 | 90 | 310-12-90 | 320-12-90 |
| 12 x 12 | 140 | 310-12-140 | 320-12-140 |
| 12.7 x 12.7 | 140 | 310-12.7 | 320-12.7 |
| 16 x 16 | 100 | 310-16 | 320-16 |
| 16 x 16 | 140 | 310-16-140 | 320-16-140 |
| 20 x 20 | 120 | 310-20 | 320-20 |

Chaque support est livré avec une ou plusieurs vis. Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert. Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws. The keys must be ordered separately.



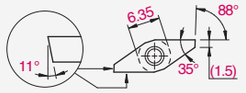




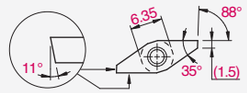

| A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|
| 7 x 7 | 115 | 310-7-BC | 320-7-BC |
| 8 x 8 | 115 | 310-8-BC | 320-8-BC |
| 10 x 10 | 115 | 310-10-BC | 320-10-BC |
| 10 x 10 | 140 | - | 320-10-140-BC |
| 12 x 12 | 115 | 310-12-BC | 320-12-BC |
| 12 x 12 | 90 | 310-12-90-BC | 320-12-90-BC |
| 12 x 12 | 140 | 310-12-140-BC | 320-12-140-BC |
| 12.7 x 12.7 | 140 | 310-12.7-BC | 320-12.7-BC |
| 16 x 16 | 100 | 310-16-BC | 320-16-BC |
| 16 x 16 | 140 | 310-16-140-BC | 320-16-140-BC |
| 20 x 20 | 120 | 310-20-BC | 320-20-BC |

Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.
Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.
Each holder is supplied with one or more screws.
The keys must be ordered separately.

| Porte-outils / Halter / Holders | Serrage standard (A) / Standard Spannsystem (A) / Standard clamping system (A) | Option |
|---|---|---|
| 310-7 / 320-7 | V-M2.5X6.5-T8 | C-T8 |
| 310-8 - 310-20 | V-M2.5X7.8-T8 | |
| 320-8 - 320-20 | | |




Tournage avant
Vorwärts drehen
Front turning
88°



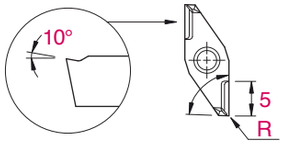

TURN-Line

310 / 320

## 317 / 327





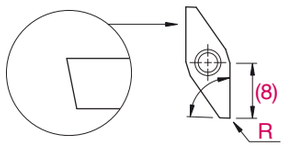



| R | L Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) | R Art. N° | TiAlN | TiN | N (µK20) | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 317 | ● | ● | ● | ● | ● | ● | 327 | ● | ● | ● | ● | ● | ● |
| 0.03 | 317-R03 | ● | ● | ● | ● | ● | ● | 327-R03 | ● | ● | ● | ● | ● | ● |
| 0.08 | 317-R08 | ● | ● | ● | ● | ● | ● | 327-R08 | ● | ● | ● | ● | ● | ● |
| 0.10 | 317-R10 | ● | ● | ● | ● | ● | ● | 327-R10 | ● | ● | ● | ● | ● | ● |
| 0.20 | 317-R20 | ● | ● | ● | ● | ● | ● | 327-R20 | ● | ● | ● | ● | ● | ● |

## 318 / 328





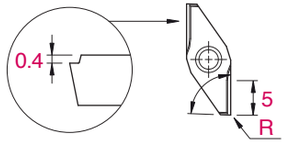



| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 318 | ● | ● | ● | 328 | ● | ● | ● |
| 0.05 | 318-R05 | ● | ● | ● | 328-R05 | ● | ● | ● |
| 0.10 | 318-R10 | ● | ● | ● | 328-R10 | ● | ● | ● |
| 0.20 | 318-R20 | ● | ● | ● | 328-R20 | ● | ● | ● |
| 0.40 | 318-R40 | ● | ● | ● | 328-R40 | ● | ● | ● |

## 318VS / 328VS





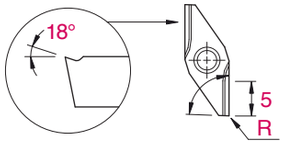



| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 318VS | ● | ● | ● | 328VS | ● | ● | ● |
| 0.10 | 318VS-R10 | ● | ● | ● | 328VS-R10 | ● | ● | ● |

## 318VX / 328VX





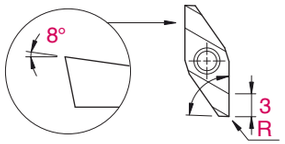



| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 318VX | ● | ● | ● | 328VX | ● | ● | ● |
| 0.05 | 318VX-R05 | ● | ● | ● | 328VX-R05 | ● | ● | ● |
| 0.10 | 318VX-R10 | ● | ● | ● | 328VX-R10 | ● | ● | ● |
| 0.20 | - | | | | 328VX-R20 | ● | ● | ● |
| 0.40 | - | | | | 328VX-R40 | ● | | ● |

## 318X / 328X





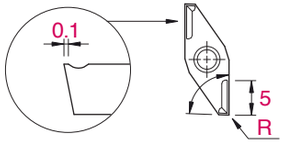



| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 318X | ● | ● | ● | 328X | ● | ● | ● |
| 0.10 | 318X-R10 | ● | ● | ● | 328X-R10 | ● | ● | ● |

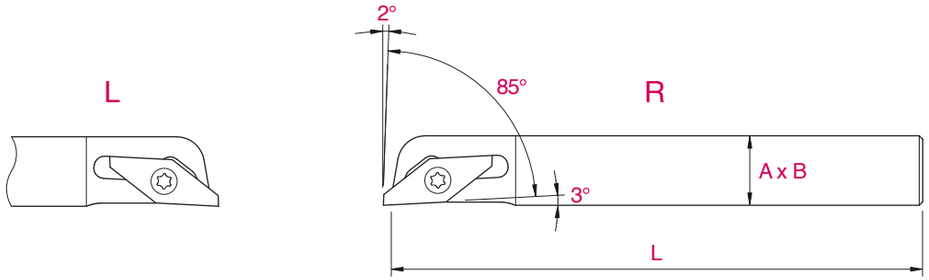
## 319 / 329

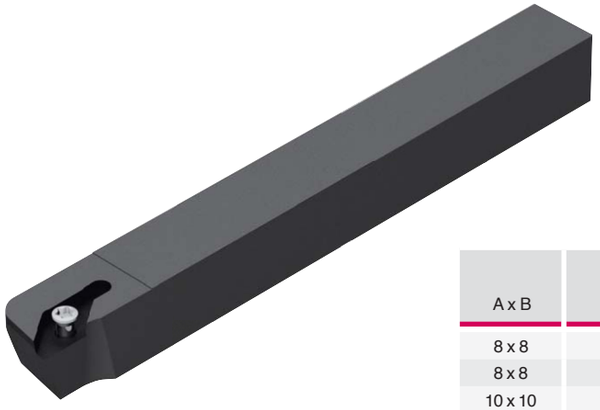







| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 319 | ● | ● | ● | 329 | ● | ● | ● |
| 0.10 | 319-R10 | ● | ● | ● | 329-R10 | ● | ● | ● |
| 0.20 | 319-R20 | ● | ● | ● | 329-R20 | ● | ● | ● |



| A x B | L | L<br>Art. N° | R<br>Art. N° |
|---|---|---|---|
| 8 x 8 | 90 | - | 340-8-90 |
| 8 x 8 | 115 | 330-8 | 340-8 |
| 10 x 10 | 115 | 330-10 | 340-10 |
| 10 x 10 | 140 | - | 340-10-140 |
| 12 x 12 | 115 | 330-12 | 340-12 |
| 12 x 12 | 90 | 330-12-90 | 340-12-90 |
| 12 x 12 | 140 | 330-12-140 | 340-12-140 |
| 12.7 x 12.7 | 140 | 330-12.7 | 340-12.7 |
| 16 x 16 | 100 | 330-16 | 340-16 |
| 16 x 16 | 140 | 330-16-140 | 340-16-140 |
| 20 x 20 | 120 | 330-20 | 340-20 |

| Porte-outils<br>Halter<br>Holders | Serrage standard (A)<br>Standard Spannsystem (A)<br>Standard clamping system (A) | Option |
|---|---|---|
| 330 | V-M2.5X7.8-T8 | C-T8 |
| 340 | | |

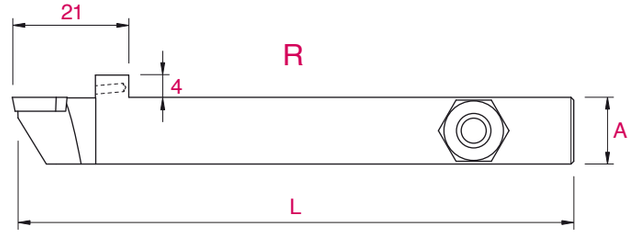
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

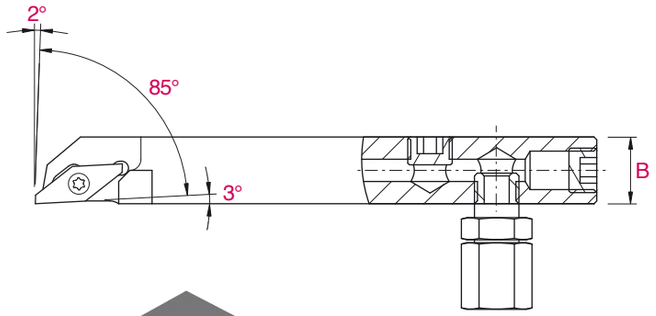
Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.









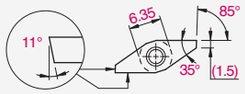

| A x B | L | R<br>Art. N° |
|---|---|---|
| 8 x 10 | 100 | 340-0810-JET |
| 10 x 12 | 100 | 340-1012-JET |
| 12 x 12 | 100 | 340-12-JET |
| 12.7 x 12.7 | 100 | 340-12.7-JET |
| 16 x 16 | 100 | 340-16-JET |
| 20 x 20 | 100 | 340-20-JET |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | | Option | |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| 340-0810-JET | J-M5-D5 | JC-M5-D5 | JB-M5 |
| 340-JET | J-M8X1-D6 | – | JB-M8X1 |

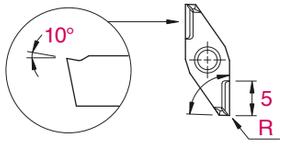
Chaque support est livré avec une ou plusieurs vis.
Les clés sont à commander séparément.

Jeder Halter wird mit einer oder mehreren Schrauben geliefert.
Die Schlüssel sind separat zu bestellen.

Each holder is supplied with one or more screws.
The keys must be ordered separately.




## 337 / 347







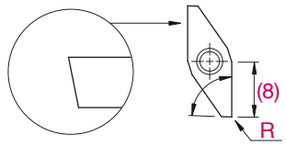






| R | L Art. N° | TiAlN | TiAlX | TiN | N (µK20) | HTA | HTAX | HTiN | HN (µK10) | R Art. N° | ST | TiAlN | TiAlX | TiN | N (µK20) | HST | HTA | HTAX | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 337 | ● | | ● | ● | ● | | ● | ● | 347 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.03 | 337-R03 | ● | | ● | ● | ● | | ● | ● | 347-R03 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | 337-R08 | ● | | ● | ● | ● | | ● | ● | 347-R08 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.10 | 337-R10 | ● | | ● | ● | ● | | ● | ● | 347-R10 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.20 | 337-R20 | ● | | ● | ● | ● | | ● | ● | 347-R20 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.35 | - | | | | | | | | | 347-R35 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0 | 337-EN | ● | | ● | ● | | | | | 347-EN | ● | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.03 | 337-EN-R03 | ● | | | ● | ● | | | ● | 347-EN-R03 | ● | ● | ● | | ● | ● | ● | ● | | ● |
| 0.08 | 337-EN-R08 | ● | | | ● | | | | | 347-EN-R08 | ● | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.10 | 337-EN-R10 | ● | | ● | ● | | | | | 347-EN-R10 | ● | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.20 | 337-EN-R20 | ● | | | ● | | | | | 347-EN-R20 | ● | ● | ● | ● | ● | ● | ● | ● | | ● |
| 0.35 | - | | | | | | | | | 347-EN-R35 | ● | | ● | ● | ● | ● | ● | ● | | ● |

## 338 / 348

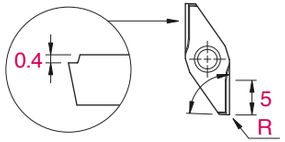







| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 338 | ● | ● | ● | 348 | ● | ● | ● |
| 0.05 | 338-R05 | ● | ● | ● | 348-R05 | ● | ● | ● |
| 0.10 | 338-R10 | ● | ● | ● | 348-R10 | ● | ● | ● |
| 0.20 | 338-R20 | ● | ● | ● | 348-R20 | ● | ● | ● |
| 0.40 | 338-R40 | ● | ● | ● | 348-R40 | ● | ● | ● |

## 338VS / 348VS



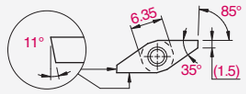




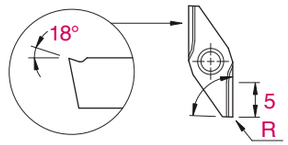

| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 338VS | ● | ● | ● | 348VS | ● | ● | ● |
| 0.10 | 338VS-R10 | ● | ● | ● | 348VS-R10 | ● | ● | ● |








## 338VX / 348VX

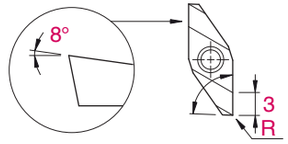







| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 338VX | ● | ● | ● | 348VX | ● | ● | ● |
| 0.05 | 338VX-R05 | ● | ● | ● | 348VX-R05 | ● | ● | ● |
| 0.10 | 338VX-R10 | ● | ● | ● | 348VX-R10 | ● | ● | ● |

## 338X / 348X

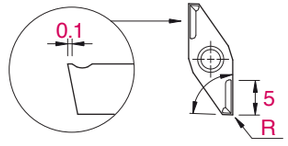







| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 338X | ● | ● | ● | 348X | ● | ● | ● |
| 0.10 | 338X-R10 | ● | ● | ● | 348X-R10 | ● | ● | ● |

## 339 / 349

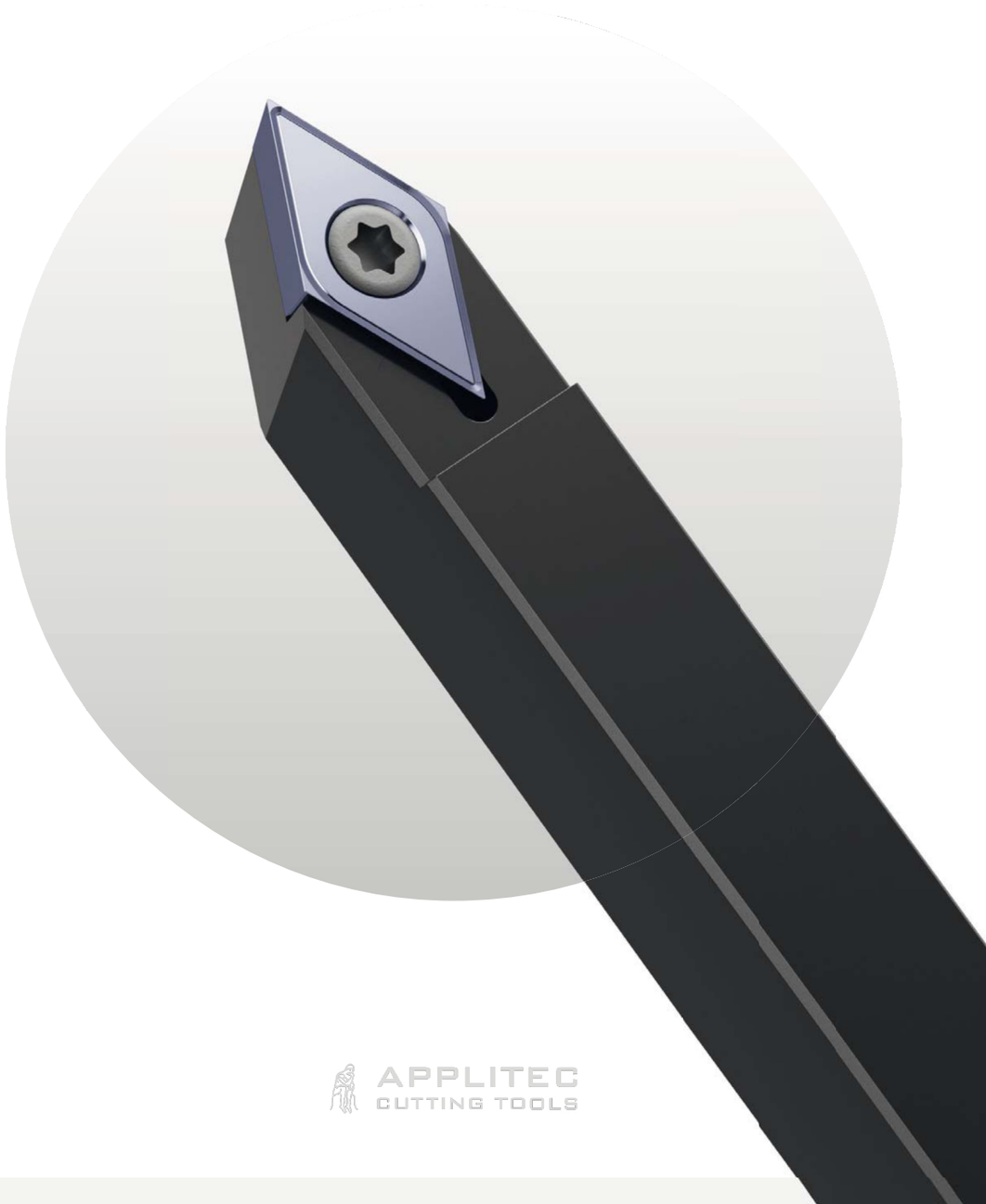







| R | L Art. N° | HTA | HTiN | HN (µK10) | R Art. N° | HTA | HTiN | HN (µK10) |
|---|---|---|---|---|---|---|---|---|
| 0 | 339 | ● | ● | ● | 349 | ● | ● | ● |
| 0.10 | 339-R10 | ● | ● | ● | 349-R10 | ● | ● | ● |
| 0.20 | 339-R20 | ● | ● | ● | 349-R20 | ● | ● | ● |

# ISO-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide

| S | D | J | C | R | – | 12 | 12 | G | – | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| D | C | G | T | – | 11 | T3 | 04 | – | FN | – |

> 9.04

Conseils d'utilisation
Anwendungsempfehlungen
Application recommendations

> 9.07

Géométries de coupe
Spanformgeometrien
Cutting geometries



> 9.08

Nuances
Sorten
Grades

PVD | CVD | CERMET

> 9.14

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

| P | M | N | S |
|---|---|---|---|
| VC(m/min) | | F (mm/U) | |

> 9.16



ISO-Line

Index

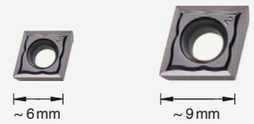
80°

Porte-outils
Halter
Holders




> 9.20

Plaquettes
WSP
Inserts




> 9.26

55°

Porte-outils
Halter
Holders




> 9.34

Plaquettes
WSP
Inserts




> 9.45

35°

Porte-outils
Halter
Holders




> 9.53

Plaquettes
WSP
Inserts




> 9.62

Pièces de rechange et accessoires
Ersatzteile und Zubehör
Spare parts and accessories



> 9.71

ISO-Line
Codification
Kodifizierung
Coding guide

| Méthode de serrage<br>Klemmsystem<br>Clamping system | Forme de la plaquette<br>Plattenform<br>Insert shape | Géométrie du porte-outil<br>Halterform<br>Holder geometry | Angle de dépouille de la plaquette<br>WSP-Freiwinkel<br>Insert clearance angle | Direction de coupe<br>Schneidrichtung<br>Cut direction | | Hauteur du porte-outil<br>Halter Höhe<br>Holder height | Largeur du porte-outil<br>Halter Breite<br>Holder width | Longueur du porte-outil<br>Halter Länge<br>Holder length | | Dimension de la plaquette (L)<br>WSP Grösse (L)<br>Insert size (L) |
|---|---|---|---|---|---|---|---|---|---|---|
| S | D | J | C | R | – | 12 | 12 | G | – | 11 |

R L N

L [mm]

C = 7°

A x B (or Ø)[mm]
08 x 08
10 x 10
12 x 12
12.7 x 12.7 (1/2 in)
16 x 16
20 x 20
Ø: D10 / D20 / D25.4 (Ø1 in)

Length: [mm]
F = 75
G = 90
J = 110
X = Special

α:
A = 0°
J = 3°
L = 5°
H = 17.5°
X = 27.5°

U
U = 3°
Ø

C = 80°
D = 55°
V = 35°

S = vis
Schraube
screw

Compatibilité porte-outil - plaquette
WSP- Halter Kompatibilität
Holder - insert compatibility

| S | D | J | C | R | – | 12 | 12 | G | – | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| D | C | G | T | – | 11 | T3 | 04 | – | FN | – |

| Matière<br>Material<br>Material | Diamètre queue<br>Schaft<br>Shank | Longueur du porte-outil<br>Halter Länge<br>Holder length | | Méthode de serrage<br>Klemmsystem<br>Clamping system | Forme de la plaquette<br>Plattenform<br>Insert shape | Géométrie du porte-outil<br>Halterform<br>Holder geometry | Angle de dépouille de la plaquette<br>WSP-Freiwinkel<br>Insert clearance angle | Direction de coupe<br>Schneidrichtung<br>Cut direction | | Dimension de la plaquette (L)<br>WSP Grösse (L)<br>Insert size (L) |
|---|---|---|---|---|---|---|---|---|---|---|
| A | 12 | K | – | S | C | L | C | R | – | 06 |

Longueur
Länge
Length
F = 80
H = 100
J = 110
K = 125
M = 150
Q = 180

125

Øqueue
Schaft Ø
Shank Ø

12

L R

C = 7°

L = 95°
Q = 107.5°
U = 93°

95°

A = acier avec lubrification
Stahl mit Kühlung
Steel with coolant

E = carbure avec lubrification
Harmetall mit Kühlung
Carbide with coolant

C = 80°
D = 55°
V = 35°

S = vis
Schraube
screw

L

| Forme de la plaquette / Plattenform / Insert shape | Angle de dépouille de la plaquette / WSP-Freiwinkel / Insert clearance angle | Classe de tolérance / ToleranzKlasse / Tolerance class | Brise-copeau / Spanbrecher / Chip breaker | | Dimension de la plaquette (L) / WSP Grösse (L) / Insert size (L) | Epaisseur de la plaquette (E) / WSP Dicke (E) / Insert thickness (E) | Rayon de pointe de la plaquette / WSP Eckenradius / Insert corner radius | | Exécution d'arête et direction de coupe / Schneidkante Ausführung und Schneidrichtung / Edge type and cutting direction | | Géométrie de coupe / Spanformgeometrie / Cutting geometry |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | C | G | T | – | 11 | T3 | 04 | – | FN | – | X8 |

T



W



R:
003 = 0.03 mm
005 = 0.05 mm
008 = 0.08 mm
01 = 0.1 mm
015 = 0.15 mm
02 = 0.2 mm
04 = 0.4 mm
08 = 0.8 mm

R





cf.: Géométrie de coupe
Spanformgeometrie
Cutting geometry

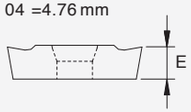
G= ±0.025 mm



M = ±0.05 mm



02 = 2.38 mm
03 = 3.18 mm
T3 = 3.97 mm
04 = 4.76 mm




FN



EN



ENP



FL / FR



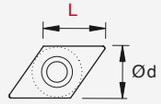
ELP / ERP



C = 7°



L




[mm]

C = 80°



D = 55°



V = 35°



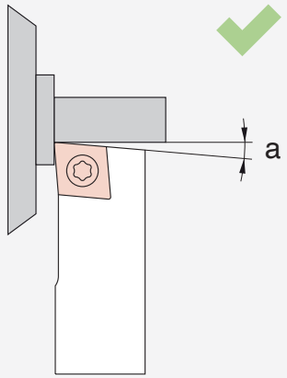
| L | Ød [mm] |
|---|---|
| CC…06<br>DC…07<br>VC…11 | 6.350 |
| VC…13 | 7.940 |
| CC…09<br>DC…11<br>VC…16 | 9.525 |

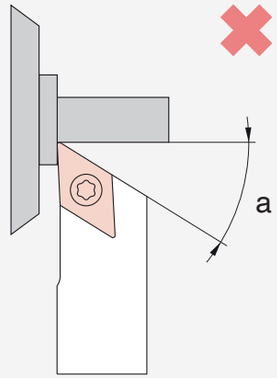
# Better surface finish

pour un meilleur état de surface et une stabilité d'usinage optimale, choisir une géométrie d'outil permettant un angle "a" le plus petit possible

für bessere Oberflächegüte und optimale Bearbeitungsstabilität, muss die Werkzeuggeometrie mit kleinstmöglichem Winkel "a" ausgewählt werden

for a better surface finish and optimal machining stability, choose a tool geometry with angle "a" as small as possible



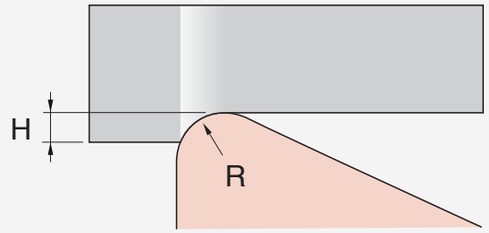

# Proportion

rapport hauteur de passe / rayon d'outil

Verhältnis zwischen Spantiefe und Werkzeugradius

machining depth / tool radius ratio

H min = 0.7 X R
R max = 1.4 X H



Géométries de coupe
Spanformgeometrien
Cutting geometries

G
tolerance class

ISO-Line

Plaquettes en métal dur rectifiées
VHM geschliffene WSP
Carbide ground inserts

## FN-X8

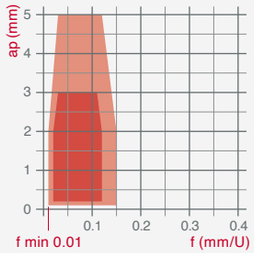
Finishing



8°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished




P ★★★★★
M ★★★★
N ★★★★
S ★★★

CCGT DCGT VCGT

p. 9.26 p. 9.45 p. 9.64

## ENP-X8

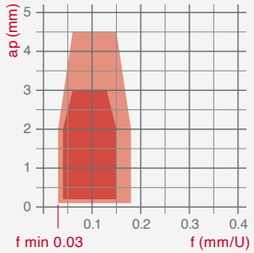
Semi-finishing
Finishing



8°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished




P ★★★★★
M ★★★
N ★★★
S ★★★

CCGT DCGT VCGT

p. 9.26 p. 9.45 p. 9.64

## FN-X17

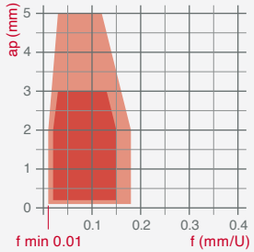
Finishing



17°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished




P ★★★
M ★★★★★
N ★★★★
S ★★★★★

CCGT DCGT VCGT

p. 9.27 p. 9.46 p. 9.65

## ENP-X17

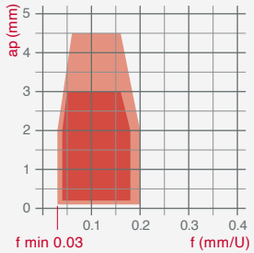
Semi-finishing
Finishing



17°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished



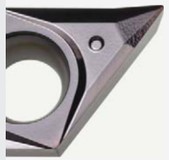

P ★★★
M ★★★★★
N ★★★
S ★★★★

CCGT DCGT VCGT

p. 9.27 p. 9.46 p. 9.65

## FN-X25

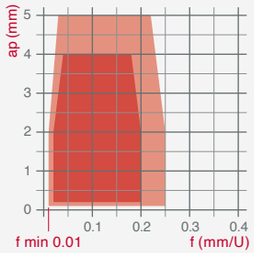
Finishing



25°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished



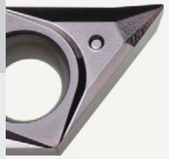

P
M ★★★
N ★★★★★
S ★★★★

CCGT DCGT VCGT

p. 9.28 p. 9.47 p. 9.66

## ENP-X25

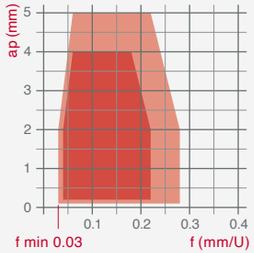
Semi-finishing
Finishing



25°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished



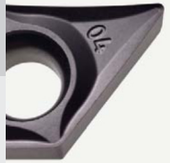

P
M ★★★
N ★★★★★
S ★★★★

CCGT DCGT VCGT

p. 9.28 p. 9.47 p. 9.66

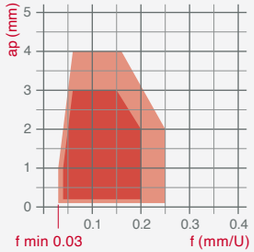
## ENP-X20

Semi-finishing
Finishing



20°

Arête de coupe honée
Schneidkantenverrundung
Honed edge




P
M ★★★★★
N ★★★
S ★★★★★

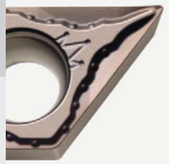
CCGT DCGT VCGT

p. 9.29 p. 9.48 p. 9.67

ISO-Line
Plaquettes en métal dur
VHM-Wendeplatten
Carbide inserts
M
tolerance class
Géométries de coupe
Spanformgeometrien
Cutting geometries

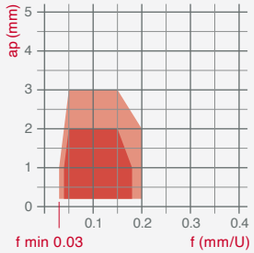
Semi-finishing
Finishing

## EN-XF3



12°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

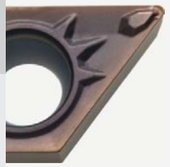



| | |
|---|---|
| P | ★★★★ |
| M | ★★★★★ |
| N | ★★★ |
| S | ★★★ |

CCMT p. 9.30 | DCMT p. 9.49 | VCMT p. 9.68

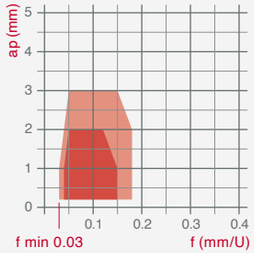
Semi-finishing
Finishing

## EN-XF2



6°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

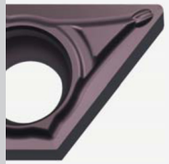



| | |
|---|---|
| P | ★★★★★ |
| M | ★★★ |
| N | |
| S | ★★★ |

CCMT p. 9.30 | DCMT p. 9.49 | VCMT p. 9.68

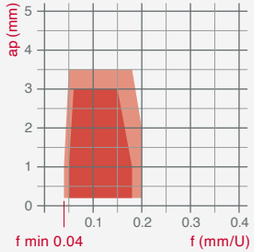
Semi-finishing

## EN-MF2



8°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

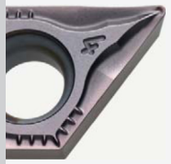



| | |
|---|---|
| P | ★★★★ |
| M | ★★★★ |
| N | ★★★ |
| S | ★★★ |

CCMT p. 9.30 | DCMT p. 9.49

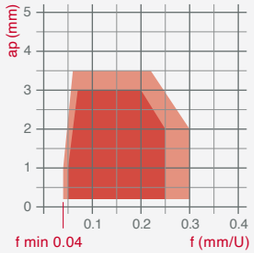
Semi-finishing

## EN-MF



5°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

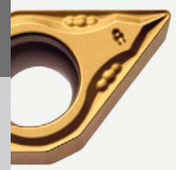



| | |
|---|---|
| P | ★★★★★ |
| M | ★★★ |
| N | |
| S | |

CCMT p. 9.31 | DCMT p. 9.50 | VCMT p. 9.69

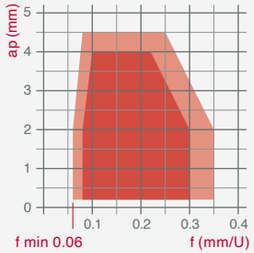
Roughing
Semi-finishing

## EN-HF3



10°

Arête de coupe honée
Schneidkantenverrundung
Honed edge




| | |
|---|---|
| P | ★★★★★ |
| M | ★★★★★ |
| N | |
| S | ★★★ |

CCMT p. 9.31 | DCMT p. 9.50

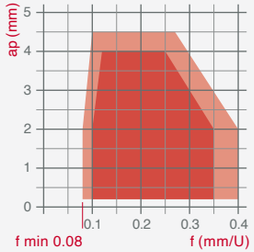
Roughing
Semi-finishing

## EN-HF



12°

Arête de coupe honée
Schneidkantenverrundung
Honed edge




| | |
|---|---|
| P | ★★★★★ |
| M | ★★★★★ |
| N | |
| S | |

CCMT p. 9.31 | DCMT p. 9.50 | VCMT p. 9.69

## FL/FR-X10

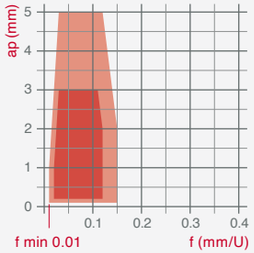
Super-finishing / Finishing



10°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished




P ★★★★
M ★★★★★
N ★★★★
S ★★★★

VCGT

p. 9.62

## ELP/ERP-X10

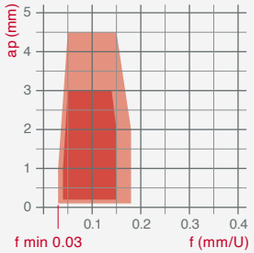
Semi-finishing / Finishing



10°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished




P ★★★★★
M ★★★★
N ★★★
S ★★★

VCGT

p. 9.62

## FN-K18

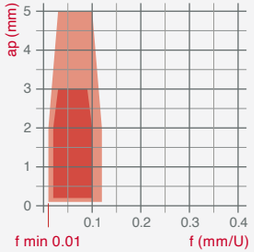
Super-finishing / Finishing



18°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished




P ★★★★
M ★★★★★
N ★★★★
S ★★★★

VCGT

p. 9.63

## FN-0

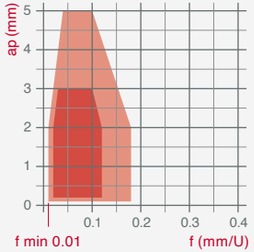
Finishing



0°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished




P ★★★
M
N ★★★
S

VCGW

p. 9.63





## FN-X8 CERMET

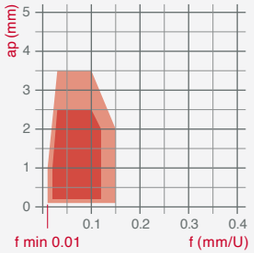
Finishing



8°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished




P ★★★★★
M ★★★
N
S

CCGT DCGT VCGT

p. 9.32 p. 9.51 p. 9.64

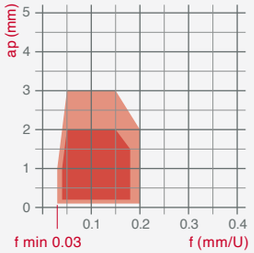
## ENP-KX CERMET

Semi-finishing / Finishing



8°

Arête de coupe honée
Schneidkantenverrundung
Honed edge




P ★★★★★
M ★★★
N
S

CCGT DCGT

p. 9.32 p. 9.51

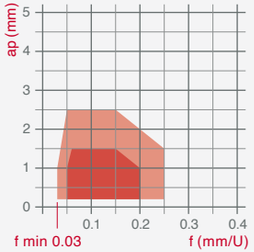
## EN-KM CERMET

Semi-finishing



8°

Arête de coupe honée
Schneidkantenverrundung
Honed edge




P ★★★★★
M ★★★
N
S

CCMT DCMT

p. 9.33 p. 9.52

| Nuances Sorten Grades | Domaine d'application Anwendungsbereich Application area | Finishing / light machining | Semi-finishing / medium cut | Roughing / heavymachining | Géométries de coupe disponibles Verfügbare Spanformgeometrien Available cutting geometries | Résistance à l'usure Verschleissfestigkeit Wear resistance | Ténacité, résistance à la rupture Zähigkeit, Bruchwiderstand Toughness, crack resistance | Résistance à la température Bearbeitungswarmfestigkeit Machining heat resistance | Revêtement et couleur Beschichtung und Farbe Coating and colour | Recommandations spéciales Sonder Empfehlungen Special recommendations |
|---|---|---|---|---|---|---|---|---|---|---|
| **Carbide + PVD** | | | | | | | | | | |
| TiAlN | ★★★★★ ★★★★★ ★★★★ ★★★★ | ● | ● | ● | FN/ENP-X8 FN/ENP-X17 FN/ENP-X25 L/R-X10 | ■■■■□ | ■■■■□ | ■■■■□ | PVD | |
| HTA | ★★★★★ ★★★★★ ★★★★ ★★★★ | ● | | | FN-X8 FN-X17 FN-X25 L/R-X10 FN-K18 FN-0 | ■■■■■ | ■■■□□ | ■■■■□ | PVD | |
| TiN | ★★★★ ★★★★ ★★★★★ | ● | ● | ● | FN/ENP-X8 FN/ENP-X17 FN/ENP-X25 L/R-X10 | ■■■□□ | ■■■■□ | ■■■□□ | PVD | High resistance to edge build up |
| HTiN | ★★★★ ★★★★ ★★★★★ | ● | | | FN-K18 FN-0 | ■■■■□ | ■■■□□ | ■■■□□ | PVD | High resistance to edge build up |
| TAC | ★★★★★ ★★★★★ ★★★★ ★★★★ | ● | ● | ● | EN-XF3 EN-XF2 EN-MF2 EN-HF | ■■■■□ | ■■■■□ | ■■■■□ | PVD | |
| HTAC | ★★★★★ ★★★★★ ★★★★ ★★★★ | ● | ● | | EN-XF3 EN-XF2 EN-MF2 | ■■■■■ | ■■■□□ | ■■■■□ | PVD | |
| TiX | ★★★★★ ★★★★★ ★★★ | | | ● | EN-HF3 | ■■■□□ | ■■■■□ | ■■■□□ | PVD | Easy wear out control with TiN top layer |
| HTiX | ★★★★★ ★★★★★ ★★★★ ★★★ | | ● | ● | ENP-X20 EN-HF3 | ■■■■□ | ■■■□□ | ■■■□□ | PVD | Easy wear out control with TiN top layer |
| Tmax | ★★★★★ ★★★★★ ★★★★ ★★★★ | | ● | ● | EN-MF EN-HF | ■■■■□ | ■■■■□ | ■■■■□ | PVD | |
| ZTA | ★★★★★ ★★★ ★★★★★ | ● | ● | | ENP-X20 | ■■■■□ | ■■■■□ | ■■■■□ | PVD | Perfect for titanium alloys & superalloys |
| TiAlX | ★★★★ ★★★★ ★★★★★ | ● | ● | | X8 R-X10 X17 X25 | ■■■■□ | ■■■■□ | ■■■■□ | PVD | Perfect for titanium alloys & superalloys |
| HTAX | ★★★★ ★★★★ ★★★★★ | ● | | | X8 R-X10 X17 X25 | ■■■■■ | ■■■□□ | ■■■■□ | PVD | Perfect for titanium alloys & superalloys |
| ST | ★★★★ ★★★★ ★★★★★ | ● | ● | | X17 ENP-X17 FL/FR-X10 ELP/ERP-X10 | ■■■■□ | ■■■■□ | ■■■■■ | PVD | Hardmaterials>50HRC, refractorymaterials, nickel-orcobalt-based, stainlesssteel, titaniumalloys |
| HST | ★★★★ ★★★★ ★★★★★ | ● | ● | | X17 | ■■■■□ | ■■■□□ | ■■■■■ | PVD | Hardmaterials>50HRC, refractorymaterials, nickel-orcobalt-based, stainlesssteel, titaniumalloys |





| Nuances Sorten Grades | Domaine d'application Anwendungsbereich Application area | Finishing / light machining | Semi-finishing / medium cut | Roughing / heavymachining | Géométries de coupe disponibles Verfügbare Spanformgeometrien Available cutting geometries | Résistance à l'usure Verschleissfestigkeit Wear resistance | Ténacité, résistance à la rupture Zähigkeit, Bruchwiderstand Toughness, crack resistance | Résistance à la température Bearbeitungswarmfestigkeit Machining heat resistance | Revêtement et couleur Beschichtung und Farbe Coating and colour | Recommandations spéciales Sonder Empfehlungen Special recommendations |
|---|---|---|---|---|---|---|---|---|---|---|
| **Carbide + CVD** | | | | | | | | | | |
| Ti4 | ★★★★★ ★★★ | | ● | ● | EN-MF EN-HF3 EN-HF | ■■■■□ | ■■■■□ | ■■■■■ | CVD | |
| Ti5 | ★★★★★ ★★★ | | ● | ● | EN-MF2 EN-HF | ■■■■□ | ■■■■□ | ■■■■■ | CVD | Easy wear out control with TiN top layer |
| HTi5 | ★★★★★ ★★★ | | ● | ● | EN-XF2 EN-MF2 EN-HF | ■■■■■ | ■■■□□ | ■■■■■ | CVD | Easy wear out control with TiN top layer |
| Ti6 | ★★★ ★★★★★ ★★★★ | | ● | ● | EN-HF3 | ■■■■□ | ■■■■□ | ■■■■■ | CVD | |
| Ti7 | ★★★ ★★★★★ ★★★★ | | ● | ● | EN-MF | ■■■□□ | ■■■■□ | ■■■■■ | CVD | titaniumalloys, refractory materials, iron-, nickel-orcobalt-based, austenitic stainlesssteel |
| **Carbide uncoated** | | | | | | | | | | |
| K10 | ★★★ ★★★ | ● | | | FN-X8 FN-X17 FN-X25 ELP-X10/ERP-X10 FN-K18 FN-0 | ■■■□□ | ■■■□□ | ■■□□□ | uncoated | |
| K20 | ★★ ★★ | ● | | | FN/ENP-X8 FN/ENP-X17 FN/ENP-X25 ELP-X10/ERP-X10 | ■■□□□ | ■■■■□ | ■■□□□ | uncoated | |
| **CERMET** | | | | | | | | | | |
| CTA | ★★★★★ ★★★ | ● | | | FN-X8 | ■■■■□ | ■■■■□ | ■■■■■ | CERMET +PVD | |
| CT7 | ★★★★★ ★★★ | ● | ● | ● | ENP-KX EN-KM | ■■■■□ | ■■■■□ | ■■■■■ | CERMET + PVD | Easy wear out control with TiN top layer |
| HCT7 | ★★★★★ ★★★ | ● | ● | | ENP-KX EN-KM | ■■■■■ | ■■■□□ | ■■■■■ | CERMET + PVD | Easy wear out control with TiN top layer |
| CN6 | ★★★★ | ● | | | FN-X8 ENP-KX EN-KM | ■■□□□ | ■■■■□ | ■■■■□ | CERMET uncoated | |

ISO-Line

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

| ISO-Line<br>Gtoleranceclass | Tough grade, for normal todifficult machiningconditions | Wear resistant grade, for finishing andlight machining | P Acier<br>Stahl<br>Steel | | | | | | M Inox<br>Rostfreistahl<br>Stainless steel | | | | N Alliages d'aluminium et non ferreux<br>Aluminium- und Nichteisenlegierungen<br>Aluminium and non-ferrous alloys | | | | | | | | S Titane et superalliages<br>Titan und Superlegierungen<br>Titanium and superalloys | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Acier dedécolletage<br>Automatenstahl<br>Free-cuttingsteel | | Acier faiblement allié<br>Leicht legierter Stahl<br>Low alloyed steel | | Acier fortement allié<br>Hochlegierter Stahl<br>High alloyed steel | | Austénitique<br>Austenitisch<br>Austenitic | | Martensitique<br>Martensitisch<br>Martensitic | | Aluminium | | Al-Si | | Cuivre<br>Kupfer<br>Copper | | Laiton & bronze<br>Messing& Bronze<br>Brass& bronze | | Ti grade1- 3 | | Ti grade4- 6 | | Superalliages<br>Superlegierungen<br>Superalloys | |
| | | | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) |
| FN-X8 | K20 | HTA | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | 150-1600 | 0.01-0.15 | 80-300 | 0.01-0.12 | 100-400 | 0.01-0.15 | | | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | TiAlX | HTAX | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | | | | | | | 30-70 | 0.01-0.12 | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | TiN | | 80-170 | 0.01-0.12 | 60-140 | 0.01-0.10 | | | 60-120 | 0.01-0.12 | 60-120 | 0.01-0.12 | 120-2200 | 0.01-0.18 | 150-1600 | 0.01-0.15 | 80-300 | 0.01-0.12 | 100-400 | 0.01-0.15 | | | | | | |
| | K20 | K10 | | | | | | | | | | | 120-2000 | 0.01-0.18 | 150-1500 | 0.01-0.15 | 80-250 | 0.01-0.12 | 100-300 | 0.01-0.15 | 30-70 | 0.01-0.12 | | | | |
| ENP-X8 | TiAlN | | 80-180 | 0.03-0.15 | 60-160 | 0.03-0.12 | 50-120 | 0.03-0.10 | 60-140 | 0.03-0.12 | 60-140 | 0.03-0.15 | | | 150-800 | 0.03-0.18 | 80-300 | 0.03-0.15 | | | | | 30-60 | 0.03-0.12 | 40-70 | 0.03-0.10 |
| | TiN | | 80-170 | 0.03-0.15 | 60-150 | 0.03-0.12 | | | 60-120 | 0.03-0.12 | 60-120 | 0.03-0.15 | | | 150-800 | 0.03-0.18 | 80-300 | 0.03-0.15 | | | | | | | | |
| | K20 | | | | | | | | | | | | | | 150-800 | 0.03-0.18 | 80-250 | 0.03-0.15 | | | | | | | | |
| FN-X17 | TiAlN | | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | | | 60-140 | 0.01-0.15 | 60-140 | 0.01-0.15 | | | 150-1600 | 0.01-0.18 | 80-300 | 0.01-0.15 | 100-400 | 0.01-0.18 | | | 30-70 | 0.01-0.15 | 40-80 | 0.01-0.12 |
| | TiAlX | | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | | | | | | | 30-70 | 0.01-0.12 | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | ST | HST | 80-180 | 0,01-0,12 | 60-150 | 0,01-0,10 | 50-120 | 0,01-0,08 | 60-150 | 0,01-0,12 | 60-150 | 0,01-0,12 | | | | | | | | | | | 40-80 | 0,01-0,08 | 40-80 | 0,01-0,08 |
| | TiN | | 80-170 | 0.01-0.12 | | | | | 60-120 | 0.01-0.15 | 60-120 | 0.01-0.15 | 120-2200 | 0.01-0.25 | 150-1600 | 0.01-0.18 | 80-300 | 0.01-0.15 | 100-400 | 0.01-0.18 | | | | | | |
| | K20 | K10 | | | | | | | | | | | 120-2000 | 0.01-0.25 | 150-1500 | 0.01-0.18 | 80-250 | 0.01-0.15 | 100-300 | 0.01-0.18 | 40-80 | 0.01-0.15 | | | | |
| ENP-X17 | TiAlN | HTA | 80-180 | 0.03-0.15 | 60-160 | 0.03-0.12 | 50-120 | 0.03-0.10 | 60-140 | 0.03-0.15 | 60-140 | 0.03-0.18 | | | 150-800 | 0.03-0.20 | 80-300 | 0.03-0.18 | | | | | 30-70 | 0.03-0.15 | 40-80 | 0.03-0.12 |
| | ST | | 80-180 | 0,01-0,12 | 60-150 | 0,01-0,10 | 50-120 | 0,01-0,08 | 60-150 | 0,01-0,12 | 60-150 | 0,01-0,12 | | | | | | | | | | | 40-80 | 0,01-0,08 | 40-80 | 0,01-0,08 |
| | TiAlX | HTAX | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | | | | | | | 30-70 | 0.01-0.12 | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | TiN | | 80-170 | 0.03-0.15 | 60-150 | 0.03-0.12 | | | 60-120 | 0.01-0.15 | 60-120 | 0.03-0.18 | | | 150-800 | 0.03-0.20 | 80-300 | 0.03-0.18 | | | | | | | | |
| | K20 | K10 | | | | | | | | | | | | | 150-800 | 0.03-0.20 | 80-250 | 0.03-0.18 | | | | | | | | |
| FN-X25 | TiAlN | HTA | | | | | | | 60-140 | 0.01-0.12 | | | | | 150-1600 | 0.01-0.22 | 80-300 | 0.01-0.18 | | | | | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | TiN | | | | | | | | 60-120 | 0.01-0.12 | | | 120-2200 | 0.01-0.30 | 150-1600 | 0.01-0.22 | 80-300 | 0.01-0.18 | | | | | | | | |
| | K20 | K10 | | | | | | | | | | | 120-2000 | 0.01-0.30 | 150-1500 | 0.01-0.22 | 80-250 | 0.01-0.18 | | | 30-70 | 0.01-0.12 | | | | |
| ENP-X25 | TiAlN | | | | | | | | 60-140 | 0.03-0.12 | 60-140 | 0.03-0.15 | | | 150-800 | 0.03-0.25 | 80-300 | 0.03-0.20 | | | | | 30-60 | 0.03-0.12 | 40-70 | 0.03-0.10 |
| | TiAlX | | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | | | | | | | 30-70 | 0.01-0.12 | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | TiN | | | | | | | | 60-120 | 0.03-0.12 | 60-120 | 0.03-0.15 | | | 150-800 | 0.03-0.25 | 80-300 | 0.03-0.20 | | | | | | | | |
| | K20 | | | | | | | | | | | | | | 150-800 | 0.03-0.25 | 80-250 | 0.03-0.20 | | | | | | | | |
| ENP-X20 | ZTA | | | | | | | | 60-140 | 0.03-0.18 | 60-140 | 0.03-0.18 | | | 150-800 | 0.03-0.25 | 80-300 | 0.03-0.20 | | | | | 40-90 | 0.03-0.15 | 40-100 | 0.03-0.15 |
| | | HTiX | | | | | | | 60-140 | 0.03-0.18 | 60-140 | 0.03-0.18 | | | 150-800 | 0.03-0.25 | 80-300 | 0.03-0.20 | | | | | 40-80 | 0.03-0.15 | 40-90 | 0.03-0.15 |
| Gtoleranceclass<br>Special 35° VC..-11 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FL / FR-X10 | TiAlN | HTA | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | 150-1600 | 0.01-0.18 | 80-300 | 0.01-0.15 | 100-400 | 0.01-0.18 | | | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | TiAlX | HTAX | 80-180 | 0.01-0.12 | 60-150 | 0.01-0.10 | 50-120 | 0.01-0.08 | 60-140 | 0.01-0.12 | 60-140 | 0.01-0.12 | | | | | | | | | 30-70 | 0.01-0.12 | 30-60 | 0.01-0.12 | 40-70 | 0.01-0.10 |
| | ST | HST | 80-180 | 0,03-0,15 | 60-160 | 0,03-0,12 | 50-120 | 0,03-0,10 | 60-150 | 0,03-0,12 | 60-150 | 0,01-0,12 | | | | | | | | | | | 40-80 | 0,01-0,08 | 40-80 | 0,01-0,08 |
| | TiN | | 80-170 | 0.01-0.12 | 60-140 | 0.01-0.10 | | | 60-120 | 0.01-0.12 | 60-120 | 0.01-0.12 | 120-2200 | 0.01-0.20 | 150-1600 | 0.01-0.18 | 80-300 | 0.01-0.15 | 100-400 | 0.01-0.18 | | | | | | |
| | K20 | K10 | | | | | | | | | | | 120-2000 | 0.01-0.20 | 150-1500 | 0.01-0.18 | 80-250 | 0.01-0.15 | 100-300 | 0.01-0.18 | 30-70 | 0.01-0.12 | | | | |
| ELP/ERP-X10 | TiAlN | HTA | 80-180 | 0.03-0.15 | 60-160 | 0.03-0.12 | 50-120 | 0.03-0.10 | 60-140 | 0.03-0.12 | 60-140 | 0.03-0.15 | | | 150-1600 | 0.03-0.20 | 80-300 | 0.03-0.18 | | | | | 30-60 | 0.03-0.12 | 40-70 | 0.03-0.10 |
| | TiAlX | HTAX | 80-180 | 0.03-0.15 | 60-160 | 0.03-0.12 | 50-120 | 0.03-0.10 | 60-140 | 0.03-0.12 | 60-140 | 0.03-0.15 | | | | | | | | | | | 30-60 | 0.03-0.12 | 40-70 | 0.03-0.10 |
| | ST | | 80-180 | 0,03-0,15 | 60-160 | 0,03-0,12 | 50-120 | 0,03-0,10 | 60-150 | 0,03-0,12 | 60-150 | 0,01-0,12 | | | | | | | | | | | 40-80 | 0,01-0,08 | 40-80 | 0,01-0,08 |
| | TiN | | 80-170 | 0.03-0.15 | 60-150 | 0.03-0.12 | | | 60-120 | 0.03-0.12 | 60-120 | 0.03-0.15 | | | 150-1600 | 0.03-0.20 | 80-300 | 0.01-0.18 | | | | | | | | |
| | K20 | K10 | | | | | | | | | | | | | 150-1500 | 0.03-0.20 | 80-250 | 0.01-0.18 | | | | | | | | |
| FN-K18 | | HTA | 80-180 | 0.01-0.10 | 60-150 | 0.01-0.10 | | | 60-140 | 0.01-0.10 | 60-140 | 0.01-0.10 | | | 150-1600 | 0.01-0.12 | 80-300 | 0.01-0.10 | | | | | 30-70 | 0.01-0.10 | 40-80 | 0.01-0.10 |
| | | HTiN | 80-170 | 0.01-0.10 | 60-140 | 0.01-0.10 | | | 60-120 | 0.01-0.10 | 60-120 | 0.01-0.10 | 120-2200 | 0.01-0.15 | 150-1600 | 0.01-0.12 | 80-300 | 0.01-0.10 | | | | | | | | |
| | | K10 | | | | | | | | | | | 120-2000 | 0.01-0.15 | 150-1500 | 0.01-0.12 | 80-250 | 0.01-0.10 | | | 40-80 | 0.01-0.10 | | | | |
| FN-0 | | HTA | 80-150 | 0.01-0.10 | | | | | | | | | | | | | | | 100-400 | 0.01-0.18 | | | | | | |
| | | HTiN | 80-140 | 0.01-0.10 | | | | | | | | | | | | | | | 100-400 | 0.01-0.18 | | | | | | |
| | | K10 | | | | | | | | | | | | | | | | | 100-300 | 0.01-0.18 | | | | | | |

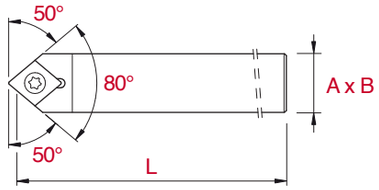
ISO-Line

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

| ISO-Line<br>Mtoleranceclass | Tough grade, for normal todifficult machiningconditions | Wear resistant grade, for finishing andlight machining | P Acier<br>Stahl<br>Steel | | | | | | M Inox<br>Rostfreistahl<br>Stainless steel | | | | N Alliages d'aluminium et non ferreux<br>Aluminium- und Nichteisenlegierungen<br>Aluminium and non-ferrous alloys | | | | | | | | S Titane et superalliages<br>Titan und Superlegierungen<br>Titanium and superalloys | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Acier dedécolletage<br>Automatenstahl<br>Free-cuttingsteel | | Acier faiblement allié<br>Leicht legierter Stahl<br>Low alloyed steel | | Acier fortement allié<br>Hochlegierter Stahl<br>High alloyed steel | | Austénitique<br>Austenitisch<br>Austenitic | | Martensitique<br>Martensitisch<br>Martensitic | | Aluminium | | Al-Si | | Cuivre<br>Kupfer<br>Copper | | Laiton & bronze<br>Messing& Bronze<br>Brass& bronze | | Ti grade1- 3 | | Ti grade4- 6 | | Superalliages<br>Superlegierungen<br>Superalloys | |
| | | | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) |
| EN-XF3 | TAC | HTAC | 100-200 | 0.03-0.15 | 80-160 | 0.03-0.12 | 50-120 | 0.03-0.10 | 60-140 | 0.03-0.12 | 60-140 | 0.03-0.15 | | | 120-1500 | 0.03-0.20 | 80-300 | 0.03-0.15 | 100-400 | 0.03-0.18 | | | 30-70 | 0.03-0.15 | 40-80 | 0.03-0.12 |
| EN-XF2 | TAC | HTAC | 100-200 | 0.03-0.15 | 80-160 | 0.03-0.12 | 50-120 | 0.03-0.10 | 60-140 | 0.03-0.12 | 60-140 | 0.03-0.15 | | | | | | | 100-400 | 0.03-0.18 | | | 30-70 | 0.03-0.15 | 40-80 | 0.03-0.12 |
| | | HTi5 | 100-250 | 0.03-0.15 | 80-220 | 0.03-0.12 | 50-180 | 0.03-0.10 | 80-200 | 0.03-0.12 | 80-200 | 0.03-0.15 | | | | | | | | | | | | | | |
| EN-MF2 | TAC | HTAC | 100-200 | 0.04-0.15 | 80-160 | 0.04-0.12 | 50-120 | 0.04-0.10 | 60-140 | 0.04-0.12 | 60-140 | 0.04-0.15 | | | 120-1500 | 0.04-0.20 | 80-300 | 0.04-0.15 | 100-400 | 0.04-0.18 | | | 30-70 | 0.04-0.15 | 40-80 | 0.04-0.12 |
| | Ti5 | HTi5 | 100-250 | 0.04-0.15 | 80-220 | 0.04-0.12 | 50-180 | 0.04-0.10 | 80-200 | 0.04-0.12 | 80-200 | 0.04-0.15 | | | | | | | | | | | | | | |
| EN-MF | Tmax | | 100-220 | 0.04-0.30 | 80-180 | 0.04-0.25 | 50-150 | 0.04-0.20 | 60-150 | 0.04-0.25 | 60-150 | 0.04-0.25 | | | | | | | | | | | | | | |
| | Ti4 | | 100-250 | 0.05-0.30 | 80-220 | 0.05-0.25 | 50-180 | 0.05-0.20 | 80-200 | 0.05-0.25 | 80-200 | 0.05-0.25 | | | | | | | | | | | | | | |
| | Ti7 | | | | | | | | 60-150 | 0.05-0.20 | 60-150 | 0.05-0.20 | | | | | | | | | | | 40-80 | 0.05-0.12 | 40-80 | 0.05-0.12 |
| EN-HF3 | TiX | HTiX | 100-220 | 0.06-0.35 | 80-180 | 0.06-0.30 | 50-150 | 0.06-0.25 | 60-150 | 0.06-0.25 | 60-150 | 0.06-0.25 | | | | | | | | | | | | | | |
| | Ti6 | | 100-250 | 0.06-0.35 | 80-220 | 0.06-0.30 | 50-180 | 0.06-0.25 | 80-200 | 0.06-0.25 | 80-200 | 0.06-0.25 | | | | | | | | | | | 30-70 | 0.06-0.20 | 40-80 | 0.06-0.20 |
| EN-HF | Tmax | | 100-220 | 0.08-0.40 | 80-180 | 0.08-0.35 | 50-150 | 0.08-0.30 | 60-150 | 0.08-0.30 | 60-150 | 0.08-0.30 | | | | | | | | | | | | | | |
| | TAC | | 100-200 | 0.08-0.40 | 80-160 | 0.08-0.35 | 50-140 | 0.08-0.30 | 60-140 | 0.08-0.30 | 60-140 | 0.08-0.30 | | | | | | | | | | | | | | |
| | Ti4 | | 100-250 | 0.08-0.40 | 80-220 | 0.08-0.35 | 50-180 | 0.08-0.30 | 80-200 | 0.08-0.30 | 80-200 | 0.08-0.30 | | | | | | | | | | | | | | |
| | Ti5 | HTi5 | 100-280 | 0.08-0.40 | 80-250 | 0.08-0.35 | 50-200 | 0.08-0.30 | 80-220 | 0.08-0.30 | 80-220 | 0.08-0.30 | | | | | | | | | | | | | | |

| ISO-Line<br>CERMET | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FN-X8<br>CERMET | CTA | | 100-350 | 0.01-0.12 | 80-300 | 0.01-0.10 | 70-250 | 0.01-0.08 | 80-250 | 0.01-0.12 | 80-250 | 0.01-0.12 |
| | CN6 | | 100-300 | 0.01-0.12 | 80-250 | 0.01-0.10 | 70-200 | 0.01-0.08 | | | | |
| ENP-KX<br>CERMET | CT7 | HCT7 | 100-350 | 0.03-0.20 | 80-300 | 0.03-0.18 | 70-250 | 0.03-0.15 | 80-250 | 0.03-0.18 | 80-250 | 0.03-0.18 |
| | CN6 | | 100-300 | 0.03-0.20 | 80-250 | 0.03-0.18 | 70-200 | 0.03-0.15 | | | | |
| EN-KM<br>CERMET | CT7 | HCT7 | 100-350 | 0.03-0.25 | 80-300 | 0.03-0.20 | 70-250 | 0.03-0.18 | 80-250 | 0.03-0.20 | 80-250 | 0.03-0.20 |
| | CN6 | | 100-300 | 0.03-0.25 | 80-250 | 0.03-0.20 | 70-200 | 0.03-0.18 | | | | |





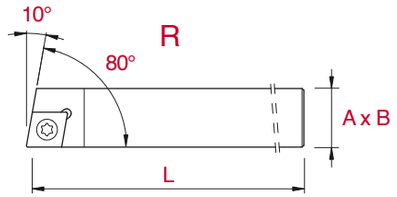

SCM

| Plaquettes WSP Inserts | A x B | L | Art. N° |
|---|---|---|---|
| CC..-0602.. | 8 x 8 | 115 | SCMCN-0808X-06 |
| | 10 x 10 | 115 | SCMCN-1010X-06 |
| | 12 x 12 | 130 | SCMCN-1212X-06 |
| | 12 x 12 | 90 | SCMCN-1212G-06 |
| | 12.7 x 12.7 | 130 | SCMCN-12.7X-06 |
| | 16 x 16 | 130 | SCMCN-1616X-06 |
| | 16 x 16 | 75 | SCMCN-1616F-06 |
| CC..-09T3.. | 12 x 12 | 130 | SCMCN-1212X-09 |
| | 12 x 12 | 90 | SCMCN-1212G-09 |
| | 12.7 x 12.7 | 130 | SCMCN-12.7X-09 |
| | 16 x 16 | 130 | SCMCN-1616X-09 |
| | 16 x 16 | 75 | SCMCN-1616F-09 |
| | 20 x 20 | 120 | SCMCN-2020X-09 |







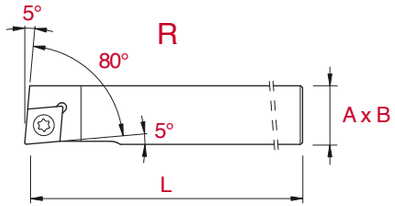



SCA

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| CC..-0602.. | 8 x 8 | 115 | SCACL-0808X-06 | SCACR-0808X-06 |
| | 10 x 10 | 115 | SCACL-1010X-06 | SCACR-1010X-06 |
| | 12 x 12 | 130 | SCACL-1212X-06 | SCACR-1212X-06 |
| | 12 x 12 | 90 | SCACL-1212G-06 | SCACR-1212G-06 |
| | 12.7 x 12.7 | 130 | SCACL-12.7X-06 | SCACR-12.7X-06 |
| | 16 x 16 | 130 | SCACL-1616X-06 | SCACR-1616X-06 |
| | 16 x 16 | 75 | SCACL-1616F-06 | SCACR-1616F-06 |
| CC..-09T3.. | 12 x 12 | 130 | SCACL-1212X-09 | SCACR-1212X-09 |
| | 12 x 12 | 90 | SCACL-1212G-09 | SCACR-1212G-09 |
| | 12.7 x 12.7 | 130 | SCACL-12.7X-09 | SCACR-12.7X-09 |
| | 16 x 16 | 130 | SCACL-1616X-09 | SCACR-1616X-09 |
| | 16 x 16 | 75 | SCACL-1616F-09 | SCACR-1616F-09 |
| | 20 x 20 | 120 | SCACL-2020X-09 | SCACR-2020X-09 |



SCL



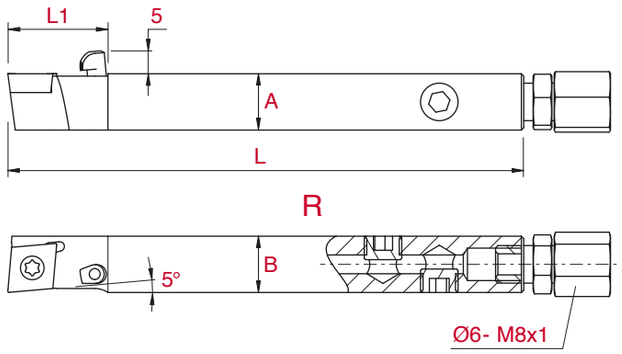

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| CC..-0602.. | 8 x 8 | 115 | SCLCL-0808X-06 | SCLCR-0808X-06 |
| | 10 x 10 | 115 | SCLCL-1010X-06 | SCLCR-1010X-06 |
| | 12 x 12 | 130 | SCLCL-1212X-06 | SCLCR-1212X-06 |
| | 12 x 12 | 90 | SCLCL-1212G-06 | SCLCR-1212G-06 |
| | 12.7 x 12.7 | 130 | SCLCL-12.7X-06 | SCLCR-12.7X-06 |
| | 16 x 16 | 130 | SCLCL-1616X-06 | SCLCR-1616X-06 |
| | 16 x 16 | 75 | SCLCL-1616F-06 | SCLCR-1616F-06 |
| CC..-09T3.. | 12 x 12 | 130 | SCLCL-1212X-09 | SCLCR-1212X-09 |
| | 12 x 12 | 90 | SCLCL-1212G-09 | SCLCR-1212G-09 |
| | 12.7 x 12.7 | 130 | SCLCL-12.7X-09 | SCLCR-12.7X-09 |
| | 16 x 16 | 130 | SCLCL-1616X-09 | SCLCR-1616X-09 |
| | 16 x 16 | 75 | SCLCL-1616F-09 | SCLCR-1616F-09 |
| | 20 x 20 | 120 | SCLCL-2020X-09 | SCLCR-2020X-09 |







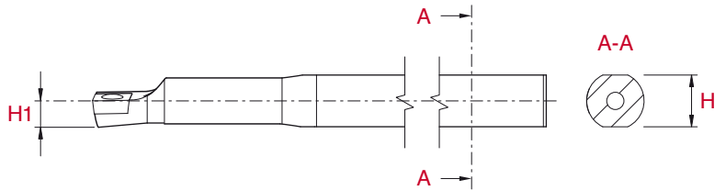
SCL

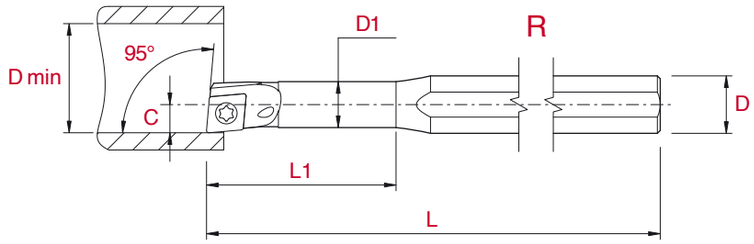



| Plaquettes WSP Inserts | A x B | L | L1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|
| CC..-0602.. | 10 x 10 | 110 | 21 | SCLCL-1010J-06-JET | SCLCR-1010J-06-JET |
| | 12 x 12 | 110 | 21 | SCLCL-1212J-06-JET | SCLCR-1212J-06-JET |
| | 12.7 x 12.7 | 110 | 21 | SCLCL-12.7J-06-JET | SCLCR-12.7J-06-JET |
| | 16 x 16 | 110 | 21 | SCLCL-1616J-06-JET | SCLCR-1616J-06-JET |
| CC..-09T3.. | 12 x 12 | 110 | 21 | SCLCL-1212J-09-JET | SCLCR-1212J-09-JET |
| | 12.7 x 12.7 | 110 | 21 | SCLCL-12.7J-09-JET | SCLCR-12.7J-09-JET |
| | 16 x 16 | 110 | 21 | SCLCL-1616J-09-JET | SCLCR-1616J-09-JET |
| | 20 x 20 | 110 | 21 | SCLCL-2020J-09-JET | SCLCR-2020J-09-JET |




SCL




| | Acier / Stahl / Steel | | | | | | | | L | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Plaquettes WSP Inserts | D | D min | D1 | C | H1 | L | L1 | H | Art. N° | Art. N° |
| CC..-0602.. | 8 | 8 | 6 | 4 | 4 | 100 | 25 | 7 | A0608H-SCLCL-06 | A0608H-SCLCR-06 |
| | 10 | 12 | 8 | 6 | 5 | 110 | 32 | 9 | A0810J-SCLCL-06 | A0810J-SCLCR-06 |
| | 12 | 14 | 10 | 7 | 6 | 125 | 38 | 11 | A1012K-SCLCL-06 | A1012K-SCLCR-06 |

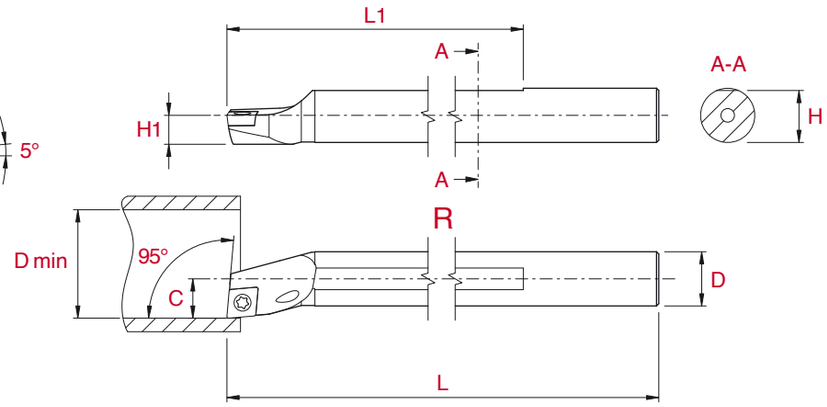
| Pour barres d'alésage / Für Borstange / For boring bar | Pièces de rechange / Ersatzteile / Spare parts | Options |
|---|---|---|
| | Art. N° | Art. N° |
| A0608H_ / A0810J_ | V-M2.5X4.8-T8 | C-T8 |
| A1012K_ | V-M2.5X5.8-T8 | |







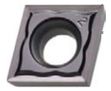

SCL




| | Acier / Stahl / Steel | | | | | | | | L | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Plaquettes WSP Inserts | D | D min | C | H1 | L | L1 | H | | Art. N° | Art. N° |
| CC..-0602 | 8 | 11 | 5 | 4 | 80 | 74 | 7.5 | | A08F-SCLCL-06 | A08F-SCLCR-06 |
| | 10 | 13 | 7 | 5 | 100 | 85 | 9.5 | | A10H-SCLCL-06 | A10H-SCLCR-06 |
| | 12 | 16 | 9 | 6 | 125 | 95 | 11.5 | | A12K-SCLCL-06 | A12K-SCLCR-06 |
| CC..-09T3 | 16 | 20 | 11 | 8 | 150 | 117 | 15.5 | | A16M-SCLCL-09 | A16M-SCLCR-09 |
| | Carbure de tungstène / Hartmetall / Solid carbide | | | | | | | | | |
| | D | D min | C | H1 | L | L1 | H | | Art. N° | Art. N° |
| CC..-0602 | 8 | 9 | 5 | 4 | 125 | - | 7.5 | | E08K-SCLCL-06 | E08K-SCLCR-06 |
| | 10 | 11 | 6 | 5 | 125 | - | 9.5 | | E10K-SCLCL-06 | E10K-SCLCR-06 |
| | 12 | 13 | 8 | 6 | 150 | - | 11.5 | | E12M-SCLCL-06 | E12M-SCLCR-06 |

| Pour barres d'alésage / Für Borstange / For boring bar | Pièces de rechange / Ersatzteile / Spare parts | Options |
|---|---|---|
| | Art. N° | Art. N° |
| A08F_ / E08K_ | V-M2.5X4.8-T8 | C-T8 |
| A10H_/E10H_ | V-M2.5X5.8-T8 | C-T8 |
| A16M_ | V-M3.5X7.2-T15-ISO | C-T15 |





## CCGT FN-X8

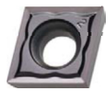
| R | Art. N° | PVD TiAlN | PVD TiN | PVD HTA | nonrevêtu unbeschichtet uncoated K20 | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|---|---|
| 0.05 | CCGT-0602005-FN-X8 | ● | ● | ● | ● | ● |
| 0.1 | CCGT-060201-FN-X8 | ● | ● | ● | ● | ● |
| 0.2 | CCGT-060202-FN-X8 | ● | ● | ● | ● | ● |
| 0.4 | CCGT-060204-FN-X8 | ● | ● | ● | ● | ● |
| 0.05 | CCGT-09T3005-FN-X8 | ● | ● | ● | ● | ● |
| 0.1 | CCGT-09T301-FN-X8 | ● | ● | ● | ● | ● |
| 0.2 | CCGT-09T302-FN-X8 | ● | ● | ● | ● | ● |
| 0.4 | CCGT-09T304-FN-X8 | ● | ● | ● | ● | ● |











## CCGT ENP-X8

| R | Art. N° | PVD TiAlN | PVD TiN | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|
| 0.05 | CCGT-0602005-ENP-X8 | ● | ● | ● |
| 0.1 | CCGT-060201-ENP-X8 | ● | ● | ● |
| 0.2 | CCGT-060202-ENP-X8 | ● | ● | ● |
| 0.4 | CCGT-060204-ENP-X8 | ● | ● | ● |
| 0.05 | CCGT-09T3005-ENP-X8 | ● | ● | ● |
| 0.1 | CCGT-09T301-ENP-X8 | ● | ● | ● |
| 0.2 | CCGT-09T302-ENP-X8 | ● | ● | ● |
| 0.4 | CCGT-09T304-ENP-X8 | ● | ● | ● |



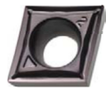








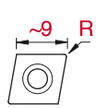




## CCGT FN-X17

| R | Art. N° | PVD ST | PVD TiAlN | PVD TiN | PVD HST | PVD HTA | nonrevêtu unbeschichtet uncoated K20 | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|---|---|---|---|
| 0.05 | CCGT-0602005-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.1 | CCGT-060201-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.2 | CCGT-060202-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | CCGT-060204-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.05 | CCGT-09T3005-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.1 | CCGT-09T301-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.2 | CCGT-09T302-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | CCGT-09T304-FN-X17 | ● | ● | ● | ● | ● | ● | ● |
| 0.8 | CCGT-09T308-FN-X17 | ● | ● | ● | ● | ● | ● | ● |



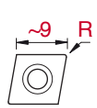




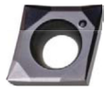

## CCGT ENP-X17

| R | Art. N° | PVD ST | PVD TiAlN | PVD TiN | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|---|
| 0.05 | CCGT-0602005-ENP-X17 | ● | ● | ● | ● |
| 0.1 | CCGT-060201-ENP-X17 | ● | ● | ● | ● |
| 0.2 | CCGT-060202-ENP-X17 | ● | ● | ● | ● |
| 0.4 | CCGT-060204-ENP-X17 | ● | ● | ● | ● |
| 0.05 | CCGT-09T3005-ENP-X17 | ● | ● | ● | ● |
| 0.1 | CCGT-09T301-ENP-X17 | ● | ● | ● | ● |
| 0.2 | CCGT-09T302-ENP-X17 | ● | ● | ● | ● |
| 0.4 | CCGT-09T304-ENP-X17 | ● | ● | ● | ● |
| 0.8 | CCGT-09T308-ENP-X17 | ● | | ● | ● |







## CCGT FN-X25

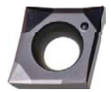
| R | Art. N° | PVD TiAlN (P M N S) | PVD TiN (P M N) | PVD HTA (P M N S) | nonrevêtu unbeschichtet uncoated K20 (N) | nonrevêtu unbeschichtet uncoated K10 (N) |
|---|---|---|---|---|---|---|
| 0.05 | CCGT-0602005-FN-X25 | ● | ● | ● | ● | ● |
| 0.1 | CCGT-060201-FN-X25 | ● | ● | ● | ● | ● |
| 0.2 | CCGT-060202-FN-X25 | ● | ● | ● | ● | ● |
| 0.4 | CCGT-060204-FN-X25 | ● | ● | ● | ● | ● |
| 0.05 | CCGT-09T3005-FN-X25 | ● | ● | ● | ● | ● |
| 0.1 | CCGT-09T301-FN-X25 | ● | ● | ● | ● | ● |
| 0.2 | CCGT-09T302-FN-X25 | ● | ● | ● | ● | ● |
| 0.4 | CCGT-09T304-FN-X25 | ● | ● | ● | ● | ● |
| 0.8 | CCGT-09T308-FN-X25 | ● | ● | ● | ● | ● |











## CCGT ENP-X25

| R | Art. N° | PVD TiAlN (P M N S) | PVD TiN (P M N) | nonrevêtu unbeschichtet uncoated K20 (N) |
|---|---|---|---|---|
| 0.05 | CCGT-0602005-ENP-X25 | ● | ● | ● |
| 0.1 | CCGT-060201-ENP-X25 | ● | ● | ● |
| 0.2 | CCGT-060202-ENP-X25 | ● | ● | ● |
| 0.4 | CCGT-060204-ENP-X25 | ● | ● | ● |
| 0.05 | CCGT-09T3005-ENP-X25 | ● | ● | ● |
| 0.1 | CCGT-09T301-ENP-X25 | ● | ● | ● |
| 0.2 | CCGT-09T302-ENP-X25 | ● | ● | ● |
| 0.4 | CCGT-09T304-ENP-X25 | ● | ● | ● |
| 0.8 | CCGT-09T308-ENP-X25 | ● | ● | ● |



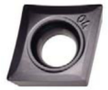












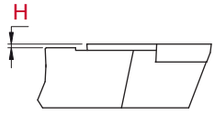
## CCGT ENP-X20

| R | H | Art. N° | PVD ZTA (M N S) | PVD HTiX (M N S) |
|---|---|---|---|---|
| 0.1 | 0.2 | CCGT-060201-ENP-X20 | ● | |
| 0.2 | 0.2 | CCGT-060202-ENP-X20 | ● | ● |
| 0.4 | 0.2 | CCGT-060204-ENP-X20 | ● | ● |
| 0.1 | 0.25 | CCGT-09T301-ENP-X20 | ● | |
| 0.2 | 0.25 | CCGT-09T302-ENP-X20 | ● | ● |
| 0.4 | 0.25 | CCGT-09T304-ENP-X20 | ● | ● |
| 0.8 | 0.25 | CCGT-09T308-ENP-X20 | ● | ● |













## CCMT EN-XF3

| R | Art. N° | PVD TAC | PVD HTAC |
|---|---|---|---|
| 0.1 | CCMT-060201-EN-XF3 | ● | ● |
| 0.2 | CCMT-060202-EN-XF3 | ● | ● |
| 0.4 | CCMT-060204-EN-XF3 | ● | ● |
| 0.1 | CCMT-09T301-EN-XF3 | ● | ● |
| 0.2 | CCMT-09T302-EN-XF3 | ● | ● |
| 0.4 | CCMT-09T304-EN-XF3 | ● | ● |

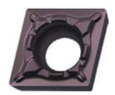




## CCMT EN-XF2

| R | Art. N° | PVD TAC | PVD HTAC | CVD HTi5 |
|---|---|---|---|---|
| 0.2 | CCMT-060202-EN-XF2 | ● | ● | ● |
| 0.4 | CCMT-060204-EN-XF2 | ● | ● | ● |
| 0.2 | CCMT-09T302-EN-XF2 | ● | ● | ● |
| 0.4 | CCMT-09T304-EN-XF2 | ● | ● | ● |





## CCMT EN-MF2

| R | Art. N° | PVD TAC | PVD HTAC | CVD Ti5 | CVD HTi5 |
|---|---|---|---|---|---|
| 0.2 | CCMT-060202-EN-MF2 | ● | ● | ● | ● |
| 0.4 | CCMT-060204-EN-MF2 | ● | ● | ● | ● |
| 0.2 | CCMT-09T302-EN-MF2 | ● | ● | ● | ● |
| 0.4 | CCMT-09T304-EN-MF2 | ● | ● | ● | ● |
| 0.8 | CCMT-09T308-EN-MF2 | ● | ● | ● | ● |





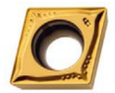




## CCMT EN-MF

| R | Art. N° | PVD Tmax | CVD Ti4 | CVD Ti7 |
|---|---|---|---|---|
| 0.2 | CCMT-060202-EN-MF | ● | ● | ● |
| 0.4 | CCMT-060204-EN-MF | ● | ● | ● |
| 0.2 | CCMT-09T302-EN-MF | ● | ● | ● |
| 0.4 | CCMT-09T304-EN-MF | ● | ● | ● |





## CCMT EN-HF3

| R | Art. N° | PVD TiX | PVD HTiX | CVD Ti6 |
|---|---|---|---|---|
| 0.2 | CCMT-060202-EN-HF3 | ● | ● | ● |
| 0.4 | CCMT-060204-EN-HF3 | ● | ● | ● |
| 0.2 | CCMT-09T302-EN-HF3 | ● | ● | ● |
| 0.4 | CCMT-09T304-EN-HF3 | ● | ● | ● |
| 0.8 | CCMT-09T308-EN-HF3 | ● | ● | ● |

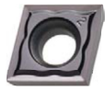




## CCMT EN-HF

| R | Art. N° | PVD Tmax | PVD TAC | CVD Ti4 | CVD Ti5 | CVD HTi5 |
|---|---|---|---|---|---|---|
| 0.2 | CCMT-060202-EN-HF | | ● | | ● | ● |
| 0.4 | CCMT-060204-EN-HF | ● | ● | ● | ● | ● |
| 0.8 | CCMT-060208-EN-HF | ● | ● | ● | ● | ● |
| 0.2 | CCMT-09T302-EN-HF | | ● | | ● | ● |
| 0.4 | CCMT-09T304-EN-HF | ● | ● | ● | ● | ● |
| 0.8 | CCMT-09T308-EN-HF | ● | ● | ● | ● | ● |

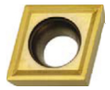




## CCGT FN-X8

| | R | Art. N° | CERMET PVD P M CTA | CERMET nonrevêtu unbeschichtet uncoated P CN6 |
|---|---|---|---|---|
| ~6 R | 0.05 | CCGT-0602005-FN-X8 | ● | ● |
| | 0.1 | CCGT-060201-FN-X8 | ● | ● |
| | 0.2 | CCGT-060202-FN-X8 | ● | ● |
| ~9 R | 0.05 | CCGT-09T3005-FN-X8 | ● | ● |
| | 0.1 | CCGT-09T301-FN-X8 | ● | ● |
| | 0.2 | CCGT-09T302-FN-X8 | ● | ● |
| | 0.4 | CCGT-09T304-FN-X8 | ● | ● |





## CCGT ENP-KX

| | R | Art. N° | CERMET PVD P M CT7 | CERMET PVD P M HCT7 | CERMET nonrevêtu unbeschichtet uncoated P CN6 |
|---|---|---|---|---|---|
| ~6 R | 0.1 | CCGT-060201-ENP-KX | ● | ● | ● |
| | 0.2 | CCGT-060202-ENP-KX | ● | ● | ● |
| | 0.4 | CCGT-060204-ENP-KX | ● | ● | ● |
| ~9 R | 0.1 | CCGT-09T301-ENP-KX | ● | ● | ● |
| | 0.2 | CCGT-09T302-ENP-KX | ● | ● | ● |
| | 0.4 | CCGT-09T304-ENP-KX | ● | ● | ● |





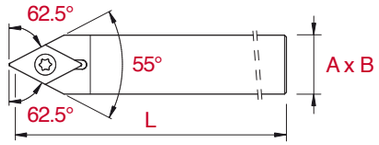




## CCMT EN-KM

| | R | Art. N° | CERMET PVD P M CT7 | CERMET PVD P M HCT7 | CERMET nonrevêtu unbeschichtet uncoated P CN6 |
|---|---|---|---|---|---|
| ~6 R | 0.2 | CCMT-060202-EN-KM | ● | ● | ● |
| | 0.4 | CCMT-060204-EN-KM | ● | ● | ● |
| ~9 R | 0.2 | CCMT-09T302-EN-KM | ● | ● | ● |
| | 0.4 | CCMT-09T304-EN-KM | ● | ● | ● |
| | 0.8 | CCMT-09T308-EN-KM | ● | ● | ● |





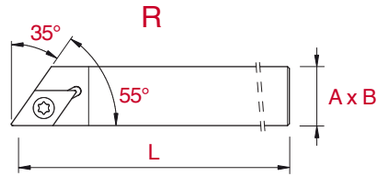

SDN

| Plaquettes WSP Inserts | A x B | L | Art. N° |
|---|---|---|---|
| DC..-0702.. | 8 x 8 | 115 | SDNCN-0808X-07 |
| | 10 x 10 | 115 | SDNCN-1010X-07 |
| | 12 x 12 | 130 | SDNCN-1212X-07 |
| | 12 x 12 | 90 | SDNCN-1212G-07 |
| | 12.7 x 12.7 | 130 | SDNCN-12.7X-07 |
| | 16 x 16 | 130 | SDNCN-1616X-07 |
| | 16 x 16 | 75 | SDNCN-1616F-07 |
| DC..-11T3.. | 12 x 12 | 130 | SDNCN-1212X-11 |
| | 12 x 12 | 90 | SDNCN-1212G-11 |
| | 12.7 x 12.7 | 130 | SDNCN-12.7X-11 |
| | 16 x 16 | 130 | SDNCN-1616X-11 |
| | 16 x 16 | 75 | SDNCN-1616F-11 |
| | 20 x 20 | 120 | SDNCN-2020X-11 |







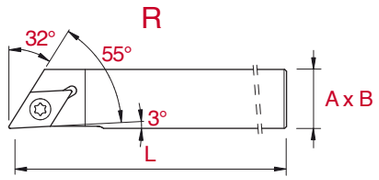



SDA

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| DC..-0702.. | 8 x 8 | 115 | SDACL-0808X-07 | SDACR-0808X-07 |
| | 10 x 10 | 115 | SDACL-1010X-07 | SDACR-1010X-07 |
| | 12 x 12 | 130 | SDACL-1212X-07 | SDACR-1212X-07 |
| | 12 x 12 | 90 | SDACL-1212G-07 | SDACR-1212G-07 |
| | 12.7 x 12.7 | 130 | SDACL-12.7X-07 | SDACR-12.7X-07 |
| | 16 x 16 | 130 | SDACL-1616X-07 | SDACR-1616X-07 |
| | 16 x 16 | 75 | SDACL-1616F-07 | SDACR-1616F-07 |
| DC..-11T3.. | 12 x 12 | 130 | SDACL-1212X-11 | SDACR-1212X-11 |
| | 12 x 12 | 90 | SDACL-1212G-11 | SDACR-1212G-11 |
| | 12.7 x 12.7 | 130 | SDACL-12.7X-11 | SDACR-12.7X-11 |
| | 16 x 16 | 130 | SDACL-1616X-11 | SDACR-1616X-11 |
| | 16 x 16 | 75 | SDACL-1616F-11 | SDACR-1616F-11 |
| | 20 x 20 | 120 | SDACL-2020X-11 | SDACR-2020X-11 |



SDJ



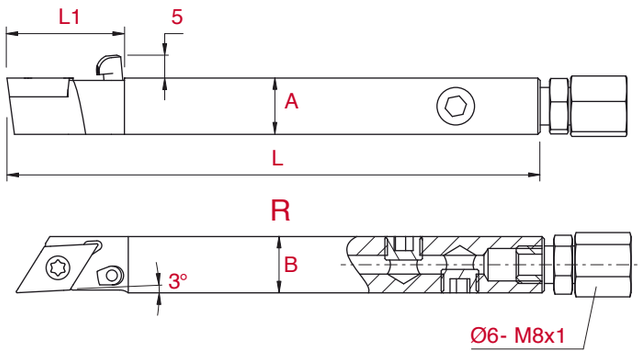

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| DC..-0702.. | 8 x 8 | 115 | SDJCL-0808X-07 | SDJCR-0808X-07 |
| | 10 x 10 | 115 | SDJCL-1010X-07 | SDJCR-1010X-07 |
| | 12 x 12 | 130 | SDJCL-1212X-07 | SDJCR-1212X-07 |
| | 12 x 12 | 90 | SDJCL-1212G-07 | SDJCR-1212G-07 |
| | 12.7 x 12.7 | 130 | SDJCL-12.7X-07 | SDJCR-12.7X-07 |
| | 16 x 16 | 130 | SDJCL-1616X-07 | SDJCR-1616X-07 |
| | 16 x 16 | 75 | SDJCL-1616F-07 | SDJCR-1616F-07 |
| | 20 x 20 | 120 | SDJCL-2020X-07 | SDJCR-2020X-07 |
| DC..-11T3.. | 12 x 12 | 130 | SDJCL-1212X-11 | SDJCR-1212X-11 |
| | 12 x 12 | 90 | SDJCL-1212G-11 | SDJCR-1212G-11 |
| | 12.7 x 12.7 | 130 | SDJCL-12.7X-11 | SDJCR-12.7X-11 |
| | 16 x 16 | 130 | SDJCL-1616X-11 | SDJCR-1616X-11 |
| | 16 x 16 | 75 | SDJCL-1616F-11 | SDJCR-1616F-11 |
| | 20 x 20 | 120 | SDJCL-2020X-11 | SDJCR-2020X-11 |







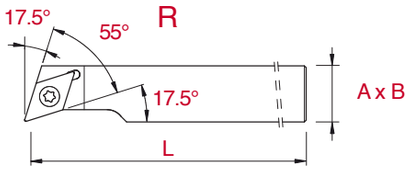
SDJ




| Plaquettes WSP Inserts | A x B | L | L1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|
| DC..-0702.. | 10 x 10 | 110 | 20 | SDJCL-1010J-07-JET | SDJCR-1010J-07-JET |
| | 12 x 12 | 110 | 20 | SDJCL-1212J-07-JET | SDJCR-1212J-07-JET |
| | 12.7 x 12.7 | 110 | 20 | SDJCL-12.7J-07-JET | SDJCR-12.7J-07-JET |
| | 16 x 16 | 110 | 20 | SDJCL-1616J-07-JET | SDJCR-1616J-07-JET |
| | 20 x 20 | 110 | 20 | SDJCL-2020J-07-JET | SDJCR-2020J-07-JET |
| DC..-11T3.. | 12 x 12 | 110 | 23 | SDJCL-1212J-11-JET | SDJCR-1212J-11-JET |
| | 12.7 x 12.7 | 110 | 23 | SDJCL-12.7J-11-JET | SDJCR-12.7J-11-JET |
| | 16 x 16 | 110 | 23 | SDJCL-1616J-11-JET | SDJCR-1616J-11-JET |
| | 20 x 20 | 110 | 23 | SDJCL-2020J-11-JET | SDJCR-2020J-11-JET |



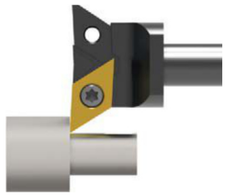
SDH



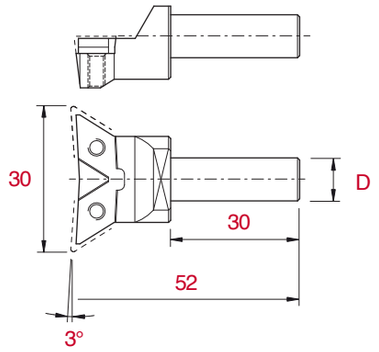

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| DC..-0702.. | 10 x 10 | 115 | SDHCL-1010X-07 | SDHCR-1010X-07 |
| | 12 x 12 | 130 | SDHCL-1212X-07 | SDHCR-1212X-07 |
| | 12 x 12 | 90 | SDHCL-1212G-07 | SDHCR-1212G-07 |
| | 12.7 x 12.7 | 130 | SDHCL-12.7X-07 | SDHCR-12.7X-07 |
| | 16 x 16 | 130 | SDHCL-1616X-07 | SDHCR-1616X-07 |
| | 16 x 16 | 75 | SDHCL-1616F-07 | SDHCR-1616F-07 |
| DC..-11T3.. | 16 x 16 | 130 | SDHCL-1616X-11 | SDHCR-1616X-11 |
| | 16 x 16 | 75 | SDHCL-1616F-11 | SDHCR-1616F-11 |
| | 20 x 20 | 120 | SDHCL-2020X-11 | SDHCR-2020X-11 |



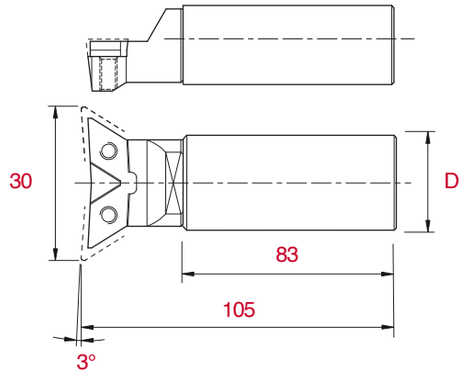




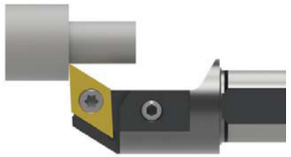
SDU



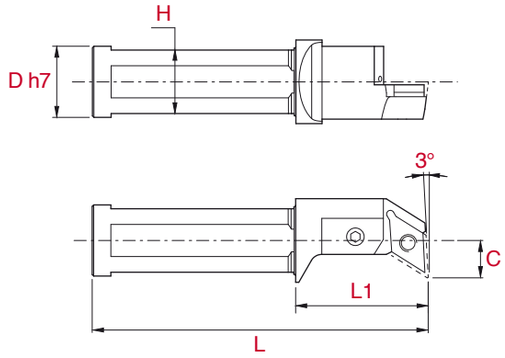

| Plaquettes WSP Inserts | D | Art. N° |
|---|---|---|
| DC..-11T3.. | 10 | SDUC-D10X-11 |



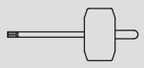

| Plaquettes WSP Inserts | D | Art. N° |
|---|---|---|
| DC..-11T3.. | 20 | SDUC-D20X-11 |
| | 25.4 | SDUC-D25.4X-11 |



SDUCL

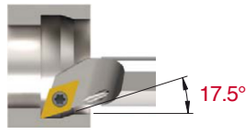



| Plaquettes WSP Inserts | D | C | H | L | L1 | Art. N° |
|---|---|---|---|---|---|---|
| DC..-11T3.. | 19.05 | 10 | 17 | 90 | 35.5 | SDUCL-D19.05-90-11-JET |
| DC..-11T3.. | 20 | 10 | 17 | 90 | 35.5 | SDUCL-D20-90-11-JET |

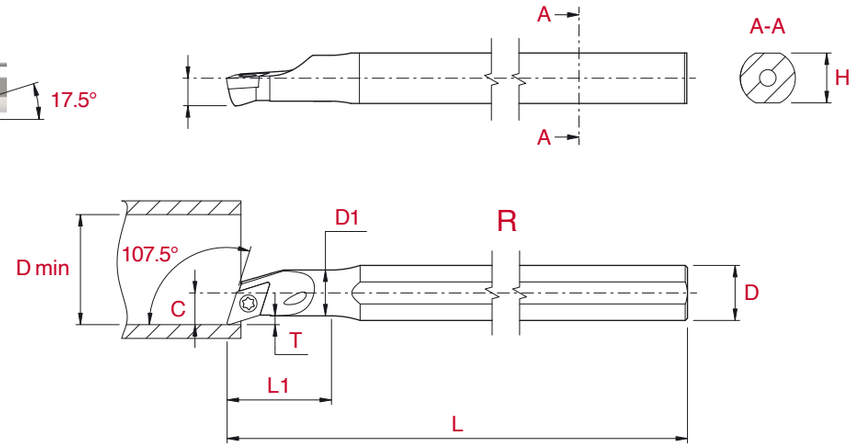
| Pièces de rechange Ersatzteile Spare parts | | Options | |
|---|---|---|---|
|  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° |
| V-M4X9-T15 | V-M5x5-BN24 | C-T15 | JS-M5-D4 |



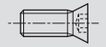


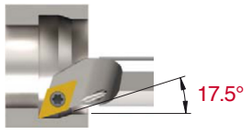



SDQ

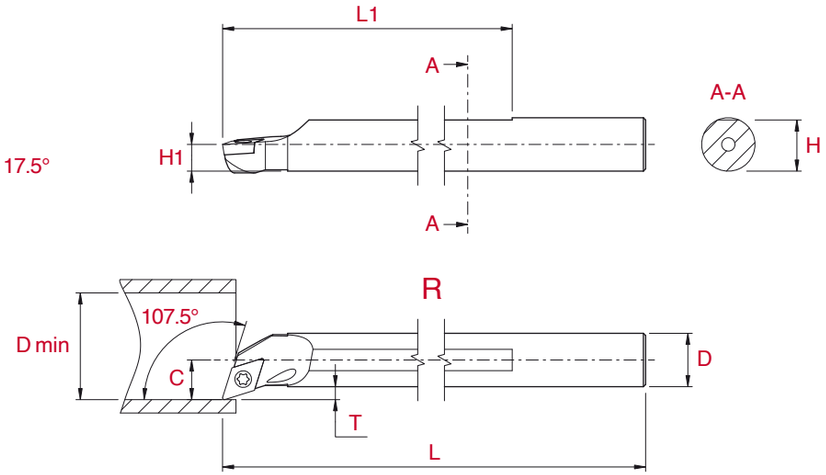



| Plaquettes WSP Inserts | D | D min | D1 | T | C | H1 | L | L1 | H | Acier / Stahl / Steel L Art. N° | Acier / Stahl / Steel R Art. N° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DC..-0702 | 10 | 12.5 | 8 | 2.4 | 7 | 5 | 100 | 22 | 9 | A0810H-SDQCL-07 | A0810H-SDQCR-07 |
| | 12 | 15.5 | 10 | 2.9 | 9 | 6 | 125 | 28 | 11 | A1012K-SDQCL-07 | A1012K-SDQCR-07 |

| Pour barres d'alésage Für Borstange For boring bar | Pièces de rechange Ersatzteile Spare parts | Options |
|---|---|---|
| |  |  |
| | Art. N° | Art. N° |
| A0810H_ | V-M2.5X4.8-T8 | C-T8 |
| A1012K_ | V-M2.5X5.8-T8 | |

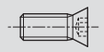
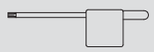



SDQ



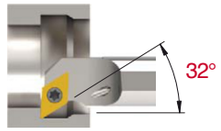

| | Acier / Stahl / Steel | | | | | | | | L | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Plaquettes WSP Inserts | D | D min | T | C | H1 | L | L1 | H | Art. N° | Art. N° |
| DC..-0702 | 10 | 14 | 2.4 | 7 | 4.5 | 100 | 85 | 9.5 | A10H-SDQCL-07 | A10H-SDQCR-07 |
| | 12 | 17 | 2.9 | 9 | 6 | 125 | 95 | 11.5 | A12K-SDQCL-07 | A12K-SDQCR-07 |
| | 16 | 21 | 2.9 | 11 | 8 | 150 | 117 | 15.5 | A16M-SDQCL-07 | A16M-SDQCR-07 |

| | Carbure de tungstène / Hartmetall / Solid carbide | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | D | D min | T | C | H1 | L | L1 | H | Art. N° | Art. N° |
| DC..-0702 | 10 | 13 | 2.4 | 7.5 | 5 | 125 | - | 9.5 | E10K-SDQCL-07 | E10K-SDQCR-07 |
| | 12 | 17 | 2.9 | 9 | 6 | 150 | - | 11.5 | E12M-SDQCL-07 | E12M-SDQCR-07 |

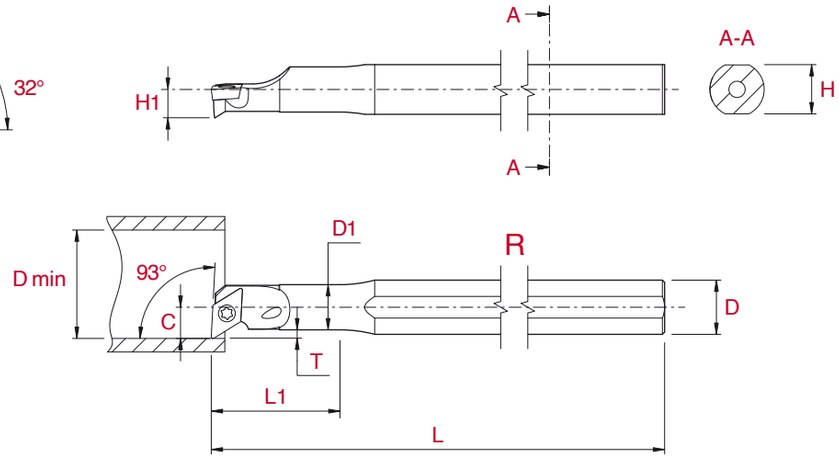
| Pièces de rechange Ersatzteile Spare parts | Options |
|---|---|
|  |  |
| Art. N° | Art. N° |
| V-M2.5X5.8-T8 | C-T8 |



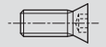


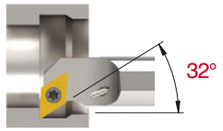



SDU

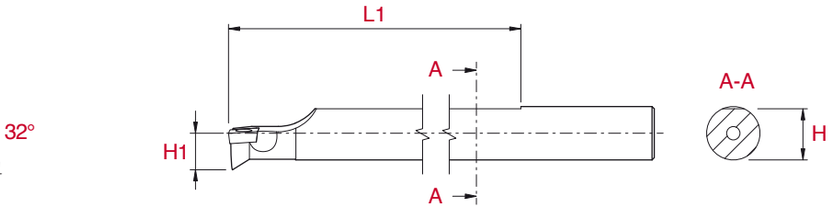


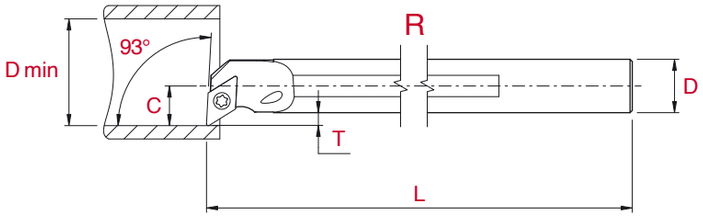

| | Acier / Stahl / Steel | | | | | | | | | L | R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Plaquettes WSP Inserts | D | D min | D1 | T | C | H1 | L | L1 | H | Art. N° | Art. N° |
| DC..-0702 | 10 | 12.5 | 8 | 1.9 | 7 | 5 | 100 | 22 | 9 | A0810H-SDUCL-07 | A0810H-SDUCR-07 |
| | 12 | 15.5 | 10 | 2.9 | 9 | 6 | 125 | 28 | 11 | A1012K-SDUCL-07 | A1012K-SDUCR-07 |

| | Pièces de rechange Ersatzteile Spare parts | Options |
|---|---|---|
| Pour barres d'alésage Für Borstange For boring bar |  |  |
| | Art. N° | Art. N° |
| A0810H_ | V-M2.5X4.8-T8 | C-T8 |
| A1012K_ | V-M2.5X5.8-T8 | |




SDU



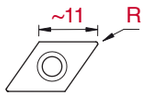

| Plaquettes WSP Inserts | D | D min | T | C | H1 | L | L1 | H | Acier / Stahl / Steel L Art. N° | Acier / Stahl / Steel R Art. N° |
|---|---|---|---|---|---|---|---|---|---|---|
| DC..-0702 | 10 | 14 | 1.9 | 7 | 5 | 100 | 85 | 9.5 | A10H-SDUCL-07 | A10H-SDUCR-07 |
| | 12 | 17 | 2.9 | 9 | 6 | 125 | 95 | 11.5 | A12K-SDUCL-07 | A12K-SDUCR-07 |
| | 16 | 21 | 2.9 | 11 | 8 | 150 | 117 | 15.5 | A16M-SDUCL-07 | A16M-SDUCR-07 |

| | D | D min | T | C | H1 | L | L1 | H | Carbure de tungstène / Hartmetall / Solid carbide L Art. N° | Carbure de tungstène / Hartmetall / Solid carbide R Art. N° |
|---|---|---|---|---|---|---|---|---|---|---|
| DC..-0702 | 10 | 14 | 1.9 | 7 | 5 | 125 | - | 9.5 | E10K-SDUCL-07 | E10K-SDUCR-07 |
| | 12 | 17 | 2.9 | 9 | 6 | 150 | - | 11.5 | E12M-SDUCL-07 | E12M-SDUCR-07 |

| Pièces de rechange Ersatzteile Spare parts Art. N° | Options Art. N° |
|---|---|
| V-M2.5X5.8-T8 | C-T8 |

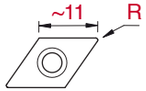




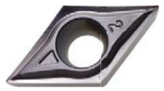

| R | Art. N° | PVD TiAlN | PVD TiAlX | PVD TiN | PVD HTA | PVD HTAX | nonrevêtu unbeschichtet uncoated K20 | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|---|---|---|---|
| 0.05 | DCGT-0702005-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | DCGT-0702008-FN-X8 | ● | ● | | ● | ● | ● | ● |
| 0.1 | DCGT-070201-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.15 | DCGT-0702015-FN-X8 | ● | ● | | ● | ● | ● | ● |
| 0.2 | DCGT-070202-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | DCGT-070204-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.05 | DCGT-11T3005-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | DCGT-11T3008-FN-X8 | ● | ● | | ● | ● | ● | ● |
| 0.1 | DCGT-11T301-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.15 | DCGT-11T3015-FN-X8 | ● | ● | | ● | ● | ● | ● |
| 0.2 | DCGT-11T302-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | DCGT-11T304-FN-X8 | ● | ● | ● | ● | ● | ● | ● |



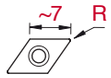

| R | Art. N° | PVD TiAlN | PVD TiN | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|
| 0.05 | DCGT-0702005-ENP-X8 | ● | ● | ● |
| 0.08 | DCGT-0702008-ENP-X8 | ● | | ● |
| 0.1 | DCGT-070201-ENP-X8 | ● | ● | ● |
| 0.15 | DCGT-0702015-ENP-X8 | ● | | ● |
| 0.2 | DCGT-070202-ENP-X8 | ● | ● | ● |
| 0.4 | DCGT-070204-ENP-X8 | ● | ● | ● |
| 0.05 | DCGT-11T3005-ENP-X8 | ● | ● | ● |
| 0.08 | DCGT-11T3008-ENP-X8 | ● | | ● |
| 0.1 | DCGT-11T301-ENP-X8 | ● | ● | ● |
| 0.15 | DCGT-11T3015-ENP-X8 | ● | | ● |
| 0.2 | DCGT-11T302-ENP-X8 | ● | ● | ● |
| 0.4 | DCGT-11T304-ENP-X8 | ● | ● | ● |

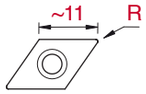




## DCGT FN-X17

| R | Art. N° | PVD ST | PVD TiAlN | PVD TiAlX | PVD TiN | PVD HST | PVD HTA | PVD HTAX | nonrevêtu unbeschichtet uncoated K20 | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.05 | DCGT-0702005-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | DCGT-0702008-FN-X17 | ● | ● | ● | | ● | ● | ● | ● | ● |
| 0.1 | DCGT-070201-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.15 | DCGT-0702015-FN-X17 | ● | ● | ● | | ● | ● | ● | ● | ● |
| 0.2 | DCGT-070202-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | DCGT-070204-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.05 | DCGT-11T3005-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | DCGT-11T3008-FN-X17 | ● | ● | ● | | ● | ● | ● | ● | ● |
| 0.1 | DCGT-11T301-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.15 | DCGT-11T3015-FN-X17 | ● | ● | ● | | ● | ● | ● | ● | ● |
| 0.2 | DCGT-11T302-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | DCGT-11T304-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.8 | DCGT-11T308-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● | ● |



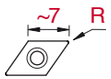



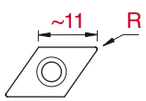





## DCGT ENP-X17

| R | Art. N° | PVD ST | PVD TiAlN | PVD TiN | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|---|
| 0.05 | DCGT-0702005-ENP-X17 | ● | ● | ● | ● |
| 0.08 | DCGT-0702008-ENP-X17 | ● | ● | | ● |
| 0.1 | DCGT-070201-ENP-X17 | ● | ● | ● | ● |
| 0.15 | DCGT-0702015-ENP-X17 | ● | ● | | ● |
| 0.2 | DCGT-070202-ENP-X17 | ● | ● | ● | ● |
| 0.4 | DCGT-070204-ENP-X17 | ● | ● | ● | ● |
| 0.05 | DCGT-11T3005-ENP-X17 | ● | ● | ● | ● |
| 0.08 | DCGT-11T3008-ENP-X17 | ● | ● | | ● |
| 0.1 | DCGT-11T301-ENP-X17 | ● | ● | ● | ● |
| 0.15 | DCGT-11T3015-ENP-X17 | ● | ● | | ● |
| 0.2 | DCGT-11T302-ENP-X17 | ● | ● | ● | ● |
| 0.4 | DCGT-11T304-ENP-X17 | ● | ● | ● | ● |
| 0.8 | DCGT-11T308-ENP-X17 | ● | ● | ● | ● |

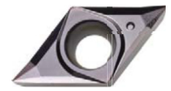




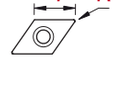




## DCGT FN-X25

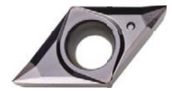
| R | Art. N° | PVD TiAlN | PVD TiN | nonrevêtu unbeschichtet uncoated K20 | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|---|
| 0.05 | DCGT-0702005-FN-X25 | ● | ● | ● | ● |
| 0.1 | DCGT-070201-FN-X25 | ● | ● | ● | ● |
| 0.2 | DCGT-070202-FN-X25 | ● | ● | ● | ● |
| 0.4 | DCGT-070204-FN-X25 | ● | ● | ● | ● |
| 0.05 | DCGT-11T3005-FN-X25 | ● | ● | ● | ● |
| 0.1 | DCGT-11T301-FN-X25 | ● | ● | ● | ● |
| 0.2 | DCGT-11T302-FN-X25 | ● | ● | ● | ● |
| 0.4 | DCGT-11T304-FN-X25 | ● | ● | ● | ● |
| 0.8 | DCGT-11T308-FN-X25 | ● | ● | ● | ● |





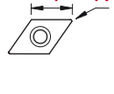






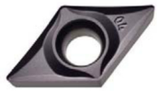
## DCGT ENP-X25

| R | Art. N° | PVD TiAlN | PVD TiAlX | PVD TiN | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|---|
| 0.05 | DCGT-0702005-ENP-X25 | ● | ● | ● | ● |
| 0.1 | DCGT-070201-ENP-X25 | ● | ● | ● | ● |
| 0.2 | DCGT-070202-ENP-X25 | ● | ● | ● | ● |
| 0.4 | DCGT-070204-ENP-X25 | ● | ● | ● | ● |
| 0.05 | DCGT-11T3005-ENP-X25 | ● | ● | ● | ● |
| 0.1 | DCGT-11T301-ENP-X25 | ● | ● | ● | ● |
| 0.2 | DCGT-11T302-ENP-X25 | ● | ● | ● | ● |
| 0.4 | DCGT-11T304-ENP-X25 | ● | ● | ● | ● |
| 0.8 | DCGT-11T308-ENP-X25 | ● | ● | ● | ● |



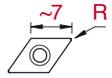


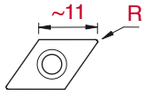


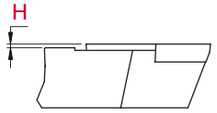



## DCGT ENP-X20

| R | H | Art. N° | PVD ZTA | PVD HTiX |
|---|---|---|---|---|
| 0.1 | 0.2 | DCGT-070201-ENP-X20 | ● | |
| 0.2 | 0.2 | DCGT-070202-ENP-X20 | ● | ● |
| 0.4 | 0.2 | DCGT-070204-ENP-X20 | ● | ● |
| 0.1 | 0.25 | DCGT-11T301-ENP-X20 | ● | |
| 0.2 | 0.25 | DCGT-11T302-ENP-X20 | ● | ● |
| 0.4 | 0.25 | DCGT-11T304-ENP-X20 | ● | ● |
| 0.8 | 0.25 | DCGT-11T308-ENP-X20 | ● | ● |



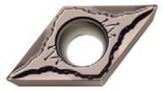





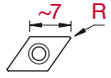


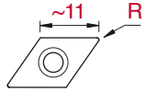


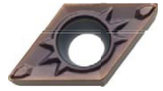
## DCMT EN-XF3

| R | Art. N° | PVD TAC | PVD HTAC |
|---|---|---|---|
| 0.1 | DCMT-070201-EN-XF3 | ● | ● |
| 0.2 | DCMT-070202-EN-XF3 | ● | ● |
| 0.4 | DCMT-070204-EN-XF3 | ● | ● |
| 0.1 | DCMT-11T301-EN-XF3 | ● | ● |
| 0.2 | DCMT-11T302-EN-XF3 | ● | ● |
| 0.4 | DCMT-11T304-EN-XF3 | ● | ● |



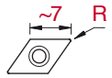



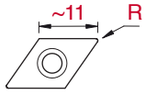


## DCMT EN-XF2

| R | Art. N° | PVD TAC | PVD HTAC | CVD HTi5 |
|---|---|---|---|---|
| 0.2 | DCMT-070202-EN-XF2 | ● | ● | ● |
| 0.4 | DCMT-070204-EN-XF2 | ● | ● | ● |
| 0.2 | DCMT-11T302-EN-XF2 | ● | ● | ● |
| 0.4 | DCMT-11T304-EN-XF2 | ● | ● | ● |



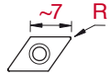



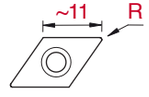




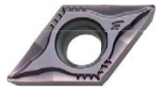

## DCMT EN-MF2

| R | Art. N° | PVD TAC | PVD HTAC | CVD Ti5 | CVD HTi5 |
|---|---|---|---|---|---|
| 0.2 | DCMT-070202-EN-MF2 | ● | ● | ● | ● |
| 0.4 | DCMT-070204-EN-MF2 | ● | ● | ● | ● |
| 0.2 | DCMT-11T302-EN-MF2 | ● | ● | ● | ● |
| 0.4 | DCMT-11T304-EN-MF2 | ● | ● | ● | ● |
| 0.8 | DCMT-11T308-EN-MF2 | ● | ● | ● | ● |



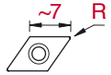



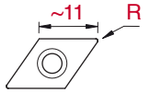




## DCMT EN-MF

| R | Art. N° | PVD Tmax | CVD Ti4 | CVD Ti7 |
|---|---|---|---|---|
| 0.2 | DCMT-070202-EN-MF | ● | ● | ● |
| 0.4 | DCMT-070204-EN-MF | ● | ● | ● |
| 0.2 | DCMT-11T302-EN-MF | ● | ● | ● |
| 0.4 | DCMT-11T304-EN-MF | ● | ● | ● |



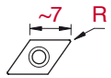



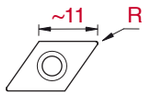





## DCMT EN-HF3

| R | Art. N° | PVD TiX | PVD HTiX | CVD Ti6 |
|---|---|---|---|---|
| 0.2 | DCMT-070202-EN-HF3 | ● | ● | ● |
| 0.4 | DCMT-070204-EN-HF3 | ● | ● | ● |
| 0.2 | DCMT-11T302-EN-HF3 | ● | ● | ● |
| 0.4 | DCMT-11T304-EN-HF3 | ● | ● | ● |
| 0.8 | DCMT-11T308-EN-HF3 | ● | ● | ● |



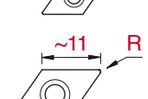





## DCMT EN-HF

| R | Art. N° | PVD Tmax | PVD TAC | CVD Ti4 | CVD Ti5 | CVD HTi5 |
|---|---|---|---|---|---|---|
| 0.2 | DCMT-070202-EN-HF | | ● | | ● | ● |
| 0.4 | DCMT-070204-EN-HF | ● | ● | ● | ● | ● |
| 0.8 | DCMT-070208-EN-HF | ● | ● | ● | ● | ● |
| 0.2 | DCMT-11T302-EN-HF | | ● | | ● | ● |
| 0.4 | DCMT-11T304-EN-HF | ● | ● | ● | ● | ● |
| 0.8 | DCMT-11T308-EN-HF | ● | ● | ● | ● | ● |

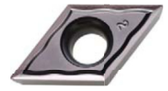




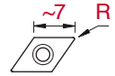


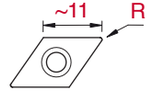


## DCGT FN-X8

| R | Art. N° | CERMET PVD CTA | CERMET nonrevêtu unbeschichtet uncoated CN6 |
|---|---|---|---|
| 0.05 | DCGT-0702005-FN-X8 | ● | ● |
| 0.1 | DCGT-070201-FN-X8 | ● | ● |
| 0.2 | DCGT-070202-FN-X8 | ● | ● |
| 0.05 | DCGT-11T3005-FN-X8 | ● | ● |
| 0.1 | DCGT-11T301-FN-X8 | ● | ● |
| 0.2 | DCGT-11T302-FN-X8 | ● | ● |
| 0.4 | DCGT-11T304-FN-X8 | ● | ● |



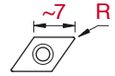



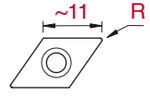




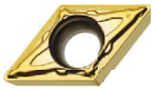

## DCGT ENP-KX

| R | Art. N° | CERMET PVD CT7 | CERMET PVD HCT7 | CERMET nonrevêtu unbeschichtet uncoated CN6 |
|---|---|---|---|---|
| 0.1 | DCGT-070201-ENP-KX | ● | ● | ● |
| 0.2 | DCGT-070202-ENP-KX | ● | ● | ● |
| 0.4 | DCGT-070204-ENP-KX | ● | ● | ● |
| 0.1 | DCGT-11T301-ENP-KX | ● | ● | ● |
| 0.2 | DCGT-11T302-ENP-KX | ● | ● | ● |
| 0.4 | DCGT-11T304-ENP-KX | ● | ● | ● |



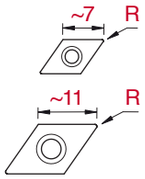







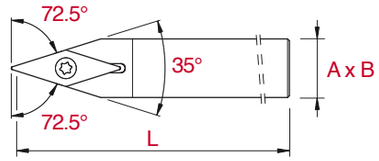
DCMT
EN-KM

| R | Art. N° | CERMET PVD P M CT7 | CERMET PVD P M HCT7 | CERMET nonrevêtu unbeschichtet uncoated P CN6 |
|---|---|---|---|---|
| 0.2 | DCMT-070202-EN-KM | ● | ● | ● |
| 0.4 | DCMT-070204-EN-KM | ● | ● | ● |
| 0.2 | DCMT-11T302-EN-KM | ● | ● | ● |
| 0.4 | DCMT-11T304-EN-KM | ● | ● | ● |
| 0.8 | DCMT-11T308-EN-KM | ● | ● | ● |



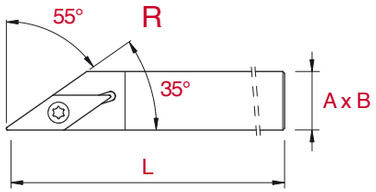



SVV




| Plaquettes WSP Inserts | A x B | L | Art. N° |
|---|---|---|---|
| VC..-1103.. | 8 x 8 | 115 | SVVCN-0808X-11 |
| | 10 x 10 | 115 | SVVCN-1010X-11 |
| | 12 x 12 | 130 | SVVCN-1212X-11 |
| | 12 x 12 | 90 | SVVCN-1212G-11 |
| | 12.7 x 12.7 | 130 | SVVCN-12.7X-11 |
| | 16 x 16 | 130 | SVVCN-1616X-11 |
| | 16 x 16 | 75 | SVVCN-1616F-11 |
| | 20 x 20 | 120 | SVVCN-2020X-11 |
| VC..-1303.. | 8 x 10 | 115 | SVVCN-0810X-13 |
| | 10 x 10 | 115 | SVVCN-1010X-13 |
| | 12 x 12 | 130 | SVVCN-1212X-13 |
| | 12 x 12 | 90 | SVVCN-1212G-13 |
| | 12.7 x 12.7 | 130 | SVVCN-12.7X-13 |
| | 16 x 16 | 130 | SVVCN-1616X-13 |
| | 16 x 16 | 75 | SVVCN-1616F-13 |
| | 20 x 20 | 120 | SVVCN-2020X-13 |
| VC..-1604.. | 12 x 12 | 130 | SVVCN-1212X-16 |
| | 12 x 12 | 90 | SVVCN-1212G-16 |
| | 12.7 x 12.7 | 130 | SVVCN-12.7X-16 |
| | 16 x 16 | 130 | SVVCN-1616X-16 |
| | 16 x 16 | 75 | SVVCN-1616F-16 |
| | 20 x 20 | 120 | SVVCN-2020X-16 |





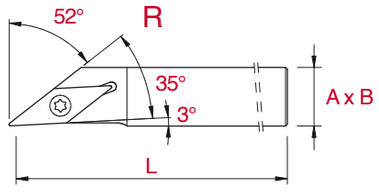

SVA

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| VC..-1103.. | 8 x 8 | 115 | SVACL-0808X-11 | SVACR-0808X-11 |
| | 10 x 10 | 115 | SVACL-1010X-11 | SVACR-1010X-11 |
| | 12 x 12 | 130 | SVACL-1212X-11 | SVACR-1212X-11 |
| | 12 x 12 | 90 | SVACL-1212G-11 | SVACR-1212G-11 |
| | 12.7 x 12.7 | 130 | SVACL-12.7X-11 | SVACR-12.7X-11 |
| | 16 x 16 | 130 | SVACL-1616X-11 | SVACR-1616X-11 |
| | 16 x 16 | 75 | SVACL-1616F-11 | SVACR-1616F-11 |
| | 20 x 20 | 120 | SVACL-2020X-11 | SVACR-2020X-11 |
| VC..-1604.. | 12 x 12 | 130 | SVACL-1212X-16 | SVACR-1212X-16 |
| | 12 x 12 | 90 | SVACL-1212G-16 | SVACR-1212G-16 |
| | 12.7 x 12.7 | 130 | SVACL-12.7X-16 | SVACR-12.7X-16 |
| | 16 x 16 | 130 | SVACL-1616X-16 | SVACR-1616X-16 |
| | 16 x 16 | 75 | SVACL-1616F-16 | SVACR-1616F-16 |
| | 20 x 20 | 120 | SVACL-2020X-16 | SVACR-2020X-16 |







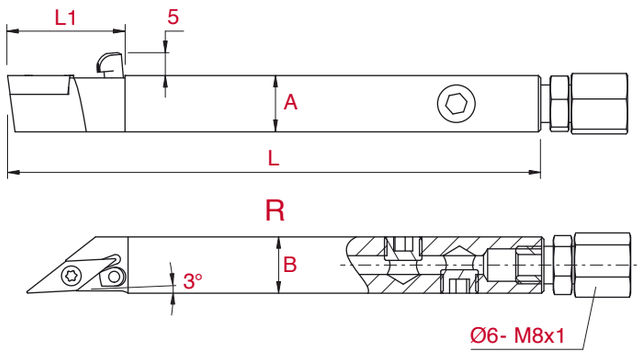



SVJ

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| VC..-1103.. | 8 x 8 | 115 | SVJCL-0808X-11 | SVJCR-0808X-11 |
| | 10 x 10 | 115 | SVJCL-1010X-11 | SVJCR-1010X-11 |
| | 12 x 12 | 130 | SVJCL-1212X-11 | SVJCR-1212X-11 |
| | 12 x 12 | 90 | SVJCL-1212G-11 | SVJCR-1212G-11 |
| | 12.7 x 12.7 | 130 | SVJCL-12.7X-11 | SVJCR-12.7X-11 |
| | 16 x 16 | 130 | SVJCL-1616X-11 | SVJCR-1616X-11 |
| | 16 x 16 | 75 | SVJCL-1616F-11 | SVJCR-1616F-11 |
| | 20 x 20 | 120 | SVJCL-2020X-11 | SVJCR-2020X-11 |
| VC..-1303.. | 8 x 10 | 115 | SVJCL-0810X-13 | SVJCR-0810X-13 |
| | 10 x 10 | 115 | SVJCL-1010X-13 | SVJCR-1010X-13 |
| | 12 x 12 | 130 | SVJCL-1212X-13 | SVJCR-1212X-13 |
| | 12 x 12 | 90 | SVJCL-1212G-13 | SVJCR-1212G-13 |
| | 12.7 x 12.7 | 130 | SVJCL-12.7X-13 | SVJCR-12.7X-13 |
| | 16 x 16 | 130 | SVJCL-1616X-13 | SVJCR-1616X-13 |
| | 16 x 16 | 75 | SVJCL-1616F-13 | SVJCR-1616F-13 |
| | 20 x 20 | 120 | SVJCL-2020X-13 | SVJCR-2020X-13 |
| VC..-1604.. | 12 x 12 | 130 | SVJCL-1212X-16 | SVJCR-1212X-16 |
| | 12 x 12 | 90 | SVJCL-1212G-16 | SVJCR-1212G-16 |
| | 12.7 x 12.7 | 130 | SVJCL-12.7X-16 | SVJCR-12.7X-16 |
| | 16 x 16 | 130 | SVJCL-1616X-16 | SVJCR-1616X-16 |
| | 16 x 16 | 75 | SVJCL-1616F-16 | SVJCR-1616F-16 |
| | 20 x 20 | 120 | SVJCL-2020X-16 | SVJCR-2020X-16 |



SVJ



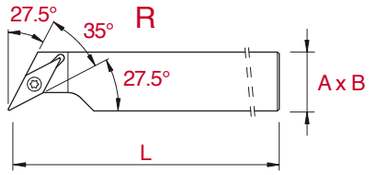

| Plaquettes WSP Inserts | A x B | L | L1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|
| VC..-1103.. | 10 x 10 | 110 | 21 | SVJCL-1010J-11-JET | SVJCR-1010J-11-JET |
| | 12 x 12 | 110 | 21 | SVJCL-1212J-11-JET | SVJCR-1212J-11-JET |
| | 12.7 x 12.7 | 110 | 21 | SVJCL-12.7J-11-JET | SVJCR-12.7J-11-JET |
| | 16 x 16 | 110 | 21 | SVJCL-1616J-11-JET | SVJCR-1616J-11-JET |
| | 20 x 20 | 110 | 21 | SVJCL-2020J-11-JET | SVJCR-2020J-11-JET |
| VC..-1303.. | 10 x 10 | 110 | 26 | SVJCL-1010J-13-JET | SVJCR-1010J-13-JET |
| | 12 x 12 | 110 | 26 | SVJCL-1212J-13-JET | SVJCR-1212J-13-JET |
| | 12.7 x 12.7 | 110 | 26 | SVJCL-12.7J-13-JET | SVJCR-12.7J-13-JET |
| | 16 x 16 | 110 | 26 | SVJCL-1616J-13-JET | SVJCR-1616J-13-JET |
| | 20 x 20 | 110 | 26 | SVJCL-2020J-13-JET | SVJCR-2020J-13-JET |
| VC..-1604.. | 12 x 12 | 110 | 30 | SVJCL-1212J-16-JET | SVJCR-1212J-16-JET |
| | 12.7 x 12.7 | 110 | 30 | SVJCL-12.7J-16-JET | SVJCR-12.7J-16-JET |
| | 16 x 16 | 110 | 30 | SVJCL-1616J-16-JET | SVJCR-1616J-16-JET |
| | 20 x 20 | 110 | 30 | SVJCL-2020J-16-JET | SVJCR-2020J-16-JET |







SVX



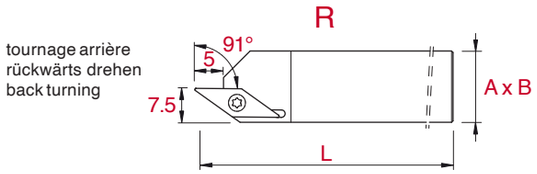

| Plaquettes WSP Inserts | A x B | L | L Art. N° | R Art. N° |
|---|---|---|---|---|
| VC..-1103.. | 16 x 16 | 130 | SVXCL-1616X-11 | SVXCR-1616X-11 |
| | 16 x 16 | 75 | SVXCL-1616F-11 | SVXCR-1616F-11 |
| | 20 x 20 | 120 | SVXCL-2020X-11 | SVXCR-2020X-11 |

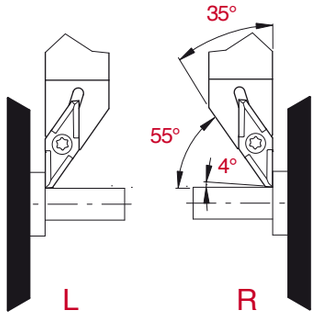
Porte-outils compatibles avec plaquettes VCGTELP/ERP-FL/FR-X10°
Passende Halter zu den Wendeplatten VCGTELP/ERP-FL/FR-X10°
Holders compatible with inserts VCGTELP/ERP-FL/FR-X10°



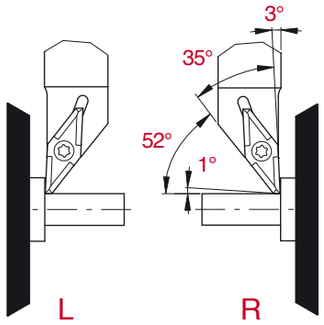


SV-CL/R

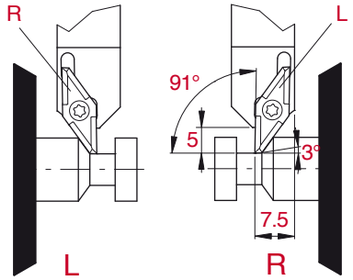



| | Art. N° |
|---|---|
| R | SVACR-...-11 |
| L | SVACL-...-11 |



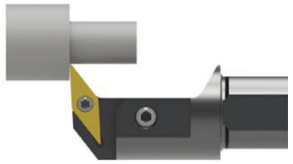

| | Art. N° |
|---|---|
| R | SVJCR-...-11 |
| L | SVJCL-...-11 |



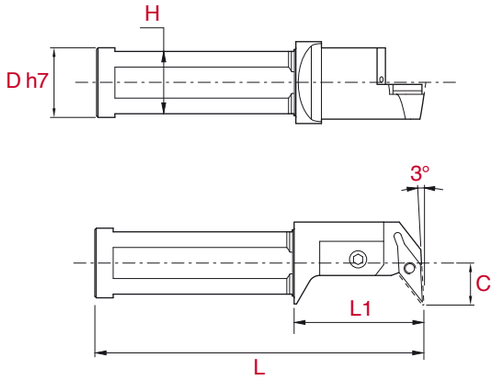

| | Art. N° |
|---|---|
| R | SV-CR-...-11 |
| L | SV-CL-...-11 |

| | | L | Art. N° | Art. N° |
|---|---|---|---|---|
| Plaquettes WSP Inserts | A x B | | L | R |
| VCG..-1103.. | 12 x 12 | 130 | SV-CL-1212X-11 | SV-CR-1212X-11 |
| | 12 x 12 | 90 | SV-CL-1212G-11 | SV-CR-1212G-11 |
| | 12.7 x 12.7 | 130 | SV-CL-12.7X-11 | SV-CR-12.7X-11 |
| | 16 x 16 | 130 | SV-CL-1616X-11 | SV-CR-1616X-11 |
| | 16 x 16 | 75 | SV-CL-1616F-11 | SV-CR-1616F-11 |
| | 20 x 20 | 120 | SV-CL-2020X-11 | SV-CR-2020X-11 |

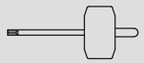
# SVUCL-JET | 35° | Porte-outils avecarrosage intégré / Halter mit integrierter Kühlmittelzufuhr / Holders with integrated coolant supply



SVUCL




| Plaquettes WSP Inserts | D | C | H | L | L1 | Art. N° |
|---|---|---|---|---|---|---|
| VC..-1103.. | 19.05 | 10 | 17 | 90 | 35.5 | SVUCL-D19.05-90-11-JET |
| VC..-1103.. | 20 | 10 | 17 | 90 | 35.5 | SVUCL-D20-90-11-JET |

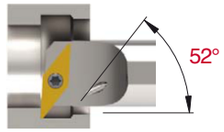
| Pièces de rechange Ersatzteile Spare parts | | Options | |
|---|---|---|---|
|  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° |
| V-M4X9-T15 | V-M5x5-BN24 | C-T15 | JS-M5-D4 |



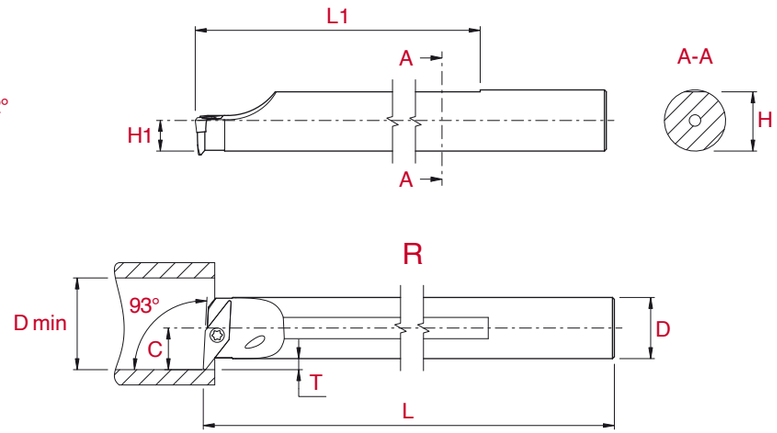
Zurück zum Kapitelanfang



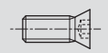
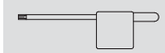
# Porte-outils intérieurs / Innenhalter / Internal holders | 35° | A-SVUCR/L



SVU




| | Acier / Stahl / Steel | | | | | | | | L | R |
|---|---|---|---|---|---|---|---|---|---|---|
| Plaquettes WSP Inserts | D | Dmin | T | C | H1 | L | L1 | H | Art. N° | Art. N° |
| VC..-1103 | 16 | 21 | 3.1 | 11 | 8 | 150 | 118 | 15.5 | A16M-SVUCL-11 | A16M-SVUCR-11 |

| Pièces de rechange Ersatzteile Spare parts | Options |
|---|---|
|  |  |
| Art. N° | Art. N° |
| V-M2.5X5.8-T8 | C-T8 |

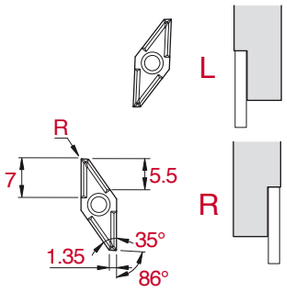
Zurück zum Index





## VCGT FL / FR-X10

| R | Art. N° | PVD ST | PVD TiAlN | PVD HTA | PVD TiAlX | PVD HTAX | PVD TiN | PVD HST | nonrevêtu unbeschichtet uncoated K10 | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.03 | VCGT-1103003-FL-X10 | ● | ● | ● | | | ● | ● | ● | ● |
| 0.08 | VCGT-1103008-FL-X10 | ● | ● | ● | | | ● | ● | ● | ● |
| 0.1 | VCGT-110301-FL-X10 | ● | ● | ● | | | ● | ● | ● | ● |
| 0.2 | VCGT-110302-FL-X10 | ● | ● | ● | | | ● | ● | ● | ● |
| 0.03 | VCGT-1103003-FR-X10 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | VCGT-1103008-FR-X10 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.1 | VCGT-110301-FR-X10 | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.2 | VCGT-110302-FR-X10 | ● | ● | ● | ● | ● | ● | ● | ● | ● |

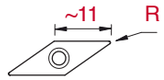







## VCGT FN-K18

| R | Art. N° | PVD HTA | PVD HTiN | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|
| 0.05 | VCGT-1103005-FN-K18 | ● | ● | ● |
| 0.1 | VCGT-110301-FN-K18 | ● | ● | ● |
| 0.2 | VCGT-110302-FN-K18 | ● | ● | ● |
| 0.4 | VCGT-110304-FN-K18 | ● | ● | ● |

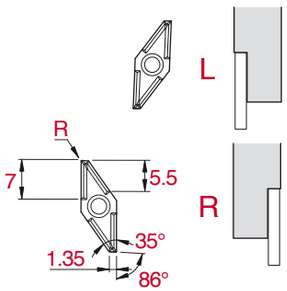







## VCGT ELP/ERP-X10

| R | Art. N° | PVD ST | PVD TiAlN | PVD HTA | PVD TiAlX | PVD HTAX | PVD TiN | nonrevêtu unbeschichtet uncoated K10 | nonrevêtu unbeschichtet uncoated K20 |
|---|---|---|---|---|---|---|---|---|---|
| 0.03 | VCGT-1103003-ELP-X10 | ● | ● | ● | | | ● | ● | ● |
| 0.08 | VCGT-1103008-ELP-X10 | ● | ● | ● | | | ● | ● | ● |
| 0.1 | VCGT-110301-ELP-X10 | ● | ● | ● | | | ● | ● | ● |
| 0.2 | VCGT-110302-ELP-X10 | ● | ● | ● | | | ● | ● | ● |
| 0.03 | VCGT-1103003-ERP-X10 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | VCGT-1103008-ERP-X10 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.1 | VCGT-110301-ERP-X10 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.2 | VCGT-110302-ERP-X10 | ● | ● | ● | ● | ● | ● | ● | ● |

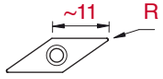







## VCGW FN-0

| R | Art. N° | PVD HTA | PVD HTiN | nonrevêtu unbeschichtet uncoated K10 |
|---|---|---|---|---|
| 0.05 | VCGW-1103005-FN-0 | ● | ● | ● |
| 0.1 | VCGW-110301-FN-0 | ● | ● | ● |
| 0.2 | VCGW-110302-FN-0 | ● | ● | ● |
| 0.4 | VCGW-110304-FN-0 | ● | ● | ● |







## VCGT FN-X8

| R | Art. N° | PVD TiAlN | PVD TiAlX | PVD TiN | PVD HTA | PVD HTAX | nonrevêtu K20 | nonrevêtu K10 |
|---|---|---|---|---|---|---|---|---|
| 0.05 | VCGT-1103005-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | VCGT-1103008-FN-X8 | ● | ● | | ● | ● | ● | ● |
| 0.1 | VCGT-110301-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.15 | VCGT-1103015-FN-X8 | ● | ● | | ● | ● | ● | ● |
| 0.2 | VCGT-110302-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | VCGT-110304-FN-X8 | ● | ● | ● | ● | ● | ● | ● |
| 0.05 | VCGT-1303005-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.1 | VCGT-130301-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.2 | VCGT-130302-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.4 | VCGT-130304-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.05 | VCGT-1604005-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.1 | VCGT-160401-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.2 | VCGT-160402-FN-X8 | ● | | ● | ● | | ● | ● |
| 0.4 | VCGT-160404-FN-X8 | ● | | ● | ● | | ● | ● |





## VCGT ENP-X8

| R | Art. N° | PVD TiAlN | PVD TiN | nonrevêtu K20 |
|---|---|---|---|---|
| 0.05 | VCGT-1103005-ENP-X8 | ● | ● | ● |
| 0.08 | VCGT-1103008-ENP-X8 | ● | | ● |
| 0.1 | VCGT-110301-ENP-X8 | ● | ● | ● |
| 0.15 | VCGT-1103015-ENP-X8 | ● | | ● |
| 0.2 | VCGT-110302-ENP-X8 | ● | ● | ● |
| 0.4 | VCGT-110304-ENP-X8 | ● | ● | ● |
| 0.05 | VCGT-1303005-ENP-X8 | ● | | ● |
| 0.1 | VCGT-130301-ENP-X8 | ● | | ● |
| 0.2 | VCGT-130302-ENP-X8 | ● | | ● |
| 0.4 | VCGT-130304-ENP-X8 | ● | | ● |
| 0.05 | VCGT-1604005-ENP-X8 | ● | ● | ● |
| 0.1 | VCGT-160401-ENP-X8 | ● | ● | ● |
| 0.2 | VCGT-160402-ENP-X8 | ● | ● | ● |
| 0.4 | VCGT-160404-ENP-X8 | ● | ● | ● |









## VCGT FN-X17

| R | Art. N° | PVD ST | PVD TiAlN | PVD TiN | PVD HST | PVD HTA | PVD HTAX | nonrevêtu K20 | nonrevêtu K10 |
|---|---|---|---|---|---|---|---|---|---|
| 0.05 | VCGT-1103005-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.08 | VCGT-1103008-FN-X17 | ● | ● | | ● | ● | ● | ● | ● |
| 0.1 | VCGT-110301-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.15 | VCGT-1103015-FN-X17 | ● | ● | | ● | ● | ● | ● | ● |
| 0.2 | VCGT-110302-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.4 | VCGT-110304-FN-X17 | ● | ● | ● | ● | ● | ● | ● | ● |
| 0.05 | VCGT-1303005-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.1 | VCGT-130301-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.2 | VCGT-130302-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.4 | VCGT-130304-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.05 | VCGT-1604005-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.1 | VCGT-160401-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.2 | VCGT-160402-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.4 | VCGT-160404-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |
| 0.8 | VCGT-160408-FN-X17 | ● | ● | ● | ● | ● | | ● | ● |





## VCGT ENP-X17

| R | Art. N° | PVD ST | PVD TiAlN | PVD TiN | nonrevêtu K20 |
|---|---|---|---|---|---|
| 0.05 | VCGT-1103005-ENP-X17 | ● | ● | ● | ● |
| 0.08 | VCGT-1103008-ENP-X17 | ● | ● | | ● |
| 0.1 | VCGT-110301-ENP-X17 | ● | ● | ● | ● |
| 0.15 | VCGT-1103015-ENP-X17 | ● | ● | | ● |
| 0.2 | VCGT-110302-ENP-X17 | ● | ● | ● | ● |
| 0.4 | VCGT-110304-ENP-X17 | ● | ● | ● | ● |
| 0.05 | VCGT-1303005-ENP-X17 | ● | ● | | ● |
| 0.1 | VCGT-130301-ENP-X17 | ● | ● | | ● |
| 0.2 | VCGT-130302-ENP-X17 | ● | ● | | ● |
| 0.4 | VCGT-130304-ENP-X17 | ● | ● | | ● |
| 0.05 | VCGT-1604005-ENP-X17 | ● | ● | ● | ● |
| 0.1 | VCGT-160401-ENP-X17 | ● | ● | ● | ● |
| 0.2 | VCGT-160402-ENP-X17 | ● | ● | ● | ● |
| 0.4 | VCGT-160404-ENP-X17 | ● | ● | ● | ● |
| 0.8 | VCGT-160408-ENP-X17 | ● | ● | ● | ● |





## VCGT FN-X25

| R | Art. N° | PVD TiAlN (P M N S) | PVD TiN (P M N) | PVD HTA (P M N S) | nonrevêtu K20 (N) | nonrevêtu K10 (N) |
|---|---|---|---|---|---|---|
| 0.05 | VCGT-1103005-FN-X25 | ● | ● | ● | ● | ● |
| 0.1 | VCGT-110301-FN-X25 | ● | ● | ● | ● | ● |
| 0.2 | VCGT-110302-FN-X25 | ● | ● | ● | ● | ● |
| 0.4 | VCGT-110304-FN-X25 | ● | ● | ● | ● | ● |
| 0.05 | VCGT-1303005-FN-X25 | ● | ● | ● | ● | ● |
| 0.1 | VCGT-130301-FN-X25 | ● | ● | ● | ● | ● |
| 0.2 | VCGT-130302-FN-X25 | ● | ● | ● | ● | ● |
| 0.4 | VCGT-130304-FN-X25 | ● | ● | ● | ● | ● |
| 0.8 | VCGT-130308-FN-X25 | ● | ● | ● | ● | ● |
| 0.05 | VCGT-1604005-FN-X25 | ● | ● | ● | ● | ● |
| 0.1 | VCGT-160401-FN-X25 | ● | ● | ● | ● | ● |
| 0.2 | VCGT-160402-FN-X25 | ● | ● | ● | ● | ● |
| 0.4 | VCGT-160404-FN-X25 | ● | ● | ● | ● | ● |
| 0.8 | VCGT-160408-FN-X25 | ● | ● | ● | ● | ● |





## VCGT ENP-X25

| R | Art. N° | PVD TiAlN (P M N S) | PVD TiAlX (P M S) | PVD TiN (P M N) | nonrevêtu K20 (N) |
|---|---|---|---|---|---|
| 0.05 | VCGT-1103005-ENP-X25 | ● | ● | ● | ● |
| 0.1 | VCGT-110301-ENP-X25 | ● | ● | ● | ● |
| 0.2 | VCGT-110302-ENP-X25 | ● | ● | ● | ● |
| 0.4 | VCGT-110304-ENP-X25 | ● | ● | ● | ● |
| 0.05 | VCGT-1303005-ENP-X25 | ● | | | ● |
| 0.1 | VCGT-130301-ENP-X25 | ● | | | ● |
| 0.2 | VCGT-130302-ENP-X25 | ● | | | ● |
| 0.4 | VCGT-130304-ENP-X25 | ● | | | ● |
| 0.8 | VCGT-130308-ENP-X25 | ● | | | ● |
| 0.05 | VCGT-1604005-ENP-X25 | ● | | ● | ● |
| 0.1 | VCGT-160401-ENP-X25 | ● | | ● | ● |
| 0.2 | VCGT-160402-ENP-X25 | ● | | ● | ● |
| 0.4 | VCGT-160404-ENP-X25 | ● | | ● | ● |
| 0.8 | VCGT-160408-ENP-X25 | ● | | ● | ● |



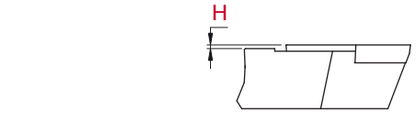






## VCGT ENP-X20

| R | H | Art. N° | PVD ZTA (M N S) | PVD HTiX (M N S) |
|---|---|---|---|---|
| 0.2 | 0.25 | VCGT-130302-ENP-X20 | ● | ● |
| 0.4 | 0.25 | VCGT-130304-ENP-X20 | ● | ● |
| 0.8 | 0.25 | VCGT-130308-ENP-X20 | ● | ● |

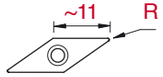






## VCMT EN-XF3

| R | Art. N° | PVD TAC | PVD HTAC |
|---|---|---|---|
| 0.1 | VCMT-110301-EN-XF3 | ● | ● |
| 0.2 | VCMT-110302-EN-XF3 | ● | ● |
| 0.4 | VCMT-110304-EN-XF3 | ● | ● |

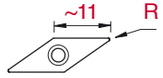


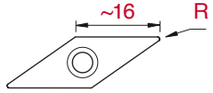





## VCMT EN-XF2

| R | Art. N° | PVD TAC | PVD HTAC | CVD HTi5 |
|---|---|---|---|---|
| 0.2 | VCMT-110302-EN-XF2 | ● | ● | ● |
| 0.4 | VCMT-110304-EN-XF2 | ● | ● | ● |
| 0.4 | VCMT-160404-EN-XF2 | ● | ● | ● |





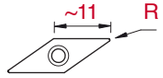


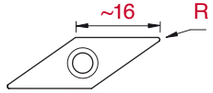





## VCMT EN-MF

| R | Art. N° | PVD Tmax | CVD Ti4 | CVD Ti7 |
|---|---|---|---|---|
| 0.2 | VCMT-110302-EN-MF | ● | ● | ● |
| 0.4 | VCMT-110304-EN-MF | ● | ● | ● |
| 0.4 | VCMT-160404-EN-MF | ● | ● | ● |



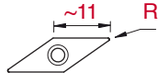



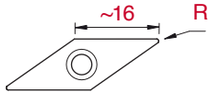





## VCMT EN-HF

| R | Art. N° | PVD Tmax | CVD Ti4 |
|---|---|---|---|
| 0.4 | VCMT-110304-EN-HF | ● | ● |
| 0.8 | VCMT-110308-EN-HF | ● | ● |
| 0.4 | VCMT-160404-EN-HF | ● | ● |
| 0.8 | VCMT-160408-EN-HF | ● | ● |



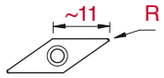







VCGT
FN-X8

| R | Art. N° | CERMET PVD CTA | CERMET nonrevêtu unbeschichtet uncoated CN6 |
|---|---|---|---|
| 0.05 | VCGT-1103005-FN-X8 | ● | ● |
| 0.1 | VCGT-110301-FN-X8 | ● | ● |
| 0.2 | VCGT-110302-FN-X8 | ● | ● |
| 0.4 | VCGT-110304-FN-X8 | ● | ● |



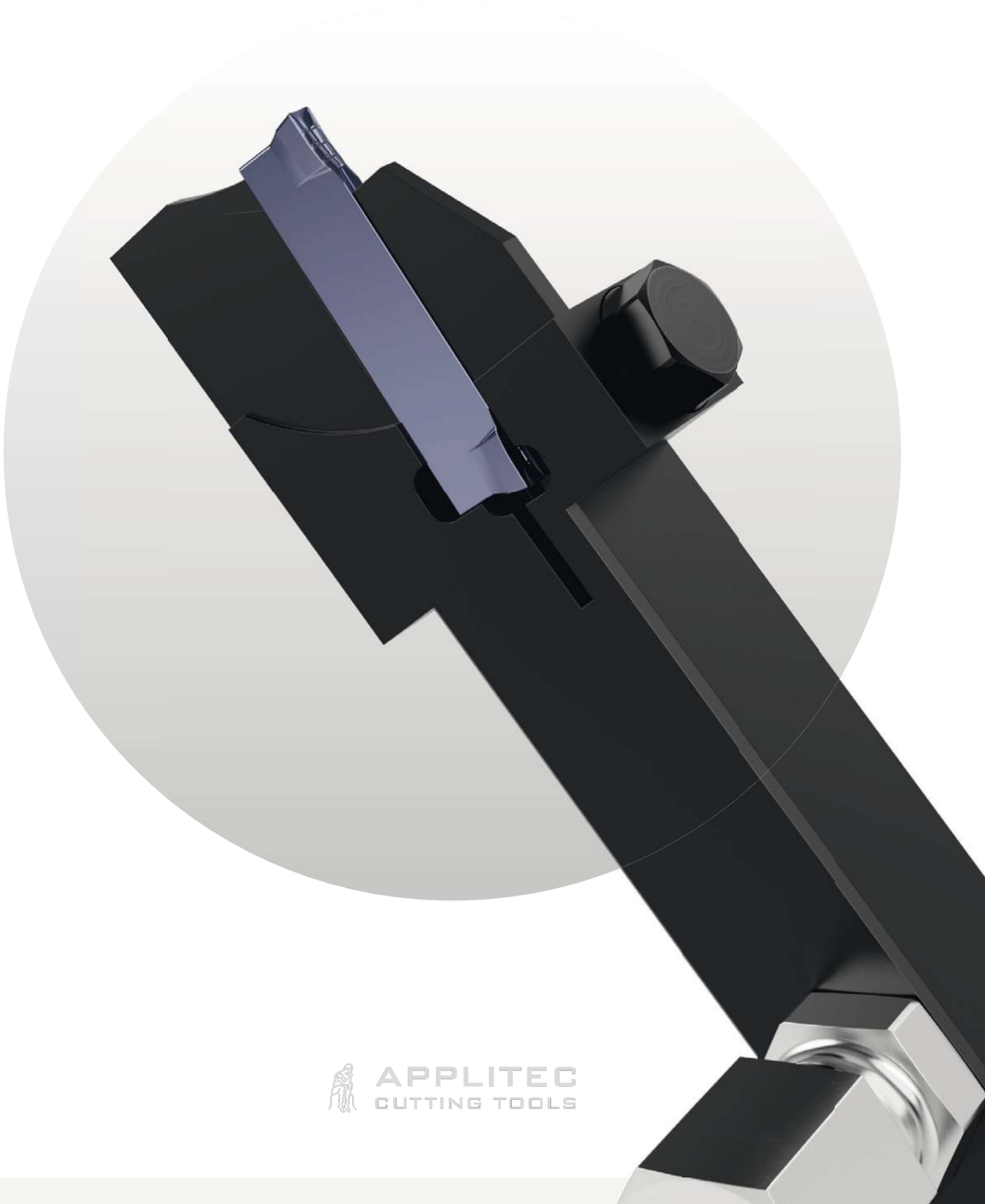



| | Porte-outils Halter Holders | Vis Schrauben Screw | Options: Clé Schlüssel Key | Options: Clédynamométrique Drehmomentschlüssel Torquewrench | Options: Serrage Drehmoment Torque |
|---|---|---|---|---|---|
| Vis de rechange Ersatzschrauben Spare screws | Series SC…-06<br>Series SD…-07<br>Series SV…-11 | V-M2.5X7.8-T8 | C-T8 | SET-NM1.5-TX8 | 1.3 Nm |
| | Series SV…-13 | V-M3X7.3-T8-ISO | | | 2.0 Nm |
| | Series SC…-09<br>Series SD…-11<br>Series SV…-16 | V-M4X9-T15-ISO | C-T15 | SET-NM3.0-TX15 | 3.0 Nm |

| | L Pour réf. Für Ref. For ref. | Art. N° * | Art. N° * | Art. N° * |
|---|---|---|---|---|
| Pièces de rechange JET Ersatzteile JET Spare parts JET | S…L-10…-JET | JJL-4X12-D1.5 | J-M8X1-D6 | JB-M8X1 |
| | S…L-12…-JET<br>S…L-12.7…-JET | JJL-4X14-D1.5 | | |
| | S…L-16…-JET<br>S…L-20…-JET | JJL-4X17-D1.5 | | |
| | **R** Pour réf. Für Ref. For ref. | Art. N° * | Art. N° * | Art. N° * |
| | S…R-10…-JET | JJR-4X12-D1.5 | J-M8X1-D6 | JB-M8X1 |
| | S…R-12…-JET<br>S…R-12.7…-JET | JJR-4X14-D1.5 | | |
| | S…R-16…-JET<br>S…R-20…-JET | JJR-4X17-D1.5 | | |

* livréavec chaqueporte-outil
mit jedem Halter geliefert
delivered with each holder

# EVOCUT-Line

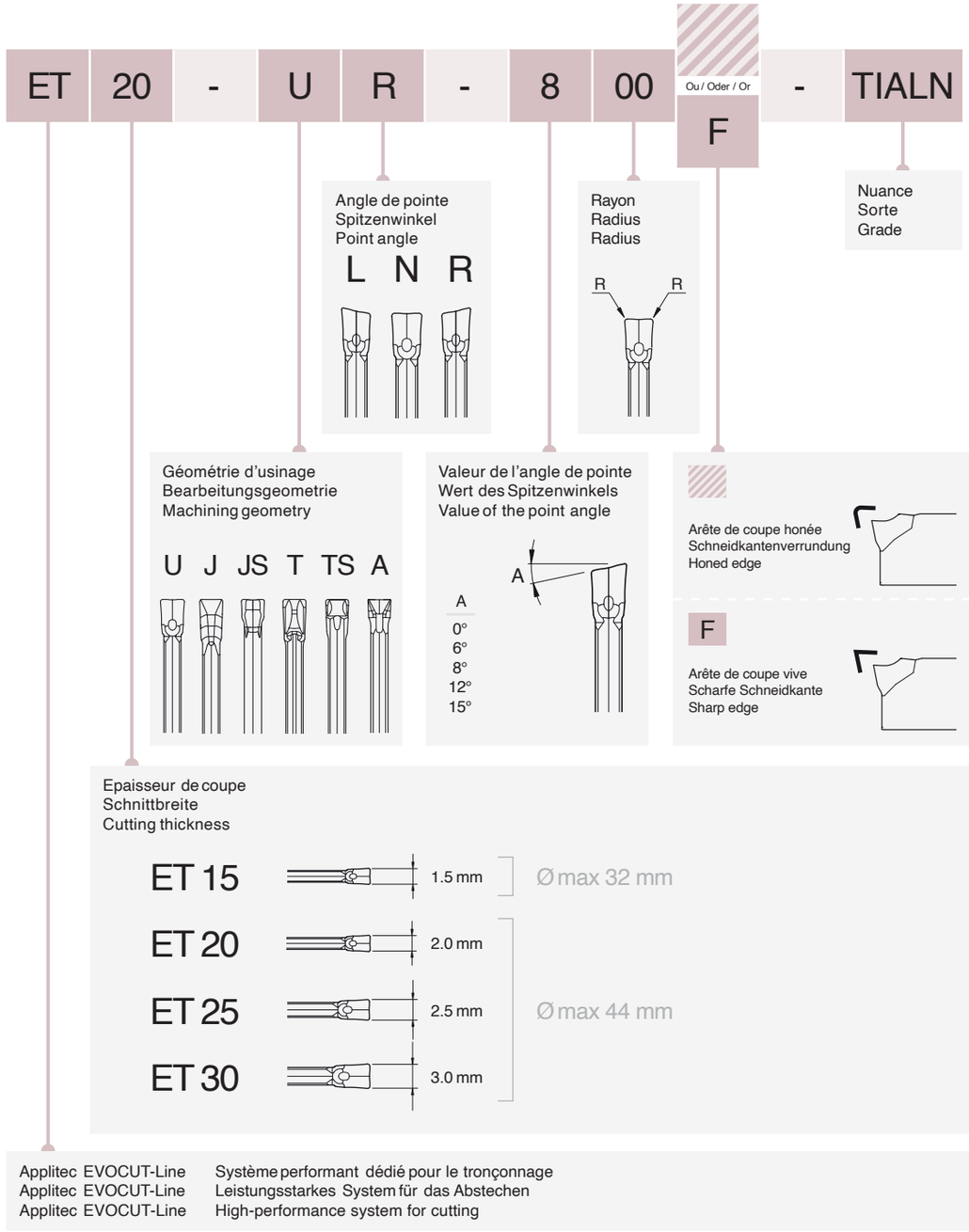


APPLITEC
CUTTING TOOLS

| | | | |
|---|---|---|---|
| Codification<br>Kodifizierung<br>Coding guide | | | > 10.03 |
| Infos et avantages<br>Infos und Vorteile<br>Infos and advantages | | | > 10.04 |
| Géométries de coupe<br>Spanformgeometrie<br>Cutting geometries | | | > 10.07 |
| Nuances<br>Sorten<br>Grades | | | > 10.08 |
| Paramètres de coupe indicatifs<br>Empfohlene Schnittwerte<br>Standard machining data | | | > 10.10 |
| Porte-outils<br>Halter<br>Holders | H | without coolant | > 10.12 |
| | H JET | with coolant | > 10.13 |
| | H-HM-JET | with coolant | > 10.14 |
| | GWS | Interface Göltenbodt | > 10.15 |
| | MS | Interface Index | > 10.19 |
| | HSK-JET | with coolant | > 10.20 |
| Lames<br>Stecklingen<br>Blades | HM-HK-HUK | | > 10.21 |
| Plaquettes de tronçonnage<br>Abstechwendeplatten<br>Cut off inserts | U | positive geometry | > 10.26 |
| | J | universal geometry | > 10.28 |
| | JS | universal geometry | > 10.30 |
| | T | negative geometry | > 10.31 |
| | TS | negative geometry | > 10.33 |
| | A | strongly positive geometry | > 10.34 |





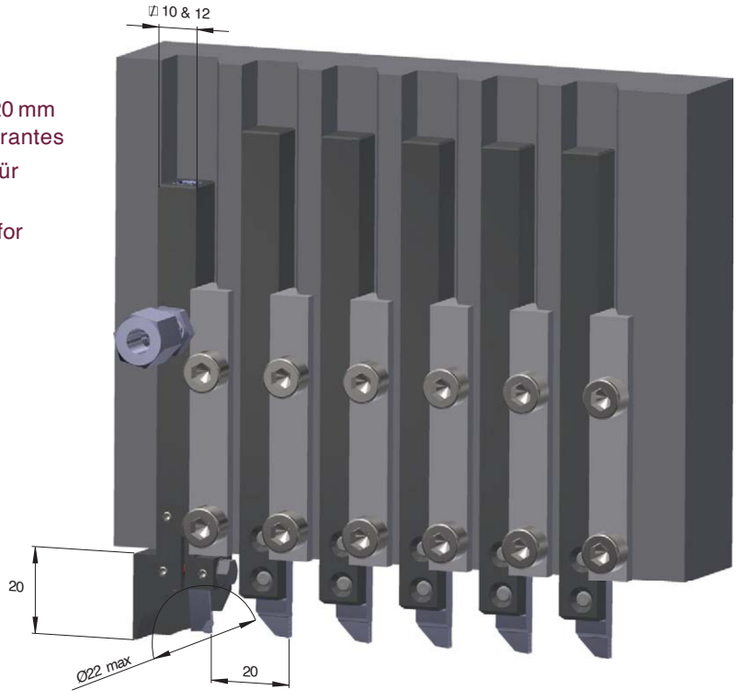
**EVOCUT-Line**

Infos et avantages
Infos und Vorteile
Infos and advantages

Compact: seulement 20 mm pour les machines courantes

Kompakt: nur 20 mm für übliche Maschinen

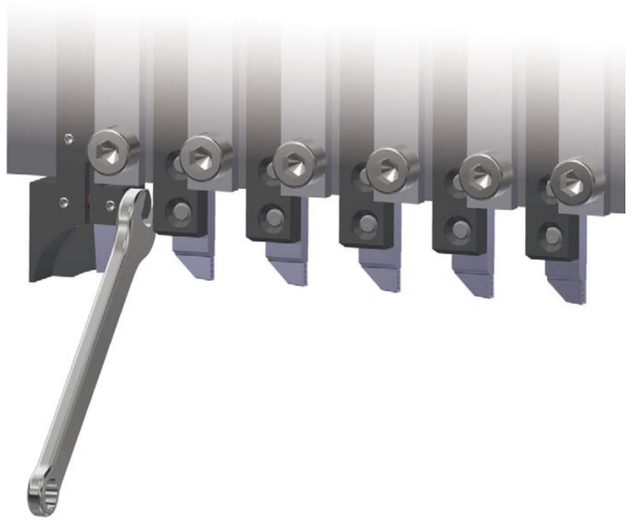
Compact: only 20 mm for current machines




Facilité d'accès

Zugangsleichtigkeit

Excellent accessibility



Changement de la plaquette sans démontage

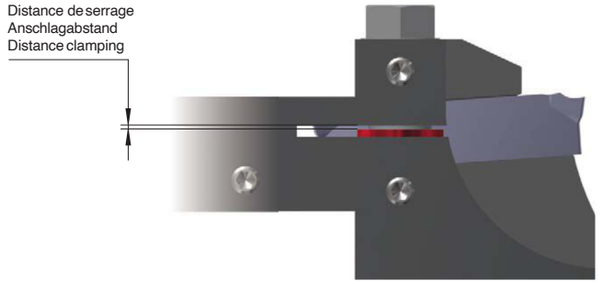
Veränderung der Platte ohne Zerlegung

Change of insert without disassembly

Butée de serrage

Spannungs-Anschlag

Clamping stop




Recommandations de serrage: n'utiliser que la clé fournie

Spannungsempfehlungen: nur den gelieferten Schlüssel benutzen

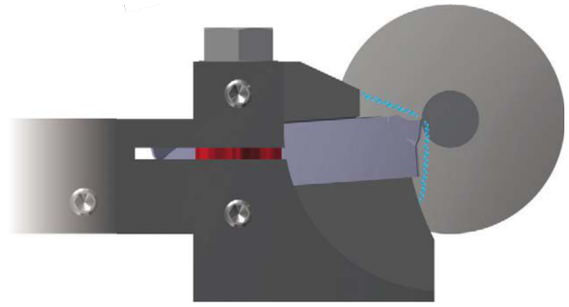
Tightening recommendation: only use the delivered key




Support JET à double lubrification

JET Halter mit doppeltem Schmierung

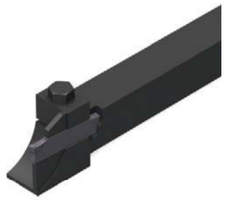
Jet holder with double lubrification



Porte-outils / Halter / Holders

## H

Système de serrage monobloc
Einteiliges Klemmsystem
Monobloc top clamp system



## H JET

Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply



## H-HM-JET
## GWS-HM
## MS-HM
## HSK

Porte-lames avec arrosage
Halter für Stechklinge mit Kühlung
Holder for parting-off blades with coolant



## HM
## HK
## HUK

Lames
Stechklinge
Parting-off blades

Plaquettes / WSP / Inserts



U J JS T TS A

## UN | UL UR



- géométrie positive universelle, faibles efforts de coupe
- bonne maîtrise du copeau
- 1er choix pour l'inox

- allgemeine Geometrie, geringe Schnittkräfte
- gute Spankontrolle
- 1. Wahl für rostfreiem Stahl

- all-round geometry, low cutting forces
- efficient chip control
- 1st choice for stainless steel

## JN | JR



- géométrie universelle
- excellent rétrécissement du copeau pour un meilleur contrôle
- conseillé pour le tronçonnage de pièces à parois minces
- pour acier et inox

- allgemeine Geometrie
- ausgezeichnete Spanverschmälerung für eine bessere Spankontrolle
- für abstechen von dünnwandigen Teilen empfohlen
- für Stahl und rostfreiem Stahl

- all-round geometry
- very efficient arrow for a better chip control
- recommended for parting off of thin-walled parts
- for steel and stainless steel

## JSN



- géométrie spéciale et étroite pour un meilleur contrôle du copeau
- recommandé pour l'acier avec faible taux de carbone, alliages Chrome nickel et acier 100Cr6

- spezielle und schmale Geometrie für eine bessere Spankontrolle
- empfohlen für Stahl mit niedrigem Kohlenstoffgehalt sowie Chrom-Nickel-Legierungen und 100Cr6-Stahl

- special and narrow geometry for better chip control
- recommended for low-carbon steel, chrome-nickel alloys and 100Cr6 steel

## TN | TR



- géométrie négative
- utilisation dans des conditions de rigidité optimale
- pour les matières à haute ténacité
- universel pour les aciers et inox

- negative Geometrie
- bei stabilen Verhältnissen einsetzbar
- für hohe widerstandsfähige Rohstoffe
- allgemein für Stahl und rostfreiem Stahl

- negative geometry
- use in solid cutting conditions
- for high toughness material
- universal for steel and stainless steel

## TSN



- géométrie négative similaire à TN pour avances modérées depuis 0.05mm/t
- conseillé pour les matières tenaces aciers et inox

- negative Geometrie ähnlich wie TN für moderate Vorschübe ab 0,05 mm/U
- Empfohlen für zähe Werkstoffe, Stahl und rostfreien Stahl

- negative geometry similar to TN for moderate feeds from 0.05mm/rev
- recommended for tough materials, steel, and stainless steel

## AN | AR



- géométrie fortement positive
- roule-copeaux poli avec arêtes de coupe vives
- 1er choix pour aluminium et matériaux non ferreux

- stark positive Geometrie
- geschliffene Spanrolle mit scharfe Schneidkanten
- 1. Wahl für Aluminium und Nichteisenmetalle

- very positive geometry
- polished chip roller with sharp cutting edge
- 1st choice for aluminium and non-ferrous materials

## TiAlN



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- pour l'usinage des aciers, aciers inoxydables et alliages de titane
- 1er choix pour les avancesfaibles à modérées

- für die Bearbeitung von Stahl, rostfreien Stahl und Titanlegierungen
- erste Wahl für niedrige bis mittlere Vorschübe

- for machining of steel, stainless steel and titanium alloys
- first choice for low to average cutting speed

## Tmax



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★☆☆☆
S ★★☆☆☆

- nuance pour usinage moyen à lourd des aciers, aciers alliés et inoxydables
- bonne résistance aux températures d'usinage élevées
- 1er choix pour le tronçonnagedes aciers au carbone et des aciers fortement alliés

- Sorte für mittlere bis hohe Belastung in Stahl und legierter Stahlbearbeitung
- gute Bearbeitungswarmfestigkeit
- erste Wahl für die Bearbeitung von legiertem Kohlenstahl und hoch legiertem Stahl

- grade for medium to heavy machining of steel, stainless steel and alloyed steel
- high machining heat resistance
- first choice for the machining of carbon steel and high alloyed steel

## Zmax



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M E

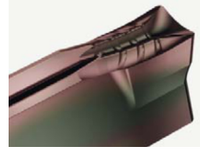
P ★★★★★
M ★★★★★
N ★★☆☆☆
S ★★☆☆☆

- pour l'usinage des aciers, aciers inoxydables et alliages de titane en conditions défavorables
- bonne résistance aux chocs à des vitesses de coupe moyennes à faibles
- 1er choix pour le tronçonnageen coupe interrompue

- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen in schwierige Bearbeitungsfälle
- gute Bruchfestigkeit mit durchschnittliche bis niedrige Schnittgeschwindigkeit
- erste Wahl für die Bearbeitung in unterbrochenen Schnitte

- for machining of steel, stainless steel and titanium alloys in unfavourable machining conditions
- good impact resistance with average to low cutting speed
- first choice for machining in interrupted cut

## ZTi6



Revêtement CVD
CVD Beschichtung
CVD coating

TF F M E

P ★★★★★
M ★★★★☆
N ★☆☆☆☆
S ★★★☆☆

- nuance très tenace
- grande résistance à la température
- 1er choix pour les aciers «haute température»
- également recommandé pour les aciers inox

- sehr zähe Sorte
- hohe Bearbeitungswarmfestigkeit
- erste Wahl für „hohe Temperatur" Stähle
- auch für rostfreie Stähle empfohlen

- very strong grade
- good wear resistance
- first choice for "high temperature" steels
- also recommended for stainless steels

## AC



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M E

P ☆☆☆☆☆
M ☆☆☆☆☆
N ★★★★★
S ★★★★★

- nuance pour métaux non ferreux
- très faible coefficient de frottement
- 1er choix pour l'usinage des aluminiums, des cuivres et titanes faiblement alliés

- Sorte für Nichteisenmetalle
- sehr geringer Reibwert
- erste Wahl für die Bearbeitung von Aluminium, Kupfer und niedriglegiertem Titan

- grade for non-ferrous materials
- very low friction ratio
- first choice for Aluminium, copper and low alloyed titanium

## N



Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- nuance non revêtue
- recommandé pour l'usinage des matières non ferreuses
- titane, laiton, cuivre, aluminium sans silicium, plastique

- unbeschichtete Sorte
- für die Bearbeitung von Nichteisenmetalle empfohlen
- Titan, Messing, Kupfer, Silicium freies Aluminium, Kunstoff

- uncoated grade
- recommended for machining of non-ferrous materials
- titanium, brass, bronze, aluminium without silicium, plastic

EVOCUT-Line

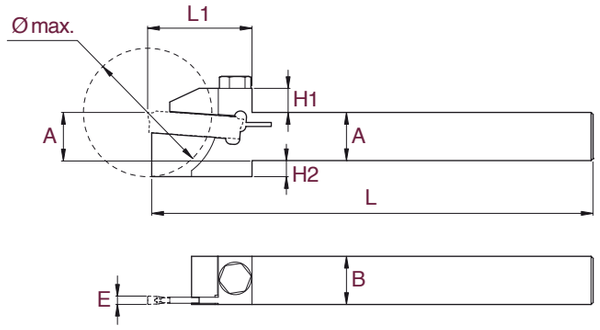
Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

| | | | | | | | P Acier Stahl Steel | | | | | | M Inox Rostfreistahl Stainless steel | | N Alliages d'aluminium et non ferreux Aluminium- und Nichteisenlegierungen Aluminium and non-ferrous alloys | | | | | | | | S Titane Titan Titanium | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Acier dedécolletage Automatenstahl Free-cuttingsteel | | Acier faiblement allié Leicht legierter Stahl Low alloyed steel | | Acier fortement allié Legierter Stahl High alloyed steel | | Austénitiqueet martensitique Austenitischundmartensitisch Austeniticandmartensitic | | Aluminium | | Alu silicium max.5% Aluminiumsilicium max.5% Aluminium silicon max.5 % | | Cuivre Kupfer Copper | | Laiton & bronze Messing& Bronze Brass& bronze | | Gr. 1- 3 | | Gr. 4- 5 | |
| | | | ET15 | ET20 | ET25 | ET30 | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) |
| Avance standard Standard Vorschub Standard feed rate | UN | TiAlN | ● | ● | ● | ● | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 50-100 | 0.04-0.08 |
| | | Tmax | ● | ● | ● | ● | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | | Zmax | ● | ● | ● | ● | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.10 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | | ZTi6 | | ● | ● | ● | 110-200 | 0.04-0.08 | 80-160 | 0.04-0.08 | 70-140 | 0.04-0.08 | 70-160 | 0.04-0.08 | | | | | | | | | | | | |
| | UR | TiAlN | ● | ● | ● | ● | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 50-100 | 0.04-0.08 |
| | | Tmax | ● | ● | ● | ● | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | | Zmax | ● | ● | ● | ● | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.10 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | JN | TiAlN | ● | ● | ● | ● | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 50-100 | 0.04-0.08 |
| | | Tmax | ● | ● | ● | ● | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | | Zmax | ● | ● | ● | ● | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.10 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | | ZTi6 | | ● | ● | ● | 110-200 | 0.04-0.08 | 80-160 | 0.04-0.08 | 70-140 | 0.04-0.08 | 70-160 | 0.04-0.08 | | | | | | | | | | | | |
| | JR | TiAlN | ● | ● | ● | ● | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 50-100 | 0.04-0.08 |
| | | Tmax | ● | ● | ● | ● | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | | Zmax | ● | ● | ● | ● | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.10 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | JSN | Tmax | | ● | | | 80-150 | 0.02-0.1 | 80-170 | 0.02-0.1 | 50-120 | 0.02-0.1 | 50-120 | 0.02-0.1 | 100-300 | 0.02-0.1 | 100-300 | 0.02-0.1 | 100-300 | 0.02-0.1 | 100-300 | 0.02-0.1 | 50-120 | 0.02-0.1 | 30-50 | 0.02-0.1 |
| | TN | TiAlN | | ● | ● | ● | 90-150 | 0.08-0.18 | 70-130 | 0.08-0.18 | 50-100 | 0.08-0.15 | 50-120 | 0.08-0.20 | | | | | | | 150-300 | 0.05-0.20 | | | | |
| | | Tmax | | ● | ● | ● | 100-170 | 0.08-0.18 | 70-150 | 0.08-0.18 | 60-120 | 0.08-0.15 | 60-150 | 0.08-0.20 | | | | | | | | | | | | |
| | | Zmax | | ● | ● | ● | 80-130* | 0.08-0.18 | 50-110* | 0.08-0.18 | 50-90* | 0.08-0.15 | 50-120* | 0.08-0.20 | | | | | | | | | | | | |
| | | ZTi6 | | ● | ● | ● | 110-200 | 0.08-0.18 | 80-160 | 0.08-0.18 | 70-140 | 0.08-0.15 | 70-160 | 0.08-0.20 | | | | | | | | | | | | |
| | TR | TiAlN | | ● | ● | ● | 90-150 | 0.08-0.18 | 70-130 | 0.08-0.18 | 50-100 | 0.08-0.15 | 50-120 | 0.08-0.20 | | | | | | | 150-300 | 0.05-0.20 | | | | |
| | | Tmax | | ● | ● | ● | 100-170 | 0.08-0.18 | 70-150 | 0.08-0.18 | 60-120 | 0.08-0.15 | 60-150 | 0.08-0.20 | | | | | | | | | | | | |
| | | Zmax | | ● | ● | ● | 80-130* | 0.08-0.18 | 50-110* | 0.08-0.18 | 50-90* | 0.08-0.15 | 50-120* | 0.08-0.20 | | | | | | | | | | | | |
| | | ZTi6 | | | | ● | 110-200 | 0.08-0.18 | 80-160 | 0.08-0.18 | 70-140 | 0.08-0.15 | 70-160 | 0.08-0.20 | | | | | | | | | | | | |
| | TSN | Tmax | | ● | | | 80-150 | 0.05-0.15 | 80-170 | 0.05-0.15 | 50-120 | 0.05-0.15 | 50-120 | 0.05-0.15 | | | | | | | 100-300 | 0.05-0.15 | | | | |
| | | Zmax | | ● | | | 80-130 | 0.05-0.15 | 80-150 | 0.05-0.15 | 50-100 | 0.05-0.15 | 50-100 | 0.05-0.15 | | | | | | | | | | | | |
| Avance modérée Niedriger Vorschub * * Low feed rate | UN-000F | TiAlN | ● | ● | ● | ● | 80-120 | 0.02-0.05 | 50-100 | 0.02-0.05 | 40-80 | 0.02-0.05 | 40-100 | 0.02-0.05 | 100-300 | 0.02-0.06 | 100-200 | 0.01-0.05 | 100-250 | 0.01-0.05 | 100-300 | 0.02-0.06 | | | 50-100 | 0.01-0.06 |
| | UR/ULF | TiAlN | ● | ● | ● | ● | 80-120 | 0.02-0.05 | 50-100 | 0.02-0.05 | 40-80 | 0.02-0.05 | 40-100 | 0.02-0.05 | 100-300 | 0.02-0.06 | 100-200 | 0.01-0.05 | 100-250 | 0.01-0.05 | 100-300 | 0.02-0.06 | | | 50-100 | 0.01-0.06 |
| | ANF | N | | ● | | ● | | | | | | | | | 80-200 | 0.02-0.06 | | | 80-200 | 0.01-0.05 | 80-200 | 0.02-0.06 | 50-100 | 0.01-0.06 | 50-100 | 0.01-0.06 |
| | | TiAlN | | ● | | ● | | | | | | | 40-80 | 0.02-0.05 | 100-250 | 0.02-0.06 | 80-150 | 0.01-0.05 | 100-200 | 0.01-0.05 | 80-200 | 0.02-0.06 | | | 30-80 | 0.01-0.06 |
| | | AC | | ● | | ● | | | | | | | | | 100-300 | 0.02-0.06 | 100-200 | 0.01-0.05 | 100-250 | 0.01-0.05 | 100-300 | 0.02-0.06 | 50-120 | 0.01-0.06 | 50-120 | 0.01-0.06 |
| | ARF | N | | ● | | ● | | | | | | | | | 80-200 | 0.02-0.06 | | | 80-200 | 0.01-0.05 | 80-200 | 0.02-0.06 | 50-100 | 0.01-0.06 | 50-100 | 0.01-0.06 |
| | | TiAlN | | ● | | ● | | | | | | | 40-80 | 0.02-0.05 | 100-250 | 0.02-0.06 | 80-150 | 0.01-0.05 | 100-200 | 0.01-0.05 | 80-200 | 0.02-0.06 | | | 30-80 | 0.01-0.06 |
| | | AC | | ● | | ● | | | | | | | | | 100-300 | 0.02-0.06 | 100-200 | 0.01-0.05 | 100-250 | 0.01-0.05 | 100-300 | 0.02-0.06 | 50-120 | 0.01-0.06 | 50-120 | 0.01-0.06 |

* premier choix en cas decoupeinterrompue
** arête de coupe vive

* ersteWahl für unterbrochener Schnitt
** scharfeSchneidkante

* first choice for interrupted cut
** sharp cuttingedge

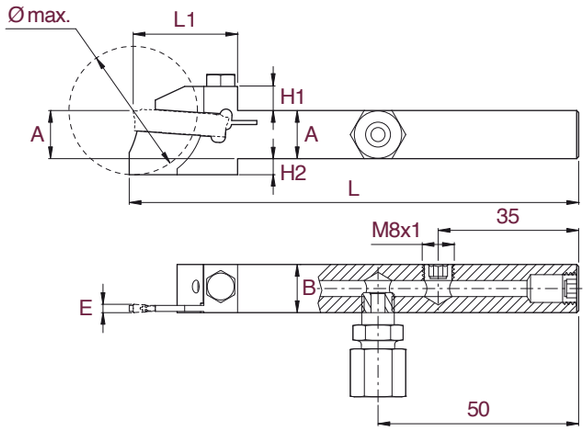



| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H1 | H2 | L Art. N° | R Art. N° | Pièces de rechange et accessoires Ersatzteileund Zubehöre Spare parts and accessories * Art. N° | * Art. N° |
|---|---|---|---|---|---|---|---|---|---|---|
| E 1.5 Type ET15 | 10x12 | 110 | 22 | 20 | 5 | 6 | ET15-H1012L-D22 | ET15-H1012R-D22 | V-M5X20-6P6 | C-6PEX-6.0 |
| | 12x12 | 110 | 22 | 20 | 5 | 4 | ET15-H1212L-D22 | ET15-H1212R-D22 | | |
| | 12.7x12.7 | 110 | 22 | 20 | 5 | 3 | ET15-H12.7L-D22 | ET15-H12.7R-D22 | | |
| | 12x12 | 110 | 32 | 26 | 6 | 4 | ET15-H1212L-D32 | ET15-H1212R-D32 | V-M5X21-6P7 | C-6PEX-7.0 |
| | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET15-H12.7L-D32 | ET15-H12.7R-D32 | | |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET15-H1616L-D32 | ET15-H1616R-D32 | | |
| E 2.0 Type ET20 | 10x12 | 110 | 22 | 20 | 5 | 6 | ET20-H1012L-D22 | ET20-H1012R-D22 | V-M5X20-6P6 | C-6PEX-6.0 |
| | 12x12 | 110 | 22 | 20 | 5 | 4 | ET20-H1212L-D22 | ET20-H1212R-D22 | | |
| | 12.7x12.7 | 110 | 22 | 20 | 5 | 3 | ET20-H12.7L-D22 | ET20-H12.7R-D22 | | |
| | 12x12 | 110 | 32 | 26 | 6 | 4 | ET20-H1212L-D32 | ET20-H1212R-D32 | V-M5X21-6P7 | C-6PEX-7.0 |
| | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET20-H12.7L-D32 | ET20-H12.7R-D32 | | |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET20-H1616L-D32 | ET20-H1616R-D32 | | |
| | 16x16 | 130 | 44 | 35 | 8 | 4 | ET20-H1616L-D44 | ET20-H1616R-D44 | V-M5X27-6P7 | C-6PEX-7.0 |
| | 20x20 | 130 | 44 | 35 | 8 | - | ET20-H2020L-D44 | ET20-H2020R-D44 | | |
| E 2.5 Type ET25 | 10x12 | 110 | 22 | 20 | 5 | 6 | ET25-H1012L-D22 | ET25-H1012R-D22 | V-M5X20-6P6 | C-6PEX-6.0 |
| | 12x12 | 110 | 22 | 20 | 5 | 4 | ET25-H1212L-D22 | ET25-H1212R-D22 | | |
| | 12.7x12.7 | 110 | 22 | 20 | 5 | 3 | ET25-H12.7L-D22 | ET25-H12.7R-D22 | | |
| | 12x12 | 110 | 32 | 26 | 6 | 4 | ET25-H1212L-D32 | ET25-H1212R-D32 | V-M5X21-6P7 | C-6PEX-7.0 |
| | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET25-H12.7L-D32 | ET25-H12.7R-D32 | | |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET25-H1616L-D32 | ET25-H1616R-D32 | | |
| | 16x16 | 130 | 44 | 35 | 8 | 4 | ET25-H1616L-D44 | ET25-H1616R-D44 | V-M5X27-6P7 | C-6PEX-7.0 |
| | 20x20 | 130 | 44 | 35 | 8 | - | ET25-H2020L-D44 | ET25-H2020R-D44 | | |
| E 3.0 Type ET30 | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET30-H12.7L-D32 | ET30-H12.7R-D32 | V-M5X21-6P7 | C-6PEX-7.0 |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET30-H1616L-D32 | ET30-H1616R-D32 | | |
| | 16x16 | 130 | 44 | 35 | 8 | 4 | ET30-H1616L-D44 | ET30-H1616R-D44 | | |
| | 20x20 | 130 | 44 | 35 | 8 | - | ET30-H2020L-D44 | ET30-H2020R-D44 | V-M5X27-6P7 | C-6PEX-7.0 |
| | 25x25 | 140 | 44 | 35 | 8 | - | ET30-H2525L-D44 | ET30-H2525R-D44 | | |

* livréavec chaqueporte-outil mit jedem Halter geliefert delivered with each holder







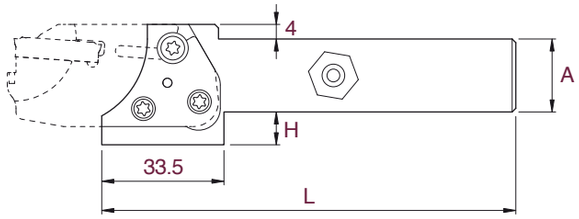

| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H1 | H2 | L Art. N° | R Art. N° | Pièces de rechange et accessoires Ersatzteileund Zubehöre Spare parts and accessories * Art. N° | * Art. N° |
|---|---|---|---|---|---|---|---|---|---|---|
| E 2.0 Type ET20 | 10x12 | 110 | 22 | 20 | 5 | 6 | ET20-H1012L-JET22 | ET20-H1012R-JET22 | V-M5X20-6P6-J | C-6PEX-6.0 |
| | 12x12 | 110 | 22 | 20 | 5 | 4 | ET20-H1212L-JET22 | ET20-H1212R-JET22 | | |
| | 12.7x12.7 | 110 | 22 | 20 | 5 | 3 | ET20-H12.7L-JET22 | ET20-H12.7R-JET22 | | |
| | 12x12 | 110 | 32 | 26 | 6 | 4 | ET20-H1212L-JET32 | ET20-H1212R-JET32 | V-M5X21-6P7-J | C-6PEX-7.0 |
| | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET20-H12.7L-JET32 | ET20-H12.7R-JET32 | | |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET20-H1616L-JET32 | ET20-H1616R-JET32 | | |
| | 16x16 | 130 | 44 | 35 | 8 | 4 | ET20-H1616L-JET44 | ET20-H1616R-JET44 | V-M5X27-6P7-J | C-6PEX-7.0 |
| | 20x20 | 130 | 44 | 35 | 8 | - | ET20-H2020L-JET44 | ET20-H2020R-JET44 | | |
| E 2.5 Type ET25 | 10x12 | 110 | 22 | 20 | 5 | 6 | ET25-H1012L-JET22 | ET25-H1012R-JET22 | V-M5X20-6P6-J | C-6PEX-6.0 |
| | 12x12 | 110 | 22 | 20 | 5 | 4 | ET25-H1212L-JET22 | ET25-H1212R-JET22 | | |
| | 12.7x12.7 | 110 | 22 | 20 | 5 | 3 | ET25-H12.7L-JET22 | ET25-H12.7R-JET22 | | |
| | 12x12 | 110 | 32 | 26 | 6 | 4 | ET25-H1212L-JET32 | ET25-H1212R-JET32 | V-M5X21-6P7-J | C-6PEX-7.0 |
| | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET25-H12.7L-JET32 | ET25-H12.7R-JET32 | | |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET25-H1616L-JET32 | ET25-H1616R-JET32 | | |
| | 16x16 | 130 | 44 | 35 | 8 | 4 | ET25-H1616L-JET44 | ET25-H1616R-JET44 | V-M5X27-6P7-J | C-6PEX-7.0 |
| | 20x20 | 130 | 44 | 35 | 8 | - | ET25-H2020L-JET44 | ET25-H2020R-JET44 | | |
| E 3.0 Type ET30 | 12.7x12.7 | 110 | 32 | 26 | 6 | 3 | ET30-H12.7L-JET32 | ET30-H12.7R-JET32 | V-M5X21-6P7-J | C-6PEX-7.0 |
| | 16x16 | 110 | 32 | 26 | 6 | - | ET30-H1616L-JET32 | ET30-H1616R-JET32 | | |
| | 16x16 | 130 | 44 | 35 | 8 | 4 | ET30-H1616L-JET44 | ET30-H1616R-JET44 | V-M5X27-6P7-J | C-6PEX-7.0 |
| | 20x20 | 130 | 44 | 35 | 8 | - | ET30-H2020L-JET44 | ET30-H2020R-JET44 | | |
| | 25x25 | 140 | 44 | 35 | 8 | - | ET30-H2525L-JET44 | ET30-H2525R-JET44 | | |

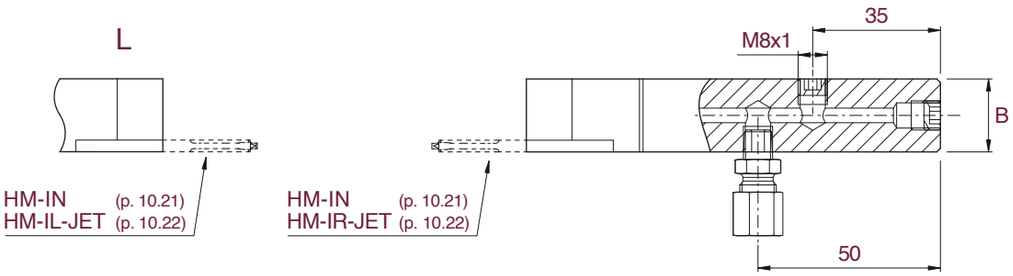
| Pièces de rechange Ersatzteile Spare parts | Art. N° | Art. N° |
|---|---|---|
| | J-M8X1-D6 | JB-M8X1 |

* livréavec chaqueporte-outil mit jedem Halter geliefert delivered with each holder

# H-HM-JET

Porte-lames avec arrosage intégré
Halter für Stechklinge mit Kühlmittelzufuhr
Holder for parting-off blades with integrated coolant supply




| | | | L | R |
|---|---|---|---|---|
| A x B | L | H | Art. N° | Art. N° |
| 16x16 | 113.5 | 13 | H1616L-HM-JET | H1616R-HM-JET |
| 20x20 | 113.5 | 9 | H2020L-HM-JET | H2020R-HM-JET |
| 25x25 | 138.5 | 4 | H2525L-HM-JET | H2525R-HM-JET |

| Pièces de rechange et accessoires<br>Ersatzteile und Zubehöre<br>Spare parts and accessories | | | | Options |
|---|---|---|---|---|
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| V-M5X10-T20IP | V-M6X10-T20IP | J-M8X1-D6 | JB-M8X1 | C-T20IP |

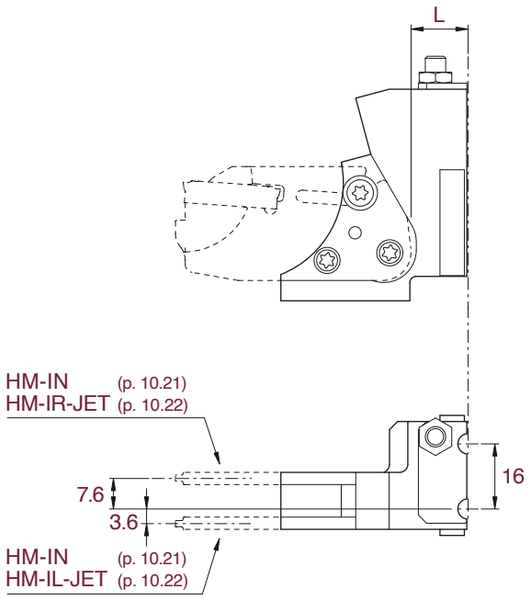


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# GWS02R-HM-JET

Interface Göltenbodt

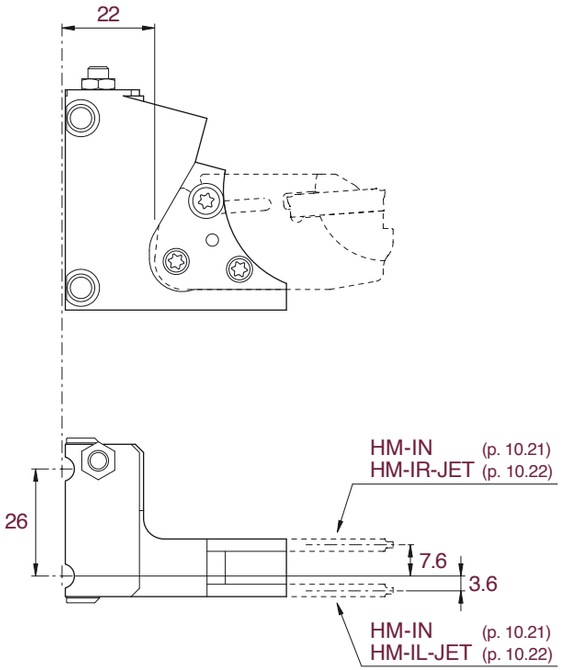



| | | | R | Pièces de rechange et accessoires<br>Ersatzteile und Zubehöre<br>Spare parts and accessories | | Options |
|---|---|---|---|---|---|---|
| Interface | Machine compatibility | L | Art. N° | Art. N° | Art. N° | Art. N° |
| GWS02 | AS14 | 14 | GWS02R-02001-HM-JET | V-M5X10-T20IP | V-M6X10-T20IP | C-T20IP |
| | SAS16 | | | | | |
| | SBS20 | | | | | |
| | Others | 22 | GWS02R-02002-HM-JET | | | |

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# GWS41L-HM-JET

Interface Göltenbodt




| | | L | Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | | Options |
|---|---|---|---|---|---|
| Interface | Machine compatibility | Art. N° | Art. N° | Art. N° | Art. N° |
| GWS41 | MultiSwiss 6X16 | GWS41L-41001-HM-JET | V-M5X10-T20IP | V-M6X10-T20IP | C-T20IP |
| | MultiDeco 20X6 | | | | |
| | MultiDeco 20X8 | | | | |
| | MultiDeco 26X6 | | | | |
| | MultiDeco 32X6 | | | | |
| | MultiAlpha 20X8 | | | | |
| | MultiSigma 24X8 | | | | |

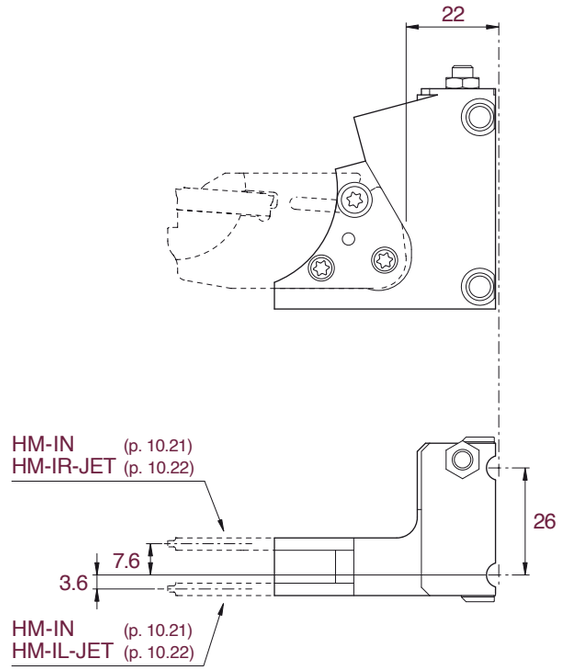


Zurück zum Kapitelanfang



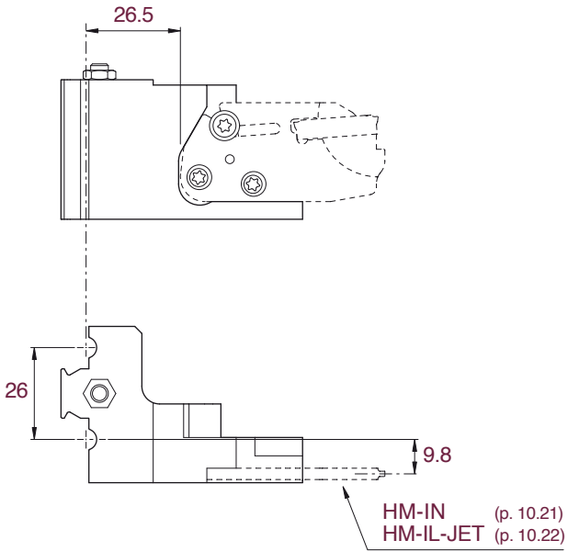
# GWS41R-HM-JET

Interface Göltenbodt




| | | R | Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | | Options |
|---|---|---|---|---|---|
| Interface | Machine compatibility | Art. N° | Art. N° | Art. N° | Art. N° |
| GWS41 | MultiSwiss 6X16 | GWS41R-41002-HM-JET | V-M5X10-T20IP | V-M6X10-T20IP | C-T20IP |
| | MultiDeco 20X6 | | | | |
| | MultiDeco 20X8 | | | | |
| | MultiDeco 26X6 | | | | |
| | MultiDeco 32X6 | | | | |
| | MultiAlpha 20X8 | | | | |
| | MultiSigma 24X8 | | | | |

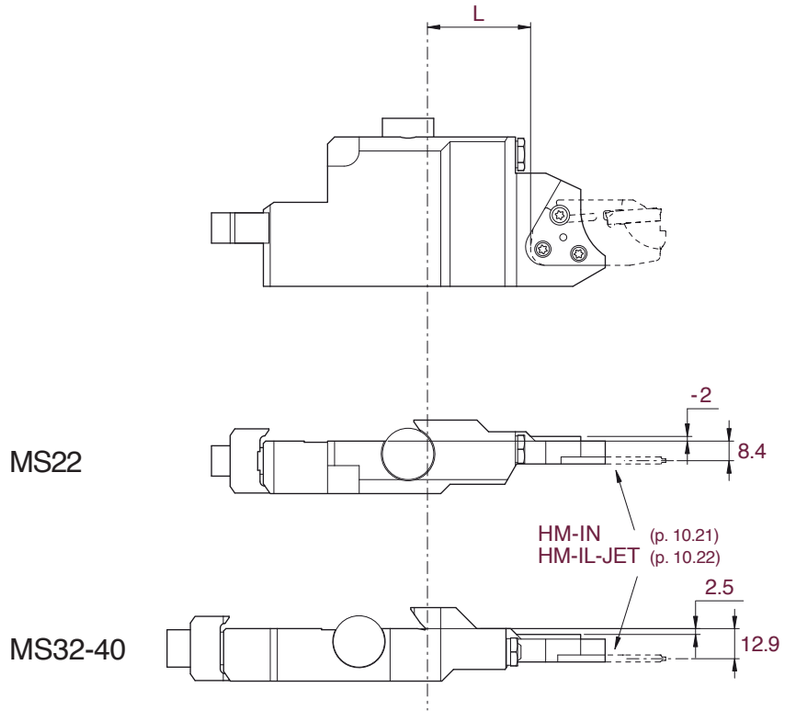
Zurück zum Index




| Interface | Machine compatibility | L | Art. N° | Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | | Options |
|---|---|---|---|---|---|---|
| | | | | Art. N° | Art. N° | Art. N° |
| GWS202 | MultiSwiss 6X32 | | GWS202L-202001-HM-JET | V-M5X10-T20IP | V-M6X10-T20IP | C-T20IP |
| | MultiSwiss 8X26 | | | | | |



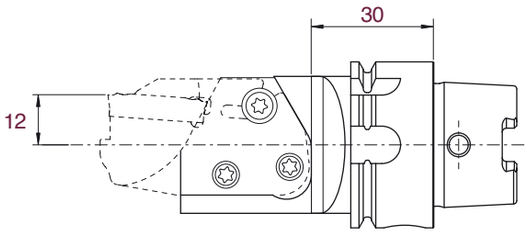


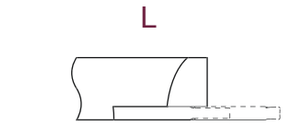



| Machine compatibility | L | Art. N° | Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | | Options |
|---|---|---|---|---|---|
| | | | Art. N° | Art. N° | Art. N° |
| MS22 | 44.2 | MS22-W5190231-HM-JET | V-M5X10-T20IP | V-M6X10-T20IP | C-T20IP |
| MS32-40 | 45.5 | MS32-40-W5190233-HM-JET | | | |

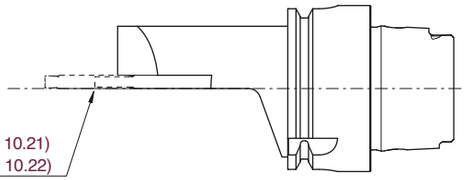
# HSK-JET

Porte-outils HSK pour porte-lames avec arrosage intégré
HSK Halter Stechklingen mit integrierter Kühlmittelzufuhr
HSK holder for parting-off blades with integrated coolant supply




HM-IN (p. 10.21)
HM-IL-JET (p. 10.22)



HM-IN (p. 10.21)
HM-IR-JET (p. 10.22)

| L | R | Pièces de rechange et accessoires<br>Ersatzteile und Zubehöre<br>Spare parts and accessories | | Options |
|---|---|---|---|---|
| | |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| HSK-T40-L-HM-JET | HSK-T40-R-HM-JET | V-M5X10-T20IP | V-M6X10-T20IP | C-T20IP |

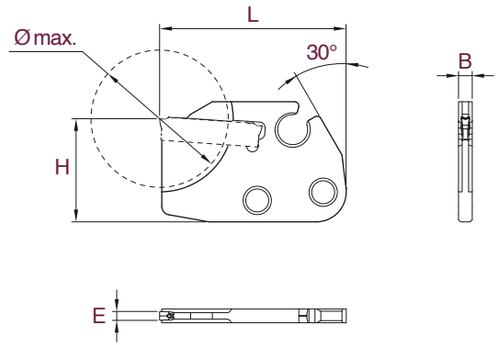


Zurück zum Kapitelanfang



# HM

Lames pour système modulaire
Stechklinge für modulares System
Parting-off blades for modular system

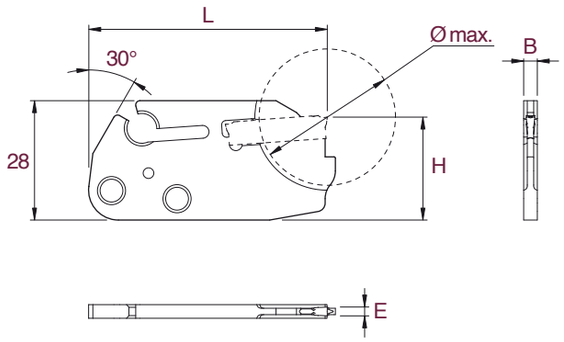



| Plaquettes WSP Inserts | Ø max. | B | L | H | N<br>Art. N° |
|---|---|---|---|---|---|
| E 1.5<br>Type ET15 | 20 | 3.2 | 43.5 | 24 | ET15-HM-IN-43-D20 |
| | 32 | 3.2 | 43.5 | 24 | ET15-HM-IN-43-D32 |
| E 2.0<br>Type ET20 | 20 | 3.2 | 43.5 | 24 | ET20-HM-IN-43-D20 |
| | 26 | 3.2 | 43.5 | 24 | ET20-HM-IN-43-D26 |
| | 26 | 3.2 | 54 | 24 | ET20-HM-IN-54-D26 |
| | 32 | 3.2 | 43.5 | 24 | ET20-HM-IN-43-D32 |
| E 3.0<br>Type ET30 | 32 | 3.2 | 43.5 | 24 | ET30-HM-IN-43-D32 |

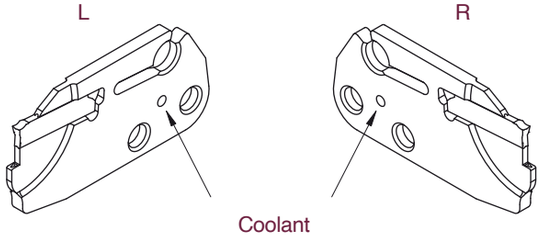
Zurück zum Index

# HM-JET

Lames avec arrosage intégré
Stechklinge mit integrierter Kühlmittelzufuhr
Parting-off blades with integrated coolant supply




| Plaquettes WSP Inserts | Ø max. | B | L | H | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|
| E 2.0 Type ET20 | 20 | 3.2 | 48.5 | 24 | ET20-HM-IL-48.5-JET20 | ET20-HM-IR-48.5-JET20 |
| | 24 | | 48.5 | | ET20-HM-IL-48.5-JET24 | ET20-HM-IR-48.5-JET24 |
| | 32 | | 45.5 | | ET20-HM-IL-45.5-JET32 | ET20-HM-IR-45.5-JET32 |
| | 32 | | 56 | | ET20-HM-IL-56-JET32 | ET20-HM-IR-56-JET32 |
| | 42 | | 48.5 | | ET20-HM-IL-48.5-JET42 | ET20-HM-IR-48.5-JET42 |
| E 3.0 Type ET30 | 32 | 3.2 | 45.5 | 24 | ET30-HM-IL-45.5-JET32 | ET30-HM-IR-45.5-JET32 |
| | 44 | | 48.5 | | ET30-HM-IL-48.5-JET42 | ET30-HM-IR-48.5-JET42 |



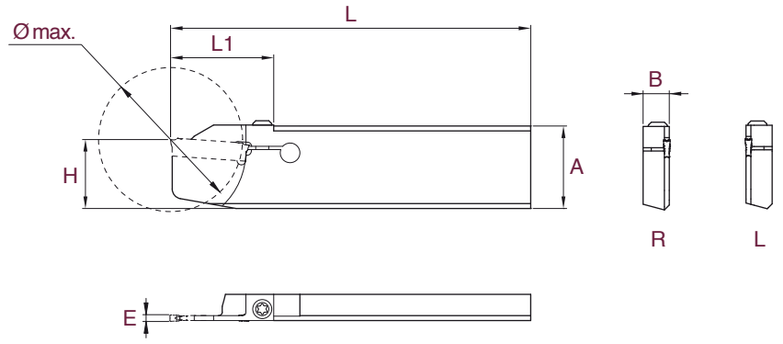



Zurück zum Kapitelanfang



# HK

Lames de tronçonnage
Stechklinge
Parting-off blades




| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| E 1.5 Type ET15 | 26x8 | 110 | 20 | 19.5 | 21 | ET15-HK-2608L-110-D20 | ET15-HK-2608R-110-D20 |
| | 26x8 | 110 | 32 | 25.5 | 21 | ET15-HK-2608L-110-D32 | ET15-HK-2608R-110-D32 |
| E 2.0 Type ET20 | 26x8 | 110 | 32 | 25.5 | 21 | ET20-HK-2608L-110-D32 | ET20-HK-2608R-110-D32 |
| | 26x8 | 110 | 44 | 31.5 | 21 | ET20-HK-2608L-110-D44 | ET20-HK-2608R-110-D44 |

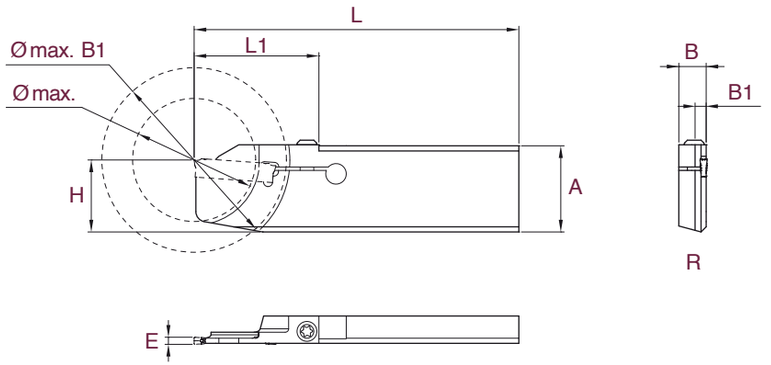
| Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | Options |
|---|---|
| * | |
| Art. N° | Art. N° |
| V-M4X14.5-T15-EVOCUT | C-T15 |

* livré avec chaque lame
mit jedem Steckling geliefert
delivered with each blade

Zurück zum Index

# HK-RS

Lames de tronçonnage avec dégagement pour accès contre-broche
Stechklinge mit Aussparung für GegenspindelZugriff
Parting-off blades with recess for subspindle access




| Plaquettes WSP Inserts | A x B | L | Ø max. | Ø max. B1 | B1 | L1 | H | R<br>Art. N° |
|---|---|---|---|---|---|---|---|---|
| E 1.5 Type ET15 | 26x8 | 95 | 36 | 54 | 3.25 | 36.5 | 21 | ET15-HK-2608RS-95-D36 |
| E 2.0 Type ET20 | 26x8 | 95 | 36 | 54 | 3.25 | 36.5 | 21 | ET20-HK-2608RS-95-D36 |

| Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | Options |
|---|---|
| * | |
| Art. N° | Art. N° |
| V-M4X14.5-T15-EVOCUT | C-T15 |

* livréavec chaquelame
mit jedem Steckling geliefert
delivered with each blade

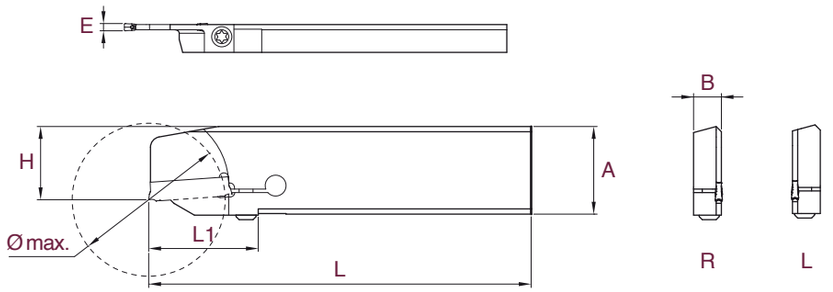


Zurück zum Kapitelanfang



# HUK

Lames de tronçonnage inversées
Überkopf Stechklinge
Upside down parting-off blades

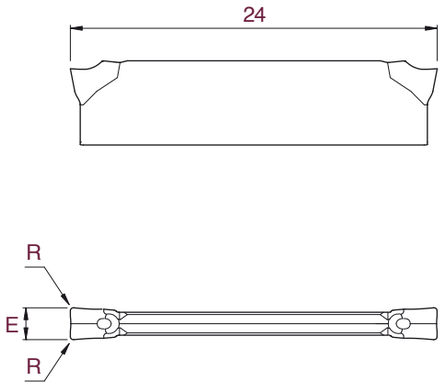


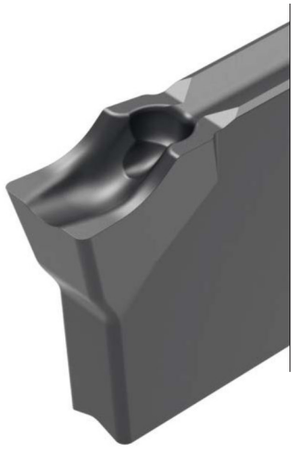

| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H | L<br>Art. N° | R<br>Art. N° |
|---|---|---|---|---|---|---|---|
| E 1.5 Type ET15 | 26x8 | 110 | 20 | 19.5 | 21 | ET15-HUK-2608L-110-D20 | ET15-HUK-2608R-110-D20 |
| | 26x8 | 110 | 32 | 25.5 | 21 | ET15-HUK-2608L-110-D32 | ET15-HUK-2608R-110-D32 |
| E 2.0 Type ET20 | 26x8 | 110 | 32 | 25.5 | 21 | ET20-HUK-2608L-110-D32 | ET20-HUK-2608R-110-D32 |
| | 26x8 | 110 | 44 | 31.5 | 21 | ET20-HUK-2608L-110-D44 | ET20-HUK-2608R-110-D44 |

| Pièces de rechange et accessoires Ersatzteile und Zubehöre Spare parts and accessories | Options |
|---|---|
| * | |
| Art. N° | Art. N° |
| V-M4X14.5-T15-EVOCUT | C-T15 |

* livréavec chaquelame
mit jedem Steckling geliefert
delivered with each blade

Zurück zum Index

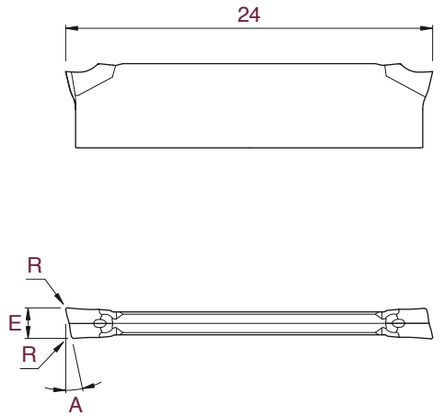


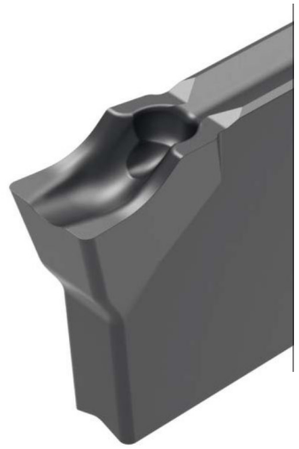



| Type | E ±0.05 | R | Art. N° | UN TiAlN | UN Tmax | UN Zmax | UN ZTi6 |
|---|---|---|---|---|---|---|---|
| ET15 | 1.35 | 0 | ET15-UN-000F | ● | | | |
| | 1.5 | 0.2 | ET15-UN-002 | ● | ● | ● | |
| ET20 | 1.85 | 0 | ET20-UN-000F | ● | | | |
| | 2.0 | 0.2 | ET20-UN-002 | ● | ● | ● | ● |
| ET25 | 2.35 | 0 | ET25-UN-000F | ● | | | |
| | 2.5 | 0.3 | ET25-UN-003 | ● | ● | ● | ● |
| ET30 | 2.85 | 0 | ET30-UN-000F | ● | | | |
| | 3.0 | 0.3 | ET30-UN-003 | ● | ● | ● | ● |

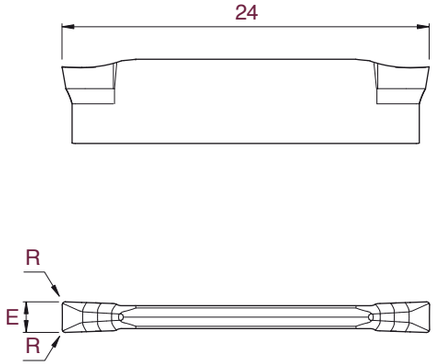






| Type | E ±0.05 | A | R | Art. N° | UL TiAlN | UL Tmax | UL Zmax | Art. N° | UR TiAlN | UR Tmax | UR Zmax |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ET15 | 1.5 | 6° | 0.2 | - | | | | ET15-UR-602 | ● | ● | ● |
| | 1.35 | 8° | 0 | - | | | | ET15-UR-800F | ● | | |
| | 1.5 | 12° | 0.1 | - | | | | ET15-UR-1201 | ● | ● | ● |
| | 1.35 | 15° | 0 | ET15-UL-1500F | ● | | | ET15-UR-1500F | ● | | |
| ET20 | 2.0 | 6° | 0.2 | - | | | | ET20-UR-602 | ● | ● | ● |
| | 1.85 | 8° | 0 | - | | | | ET20-UR-800F | ● | | |
| | 2.0 | 12° | 0.1 | - | | | | ET20-UR-1201 | ● | ● | ● |
| | 1.85 | 15° | 0 | ET20-UL-1500F | ● | | | ET20-UR-1500F | ● | | |
| ET25 | 2.5 | 6° | 0.2 | - | | | | ET25-UR-602 | ● | ● | ● |
| | 2.35 | 8° | 0 | - | | | | ET25-UR-800F | ● | | |
| | 2.5 | 12° | 0.1 | - | | | | ET25-UR-1201 | ● | ● | ● |
| | 2.35 | 15° | 0 | ET25-UL-1500F | ● | | | ET25-UR-1500F | ● | | |
| ET30 | 3.0 | 6° | 0.3 | - | | | | ET30-UR-603 | ● | ● | ● |
| | 2.85 | 8° | 0 | - | | | | ET30-UR-800F | ● | | |
| | 3.0 | 12° | 0.2 | - | | | | ET30-UR-1202 | ● | ● | ● |
| | 2.85 | 15° | 0 | ET30-UL-1500F | ● | | | ET30-UR-1500F | ● | | |

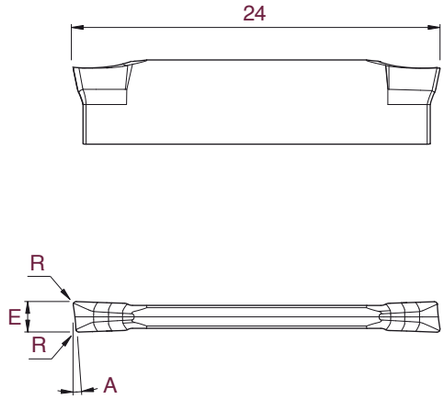





| Type | E ±0.05 | R | Art. N° | P M N S TiAlN | P M Tmax | P M Zmax | P M ZTi6 |
|---|---|---|---|---|---|---|---|
| | | | JN | | | | |
| ET15 | 1.5 | 0.2 | ET15-JN-002 | ● | ● | ● | |
| ET20 | 2.0 | 0.2 | ET20-JN-002 | ● | ● | ● | ● |
| ET25 | 2.5 | 0.3 | ET25-JN-003 | ● | ● | ● | ● |
| ET30 | 3.0 | 0.3 | ET30-JN-003 | ● | ● | ● | ● |

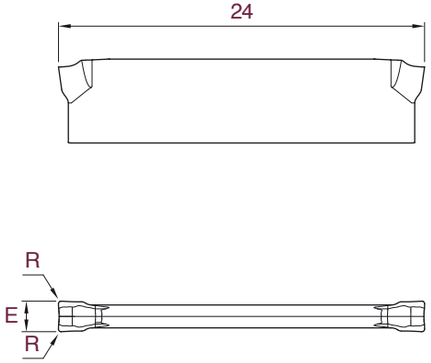


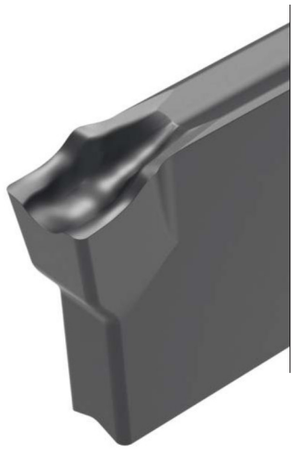







| Type | E ±0.05 | A | R | Art. N° | P M N S TiAlN | P M Tmax | P M Zmax |
|---|---|---|---|---|---|---|---|
| | | | | JR | | | |
| ET15 | 1.5 | 6° | 0.2 | ET15-JR-602 | ● | ● | ● |
| ET20 | 2.0 | 6° | 0.2 | ET20-JR-602 | ● | ● | ● |
| ET25 | 2.5 | 6° | 0.2 | ET25-JR-602 | ● | ● | ● |
| ET30 | 3.0 | 6° | 0.3 | ET30-JR-603 | ● | ● | ● |

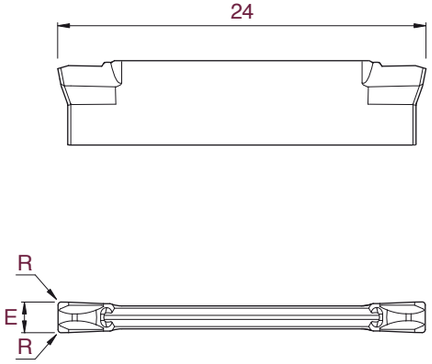


| Type | E ±0.05 | R | Art. N° | JSN Tmax |
|---|---|---|---|---|
| ET20 | 2.0 | 0.2 | ET20-JSN-002 | ● |

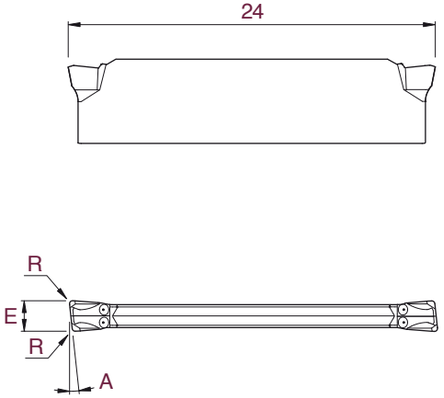









| Type | E ±0.05 | R | Art. N° | TN P M N TiAlN | P M Tmax | P M Zmax | P M ZTi6 |
|---|---|---|---|---|---|---|---|
| ET20 | 2.0 | 0.2 | ET20-TN-002 | ● | ● | ● | ● |
| ET25 | 2.5 | 0.3 | ET25-TN-003 | ● | ● | ● | ● |
| ET30 | 3.0 | 0.3 | ET30-TN-003 | ● | ● | ● | ● |

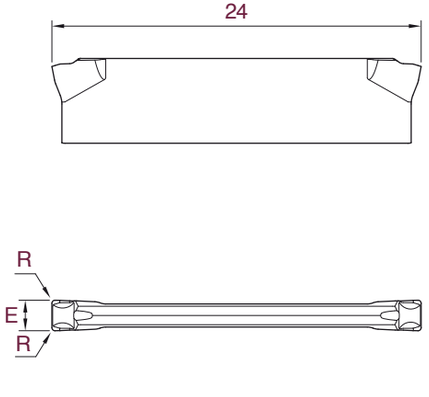





| Type | E ±0.05 | A | R | Art. N° | TiAlN | Tmax | Zmax | ZTi6 |
|---|---|---|---|---|---|---|---|---|
| | | | | TR | | | | |
| ET20 | 2.0 | 6° | 0.2 | ET20-TR-602 | ● | ● | ● | |
| ET25 | 2.5 | 6° | 0.2 | ET25-TR-602 | ● | ● | ● | |
| ET30 | 3.0 | 6° | 0.3 | ET30-TR-603 | ● | ● | ● | ● |

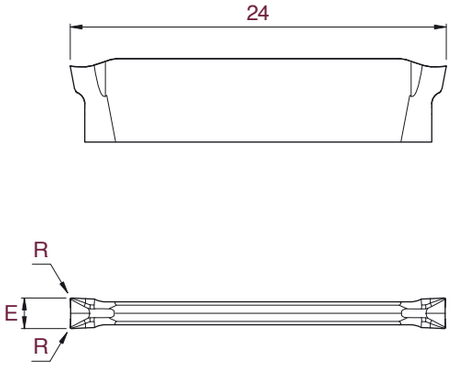









| Type | E ±0.05 | R | Art. N° | Tmax | Zmax |
|---|---|---|---|---|---|
| | | | TSN | | |
| ET20 | 2.0 | 0.2 | ET20-TSN-002 | ● | ● |



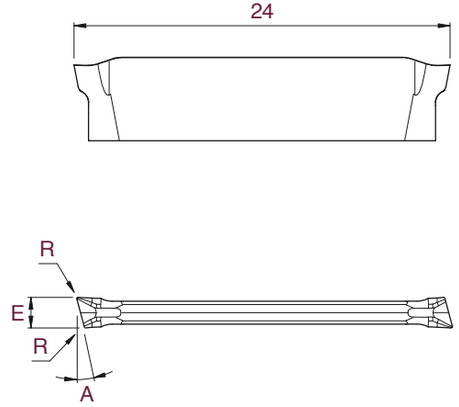



## AN

| Type | E ±0.05 | R | Art. N° | TiAlN | AC | N |
|---|---|---|---|---|---|---|
| ET20 | 2.0 | 0.2 | ET20-AN-002F | ● | ● | ● |
| ET30 | 3.0 | 0.3 | ET30-AN-003F | ● | ● | ● |





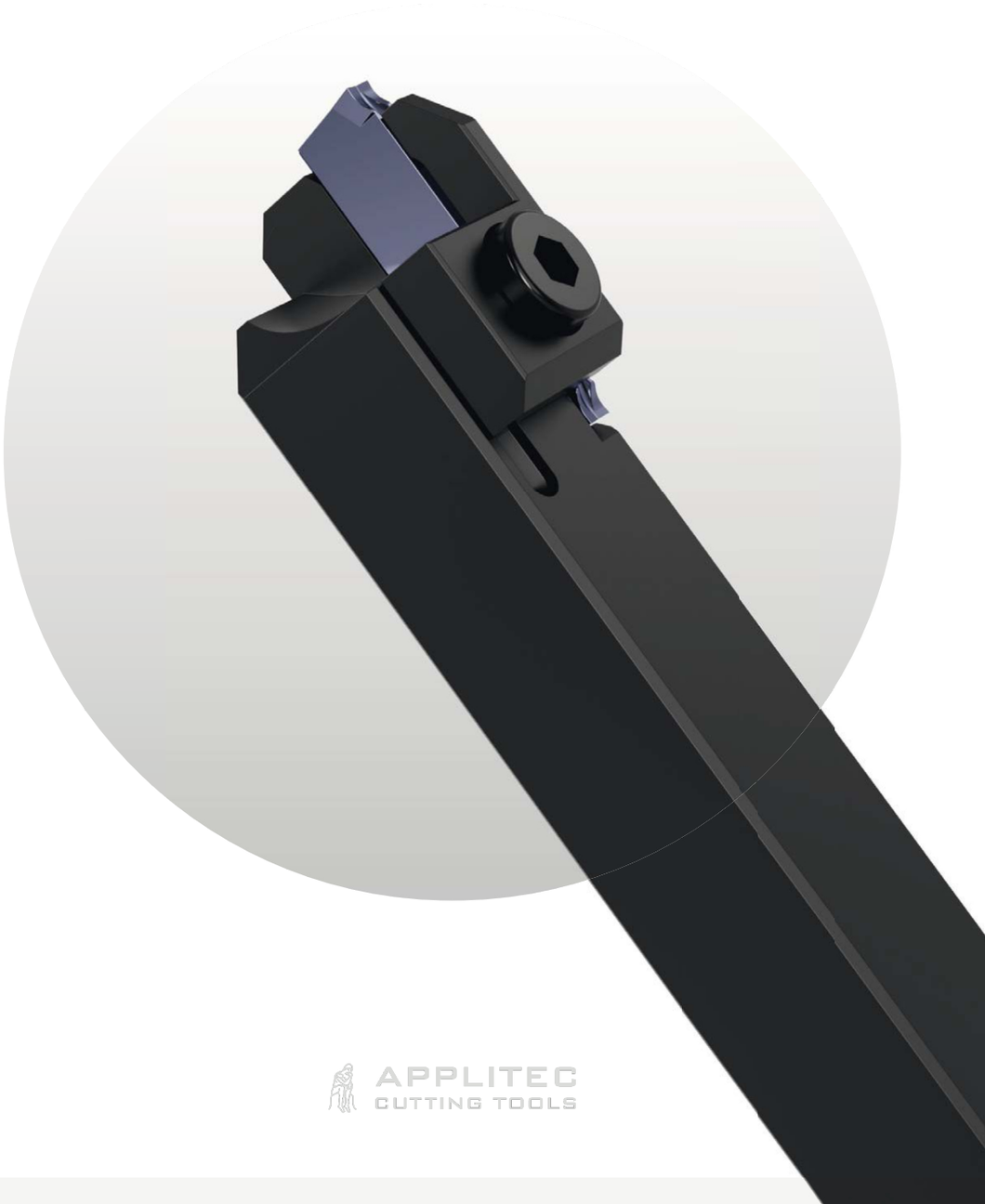





## AR

| Type | E ±0.05 | A | R | Art. N° | TiAlN | AC | N |
|---|---|---|---|---|---|---|---|
| ET20 | 2.0 | 15° | 0.1 | ET20-AR-1501F | ● | ● | ● |
| ET30 | 3.0 | 15° | 0.2 | ET30-AR-1502F | ● | ● | ● |

# CUT-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide > 11.03

Infos et avantages, géométries de coupe
Infos und Vorteile, Spanformgeometrie
Infos and advantages, cutting geometries > 11.04

Nuances
Sorten
Grades > 11.06

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data
CUT 16 Ø max 20 mm > 11.08
CUT 22 Ø max 42 mm > 11.10
CUT 31 Ø max 65 mm > 11.12

Porte-outils
Halter
Holders
H > 11.14
HX > 11.15
HZ > 11.16

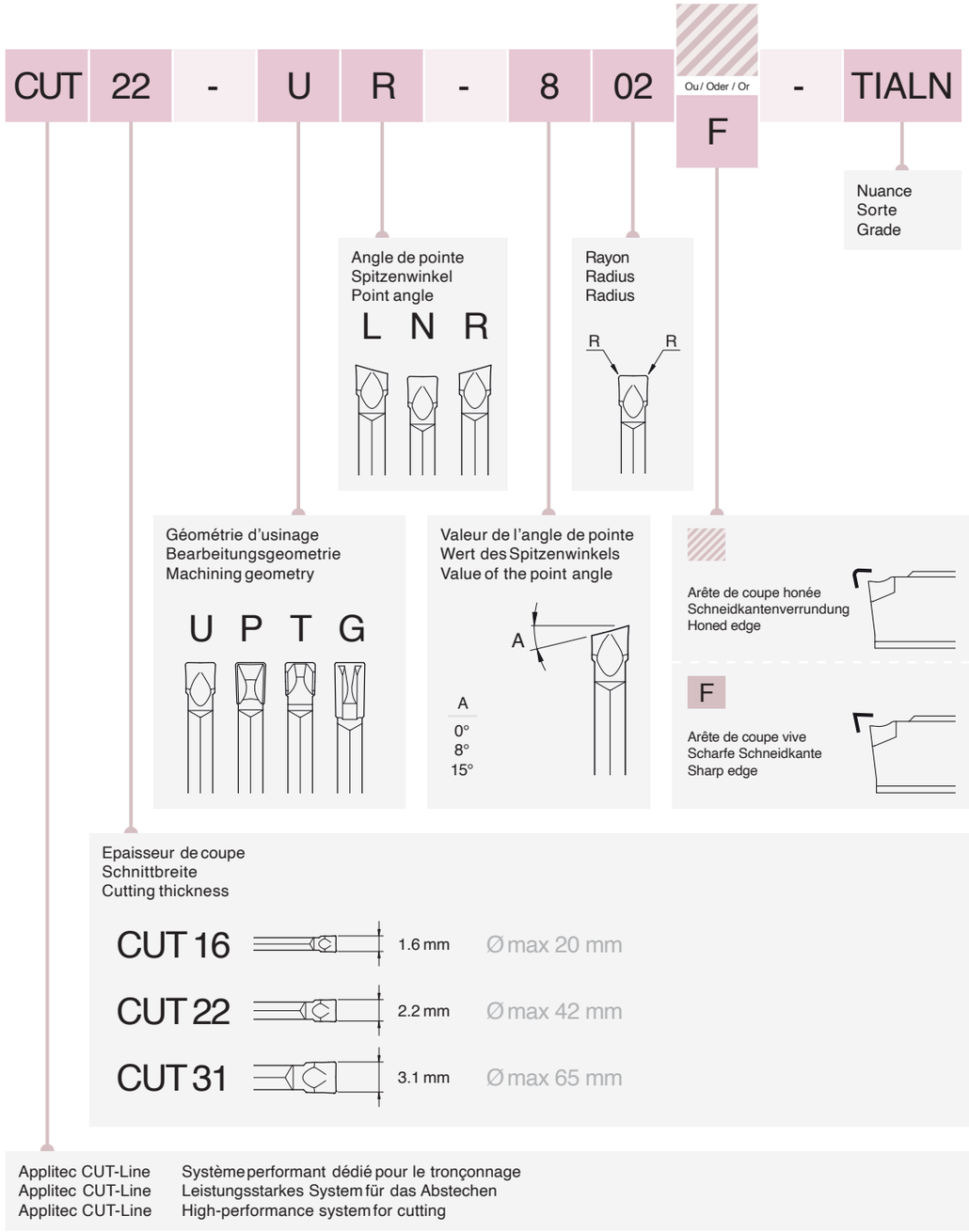
Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply
HZ-JET > 11.17

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts
U > 11.18
P > 11.20
T > 11.24

Plaquettes de fonçage, tournage et tronçonnage
WSP zum einstechen, drehen und abstechen
Inserts for grooving, turning and cut off
G > 11.25







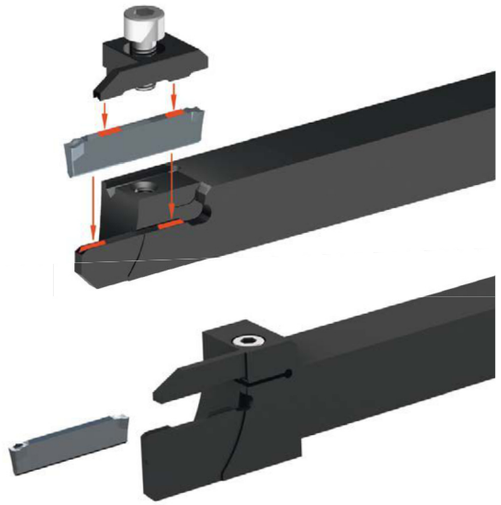
Porte-outils / Halter / Holders

## Very rigid clamping system

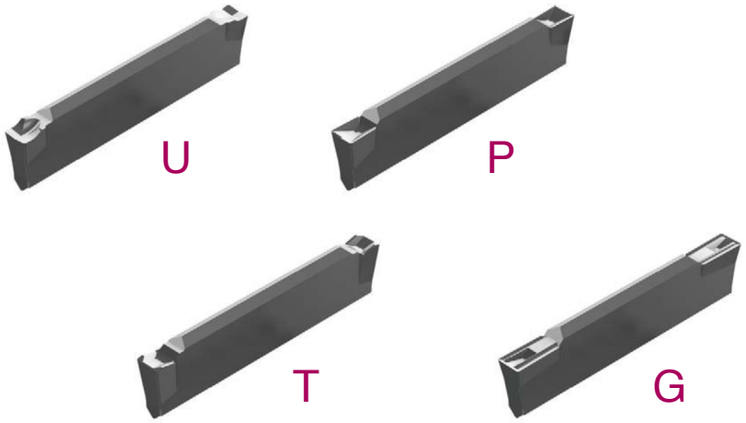
**H** Système de serrage à bride, version courte
Spann-Klemmsystem, kurze Ausführung
Independent top clamp system, short version

**HX** Système de serrage à bride, version longue
Spann-Klemmsystem, lange Ausführung
Independent top clamp system, long version

**HZ** Porte-outils de grande capacité
Klemmhalter mit grosser Kapazität
High capacity tool holders



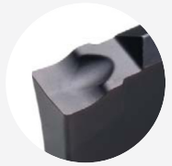
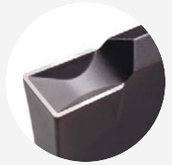
Plaquettes / WSP / Inserts




Toutes les géométries des plaquettes sont conçues pour être entièrement compatibles avecles porte-outils.

Alle Geometrien der Wendeschneidplatten sind so gestaltet, dass sie vollständig mit den Haltern kompatibel sind.

All the geometries of the inserts are designedto be fully compatible with the holders.

| | | |
|---|---|---|
| **UN**<br>**UR**<br>**UL** |  | • géométrie positive universelle, bonne maîtrise du copeau<br>• Universalgeometrie positive gute Beherrschung der Späne<br>• all-round insert with efficient chip control |
| **PN**<br>**PR** |  | • géométrie légèrement positive pour les aciers, aciers au carbone, aciers alliés<br>• leicht positive Geometrie für Stahl, Kohlenstoffstahl, legiertem Stahl<br>• slightly positive geometry for steel, carbon steel, alloyed steel |
| **PNW**<br>**PRW** |  | • géométrie neutre pour les laitons<br>• neutrale Geometrie für Messinge<br>• neutral geometry for brasses |
| **TN** |  | • géométrie négative pour de fortes avances dans des conditions de rigidité favorables<br>• negative Geometrie für hohe Vorschübe in guten Stabilitätsfällen<br>• negative geometry for high feed rate in case of good stability |
| **GN** |  | • géométrie universelle pour fonçage-tournage, peut également être utilisée en tronçonnage<br>• Universalgeometrie zum einstechen-langdrehen, kann auch zum abstechen verwendet werden<br>• all-round insert for grooving and turning, can also be used for parting off |

## TiAlN



Revêtement PVD
PVD Beschichtung
PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- pour l'usinage des aciers, aciers inoxydables et alliages de titane
- 1er choix pour les avancesfaibles à modérées

- für die Bearbeitung von Stahl, rostfreien Stahl und Titanlegierungen
- erste Wahl für niedrige bis mittlere Vorschübe

- for machining of steel, stainless steel and titanium alloys
- first choice for low to average cutting speed

## Tmax



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M **E**

P ★★★★★
M ★★★★★
N ★★☆☆☆
S ★★☆☆☆

- nuance pour usinage moyen à lourd des aciers, aciers alliés et inoxydables
- bonne résistance aux températures d'usinage élevées
- 1er choix pour le tronçonnagedes aciers au carbone et des aciers fortement alliés

- Sorte für mittlere bis hohe Belastung in Stahl und legierter Stahlbearbeitung
- gute Bearbeitungswarmfestigkeit
- erste Wahl für die Bearbeitung von legiertem Kohlenstahl und hoch legiertem Stahl

- grade for medium to heavy machining of steel, stainless steel and alloyed steel
- high machining heat resistance
- first choice for the machining of carbon steel and high alloyed steel

## Zmax



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M **E**

P ★★★★★
M ★★★★★
N ★★☆☆☆
S ★★☆☆☆

- pour l'usinage des aciers, aciers inoxydables et alliages de titane en conditions défavorables
- bonne résistance aux chocs à des vitesses de coupe moyennes à faibles
- 1er choix pour le tronçonnageen coupe interrompue

- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen in schwierige Bearbeitungsfälle
- gute Bruchfestigkeit mit durchschnittliche bis niedrige Schnittgeschwindigkeit
- erste Wahl für die Bearbeitung in unterbrochenen Schnitte

- for machining of steel, stainless steel and titanium alloys in unfavourable machining conditions
- good impact resistance with average to low cutting speed
- first choice for machining in interrupted cut





## HTA



Revêtement PVD
PVD Beschichtung
PVD coating

TF F **M** E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- très bonne résistance à l'usure
- pour le tronçonnage des aciers, aciers inoxydables et alliages de titane
- déconseillé en coupe interrompue

- sehr gute Verschleissfestigkeit
- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierung
- für unterbrochene Schnitte ungeeignet

- very good wear resistance
- for steel, stainless steel and titanium alloys machining
- not suitable for interrupted cut

## HAC



Revêtement PVD
PVD Beschichtung
PVD coating

TF F **M** E

P ☆☆☆☆☆
M ☆☆☆☆☆
N ★★★★★
S ★★★★★

- nuance pour métaux non ferreux
- très faible coefficient de frottement
- 1er choix pour l'usinage des aluminiums, des cuivres et titanes faiblement alliés

- Sorte für Nichteisenmetalle
- sehr geringer Reibwert
- erste Wahl für die Bearbeitung von Aluminium, Kupfer und niedriglegiertem Titan

- grade for non-ferrous materials
- very low friction ratio
- first choice for Aluminium, copper and low alloyed titanium

## N



Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★☆☆
S ★★★☆☆

- idéal pour l'usinage du laiton, uniquement disponible en géométries PNW / PRW

- Ideal für die Bearbeitung von Messing, nur in den Geometrien PNW / PRWerhältlich

- ideal for machining brass, only available in PNW / PRW geometries

CUT-Line

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

# CUT 16

| | | | P Acier / Stahl / Steel | | | | | | M Inox / Rostfreistahl / Stainless steel | | N Alliages d'aluminium et non ferreux / Aluminium- und Nichteisenlegierungen / Aluminium and non-ferrous alloys | | | | | | | | S Titane / Titan / Titanium | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Acier dedécolletage / Automatenstahl / Free-cuttingsteel | | Acier faiblement allié / Leicht legierter Stahl / Low alloyed steel | | Acier fortement allié / Legierter Stahl / High alloyed steel | | Austénitiqueet martensitique / Austenitischundmartensitisch / Austeniticandmartensitic | | Aluminium | | Alu silicium max.5% / Aluminiumsilicium max.5% / Aluminium silicon max.5% | | Cuivre / Kupfer / Copper | | Laiton & bronze / Messing& Bronze / Brass& bronze | | Gr. 1- 3 | | Gr. 4- 5 | |
| | | | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) |
| Avance standard / Standard Vorschub / Standard feed rate | CUT16-UN-001 | TiAlN | 90-140 | 0.03-0.07 | 60-120 | 0.03-0.07 | 50-100 | 0.04-0.08 | 50-120 | 0.03-0.07 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 30-60 | 0.04-0.08 |
| | | Tmax | 100-170 | 0.03-0.07 | 70-150 | 0.03-0.07 | 60-120 | 0.04-0.08 | 60-150 | 0.03-0.07 | | | | | | | | | | | | |
| | | Zmax | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.08 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | | HTA | 70-120 | 0.03-0.05 | 60-100 | 0.03-0.05 | 50-90 | 0.03-0.05 | 50-100 | 0.03-0.06 | 100-300 | 0.04-0.10 | 100-250 | 0.04-0.10 | 100-300 | 0.03-0.08 | 150-300 | 0.03-0.08 | | | 30-60 | 0.04-0.08 |
| | | HAC | | | | | | | | | 150-300 | 0.04-0.15 | 100-300 | 0.04-0.10 | 100-300 | 0.04-0.10 | 150-300 | 0.02-0.08 | 30-60 | 0.04-0.08 | 30-60 | 0.04-0.08 |
| | CUT16-PR-801 | TiAlN | 90-140 | 0.03-0.07 | 60-120 | 0.03-0.07 | 50-100 | 0.03-0.07 | 50-120 | 0.03-0.07 | | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | Tmax | 100-170 | 0.03-0.07 | 70-150 | 0.03-0.07 | 60-120 | 0.03-0.07 | 60-150 | 0.03-0.07 | | | | | | | | | | | | |
| | CUT16-PRW-801 | N | | | | | | | | | | | | | | | 100-500 | 0.02-0.10 | | | | |
| Avance modérée ** / Niedriger Vorschub ** / Low feed rate | CUT16-UN-000F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT16-UL/R-800F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT16-UL/R-1500F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |

* premier choix en cas decoupeinterrompue
** arête de coupe vive

* ersteWahl für unterbrochener Schnitt
** scharfeSchneidkante

* first choice for interrupted cut
** sharp cuttingedge

CUT-Line

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

# CUT 22

| | | | P Acier / Stahl / Steel | | | | | | M Inox / Rostfreistahl / Stainless steel | | N Alliages d'aluminium et non ferreux / Aluminium- und Nichteisenlegierungen / Aluminium and non-ferrous alloys | | | | | | | | S Titane / Titan / Titanium | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Acier dedécolletage / Automatenstahl / Free-cuttingsteel | | Acier faiblement allié / Leicht legierter Stahl / Low alloyed steel | | Acier fortement allié / Legierter Stahl / High alloyed steel | | Austénitiqueet martensitique / Austenitischundmartensitisch / Austeniticandmartensitic | | Aluminium | | Alu silicium max.5% / Aluminiumsilicium max.5% / Aluminium silicon max.5% | | Cuivre / Kupfer / Copper | | Laiton & bronze / Messing& Bronze / Brass& bronze | | Gr. 1- 3 | | Gr. 4- 5 | |
| | | | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) |
| Avance standard / Standard Vorschub / Standard feed rate | CUT22-UN-002<br>CUT22-UR-802 | TiAlN | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 30-60 | 0.04-0.08 |
| | | Tmax | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | | Zmax | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.08 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | | HTA | 70-120 | 0.04-0.06 | 60-100 | 0.04-0.06 | 50-90 | 0.04-0.06 | 50-100 | 0.04-0.06 | 100-300 | 0.04-0.10 | 100-250 | 0.04-0.10 | 100-300 | 0.03-0.08 | 150-300 | 0.03-0.08 | | | 30-60 | 0.04-0.08 |
| | | HAC | | | | | | | | | 150-300 | 0.04-0.15 | 100-300 | 0.04-0.10 | 100-300 | 0.04-0.10 | 150-300 | 0.02-0.08 | 30-60 | 0.04-0.08 | 30-60 | 0.04-0.08 |
| | CUT22-PN-002 | TiAlN | 90-140 | 0.04-0.10 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | | | | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | Tmax | 100-170 | 0.04-0.10 | 70-150 | 0.04-0.10 | 60-120 | 0.04-0.10 | | | | | | | | | | | | | | |
| | CUT22-PNW-002 | N | | | | | | | | | | | | | | | 100-500 | 0.02-0.10 | | | | |
| | CUT22-PR-002 | TiAlN | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | Tmax | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | CUT22-PRW-002 | N | | | | | | | | | | | | | | | 100-500 | 0.02-0.10 | | | | |
| | CUT22-TN-002 | TiAlN | 90-140 | 0.08-0.18 | 60-120 | 0.08-0.18 | 50-100 | 0.08-0.15 | 50-120 | 0.08-0.20 | | | | | | | 150-300 | 0.05-0.20 | | | | |
| | | Tmax | 100-170 | 0.08-0.18 | 70-150 | 0.08-0.18 | 60-120 | 0.08-0.15 | 60-150 | 0.08-0.20 | | | | | | | | | | | | |
| | | Zmax | 80-130* | 0.08-0.18 | 50-110* | 0.08-0.18 | 50-90* | 0.08-0.15 | | | | | | | | | | | | | | |
| | CUT22-GN-002 *** | TiAlN | 90-140 | 0.03-0.12 | 60-120 | 0.03-0.12 | 50-100 | 0.03-0.10 | 50-120 | 0.03-0.08 | 100-300 | 0.03-0.12 | 100-200 | 0.03-0.10 | 100-200 | 0.03-0.10 | 100-300 | 0.03-0.12 | | | 30-60 | 0.04-0.08 |
| | | Tmax | 100-170 | 0.03-0.12 | 70-150 | 0.03-0.12 | 60-120 | 0.03-0.10 | 70-120 | 0.03-0.08 | | | | | | | 100-300 | 0.03-0.12 | | | | |
| | | HAC | | | | | | | | | 100-300 | 0.03-0.12 | 100-200 | 0.03-0.10 | 100-200 | 0.03-0.10 | 100-300 | 0.03-0.12 | 30-60 | 0.04-0.08 | 30-60 | 0.04-0.08 |
| Avance modérée / Niedriger Vorschub / Low feed rate ** | CUT22-UN-000F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT22-UL/R-800F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT22-UL/R-802F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT22-UL/R-1500F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |

* premier choix en cas decoupeinterrompue
** arête de coupe vive
*** Pour opérations de fonçage-tournage (évent. tronçonnage)

* ersteWahl für unterbrochener Schnitt
** scharfeSchneidkante
*** Für Stech- und Drehoperationen (event. abstechen)

* first choice for interrupted cut
** sharp cuttingedge
*** For grooving and turning operations (event.parting off)

CUT-Line

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

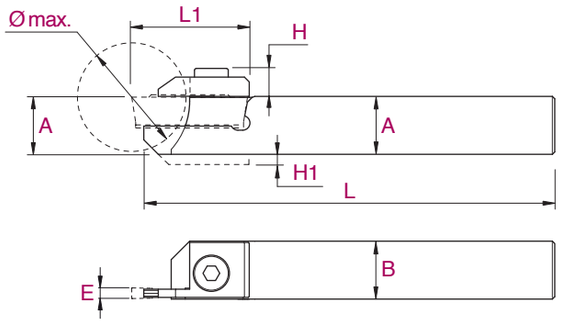
# CUT 31

| | | | P Acier / Stahl / Steel | | | | | | M Inox / Rostfreistahl / Stainless steel | | N Alliages d'aluminium et non ferreux / Aluminium- und Nichteisenlegierungen / Aluminium and non-ferrous alloys | | | | | | | | S Titane / Titan / Titanium | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Acier dedécolletage / Automatenstahl / Free-cuttingsteel | | Acier faiblement allié / Leicht legierter Stahl / Low alloyed steel | | Acier fortement allié / Legierter Stahl / High alloyed steel | | Austénitiqueet martensitique / Austenitischundmartensitisch / Austeniticandmartensitic | | Aluminium | | Alu silicium max.5% / Aluminiumsilicium max.5% / Aluminium silicon max.5% | | Cuivre / Kupfer / Copper | | Laiton & bronze / Messing& Bronze / Brass& bronze | | Gr. 1- 3 | | Gr. 4- 5 | |
| | | | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) | VC(m/min) | F(mm/U) |
| Avance standard / Standard Vorschub / Standard feed rate | CUT31-UN-002 | TiAlN | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.10 | 100-250 | 0.03-0.10 | 100-250 | 0.03-0.10 | 100-300 | 0.03-0.10 | 100-300 | 0.03-0.10 | | | 30-60 | 0.04-0.08 |
| | | Tmax | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.10 | | | | | | | | | | | | |
| | | Zmax | 80-130* | 0.04-0.10 | 50-110* | 0.04-0.10 | 50-90* | 0.04-0.08 | 50-120* | 0.04-0.10 | | | | | | | | | | | | |
| | | HTA | 70-120 | 0.04-0.06 | 60-100 | 0.04-0.06 | 50-90 | 0.04-0.06 | 50-100 | 0.04-0.06 | 100-300 | 0.04-0.10 | 100-250 | 0.04-0.10 | 100-300 | 0.03-0.08 | 150-300 | 0.03-0.08 | | | 30-60 | 0.04-0.08 |
| | | HAC | | | | | | | | | 150-300 | 0.04-0.15 | 100-300 | 0.04-0.10 | 100-300 | 0.04-0.10 | 150-300 | 0.02-0.08 | 30-60 | 0.04-0.08 | 30-60 | 0.04-0.08 |
| | CUT31-PN-002 | TiAlN | 90-140 | 0.04-0.10 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | | | | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | Tmax | 100-170 | 0.04-0.10 | 70-150 | 0.04-0.10 | 60-120 | 0.04-0.10 | | | | | | | | | | | | | | |
| | CUT31-PNW-002 | N | | | | | | | | | | | | | | | 100-500 | 0.02-0.15 | | | | |
| | CUT31-PR-802 | TiAlN | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 | 0.04-0.08 | 50-120 | 0.04-0.08 | | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | Tmax | 100-170 | 0.04-0.08 | 70-150 | 0.04-0.08 | 60-120 | 0.04-0.08 | 60-150 | 0.04-0.08 | | | | | | | | | | | | |
| | CUT31-PRW-802 | N | | | | | | | | | | | | | | | 100-500 | 0.02-0.15 | | | | |
| | CUT31-TN-002 | TiAlN | 90-140 | 0.08-0.20 | 60-120 | 0.08-0.20 | 50-100 | 0.08-0.15 | 50-120 | 0.08-0.20 | | | | | | | 150-300 | 0.05-0.20 | | | | |
| | | Tmax | 100-170 | 0.08-0.20 | 70-150 | 0.08-0.20 | 60-120 | 0.08-0.15 | 60-150 | 0.08-0.20 | | | | | | | | | | | | |
| | | Zmax | 80-130* | 0.08-0.20 | 50-110* | 0.08-0.20 | 50-90* | 0.08-0.15 | | | | | | | | | | | | | | |
| | CUT31-GN-002 *** | TiAlN | 90-140 | 0.04-0.15 | 60-120 | 0.04-0.15 | 50-100 | 0.04-0.10 | 50-120 | 0.04-0.10 | 100-300 | 0.04-0.15 | 100-200 | 0.04-0.10 | 100-200 | 0.04-0.10 | 100-300 | 0.04-0.15 | | | 30-60 | 0.04-0.08 |
| | | Tmax | 100-170 | 0.04-0.15 | 70-150 | 0.04-0.15 | 60-120 | 0.04-0.10 | 70-120 | 0.04-0.10 | | | | | | | 100-300 | 0.04-0.15 | | | | |
| | | HAC | | | | | | | | | 100-300 | 0.04-0.15 | 100-200 | 0.04-0.10 | 100-200 | 0.04-0.10 | 100-300 | 0.04-0.15 | 30-60 | 0.04-0.08 | 30-60 | 0.04-0.08 |
| Avance modérée / Niedriger Vorschub / Low feed rate ** | CUT31-UN-000F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT31-UL/R-800F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT31-UL/R-802F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |
| | CUT31-UL/R-1500F | TiAlN | 80-130 | 0.02-0.05 | 50-110 | 0.02-0.05 | 50-90 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.01-0.04 | 100-250 | 0.01-0.04 | 100-300 | 0.02-0.05 | | | 30-60 | 0.01-0.04 |
| | | HTA | 60-100 | 0.01-0.04 | 50-90 | 0.01-0.04 | 50-80 | 0.02-0.05 | 50-80 | 0.02-0.05 | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | | | 30-60 | 0.02-0.06 |
| | | HAC | | | | | | | | | 100-300 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-250 | 0.02-0.05 | 100-300 | 0.02-0.05 | 30-60 | 0.02-0.06 | 30-60 | 0.02-0.06 |

* premier choix en cas decoupeinterrompue
** arête de coupe vive
*** Pour opérations de fonçage-tournage (évent. tronçonnage)

* ersteWahl für unterbrochener Schnitt
** scharfeSchneidkante
*** Für Stech- und Drehoperationen (event. abstechen)

* first choice for interrupted cut
** sharp cuttingedge
*** For grooving and turning operations (event.parting off)

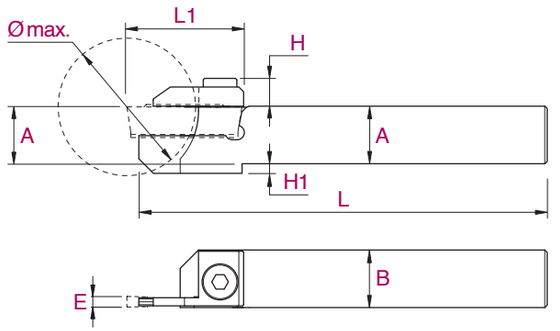



| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H | H1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|---|
| E 1.6 mm Type CUT16 | 8 x 10 | 115 | 16 | 19.5 | 6.2 | 2 | CUT16-H0810L | CUT16-H0810R |
| | 10 x 10 | 115 | 16 | 19.5 | 6.2 | - | CUT16-H1010L | CUT16-H1010R |
| | 12 x 12 | 130 | 16 | 19.5 | 6.2 | - | CUT16-H1212L | CUT16-H1212R |
| | 12 x 12 | 90 | 16 | 19.5 | 6.2 | - | CUT16-H1212L-90 | CUT16-H1212R-90 |
| | 12.7 x 12.7 | 130 | 16 | 19.5 | 6.2 | - | CUT16-H127127L | CUT16-H127127R |
| | 16 x 16 | 130 | 16 | 19.5 | 6.2 | - | CUT16-H1616L | CUT16-H1616R |
| | 20 x 20 | 120 | 16 | 19.5 | 6.2 | - | CUT16-H2020L | CUT16-H2020R |
| E 2.2 mm Type CUT22 | 10 x 12 | 115 | 20 | 24 | 6.4 | - | CUT22-H1012L | CUT22-H1012R |
| | 12 x 12 | 130 | 20 | 24 | 6.4 | - | CUT22-H1212L | CUT22-H1212R |
| | 12 x 12 | 90 | 20 | 24 | 6.4 | - | CUT22-H1212L-90 | CUT22-H1212R-90 |
| | 12.7 x 12.7 | 130 | 20 | 24 | 6.4 | - | CUT22-H127127L | CUT22-H127127R |
| | 16 x 16 | 130 | 20 | 24 | 6.4 | - | CUT22-H1616L | CUT22-H1616R |
| | 20 x 20 | 120 | 20 | 24 | 6.4 | - | CUT22-H2020L | CUT22-H2020R |
| E 3.1 mm Type CUT31 | 16 x 16 | 130 | 34 | 35 | 7.8 | - | CUT31-H1616L | CUT31-H1616R |
| | 20 x 20 | 120 | 34 | 35 | 7.8 | - | CUT31-H2020L | CUT31-H2020R |
| | 25 x 25 | 140 | 34 | 35 | 7.8 | - | CUT31-H2525L | CUT31-H2525R |

| Pièces de rechange Ersatzteile Spare parts | L Art. N° | R Art. N° | Art. N° | Serrage Anzug Torque |
|---|---|---|---|---|
| CUT 16 | CUT16L-SET | CUT16R-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 22 | CUT22L-SET | CUT22R-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 31 | CUT31L-SET | CUT31R-SET | V-M5X10-BN7 | 4.5 Nm |

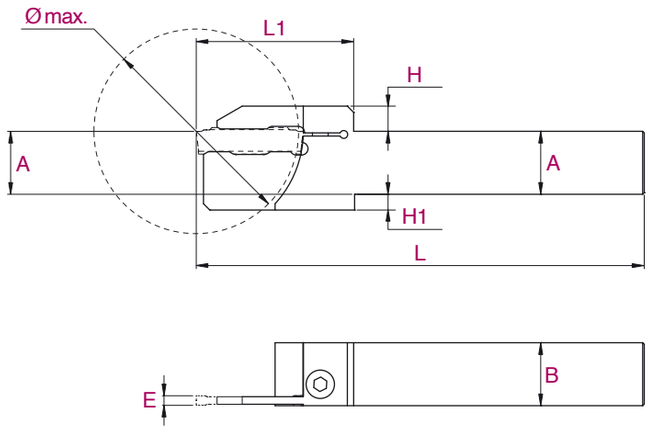







| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H | H1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|---|
| E 1.6 mm Type CUT16 | 10 x 12 | 115 | 20 | 21 | 6.2 | 2 | CUT16-H1012LX | CUT16-H1012RX |
| | 12 x 12 | 130 | 20 | 21 | 6.2 | - | CUT16-H1212LX | CUT16-H1212RX |
| | 12 x 12 | 90 | 20 | 21 | 6.2 | - | CUT16-H1212LX-90 | CUT16-H1212RX-90 |
| | 12.7 x 12.7 | 130 | 20 | 21 | 6.2 | - | CUT16-H127127LX | CUT16-H127127RX |
| | 16 x 16 | 130 | 20 | 21 | 6.2 | - | CUT16-H1616LX | CUT16-H1616RX |
| | 20 x 20 | 120 | 20 | 21 | 6.2 | - | CUT16-H2020LX | CUT16-H2020RX |
| E 2.2 mm Type CUT22 | 10 x 12 | 115 | 26 | 25 | 6.4 | 4 | CUT22-H1012LX | CUT22-H1012RX |
| | 12 x 12 | 130 | 26 | 25 | 6.4 | 2 | CUT22-H1212LX | CUT22-H1212RX |
| | 12 x 12 | 90 | 26 | 25 | 6.4 | 2 | CUT22-H1212LX-90 | CUT22-H1212RX-90 |
| | 12.7 x 12.7 | 130 | 26 | 25 | 6.4 | - | CUT22-H127127LX | CUT22-H127127RX |
| | 16 x 16 | 130 | 26 | 25 | 6.4 | - | CUT22-H1616LX | CUT22-H1616RX |
| | 20 x 20 | 120 | 26 | 25 | 6.4 | - | CUT22-H2020LX | CUT22-H2020RX |
| | 25 x 25 | 140 | 26 | 25 | 6.4 | - | CUT22-H2525LX | CUT22-H2525RX |
| E 3.1 mm Type CUT31 | 16 x 16 | 120 | 42 | 37 | 7.8 | 4 | CUT31-H1616LX | CUT31-H1616RX |
| | 20 x 20 | 120 | 42 | 37 | 7.8 | - | CUT31-H2020LX | CUT31-H2020RX |
| | 25 x 25 | 140 | 42 | 37 | 7.8 | - | CUT31-H2525LX | CUT31-H2525RX |

| Pièces de rechange Ersatzteile Spare parts | L Art. N° | R Art. N° | Art. N° | Serrage Anzug Torque |
|---|---|---|---|---|
| CUT 16 | CUT16LX-SET | CUT16RX-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 22 | CUT22LX-SET | CUT22RX-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 31 | CUT31LX-SET | CUT31RX-SET | V-M5X10-BN7 | 4.5 Nm |

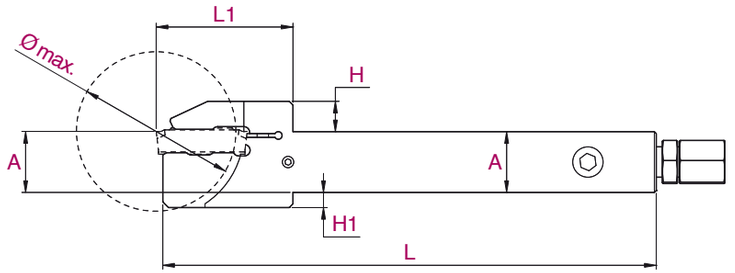


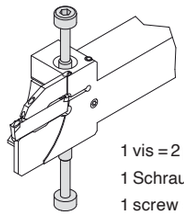

| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H | H1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|---|
| E 2.2 mm Type CUT22 | 16 x 16 | 130 | 32 | 30 | 7 | - | CUT22-H1616LZ-D32 | CUT22-H1616RZ-D32 |
| | 20 x 20 | 130 | 32 | 30 | 7 | - | CUT22-H2020LZ-D32 | CUT22-H2020RZ-D32 |
| | 16 x 16 | 130 | 42 | 35 | 7 | 4 | CUT22-H1616LZ-D42 | CUT22-H1616RZ-D42 |
| | 20 x 20 | 130 | 42 | 35 | 7 | - | CUT22-H2020LZ-D42 | CUT22-H2020RZ-D42 |
| E 3.1 mm Type CUT31 | 20 x 20 | 140 | 52 | 44 | 8 | 5 | CUT31-H2020LZ-D52 | CUT31-H2020RZ-D52 |
| | 25 x 25 | 140 | 52 | 44 | 8 | - | CUT31-H2525LZ-D52 | CUT31-H2525RZ-D52 |
| | 20 x 20 | 140 | 65 | 50 | 8 | 5 | CUT31-H2020LZ-D65 | CUT31-H2020RZ-D65 |
| | 25 x 25 | 140 | 65 | 50 | 8 | - | CUT31-H2525LZ-D65 | CUT31-H2525RZ-D65 |

| Pièces de rechange Ersatzteile Spare parts | Art. N° | Serrage Anzug Torque |
|---|---|---|
| CUT 22 | V-M4X10-BN7 | 3.5 Nm |
| CUT 31 | V-M5X10-BN7 | 4.5 Nm |





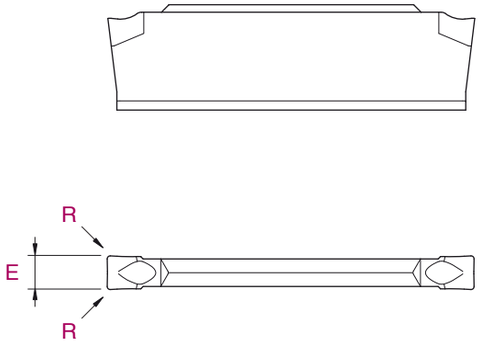


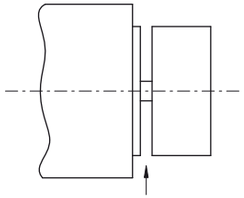
1 vis = 2 possibilités de serrage
1 Schraube = 2 Spannmöglichkeiten
1 screw = 2 clamp possibilities

| Plaquettes WSP Inserts | A x B | L | Ø max. | L1 | H | H1 | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|---|
| E 2.2 mm Type CUT22 | 16 x 16 | 130 | 42 | 36 | 8 | 4 | CUT22-H1616LZ-JET42 | CUT22-H1616RZ-JET42 |
| | 20 x 20 | 130 | 42 | 36 | 8 | - | CUT22-H2020LZ-JET42 | CUT22-H2020RZ-JET42 |
| E 3.1 mm Type CUT31 | 16 x 16 | 140 | 65 | 49 | 9 | 9 | CUT31-H1616LZ-JET65 | CUT31-H1616RZ-JET65 |
| | 20 x 20 | 140 | 65 | 51 | 9 | 5 | CUT31-H2020LZ-JET65 | CUT31-H2020RZ-JET65 |
| | 25 x 25 | 140 | 65 | 51 | 9 | - | CUT31-H2525LZ-JET65 | CUT31-H2525RZ-JET65 |

| Pièces de rechange Ersatzteile Spare parts | Art. N° | Serrage Anzug Torque | Art. N° | Art. N° |
|---|---|---|---|---|
| CUT 22 | V-M4X22-CUT | 3.5 Nm | J-M8X1-D6 | JB-M8X1 |
| CUT 31 | V-M5X25-CUT | 4.5 Nm | J-M8X1-D6 | JB-M8X1 |





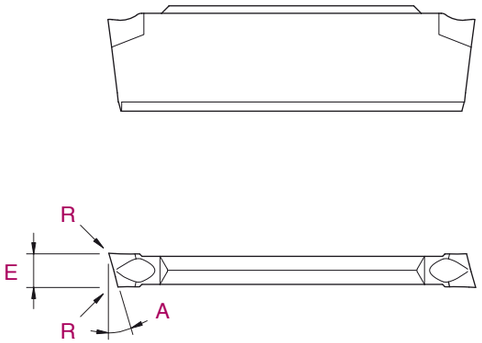



## UN

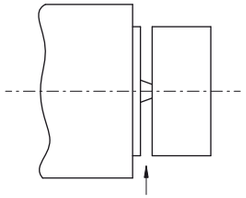
| Type | E ±0.1 | R | Art. N° | TiAlN | Tmax | Zmax | HTA | HAC |
|---|---|---|---|---|---|---|---|---|
| | | | | P M N S | P M | P M | P M N S | N S |
| CUT16 | 1.6 | 0.02 | CUT16-UN-000F | ● | | | ● | ● |
| | 1.6 | 0.10 | CUT16-UN-001 | ● | ● | ● | ● | ● |
| CUT22 | 2.2 | 0.02 | CUT22-UN-000F | ● | | | ● | ● |
| | 2.2 | 0.20 | CUT22-UN-002 | ● | ● | ● | ● | ● |
| CUT31 | 3.1 | 0.02 | CUT31-UN-000F | ● | | | ● | ● |
| | 3.1 | 0.20 | CUT31-UN-002 | ● | ● | ● | ● | ● |







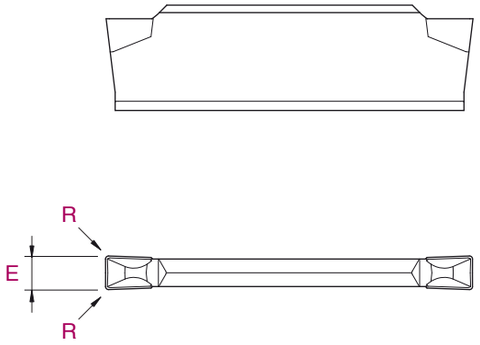


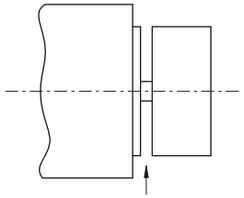
## UL

## UR

| Type | E ±0.1 | A | R | Art. N° | TiAlN | HTA | HAC | Art. N° | TiAlN | Tmax | Zmax | HTA | HAC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | P M N S | P M N S | N S | | P M N S | P M | P M | P M N S | N S |
| CUT16 | 1.6 | 8° | 0.02 | CUT16-UL-800F | ● | ● | ● | CUT16-UR-800F | ● | | | ● | ● |
| | 1.6 | 15° | 0.02 | CUT16-UL-1500F | ● | ● | ● | CUT16-UR-1500F | ● | | | ● | ● |
| CUT22 | 2.2 | 8° | 0.02 | CUT22-UL-800F | ● | ● | ● | CUT22-UR-800F | ● | | | ● | ● |
| | 2.2 | 8° | 0.20 | – | | | | CUT22-UR-802 | | ● | ● | | |
| | 2.2 | 8° | 0.20 | CUT22-UL-802F | ● | ● | ● | CUT22-UR-802F | ● | | | ● | ● |
| | 2.2 | 15° | 0.02 | CUT22-UL-1500F | ● | ● | ● | CUT22-UR-1500F | ● | | | ● | ● |
| CUT31 | 3.1 | 8° | 0.02 | CUT31-UL-800F | ● | ● | ● | CUT31-UR-800F | ● | | | ● | ● |
| | 3.1 | 8° | 0.20 | CUT31-UL-802F | ● | ● | ● | CUT31-UR-802F | ● | | | ● | ● |
| | 3.1 | 15° | 0.02 | CUT31-UL-1500F | ● | ● | ● | CUT31-UR-1500F | ● | | | ● | ● |





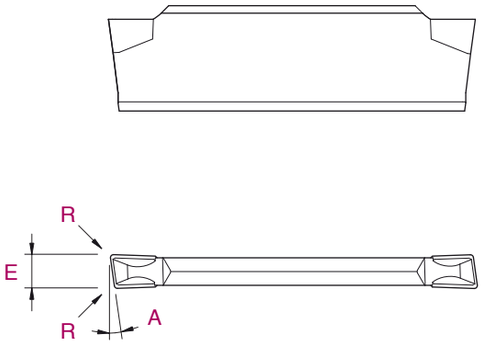



PN

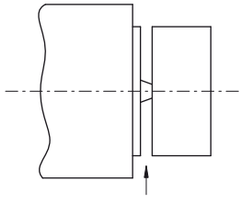
| Type | E ±0.1 | R | Art. N° | TiAlN | Tmax |
|---|---|---|---|---|---|
| CUT22 | 2.2 | 0.20 | CUT22-PN-002 | ● | ● |
| CUT31 | 3.1 | 0.20 | CUT31-PN-002 | ● | ● |





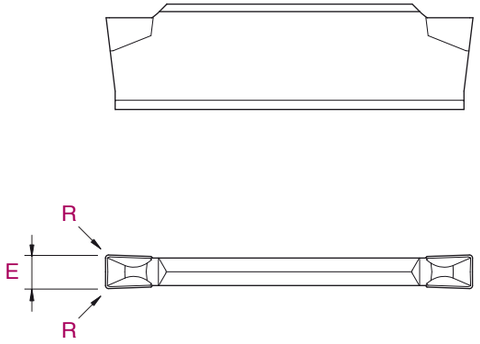




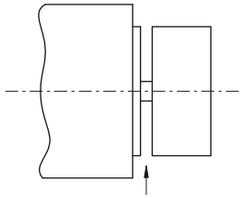



PR

| Type | E ±0.1 | A | R | Art. N° | TiAlN | Tmax |
|---|---|---|---|---|---|---|
| CUT16 | 1.6 | 8° | 0.10 | CUT16-PR-801 | ● | ● |
| CUT22 | 2.2 | 8° | 0.20 | CUT22-PR-802 | ● | ● |
| CUT31 | 3.1 | 8° | 0.20 | CUT31-PR-802 | ● | ● |





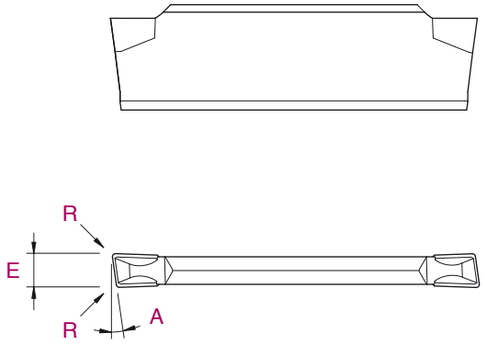



## PNW

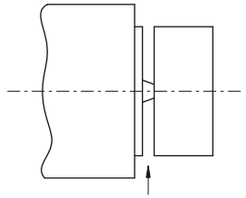
| Type | E ±0.1 | R | Art. N° | N S Z |
|---|---|---|---|---|
| CUT22 | 2.2 | 0.20 | CUT22-PNW-002 | ● |
| CUT31 | 3.1 | 0.20 | CUT31-PNW-002 | ● |





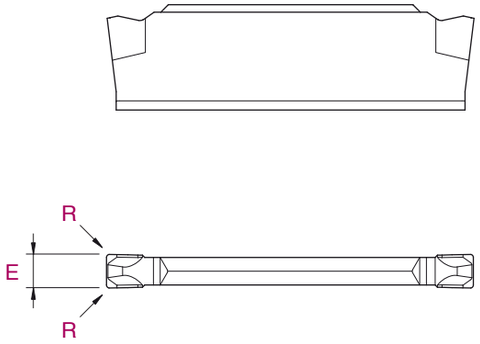




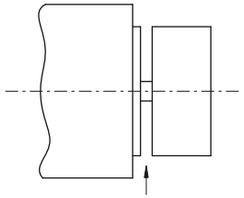



## PRW

| Type | E ±0.1 | A | R | Art. N° | N S Z |
|---|---|---|---|---|---|
| CUT16 | 1.6 | 8° | 0.10 | CUT16-PRW-801 | ● |
| CUT22 | 2.2 | 8° | 0.20 | CUT22-PRW-802 | ● |
| CUT31 | 3.1 | 8° | 0.20 | CUT31-PRW-802 | ● |





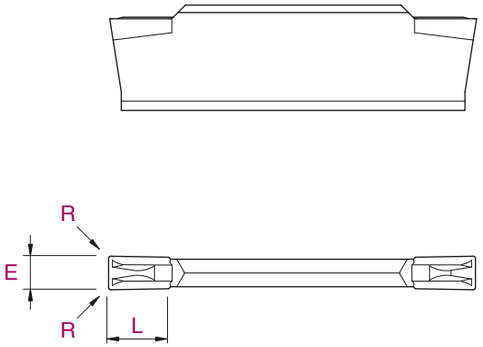



## TN

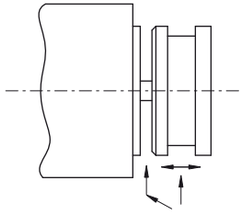
| Type | E ±0.1 | R | Art. N° | TiAlN | Tmax | Zmax |
|---|---|---|---|---|---|---|
| CUT22 | 2.2 | 0.20 | CUT22-TN-002 | ● | ● | ● |
| CUT31 | 3.1 | 0.20 | CUT31-TN-002 | ● | ● | ● |







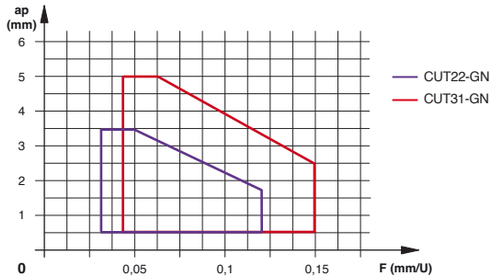


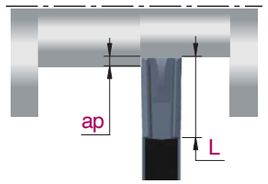



## GN

| Type | E ±0.1 | L | R | Art. N° | TiAlN | Tmax | HAC |
|---|---|---|---|---|---|---|---|
| CUT22 | 2.2 | 3.5 | 0.15 | CUT22-GN-002 | ● | ● | ● |
| CUT31 | 3.1 | 5.0 | 0.15 | CUT31-GN-002 | ● | ● | ● |

### Conseils d'utilisation pour plaquettes type GN
### Anwendungsempfehlungen für GN-Wendeplatten
### Application recommendations for GN inserts




ap max =L dans matière à bonne usinabilité
ap max =L in Werkstoffe mit gute Zerspanbarkeit
ap max =L in material with good machinability

# IN-Line

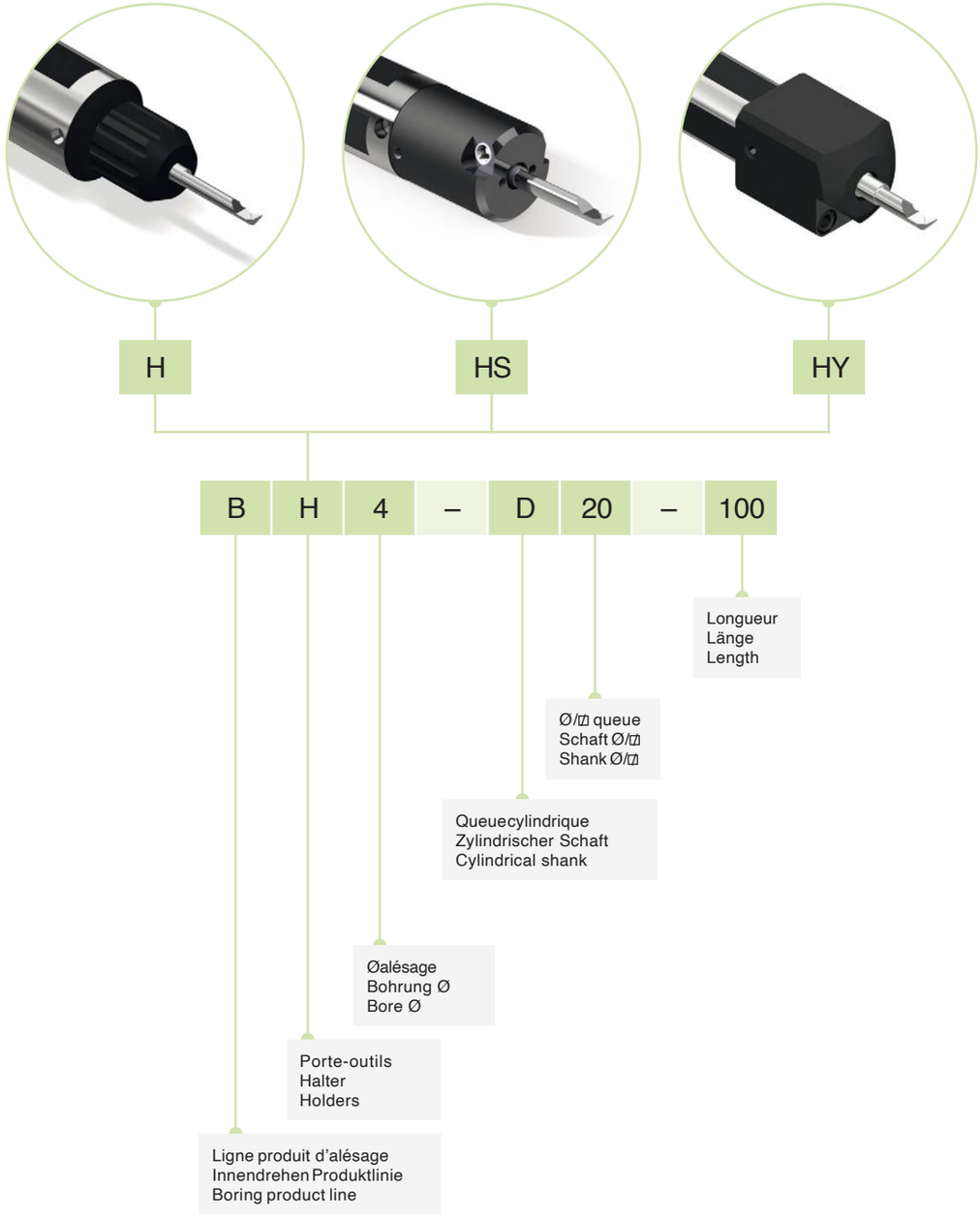


APPLITEC
CUTTING TOOLS

| | | | |
|---|---|---|---|
| Codification<br>Kodifizierung<br>Coding guide | | | > 12.03 |
| Infos et avantages<br>Infos und Vorteile<br>Infos and advantages | | | > 12.06 |
| Nuances & paramètres de coupe<br>Sorten & Schnittwerte<br>Grades & machining data | | | > 12.10 |
| Porte-outils<br>Halter<br>Holders | BH / BHS / BHY / BHK | | > 12.12 |
| Alésage<br>Ausbohren<br>Boring | BA / BAX |  | > 12.22 |
| Alésage-copiage<br>Ausbohren-kopieren<br>Boring-chambering | BCX |  | > 12.26 |
| Copiage<br>Kopieren<br>Chambering | C45 / C45X |  | > 12.28 |
| Gorge<br>Einstechen<br>Grooving | GX |  | > 12.32 |
| Fonçage-tournage<br>Einstechen und drehen<br>Grooving and turning | GTX |  | > 12.34 |
| Fonçage-tournage<br>Einstechen und drehen<br>Grooving and turning | GT-ZFX |  | > 12.36 |
| Filetage<br>Gewindedrehen<br>Threading | TP60° / TP55° / TM |  | > 12.38 |
| Gorge frontale<br>Axiales Stechen<br>Axial grooving | FEG / FIG |  | > 12.44 |
| Ébauches / Jauges d'alignement / Adaptations machines / Accessoires<br>Rohlinge / Richtplatten / Maschinenanpassungen / Zubehöre<br>Blanks / Adjusting tools / Machines adapters / Accessories | | | > 12.46 |







HK

B | HK | 4 | N | – | 20 | – | 32R

- B: Ligne produit d'alésage / Innendrehen Produktlinie / Boring product line
- HK: Porte-outils / Halter / Holders
- 4: Øalésage / Bohrung Ø / Bore Ø
- N: Géométrie du porte-outil / Haltergeometrie / Tool holder geometry
- 20: ⎅ queue / Schaft ⎅ / Shank ⎅
- 32R: Barres d'alésage compatibles (longueur L3) / Kompatible Bohrstangen (Länge L3) / Compatible boring bars (length L3)







B — Arrosage intégré / Intergrieter Kühlmittelzufuhr / Integrated coolant supply

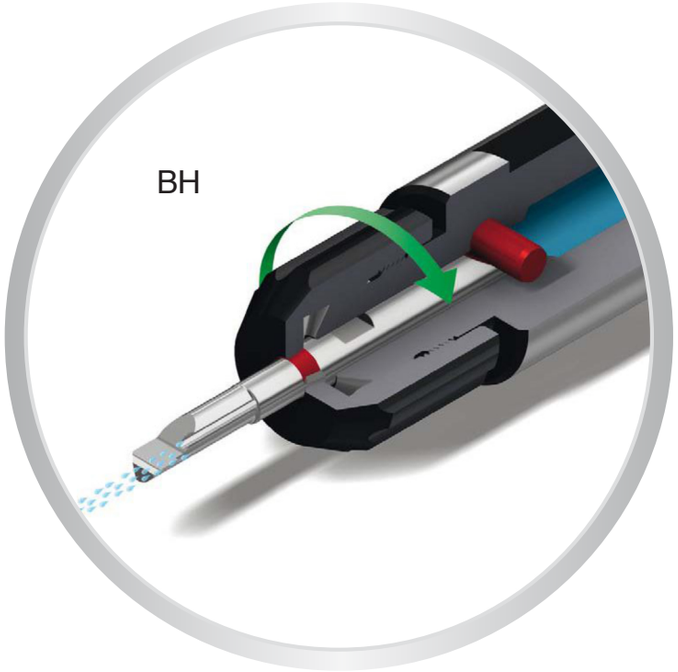


F — Sans arrosage / Ohne Kühlung / Without coolant

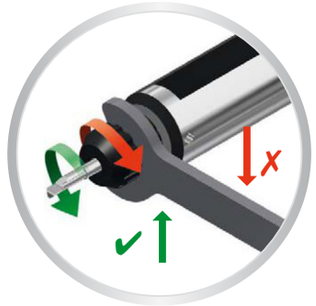
B | B (Ou / Oder / Or F) | 4 | R | – | 25 | – | 75 | – | BAX | – | R05 | – | ZN

- B: Ligne produit d'alésage / Innendrehen Produktlinie / Boring product line
- 4: Øqueue / Schaft Ø / Shank Ø
- R: Exécution R/L / Ausführung R/L / Execution R/L
- 25: Øminimum / Minimal Ø / Minimum Ø
- 75: Longueur utile / Nutzlänge / Length
- BAX: Géométries de coupe / Schneidgeometrien / Cutting geometries
- R05: Indication complémentaire / Zusätzliche Angabe / Additional indication — R = rayon / Radius / radius
- ZN: Nuance / Sorte / Grade

## Arrosage par la barre d'alésage
## Kühlung durch die Bohrstange
## Cooling through the boring bar



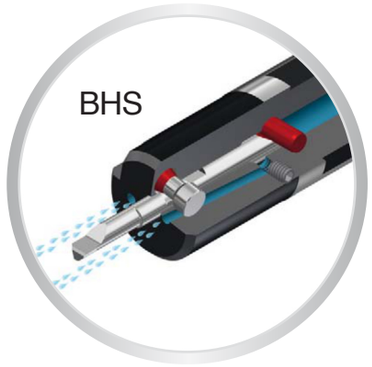


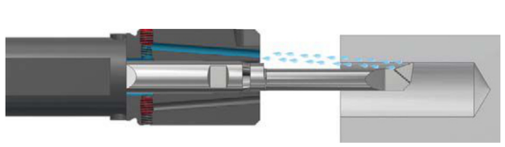


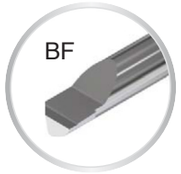



## Système de serrage à vis transversale
## Querverschraubungsspannsystem
## Clamping system with transverse screw

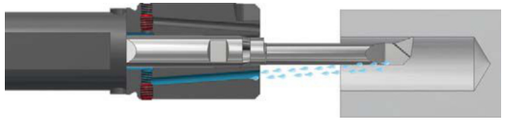


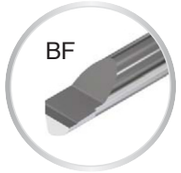

Arrosage sur l'arête de coupe
Kühlung auf der Schneidkante
Cooling on the cutting edge



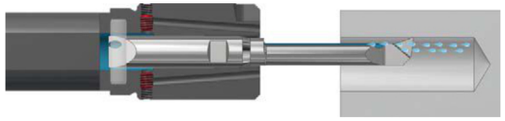


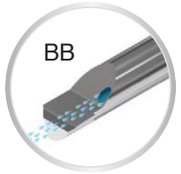

Arrosage favorisant l'évacuation des copeaux
Spanabfuhr fördernde Kühlung
Cooling for better chip outflow






Arrosage par le centre de l'outil
Zentrale Kühlmittelzufuhr
Cooling through the center of the tool

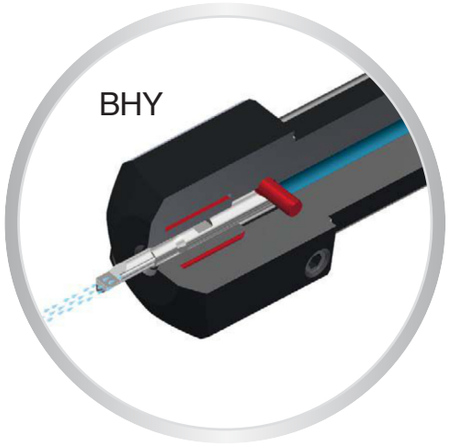






Excellente absorption des vibrations
Ausgezeichnete Schwingungsdämpfung
Excellent vibration absorbtion

Arrosage par la barre d'alésage
Kühlung durch die Bohrstange
Cooling through the boring bar

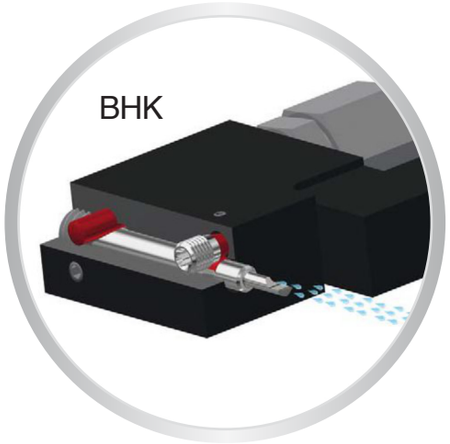





Système de serrage à vis transversale
Querverschraubungsspannsystem
Clamping system with transverse screw

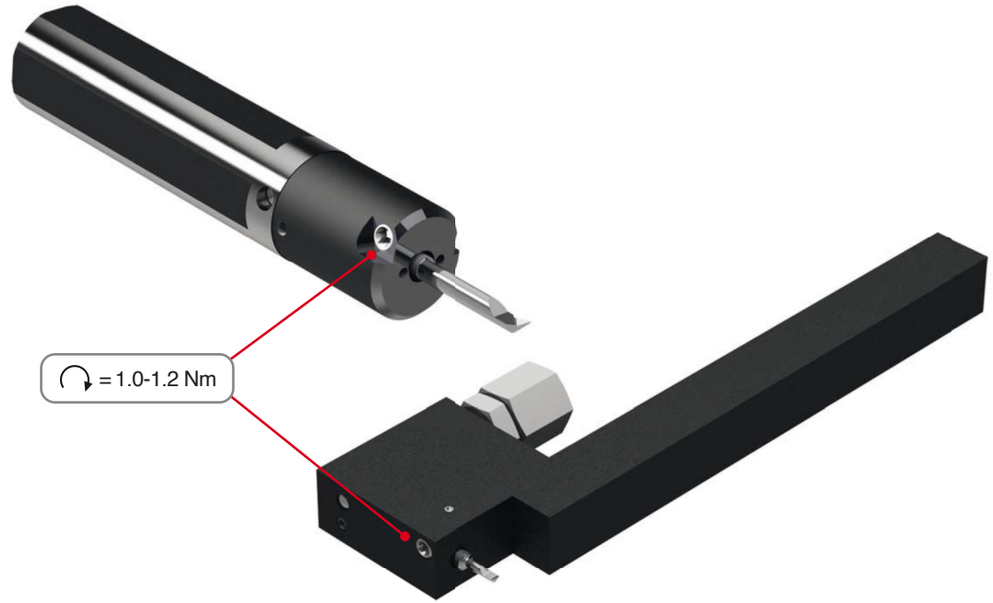


Arrosage par la barre d'alésage
Kühlung durch die Bohrstange
Cooling through the boring bar








Nous recommandons le serrage des porte-outils type BHS et BHK avec ce type de tournevis dynamométrique.

Wir empfehlen für das Anziehen der Halter Typ BHS und BHK diese Art von Drehmomentschraubendreher.

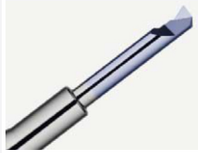
For holders type BHS and BHK clamping, we recommend this kind of torque screwdriver.



| Art. N° |
| --- |
| SET-NM1.2-TX8 |

µK30

## ZTAF



K30

ZN + revêtement PVD
ZN + PVD Beschichtung
ZN + PVD coating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

- nuance universelle pour l'usage des aciers, aciers inoxydables, aciers alliés, alliages de titane
- bonne résistance à la température

- Vielzweck-Hartmetallsorte für die Bearbeitung von Stahl, rostfreien Stählen, Stahllegierung, Titanlegierung
- gute Warmfestigkeit

- universal grade for steel, stainless steel, alloyed steel, titanium alloys
- good heat resistance

µK30

## ZTAXF



K30

ZN + revêtement PVD
ZN + PVD Beschichtung
ZN + PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★★★★

- nuance très résistante à l'usure et à la température, recommandée pour l'usinage des matières suivantes: inox 304, 316L, 317L, 904, Phynox
- aciers alliés contenant: chrome nickel, vanadium, molybdène, …

- sehr verschleissfeste und temperaturbeständige Sorte, für folgende Materialien empfohlen: Inox 304, 316L, 317L, 904, Phynox
- legierter Stahl enthaltend: Chrom-Nickel, Vanadium, Molybdän, …

- very wear and high temperature resistant grade, recommended for following material : Inox 304, 316L, 317L, 904, Phynox
- alloy steel containing: Chrome-nickel, Vanadium, Molybdenum, …

µK30

## ZN



K30

Non revêtu
Unbeschichtet
Uncoated

P ★☆☆☆☆
M ★☆☆☆☆
N ★★★★☆
S ★★★★☆

- nuance de base micro-grain tenace
- 1er choix pour l'usinage des métaux non ferreux

- zähe Basis Feinkornsorte
- erste Wahl für die Bearbeitung von Nichteisenmetalle

- tough base micro-grain grade
- first choice for non-ferrous materials





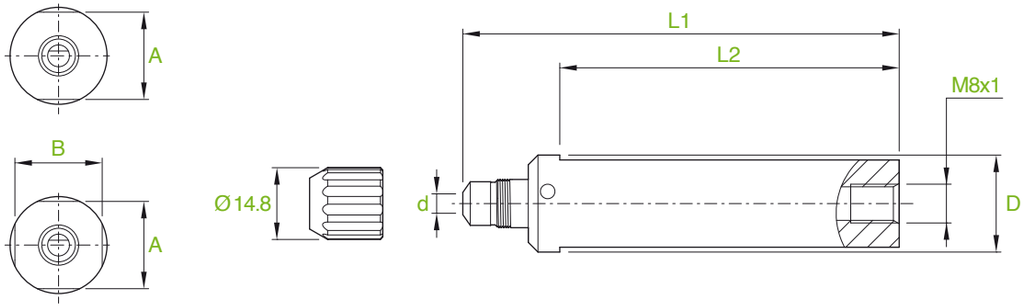
| Matière<br>Werkstoff<br>Material | | VC<br>(m/min) | Øbarre d'alésage<br>Bohrstange Ø<br>boring bar Ø<br>Ø1.0 - Ø2.0<br>(mm/U) | Ø2.5 - Ø4.0<br>(mm/U) | Ø4.5 - Ø5.5<br>(mm/U) |
|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 60-100 | 0.02-0.03 | 0.02-0.08 | 0.03-0.10 |
| Acier faiblement allié<br>Leicht legierter Stahl<br>Low alloyed steel | P | 50-80 | 0.01-0.03 | 0.02-0.05 | 0.03-0.06 |
| Acier fortement allié<br>Legierter Stahl<br>High alloyed steel | P | 40-60 | 0.01-0.02 | 0.02-0.04 | 0.02-0.06 |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel | M | 40-90 | 0.01-0.03 | 0.02-0.05 | 0.03-0.08 |
| Aluminium | N | 60-150 | 0.01-0.03 | 0.02-0.06 | 0.03-0.10 |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 60-150 | 0.01-0.03 | 0.02-0.05 | 0.03-0.08 |
| Titane<br>Titan<br>Titanium | S | 30-70 | 0.01-0.03 | 0.02-0.05 | 0.03-0.10 |

# BH4-D

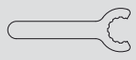
Porte-outils avec écrou de serrage
Halter mit Spannmutter
Holders with clamping nut

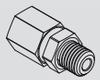







| d | Bars | D | L1 | L2 | A x B | 2 flats | 4 flats | Art. N° |
|---|---|---|---|---|---|---|---|---|
| 4 | BB4…<br>BF4… | 10 | 75 | 55 | 8.8x8.8 | ● | | BH4-D10-75 |
| | | 12 | 75 | 55 | 11.2x11.2 | ● | | BH4-D12-75 |
| | | 12.7 | 75 | 55 | 11.2x11.2 | ● | | BH4-D12.7-75 |
| | | 15.87 | 75 | 55 | 14x14 | | ● | BH4-D15.87-75-F4 |
| | | 16 | 75 | 55 | 14x14 | ● | | BH4-D16-75 |
| | | 16 | 75 | 55 | 14x14 | | ● | BH4-D16-75-F4 |
| | | 16 | 110 | 90 | 14x14 | | ● | BH4-D16-110-F4 |
| | | 19.05 | 90 | 70 | 17x17 | | ● | BH4-D19.05-90-F4 |
| | | 20 | 90 | 70 | 18x18 | ● | | BH4-D20-90 |
| | | 20 | 90 | 70 | 18x18 | | ● | BH4-D20-90-F4 |
| | | 20 | 160 | 140 | 18x18 | | ● | BH4-D20-160-F4 |
| | | 22 | 90 | 70 | 20x20 | ● | | BH4-D22-90 |
| | | 22 | 90 | 70 | 20x20 | | ● | BH4-D22-90-F4 |
| | | 22 | 130 | 110 | 20x20 | | ● | BH4-D22-130-F4 |
| | | 25 | 100 | 80 | 23x23 | ● | | BH4-D25-100 |
| | | 25 | 100 | 80 | 23x23 | | ● | BH4-D25-100-F4 |
| | | 25 | 170 | 150 | 23x23 | | ● | BH4-D25-170-F4 |
| | | 25.4 | 100 | 80 | 23.4x23.4 | ● | | BH4-D25.4-100 |
| | | 28 | 100 | 80 | 26x26 | ● | | BH4-D28-100 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts |  Art. N° |  Art. N° |
|---|---|---|
| BH4… | BH4-M10 | C-BH4-M10 |

| Option |  Art. N° |
|---|---|
| BH4… | J-M8X1-D6 |
| | moreoption<br>see JET-Line |



Zurück zum Kapitelanfang

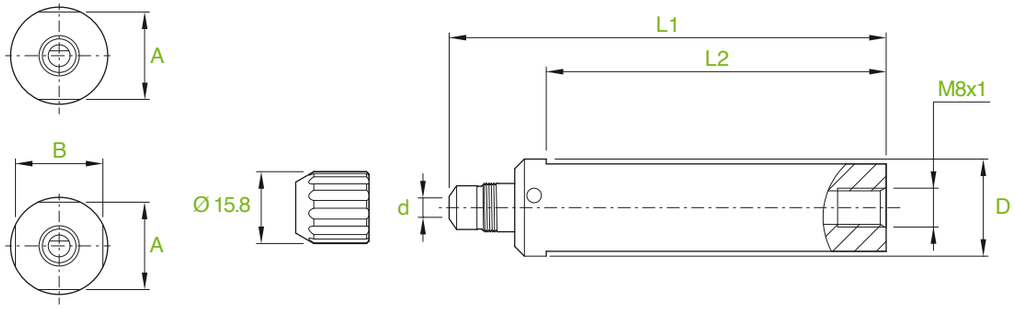


# BH6-D

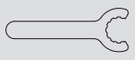
Porte-outils avec écrou de serrage
Halter mit Spannmutter
Holders with clamping nut

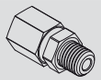







| d | Bars | D | L1 | L2 | A x B | 2 flats | 4 flats | Art. N° |
|---|---|---|---|---|---|---|---|---|
| 6 | BB6…<br>BF6… | 12 | 75 | 55 | 11.2x11.2 | ● | | BH6-D12-75 |
| | | 12.7 | 75 | 55 | 11.2x11.2 | ● | | BH6-D12.7-75 |
| | | 15.87 | 75 | 55 | 14x14 | ● | | BH6-D15.87-75 |
| | | 16 | 75 | 55 | 14x14 | ● | | BH6-D16-75 |
| | | 19.05 | 90 | 70 | 17x17 | ● | | BH6-D19.05-90 |
| | | 20 | 90 | 70 | 18x18 | ● | | BH6-D20-90 |
| | | 20 | 90 | 70 | 18x18 | | ● | BH6-D20-90-F4 |
| | | 20 | 160 | 140 | 18x18 | | ● | BH6-D20-160-F4 |
| | | 22 | 90 | 70 | 20x20 | ● | | BH6-D22-90 |
| | | 22 | 90 | 70 | 20x20 | | ● | BH6-D22-90-F4 |
| | | 22 | 130 | 110 | 20x20 | | ● | BH6-D22-130-F4 |
| | | 25 | 100 | 80 | 23x23 | ● | | BH6-D25-100 |
| | | 25 | 100 | 80 | 23x23 | | ● | BH6-D25-100-F4 |
| | | 25 | 170 | 150 | 23x23 | | ● | BH6-D25-170-F4 |
| | | 25.4 | 100 | 80 | 23.4x23.4 | ● | | BH6-D25.4-100 |
| | | 28 | 100 | 80 | 26x26 | ● | | BH6-D28-100 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts |  Art. N° |  Art. N° |
|---|---|---|
| BH6… | BH6-M12 | C-BH6-M12 |

| Option |  Art. N° |
|---|---|
| BH6… | J-M8X1-D6 |
| | moreoption<br>see JET-Line |

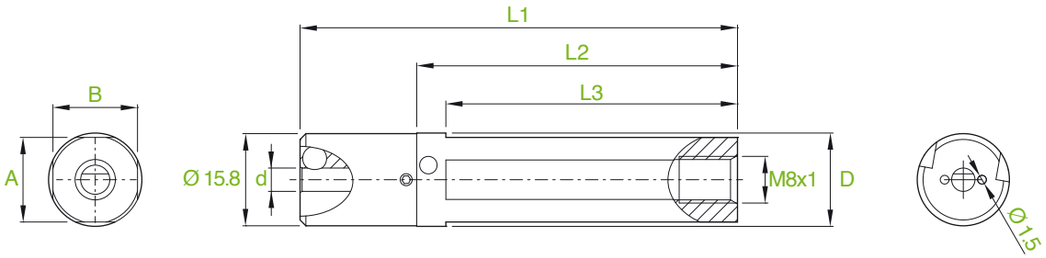
Zurück zum Index

# BHS4-D

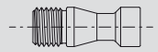
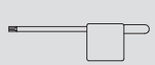
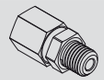
Porte-outils avec arrosage multiple
Halter mit mehrfaches Kühlungssystem
Holders with multiple coolant system








| d | Bars | D | L1 | L2 | L3 | A x B | Art. N° |
|---|---|---|---|---|---|---|---|
| 4 | BB4…<br>BF4… | 10 | 75 | 55 | 50 | 9.2x9.2 | BHS4-D10-75-F4 |
| | | 12 | 75 | 55 | 50 | 11x11 | BHS4-D12-75-F4 |
| | | 12.7 | 75 | 55 | 50 | 11.7x11.7 | BHS4-D12.7-75-F4 |
| | | 15.87 | 75 | 55 | 50 | 14.5x14.5 | BHS4-D15.87-75-F4 |
| | | 16 | 75 | 55 | 50 | 14.5x14.5 | BHS4-D16-75-F4 |
| | | 16 | 110 | 90 | 85 | 14.5x14.5 | BHS4-D16-110-F4 |
| | | 19.05 | 90 | 70 | 65 | 17x17 | BHS4-D19.05-90-F4 |
| | | 20 | 90 | 70 | 65 | 18x18 | BHS4-D20-90-F4 |
| | | 20 | 160 | 140 | 135 | 18x18 | BHS4-D20-160-F4 |
| | | 22 | 90 | 70 | 65 | 20x20 | BHS4-D22-90-F4 |
| | | 22 | 130 | 110 | 105 | 20x20 | BHS4-D22-130-F4 |
| | | 25 | 100 | 80 | 75 | 23x23 | BHS4-D25-100-F4 |
| | | 25 | 170 | 150 | 145 | 23x23 | BHS4-D25-170-F4 |
| | | 25.4 | 100 | 80 | 75 | 23x23 | BHS4-D25.4-100-F4 |
| | | 28 | 100 | 80 | 75 | 26x26 | BHS4-D28-100-F4 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | <br>Art. N° | Option | <br>Art. N° | <br>Art. N° | <br>Art. N° |
|---|---|---|---|---|---|
| BHS4… | V-BHS-M4X0.5-T8 | BHS4… | C-T8 | J-M8X1-D6<br>moreoption<br>see JET-Line | SET-NM1.2-TX8 |



Zurück zum Kapitelanfang

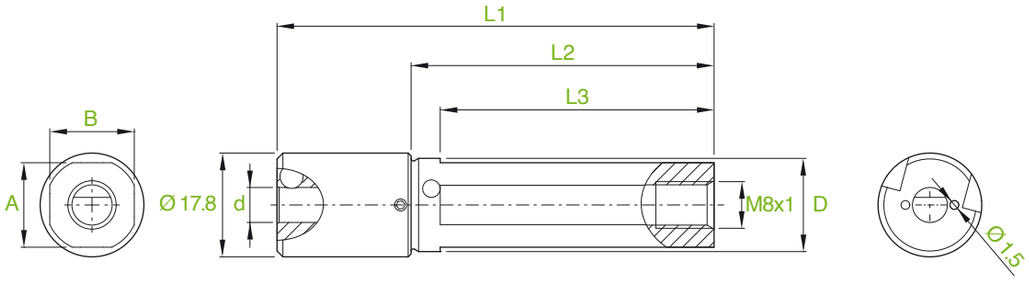


# BHS6-D

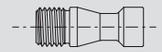
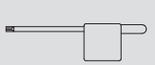
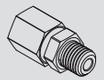
Porte-outils avec arrosage multiple
Halter mit mehrfaches Kühlungssystem
Holders with multiple coolant system







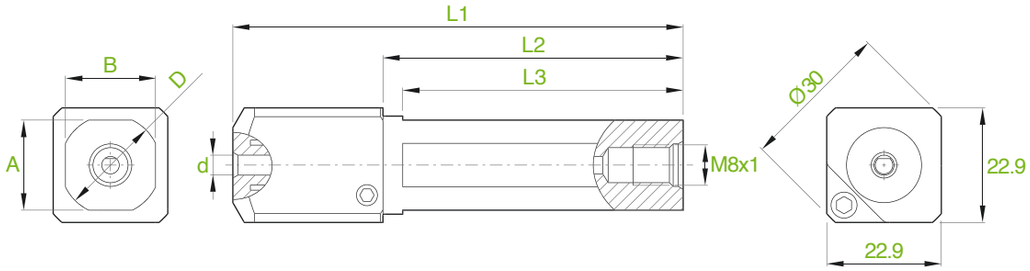

| d | Bars | D | L1 | L2 | L3 | A x B | Art. N° |
|---|---|---|---|---|---|---|---|
| 6 | BB6…<br>BF6… | 12 | 75 | 52 | 47 | 11x11 | BHS6-D12-75-F4 |
| | | 12.7 | 75 | 52 | 47 | 11.7x11.7 | BHS6-D12.7-75-F4 |
| | | 15.87 | 75 | 52 | 47 | 14.5x14.5 | BHS6-D15.87-75-F4 |
| | | 16 | 75 | 52 | 47 | 14.5x14.5 | BHS6-D16-75-F4 |
| | | 16 | 110 | 87 | 82 | 14.5x14.5 | BHS6-D16-110-F4 |
| | | 19.05 | 90 | 67 | 62 | 17x17 | BHS6-D19.05-90-F4 |
| | | 20 | 90 | 67 | 62 | 18x18 | BHS6-D20-90-F4 |
| | | 20 | 160 | 137 | 132 | 18x18 | BHS6-D20-160-F4 |
| | | 22 | 90 | 67 | 62 | 20x20 | BHS6-D22-90-F4 |
| | | 22 | 130 | 107 | 102 | 20x20 | BHS6-D22-130-F4 |
| | | 25 | 100 | 77 | 72 | 23x23 | BHS6-D25-100-F4 |
| | | 25 | 170 | 147 | 142 | 23x23 | BHS6-D25-170-F4 |
| | | 25.4 | 100 | 77 | 72 | 23x23 | BHS6-D25.4-100-F4 |
| | | 28 | 100 | 77 | 72 | 26x26 | BHS6-D28-100-F4 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | <br>Art. N° | Option | <br>Art. N° | <br>Art. N° | <br>Art. N° |
|---|---|---|---|---|---|
| BHS4… | V-BHS-M4X0.5-T8 | BHS6… | C-T8 | J-M8X1-D6<br>moreoption<br>see JET-Line | SET-NM1.2-TX8 |

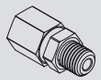
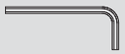
Zurück zum Index








| d | Bars | D | L1 | L2 | L3 | A x B | Art. N° |
|---|---|---|---|---|---|---|---|
| 4 | BB4…<br>BF4… | 12 | 90 | 60 | 55 | 11.2x11.2 | BHY4-D12-90-F4 |
| | | 16 | 90 | 60 | 55 | 14.5x14.5 | BHY4-D16-90-F4 |
| | | 19.05 | 90 | 60 | 55 | 17x17 | BHY4-D19.05-90-F4 |
| | | 20 | 90 | 60 | 55 | 18x18 | BHY4-D20-90-F4 |
| | | 22 | 90 | 60 | 55 | 20x20 | BHY4-D22-90-F4 |
| | | 25 | 100 | 70 | 65 | 23x23 | BHY4-D25-100-F4 |

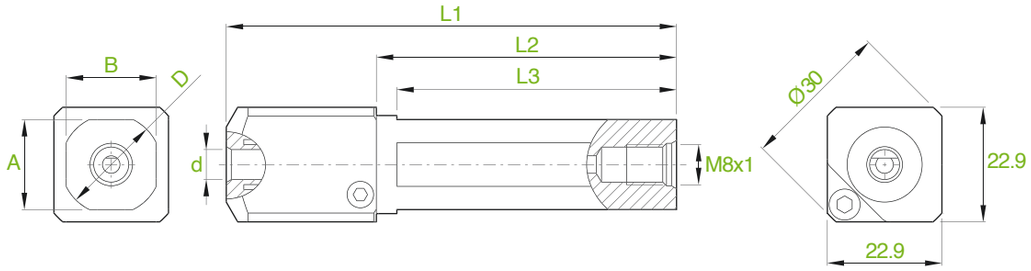
| Pièces de rechange<br>Ersatzteile<br>Spare parts |  Art. N° |  Art. N° |
|---|---|---|
| BHY4… | J-M8X1-D6<br>moreoption<br>see JET-Line | C-6P-3.0 |



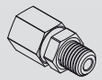
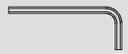


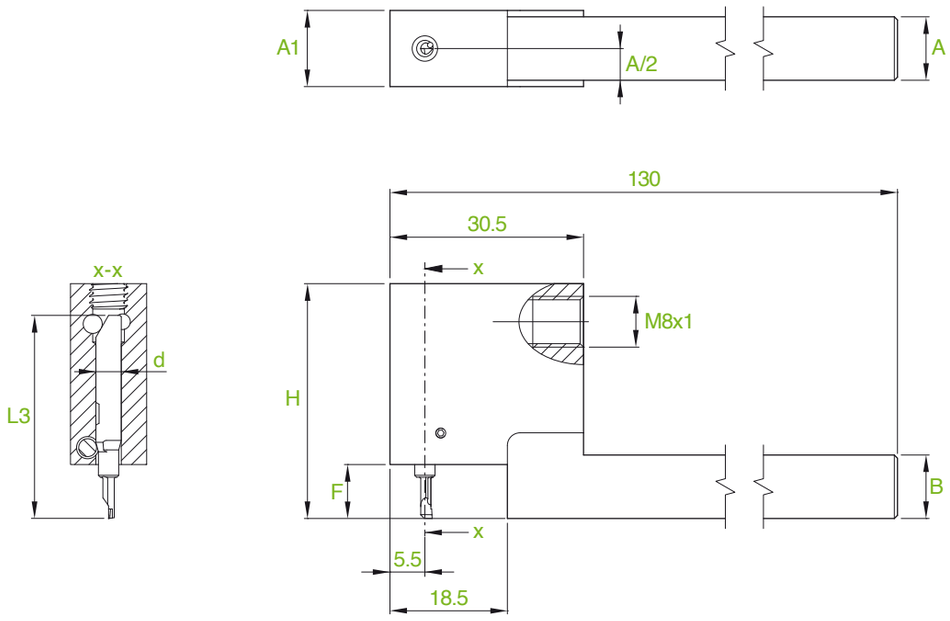




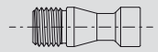


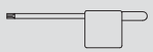
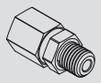
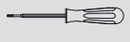

| d | Bars | D | L1 | L2 | L3 | A x B | Art. N° |
|---|---|---|---|---|---|---|---|
| 6 | BB6…<br>BF6… | 12 | 90 | 60 | 55 | 11.2x11.2 | BHY6-D12-90-F4 |
| | | 16 | 90 | 60 | 55 | 14.5x14.5 | BHY6-D16-90-F4 |
| | | 19.05 | 90 | 60 | 55 | 17x17 | BHY6-D19.05-90-F4 |
| | | 20 | 90 | 60 | 55 | 18x18 | BHY6-D20-90-F4 |
| | | 22 | 90 | 60 | 55 | 20x20 | BHY6-D22-90-F4 |
| | | 25 | 100 | 70 | 65 | 23x23 | BHY6-D25-100-F4 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts |  Art. N° |  Art. N° |
|---|---|---|
| BHY6… | J-M8X1-D6<br>moreoption<br>see JET-Line | C-6P-3.0 |



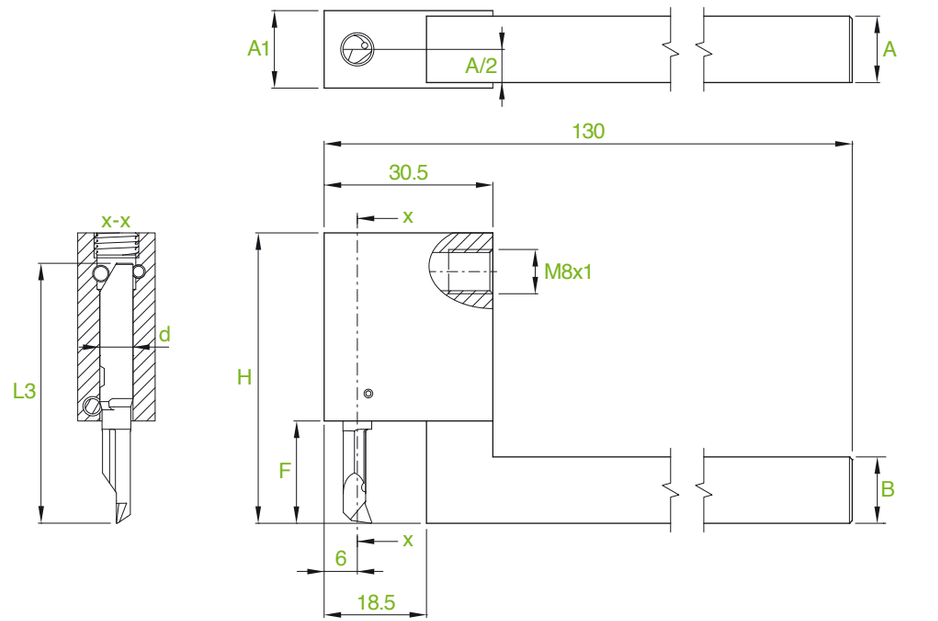

| d | Bars | L3 | A x B | F | H | A1 | Art. N° |
|---|---|---|---|---|---|---|---|
| 4 | BB4R…<br>BF4R… | 32 | 8x8 | 8.5 | 37 | 12 | BHK4N-0808X-32R |
| | | | 10x10 | 8.5 | 37 | 12 | BHK4N-1010X-32R |
| | | | 12x12 | 8.5 | 37 | 12 | BHK4N-1212X-32R |
| | | | 16x16 | 8.5 | 37 | 16 | BHK4N-1616X-32R |
| | | 37 | 8x8 | 13.5 | 42 | 12 | BHK4N-0808X-37R |
| | | | 10x10 | 13.5 | 42 | 12 | BHK4N-1010X-37R |
| | | | 12x12 | 13.5 | 42 | 12 | BHK4N-1212X-37R |
| | | | 16x16 | 13.5 | 42 | 16 | BHK4N-1616X-37R |
| | | 42 | 10x10 | 18.5 | 47 | 12 | BHK4N-1010X-42R |
| | | | 12x12 | 18.5 | 47 | 12 | BHK4N-1212X-42R |
| | | | 16x16 | 18.5 | 47 | 16 | BHK4N-1616X-42R |

| Pièces de rechange<br>Ersatzteile<br>Spare parts |  Art. N° |
|---|---|
| BHK4N… | V-BHK-M4X0.5-T8 |

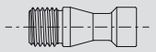
| Option |  Art. N° |  Art. N° |  Art. N° |
|---|---|---|---|
| BHK4N… | C-T8 | J-M8X1-D6<br>moreoption<br>see JET-Line | SET-NM1.2-TX8 |

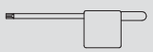
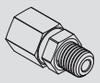


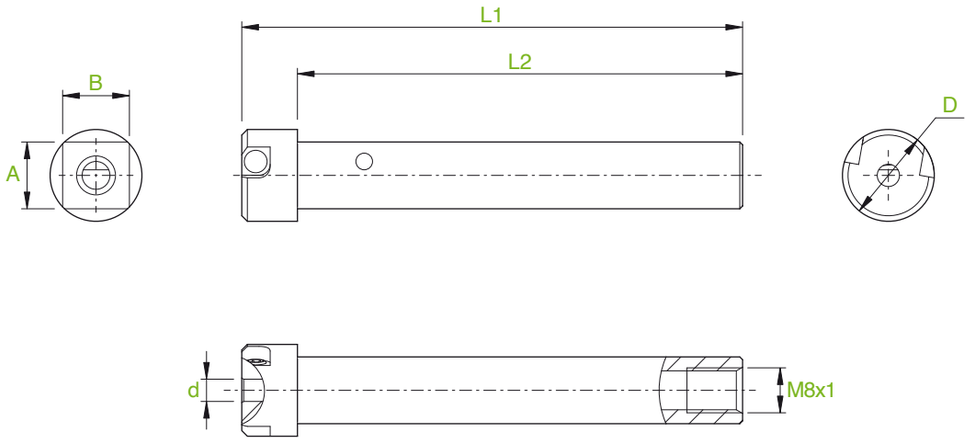





| d | Bars | L3 | A x B | F | H | A1 | Art. N° |
|---|---|---|---|---|---|---|---|
| 6 | BB6R…<br>BF6R… | 47 | 10x10 | 18.5 | 52.5 | 12 | BHK6N-1010X-47R |
| | | | 12x12 | 18.5 | 52.5 | 12 | BHK6N-1212X-47R |
| | | | 16x16 | 18.5 | 52.5 | 16 | BHK6N-1616X-47R |
| | | 57 | 10x10 | 28.5 | 62.5 | 12 | BHK6N-1010X-57R |
| | | | 12x12 | 28.5 | 62.5 | 12 | BHK6N-1212X-57R |
| | | | 16x16 | 28.5 | 62.5 | 16 | BHK6N-1616X-57R |

| Pièces de rechange<br>Ersatzteile<br>Spare parts |  Art. N° |
|---|---|
| BHK6N… | V-BHK-M4X0.5-T8 |

| Option |  Art. N° |  Art. N° |  Art. N° |
|---|---|---|---|
| BHK6N… | C-T8 | J-M8X1-D6<br>moreoption<br>see JET-Line | SET-NM1.2-TX8 |



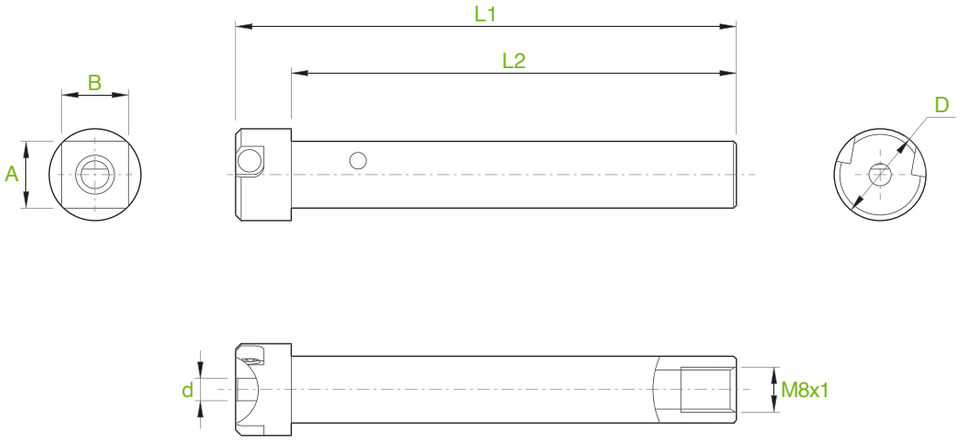

| d | Bars | A x B | L1 | L2 | D | Art. N° |
|---|---|---|---|---|---|---|
| 4 | BB4…BF4… | 12x12 | 90 | 80 | 16.5 | BHS4-1212-90 |
| | | 16x16 | 100 | 90 | 15.5 | BHS4-1616-100 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Art. N° |
|---|---|
| BHS4… | V-BHS-M4X0.5-T8 |

| Option | Art. N° | Art. N° | Art. N° |
|---|---|---|---|
| BHS4… | C-T8 | J-M8X1-D6<br>moreoption<br>see JET-Line | SET-NM1.2-TX8 |



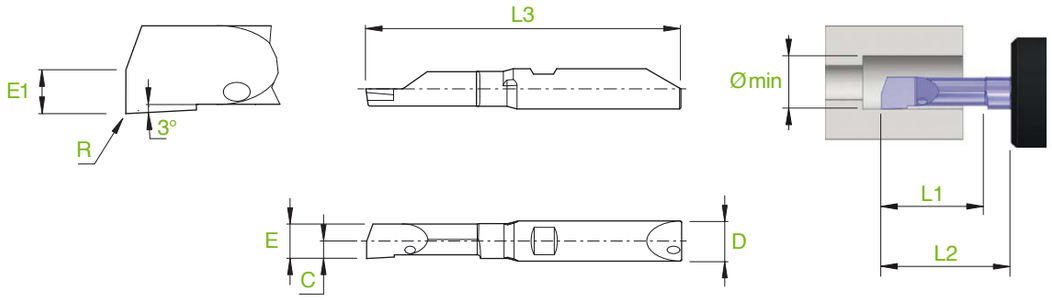


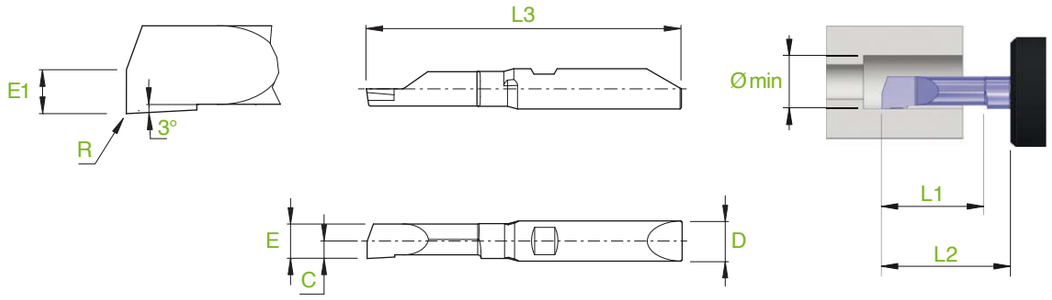



| d | Bars | A x B | L1 | L2 | D | Art. N° |
|---|---|---|---|---|---|---|
| 6 | BB6…BF6… | 12x12 | 90 | 80 | 17.5 | BHS6-1212-90 |
| | | 16x16 | 100 | - | - | BHS4-1616-100 |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Art. N° |
|---|---|
| BHS6… | V-BHS-M4X0.5-T8 |

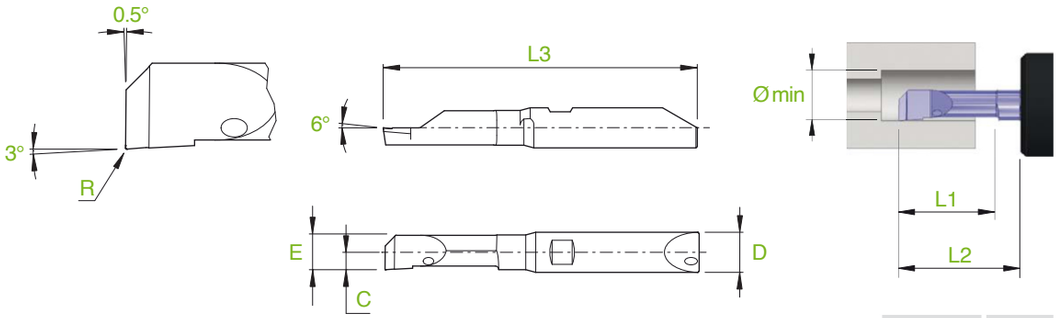
| Option | Art. N° | Art. N° | Art. N° |
|---|---|---|---|
| BHS6… | C-T8 | J-M8X1-D6<br>moreoption<br>see JET-Line | SET-NM1.2-TX8 |




| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E | E1 | C | R | L3 | Art. N° | P M N S ZTAF | P M S ZTAXF | P N S ZN | P M N S ZTAF | P N S ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 0.3 | 0.9 | 10 | 8.5 | 0.27 | 0.13 | 0.15 | 0 | 32 | BB4R/L-0309-BA | ● | ● | ● | ● | ● |
| | | 0.4 | 1.2 | 10 | 8.5 | 0.36 | 0.18 | 0.20 | 0 | 32 | BB4R/L-0412-BA | ● | ● | ● | ● | ● |
| | | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.22 | 0.25 | 0 | 32 | BB4R/L-0515-BA | ● | ● | ● | ● | ● |
| | | 0.6 | 1.8 | 10 | 8.5 | 0.54 | 0.27 | 0.30 | 0 | 32 | BB4R/L-0618-BA | ● | ● | ● | ● | ● |
| | | 0.7 | 2.1 | 10 | 8.5 | 0.63 | 0.31 | 0.35 | 0 | 32 | BB4R/L-0721-BA | ● | ● | ● | ● | ● |
| | | 0.8 | 2.4 | 10 | 8.5 | 0.72 | 0.36 | 0.40 | 0 | 32 | BB4R/L-0824-BA | ● | ● | ● | ● | ● |
| | | 0.9 | 2.7 | 10 | 8.5 | 0.81 | 0.40 | 0.45 | 0 | 32 | BB4R/L-0927-BA | ● | ● | ● | ● | ● |
| | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.45 | 0.60 | 0.02 | 32 | BB4R/L-1030-BA-R02 | ● | ● | ● | ● | ● |
| | | 1.2 | 3.6 | 10 | 8.5 | 1.08 | 0.54 | 0.60 | 0.02 | 32 | BB4R/L-1236-BA-R02 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.67 | 0.65 | 0.02 | 32 | BB4R/L-1545-BA-R02 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 0.90 | 1.15 | 0.02 | 32 | BB4R/L-2060-BA-R02 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.13 | 1.30 | 0.02 | 32 | BB4R/L-2575-BA-R02 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 1.35 | 0.05 | 37 | BB4R/L-3090-BA-R05 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.58 | 1.60 | 0.05 | 37 | BB4R/L-35105-BA-R05 | ● | ● | ● | ● | ● |

| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E | E1 | C | R | L3 | Art. N° | P M N S ZTAF | P M S ZTAXF | P N S ZN | P M N S ZTAF | P N S ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 0.3 | 0.9 | 10 | 8.5 | 0.27 | 0.13 | 0.15 | 0 | 32 | BF4R/L-0309-BA | ● | ● | ● | ● | ● |
| | | 0.4 | 1.2 | 10 | 8.5 | 0.36 | 0.18 | 0.20 | 0 | 32 | BF4R/L-0412-BA | ● | ● | ● | ● | ● |
| | | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.22 | 0.25 | 0 | 32 | BF4R/L-0515-BA | ● | ● | ● | ● | ● |
| | | 0.6 | 1.8 | 10 | 8.5 | 0.54 | 0.27 | 0.30 | 0 | 32 | BF4R/L-0618-BA | ● | ● | ● | ● | ● |
| | | 0.7 | 2.1 | 10 | 8.5 | 0.63 | 0.31 | 0.35 | 0 | 32 | BF4R/L-0721-BA | ● | ● | ● | ● | ● |
| | | 0.8 | 2.4 | 10 | 8.5 | 0.72 | 0.36 | 0.40 | 0 | 32 | BF4R/L-0824-BA | ● | ● | ● | ● | ● |
| | | 0.9 | 2.7 | 10 | 8.5 | 0.81 | 0.40 | 0.45 | 0 | 32 | BF4R/L-0927-BA | ● | ● | ● | ● | ● |
| | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.45 | 0.60 | 0.02 | 32 | BF4R/L-1030-BA-R02 | ● | ● | ● | ● | ● |
| | | 1.2 | 3.6 | 10 | 8.5 | 1.08 | 0.54 | 0.60 | 0.02 | 32 | BF4R/L-1236-BA-R02 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.67 | 0.65 | 0.02 | 32 | BF4R/L-1545-BA-R02 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 0.90 | 1.15 | 0.02 | 32 | BF4R/L-2060-BA-R02 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.13 | 1.30 | 0.02 | 32 | BF4R/L-2575-BA-R02 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 1.35 | 0.05 | 37 | BF4R/L-3090-BA-R05 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.58 | 1.60 | 0.05 | 37 | BF4R/L-35105-BA-R05 | ● | ● | ● | ● | ● |

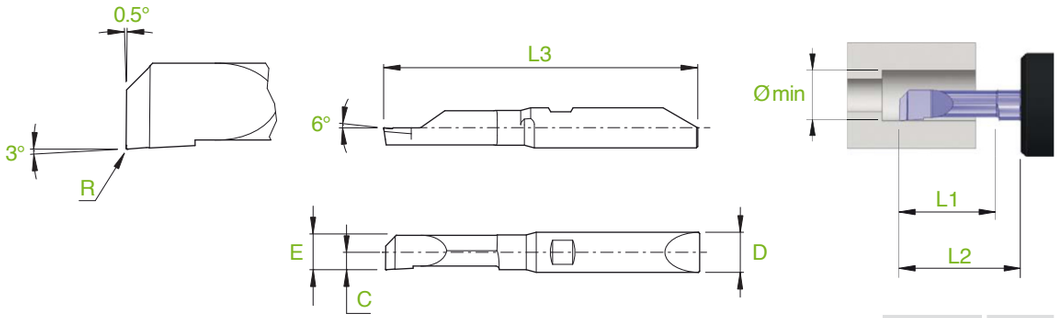



| | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E | C | R | L3 | Art. N° | PMNS ZTAF | PMS ZTAXF | PN S ZN | PMNS ZTAF | PNS ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.25 | 0 | 32 | BB4R/L-0515-BAX | ● | ● | ● | ● | ● |
| | | 0.6 | 1.8 | 10 | 8.5 | 0.54 | 0.30 | 0 | 32 | BB4R/L-0618-BAX | ● | ● | ● | ● | ● |
| | | 0.7 | 2.1 | 10 | 8.5 | 0.63 | 0.35 | 0 | 32 | BB4R/L-0721-BAX | ● | ● | ● | ● | ● |
| | | 0.8 | 2.4 | 10 | 8.5 | 0.72 | 0.40 | 0 | 32 | BB4R/L-0824-BAX | ● | ● | ● | ● | ● |
| | | 0.9 | 2.7 | 10 | 8.5 | 0.81 | 0.45 | 0 | 32 | BB4R/L-0927-BAX | ● | ● | ● | ● | ● |
| | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 | BB4R/L-1030-BAX-R02 | ● | ● | ● | ● | ● |
| | | | 5.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 | BB4R/L-1050-BAX-R02 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 | BB4R/L-1545-BAX-R02 | ● | ● | ● | ● | ● |
| | | | 7.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 | BB4R/L-1575-BAX-R02 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 1.15 | 0.02 | 32 | BB4R/L-2060-BAX-R02 | ● | ● | ● | ● | ● |
| | | | 10.0 | 15 | 13.5 | 1.80 | 1.15 | 0.02 | 37 | BB4R/L-20100-BAX-R02 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.30 | 0.05 | 32 | BB4R/L-2575-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 12.5 | 15 | 13.5 | 2.25 | 1.30 | 0.05 | 37 | BB4R/L-25125-BAX-R05 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 0.05 | 37 | BB4R/L-3090-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 2.70 | 1.35 | 0.05 | 42 | BB4R/L-30150-BAX-R05 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.60 | 0.05 | 37 | BB4R/L-35105-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 3.15 | 1.60 | 0.05 | 42 | BB4R/L-35175-BAX-R05 | ● | ● | ● | ● | ● |

| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 3.80 | 2.20 | 0.05 | 47 | BB6R/L-40120-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 3.80 | 2.20 | 0.05 | 57 | BB6R/L-40200-BAX-R05 | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 4.28 | 2.30 | 0.05 | 47 | BB6R/L-45135-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 4.28 | 2.30 | 0.05 | 57 | BB6R/L-45225-BAX-R05 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 4.75 | 2.40 | 0.05 | 47 | BB6R/L-50150-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 4.75 | 2.40 | 0.05 | 57 | BB6R/L-50250-BAX-R05 | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 5.15 | 2.60 | 0.05 | 47 | BB6R/L-55165-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 5.15 | 2.60 | 0.05 | 57 | BB6R/L-55275-BAX-R05 | ● | ● | ● | ● | ● |

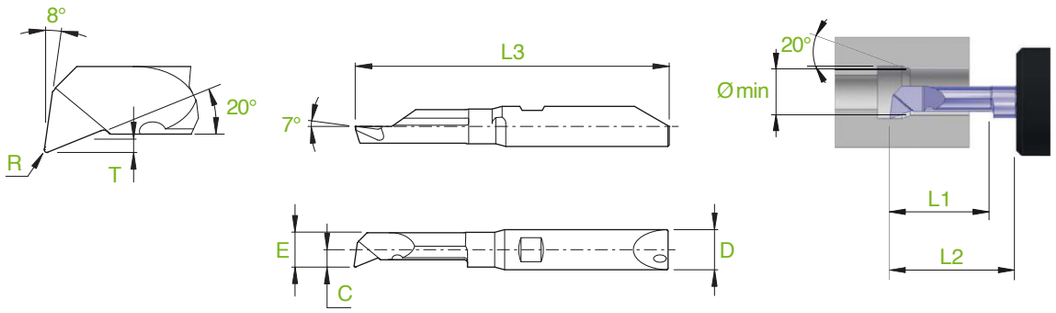







| | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E | C | R | L3 | Art. N° | PMNS ZTAF | PMS ZTAXF | PN S ZN | PMNS ZTAF | PNS ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.25 | 0 | 32 | BF4R/L-0515-BAX | ● | ● | ● | ● | ● |
| | | 0.6 | 1.8 | 10 | 8.5 | 0.54 | 0.30 | 0 | 32 | BF4R/L-0618-BAX | ● | ● | ● | ● | ● |
| | | 0.7 | 2.1 | 10 | 8.5 | 0.63 | 0.35 | 0 | 32 | BF4R/L-0721-BAX | ● | ● | ● | ● | ● |
| | | 0.8 | 2.4 | 10 | 8.5 | 0.72 | 0.40 | 0 | 32 | BF4R/L-0824-BAX | ● | ● | ● | ● | ● |
| | | 0.9 | 2.7 | 10 | 8.5 | 0.81 | 0.45 | 0 | 32 | BF4R/L-0927-BAX | ● | ● | ● | ● | ● |
| | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 | BF4R/L-1030-BAX-R02 | ● | ● | ● | ● | ● |
| | | | 5.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 | BF4R/L-1050-BAX-R02 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 | BF4R/L-1545-BAX-R02 | ● | ● | ● | ● | ● |
| | | | 7.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 | BF4R/L-1575-BAX-R02 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 1.15 | 0.02 | 32 | BF4R/L-2060-BAX-R02 | ● | ● | ● | ● | ● |
| | | | 10.0 | 15 | 13.5 | 1.80 | 1.15 | 0.02 | 37 | BF4R/L-20100-BAX-R02 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.30 | 0.05 | 32 | BF4R/L-2575-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 12.5 | 15 | 13.5 | 2.25 | 1.30 | 0.05 | 37 | BF4R/L-25125-BAX-R05 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 0.05 | 37 | BF4R/L-3090-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 2.70 | 1.35 | 0.05 | 42 | BF4R/L-30150-BAX-R05 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.60 | 0.05 | 37 | BF4R/L-35105-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 3.15 | 1.60 | 0.05 | 42 | BF4R/L-35175-BAX-R05 | ● | ● | ● | ● | ● |

| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 3.80 | 2.20 | 0.05 | 47 | BF6R/L-40120-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 3.80 | 2.20 | 0.05 | 57 | BF6R/L-40200-BAX-R05 | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 4.28 | 2.30 | 0.05 | 47 | BF6R/L-45135-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 4.28 | 2.30 | 0.05 | 57 | BF6R/L-45225-BAX-R05 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 4.75 | 2.40 | 0.05 | 47 | BF6R/L-50150-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 4.75 | 2.40 | 0.05 | 57 | BF6R/L-50250-BAX-R05 | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 5.15 | 2.60 | 0.05 | 47 | BF6R/L-55165-BAX-R05 | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 5.15 | 2.60 | 0.05 | 57 | BF6R/L-55275-BAX-R05 | ● | ● | ● | ● | ● |

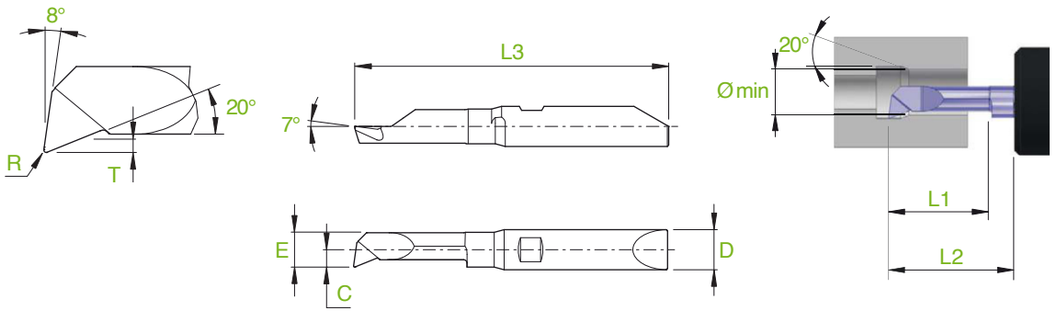



| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | T | E | C | R | L3 | Art. N° | P M N S ZTAF | P M S ZTAXF | P N S ZN | P M N S ZTAF | P N S ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 1.0 | 3.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 | BB4R/L-1030-BCX-R05 | ● | ● | ● | ● | ● |
| | | | 5.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 | BB4R/L-1050-BCX-R05 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 | BB4R/L-1545-BCX-R05 | ● | ● | ● | ● | ● |
| | | | 7.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 | BB4R/L-1575-BCX-R05 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 0.30 | 1.80 | 1.15 | 0.05 | 32 | BB4R/L-2060-BCX-R05 | ● | ● | ● | ● | ● |
| | | | 10.0 | 15 | 13.5 | 0.30 | 1.80 | 1.15 | 0.05 | 37 | BB4R/L-20100-BCX-R05 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 0.38 | 2.25 | 1.30 | 0.10 | 32 | BB4R/L-2575-BCX-R10 | ● | ● | ● | ● | ● |
| | | | 12.5 | 15 | 13.5 | 0.38 | 2.25 | 1.30 | 0.10 | 37 | BB4R/L-25125-BCX-R10 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.45 | 2.70 | 1.35 | 0.10 | 37 | BB4R/L-3090-BCX-R10 | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.45 | 2.70 | 1.35 | 0.10 | 42 | BB4R/L-30150-BCX-R10 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.53 | 3.15 | 1.60 | 0.10 | 37 | BB4R/L-35105-BCX-R10 | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 0.53 | 3.15 | 1.60 | 0.10 | 42 | BB4R/L-35175-BCX-R10 | ● | ● | ● | ● | ● |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 0.60 | 3.80 | 2.20 | 0.15 | 47 | BB6R/L-40120-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 0.60 | 3.80 | 2.20 | 0.15 | 57 | BB6R/L-40200-BCX-R15 | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 0.68 | 4.28 | 2.30 | 0.15 | 47 | BB6R/L-45135-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 0.68 | 4.28 | 2.30 | 0.15 | 57 | BB6R/L-45225-BCX-R15 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 0.75 | 4.75 | 2.40 | 0.15 | 47 | BB6R/L-50150-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 0.75 | 4.75 | 2.40 | 0.15 | 57 | BB6R/L-50250-BCX-R15 | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 0.83 | 5.15 | 2.60 | 0.15 | 47 | BB6R/L-55165-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 0.83 | 5.15 | 2.60 | 0.15 | 57 | BB6R/L-55275-BCX-R15 | ● | ● | ● | ● | ● |

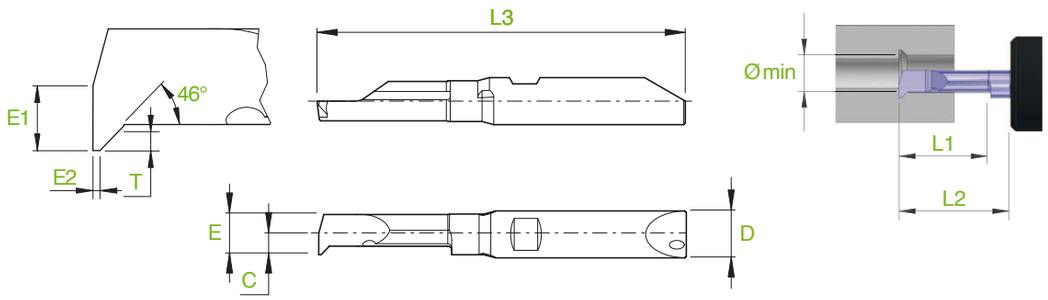







| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | T | E | C | R | L3 | Art. N° | P M N S ZTAF | P M S ZTAXF | P N S ZN | P M N S ZTAF | P N S ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 1.0 | 3.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 | BF4R/L-1030-BCX-R05 | ● | ● | ● | ● | ● |
| | | | 5.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 | BF4R/L-1050-BCX-R05 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 | BF4R/L-1545-BCX-R05 | ● | ● | ● | ● | ● |
| | | | 7.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 | BF4R/L-1575-BCX-R05 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 0.30 | 1.80 | 1.15 | 0.05 | 32 | BF4R/L-2060-BCX-R05 | ● | ● | ● | ● | ● |
| | | | 10.0 | 15 | 13.5 | 0.30 | 1.80 | 1.15 | 0.05 | 37 | BF4R/L-20100-BCX-R05 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 0.38 | 2.25 | 1.30 | 0.10 | 32 | BF4R/L-2575-BCX-R10 | ● | ● | ● | ● | ● |
| | | | 12.5 | 15 | 13.5 | 0.38 | 2.25 | 1.30 | 0.10 | 37 | BF4R/L-25125-BCX-R10 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.45 | 2.70 | 1.35 | 0.10 | 37 | BF4R/L-3090-BCX-R10 | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.45 | 2.70 | 1.35 | 0.10 | 42 | BF4R/L-30150-BCX-R10 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.53 | 3.15 | 1.60 | 0.10 | 37 | BF4R/L-35105-BCX-R10 | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 0.53 | 3.15 | 1.60 | 0.10 | 42 | BF4R/L-35175-BCX-R10 | ● | ● | ● | ● | ● |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 0.60 | 3.80 | 2.20 | 0.15 | 47 | BF6R/L-40120-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 0.60 | 3.80 | 2.20 | 0.15 | 57 | BF6R/L-40200-BCX-R15 | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 0.68 | 4.28 | 2.30 | 0.15 | 47 | BF6R/L-45135-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 0.68 | 4.28 | 2.30 | 0.15 | 57 | BF6R/L-45225-BCX-R15 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 0.75 | 4.75 | 2.40 | 0.15 | 47 | BF6R/L-50150-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 0.75 | 4.75 | 2.40 | 0.15 | 57 | BF6R/L-50250-BCX-R15 | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 0.83 | 5.15 | 2.60 | 0.15 | 47 | BF6R/L-55165-BCX-R15 | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 0.83 | 5.15 | 2.60 | 0.15 | 57 | BF6R/L-55275-BCX-R15 | ● | ● | ● | ● | ● |

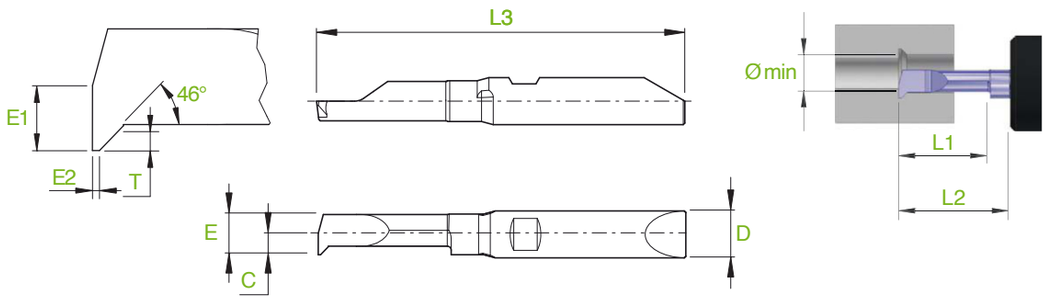



| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | T | E | E1 | C | E2 | L3 | Art. N° | R ZTAF | R ZTAXF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | 0.3 | 0.6 | 10 | 8.5 | 0.05 | 0.27 | 0.13 | 0.15 | 0.03 | 32 | BB4R/L-0306-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.4 | 0.8 | 10 | 8.5 | 0.07 | 0.36 | 0.18 | 0.20 | 0.03 | 32 | BB4R/L-0408-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.5 | 1.0 | 10 | 8.5 | 0.08 | 0.45 | 0.22 | 0.25 | 0.03 | 32 | BB4R/L-0510-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.6 | 1.2 | 10 | 8.5 | 0.10 | 0.54 | 0.27 | 0.30 | 0.03 | 32 | BB4R/L-0612-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.7 | 1.2 | 10 | 8.5 | 0.12 | 0.63 | 0.32 | 0.35 | 0.03 | 32 | BB4R/L-0714-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.8 | 1.6 | 10 | 8.5 | 0.14 | 0.72 | 0.36 | 0.40 | 0.05 | 32 | BB4R/L-0816-C45-E05 | ● | ● | ● | ● | ● |
| | | 0.9 | 1.8 | 10 | 8.5 | 0.15 | 0.81 | 0.41 | 0.45 | 0.05 | 32 | BB4R/L-0918-C45-E05 | ● | ● | ● | ● | ● |
| | | 1.0 | 3.0 | 10 | 8.5 | 0.17 | 0.90 | 0.45 | 0.70 | 0.10 | 32 | BB4R/L-1030-C45-E10 | ● | ● | ● | ● | ● |
| | | 1.2 | 3.6 | 10 | 8.5 | 0.20 | 1.08 | 0.54 | 0.70 | 0.10 | 32 | BB4R/L-1236-C45-E10 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 0.25 | 1.35 | 0.67 | 0.75 | 0.10 | 32 | BB4R/L-1545-C45-E10 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 0.34 | 1.80 | 0.90 | 1.15 | 0.20 | 32 | BB4R/L-2060-C45-E20 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 0.43 | 2.25 | 1.13 | 1.30 | 0.20 | 32 | BB4R/L-2575-C45-E20 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.51 | 2.70 | 1.35 | 1.35 | 0.30 | 37 | BB4R/L-3090-C45-E30 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.60 | 3.15 | 1.58 | 1.60 | 0.30 | 37 | BB4R/L-35105-C45-E30 | ● | ● | ● | ● | ● |

| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | E1 | C | E2 | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 0.68 | 3.80 | 1.90 | 2.30 | 0.40 | 47 | BB6R/L-40120-C45-E40 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 0.85 | 4.75 | 2.37 | 2.50 | 0.50 | 47 | BB6R/L-50150-C45-E50 | ● | ● | ● | ● | ● |

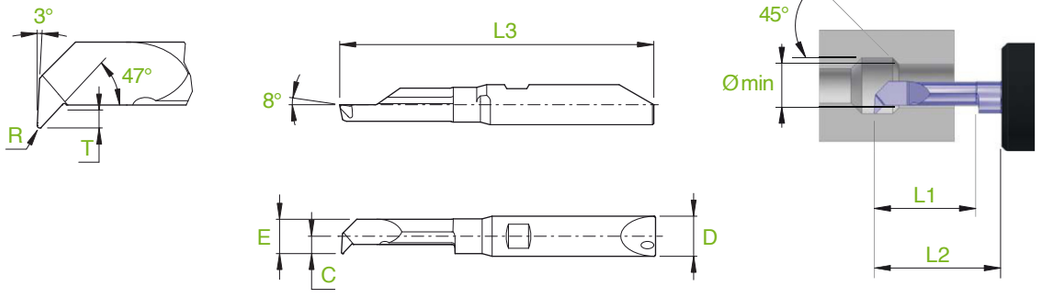







| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | T | E | E1 | C | E2 | L3 | Art. N° | R ZTAF | R ZTAXF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | 0.3 | 0.6 | 10 | 8.5 | 0.05 | 0.27 | 0.13 | 0.15 | 0.03 | 32 | BF4R/L-0306-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.4 | 0.8 | 10 | 8.5 | 0.07 | 0.36 | 0.18 | 0.20 | 0.03 | 32 | BF4R/L-0408-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.5 | 1.0 | 10 | 8.5 | 0.08 | 0.45 | 0.22 | 0.25 | 0.03 | 32 | BF4R/L-0510-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.6 | 1.2 | 10 | 8.5 | 0.10 | 0.54 | 0.27 | 0.30 | 0.03 | 32 | BF4R/L-0612-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.7 | 1.4 | 10 | 8.5 | 0.12 | 0.63 | 0.32 | 0.35 | 0.03 | 32 | BF4R/L-0714-C45-E03 | ● | ● | ● | ● | ● |
| | | 0.8 | 1.6 | 10 | 8.5 | 0.14 | 0.72 | 0.36 | 0.40 | 0.05 | 32 | BF4R/L-0816-C45-E05 | ● | ● | ● | ● | ● |
| | | 0.9 | 1.8 | 10 | 8.5 | 0.15 | 0.81 | 0.41 | 0.45 | 0.05 | 32 | BF4R/L-0918-C45-E05 | ● | ● | ● | ● | ● |
| | | 1.0 | 3.0 | 10 | 8.5 | 0.17 | 0.90 | 0.45 | 0.70 | 0.10 | 32 | BF4R/L-1030-C45-E10 | ● | ● | ● | ● | ● |
| | | 1.2 | 3.6 | 10 | 8.5 | 0.20 | 1.08 | 0.54 | 0.70 | 0.10 | 32 | BF4R/L-1236-C45-E10 | ● | ● | ● | ● | ● |
| | | 1.5 | 4.5 | 10 | 8.5 | 0.25 | 1.35 | 0.67 | 0.75 | 0.10 | 32 | BF4R/L-1545-C45-E10 | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 0.34 | 1.80 | 0.90 | 1.15 | 0.20 | 32 | BF4R/L-2060-C45-E20 | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 0.43 | 2.25 | 1.13 | 1.30 | 0.20 | 32 | BF4R/L-2575-C45-E20 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.51 | 2.70 | 1.35 | 1.35 | 0.30 | 37 | BF4R/L-3090-C45-E30 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.60 | 3.15 | 1.58 | 1.60 | 0.30 | 37 | BF4R/L-35105-C45-E30 | ● | ● | ● | ● | ● |

| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | E1 | C | E2 | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 0.68 | 3.80 | 1.90 | 2.30 | 0.40 | 47 | BF6R/L-40120-C45-E40 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 0.85 | 4.75 | 2.37 | 2.50 | 0.50 | 47 | BF6R/L-50150-C45-E50 | ● | ● | ● | ● | ● |

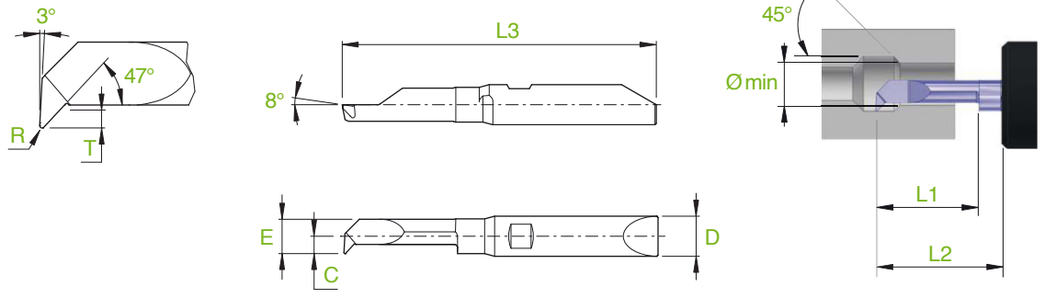



| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | T | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 2.5 | 7.5 | 10 | 8.5 | 0.50 | 2.25 | 1.35 | 0.10 | 32 | BB4R/L-2575-C45X-R10 | ● | ● | ● | ● | ● |
| | | | 12.5 | 15 | 13.5 | 0.50 | 2.25 | 1.35 | 0.10 | 37 | BB4R/L-25125-C45X-R10 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.60 | 2.70 | 1.45 | 0.10 | 37 | BB4R/L-3090-C45X-R10 | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.60 | 2.70 | 1.45 | 0.10 | 42 | BB4R/L-30150-C45X-R10 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.70 | 3.15 | 1.60 | 0.10 | 37 | BB4R/L-35105-C45X-R10 | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 0.70 | 3.15 | 1.60 | 0.10 | 42 | BB4R/L-35175-C45X-R10 | ● | ● | ● | ● | ● |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 0.80 | 3.80 | 2.30 | 0.15 | 47 | BB6R/L-40120-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 0.80 | 3.80 | 2.30 | 0.15 | 57 | BB6R/L-40200-C45X-R15 | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 0.90 | 4.28 | 2.40 | 0.15 | 47 | BB6R/L-45135-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 0.90 | 4.28 | 2.40 | 0.15 | 57 | BB6R/L-45225-C45X-R15 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 4.75 | 2.50 | 0.15 | 47 | BB6R/L-50150-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.00 | 4.75 | 2.50 | 0.15 | 57 | BB6R/L-50250-C45X-R15 | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 1.10 | 5.15 | 2.60 | 0.15 | 47 | BB6R/L-55165-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.10 | 5.15 | 2.60 | 0.15 | 57 | BB6R/L-55275-C45X-R15 | ● | ● | ● | ● | ● |

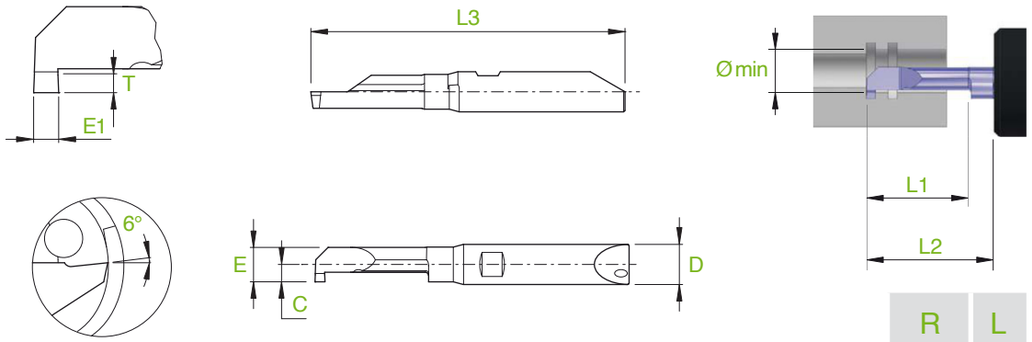







| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | T | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 2.5 | 7.5 | 10 | 8.5 | 0.50 | 2.25 | 1.35 | 0.10 | 32 | BF4R/L-2575-C45X-R10 | ● | ● | ● | ● | ● |
| | | | 12.5 | 15 | 13.5 | 0.50 | 2.25 | 1.35 | 0.10 | 37 | BF4R/L-25125-C45X-R10 | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.60 | 2.70 | 1.45 | 0.10 | 37 | BF4R/L-3090-C45X-R10 | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.60 | 2.70 | 1.45 | 0.10 | 42 | BF4R/L-30150-C45X-R10 | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.70 | 3.15 | 1.60 | 0.10 | 37 | BF4R/L-35105-C45X-R10 | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 0.70 | 3.15 | 1.60 | 0.10 | 42 | BF4R/L-35175-C45X-R10 | ● | ● | ● | ● | ● |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | C | R | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 0.80 | 3.80 | 2.30 | 0.15 | 47 | BF6R/L-40120-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 0.80 | 3.80 | 2.30 | 0.15 | 57 | BF6R/L-40200-C45X-R15 | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 0.90 | 4.28 | 2.40 | 0.15 | 47 | BF6R/L-45135-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 0.90 | 4.28 | 2.40 | 0.15 | 57 | BF6R/L-45225-C45X-R15 | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 4.75 | 2.50 | 0.15 | 47 | BF6R/L-50150-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.00 | 4.75 | 2.50 | 0.15 | 57 | BF6R/L-50250-C45X-R15 | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 1.10 | 5.15 | 2.60 | 0.15 | 47 | BF6R/L-55165-C45X-R15 | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.10 | 5.15 | 2.60 | 0.15 | 57 | BF6R/L-55275-C45X-R15 | ● | ● | ● | ● | ● |

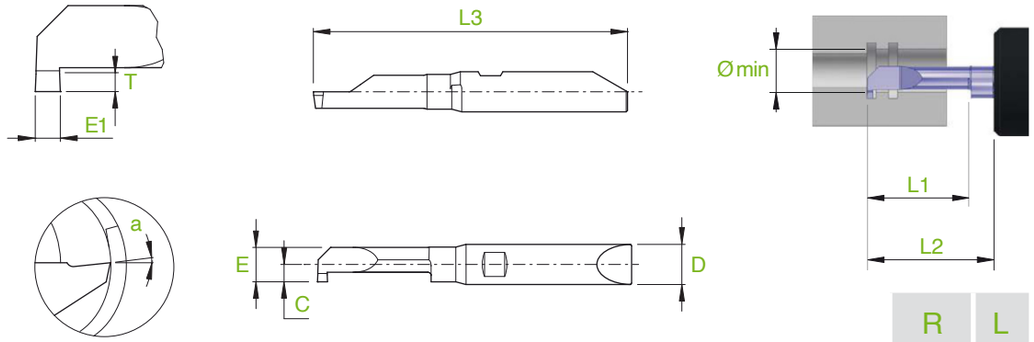



| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E1 | T | E | C | L3 | Art. N° | R ZTAF | R ZTAXF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | 3.0 | 9.0 | 15 | 13.5 | 0.50 | 0.60 | 2.70 | 1.45 | 37 | BB4R/L-3090-G050X | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.50 | 0.60 | 2.70 | 1.45 | 42 | BB4R/L-30150-G050X | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.75 | 0.70 | 3.15 | 1.60 | 37 | BB4R/L-35105-G075X | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 0.75 | 0.70 | 3.15 | 1.60 | 42 | BB4R/L-35175-G075X | ● | ● | ● | ● | ● |

| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E1 | T | E | C | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 1.00 | 0.80 | 3.80 | 2.20 | 47 | BB6R/L-40120-G100X | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 1.00 | 0.80 | 3.80 | 2.20 | 57 | BB6R/L-40200-G100X | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 1.00 | 0.90 | 4.28 | 2.40 | 47 | BB6R/L-45135-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | BB6R/L-45135-G150X | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 1.00 | 0.90 | 4.28 | 2.40 | 57 | BB6R/L-45225-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | BB6R/L-45225-G150X | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 1.00 | 4.75 | 2.50 | 47 | BB6R/L-50150-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | BB6R/L-50150-G150X | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.00 | 1.00 | 4.75 | 2.50 | 57 | BB6R/L-50250-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | BB6R/L-50250-G150X | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 1.00 | 1.10 | 5.15 | 2.60 | 47 | BB6R/L-55165-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | BB6R/L-55165-G150X | ● | ● | ● | ● | ● |
| | | | | | | 2.00 | | | | | BB6R/L-55165-G200X | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.00 | 1.10 | 5.15 | 2.60 | 57 | BB6R/L-55275-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | BB6R/L-55275-G150X | ● | ● | ● | ● | ● |
| | | | | | | 2.00 | | | | | BB6R/L-55275-G200X | ● | ● | ● | ● | ● |

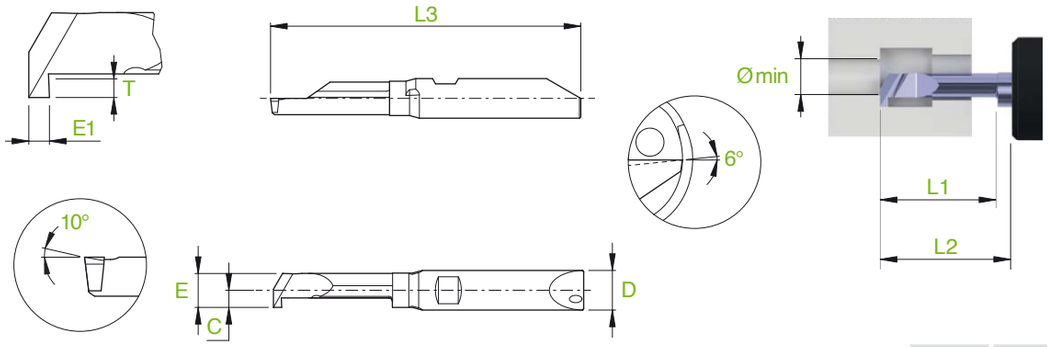


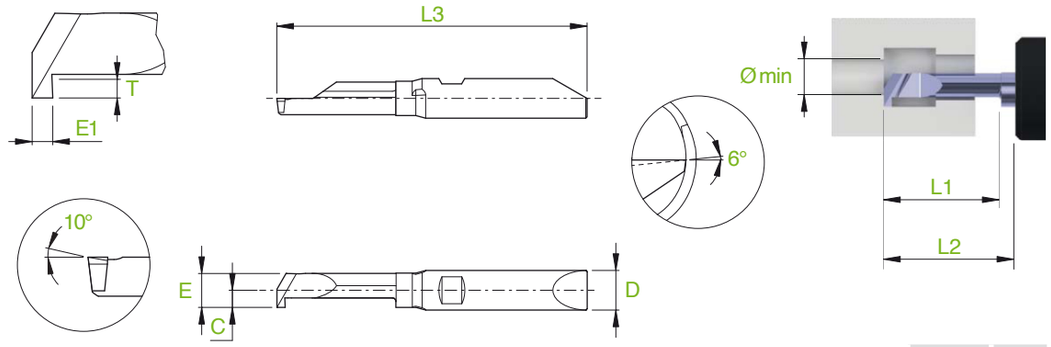





| D h5 | Holder | Ø min | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E1 | T | E | a | C | L3 | Art. N° | R ZTAF | R ZTAXF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | 0.5 | 1.0 | 10 | 8.5 | 0.15 | 0.10 | 0.45 | 3° | 0.25 | 32 | BF4R/L-0510-G015X | ● | ● | ● | ● | ● |
| | | 0.7 | 1.4 | 10 | 8.5 | 0.20 | 0.14 | 0.63 | | 0.35 | 32 | BF4R/L-0714-G020X | ● | ● | ● | ● | ● |
| | | 1.0 | 2.0 | 10 | 8.5 | 0.30 | 0.20 | 0.90 | | 0.60 | 32 | BF4R/L-1020-G030X | ● | ● | ● | ● | ● |
| | | 1.5 | 3.0 | 10 | 8.5 | 0.40 | 0.30 | 1.35 | 6° | 0.80 | 32 | BF4R/L-1530-G040X | ● | ● | ● | ● | ● |
| | | 2.0 | 6.0 | 10 | 8.5 | 0.40 | 0.40 | 1.80 | | 1.15 | 32 | BF4R/L-2060-G040X | ● | ● | ● | ● | ● |
| | | 2.5 | 7.5 | 10 | 8.5 | 0.50 | 0.50 | 2.25 | | 1.15 | 32 | BF4R/L-2575-G050X | ● | ● | ● | ● | ● |
| | | 3.0 | 9.0 | 15 | 13.5 | 0.50 | 0.60 | 2.70 | | 1.45 | 37 | BF4R/L-3090-G050X | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.50 | 0.60 | 2.70 | | 1.45 | 42 | BF4R/L-30150-G050X | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 0.75 | 0.70 | 3.15 | | 1.60 | 37 | BF4R/L-35105-G075X | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 0.75 | 0.70 | 3.15 | | 1.60 | 42 | BF4R/L-35175-G075X | ● | ● | ● | ● | ● |

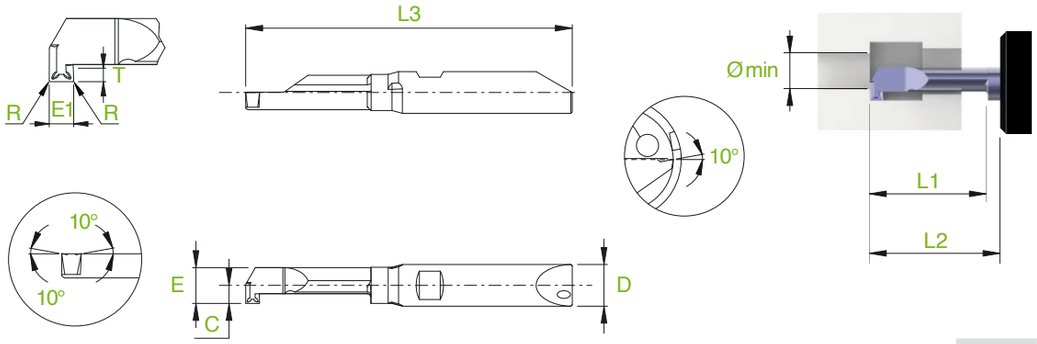
| D h5 | Holder | Ø min | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E1 | T | E | a | C | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 12.0 | 20 | 18.5 | 1.00 | 0.80 | 3.80 | 6° | 2.20 | 47 | BF6R/L-40120-G100X | ● | ● | ● | ● | ● |
| | | | 20.0 | 30 | 28.5 | 1.00 | 0.80 | 3.80 | | 2.20 | 57 | BF6R/L-40200-G100X | ● | ● | ● | ● | ● |
| | | 4.5 | 13.5 | 20 | 18.5 | 1.00 | 0.90 | 4.28 | | 2.40 | 47 | BF6R/L-45135-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | | BF6R/L-45135-G150X | ● | ● | ● | ● | ● |
| | | | 22.5 | 30 | 28.5 | 1.00 | 0.90 | 4.28 | | 2.40 | 57 | BF6R/L-45225-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | | BF6R/L-45225-G150X | ● | ● | ● | ● | ● |
| | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 1.00 | 4.75 | | 2.50 | 47 | BF6R/L-50150-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | | BF6R/L-50150-G150X | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.00 | 1.00 | 4.75 | | 2.50 | 57 | BF6R/L-50250-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | | BF6R/L-50250-G150X | ● | ● | ● | ● | ● |
| | | 5.5 | 16.5 | 20 | 18.5 | 1.00 | 1.10 | 5.15 | | 2.60 | 47 | BF6R/L-55165-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | | BF6R/L-55165-G150X | ● | ● | ● | ● | ● |
| | | | | | | 2.00 | | | | | | BF6R/L-55165-G200X | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.00 | 1.10 | 5.15 | | 2.60 | 57 | BF6R/L-55275-G100X | ● | ● | ● | ● | ● |
| | | | | | | 1.50 | | | | | | BF6R/L-55275-G150X | ● | ● | ● | ● | ● |
| | | | | | | 2.00 | | | | | | BF6R/L-55275-G200X | ● | ● | ● | ● | ● |




| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E1 | T | E | C | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 3.0 | 9.0 | 15 | 13.5 | 1.00 | 0.60 | 2.7 | 1.45 | 37 | BB4R/L-3090-GT100X | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 1.00 | 0.60 | 2.7 | 1.45 | 42 | BB4R/L-30150-GT100X | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 1.00 | 0.70 | 3.15 | 1.6 | 37 | BB4R/L-35105-GT100X | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 1.00 | 0.70 | 3.15 | 1.6 | 42 | BB4R/L-35175-GT100X | ● | ● | ● | ● | ● |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 14.0 | 20 | 18.5 | 1.25 | 0.80 | 3.8 | 2.2 | 47 | BB6R/L-40140-GT125X | ● | ● | ● | ● | ● |
| | | | 22.0 | 30 | 28.5 | 1.25 | 0.80 | 3.8 | 2.2 | 57 | BB6R/L-40220-GT125X | ● | ● | ● | ● | ● |
| | | 4.5 | 16.0 | 20 | 18.5 | 1.25 | 0.90 | 4.28 | 2.4 | 47 | BB6R/L-45160-GT125X | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.25 | 0.90 | 4.28 | 2.4 | 57 | BB6R/L-45250-GT125X | ● | ● | ● | ● | ● |
| | | 5.0 | 17.5 | 20 | 18.5 | 1.25 | 1.00 | 4.75 | 2.5 | 47 | BB6R/L-50175-GT125X | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.25 | 1.00 | 4.75 | 2.5 | 57 | BB6R/L-50275-GT125X | ● | ● | ● | ● | ● |
| | | 5.5 | 17.5 | 20 | 18.5 | 1.25 | 1.10 | 5.15 | 2.6 | 47 | BB6R/L-55175-GT125X | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.25 | 1.10 | 5.15 | 2.6 | 57 | BB6R/L-55275-GT125X | ● | ● | ● | ● | ● |

| | | | | | | | | | | | | R | | | L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D h5 | Holder | Ømin | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E1 | T | E | C | L3 | Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN |
| 4 | BH4… BHS4… BHY4… BHK4… | 3.0 | 9.0 | 15 | 13.5 | 1.00 | 0.60 | 2.7 | 1.45 | 37 | BF4R/L-3090-GT100X | ● | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 1.00 | 0.60 | 2.7 | 1.45 | 42 | BF4R/L-30150-GT100X | ● | ● | ● | ● | ● |
| | | 3.5 | 10.5 | 15 | 13.5 | 1.00 | 0.70 | 3.15 | 1.6 | 37 | BF4R/L-35105-GT100X | ● | ● | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 1.00 | 0.70 | 3.15 | 1.6 | 42 | BF4R/L-35175-GT100X | ● | ● | ● | ● | ● |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 14.0 | 20 | 18.5 | 1.25 | 0.80 | 3.8 | 2.2 | 47 | BF6R/L-40140-GT125X | ● | ● | ● | ● | ● |
| | | | 22.0 | 30 | 28.5 | 1.25 | 0.80 | 3.8 | 2.2 | 57 | BF6R/L-40220-GT125X | ● | ● | ● | ● | ● |
| | | 4.5 | 16.0 | 20 | 18.5 | 1.25 | 0.90 | 4.28 | 2.4 | 47 | BF6R/L-45160-GT125X | ● | ● | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.25 | 0.90 | 4.28 | 2.4 | 57 | BF6R/L-45250-GT125X | ● | ● | ● | ● | ● |
| | | 5.0 | 17.5 | 20 | 18.5 | 1.25 | 1.00 | 4.75 | 2.5 | 47 | BF6R/L-50175-GT125X | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.25 | 1.00 | 4.75 | 2.5 | 57 | BF6R/L-50275-GT125X | ● | ● | ● | ● | ● |
| | | 5.5 | 17.5 | 20 | 18.5 | 1.25 | 1.10 | 5.15 | 2.6 | 47 | BF6R/L-55175-GT125X | ● | ● | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.25 | 1.10 | 5.15 | 2.6 | 57 | BF6R/L-55275-GT125X | ● | ● | ● | ● | ● |




| | | | | | | | | | | | | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E1 | T | E | C | R | L3 | Art. N° | ZTAF P M N S | ZTAXF P M S | ZN P N S |
| 6 | BH6… BHS6… BHY6… BHK6… | 4.0 | 14.0 | 20 | 18.5 | 1.25 | 0.80 | 3.8 | 2.2 | 0.08 | 47 | BB6R-40140-GT125ZFX-R08 | ● | ● | ● |
| | | | 22.0 | 30 | 28.5 | 1.25 | 0.80 | 3.8 | 2.2 | 0.08 | 57 | BB6R-40220-GT125ZFX-R08 | ● | ● | ● |
| | | 4.5 | 16.0 | 20 | 18.5 | 1.25 | 0.90 | 4.28 | 2.4 | 0.08 | 47 | BB6R-45160-GT125ZFX-R08 | ● | ● | ● |
| | | | 25.0 | 30 | 28.5 | 1.25 | 0.90 | 4.28 | 2.4 | 0.08 | 57 | BB6R-45250-GT125ZFX-R08 | ● | ● | ● |
| | | 5.0 | 17.5 | 20 | 18.5 | 1.25 | 1.00 | 4.75 | 2.5 | 0.08 | 47 | BB6R-50175-GT125ZFX-R08 | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 2.00 | 1.00 | 4.75 | 2.5 | 0.08 | 47 | BB6R-50175-GT200ZFX-R08 | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.25 | 1.00 | 4.75 | 2.5 | 0.08 | 57 | BB6R-50275-GT125ZFX-R08 | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 2.00 | 1.00 | 4.75 | 2.5 | 0.08 | 57 | BB6R-50275-GT200ZFX-R08 | ● | ● | ● |
| | | 5.5 | 17.5 | 20 | 18.5 | 1.25 | 1.10 | 5.15 | 2.6 | 0.08 | 47 | BB6R-55175-GT125ZFX-R08 | ● | ● | ● |
| | | | 17.5 | 20 | 18.5 | 2.00 | 1.10 | 5.15 | 2.6 | 0.08 | 47 | BB6R-55175-GT200ZFX-R08 | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 1.25 | 1.10 | 5.15 | 2.6 | 0.08 | 57 | BB6R-55275-GT125ZFX-R08 | ● | ● | ● |
| | | | 27.5 | 30 | 28.5 | 2.00 | 1.10 | 5.15 | 2.6 | 0.08 | 57 | BB6R-55275-GT200ZFX-R08 | ● | ● | ● |

# GT-ZFX

Géométrie de coupe innovante avec brise copeaux de dernière génération
Innovative Schneidgeometrie mit Spanbrecher der neuesten Generation
Innovative cutting geometry with next-generation chip breaker



## Laser geometry

Très bonne maîtrise du copeau pour matières difficiles

Sehr gute Spankontrolle für schwierige Werkstoffe

Very efficient chip control for difficult materials



## Three-directional

Géométrie tri-directionnelle permettant un usinage optimal aussi bien en fonçage qu'en tournage, avant et arrière

Drei-direktionale Geometrie für eine optimale Bearbeitung sowohl im Senken als auch im Drehen, vorwärts und rückwärts

Three-directional geometry enabling optimal machining in both plunging and turning, forward and reverse



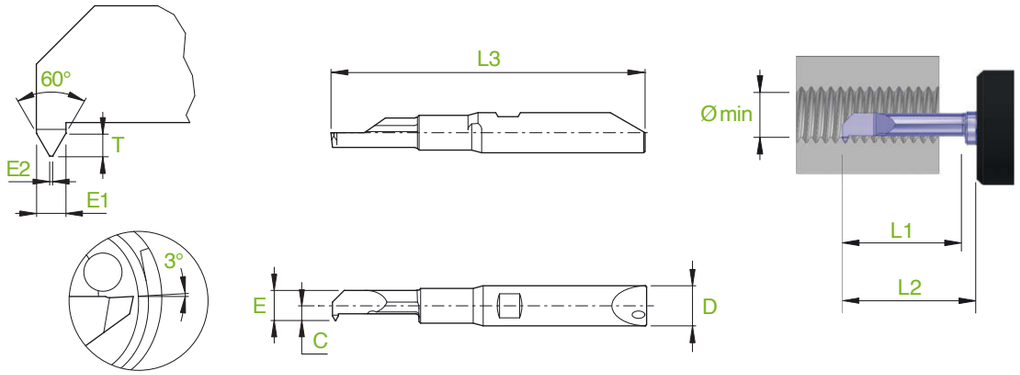
## Sharp cutting edge

L'arête de coupe vive assure une finition de haute qualité, réduisant l'effort et l'usure des outils

Die scharfe Schneidkante sorgt für eine hochwertige Oberflächengüte und verringert sowohl die Schnittkräfte als auch den Werkzeugverschleiss

The sharp cutting edge ensures a high-quality finish while reducing cutting forces and tool wear



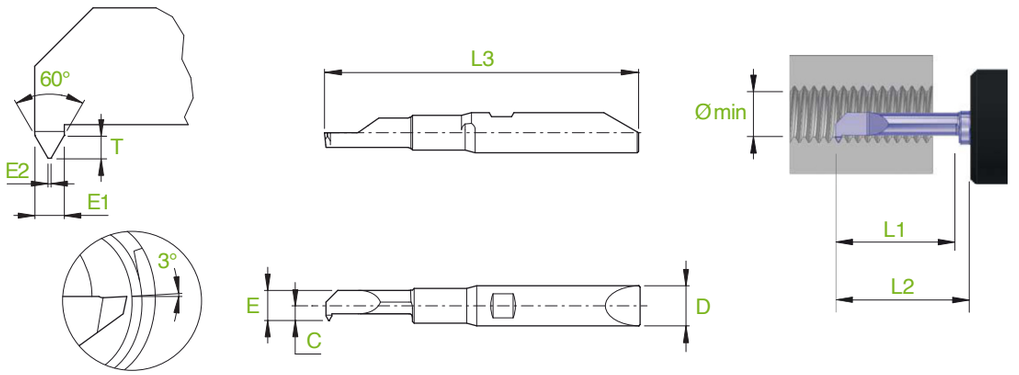



| D h5 | Holder | Ø min | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | P (mm) | P (TPI) | E1 | E2 (0/-0.01) | T | E | C | L3 | Art. N° | R ZTAF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | P M N S | P N S | P M N S | P N S |
| 4 | BH4… BHS4… BHY4… BHK4… | 1.25 | 3.2 | 10 | 8.5 | 0.20-0.35 | 80 | 0.30 | 0.02 | 0.25 | 1.10 | 0.80 | 32 | BB4R/L-1232-TP60 | ● | ● | ● | ● |
| | | 1.6 | 4.0 | 10 | 8.5 | 0.25-0.40 | 72-64 | 0.35 | 0.03 | 0.28 | 1.41 | 0.90 | 32 | BB4R/L-1640-TP60 | ● | ● | ● | ● |
| | | 2.5 | 6.0 | 10 | 8.5 | 0.35-0.50 | 56-48 | 0.44 | 0.04 | 0.34 | 2.25 | 1.35 | 32 | BB4R/L-2560-TP60 | ● | ● | ● | ● |
| | | | 9.0 | 15 | 13.5 | 0.35-0.50 | 56-48 | 0.44 | 0.04 | 0.34 | 2.25 | 1.35 | 37 | BB4R/L-2590-TP60 | ● | ● | ● | ● |
| | | 3.3 | 8.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | BB4R/L-3380-TP60 | ● | ● | ● | ● |
| | | | 12.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | BB4R/L-33120-TP60 | ● | ● | ● | ● |

| D h5 | Holder | Ø min | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | P (mm) | P (TPI) | E1 | E2 (0/-0.01) | T | E | C | L3 | Art. N° | ZTAF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.2 | 10.0 | 20 | 18.5 | 0.50-0.80 | 36-32 | 0.70 | 0.06 | 0.55 | 3.78 | 2.10 | 47 | BB6R/L-42100-TP60 | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.50-0.80 | 36-32 | 0.70 | 0.06 | 0.55 | 3.78 | 2.10 | 47 | BB6R/L-42150-TP60 | ● | ● | ● | ● |
| | | 5.0 | 12.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | BB6R/L-50120-TP60 | ● | ● | ● | ● |
| | | | 18.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | BB6R/L-50180-TP60 | ● | ● | ● | ● |

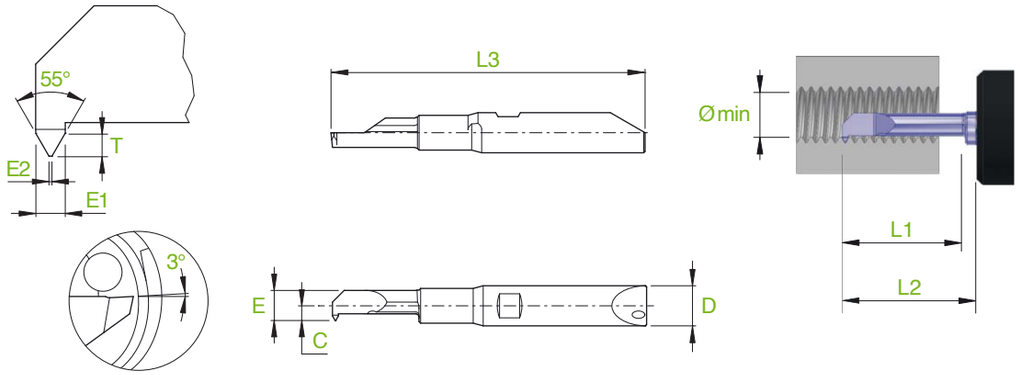







| D h5 | Holder | Ø min | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | P (mm) | P (TPI) | E1 | E2 (0/-0.01) | T | E | C | L3 | Art. N° | R ZTAF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | P M N S | P N S | P M N S | P N S |
| 4 | BH4… BHS4… BHY4… BHK4… | 1.25 | 3.2 | 10 | 8.5 | 0.20-0.35 | 80 | 0.30 | 0.02 | 0.25 | 1.10 | 0.80 | 32 | BF4R/L-1232-TP60 | ● | ● | ● | ● |
| | | 1.6 | 4.0 | 10 | 8.5 | 0.25-0.40 | 72-64 | 0.35 | 0.03 | 0.28 | 1.41 | 0.90 | 32 | BF4R/L-1640-TP60 | ● | ● | ● | ● |
| | | 2.5 | 6.0 | 10 | 8.5 | 0.35-0.50 | 56-48 | 0.44 | 0.04 | 0.34 | 2.25 | 1.35 | 32 | BF4R/L-2560-TP60 | ● | ● | ● | ● |
| | | | 9.0 | 15 | 13.5 | 0.35-0.50 | 56-48 | 0.44 | 0.04 | 0.34 | 2.25 | 1.35 | 37 | BF4R/L-2590-TP60 | ● | ● | ● | ● |
| | | 3.3 | 8.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | BF4R/L-3380-TP60 | ● | ● | ● | ● |
| | | | 12.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | BF4R/L-33120-TP60 | ● | ● | ● | ● |

| D h5 | Holder | Ø min | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | P (mm) | P (TPI) | E1 | E2 (0/-0.01) | T | E | C | L3 | Art. N° | ZTAF | ZN | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 4.2 | 10.0 | 20 | 18.5 | 0.50-0.80 | 36-32 | 0.70 | 0.06 | 0.55 | 3.78 | 2.10 | 47 | BF6R/L-42100-TP60 | ● | ● | ● | ● |
| | | | 15.0 | 20 | 18.5 | 0.50-0.80 | 36-32 | 0.70 | 0.06 | 0.55 | 3.78 | 2.10 | 47 | BF6R/L-42150-TP60 | ● | ● | ● | ● |
| | | 5.0 | 12.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | BF6R/L-50120-TP60 | ● | ● | ● | ● |
| | | | 18.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | BF6R/L-50180-TP60 | ● | ● | ● | ● |

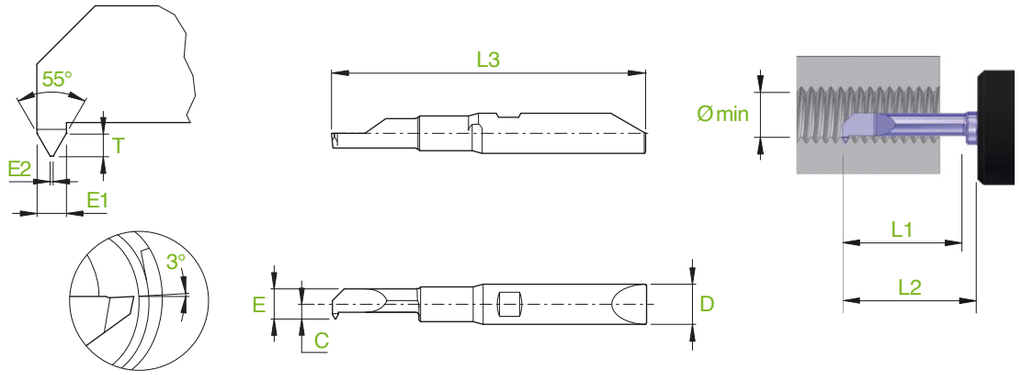



| D h5 | Holder | Ø min | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | P (TPI) | E1 | E2 (0/-0.02) | T | E | C | L3 | Art. N° | R ZTAF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… | 1.85 | 4.5 | 10 | 8.5 | 48 | 0.54 | 0.09 | 0.44 | 1.67 | 0.97 | 32 | BB4R/L-1845-TP55 | ● | ● | ● | ● |
| | BHY4… BHK4… | 2.55 | 6.0 | 10 | 8.5 | 40 | 0.64 | 0.10 | 0.52 | 2.25 | 1.35 | 32 | BB4R/L-2560-TP55 | ● | ● | ● | ● |

| D h5 | Holder | Ø min | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | P (TPI) | E1 | E2 (0/-0.02) | T | E | C | L3 | Art. N° | R ZTAF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… | 3.70 | 11.0 | 20 | 18.5 | 32-24 | 1.08 | 0.13 | 0.91 | 3.33 | 1.83 | 47 | BB6R/L-37110-TP55 | ● | ● | ● | ● |
| | BHS6… BHY6… | 5.10 | 15.0 | 20 | 18.5 | 26-20 | 1.30 | 0.16 | 1.09 | 4.60 | 2.05 | 47 | BB6R/L-51150-TP55 | ● | ● | ● | ● |
| | BHK6… | 5.50 | 16.0 | 20 | 18.5 | 22-16 | 1.48 | 0.19 | 1.24 | 5.15 | 2.60 | 47 | BB6R/L-55160-TP55 | ● | ● | ● | ● |



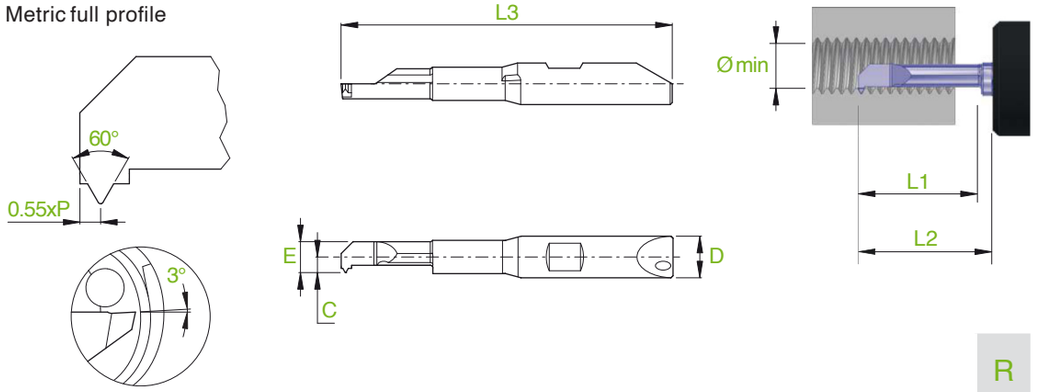





| D h5 | Holder | Ø min | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | P (TPI) | E1 | E2 (0/-0.02) | T | E | C | L3 | Art. N° | R ZTAF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… | 1.85 | 4.5 | 10 | 8.5 | 48 | 0.54 | 0.09 | 0.44 | 1.67 | 0.97 | 32 | BF4R/L-1845-TP55 | ● | ● | ● | ● |
| | BHY4… BHK4… | 2.55 | 6.0 | 10 | 8.5 | 40 | 0.64 | 0.10 | 0.52 | 2.25 | 1.35 | 32 | BF4R/L-2560-TP55 | ● | ● | ● | ● |

| D h5 | Holder | Ø min | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | P (TPI) | E1 | E2 (0/-0.02) | T | E | C | L3 | Art. N° | R ZTAF | R ZN | L ZTAF | L ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… | 3.70 | 11.0 | 20 | 18.5 | 32-24 | 1.08 | 0.13 | 0.91 | 3.33 | 1.83 | 47 | BF6R/L-37110-TP55 | ● | ● | ● | ● |
| | BHS6… BHY6… | 5.10 | 15.0 | 20 | 18.5 | 26-20 | 1.30 | 0.16 | 1.09 | 4.60 | 2.05 | 47 | BF6R/L-51150-TP55 | ● | ● | ● | ● |
| | BHK6… | 5.50 | 16.0 | 20 | 18.5 | 22-16 | 1.48 | 0.19 | 1.24 | 5.15 | 2.60 | 47 | BF6R/L-55160-TP55 | ● | ● | ● | ● |

Profil complet métrique
Metrisches Vollprofil
Metric full profile




R

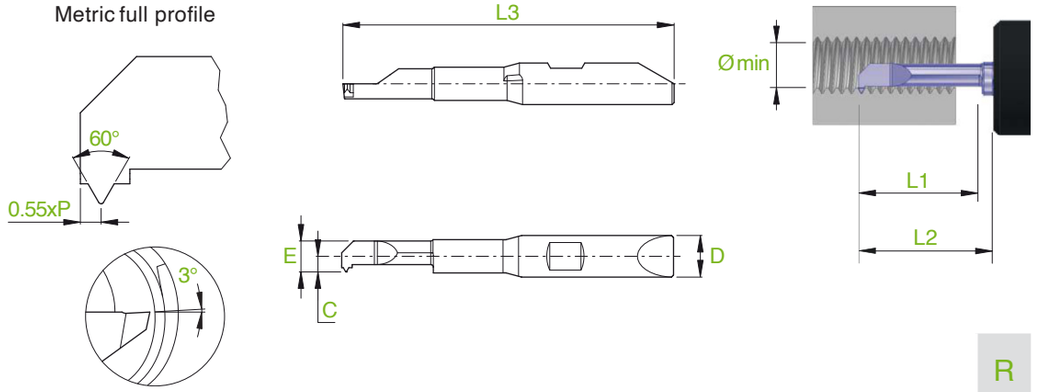
| D h5 | Holder | M (min) | Ømin | P (mm) | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E | C | L3 | Art. N° | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | M3x0.5 | 2.50 | 0.50 | 6.0 | 10 | 8.5 | 2.25 | 1.35 | 32 | BB4R-2560-TM-0.50 | ● | ● |
| | | M4x0.7 | 3.30 | 0.70 | 8.0 | 15 | 13.5 | 2.97 | 1.50 | 37 | BB4R-3380-TM-0.70 | ● | ● |

| D h5 | Holder | M (min) | Ømin | P (mm) | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E | C | L3 | Art. N° | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | M5x0.8 | 4.20 | 0.80 | 10.0 | 20 | 18.5 | 3.78 | 2.10 | 47 | BB6R-42100-TM-0.80 | ● | ● |
| | | M6x1.0 | 5.00 | 1.00 | 12.0 | 20 | 18.5 | 4.50 | 2.20 | 47 | BB6R-50120-TM-1.00 | ● | ● |





Profil complet métrique
Metrisches Vollprofil
Metric full profile

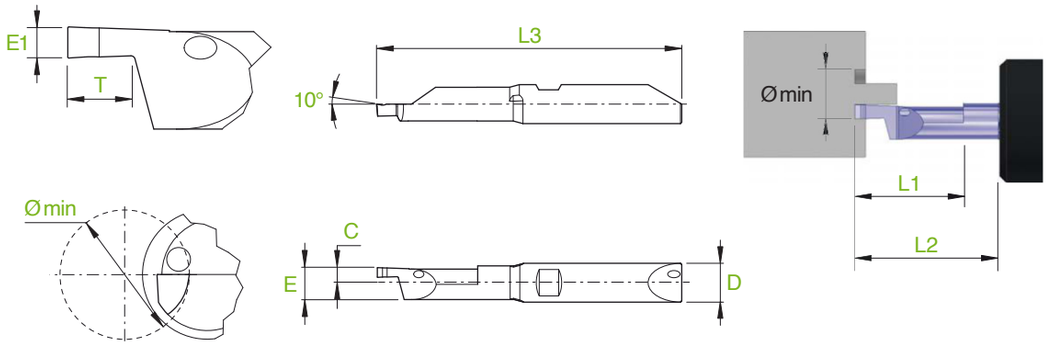



R

| D h5 | Holder | M (min) | Ømin | P (mm) | L1 | L2 BH4… BHY4… | L2 BHS4… BHK4… | E | C | L3 | Art. N° | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | M3x0.5 | 2.50 | 0.50 | 6.0 | 10 | 8.5 | 2.25 | 1.35 | 32 | BF4R-2560-TM-0.50 | ● | ● |
| | | M4x0.7 | 3.30 | 0.70 | 8.0 | 15 | 13.5 | 2.97 | 1.50 | 37 | BF4R-3380-TM-0.70 | ● | ● |

| D h5 | Holder | M (min) | Ømin | P (mm) | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | E | C | L3 | Art. N° | ZTAF | ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | M5x0.8 | 4.20 | 0.80 | 10.0 | 20 | 18.5 | 3.78 | 2.10 | 47 | BF6R-42100-TM-0.80 | ● | ● |
| | | M6x1.0 | 5.00 | 1.00 | 12.0 | 20 | 18.5 | 4.50 | 2.20 | 47 | BF6R-50120-TM-1.00 | ● | ● |

FEG | BB6… | Gorgefrontale extérieure / Aussen axiales stechen / External axial grooving



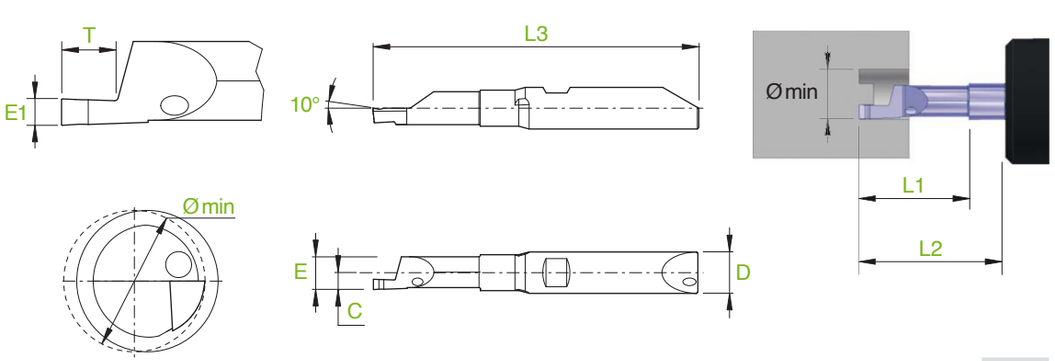

| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | C | E1 | L3 | Art. N° | R ZTAF | R ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 5.0 | 15.0 | 20 | 18.5 | 3.00 | 4.90 | 2.30 | 1.50 | 47 | BB6R-50150-FEG150X | ● | ● |



Zurück zum Kapitelanfang

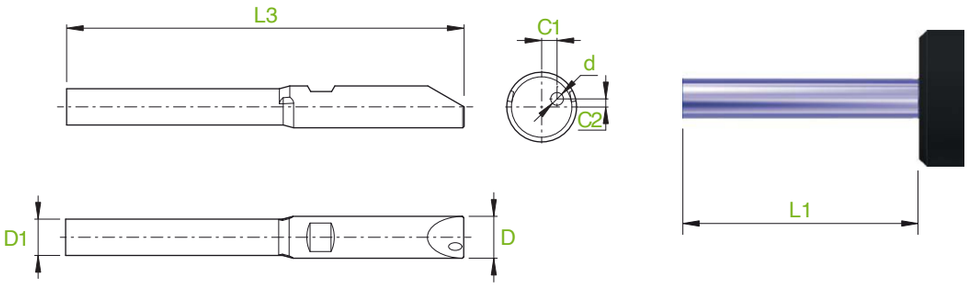


Gorgefrontale intérieure / Innen axiales stechen / Internal axial grooving | BB6… | FIG




| D h5 | Holder | Ømin | L1 | L2 BH6… BHY6… | L2 BHS6… BHK6… | T | E | C | E1 | L3 | Art. N° | R ZTAF | R ZN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 5.0 | 15.0 | 20 | 18.5 | 3.00 | 4.75 | 2.45 | 1.50 | 47 | BB6R-50150-FIG150X | ● | ● |

Zurück zum Index

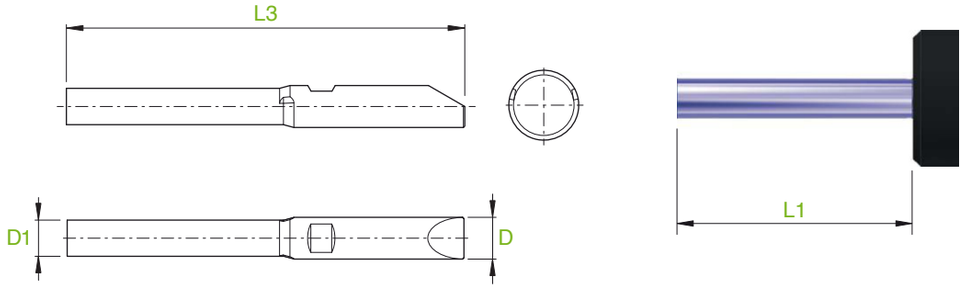



| D h5 | Holder | L1 BH4… BHY4… | L1 BHS4… BHK4… | D1 | C1 | C2 | d | L3 | Art. N° | ZN |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | 20.0 | 18.5 | 3.20 | 0.84 | 0.55 | 0.85 | 42 | BB4R-E42 | • |

| D h5 | Holder | L1 BH6… BHY6… | L1 BHS6… BHK6… | D1 | C1 | C2 | d | L3 | Art. N° | ZN |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 30.0 | 28.5 | 5.20 | 1.33 | 0.70 | 1.10 | 57 | BB6R-E57 | • |

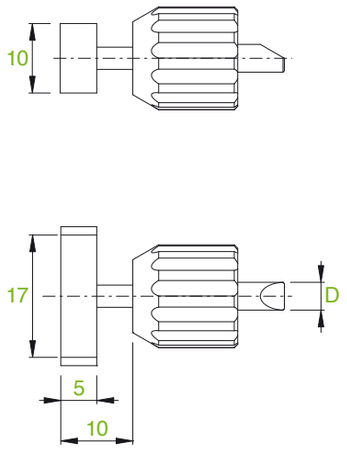







| D h5 | Holder | L1 BH4… BHY4… | L1 BHS4… BHK4… | D1 | L3 | Art. N° | ZN |
|---|---|---|---|---|---|---|---|
| 4 | BH4… BHS4… BHY4… BHK4… | 20.0 | 18.5 | 3.20 | 42 | BF4-E42 | • |

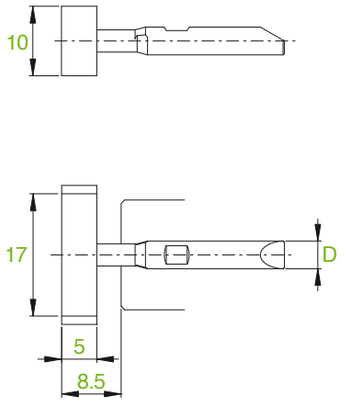
| D h5 | Holder | L1 BH6… BHY6… | L1 BHS6… BHK6… | D1 | L3 | Art. N° | ZN |
|---|---|---|---|---|---|---|---|
| 6 | BH6… BHS6… BHY6… BHK6… | 30.0 | 28.5 | 5.20 | 57 | BF6-E57 | • |






| D h5 | Art. N° | |
|---|---|---|
| 4 | BH4-MASTER | ● |
| 6 | BH6-MASTER | ● |

## BHSY… | MASTER | Jauges d'alignement / Richtplatten / Adjusting tools





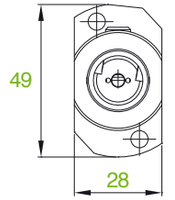

| D h5 | Art. N° | |
|---|---|---|
| 4 | BHSY4-MASTER | ● |
| 6 | BHSY6-MASTER | ● |

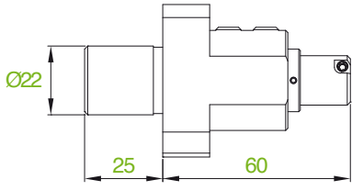








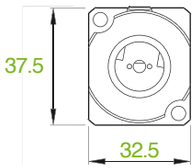

| Art. N° |
|---|
| BWD1-2022-STAR-SRR |

| Art. N° |
|---|
| BHS4-D20-55-BWD1 |
| BHS6-D20-55-BWD1 |

| Types of STARmachines |
|---|
| SR10J (T22+T24) |
| SB16/20 Types C+ D + E (T21-T24) |
| SB20R Types E + G+ N (T21-T24) |
| SR20J / JN (T21-T24) |
| SR20R/ II / III (T21-T24) |
| SR20R IV (T21-T24) |
| SR32J/JN (T21-T24) |
| SW12RII (T21-T24) |
| SV20R (T21-T24) |
| ECAS12/20 (T21-T24) |
| SW20 (T21-T23) |





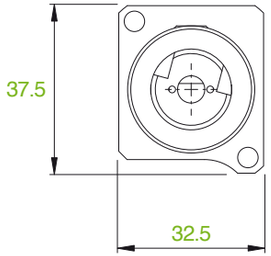


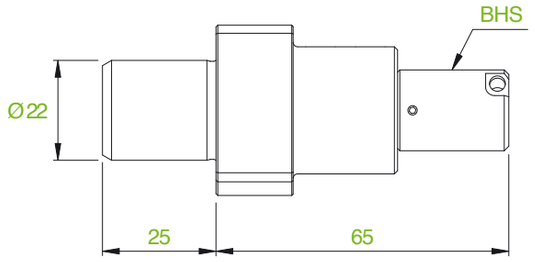


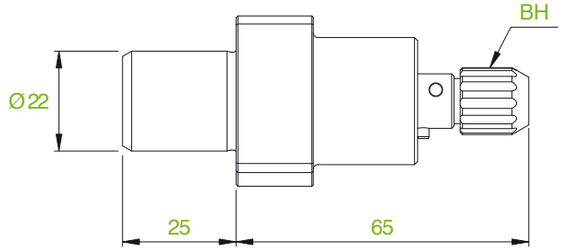
| Art. N° |
|---|
| BWD1-2022-STAR-SW |

| Art. N° |
|---|
| BHS4-D20-55-BWD1 |
| BHS6-D20-55-BWD1 |

| Types of STARmachines |
|---|
| SW12RII (T21-T28) |
| SW20 (T21-T23 + T25-T27) |
| SV20R (T21-T28) |
| SR-20R IV (T21-T28) |
| SB12/20R (T22-T24) |
| SR38 (T21-T28) |







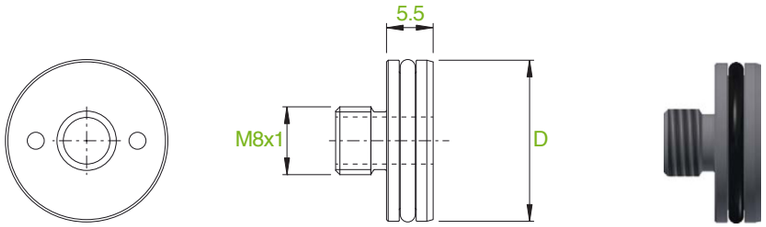
| Art. N° |
|---|
| BWD1-1222-STAR-SW-B |

| Art. N° |
|---|
| BHS4-D12-51-BWD1-B |
| BHS6-D12-51-BWD1-B |

| Art. N° |
|---|
| BH4-D12-51-BWD1-B |
| BH6-D12-51-BWD1-B |

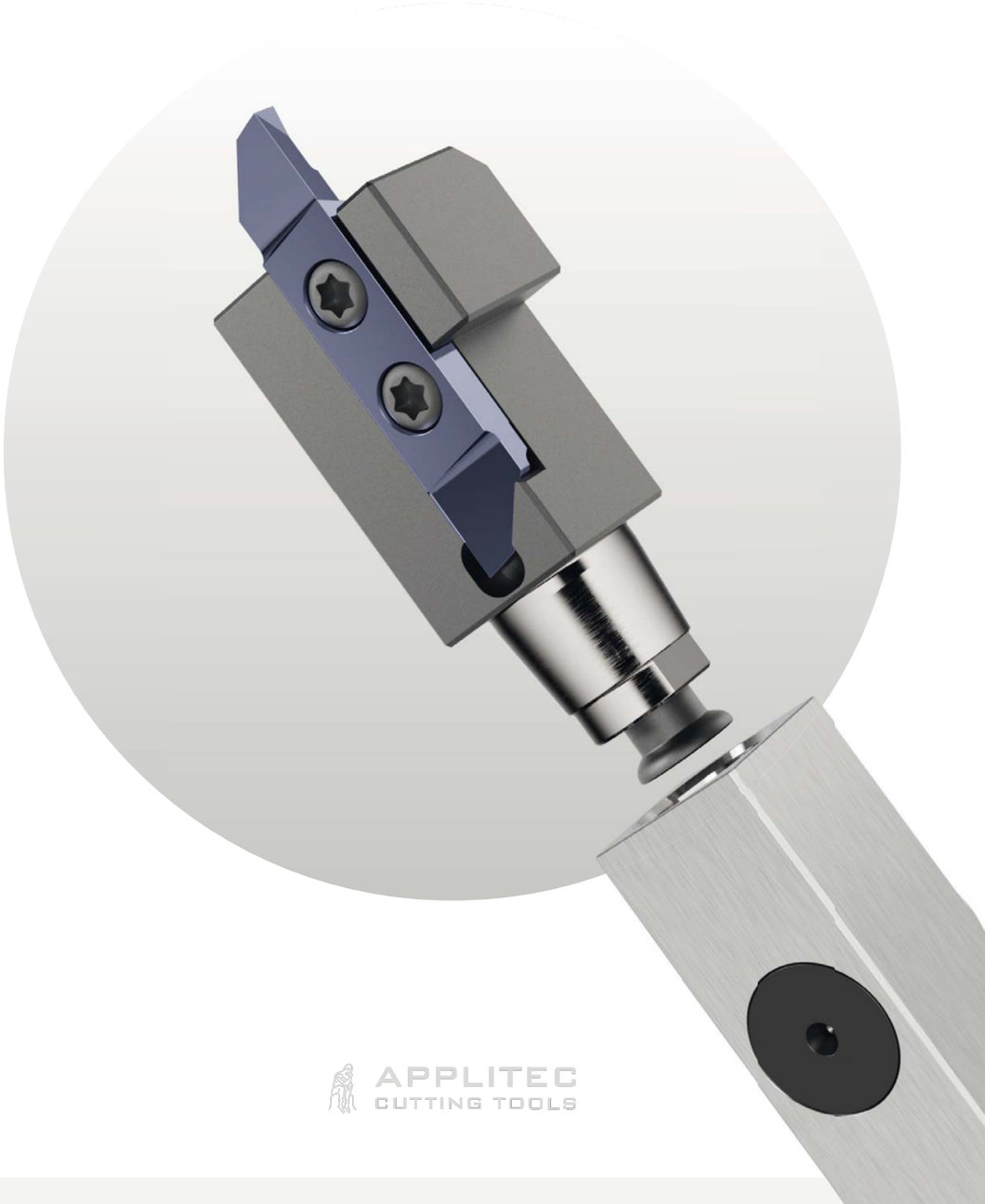
| Types of STARmachines |
|---|
| SW12RII (T21-T28) |
| SW20 (T21-T23 + T25-T27) |
| SV20R (T21-T28) |
| SR-20R IV (T21-T28) |
| SB12/20R (T22-T24) |
| SR38 (T21-T28) |






| D | Art. N° | |
|---|---|---|
| 19.05 | JB-M8X1-D19.05 | ● |
| 20 | JB-M8X1-D20 | ● |
| 22 | JB-M8X1-D22 | ● |
| 25 | JB-M8X1-D25 | ● |
| 25.4 | JB-M8X1-D25.4 | ● |

# SWITCH-Line



APPLITEC
CUTTING TOOLS

Infos et avantages
Infos und Vorteile
Infos and advantages >13.03

Supports carrés
Viereckige Halter
Square holders >13.07



Têtes interchangeables I Wechselköpfe I Interchangeable heads

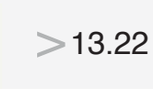
| | | | |
|---|---|---|---|
| TOP-Line | | LW-730-740-JET<br>LW-750-760-JET<br>LW-770-780-JET | >13.08<br>>13.09<br>>13.10 |
| ONE-Line | | LW-130-JET<br>LW-140-JET | >13.11 |
| TURN-Line | 88° | LW-310-320-JET<br>LW-310-BC/320-BC-JET | >13.12<br>>13.13 |
| | 85° | LW-330-340-JET | >13.14 |
| ISO-Line | 80° | LW-SCL-JET<br>LW-SCM-JET | >13.15<br>>13.16 |
| | 55° | LW-SDJ-JET<br>LW-SDN-JET<br>LW-SDH-JET | >13.17<br>>13.18<br>>13.19 |
| | 35° | LW-SVJ-JET<br>LW-SVV-JET | >13.20<br>>13.21 |

Supports cylindriques
Zylindrische Halter
Cylinder holders LW-D >13.22

Têtes interchangeables porte-pince
Spannzangenwechselköpfe
Interchangeable head gripper holder LW-E >13.23

Porte-outils
Halter
Holders HSK / PSC >13.24



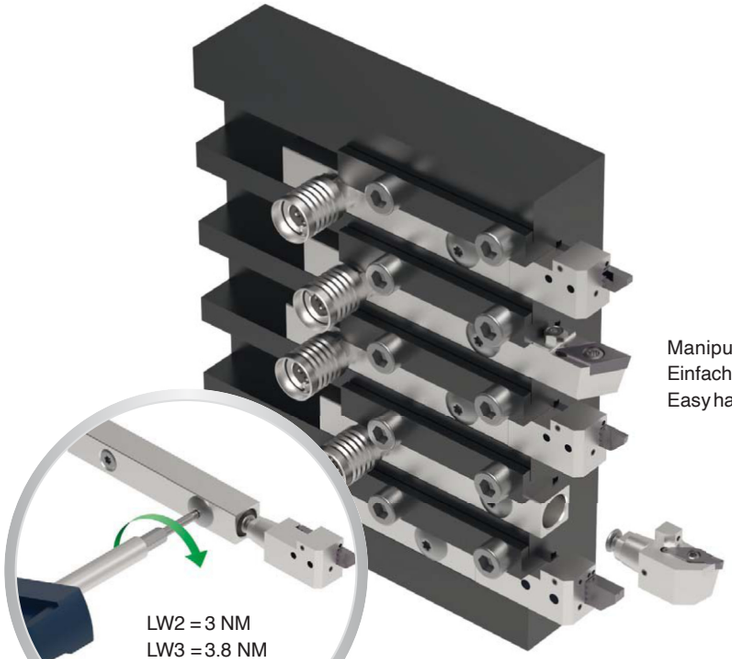












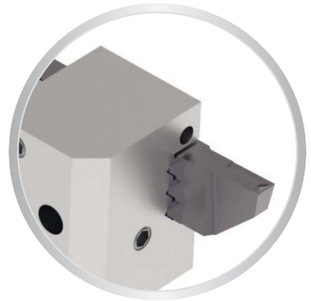
Manipulation facilitée
Einfache Handhabung
Easy handling

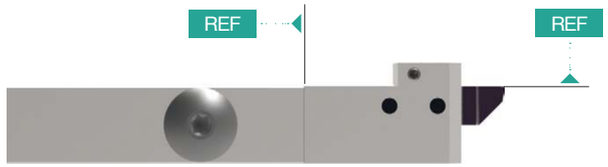


LW2 = 3 NM
LW3 = 3.8 NM
LW4 = 5.7 NM

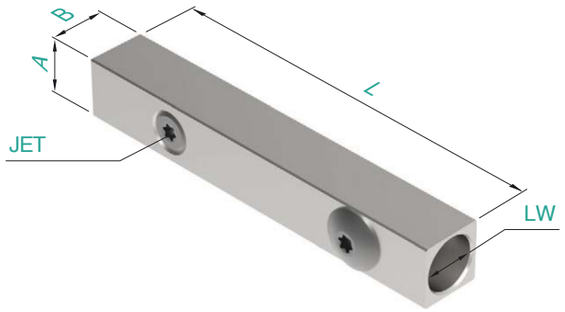
Changement rapide
Schneller Wechsel
Quick change

Lubrification intégrée
Integrierte Kühlung
Integrated coolant



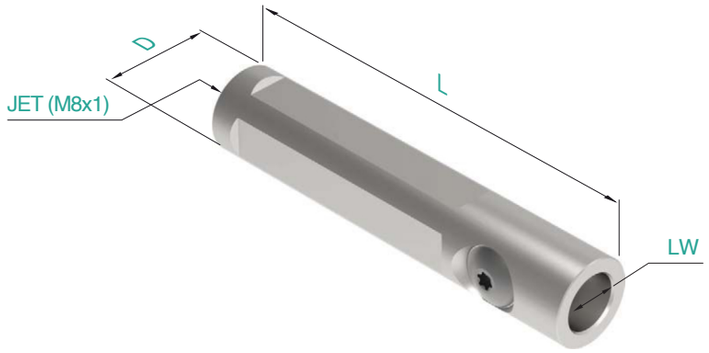



Excellente répétitivité
Ausgezeichnete Wiederholgenauigkeit
Excellent repeatability



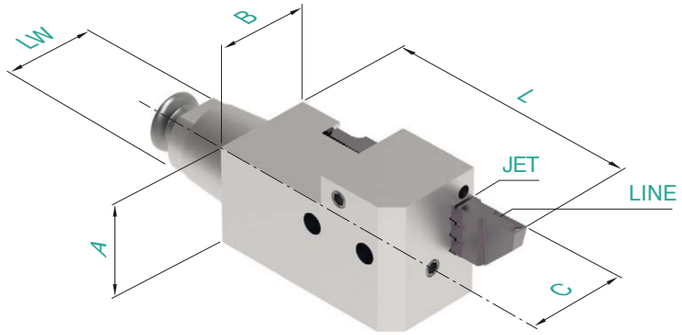

| LW | A x B | L | JET |
|---|---|---|---|
| Interface | Section | Longueur<br>Länge<br>Length | Arrosage intégré<br>Integrierte Kühlung<br>Integrated coolant |






| LW | D | L | JET |
|---|---|---|---|
| Interface | Ø | Longueur<br>Länge<br>Length | Arrosage intégré<br>Integrierte Kühlung<br>Integrated coolant |






| LW | LINE | A x B | C | L | JET |
|---|---|---|---|---|---|
| Interface | Serie | Section | Localisation axe<br>Achselokalisation<br>Axis location | Longueur<br>Länge<br>Length | Arrosage intégré<br>Integrierte Kühlung<br>Integrated coolant |

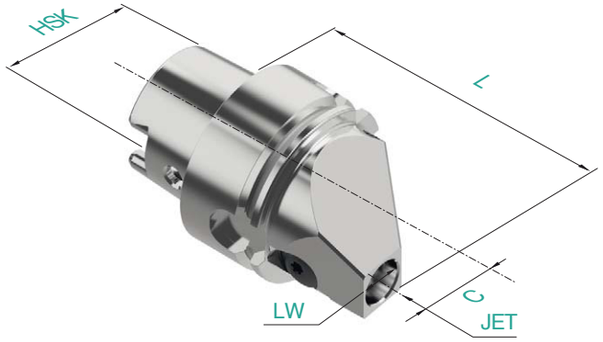





| LW | E | D | L |
|---|---|---|---|
| Interface | Pince type<br>Spannzange Typ<br>Gripper type | Ø | Longueur<br>Länge<br>Length |

SWITCH-Line

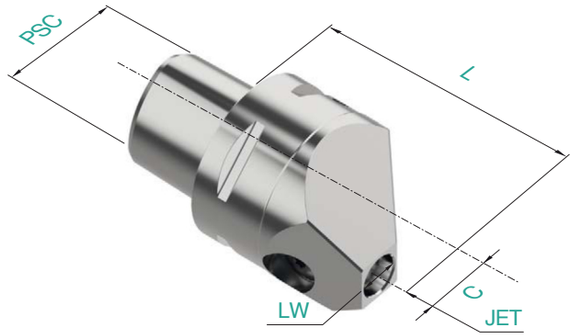




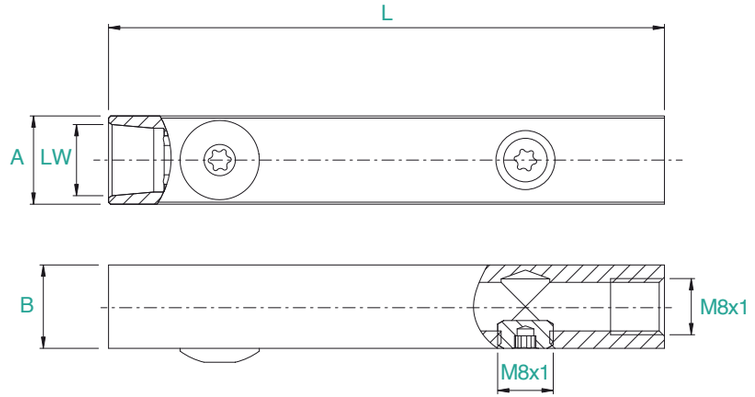

| HSK | LW | C | L | JET | X |
|---|---|---|---|---|---|
| Machine interface | Interface tête interchangeable<br>Wechselkopfschnittstelle<br>Interchangeable head interface | Localisation axe<br>Achsellokalisation<br>Axis location<br>LW | Longueur<br>Länge<br>Length | Arrosage intégré<br>Integrierte Kühlung<br>Integrated coolant | Spécificité fabricant machine<br>Spezifität Maschinenhersteller<br>Specificity machine manufacturer |

Désignations - Têtes interchangeables
Bezeichnungen - Wechselköpfe
Designations - Interchangeable heads

Infos et avantages
Infos und Vorteile
Infos and advantages




| PSC | LW | C | L | JET | X |
|---|---|---|---|---|---|
| Machine interface | Interface tête interchangeable<br>Wechselkopfschnittstelle<br>Interchangeable head interface | Localisation axe<br>Achsellokalisation<br>Axis location<br>LW | Longueur<br>Länge<br>Length | Arrosage intégré<br>Integrierte Kühlung<br>Integrated coolant | Spécificité fabricant machine<br>Spezifität Maschinenhersteller<br>Specificity machine manufacturer |






| | | | | Pièces de rechange<br>Ersatzteile<br>Spare parts | | Options | |
|---|---|---|---|---|---|---|---|
| LW | A x B | L | Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW2 | 10x10 | 80 | LW2-1010-80-JET | JB-M8X1 | LW2-ER1.010.012 | CD-NM3.0 | TX15-E6.3 |
| LW3 | 12x12 | 80 | LW3-1212-80-JET | JB-M8X1 | LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 |
| LW3 | 12.7x12 | 80 | LW3-12.7-80-JET | | | | |
| LW4 | 15.87x16 | 80 | LW4-15.87-80-JET | JB-M8X1 | LW4-ER1.014.019 | CD-NM5.7 | TX20-E6.3 |
| LW4 | 16x16 | 80 | LW4-1616-80-JET | | | | |

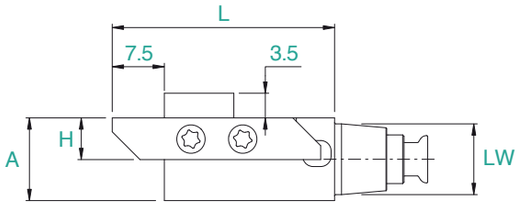


Utilisation d'une clé dynamométrique recommandée
Benutzung eines Drehmomentschlüssel empfohlen
Recommended use of a torque wrench

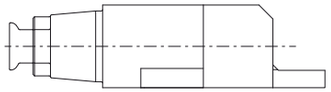
| Options | Art. N° |
|---|---|
| | M8X1 |
| | voir JET-LINE<br>siehe JET-LINE<br>see JET-LINE |

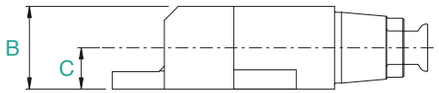


R




L






| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 73_-74_ | LW3 | 12x12 | 6 | 6 | 32 | LW3-730-12-0632-JET | LW3-740-12-0632-JET |
| | LW4 | 16x16 | 8 | 8 | 32 | LW4-730-16-0832-JET | LW4-740-16-0832-JET |

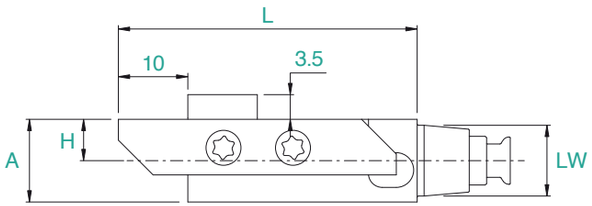
| LW | Pièces de rechange Ersatzteile Spare parts | | Options |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| LW3 | V-M3X7-T8 | LW3-U00.ER1.000 | C-T8 |
| LW4 | | LW4-U00.ER1.000 | |



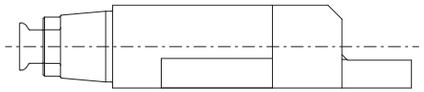


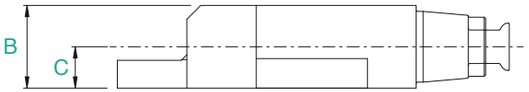


R



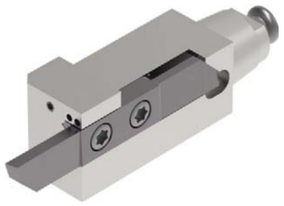

L



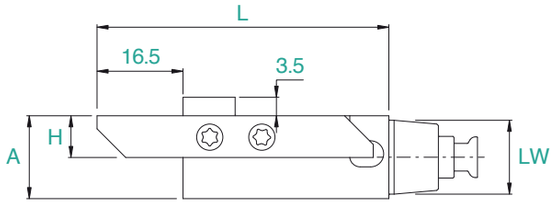



| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 75_-76_ | LW3 | 12x12 | 6 | 6 | 43 | LW3-750-12-0643-JET | LW3-760-12-0643-JET |
| | LW4 | 16x16 | 8 | 8 | 43 | LW4-750-16-0843-JET | LW4-760-16-0843-JET |

| LW | Pièces de rechange Ersatzteile Spare parts | | Options |
|---|---|---|---|
| | Art. N° | Art. N° | Art. N° |
| LW3 | V-M4X9-T15 | LW3-U00.ER1.000 | C-T15 |
| LW4 | | LW4-U00.ER1.000 | |



R

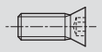



L






| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 77_-78_ | LW4 | 16x16 | 8 | 8 | 56 | LW4-770-16-0856-JET | LW4-780-16-0856-JET |

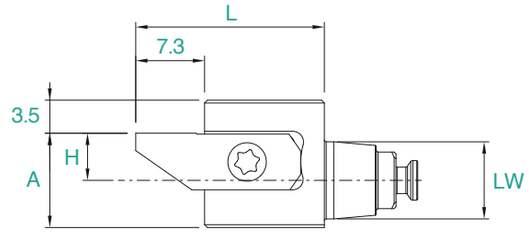
| LW | Pièces de rechange Ersatzteile Spare parts | | Options |
|---|---|---|---|
| |  |  |  |
| | Art. N° | Art. N° | Art. N° |
| LW4 | V-M4X9-T15 | LW4-U00.ER1.000 | C-T15 |



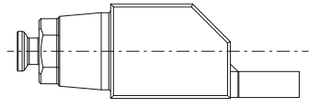


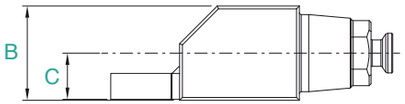


R

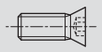



L



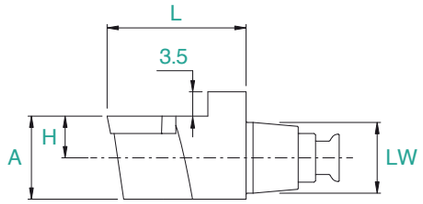



| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 13_-14_ | LW2 | 10x10 | 5 | 5 | 20 | LW2-130-10-0520-JET | LW2-140-10-0520-JET |

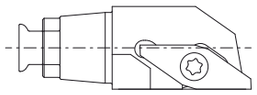
| LW | Pièces de rechange Ersatzteile Spare parts | | Options |
|---|---|---|---|
| |  |  |  |
| | Art. N° | Art. N° | Art. N° |
| LW4 | V-M3X7-T8 | LW2-U00.ER1.000 | C-T8 |

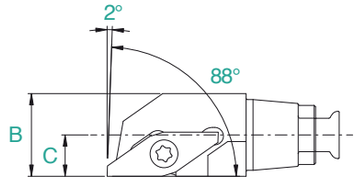


R




L






| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 31_-32_ | LW2 | 10x10 | 5 | 5 | 20 | LW2-310-10-0520-JET | LW2-320-10-0520-JET |
| | LW3 | 12x12 | 6 | 6 | 20 | LW3-310-12-0620-JET | LW3-320-12-0620-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-310-16-0825-JET | LW4-320-16-0825-JET |

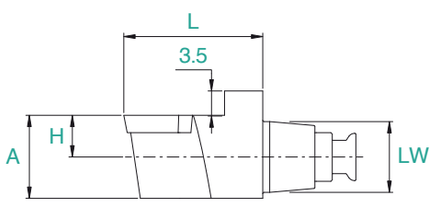
| LW | Pièces de rechange Ersatzteile Spare parts: Art. N° | Pièces de rechange Ersatzteile Spare parts: Art. N° | Options: Art. N° |
|---|---|---|---|
| LW2 | V-M2.5X7.8-T8 | LW2-U00.ER1.000 | C-T8 |
| LW3 | | LW3-U00.ER1.000 | |
| LW4 | | LW4-U00.ER1.000 | |



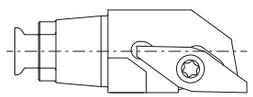


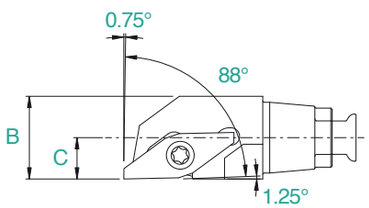


R




L



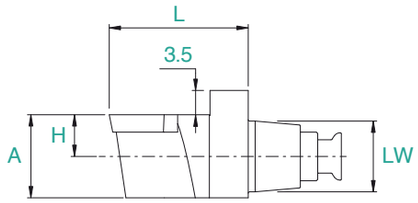



| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 31_-32_ | LW2 | 10x10 | 5 | 5 | 20 | LW2-310-10-0520-BC-JET | LW2-320-10-0520-BC-JET |
| | LW3 | 12x12 | 6 | 6 | 20 | LW3-310-12-0620-BC-JET | LW3-320-12-0620-BC-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-310-16-0825-BC-JET | LW4-320-16-0825-BC-JET |

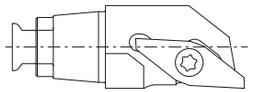
| LW | Pièces de rechange Ersatzteile Spare parts: Art. N° | Pièces de rechange Ersatzteile Spare parts: Art. N° | Options: Art. N° |
|---|---|---|---|
| LW2 | V-M2.5X7.8-T8 | LW2-U00.ER1.000 | C-T8 |
| LW3 | | LW3-U00.ER1.000 | |
| LW4 | | LW4-U00.ER1.000 | |

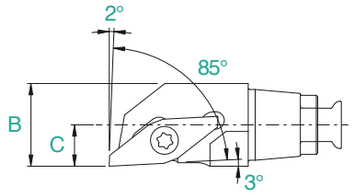


R




L






| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| 33_-34_ | LW2 | 10x10 | 5 | 5 | 20 | LW2-330-10-0520-JET | LW2-340-10-0520-JET |
| | LW3 | 12x12 | 6 | 6 | 20 | LW3-330-12-0620-JET | LW3-340-12-0620-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-330-16-0825-JET | LW4-340-16-0825-JET |

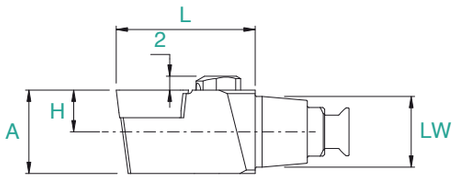
| LW | Pièces de rechange / Ersatzteile / Spare parts Art. N° | Pièces de rechange / Ersatzteile / Spare parts Art. N° | Options Art. N° |
|---|---|---|---|
| LW2 | V-M2.5X7.8-T8 | LW2-U00.ER1.000 | C-T8 |
| LW3 | | LW3-U00.ER1.000 | |
| LW4 | | LW4-U00.ER1.000 | |



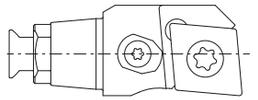


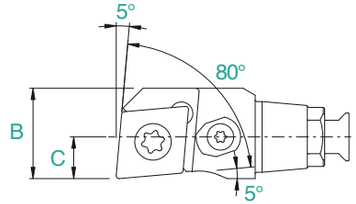


R




L

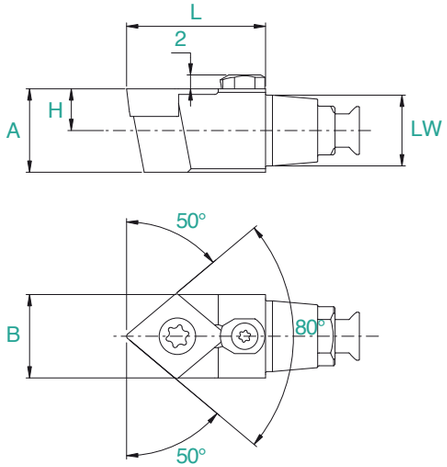





| Plaquettes WSP Inserts | LW | A x B | H | C | L | L Art. N° | R Art. N° |
|---|---|---|---|---|---|---|---|
| CC..-0602.. | LW2 | 10x10 | 5 | 5 | 20 | LW2-SCLCL-10-0520-06-JET | LW2-SCLCR-10-0520-06-JET |
| | LW3 | 12x12 | 6 | 6 | 20 | LW3-SCLCL-12-0620-06-JET | LW3-SCLCR-12-0620-06-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SCLCL-16-0825-06-JET | LW4-SCLCR-16-0825-06-JET |
| CC..-09T3.. | LW3 | 12x12 | 6 | 6 | 20 | LW3-SCLCL-12-0620-09-JET | LW3-SCLCR-12-0620-09-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SCLCL-16-0825-09-JET | LW4-SCLCR-16-0825-09-JET |

| Plaquettes WSP Inserts | LW | Pièces de rechange / Ersatzteile / Spare parts Art. N° | Pièces de rechange / Ersatzteile / Spare parts Art. N° | Pièces de rechange / Ersatzteile / Spare parts Art. N° | Options Art. N° |
|---|---|---|---|---|---|
| CC..-0602.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| CC..-09T3.. | LW3 | V-M4X9-T15-ISO | | LW3-U00.ER1.000 | C-T15 |
| | LW4 | | | LW4-U00.ER1.000 | |





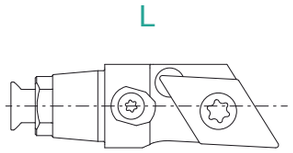

| Plaquettes WSP Inserts | LW | A x B | H | L | Art. N° |
|---|---|---|---|---|---|
| CC..-0602.. | LW2 | 10x10 | 5 | 20 | LW2-SCMCN-10-0020-06-JET |
| | LW3 | 12x12 | 6 | 20 | LW3-SCMCN-12-0020-06-JET |
| | LW4 | 16x16 | 8 | 25 | LW4-SCMCN-16-0025-06-JET |
| CC..-09T3.. | LW3 | 12x12 | 6 | 20 | LW3-SCMCN-12-0020-09-JET |
| | LW4 | 16x16 | 8 | 25 | LW4-SCMCN-16-0025-09-JET |

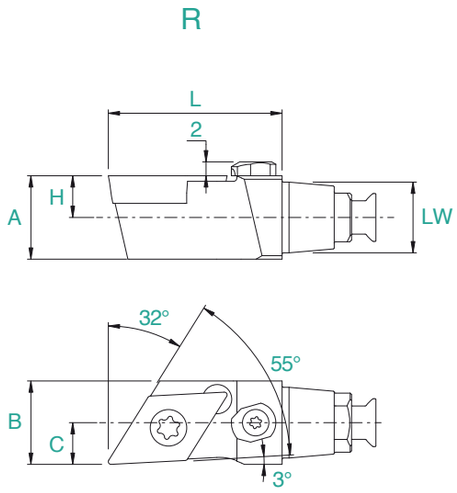
| Plaquettes WSP Inserts | LW | Pièces de rechange / Ersatzteile / Spare parts: Art. N° | Art. N° | Art. N° | Options: Art. N° |
|---|---|---|---|---|---|
| CC..-0602.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| CC..-09T3.. | LW3 | V-M4X9-T15-ISO | | LW3-U00.ER1.000 | C-T15 |
| | LW4 | | | LW4-U00.ER1.000 | |







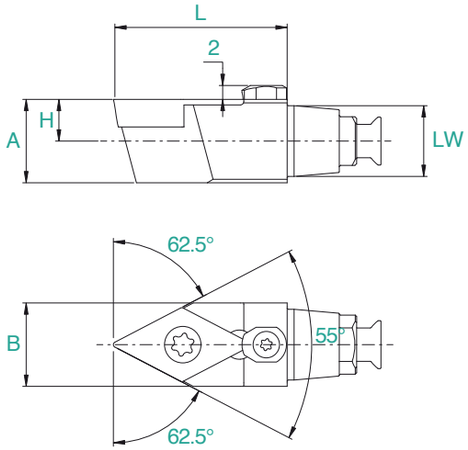



| Plaquettes WSP Inserts | LW | A x B | H | C | L | L: Art. N° | R: Art. N° |
|---|---|---|---|---|---|---|---|
| DC..-0702.. | LW2 | 10x10 | 5 | 5 | 20 | LW2-SDJCL-10-0520-07-JET | LW2-SDJCR-10-0520-07-JET |
| | LW3 | 12x12 | 6 | 6 | 20 | LW3-SDJCL-12-0620-07-JET | LW3-SDJCR-12-0620-07-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SDJCL-16-0825-07-JET | LW4-SDJCR-16-0825-07-JET |
| DC..-11T3.. | LW3 | 12x12 | 6 | 6 | 25 | LW3-SDJCL-12-0625-11-JET | LW3-SDJCR-12-0625-11-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SDJCL-16-0825-11-JET | LW4-SDJCR-16-0825-11-JET |

| Plaquettes WSP Inserts | LW | Pièces de rechange / Ersatzteile / Spare parts: Art. N° | Art. N° | Art. N° | Options: Art. N° |
|---|---|---|---|---|---|
| DC..-0702.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| DC..-11T3.. | LW3 | V-M4X9-T15-ISO | | LW3-U00.ER1.000 | C-T15 |
| | LW4 | | | LW4-U00.ER1.000 | |






| Plaquettes WSP Inserts | LW | A x B | H | L | Art. N° |
|---|---|---|---|---|---|
| DC..-0702.. | LW2 | 10x10 | 5 | 20 | LW2-SDNCN-10-0020-07-JET |
| | LW3 | 12x12 | 6 | 20 | LW3-SDNCN-12-0020-07-JET |
| | LW4 | 16x16 | 8 | 25 | LW4-SDNCN-16-0025-07-JET |
| DC..-11T3.. | LW3 | 12x12 | 6 | 25 | LW3-SDNCN-12-0025-11-JET |
| | LW4 | 16x16 | 8 | 25 | LW4-SDNCN-16-0025-11-JET |

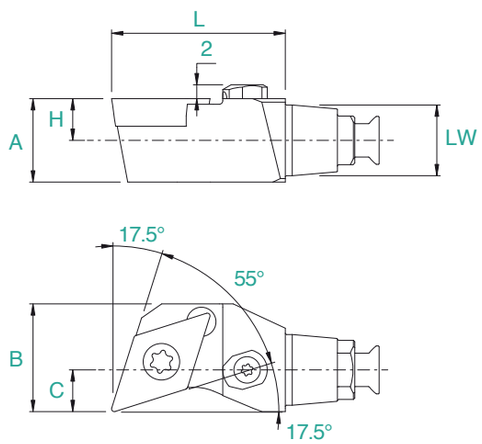
| Plaquettes WSP Inserts | LW | Pièces de rechange Ersatzteile Spare parts | | | Options |
|---|---|---|---|---|---|
| | | Art. N° | Art. N° | Art. N° | Art. N° |
| DC..-0702.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| DC..-11T3.. | LW3 | V-M4X9-T15-ISO | | LW3-U00.ER1.000 | C-T15 |
| | LW4 | | | LW4-U00.ER1.000 | |

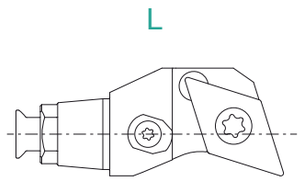




R





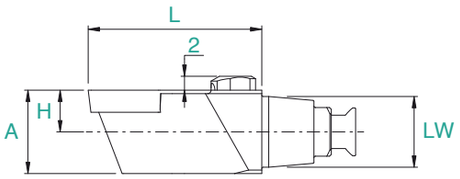




| Plaquettes WSP Inserts | LW | A x B | H | C | L | L | R |
|---|---|---|---|---|---|---|---|
| | | | | | | Art. N° | Art. N° |
| DC..-0702.. | LW2 | 10x10 | 5 | 5 | 20 | LW2-SDHCL-10-0520-07-JET | LW2-SDHCR-10-0520-07-JET |
| | LW3 | 12x15.5 | 6 | 6 | 20 | LW3-SDHCL-12-0620-07-JET | LW3-SDHCR-12-0620-07-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SDHCL-16-0825-07-JET | LW4-SDHCR-16-0825-07-JET |
| DC..-11T3.. | LW3 | 12x15.5 | 6 | 6 | 25 | LW3-SDHCL-12-0625-11-JET | LW3-SDHCR-12-0625-11-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SDHCL-16-0825-11-JET | LW4-SDHCR-16-0825-11-JET |

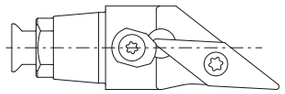
| Plaquettes WSP Inserts | LW | Pièces de rechange Ersatzteile Spare parts | | | Options |
|---|---|---|---|---|---|
| | | Art. N° | Art. N° | Art. N° | Art. N° |
| DC..-0702.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| DC..-11T3.. | LW3 | V-M4X9-T15-ISO | | LW3-U00.ER1.000 | C-T15 |
| | LW4 | | | LW4-U00.ER1.000 | |

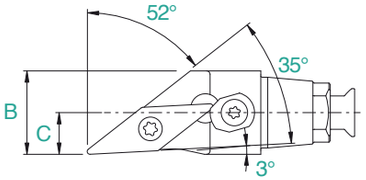
R






L





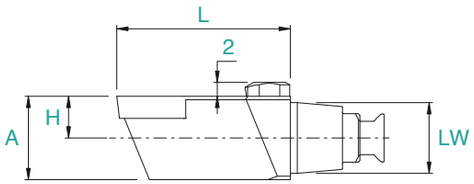

| Plaquettes WSP Inserts | LW | A x B | H | C | L | L<br>Art. N° | R<br>Art. N° |
|---|---|---|---|---|---|---|---|
| VC..-1103.. | LW2 | 10x10 | 5 | 5 | 25 | LW2-SVJCL-10-0525-11-JET | LW2-SVJCR-10-0525-11-JET |
| | LW3 | 12x12 | 6 | 6 | 25 | LW3-SVJCL-12-0625-11-JET | LW3-SVJCR-12-0625-11-JET |
| | LW4 | 16x16 | 8 | 8 | 25 | LW4-SVJCL-16-0825-11-JET | LW4-SVJCR-16-0825-11-JET |
| VC..-1303.. | LW3 | 12x12 | 6 | 6 | 30 | LW3-SVJCL-12-0630-13-JET | LW3-SVJCR-12-0630-13-JET |
| | LW4 | 16x16 | 8 | 8 | 30 | LW4-SVJCL-16-0830-13-JET | LW4-SVJCR-16-0830-13-JET |
| VC..-1604.. | LW4 | 16x16 | 8 | 8 | 35 | LW4-SVJCL-16-0835-16-JET | LW4-SVJCR-16-0835-16-JET |

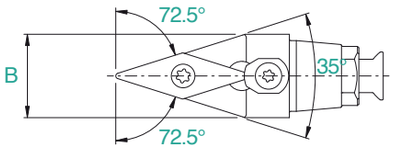
| Plaquettes WSP Inserts | LW | Pièces de rechange / Ersatzteile / Spare parts<br>Art. N° | Art. N° | Art. N° | Options<br>Art. N° |
|---|---|---|---|---|---|
| VC..-1103.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| VC..-1303.. | LW3 | V-M3X7.3-T8-ISO | | LW3-U00.ER1.000 | C-T15 |
| | LW4 | | | LW4-U00.ER1.000 | |
| VC..-1604.. | LW4 | V-M4X9-T15-ISO | | LW4-U00.ER1.000 | C-T15 |





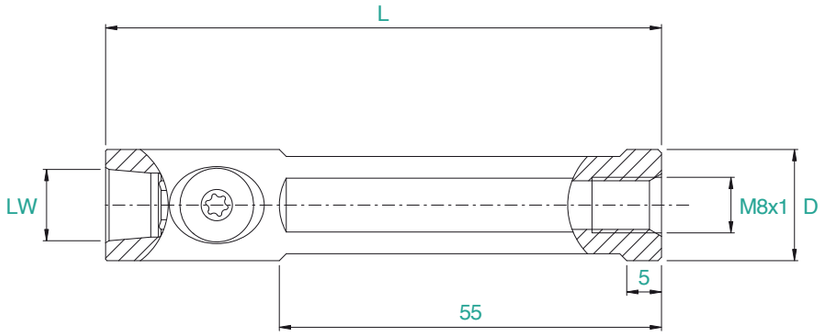




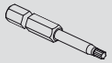




| Plaquettes WSP Inserts | LW | A x B | H | L | Art. N° |
|---|---|---|---|---|---|
| VC..-1103.. | LW2 | 10x10 | 5 | 25 | LW2-SVVCN-10-0025-11-JET |
| | LW3 | 12x12 | 6 | 25 | LW3-SVVCN-12-0025-11-JET |
| | LW4 | 16x16 | 8 | 25 | LW4-SVVCN-16-0025-11-JET |
| VC..-1303.. | LW3 | 12x12 | 6 | 30 | LW3-SVVCN-12-0030-13-JET |
| | LW4 | 16x16 | 8 | 30 | LW4-SVVCN-16-0030-13-JET |
| VC..-1604.. | LW4 | 16x16 | 8 | 35 | LW4-SVVCN-16-0035-16-JET |

| Plaquettes WSP Inserts | LW | Pièces de rechange / Ersatzteile / Spare parts<br>Art. N° | Art. N° | Art. N° | Options<br>Art. N° |
|---|---|---|---|---|---|
| VC..-1103.. | LW2 | V-M2.5X7.8-T8 | LWX-ER1.007.004 | LW2-U00.ER1.000 | C-T8 |
| | LW3 | | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| VC..-1303.. | LW3 | V-M3X7.3-T8-ISO | | LW3-U00.ER1.000 | |
| | LW4 | | | LW4-U00.ER1.000 | |
| VC..-1604.. | LW4 | V-M4X9-T15-ISO | | LW4-U00.ER1.000 | C-T15 |






| | | | | | Pièces de rechange Ersatzteile Spare parts | | Options | |
|---|---|---|---|---|---|---|---|---|
| | | | | |  |  |  |  |
| LW | D | L | L1 | Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3 | 16 | 80 | 55 | LW3-D16-80-JET | LW3-ER1.012.014 | JB-M8X1 | CD-NM3.8 | TX15-E6.3 |
| LW4 | 19.05 | 80 | 55 | LW4-D19.05-80-JET | LW4-ER1.014.018 | | CD-NM5.7 | TX20-E6.3 |
| | 20 | 80 | 55 | LW4-D20-80-JET | | | | |
| | 22 | 80 | 55 | LW4-D22-80-JET | LW4-ER1.014.019 | | | |
| | 25 | 80 | 55 | LW4-D25-80-JET | LW4-ER1.015.023 | | | |
| | 25.4 | 80 | 55 | LW4-D25.4-80-JET | | | | |

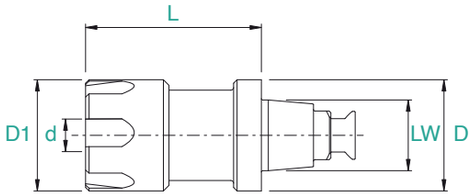


Utilisation d'une clé dynamométrique recommandée
Benutzung eines Drehmomentschlüssel empfohlen
Recommended use of a torque wrench

| Options |  |
|---|---|
| | Art. N° |
| | M8X1 |
| | voir JET-LINE<br>siehe JET-LINE<br>see JET-LINE |

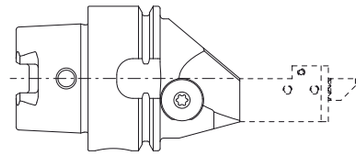


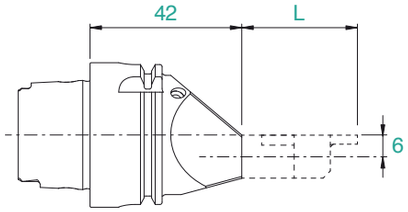






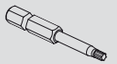

| | | | | | | | Pièces de rechange Ersatzteile Spare parts | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | |  |  |
| LW | D | D1 | L | Pince type | d | Art. N° | Art. N° | Art. N° |
| LW3 | 16 | 16 | 26 | ER11 | 0.5-7 | LW3-E11-D16-26 | E11-ER1.001-012 | LW3-U00.ER1.00 |
| LW4 | 19 | 16 | 26 | ER11 | 0.5-7 | LW4-E11-D19-26 | | LW4-U00.ER1.00 |
| | 19 | 22 | 35 | ER16 | 0.5-10 | LW4-E16-D19-35 | E16-ER1.001-018 | |





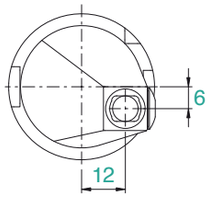


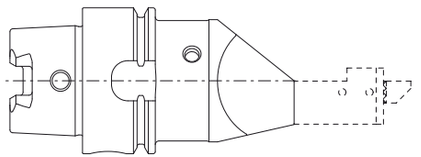

| | | | | BUMOTEC S191 | |
|---|---|---|---|---|---|
| LW | Compatibility | Page | L | Art. N° | Art. N° |
| LW3 | LW3-740.. | 13.06 | 32 | HSK-T40-LW3-0642-JET | HSK-A40-LW3-0642-JET-BU |
| | LW3-760.. | 13.07 | 43 | | |
| | LW3-320-340.. | 13.09/13.11 | 20 | | |
| | LW3-SCLCR.. | 13.12 | 20 | | |
| | LW3-SCMCN.. | 13.13 | 20 | | |
| | LW3-SDJCR.. | 13.14 | 20 | | |
| | LW3-SDNCN.. | 13.15 | 20 | | |
| | LW3-SDHCR.. | 13.16 | 20 | | |
| | LW3-SVJCR.. | 13.17 | 25 | | |

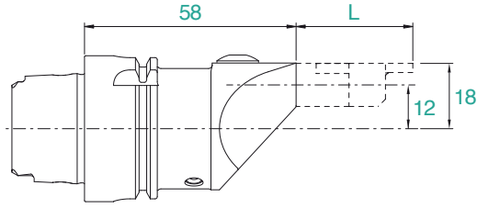
| Pièces de rechange Ersatzteile Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |





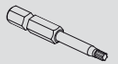


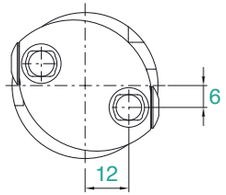



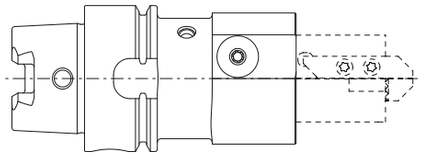




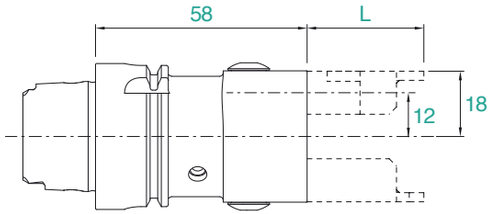

| | | | | BUMOTEC S191 | |
|---|---|---|---|---|---|
| LW | Compatibility | Page | L | Art. N° | Art. N° |
| LW3 | LW3-740.. | 6 | 32 | HSK-T40-LW3-1258-JET | HSK-A40-LW3-1258-JET-BU |
| | LW3-760.. | 7 | 43 | | |
| | LW3-320-340.. | 9/11 | 20 | | |
| | LW3-SCLCR.. | 12 | 20 | | |
| | LW3-SCMCN.. | 13 | 20 | | |
| | LW3-SDJCR.. | 14 | 20 | | |
| | LW3-SDNCN.. | 15 | 20 | | |
| | LW3-SDHCR.. | 16 | 20 | | |
| | LW3-SVJCR.. | 17 | 25 | | |

| Pièces de rechange Ersatzteile Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |

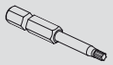




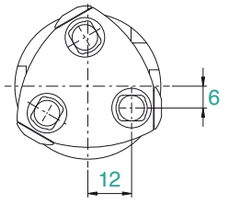


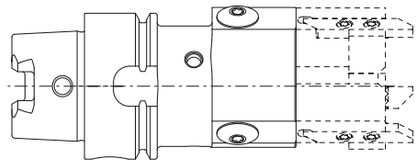

| LW | Compatibility | Page | L | Art. N° |
|---|---|---|---|---|
| LW3 | LW3-740.. | 13.06 | 32 | HSK-T40-LW3/2-1258-JET |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |

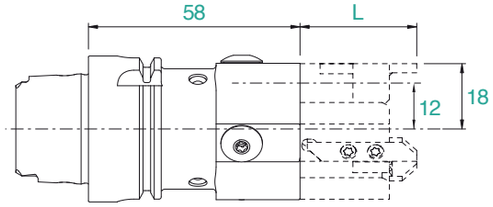




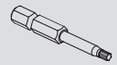
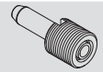


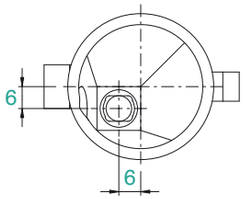



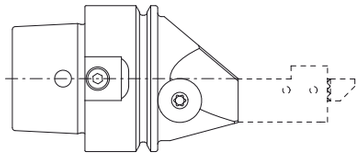


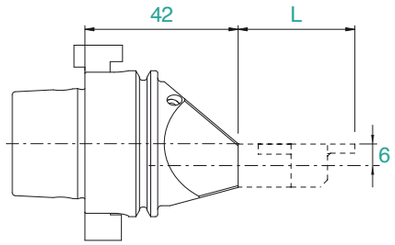



| LW | Compatibility | Page | L | Art. N° |
|---|---|---|---|---|
| LW3 | LW3-740.. | 13.06 | 32 | HSK-T40-LW3/3-1258-JET |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |

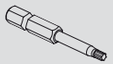







| | | | | WILLEMIN-MACODEL |
|---|---|---|---|---|
| LW | Compatibility | Page | L | Art. N° |
| LW3 | LW3-740.. | 13.06 | 32 | HSK-E40-LW3-0642-JET-WM |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

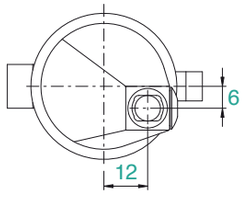
| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |

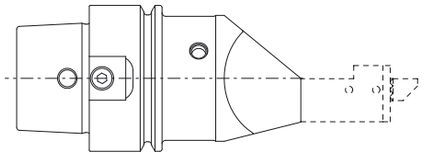


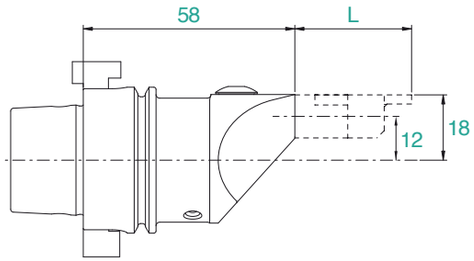
Porte-outils
Halter
Holders

SWITCH-Line

HSK-E40-LW3

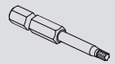
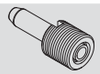


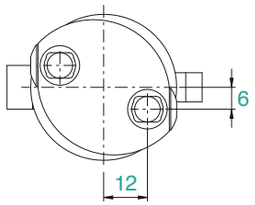



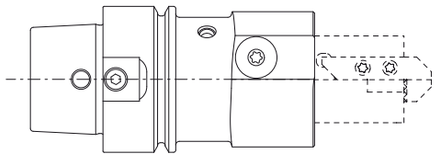


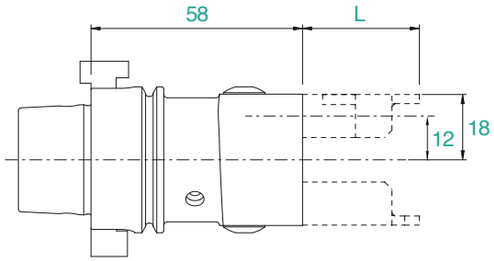



| | | | | WILLEMIN-MACODEL |
|---|---|---|---|---|
| LW | Compatibility | Page | L | Art. N° |
| LW3 | LW3-740.. | 13.06 | 32 | HSK-E40-LW3-1258-JET-WM |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |

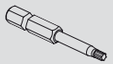




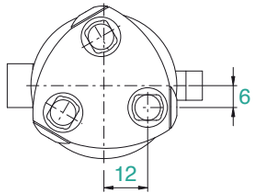


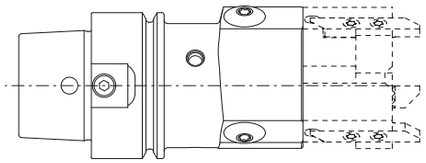

| | | | | WILLEMIN-MACODEL |
|---|---|---|---|---|
| LW | Compatibility | Page | L | Art. N° |
| LW3 | LW3-740.. | 13.06 | 32 | HSK-E40-LW3/2-1258-JET-WM |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

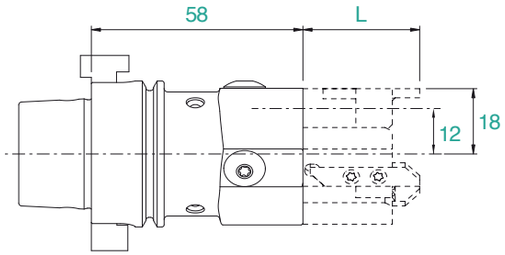
| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |





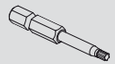
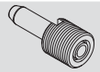


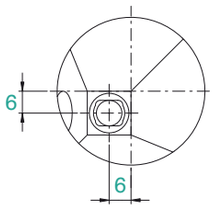



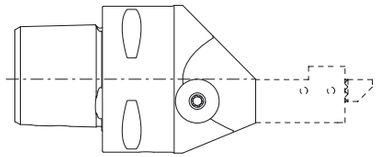


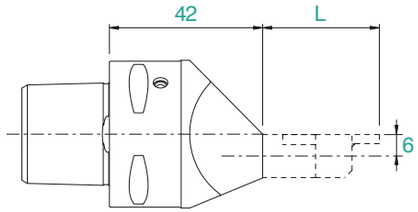



| | | | | WILLEMIN-MACODEL |
|---|---|---|---|---|
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| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | HSK-40-JET-M12X1 | C-HSK-40-JET |

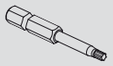







| LW | Compatibility | Page | L | Art. N° |
|---|---|---|---|---|
| LW3 | LW3-740.. | 13.06 | 32 | PSC4-LW3-0642-JET |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

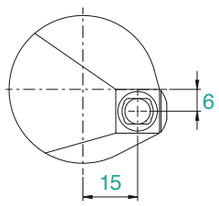
| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | PSC4-JET-M14X1.5 | C-PSC4-JET |

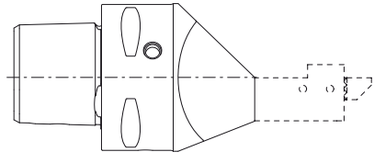


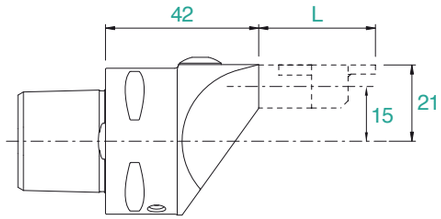
SWITCH-Line

PSC4-LW3

Porte-outils
Halter
Holders

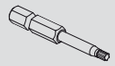


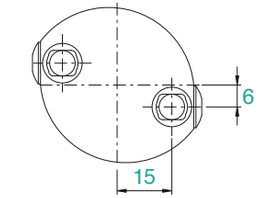



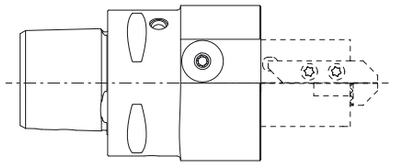


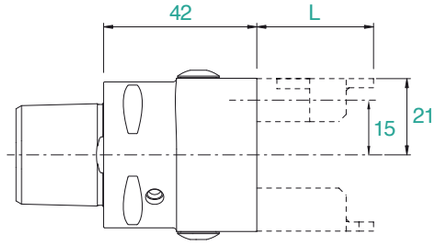



| LW | Compatibility | Page | L | Art. N° |
|---|---|---|---|---|
| LW3 | LW3-740.. | 13.06 | 32 | PSC4-LW3-1542-JET |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | PSC4-JET-M14X1.5 | C-PSC4-JET |

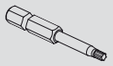




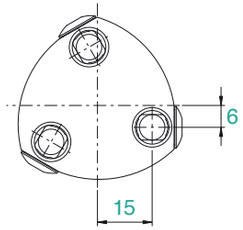


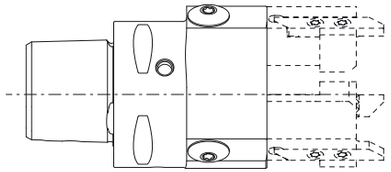

| LW | Compatibility | Page | L | Art. N° |
|---|---|---|---|---|
| LW3 | LW3-740.. | 13.06 | 32 | PSC4-LW3/2-1542-JET |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

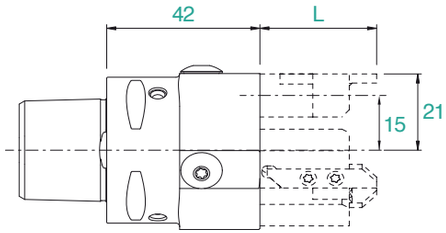
| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | PSC4-JET-M14X1.5 | C-PSC4-JET |





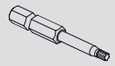


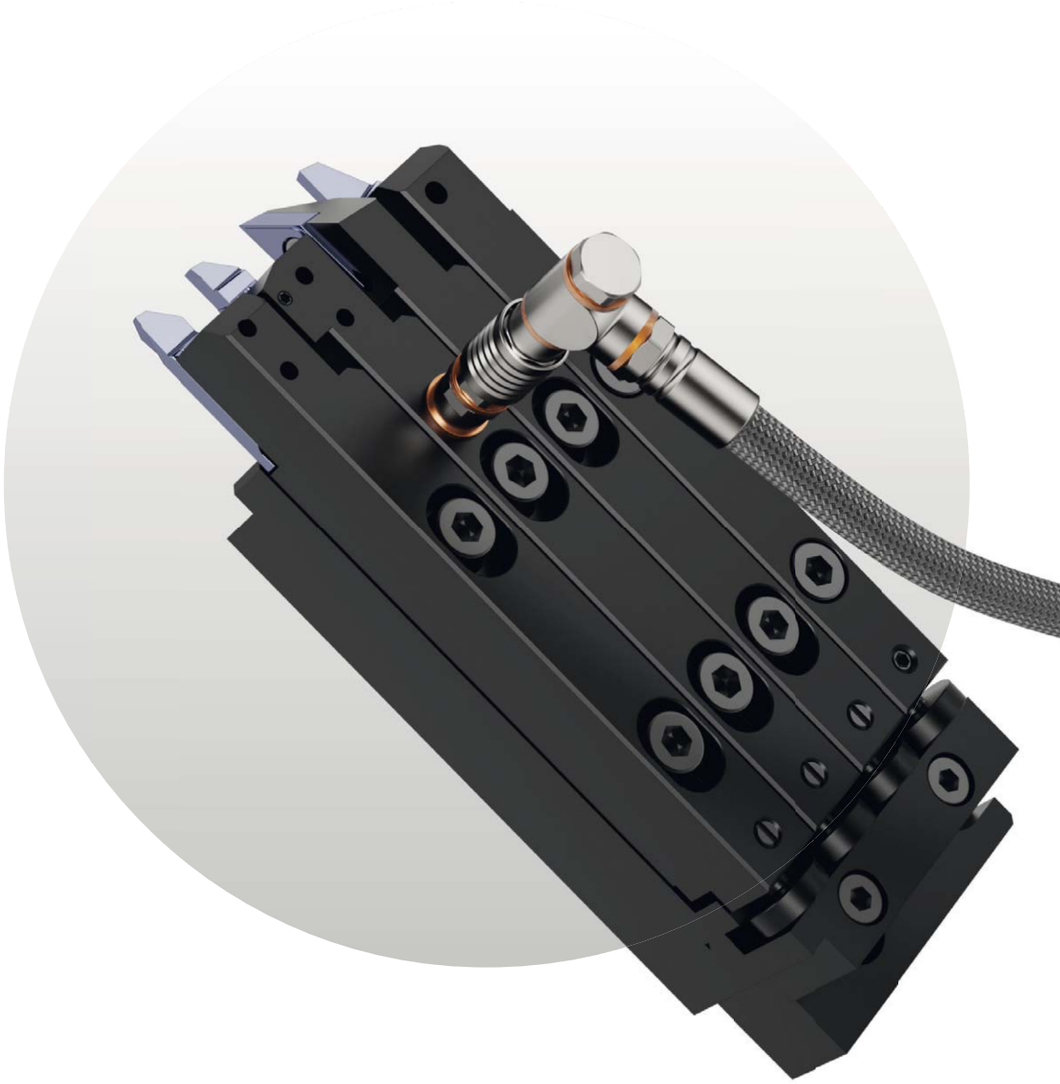





| LW | Compatibility | Page | L | Art. N° |
|---|---|---|---|---|
| LW3 | LW3-740.. | 13.06 | 32 | PSC4-LW3/3-1542-JET |
| | LW3-760.. | 13.07 | 43 | |
| | LW3-320-340.. | 13.09/13.11 | 20 | |
| | LW3-SCLCR.. | 13.12 | 20 | |
| | LW3-SCMCN.. | 13.13 | 20 | |
| | LW3-SDJCR.. | 13.14 | 20 | |
| | LW3-SDNCN.. | 13.15 | 20 | |
| | LW3-SDHCR.. | 13.16 | 20 | |
| | LW3-SVJCR.. | 13.17 | 25 | |

| Pièces de rechange<br>Ersatzteile<br>Spare parts | Options | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Art. N° | Art. N° | Art. N° | Art. N° | Art. N° |
| LW3-ER1.012.014 | CD-NM3.8 | TX15-E6.3 | PSC4-JET-M14X1.5 | C-PSC4-JET |

# MODU-Line



APPLITEC
CUTTING TOOLS

MODU-Line

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Infos und Vorteile
Infos and advantages > 14.04

Supports de base
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Baseholders

Adaptations disponibles pour les machines suivantes:
Verfügbare Anpassungen für folgende Maschinen:
Available adapters for the following machines:

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Hanwha > 14.20
Manurhin > 14.24
Metafil > 14.26
Star > 14.28
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Tsugami > 14.66

Porte-outils
Halter
Holders

Porte-outils
Halter
Holders

ML12 ML16




Infos > 14.74

Right cut



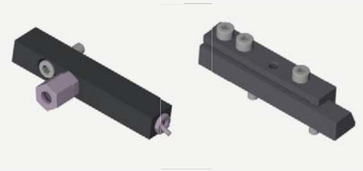
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Ersatzteile und Zubehör
Spare parts and accessories > 14.102



**MODU-Line**

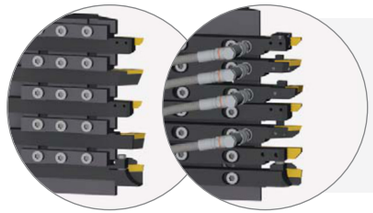
Infos et avantages
Infos und Vorteile
Infos and advantages

| Original system | MODU-Line system |
| --- | --- |
|  |  |

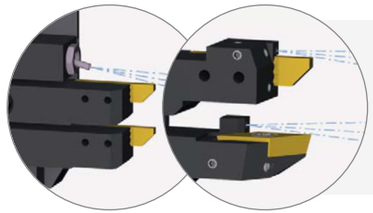
## Système d'outils modulaires pour tours automatiques

## Modulares Werkzeugsystem für Langdrehautomaten

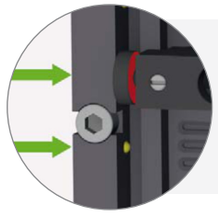
## Modular tooling system for sliding headstock automatic lathes



Plus d'outils disponibles
Mehr verfügbaren Werkzeuge
More available tools



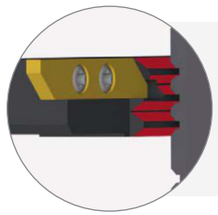
Système d'arrosage efficace
Effizientes Kühlmittelzufuhrsystem
Efficient coolant supply system



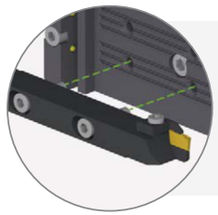
Repositionnement précis, poussée axiale automatique
Präzise Nachpositionierung, automatischer Axialschub
Precise repositionning, automatic axial thrust



Possibilité de préréglage et de réglage de la longueur des outils
Voreinstellbar auf feste oder einstellbare Länge
Presetting on fixed or adjustable length



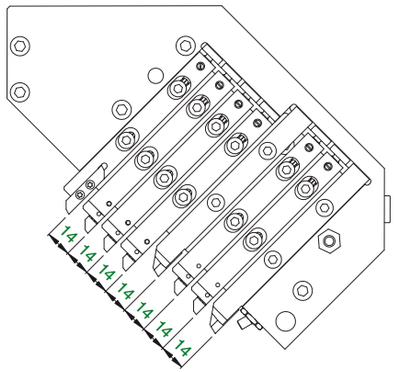
Système de fixation robuste et rigide
Robustes und starres Spannsystem
Strong and stable clamping system

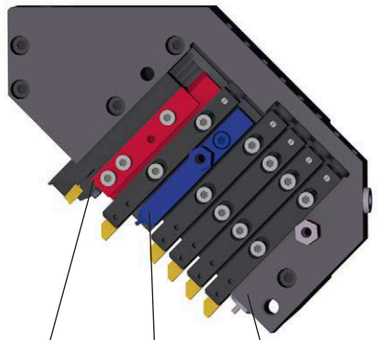


Changement d'outil simple et rapide
Einfacher und schneller Werkzeugwechsel
Easy and quick tool replacement

## Citizen

| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
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| L12-1M7 | ML12-CITIZEN-L12-1M7 | | 14.08 |
| L12-2M10 | ML12-CITIZEN-L12-2M10 | | 14.09 |
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| | ML12-CITIZEN-R04-QTF5008-4T | | 14.11 |
| | ML12-CITIZEN-R04-QTF5108-4T | | |
| R07 | ML12-CITIZEN-R07-QTF4008-5T | | 14.14 |
| | ML12-CITIZEN-R07-QTF4108-6T | | |
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| | ML12-CITIZEN-R07-QTF4608-4T | | |
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| L20E-1M8/L20X-1M10/<br>L20-2M8/2M12 | ML16-CITIZEN-L20E | | 14.18 |
| L20E-3M | ML16-L20E-GTF7812 | | 14.19 |

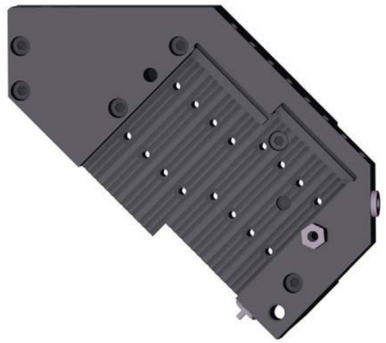


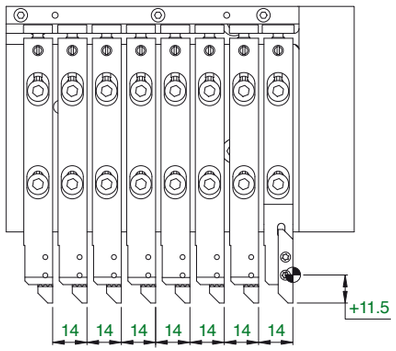
Outil ⍁ 12 mm possible avec module de serrage
Werkzeug ⍁ 12 mm mit Spannelement möglich
Tool ⍁ 12mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)

Arrosage intégré
Integrierter Kühlmittel
Integrated coolant



| | | | Accessoires<br>Zubehöre<br>Accessories | | |
|---|---|---|---|---|---|
| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Module de serrage<br>Spannelement<br>Clamping unit | Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
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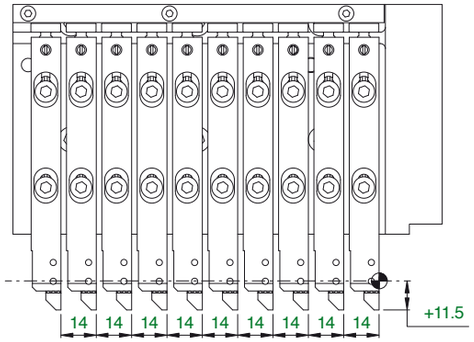





| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Accessoires Zubehöre Accessories: Page Seite Page |
|---|---|---|---|---|---|
| ML12-CITIZEN-L12-1M7 | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |



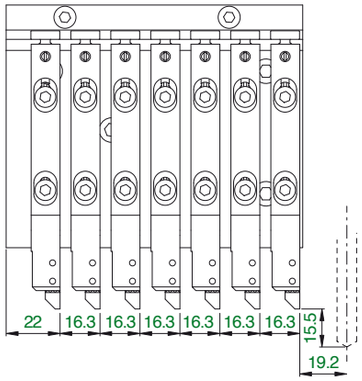




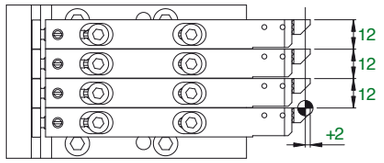


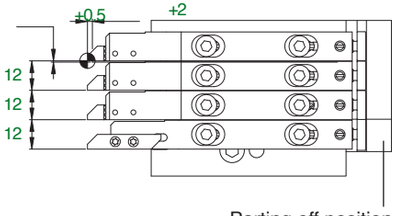


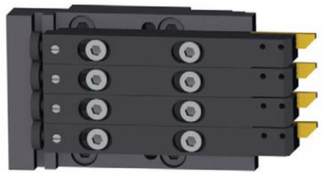

| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Accessoires Zubehöre Accessories: Page Seite Page |
|---|---|---|---|---|---|
| ML12-CITIZEN-L12-2M10 | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |











ML12-CITIZEN-R04-QTF5008-4T



ML12-CITIZEN-R04-QTF5108-4T

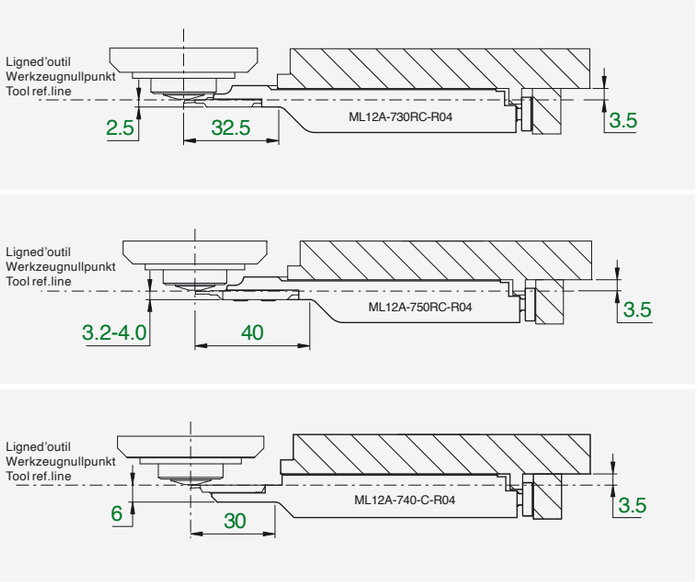
| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML12-CITIZEN-M16V/VIII | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |

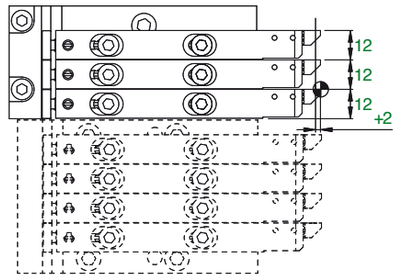
| Type Typ Type | Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|---|
| 4T | ML12-CITIZEN-R04-QTF5008-4T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| | ML12-CITIZEN-R04-QTF5108-4T | | | | | |

Citizen R04



avec canon
mit Führungsbuchse
with guide bush



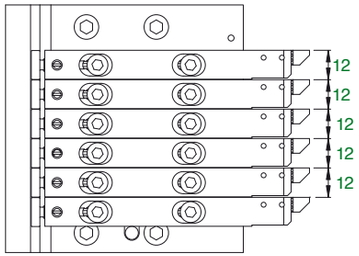








| Type de machine<br>Maschinen-Typ<br>Type of machine | Porte-outils<br>Halter<br>Holders | Art. N° | Plaquettes<br>Wendeplatten<br>Inserts | Pages<br>Seiten<br>Pages |
|---|---|---|---|---|
| Citizen R04 | ML12 | ML12A-730RC-R04 | 731R.../ 731RSF | > TOP-Line<br>TOP-Watch |
| | | ML12A-750RC-R04 | 751R.../ 751RDSF | |
| | | ML12A-740-C-R04 | 741 / 741SF | |

| | | | Accessoires<br>Zubehöre<br>Accessories | | |
|---|---|---|---|---|---|
| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Module de serrage<br>Spannelement<br>Clamping unit | Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
| ML12-CITIZEN-R04-QTF3101-3T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |





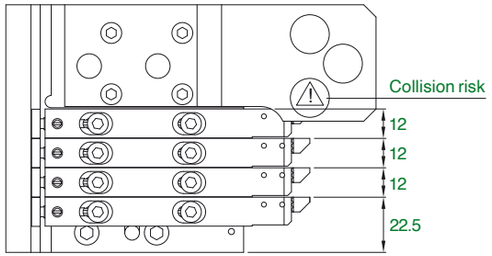

ML12-CITIZEN-R07-QTF4108-6T

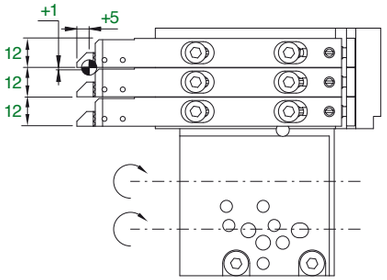


| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 5T | ML12-CITIZEN-R07-QTF4008-5T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 6T | ML12-CITIZEN-R07-QTF4108-6T | | | | | |









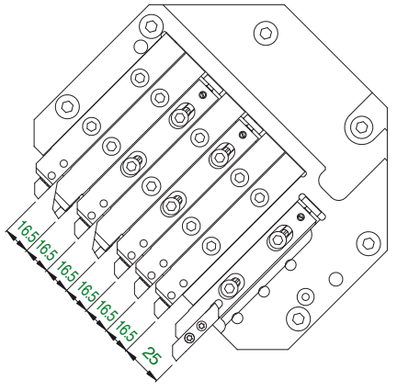

ML12-CITIZEN-R07-QTF4608-4T

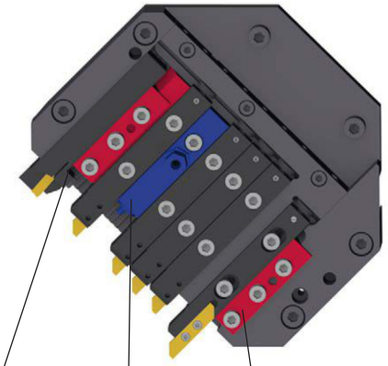


ML12-CITIZEN-R07-QTF4208-3T



| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 3T | ML12-CITIZEN-R07-QTF4208-3T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 4T | ML12-CITIZEN-R07-QTF4608-4T | | | | | |



Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)

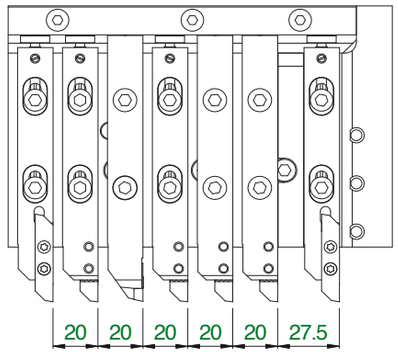
1 serrage ML16-FIX-16 pour outil ⍁ 16 mm inclus
1 Spannung ML16-FIX-16 für Werkzeug ⍁ 16 mm inbegriffen
1 clamping ML16-FIX-16 for tool ⍁ 16 mm included

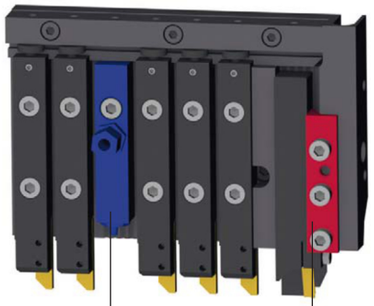


| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-CITIZEN-K16 | ML16 | > 14.77 | ML16-FIX-16/16.5 | ML16-JET-7/16 | 14.98 |







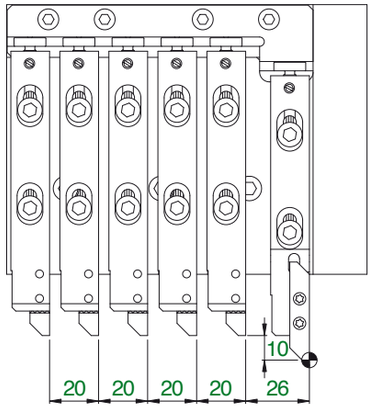



Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)

1 serrage ML16-FIX-16 pour outil ⍁ 16 mm inclus
1 Spannung ML16-FIX-16 für Werkzeug ⍁ 16 mm inbegriffen
1 clamping ML16-FIX-16 for tool ⍁ 16 mm included



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-CITIZEN-L20 | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |



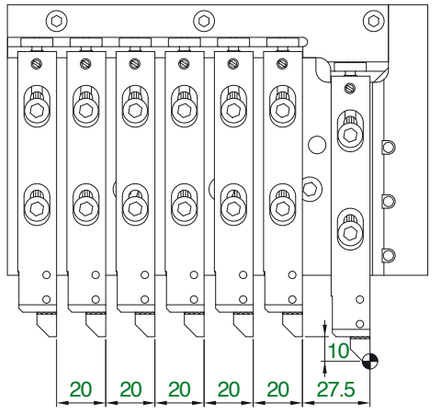





| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Accessoires Zubehöre Accessories: Page Seite Page |
|---|---|---|---|---|---|
| ML16-CITIZEN-L20E | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |










Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)

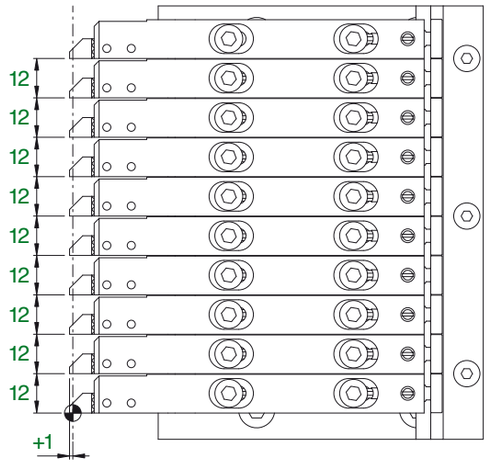
1 serrage ML16-FIX-16 pour outil ⍁ 16 mm inclus
1 Spannung ML16-FIX-16 für Werkzeug ⍁ 16 mm inbegriffen
1 clamping ML16-FIX-16 for tool ⍁ 16 mm included

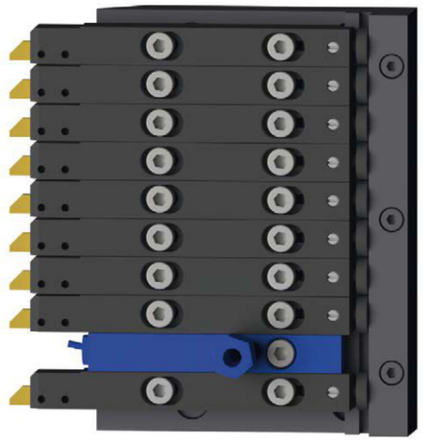


| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Accessoires Zubehöre Accessories: Page Seite Page |
|---|---|---|---|---|---|
| ML16-L20E-GTF7812 | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |

## Hanwha

| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
|---|---|---|---|
| XD10 | ML12-HANWHA-XD10 | ML12 | 14.21 |
| XD20M | ML12-HANWHA-XD20M | | 14.22 |
| SL12/16 | ML16-HANWHA-SL12/16 | ML16 | 14.23 |



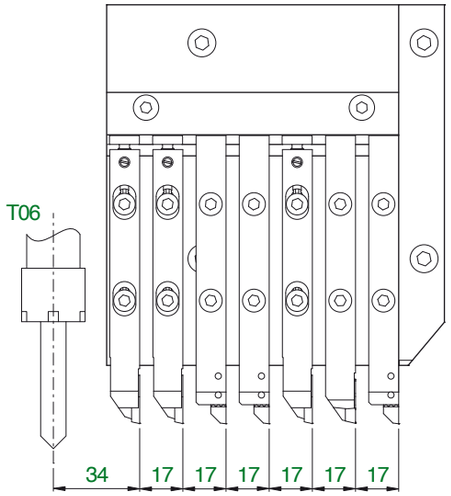


| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|
| ML12-HANWHA-XD10 | ML12 | > 14.77 | - | ML12-JET-5/16 | 14.98 |

## ML12

+ 2 outils (max 7)
+ 2 Werkzeuge (max 7)
+ 2 tools (max 7)

Hanwha XD20M








| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML12-HANWHA-XD20M | ML12 | > 14.77 | - | ML12-JET-5/16 | 14.98 |

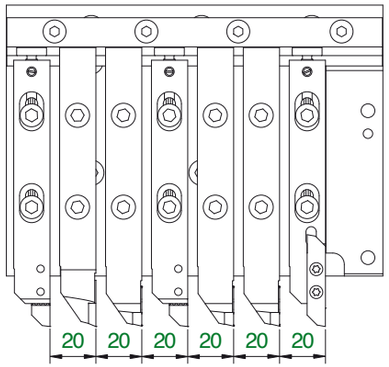




## ML16

+ 1 outil (max 7)
+ 1 Werkzeug (max 7)
+ 1 tool (max 7)

Hanwha SL12 / 16







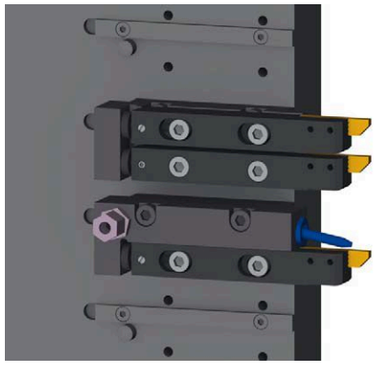

| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-HANWHA-SL12/16 | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |

## Manurhin

| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
|---|---|---|---|
| KMX426/526/626/<br>Swingg 20-26 MM | ML16-KMX26-JET | ML16 | 14.25 |
| | ML16-KMX26-DUO | | |





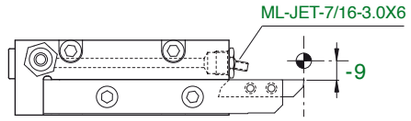


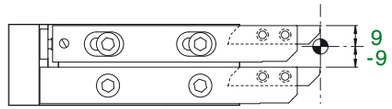


JET



DUO






JET

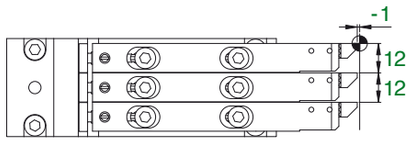


DUO

| | | | | Accessoires<br>Zubehöre<br>Accessories | | |
|---|---|---|---|---|---|---|
| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Module de serrage<br>Spannelement<br>Clamping unit | Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
| JET | ML16-KMX26-JET | ML16 | > 14.77 | – | ML-JET-7/16… | 14.98 |
| DUO | ML16-KMX26-DUO | | | | ML16-JET-7/16 | |

## Metafil

| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
|---|---|---|---|
| D3/D10/D13 | ML12-D10-3T | ML12 | 14.27 |



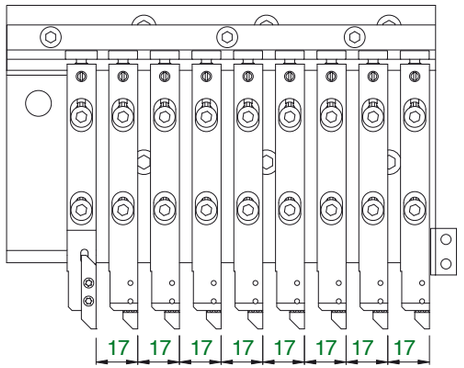





| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|
| ML12-D10-3T | ML12 | > 14.77 | - | ML12-JET-5/16 | 14.98 |

## Star

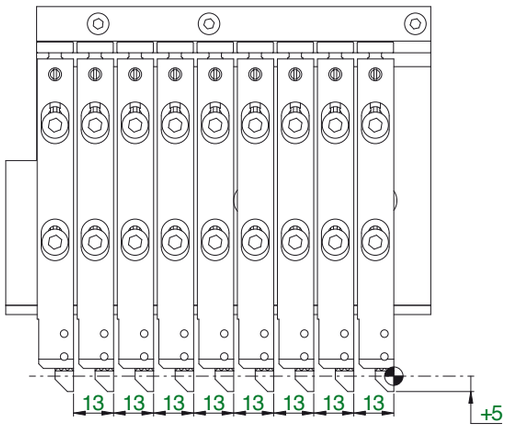
| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
|---|---|---|---|
| SB-12RG | ML12-STAR-SB-12RG | ML12 | 14.29 |
| SL7/10 | ML12-STAR-SL7/10 | | 14.30 |
| SR-10J | ML12-STAR-SR-10J | | 14.31 |
| SW-12RII | ML12-STAR-SW-12RII-2T | | 14.32 |
| | ML12-STAR-SW-12RII-8T | | |
| SA-12/SA-16/SA-16R | ML16-STAR-SA-16 | ML16 | 14.33 |
| SB-16 | ML16-STAR-SB-16 | | 14.34 |
| SB-16/20RG | ML16-STAR-SB-16/20RG | | 14.35 |
| SB-20C/E | ML16-STAR-SB-20C/E | | 14.36 |
| SR-16R/SR-20R/SR-20RII | ML16-STAR-SR-20R | | 14.37 |
| SR-20J/SR-20RIII | ML16-STAR-SR-20J | | 14.38 |
| | ML16-STAR-SR-20RIII | | |
| SR-20JII-A/B | ML16-STAR-SR-20JII-A/B | | 14.39 |
| SR-20RIV | ML16-STAR-SR-20RIV-2T | | 14.40 |
| | ML16-STAR-SR-20RIV-6T | | |
| SR-32J | ML16-STAR-SR-32J | | 14.41 |
| SV-12/20 | ML16-STAR-SV-12/20 | | 14.42 |
| SV-20R | ML16-STAR-SV-20R | | 14.43 |
| SW-20 | ML16-STAR-SW-20-2T | | 14.44 |
| | ML16-STAR-SW-20-6T | | |

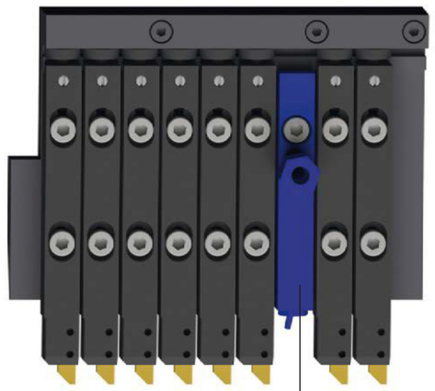




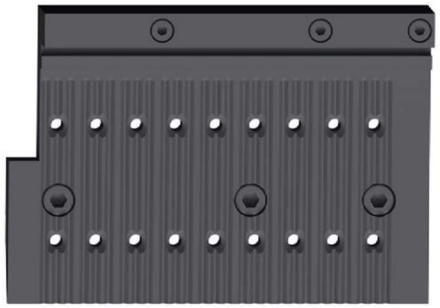



| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|
| ML12-STAR-SB-12RG | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |



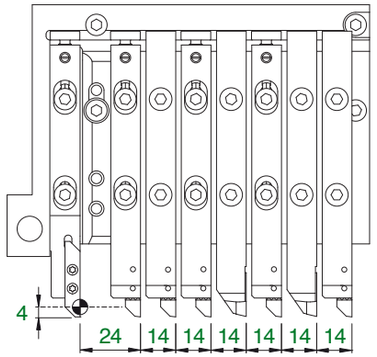
Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 9T | ML12-STAR-SL7/10 | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |







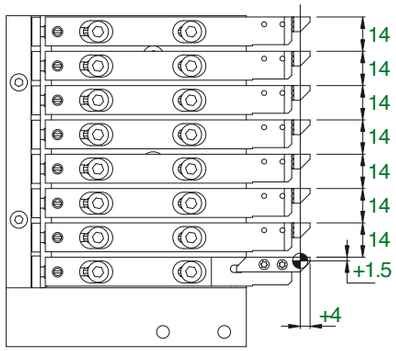


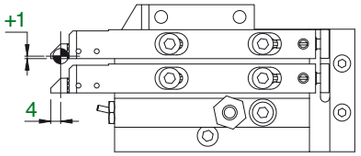

1 serrage ML12-FIX-12pour outil ⍁ 12 mm inclus
1 Spannung ML12-FIX-12 für Werkzeug ⍁ 12 mm inbegriffen
1 clamping ML12-FIX-12for tool ⍁ 12 mm included

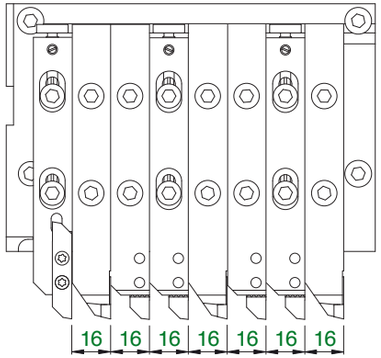
Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)

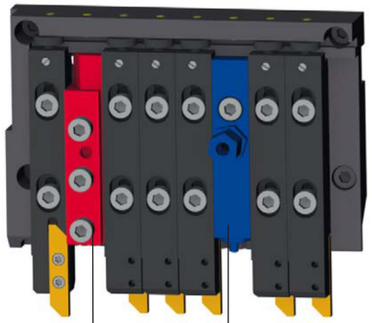


| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|
| ML12-STAR-SR-10J | ML12 | > 14.77 | ML12-FIX-12/14 | ML12-JET-5/16 | 14.98 |



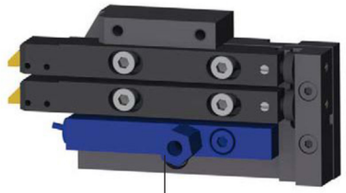



Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)





Position uniquement utilisable avec module d'arrosage, en option
Position nur mit Kühlmittelzufuhrelement verwendbar, optional
Position only with coolant supply unit usable, optional



ML12-STAR-SW-12RII-8T

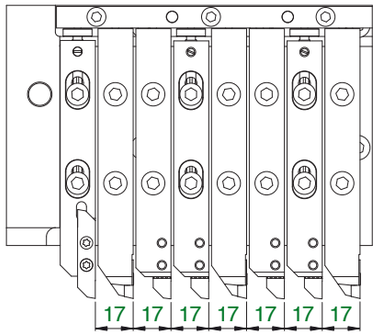


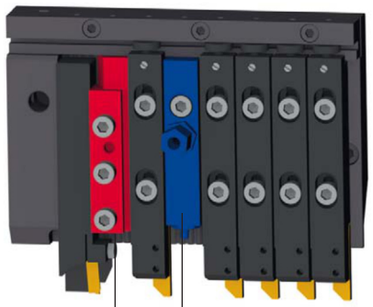
ML12-STAR-SW-12RII-2T



| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 2T | ML12-STAR-SW-12RII-2T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 8T | ML12-STAR-SW-12RII-8T | | | | | |

| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|
| ML16-STAR-SA-16 | ML16 | > 14.77 | ML16-FIX-16/16 | ML16-JET-7/16 | 14.98 |



Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

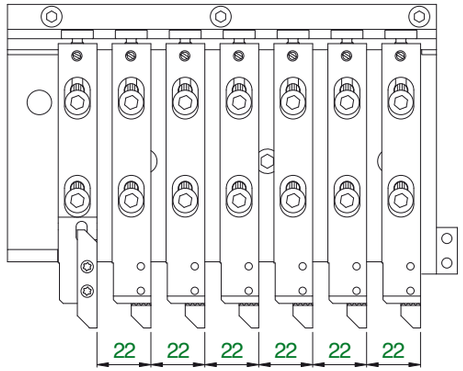
Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SB-16 | ML16 | > 14.77 | ML16-FIX-16/17 | ML16-JET-7/16 | 14.98 |







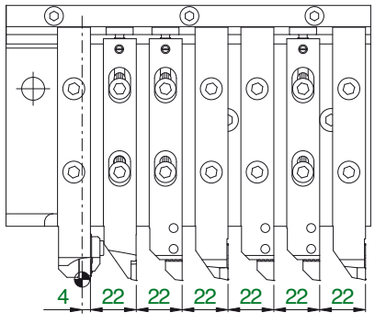



Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SB-16/20RG | ML16 | > 14.77 | ML16-FIX-16/22 | ML16-JET-7/16 | 14.98 |






Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

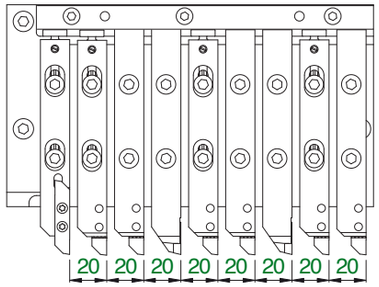
Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)

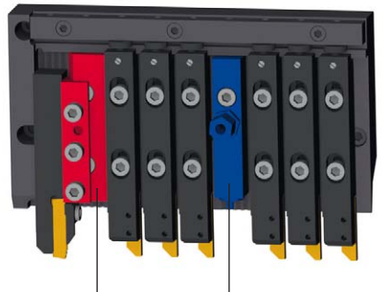


| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SB20C/E | ML16 | > 14.77 | ML16-FIX-16/22 | ML16-JET-7/16 | 14.98 |







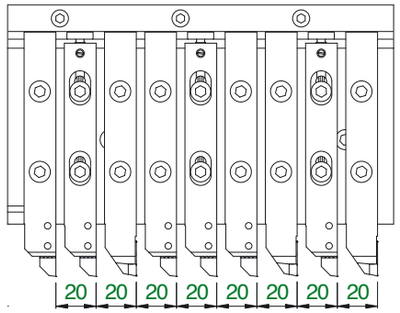



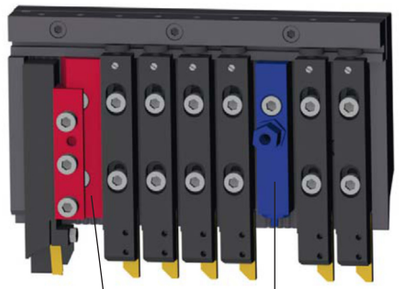
Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SR-20R | ML16 | > 14.77 | ML16-FIX-16/20 | ML16-JET-7/16 | 14.98 |



Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

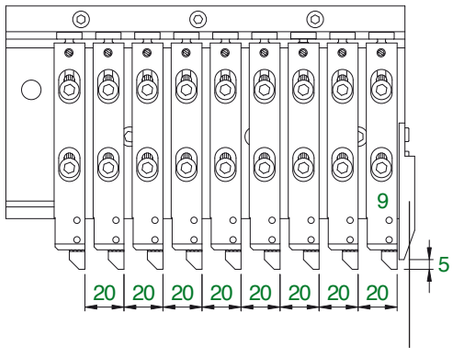
Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SR-20RIII | ML16 | > 14.77 | ML16-FIX-16/20 | ML16-JET-7/16 | 14.98 |
| ML16-STAR-SR-20J | | | | | |





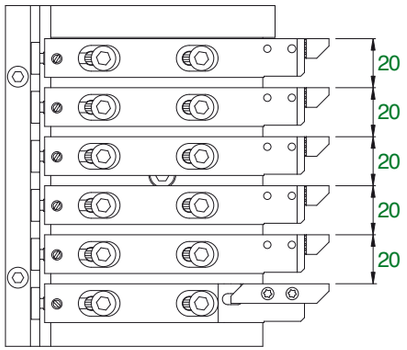


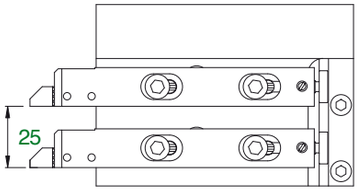



Risque de collision avec outil n° 9
Kollisionsrisiko mit Werkzeug Nr. 9
Collision risk with tool no. 9



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SR-20JII-A/B | ML16 | > 14.77 | ML16-FIX-16/20 | ML16-JET-7/16 | 14.98 |










ML16-STAR-SR-20RIV-6T

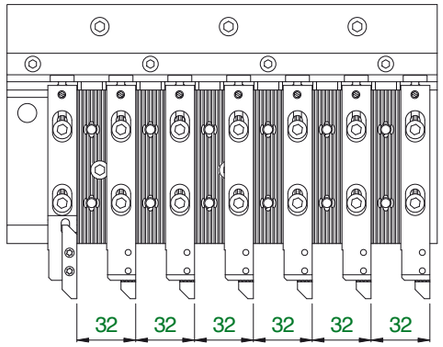


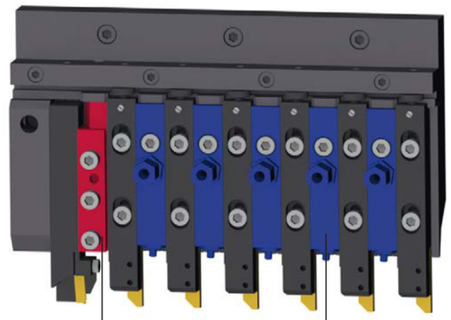
ML16-STAR-SR-20RIV-2T

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires Zubehöre Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires Zubehöre Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 2T | ML16-STAR-SR-20RIV-2T | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |
| 6T | ML16-STAR-SR-20RIV-6T | | | | | |







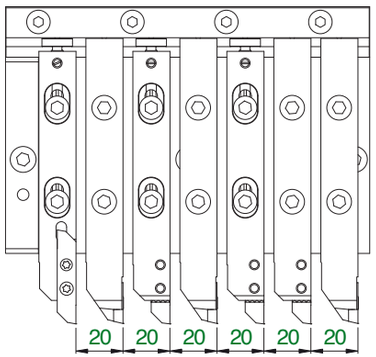



Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires Zubehöre Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires Zubehöre Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|
| ML16-STAR-SR-32J | ML16 | > 14.77 | ML16-FIX-16/16 | ML16-JET-7/16 | 14.98 |






Outil ⍁ 16 mm possible avec module de serrage
Werkzeug ⍁ 16 mm mit Spannelement möglich
Tool ⍁ 16 mm possible with clamping unit

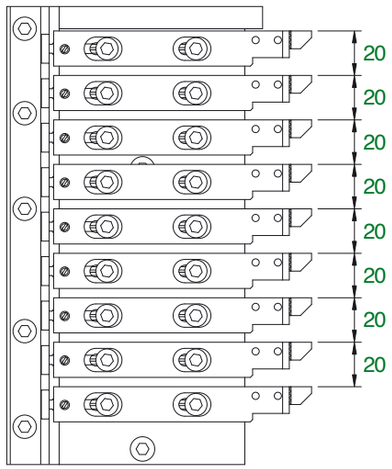
Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SV-12/20 | ML16 | > 14.77 | ML16-FIX-16/20 | ML16-JET-7/16 | 14.98 |











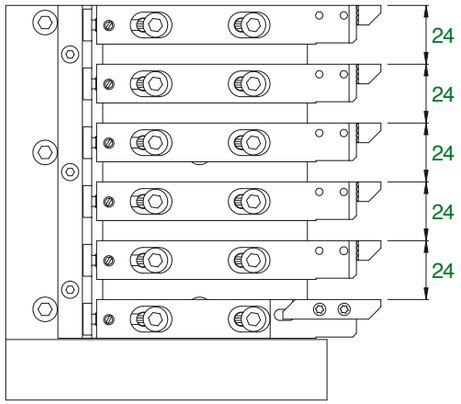

| Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|
| ML16-STAR-SV-20R | ML16 | > 14.77 | ML16-FIX-16/20 | ML16-JET-7/16 | 14.98 |

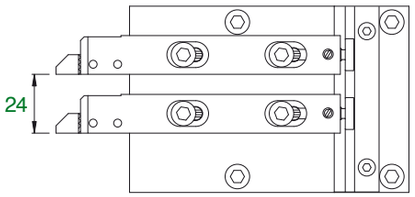
Star SW-20

+ 1 outil (max 8)
+ 1 Werkzeug (max 8)
+ 1 tool (max 8)

ML16

MODU-Line






ML16-STAR-SW-20-6T



ML16-STAR-SW-20-2T



ML16-STAR-SW-20-6T



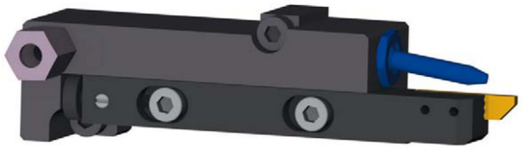
ML16-STAR-SW-20-2T

| | | | | Accessoires Zubehöre Accessories | | |
|---|---|---|---|---|---|---|
| Type Typ Type | Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Module de serrage Spannelement Clamping unit | Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
| 2T | ML16-STAR-SW-20-2T | ML16 | > 62 | – | ML16-JET-7/16 | 14.98 |
| 6T | ML16-STAR-SW-20-6T | | | ML16-FIX-16/24 | | |

## Tornos

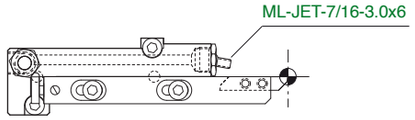
| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
|---|---|---|---|
| DECO7/10 - EvoDECO 10 | ML12-DECO10-DUO | ML12 | 14.47 |
| | ML12-DECO10-JET | | |
| SWISS-NANO/SWISS-NANO7 | ML12-SWISS-NANO-2T | | 14.50 |
| | ML12-SWISS-NANO-3T | | |
| | ML12-SWISS-NANO-6T | | 14.48 |
| SWISS-NANO7 | ML12-SWISS-NANO-7-4T | | 14.51 |
| DT13 | ML-DT13-2052104-9T | | 14.52 |
| | ML12-DT13-2020206-9T | | |
| CT20 | ML12-CT20-2020019-7T | | 14.53 |
| GT13 | ML12-GT13-389104-3T | | 14.54 |
| | ML12-GT13-390224-5T | | |
| | ML12-GT13-390223-7T | | |
| GT26 | ML16-GT26-386210-5T | ML16 | 14.56 |
| | ML16-GT26-386209-6T | | |
| GT32 | ML16-GT32-389210-4T | | 14.58 |
| | ML16-GT32-389209-5T | | |
| DECO13- EvoDECO16 | ML16-DECO13-DUO | | 14.60 |
| | ML16-DECO13-JET | | |
| DECO20/26 - EvoDECO20/32 | ML16-DECO20-DUO | | 14.61 |
| | ML16-DECO20-JET | | |
| SIGMA20/32 | ML16-S20-DUO | | 14.62 |
| | ML16-S20-JET | | |
| SWISS ST26 | ML16-SWISS-ST26-DUO | | 14.63 |
| | ML16-SWISS-ST26-JET | | |
| DT26 | ML16-DT26-2020206-7T | | 14.64 |
| | ML16-DT26-2052096-5T | | 14.65 |

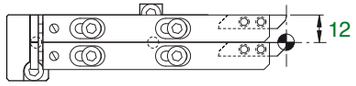
JET



DUO





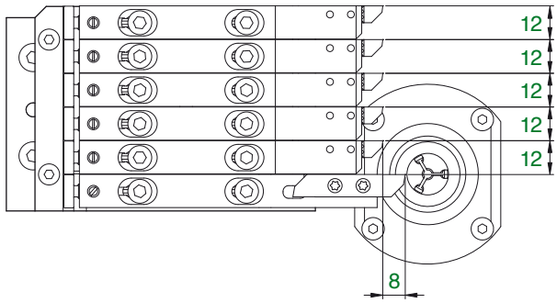



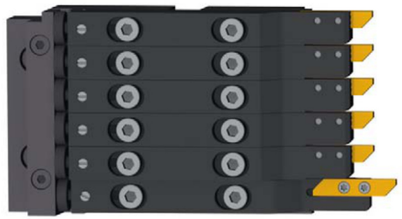





JET DUO

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| JET | ML12-DECO10-JET | ML12 | > 14.77 | – | ML-JET-7/16… | 14.98 |
| DUO | ML12-DECO10-DUO | | | | ML12-JET-5/16 | |



6T

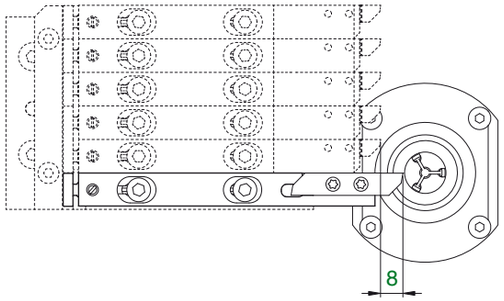


6T

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 6T | ML12-SWISS-NANO-6T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |

## ML12

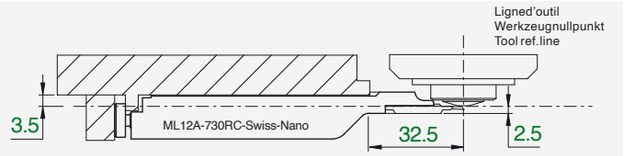
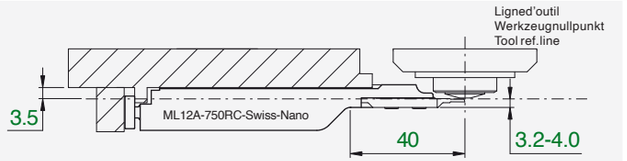
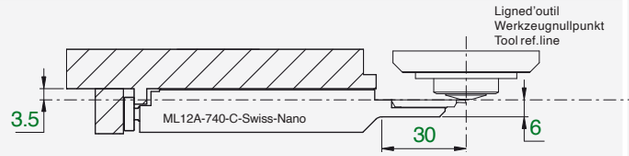
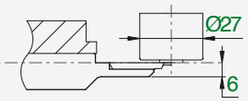
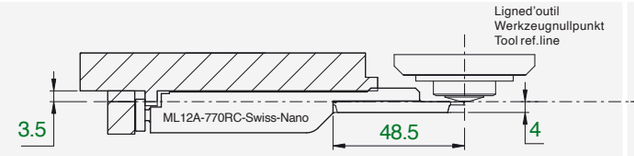
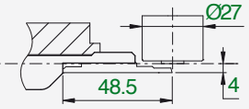
Tornos SwissNano
SwissNano 7



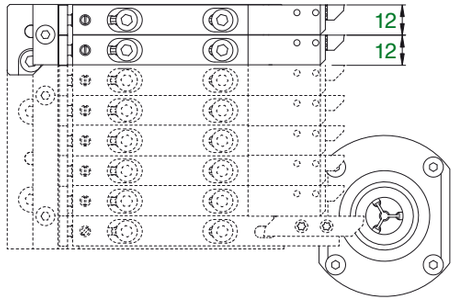




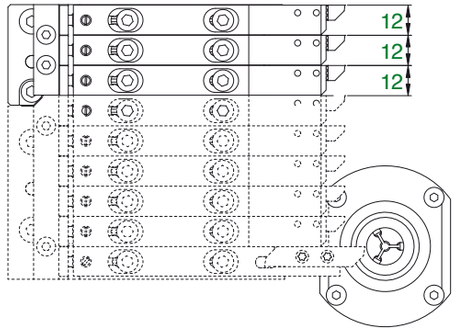



| avec canon<br>mit Führungsbuchse<br>with guide bush | avec pince<br>mit Spannzange<br>with collet |
|---|---|
|  | ——— |
|  | ——— |
|  |  |
|  |  |

| Type de machine<br>Maschinen-Typ<br>Type of machine | Porte-outils<br>Halter<br>Holders | Art. N° | Plaquettes<br>Wendeplatten<br>Inserts | Pages<br>Seiten<br>Pages |
|---|---|---|---|---|
| SwissNano | ML12 | ML12A-730RC-SWISS-NANO | 731R…/ 731RSF | > TOP-Line<br>TOP-Watch |
| | | ML12A-750RC-SWISS-NANO | 751R…/ 751RDSF | |
| | | ML12A-740-C-SWISS-NANO | 741…/ 741SF | |
| | | ML12A-770RC-SWISS-NANO | 771R… | > TOP-Line |









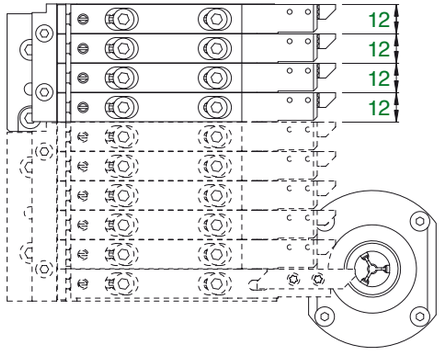
2T


3T

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 2T | ML12-SWISS-NANO-2T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 3T | ML12-SWISS-NANO-3T | | | | | |



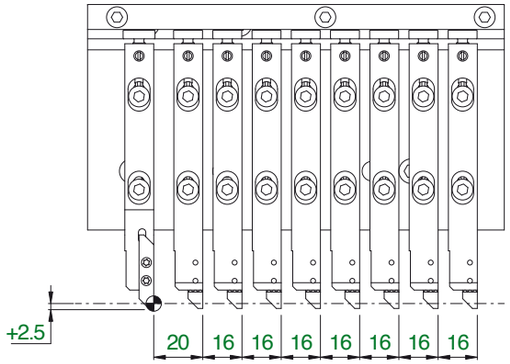









| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 4T | ML12-SWISS-NANO-7-4T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |



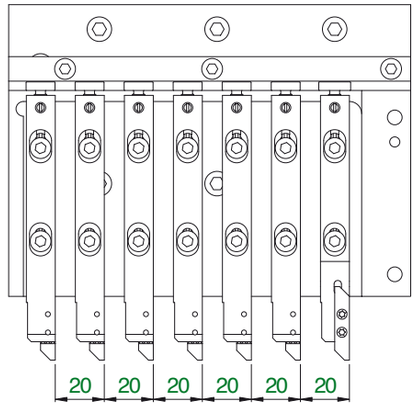





| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page | Type machine<br>Maschinentyp<br>Machine type |
|---|---|---|---|---|---|---|---|
| 9T | ML12-DT13-2020206-9T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 | DT 13 |
| 9T | ML12-DT13-2052104-9T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 | DT 13 (S-HP) |









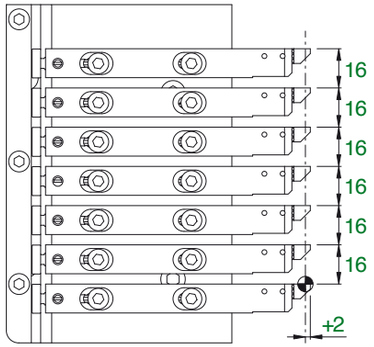


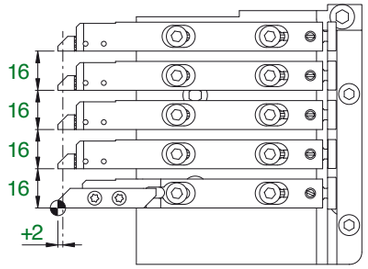

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 7T | ML12-CT20-2020019-7T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |

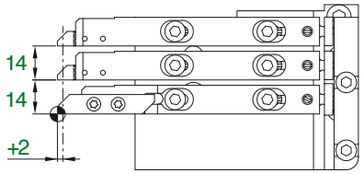
Tornos GT13

MODU-Line

ML12












ML12-GT13-390223-7T



ML12-GT13-390224-5T



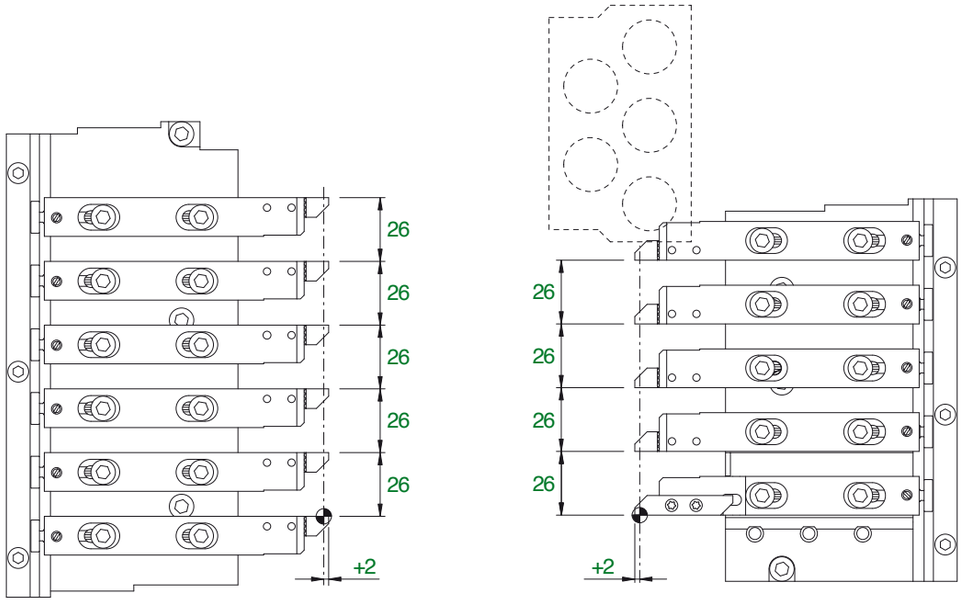
ML12-GT13-389104-3T

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Accessoires<br>Zubehöre<br>Accessories<br>Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 3T | ML12-GT13-389104-3T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 5T | ML12-GT13-390224-5T | | | | | |
| 7T | ML12-GT13-390223-7T | | | | | |

Tornos GT26

MODU-Line

ML16






ML16-GT26-386209-6T

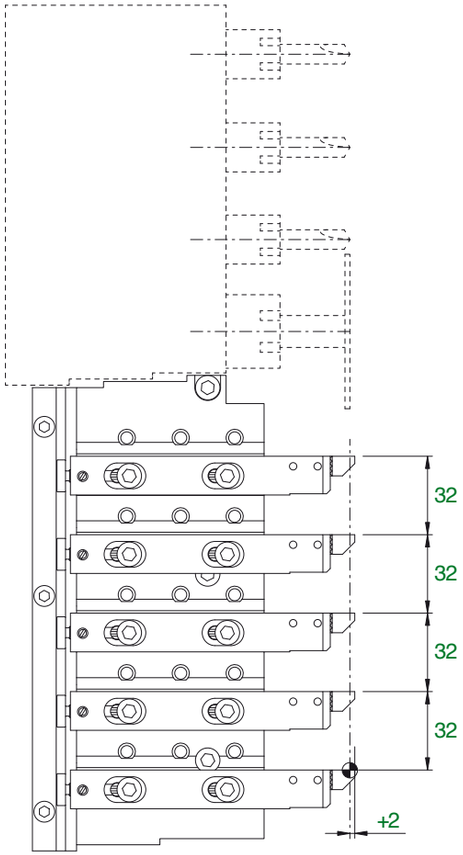


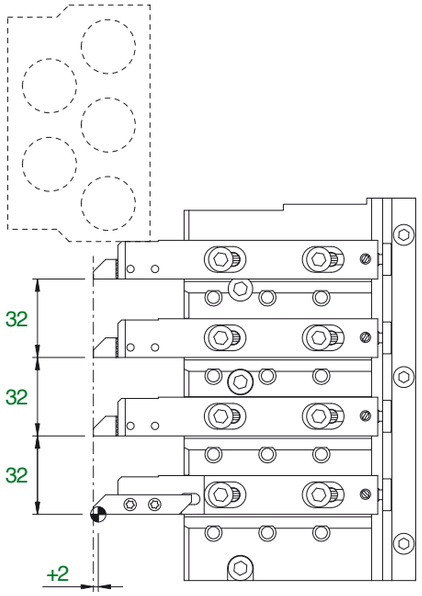
ML16-GT26-386210-5T



1 serrage ML16-FIX-16pour outil ◫ 16mm inclus
1 Spannung ML16-FIX-16 für Werkzeug ◫ 16 mm inbegriffen
1 clamping ML16-FIX-16for tool ◫ 16 mm included

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Accessoires<br>Zubehöre<br>Accessories<br>Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 5T | ML16-GT26-386210-5T | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |
| 6T | ML16-GT26-386209-6T | | | | | |






ML16-GT32-386209-5T



ML16-GT32-386210-4T



Holder ML16



Holder ⎅16



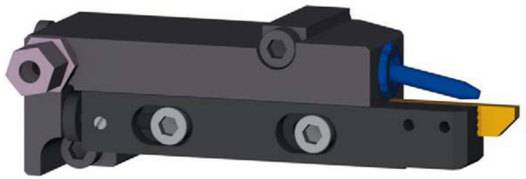
Holder ML16



Holder ⎅16

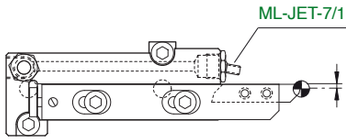
| | | | | Accessoires Zubehöre Accessories | | | |
|---|---|---|---|---|---|---|---|
| Type Typ Type | Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Module de serrage Spannelement Clamping unit | | Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Pages Seiten Pages |
| 4T | ML16-GT32-386210-4T | ML16 | > 14.77 | 1x inclus 1x inbegriffen 1x included | Option ML16-FIX-16 | ML16-JET-7/16 | 14.98 |
| 5T | ML16-GT32-386209-5T | | | | | | |

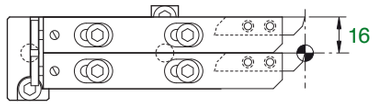
JET



DUO








JET



DUO

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| JET | ML16-DECO13-JET | ML16 | > 14.77 | – | ML-JET-7/16… | 14.98 |
| DUO | ML16-DECO13-DUO | | | | ML16-JET-7/16 | 14.98 |



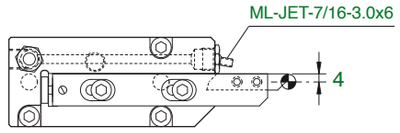


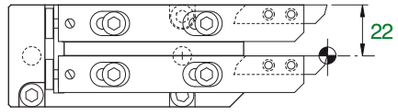
JET



DUO








JET



DUO

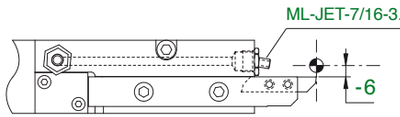
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|---|---|---|---|---|---|---|
| JET | ML16-DECO20-JET | ML16 | > 14.77 | – | ML-JET-7/16… | 14.98 |
| DUO | ML16-DECO20-DUO | | | | ML16-JET-7/16 | 14.98 |

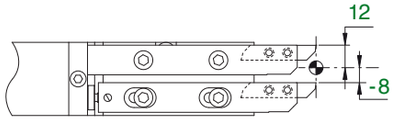
JET



DUO








JET



DUO

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| JET | ML16-S20-JET | ML16 | > 14.77 | – | ML-JET-7/16… | 14.98 |
| DUO | ML16-S20-DUO | | | | ML16-JET-7/16 | 14.98 |



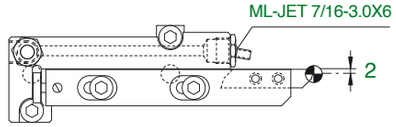


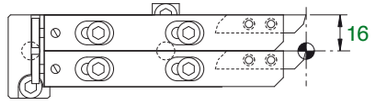
JET



DUO





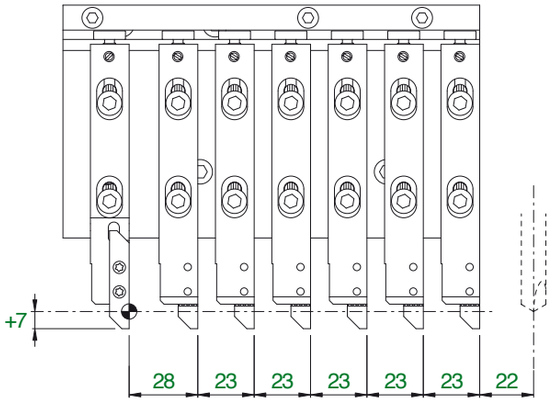



JET



DUO

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| JET | ML16-SWISS-ST26-JET | ML16 | > 14.77 | – | ML-JET-7/16… | 14.98 |
| DUO | ML16-SWISS-ST26-DUO | | | | ML16-JET-7/16 | 14.98 |



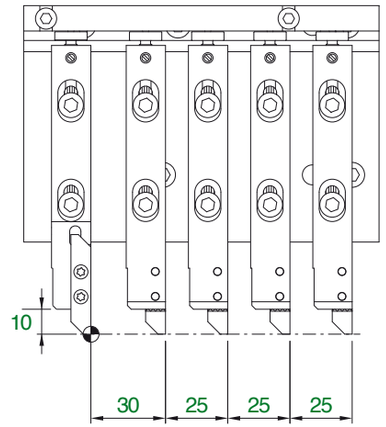




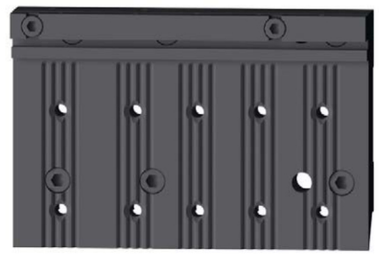

| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Accessoires<br>Zubehöre<br>Accessories<br>Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 7T | ML16-DT26-2020206-7T | ML16 | > 14.77 | – | ML16-JET-7/16 | 14.98 |









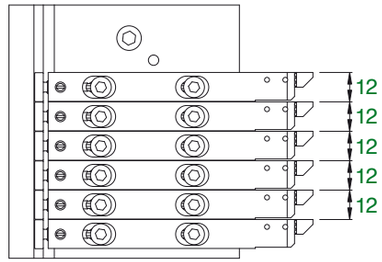



| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Accessoires<br>Zubehöre<br>Accessories<br>Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
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MODU-Line

## Tsugami

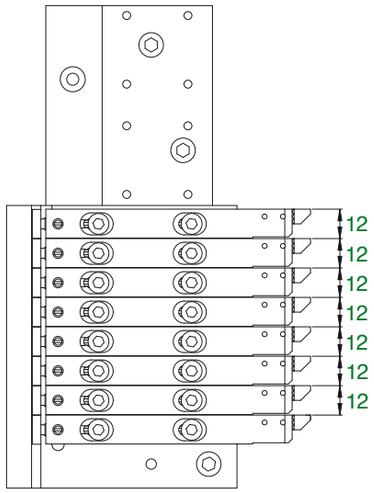
| Machine<br>Maschine<br>Machine | Adaptations<br>Anpassungen<br>Adapters | Type<br>Typ<br>Type | Page<br>Seite<br>Page |
|---|---|---|---|
| B074 | ML12-B074-1-6T | ML12 | 14.67 |
| B075 | ML12-B075-1-8T | | 14.68 |
| P034 | ML12-P034-1-5T | | 14.69 |
| | ML12-P034-1-7T | | 14.70 |
| | ML12-P034-2-4T | | 14.69 |
| | ML12-P034-2-10T | | 14.70 |
| P034-P036 | 0400-ML12-R0000C-3T | | 14.72 |
| | 0400-ML12-R0000C-5T | | 14.73 |








| | | | | Accessoires<br>Zubehöre<br>Accessories | | |
|---|---|---|---|---|---|---|
| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Module de serrage<br>Spannelement<br>Clamping unit | Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
| 6T | ML12-B074-1-6T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |



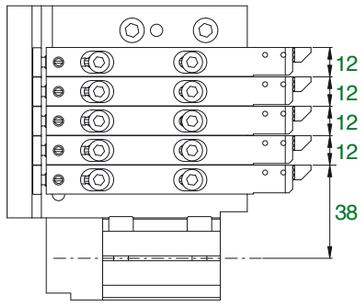





| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 8T | ML12-B075-1-8T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |



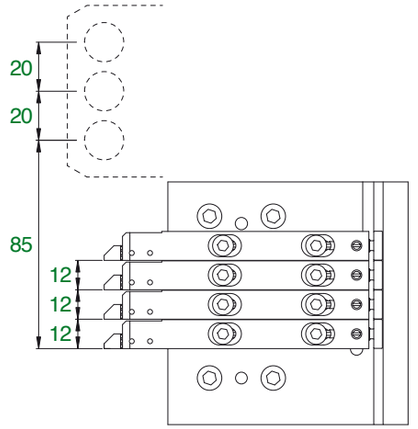









ML12-P034-1-5T

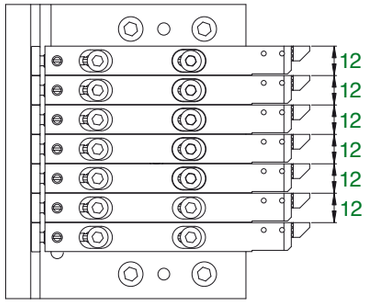


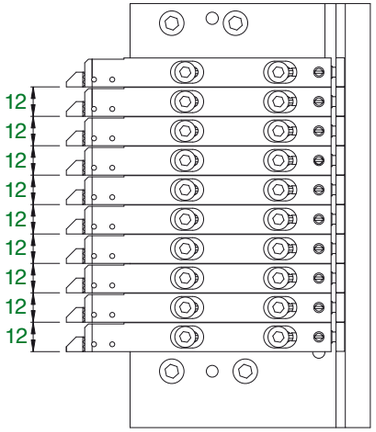





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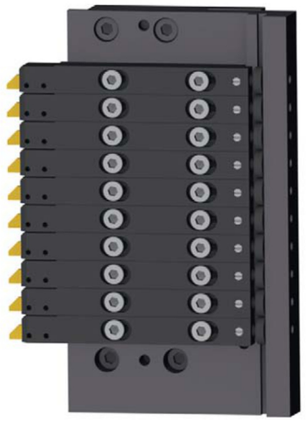
| Type<br>Typ<br>Type | Art. N° | Porte-outils<br>Halter<br>Holders | Pages<br>Seiten<br>Pages | Accessoires<br>Zubehöre<br>Accessories<br>Module de serrage<br>Spannelement<br>Clamping unit | Accessoires<br>Zubehöre<br>Accessories<br>Module d'arrosage<br>Kühlmittelzufuhrelement<br>Coolant supply unit | Page<br>Seite<br>Page |
|---|---|---|---|---|---|---|
| 4T | ML12-P034-2-4T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 5T | ML12-P034-1-5T | | | | | |






ML12-P034-1-7T



ML12-P034-2-10T

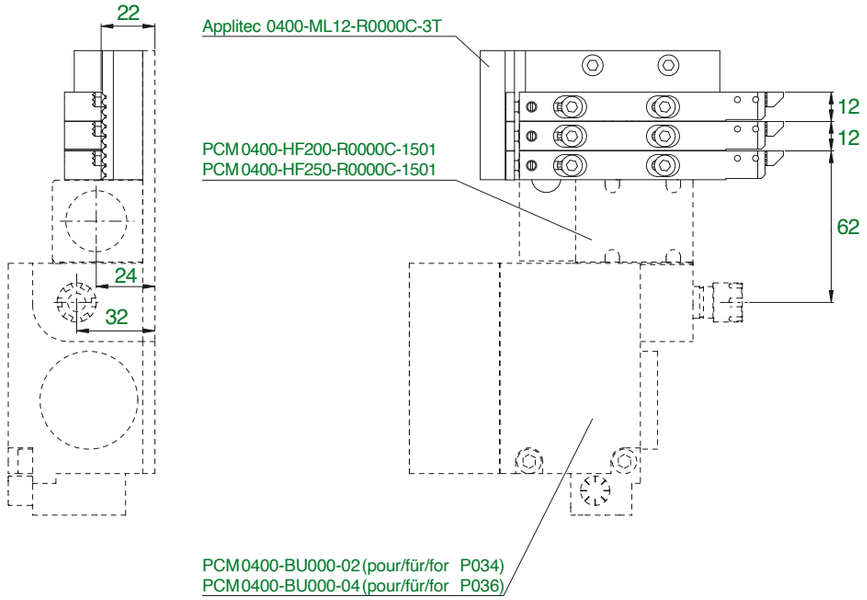


ML12-P034-1-7T



ML12-P034-2-10T

| | | | | Accessoires Zubehöre Accessories | | |
|---|---|---|---|---|---|---|
| Type Typ Type | Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Module de serrage Spannelement Clamping unit | Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
| 7T | ML12-P034-1-7T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |
| 10T | ML12-P034-2-10T | | | | | |



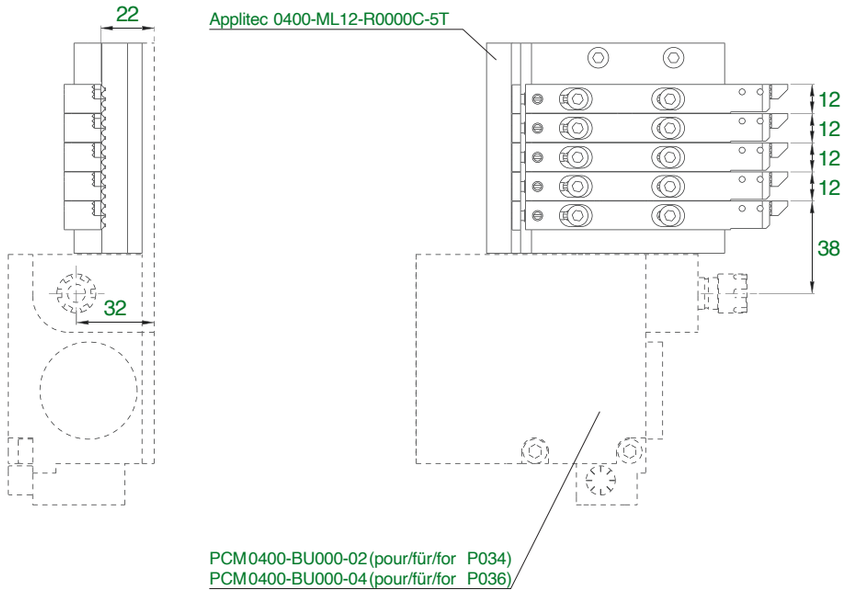





| Type Typ Type | Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|---|
| 3T | 0400-ML12-R0000C-3T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |












| Type Typ Type | Art. N° | Porte-outils Halter Holders | Pages Seiten Pages | Accessoires Zubehöre Accessories: Module de serrage Spannelement Clamping unit | Accessoires Zubehöre Accessories: Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit | Page Seite Page |
|---|---|---|---|---|---|---|
| 5T | 0400-ML12-R0000C-5T | ML12 | > 14.77 | – | ML12-JET-5/16 | 14.98 |

Les différents types de porte-outils ML12 / ML16
Die verschiedenen Haltertypen ML12 / ML16
The various types of holders ML12 / ML16

Type Standard

ML...A-740





Type -D

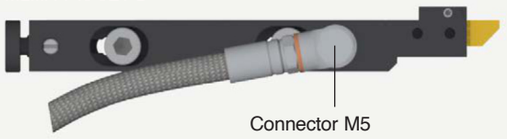
ML...A-740-D

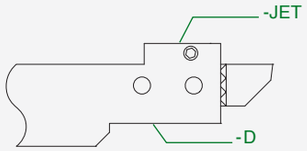





Type -JET-D

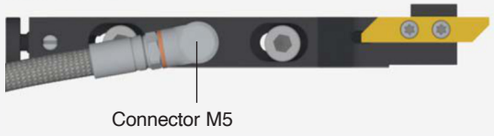
ML...A-740-JET-D

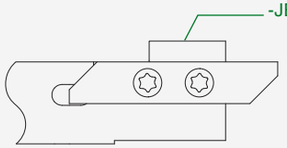



Type -JET

ML...A-740-JET



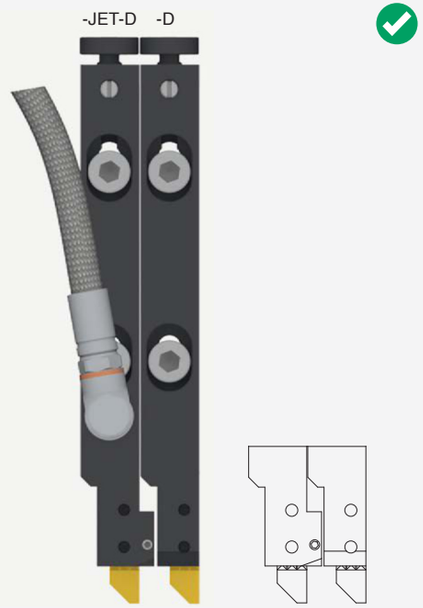








Compatibilité
Kompatibilität
Compatibility

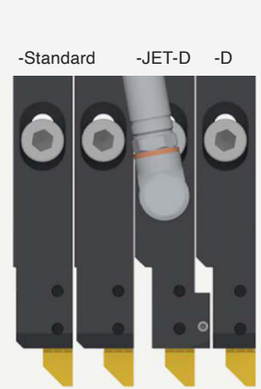
OK



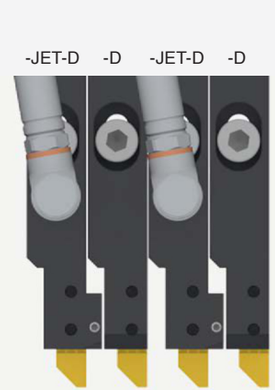

NOT OK




MIX




TYPE D



Porte-outils
Halter
Holders



## Exceptions
## Ausnahmen
## Exceptions

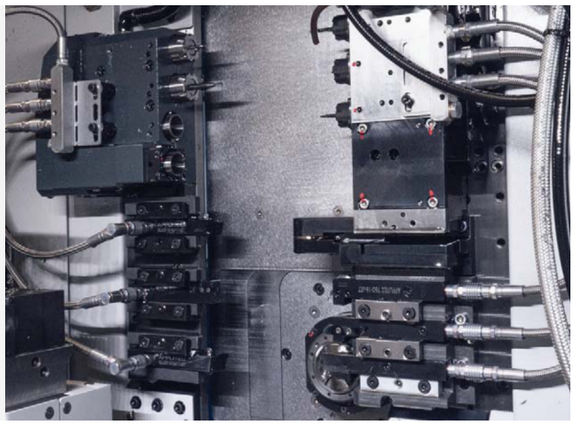
| Exception ML12 | Exception ML16 |
|---|---|
|  |  |
| ≥ 15 mm = Total compatibility | ≥ 20 mm = Total compatibility |



JET-Line:
Système de distribution du liquide de refroidissement pour haute pression
Voir chapitre JET-Line

JET-Line:
Kühlmittelverteilungssystem für hohen Druck
Siehe Kapitel JET-Line

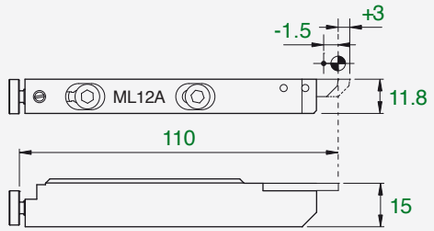
JET-Line:
Coolant distribution system for high pressure
See chapter JET-Line



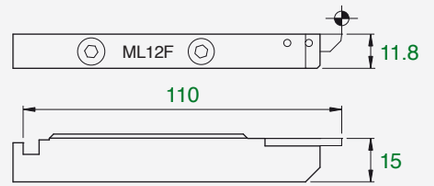
## Système de fixation
## Befestigungssystem
## Clamping system

| A = réglable einstellbar adjustable | F = longueur fixe fixlänge fixed length |
|---|---|

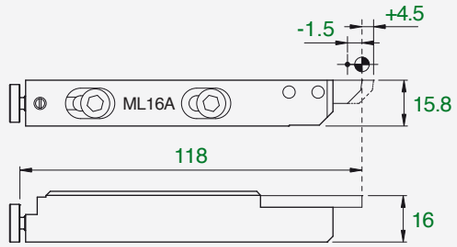
### ML12A



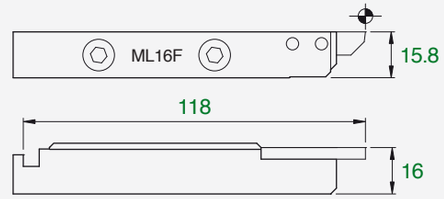

### ML12F

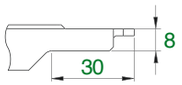



### ML16A



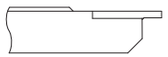

### ML16F





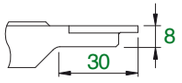

TOP-Line
731-737

| Art. N° | -D<br>Art. N° | Art. N° |
|---|---|---|
| ML12 | ML12 | ML12 |
| - | ML12A-730-C-D | - |



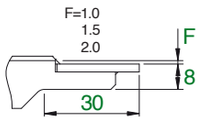
TOP-Line
741-747

| Standard<br>Art. N° | -D<br>Art. N° | -JET-D<br>Art. N° |
|---|---|---|
| ML12 | ML12 | ML12 |
| ML12A-740 | ML12A-740-D | ML12A-740-JET-D |
| ML12F-740 | ML12F-740-D | - |
| ML16 | ML16 | ML16 |
| ML16A-740 | ML16A-740-D | ML16A-740-JET-D |
| ML16F-740 | - | - |




TOP-Line
741-747

| ML12<br>Art. N° | ML12<br>Art. N° | ML12<br>Art. N° |
|---|---|---|
| ML12A-740-C | ML12A-740-C-D | ML12A-740-C-JET-D |
| ML12F-740-C | ML12F-740-C-D | - |

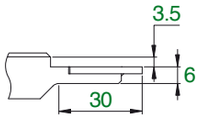



TOP-Line
741-747

| ML12<br>Art. N° | ML12<br>Art. N° | ML12<br>Art. N° |
|---|---|---|
| ML12A-740-ZD1.0-C | - | - |
| ML12A-740-ZD1.5-C | - | - |
| ML12A-740-ZD2.0-C | - | - |

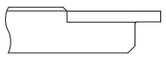






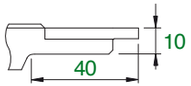

TOP-Line
741

| Standard<br>Art. N° | -D<br>Art. N° | -JET-D<br>Art. N° |
|---|---|---|
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| ML12A-740-C-R04 | - | - |
| ML12A-740-C-SWISS-NANO | - | - |



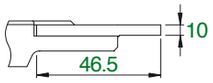
TOP-Line
761-767

| ML12<br>Art. N° | ML12<br>Art. N° | ML12<br>Art. N° |
|---|---|---|
| ML12A-760 | ML12A-760-D | ML12A-760-JET-D |
| ML12F-760 | ML12F-760-D | - |
| ML16 | ML16 | ML16 |
| ML16A-760 | ML16A-760-D | ML16A-760-JET-D |
| ML16F-760 | - | - |




TOP-Line
761-767

| ML16<br>Art. N° | ML16<br>Art. N° | ML16<br>Art. N° |
|---|---|---|
| ML16A-760-C | ML16A-760-C-D | - |
| ML16F-760-C | - | - |

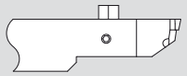



TOP-Line
781

| ML16<br>Art. N° | ML16<br>Art. N° | ML16<br>Art. N° |
|---|---|---|
| - | ML16A-780-C-D | - |

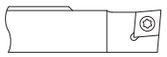


TURN-Line
347-349

| Standard | -D | -JET-D |
|---|---|---|
|  |  |  |
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-340 | ML12A-340-D | ML12A-340-JET-D |
| ML12F-340 | ML12F-340-D | - |
| ML16 | ML16 | ML16 |
| ML16A-340 | ML16A-340-D | ML16A-340-JET-D |
| ML16F-340 | - | - |



80°

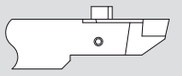


ISO-Line
CC..-09T3..

55°



ISO-Line
DC..-0702..

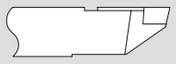
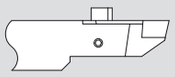
| Standard | -D | -JET-D |
|---|---|---|
|  |  |  |
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-SCLCR09 | ML12A-SCLCR09-D | ML12A-SCLCR09-JET-D |
| ML12F-SCLCR09 | ML12F-SCLCR09-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SCLCR09 | ML16A-SCLCR09-D | ML16A-SCLCR09-JET-D |
| ML16F-SCLCR09 | ML16F-SCLCR09-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SDHCR07 | - | ML16A-SDHCR07-JET-D |



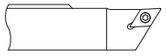
80°



ISO-Line
CC..-0602..

| Standard | -D | -JET-D |
|---|---|---|
|  |  |  |
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-SCLCR06 | ML12A-SCLCR06-D | ML12A-SCLCR06-JET-D |
| ML12F-SCLCR06 | ML12F-SCLCR06-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SCLCR06 | ML16A-SCLCR06-D | ML16A-SCLCR06-JET-D |
| ML16F-SCLCR06 | ML16F-SCLCR06-D | - |

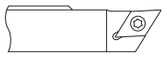
55°



ISO-Line
DC..-0702..

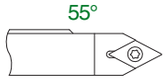
| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-SDJCR07 | ML12A-SDJCR07-D | ML12A-SDJCR07-JET-D |
| ML12F-SDJCR07 | ML12F-SDJCR07-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SDJCR07 | ML16A-SDJCR07-D | ML16A-SDJCR07-JET-D |
| ML16F-SDJCR07 | ML16F-SDJCR07-D | - |

55°



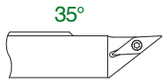
ISO-Line
DC..-11T3..

| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-SDJCR11 | ML12A-SDJCR11-D | ML12A-SDJCR11-JET-D |
| ML12F-SDJCR11 | ML12F-SDJCR11-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SDJCR11 | ML16A-SDJCR11-D | ML16A-SDJCR11-JET-D |
| ML16F-SDJCR11 | ML16F-SDJCR11-D | - |



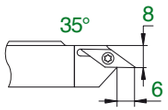

ISO-Line
DC..-11T3..

| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-SDNCN11 | ML12A-SDNCN11-D | - |
| ML12F-SDNCN11 | ML12F-SDNCN11-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SDNCN11 | ML16A-SDNCN11-D | - |
| ML16F-SDNCN11 | ML16F-SDNCN11-D | - |




ISO-Line
VC..-1103..

| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-SVJCR11 | ML12A-SVJCR11-D | ML12A-SVJCR11-JET-D |
| ML12F-SVJCR11 | ML12F-SVJCR11-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SVJCR11 | ML16A-SVJCR11-D | ML16A-SVJCR11-JET-D |
| ML16F-SVJCR11 | ML16F-SVJCR11-D | - |

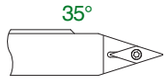



ISO-Line
VC..-1103..

| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-SV-CR11 | ML12A-SV-CR11-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SV-CR11 | ML16A-SV-CR11-D | ML16A-SV-CR11-JET-D |

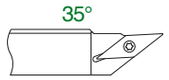







ISO-Line
VC..-1103..

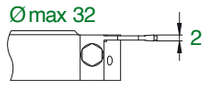
| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-SVVCN11 | ML12A-SVVCN11-D | ML12A-SVVCN11-JET-D |
| ML12F-SVVCN11 | ML12F-SVVCN11-D | - |
| ML16 | ML16 | ML16 |
| ML16A-SVVCN11 | ML16A-SVVCN11-D | ML16A-SVVCN11-JET-D |
| ML16F-SVVCN11 | ML16F-SVVCN11-D | - |




ISO-Line
VC..-1303..

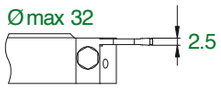
| ML12 | ML12 | ML12 |
|---|---|---|
| - | ML12A-SVJCR13-D | - |
| ML16 | ML16 | ML16 |
| - | ML16A-SVJCR13-D | ML16A-SVJCR13-JET-D |





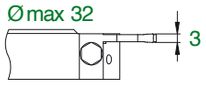

EVOCUT-Line
ET20..

| -JET |
|---|
| Art. N° | Art. N° | Art. N° |
| ML16 | ML16 | ML16 |
| - | - | ML16A-ET20-JET32 |




EVOCUT-Line
ET25..

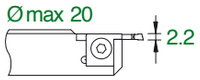
| -JET -Ø | | |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML16 | ML16 | ML16 |
| - | - | ML16A-ET25-JET32 |




EVOCUT-Line
ET30..

| | | |
|---|---|---|
| ML16 | ML16 | ML16 |
| - | - | ML16A-ET30-JET32 |

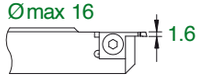





CUT-Line
CUT22..

| Standard | | |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-CUT22 | - | - |
| ML12F-CUT22 | - | - |
| ML16 | ML16 | ML16 |
| ML16A-CUT22 | - | - |
| ML16F-CUT22 | - | - |

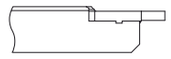





CUT-Line
CUT16..

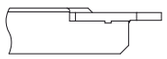
| Standard | | |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-CUT16 | - | - |
| ML12F-CUT16 | - | - |
| ML16 | ML16 | ML16 |
| ML16A-CUT16 | - | - |
| ML16F-CUT16 | - | - |





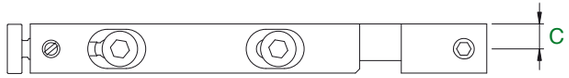
PRO-Line
642-647

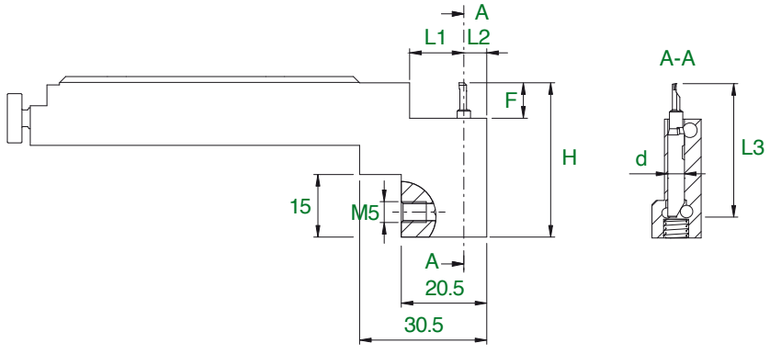
| | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| - | ML12A-640-D | ML12A-640-JET-D |
| ML16 | ML16 | ML16 |
| – | ML16A-640-D | ML16A-640-JET-D |



PRO-Line
661

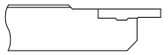
| | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| - | ML12A-660-D | ML12A-660-JET-D |
| ML16 | ML16 | ML16 |
| - | ML16A-660-D | ML16A-660-JET-D |



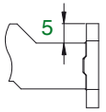




## ECO-Line

Porte-plaquettes
WSP-Halter
Insert holders



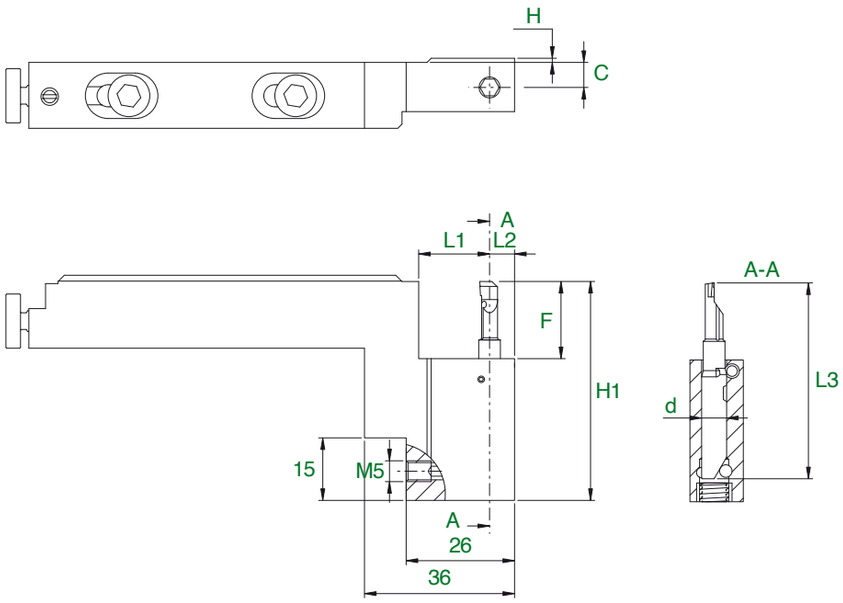
ECO-Line
261-266




ECO-Line
251RFG

| | Standard | -D | -JET-D |
|---|---|---|---|
| Art. N° | Art. N° | Art. N° | |
| ML12 | ML12 | ML12 | |
| ML12A-260 | ML12A-260-D | ML12A-260-JET-D | |
| ML12F-260 | ML12F-260-D | - | |
| ML16 | ML16 | ML16 | |
| ML16A-260 | ML16A-260-D | ML16A-260-JET-D | |
| ML16F-260 | - | - | |
| ML12 | ML12 | ML12 | |
| ML12A-250RFG | - | - | |

| | | | | | | | | ML12 |
|---|---|---|---|---|---|---|---|---|
| d | Compatible bars | L3 | F | H | C | L1 | L2 | Art. N° |
| 4 | BB4R… BF4R… | 32 | 8.5 | 37 | 6 | 13 | 5.5 | ML12A-BHK4N-32R-D |
| | | 37 | 13.5 | 42 | 6 | 13 | 5.5 | ML12A-BHK4N-37R-D |
| | | 42 | 18.5 | 47 | 6 | 13 | 5.5 | ML12A-BHK4N-42R-D |

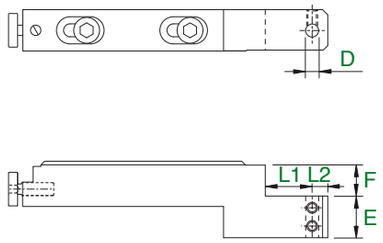



| | | | | | | | | | ML16 |
|---|---|---|---|---|---|---|---|---|---|
| d | Compatible bars | L3 | F | H1 | C | H | L1 | L2 | Art. N° |
| 4 | BB4R… BF4R… | 32 | 8.5 | 37 | 6 | - | 17.5 | 5.5 | ML16A-BHK4N-32R-D |
| | | 37 | 13.5 | 42 | 6 | - | 17.5 | 5.5 | ML16A-BHK4N-37R-D |
| | | 42 | 18.5 | 47 | 6 | - | 17.5 | 5.5 | ML16A-BHK4N-42R-D |

| | | | | | | | | | ML16 |
|---|---|---|---|---|---|---|---|---|---|
| d | Compatible bars | L3 | F | H1 | C | H | L1 | L2 | Art. N° |
| 6 | BB4R… BF4R… | 47 | 18.5 | 52.5 | 6 | 1 | 17 | 6 | ML16A-BHK6N-47R-D |
| | | 57 | 28.5 | 62.5 | 6 | 1 | 17 | 6 | ML16A-BHK6N-57R-D |



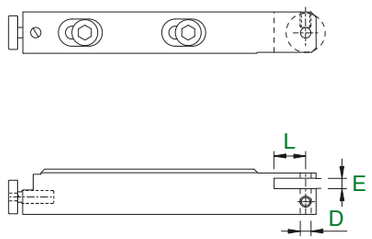





| | | | | | ML12 |
|---|---|---|---|---|---|
| F | D | E | L1 | L2 | Art. N° |
| 8 | 3 | 12 | 13 | 6 | ML12A-2440-8-3 |
| 8 | 4 | 12 | 13 | 6 | ML12A-2440-8-4 |
| 8 | 5 | 12 | 13 | 6 | ML12A-2440-8-5 |
| 12 | 6 | 12 | 13 | 6 | ML12A-2440-12-6 |

| | | | | | ML16 |
|---|---|---|---|---|---|
| F | D | E | L1 | L2 | Art. N° |
| 12 | 3 | 16 | 18 | 6 | ML16A-2440-12-3 |
| 12 | 4 | 16 | 18 | 6 | ML16A-2440-12-4 |
| 12 | 5 | 16 | 18 | 6 | ML16A-2440-12-5 |
| 12 | 6 | 16 | 18 | 6 | ML16A-2440-12-6 |
| 18 | 8 | 16 | 18 | 6 | ML16A-2440-18-8 |





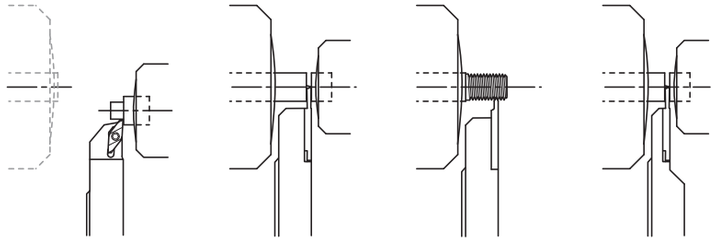

| | | | ML12 |
|---|---|---|---|
| E | D | L | Art. N° |
| 4 | 4 | 8 | ML12A-2402-44 |

| | | | ML16 |
|---|---|---|---|
| E | D | L | Art. N° |
| 4 | 4 | 11 | ML16A-2402-44 |

Coupe à droite déportée ou usinage à gauche sur contre-broche

Rechtsschneidend versetzt oder linksschneidend auf Gegenspindel

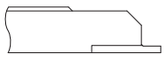
Right hand cut off line or left hand cut on subspindle



| TURN-Line<br>ISO-Line | TOP-Line<br>EVOCUT-Line<br>CUT-Line<br>PRO-Line<br>ECO-Line | TOP-Line<br>EVOCUT-Line<br>CUT-Line<br>PRO-Line<br>ECO-Line | TOP-Line<br>PRO-Line<br>ECO-Line |
|---|---|---|---|

## TOP-Line



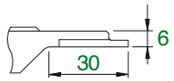


TOP-Line
731-737

| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-730-V | ML12A-730-V-D | ML12A-730-V-JET-D |
| ML16 | ML16 | ML16 |
| ML16A-730-V | ML16A-730-V-D | ML16A-730-V-JET-D |

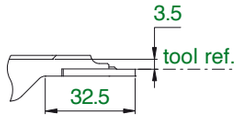






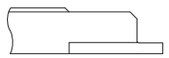

TOP-Line
731R

| Standard | -D | -JET | -JET-D |
|---|---|---|---|
| Art. N° | Art. N° | Art. N° | |
| ML12 | ML12 | ML12 | |
| ML12A-730RC | - | ML12A-730RC-JET | |
| ML16 | ML16 | ML16 | |
| ML16A-730RC | ML16A-730RC-D | ML16A-730RC-JET-D | |



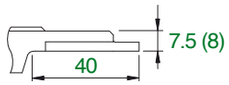

TOP-Line
731R

| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-730RC-R04 | - | - |
| ML12A-730RC-SWISS-NANO | - | - |



TOP-Line
751-757

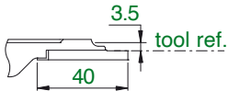
| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-750-V | ML12A-750-V-D | ML12A-750-V-JET-D |
| ML16 | ML16 | ML16 |
| ML16A-750-V | ML16A-750-V-D | ML16A-750-V-JET-D |




TOP-Line
751R

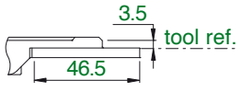
| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-750RC | - | ML12A-750RC-JET |
| ML16 | ML16 | ML16 |
| ML16A-750RC | ML16A-750RC-D | ML16A-750RC-JET-D |

Porte-plaquettes – Coupedéportée & contre-opération
WSP-Halter – Versetztes Schneiden & Gegenspindel
Insert holders – Cut off line & cut on subspindle




TOP-Line
751R

| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-750RC-R04 | - | - |
| ML12A-750RC-SWISS-NANO | - | - |




TOP-Line
771R

| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-770RC-SWISS-NANO | - | - |

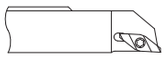


TOP-Line
770

| ML16 | ML16 | ML16 |
|---|---|---|
| - | - | ML16A-770-V-JET-D |

## TURN-Line

Porte-plaquettes – Contre-opération
WSP-Halter – Gegenspindel
Insert holders – Cut on subspindle



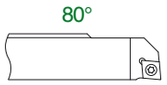
TURN-Line
337-339

| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-330-V | ML12A-330-V-D | ML12A-330-V-JET-D |
| ML16 | ML16 | ML16 |
| ML16A-330-V | ML16A-330-V-D | ML16A-330-V-JET-D |



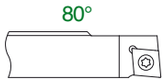


Porte-plaquettes – Contre-opération
WSP-Halter – Gegenspindel
Insert holders – Cut on subspindle



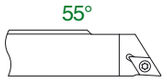

ISO-Line
CC..-0602..

| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| - | ML12A-SCLCL06-V-D | ML12A-SCLCL06-V-JET-D |
| ML16 | ML16 | ML16 |
| - | ML16A-SCLCL06-V-D | ML16A-SCLCL06-V-JET-D |



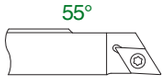

ISO-Line
CC..-9T3..

| ML12 | ML12 | ML12 |
|---|---|---|
| - | ML12A-SCLCL09-V-D | ML12A-SCLCL09-V-JET-D |
| ML16 | ML16 | ML16 |
| - | ML16A-SCLCL09-V-D | ML16A-SCLCL09-V-JET-D |




ISO-Line
DC..-0702..

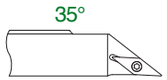
| ML12 | ML12 | ML12 |
|---|---|---|
| - | ML12A-SDJCL07-V-D | ML12A-SDJCL07-V-JET-D |
| ML16 | ML16 | ML16 |
| - | ML16A-SDJCL07-V-D | ML16A-SDJCL07-V-JET-D |




ISO-Line
DC..-11T3..

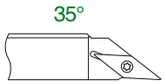
| ML12 | ML12 | ML12 |
|---|---|---|
| ML12A-SDJCL11-V | ML12A-SDJCL11-V-D | ML12A-SDJCL11-V-JET-D |
| ML16 | ML16 | ML16 |
| ML16A-SDJCL11-V | ML16A-SDJCL11-V-D | ML16A-SDJCL11-V-JET-D |

Porte-plaquettes – Coupedéportée
WSP-Halter – Versetztes Schneiden
Insert holders – Cut off line




ISO-Line
VC..-1103..

| Standard | -D | -JET-D |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-SVJCL11-V | ML12A-SVJCL11-V-D | ML12A-SVJCL11-V-JET-D |
| ML16 | ML16 | ML16 |
| ML16A-SVJCL11-V | ML16A-SVJCL11-V-D | ML16A-SVJCL11-V-JET-D |

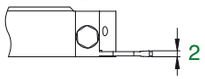



ISO-Line
VC..-1303..

| ML12 | ML12 | ML12 |
|---|---|---|
| - | ML12A-SVJCL13-V-D | - |
| ML16 | ML16 | ML16 |
| - | ML16A-SVJCL13-V-D | ML16A-SVJCL13-V-JET-D |

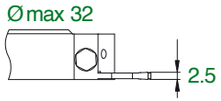
## EVOCUT-Line

Porte-plaquettes – Coupedéportée
WSP-Halter – Versetztes Schneiden
Insert holders – Cut off line




EVOCUT-Line
ET20

| -JET |
|---|
| Art. N° |
| ML16 |
| - |



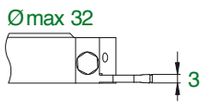

EVOCUT-Line
ET25

| ML16 |
|---|
| - |





Porte-plaquettes – Coupedéportée
WSP-Halter – Versetztes Schneiden
Insert holders – Cut off line



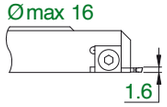

EVOCUT-Line
ET30

| -JET |
|---|
| ML16 |
| - |

| ML16 |
|---|
| ML16A-ET30-V-JET32 |

## CUT-Line

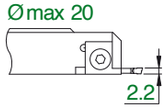
Porte-plaquettes – Coupedéportée
WSP-Halter – Versetztes Schneiden
Insert holders – Cut off line




CUT-Line
CUT16

| Standard |
|---|
| Art. N° |
| ML12 |
| ML12A-CUT16-V |
| ML12F-CUT16-V |
| ML16 |
| ML16A-CUT16-V |
| ML16F-CUT16-V |

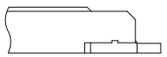
| Art. N° | Art. N° |
|---|---|
| ML12 | ML12 |
| - | - |
| - | - |
| ML16 | ML16 |
| - | - |
| - | - |



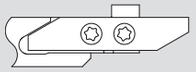

CUT-Line
CUT22

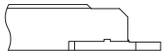
| ML12 |
|---|
| ML12A-CUT22-V |
| ML12F-CUT22-V |
| ML16 |
| ML16A-CUT22-V |
| ML16F-CUT22-V |

| ML12 | ML12 |
|---|---|
| - | - |
| - | - |
| ML16 | ML16 |
| - | - |
| - | - |



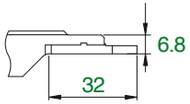
PRO-Line
632-636

| Standard | -D | -JET-D |
|---|---|---|
|  |  |  |
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| - | ML12A-630-V-D | ML12A-630-V-JET-D |
| ML16 | ML16 | ML16 |
| - | ML16A-630-V-D | ML16A-630-V-JET-D |



PRO-Line
651R

| | | |
|---|---|---|
| ML12 | ML12 | ML12 |
| - | ML12A-650-V-D | ML12A-650-V-JET-D |
| ML16 | ML16 | ML16 |
| - | ML16A-650-V-D | ML16A-650-V-JET-D |

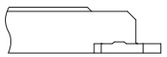



PRO-Line
651R

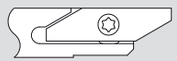
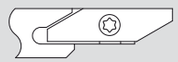
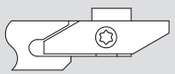
| | | |
|---|---|---|
| ML12 | ML12 | ML12 |
| ML12A-650RC | ML12A-650RC-D | - |
| ML16 | ML16 | ML16 |
| - | ML16A-650RC-D | ML16A-650RC-JET-D |

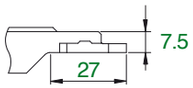






ECO-Line
251-261

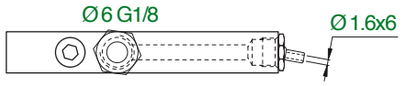
| Standard | -D | -JET-D |
|---|---|---|
|  |  |  |
| Art. N° | Art. N° | Art. N° |
| ML12 | ML12 | ML12 |
| ML12A-250-V | ML12A-250-V-D | ML12A-250-V-JET-D |
| ML16 | ML16 | ML16 |
| ML16A-250-V | ML16A-250-V-D | ML16A-250-V-JET-D |




ECO-Line
251R

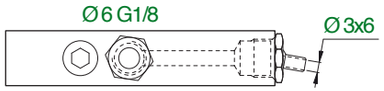
| | | |
|---|---|---|
| ML12 | ML12 | ML12 |
| - | ML12A-250RC-D | - |
| ML16 | ML16 | ML16 |
| - | ML16A-250RC-D | - |

ML12



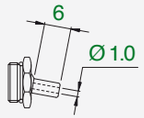
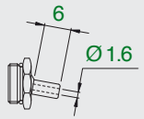
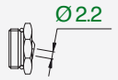

| Raccord<br>Anschluss<br>Connection | Buses d'arrosage<br>Kühlmitteldüse<br>Coolant nozzles | ML12<br>Art. N° |
|---|---|---|
| Ø 6 G 1/8 | 5/16" | ML12-JET-5/16 |

ML16



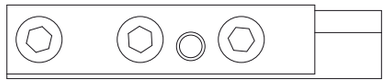

| Raccord<br>Anschluss<br>Connection | Buses d'arrosage<br>Kühlmitteldüse<br>Coolant nozzles | ML16<br>Art. N° |
|---|---|---|
| Ø 6 G 1/8 | 7/16" | ML16-JET-7/16 |

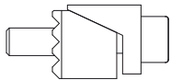
buses optionnelles voir page 14.99
zusätzliche Düsen siehe Seite 14.99
optional nozzles see page 14.99

| 5/16" | Art. N° | Références compatibles<br>Kompatible Artikeln<br>Compatible items |
|---|---|---|
|  | ML-JET-5/16-1.0X6 | ML12-JET-5/1.6<br>une buse ML-JET-5/16-1.6x6 est comprise<br>eine Düse ML-JET-5/16-1.6x6 ist inbegriffen<br>a nozzle ML-JET-5/16-1.6x6 is included |
|  | ML-JET-5/16-1.6X6 | |
|  | ML-JET-5/16-2.2X0 | |

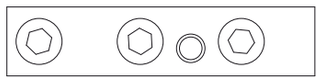
## ML12 / ML16

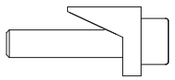
Modules de serrage
Spannelemente
Clamping units



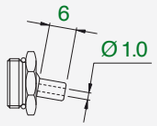
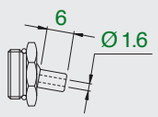
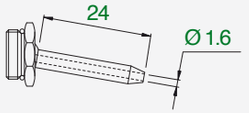
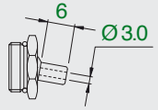


| ML12<br>Art. N° | ML16<br>Art. N° |
|---|---|
| ML12-FIX-12/14 | ML16-FIX-16/16 |
| – | ML16-FIX-16/16.5 |
| – | ML16-FIX-16/17 |
| – | ML16-FIX-16/20 |
| – | ML16-FIX-16/22 |
| – | ML16-FIX-16/24 |





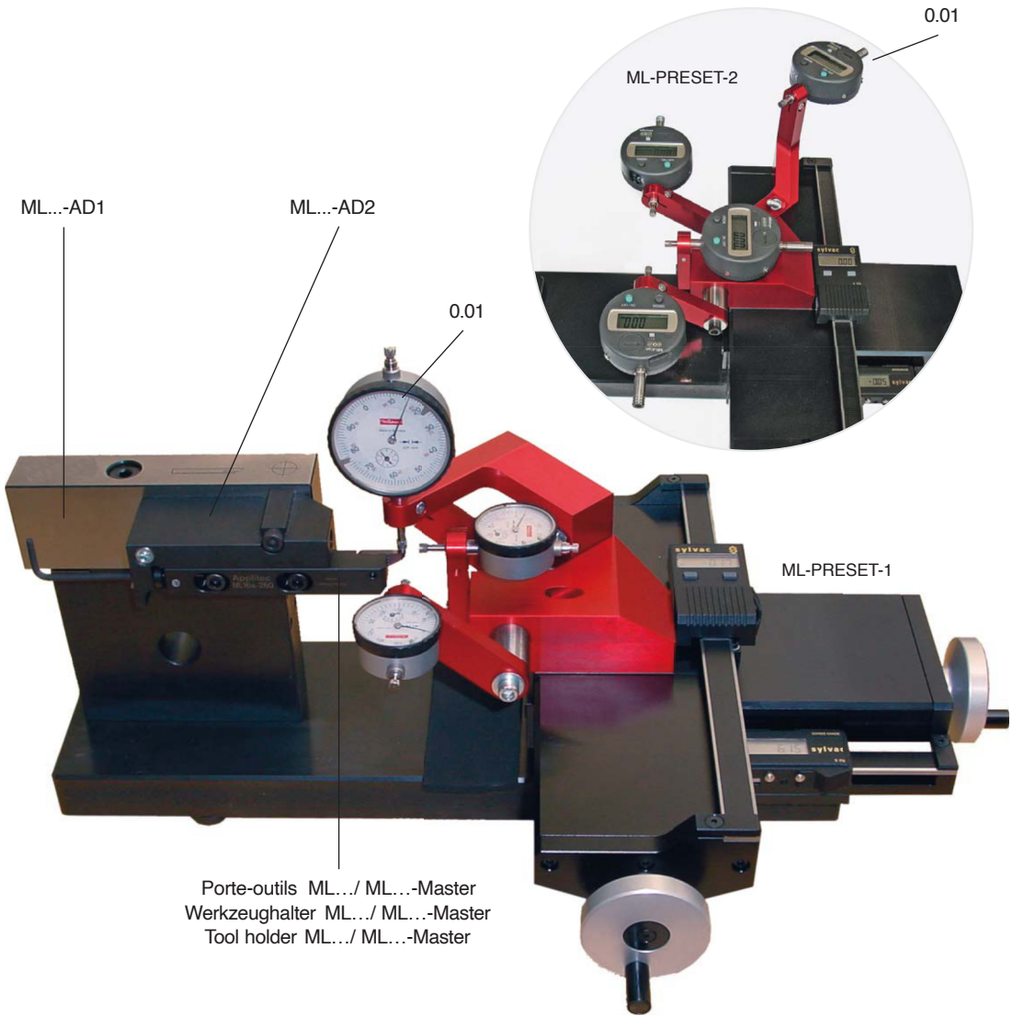
| ML12<br>Art. N° | ML16<br>Art. N° |
|---|---|
| ML12-FIX-12 | ML16-FIX-16 |

| 7/16" | Art. N° | Références compatibles<br>Kompatible Artikeln<br>Compatible items |
|---|---|---|
|  | ML-JET-7/16-1.0X6 | ML16-KMX26-JET<br>ML16-JET-7/16<br>ML12-DECO10-JET<br>ML16-DECO13-JET<br>ML16-DECO20-JET<br>ML16-S20-JET<br>ML16-SWISS-ST26-JET<br>une buse ML-JET-7/16-3.0x6 est comprise avec chaque article ci-dessus<br>eine Düse ML-JET-7/16-3.0x6 ist mit jedem vorstehenden Artikel inbegriffen<br>a nozzle ML-JET-7/16-3.0x6 is included with each above item |
|  | ML-JET-7/16-1.6X6 | |
|  | ML-JET-7/16-1.6X24 | |
|  | ML-JET-7/16-3.0X6 | |

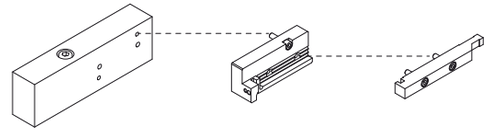
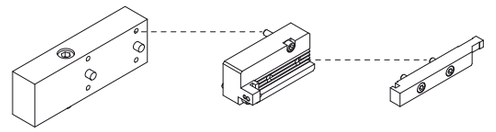
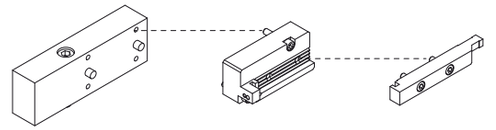
MODU-Line

Bancs de préréglage
Voreinstellgeräte
Presetting devices

ML12 / ML16




| Art. N° |
|---|
| ML-PRESET-1 |
| ML-PRESET-2 |

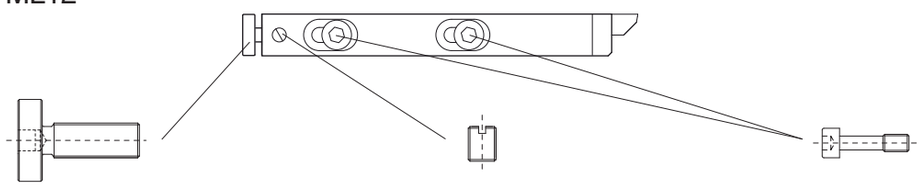
| Type<br>Typ<br>Type | Fabricant<br>Hersteller<br>Manufacturer | Machines<br>Maschinen<br>Machines | Adaptateurs et jauges d'étalonnage<br>Adapter und Einstellehre<br>Adaptators and master gauges |
|---|---|---|---|
| ML12 | CITIZEN | C12/C16 |  |
| | | L12-1M7 | |
| | | L12-2M10 | |
| | | M16 V/VIII | |
| | | R04 | |
| | | R07 | |
| | HANWHA | XD10 | |
| | | XD20M | |
| | METAFIL | D3/D10/D13 | |
| | STAR | SB-12RG | |
| | | SL-7/10 | |
| | | SR10-J | |
| | | SW-12RII | |
| | TORNOS | DECO7/10 - EvoDECO10 | |
| | | SwissNano/SwissNano 7 | |
| | | DT13 | |
| | | CT20 | |
| | | GT13 | |
| | TSUGAMI | B074 | |
| | | B075 | |
| | | P034 | |
| | | P034-P036 | |
| ML16 | CITIZEN | K12/K16/K12E/K16E |  |
| | | L20E-1M8/L20X-1M10/L20-2M8/2M12 | |
| | | L20E-3M | |
| | HANWHA | SL12/16 | |
| | MANUHRIN | KMX426/526/626/Swing 20-26 MM | |
| | STAR | SA-12/SA-16/SA-16R | |
| | | SB-16 | |
| | | SB-16/20RG | |
| | | SB-20C/E | |
| | | SR-16R/SR-20R/SR-20RII | |
| | | SR-20J/SR-20RIII | |
| | | SR-20JII-A/B | |
| | | SR-20RIII/SR-20J | |
| | | SR-20RIV | |
| | | SR-32J | |
| | | SV-12/20/ SV-20R | |
| | | SW-20 | |
| | TORNOS | DECO20/26 - EvoDECO20/32 | |
| | | SIGMA20/32 | |
| | | DT26 | |
| | | GT26 | |
| | | GT32 | |
| ML16 | TORNOS | DECO13-EvoDECO16 |  |
| | | Swiss ST26 | |

MODU-Line

ML12 / ML16

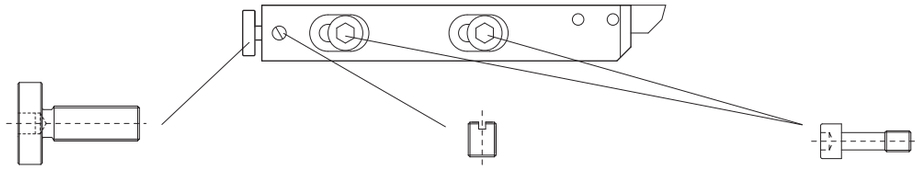
Pièces de rechange et accessoires
Ersatzteile und Zubehör
Spare parts and accessories

## ML12



| Vis de réglage<br>Einstellungsschraube<br>Setting screw | Vis de blocage<br>Blockierschraube<br>Locking screw | Vis de fixation<br>Befestigungsschraube<br>Fixing screw |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML12A-M5X0.5 | ML-M4X4-T | ML12-M5XL20 |

## ML16

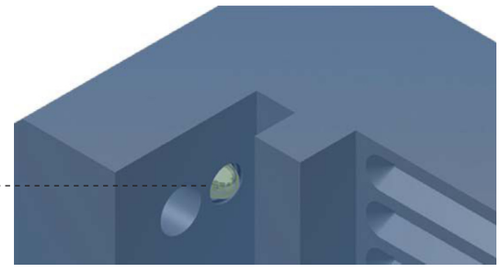


| Vis de réglage<br>Einstellungsschraube<br>Setting screw | Vis de blocage<br>Blockierschraube<br>Locking screw | Vis de fixation<br>Befestigungsschraube<br>Fixing screw |
|---|---|---|
| Art. N° | Art. N° | Art. N° |
| ML16A-M5X0.5 | ML-M4X4-T | ML16/20-M6XL20 |

| Art. N° |
|---|
| ML-205004 |



Butée à ressort
Federnde Schraube
Spring bumper



| Porte-outils<br>Halter<br>Holders | | | | | Options | |
|---|---|---|---|---|---|---|
| ML…250 | V-M4X9-T15 | - | - | - | - | C-T15 |
| ML…260 | | | | | | |
| ML…330 | V-M2.5X7.8-T8 | - | - | - | - | C-T8 |
| ML…340 | | | | | | |
| ML…630 | V-M4X9-T15 | - | - | - | - | C-T15 |
| ML…640 | | | | | | |
| ML…650 | | | | | | |
| ML…650RC | V-M4X6.5-T15 | | | | | |
| ML…660 | V-M4X9-T15 | | | | | |
| ML…730 | V-M3X7-T8 | - | - | - | - | C-T8 |
| ML…730RC | V-M3X5.5-T8 | | | | | |
| ML…730RC-R04 | V-M3X4.5-T8<br>V-M3X7-T8 | | | | | |
| ML…730RC-SWISS-NANO | V-M3X4.5-T8<br>V-M3X7-T8 | | | | | |
| ML…740 | V-M3X7-T8 | | | | | |
| ML…750 | V-M4X9-T15 | - | - | - | - | C-T15 |
| ML…750RC | V-M4X7.3-T15 | | | | | |
| ML…750RC-R04 | V-M4X5.6-T15<br>V-M4X7.3-T15 | | | | | |
| ML…750RC-SWISS-NANO | V-M4X5.6-T15<br>V-M4X7.3-T15 | | | | | |
| ML…760 | V-M4X9-T15 | | | | | |
| ML…770RC-SWISS-NANO | V-M4X7.3-T15 | | | | | |
| ML…780 | V-M4X9-T15 | | | | | |
| ML…SC…06 | V-M2.5X5.8-T8 | - | - | - | - | C-T8 |
| ML…SC…09 | V-M4X7-T15-ISO | - | - | - | - | C-T15 |
| ML…-SD…07 | V-M2.5X7.8-T8 | - | - | - | - | C-T8 |
| ML…-SD…07-D | V-M2.5X5.8-T8 | | | | | |
| ML12…-SDJ…11 | V-M4X7-T15-ISO | - | - | - | - | C-T15 |
| ML12…-SDN…11 | V-M4X9-T15-ISO | | | | | |
| ML16…-SD…11 | | | | | | |
| ML…-SV…11 | V-M2.5X7.8-T8 | - | - | - | - | C-T8 |
| ML…-SV…13 | V-M3X7.3-T8-ISO | | | | | |
| ML…-CUT16 | - | - | CUT16RS-SET | - | - | - |
| ML…-CUT16-V | - | - | CUT16LS-SET | - | - | - |
| ML…-CUT22 | - | - | CUT22RS-SET | - | - | - |
| ML…-CUT16-V | - | - | CUT22LS-SET | - | - | - |
| ML16...-ET…JET32 | - | | - | | | - |
| ML16...-ET... V-JET32 | - | - | - | V-M5X21-6P7-J | C-6PEX-7.0 | - |
| ML...-BHK | V-BHK-M4X0.5-T8 | | - | | | - |
| ML12A-2440-8-3 | - | V-M3X4-BN24 | - | - | - | - |
| ML12A-2440-8-4 | | V-M4X5-BN24 | | | | |
| ML12A-2440-8-5 | | V-M4X5-BN25 | | | | |
| ML12A-2440-12-6 | | V-M4X5-BN24 | | | | |
| ML16A-2440-12-3 | | V-M3X5-BN24 | | | | |
| ML16A-2440-12-4 | | V-M4X6-BN24 | | | | |
| ML16A-2440-12-5 | | V-M4X5-BN24 | | | | |
| ML16A-2440-12-6 | | V-M4X5-BN24 | | | | |
| ML16A-2440-18-8 | | V-M4X5-BN25 | | | | |

# TOOLING-Line



Infos et avantages
Infos und Vorteile
Infos and advantages > 15.03

Porte-outils
Werkzeughalter
Tool holders
14xx / 24xx  > 15.04

Porte-outils monoblocs pour machines Tornos
Monoblockwerkzeughalter für Tornos Maschinen
Monobloc tool holders for Tornos machines
2435 / 2436  > 15.18

Forets à centrer plats
Zentrierflachbohrer
Centering flat drills
1200 / 2200  > 15.20

Forets à centrer hélicoïdaux
Zentrierspiralbohrer
Centering twist drills
15xx / 25xx  > 15.21

Burins intérieurs en métal dur
Vollhartmetall Innendrehwerkzeuge
Solid carbide internal turning tools
16xx / 26xx  > 15.22

Porte-molettes
Rändelhalter
Knurl holders
1402 / 2402  > 15.24

Molettes en métal dur
Vollhartmetall Rändelrädchen
Solid carbide knurling wheels
1107  > 15.25





## Outils et porte-outils traditionnels pour le décolletage et la mécanique de précision

- Porte-outils
- Forets à centrer
- Burins intérieurs
- Porte-molettes
- Molettes en métal dur

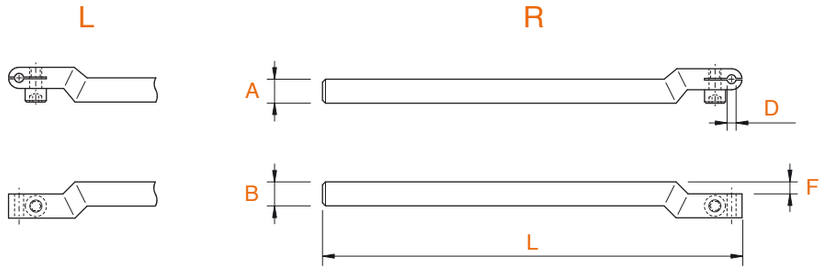
## Übliche Werkzeuge und Halter für Decolletage und Präzisionsmechanik

- Werkzeughalter
- Zentrierbohrer
- Innendrehwerkzeuge
- Rändelhalter
- Vollhartmetall Rändelrädchen

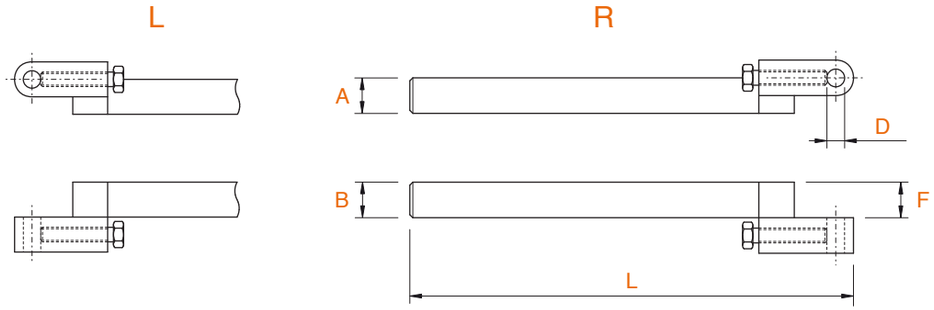
## Usual tools and tool holders for automatic lathes and precision mecanics

- Tool holders
- Centring drills
- Internal turning tools
- Knurl holders
- Solid carbide knurling wheels





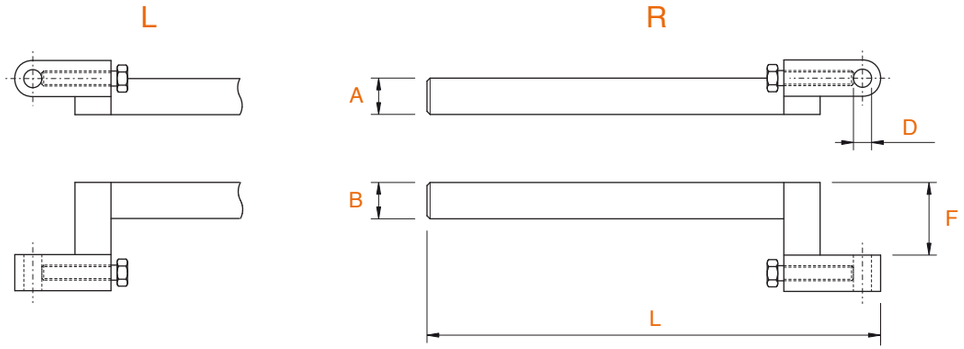

| A x B | L | F | D | L Art. N° | R Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|---|---|---|
| 6 x 6 | 132 | 3 | 1.5 | 1400-J-615 | 2400-J-615 | V-M3X5-BN7 |
| 6 x 6 | 132 | 3 | 2.0 | 1400-J-620 | 2400-J-620 | |
| 6 x 6 | 132 | 3 | 3.0 | 1400-J-630 | 2400-J-630 | |
| 7 x 7 | 140 | 3 | 1.5 | 1400-J-715 | 2400-J-715 | V-M4X6-BN7 |
| 7 x 7 | 140 | 3 | 2.0 | 1400-J-720 | 2400-J-720 | |
| 7 x 7 | 140 | 3 | 3.0 | 1400-J-730 | 2400-J-730 | |
| 8 x 8 | 140 | 4 | 1.5 | 1400-J-815 | 2400-J-815 | |
| 8 x 8 | 140 | 4 | 2.0 | 1400-J-820 | 2400-J-820 | |
| 8 x 8 | 140 | 4 | 3.0 | 1400-J-830 | 2400-J-830 | |




| A x B | L | F | D | L Art. N° | R Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|---|---|---|
| 7 x 7 | 146 | 7 | 2.0 | 1401-K-720 | - | V-M4X20-HEX7 |
| 7 x 7 | 146 | 7 | 3.0 | 1401-K-730 | 2401-K-730 | |
| 7 x 7 | 146 | 7 | 4.0 | 1401-K-740 | 2401-K-740 | |
| 8 x 8 | 146 | 8 | 2.0 | 1401-K-820 | - | |
| 8 x 8 | 146 | 8 | 3.0 | 1401-K-830 | 2401-K-830 | |
| 8 x 8 | 146 | 8 | 4.0 | 1401-K-840 | 2401-K-840 | |
| 8 x 8 | 146 | 8 | 5.0 | 1401-K-850 | 2401-K-850 | |
| 8 x 8 | 146 | 8 | 6.0 | 1401-K-860 | 2401-K-860 | |
| 10 x 10 | 150 | 10 | 3.0 | - | 2401-K-1030 | V-M4X25-HEX7 |
| 10 x 10 | 150 | 10 | 4.0 | 1401-K-1040 | 2401-K-1040 | |
| 10 x 10 | 150 | 10 | 5.0 | 1401-K-1050 | 2401-K-1050 | |
| 10 x 10 | 150 | 10 | 6.0 | 1401-K-1060 | 2401-K-1060 | |
| 10 x 10 | 150 | 10 | 7.0 | 1401-K-1070 | 2401-K-1070 | |
| 12 x 12 | 150 | 12 | 3.0 | - | 2401-K-1230 | |
| 12 x 12 | 150 | 12 | 4.0 | 1401-K-1240 | 2401-K-1240 | |
| 12 x 12 | 150 | 12 | 5.0 | 1401-K-1250 | 2401-K-1250 | |
| 12 x 12 | 150 | 12 | 6.0 | 1401-K-1260 | 2401-K-1260 | V-M4X30-HEX7 |
| 12 x 12 | 150 | 12 | 8.0 | 1401-K-1280 | 2401-K-1280 | |
| 14 x 14 | 150 | 14 | 4.0 | 1401-K-1440 | 2401-K-1440 | |
| 14 x 14 | 150 | 14 | 6.0 | 1401-K-1460 | 2401-K-1460 | |
| 14 x 14 | 150 | 14 | 8.0 | 1401-K-1480 | 2401-K-1480 | |



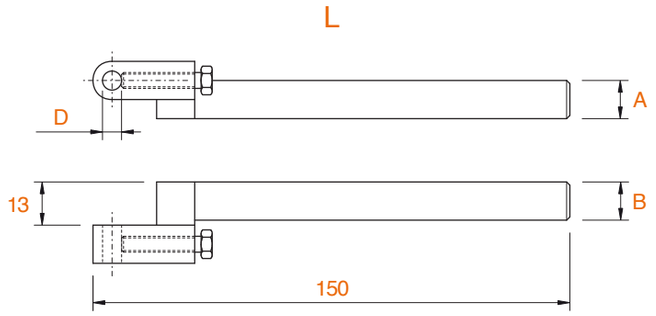
* livré avecchaque porte-outil / mit jedem Halter geliefert / delivered with each holder




| A x B | L | F | D | L Art. N° | R Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|---|---|---|
| 7 x 7 | 146 | 12 | 4.0 | 1420-7124 | 2420-7124 | V-M4X20-HEX7 |
| 8 x 8 | 146 | 12 | 4.0 | 1420-8124 | 2420-8124 | |
| 8 x 8 | 146 | 14 | 3.0 | 1420-8143 | 2420-8143 | |
| 8 x 8 | 146 | 15 | 5.0 | 1420-8155 | 2420-8155 | |
| 8 x 8 | 146 | 20 | 5.0 | 1420-8205 | 2420-8205 | |
| 10 x 10 | 150 | 20 | 6.0 | 1420-10206 | 2420-10206 | V-M5X25-HEX8 |
| 12 x 12 | 150 | 18 | 6.0 | 1420-12186 | 2420-12186 | |
| 12 x 12 | 150 | 18 | 8.0 | 1420-12188 | - | |
| 12 x 12 | 150 | 24 | 8.0 | 1420-12248 | 2420-12248 | |
| 14 x 14 | 150 | 20 | 8.0 | 1420-14208 | 2420-14208 | |
| 14 x 14 | 150 | 24 | 8.0 | 1420-14248 | 2420-14248 | |

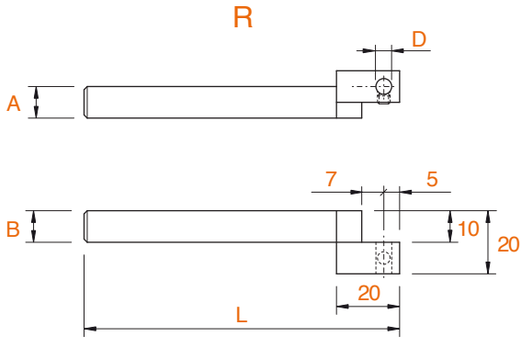







| A x B | D | L Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|
| 12 x 12 | 4.0 | 1460-4 | V-M5X25-HEX8 |
| 12 x 12 | 5.0 | 1460-5 | |
| 12 x 12 | 6.0 | 1460-6 | |
| 12 x 12 | 8.0 | 1460-8 | |

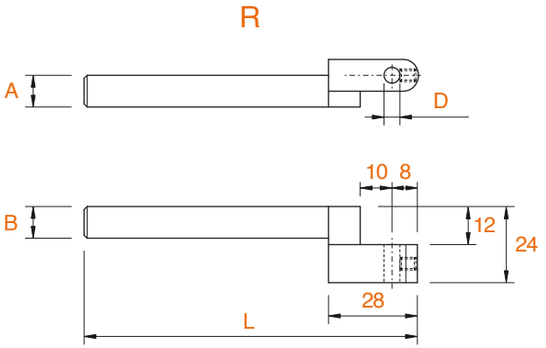
* livré avecchaque porte-outil / mit jedem Halter geliefert / delivered with each holder




| A x B | L | D | Art. N° | Art. N° |
|---|---|---|---|---|
| 10 x 10 | 100 | 3.0 | 2450-SP-3 | V-M4X4-BN24 |
| 10 x 10 | 100 | 4.0 | 2450-SP-4 | V-M4X3-BN24 |
| 10 x 10 | 100 | 5.0 | 2450-SP-5 | V-M4X4-BN24 |
| 10 x 10 | 100 | 6.0 | 2450-SP-6 | V-M4X3-BN24 |
| 10 x 10 | 120 | 3.0 | 2450-SP-3-120 | |
| 10 x 10 | 120 | 4.0 | 2450-SP-4-120 | V-M4X4-BN24 |
| 10 x 10 | 120 | 5.0 | 2450-SP-5-120 | |
| 10 x 10 | 120 | 6.0 | 2450-SP-6-120 | V-M4X3-BN24 |

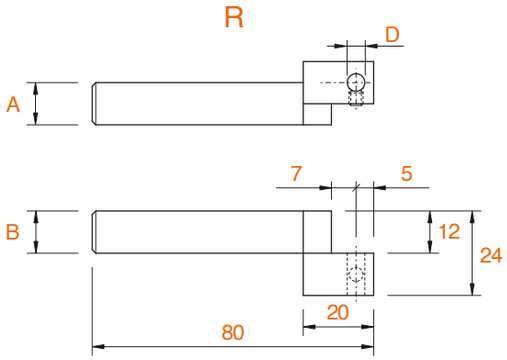







| A x B | L | D | Art. N° | Art. N° |
|---|---|---|---|---|
| 10 x 10 | 105 | 3.0 | 2470-3 | |
| 10 x 10 | 105 | 4.0 | 2470-4 | |
| 10 x 10 | 105 | 5.0 | 2470-5 | V-M4X5-BN24 |
| 10 x 10 | 105 | 6.0 | 2470-6 | |
| 10 x 10 | 105 | 7.0 | 2470-7 | |

* livré avec chaque porte-outil / mit jedem Halter geliefert / delivered with each holder




| A x B | D | Art. N° |
|---|---|---|
| 12 x 12 | 3.0 | 2450-3 |
| 12 x 12 | 4.0 | 2450-4 |
| 12 x 12 | 5.0 | 2450-5 |
| 12 x 12 | 6.0 | 2450-6 |
| 12 x 12 | 8.0 | 2450-8 |

R

Pièces de rechange / Ersatzteile / Spare parts

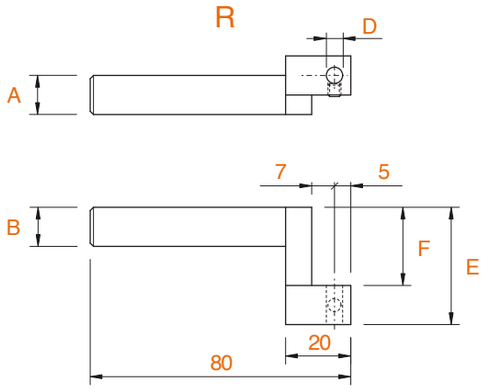


*

| Art. N° |
|---|
| V-M3X4-BN24 |
| V-M4X3-BN24 |








| A x B | F | E | D | Art. N° |
|---|---|---|---|---|
| 12 x 12 | 16 | 28 | 4.0 | 2460-284 |
| 12 x 12 | 16 | 28 | 6.0 | 2460-286 |
| 12 x 12 | 16 | 28 | 8.0 | 2460-288 |
| 12 x 12 | 20 | 32 | 4.0 | 2460-324 |
| 12 x 12 | 20 | 32 | 6.0 | 2460-326 |
| 12 x 12 | 20 | 32 | 8.0 | 2460-328 |
| 12 x 12 | 24 | 36 | 4.0 | 2460-364 |
| 12 x 12 | 24 | 36 | 6.0 | 2460-366 |
| 12 x 12 | 24 | 36 | 8.0 | 2460-368 |

R

Pièces de rechange / Ersatzteile / Spare parts



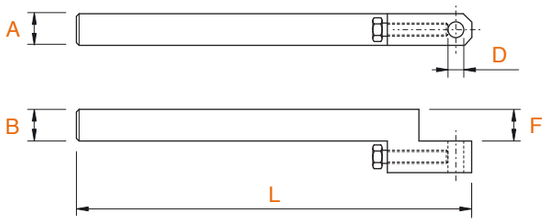
*

| Art. N° |
|---|
| V-M3X4-BN24 |
| V-M4X3-BN24 |
| V-M3X4-BN24 |
| V-M4X3-BN24 |
| V-M3X4-BN24 |
| V-M4X3-BN24 |

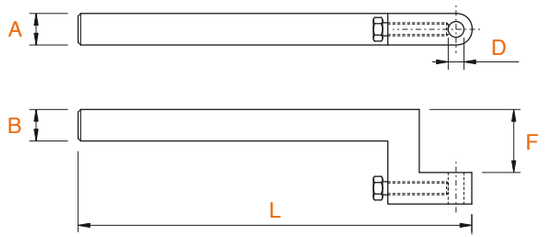
* livré avec chaque porte-outil / mit jedem Halter geliefert / delivered with each holder

Porte-outils
Werkzeughalter
Tool holders





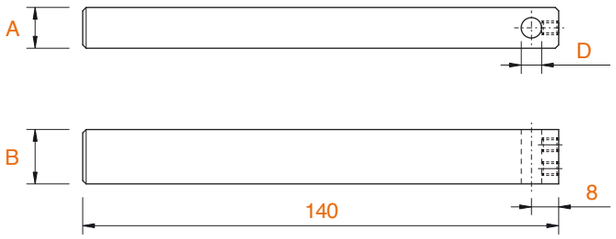

| A x B | L | F | D | Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|---|---|
| 8 x 8 | 120 | 8 | 3.0 | 2405-K-830 | V-M4X25-HEX7 |
| 8 x 8 | 120 | 8 | 4.0 | 2405-K-840 | |
| 8 x 8 | 120 | 8 | 5.0 | 2405-K-850 | |
| 8 x 8 | 120 | 8 | 6.0 | 2405-K-860 | |
| 10 x 10 | 100 | 10 | 4.0 | 2405-K-1040 | V-M5X25-HEX8 |
| 10 x 10 | 100 | 10 | 5.0 | 2405-K-1050 | |
| 10 x 10 | 100 | 10 | 6.0 | 2405-K-1060 | |
| 12 x 12 | 150 | 12 | 4.0 | 2405-K-1240 | V-M5X30-HEX8 |
| 12 x 12 | 150 | 12 | 6.0 | 2405-K-1260 | |
| 12 x 12 | 150 | 12 | 8.0 | 2405-K-1280 | |




| A x B | L | F | D | Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|---|---|
| 8 x 8 | 120 | 12 | 4.0 | 2425-8124 | M4X25-HEX7 |
| 8 x 8 | 120 | 15 | 5.0 | 2425-8155 | |
| 8 x 8 | 120 | 20 | 5.0 | 2425-8205 | |
| 10 x 10 | 100 | 15 | 6.0 | 2425-10156 | M5X25-HEX8 |
| 10 x 10 | 100 | 20 | 6.0 | 2425-10206 | |
| 12 x 12 | 150 | 18 | 6.0 | 2425-12186 | M5X30-HEX8 |
| 12 x 12 | 150 | 24 | 8.0 | 2425-12248 | M5X25-HEX8 |



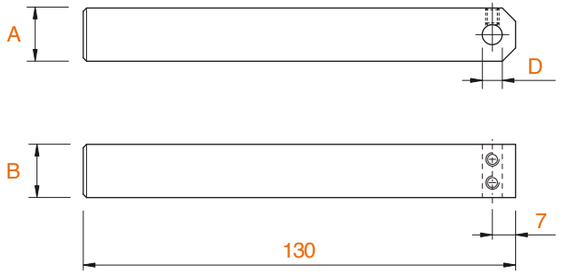
* livré avecchaque porte-outil / mit jedem Halter geliefert / delivered with each holder




| A x B | D | Art. N° | Pièces de rechange / Ersatzteile / Spare parts * Art. N° |
|---|---|---|---|
| 12 x 16 | 3.0 | 2441-0-3 | V-M4X4-BN24 |
| 12 x 16 | 4.0 | 2441-0-4 | |
| 12 x 16 | 5.0 | 2441-0-5 | |
| 12 x 16 | 6.0 | 2441-0-6 | |

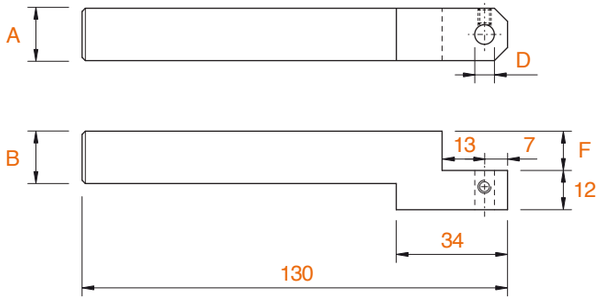







| A x B | D | Art. N° | Pièces de rechange / Ersatzteile / Spare parts * Art. N° |
|---|---|---|---|
| 16 x 16 | 3.0 | 2440-0-3 | V-M4X4-BN24 |
| 16 x 16 | 4.0 | 2440-0-4 | |
| 16 x 16 | 5.0 | 2440-0-5 | |
| 16 x 16 | 6.0 | 2440-0-6 | |

* livré avec chaque porte-outil / mit jedem Halter geliefert / delivered with each holder




| A x B | F | D | Art. N° |
|---|---|---|---|
| 16 x 16 | 8 | 3.0 | 2440-8-3 |
| 16 x 16 | 8 | 4.0 | 2440-8-4 |
| 16 x 16 | 8 | 5.0 | 2440-8-5 |
| 16 x 16 | 8 | 6.0 | 2440-8-6 |
| 16 x 16 | 8 | 8.0 | 2440-8-8 |
| 16 x 16 | 12 | 3.0 | 2440-12-3 |
| 16 x 16 | 12 | 4.0 | 2440-12-4 |
| 16 x 16 | 12 | 5.0 | 2440-12-5 |
| 16 x 16 | 12 | 6.0 | 2440-12-6 |
| 16 x 16 | 12 | 8.0 | 2440-12-8 |

Pièces de rechange / Ersatzteile / Spare parts

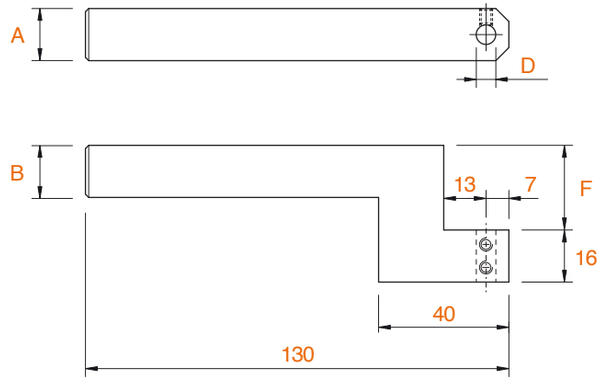


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| Art. N° |
|---|
| V-M4X6-BN24 |








| A x B | F | D | Art. N° |
|---|---|---|---|
| 16 x 16 | 18 | 4.0 | 2440-18-4 |
| 16 x 16 | 18 | 5.0 | 2440-18-5 |
| 16 x 16 | 18 | 6.0 | 2440-18-6 |
| 16 x 16 | 18 | 8.0 | 2440-18-8 |
| 16 x 16 | 26 | 4.0 | 2440-26-4 |
| 16 x 16 | 26 | 5.0 | 2440-26-5 |
| 16 x 16 | 26 | 6.0 | 2440-26-6 |
| 16 x 16 | 26 | 8.0 | 2440-26-8 |

Pièces de rechange / Ersatzteile / Spare parts

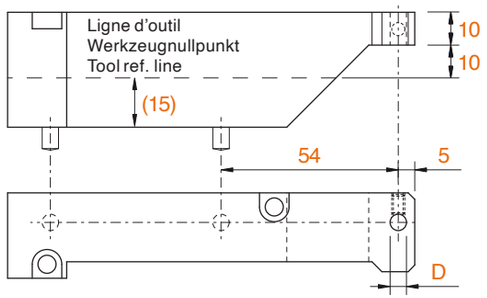


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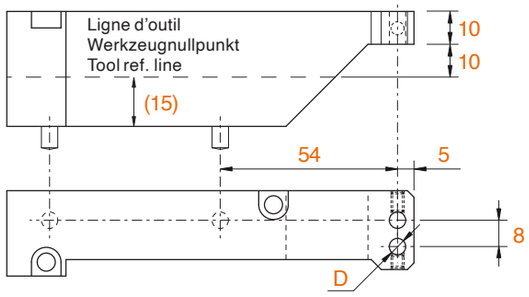
| Art. N° |
|---|
| V-M4X6-BN24 |

* livré avec chaque porte-outil / mit jedem Halter geliefert / delivered with each holder

Porte-outils pour machines Tornos DECO7/10 / EvoDECO10
Werkzeughalter für Tornos DECO7/10 / EvoDECO10Maschinen
Tool holders for Tornos DECO7/10 / EvoDECO10machines




| D | Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|
| 3.0 | 2435-3 | V-M4X6-BN24 |
| 4.0 | 2435-4 | |
| 5.0 | 2435-5 | |
| 6.0 | 2435-5 | |




| D | Art. N° | Art. N° |
|---|---|---|
| 3.0 | 2435-3-T | V-M4X6-BN24 |
| 4.0 | 2435-4-T | |
| 5.0 | 2435-5-T | |
| 6.0 | 2435-6-T | |

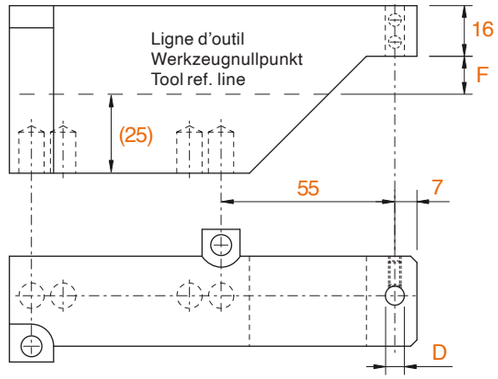


Zurück zum Kapitelanfang

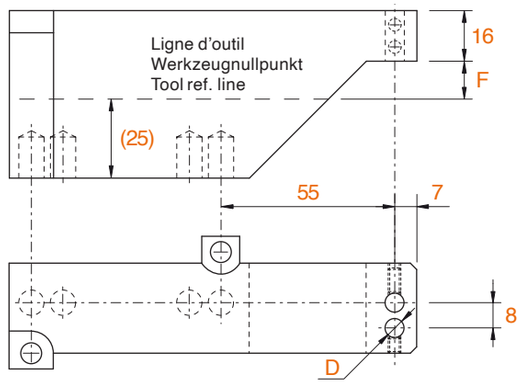
* Ein Ersatzteil pro Werkzeughalter / mit jedem Halter geliefert / delivered with each holder



Porte-outils pour machines Tornos DECO13/ EvoDECO16
Werkzeughalter für Tornos DECO13 / EvoDECO16Maschinen
Tool holders for Tornos DECO13 / EvoDECO16machines



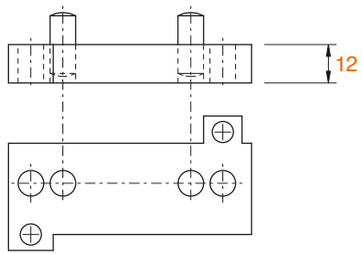

| F | D | Art. N° | Pièces de rechange Ersatzteile Spare parts * Art. N° |
|---|---|---|---|
| 12 | 3.0 | 2436-12-3 | V-M4X10-BN24 |
| 12 | 4.0 | 2436-12-4 | |
| 12 | 5.0 | 2436-12-5 | |
| 12 | 6.0 | 2436-12-6 | |
| 12 | 8.0 | 2436-12-8 | |
| 18 | 3.0 | 2436-18-3 | |
| 18 | 4.0 | 2436-18-4 | |
| 18 | 5.0 | 2436-18-5 | |
| 18 | 6.0 | 2436-18-6 | |
| 18 | 8.0 | 2436-18-8 | |




| F | D | Art. N° | Art. N° |
|---|---|---|---|
| 12 | 3.0 | 2436T-12-3 | V-M4X5-BN24 |
| 12 | 4.0 | 2436T-12-4 | |
| 12 | 5.0 | 2436T-12-5 | |
| 12 | 6.0 | 2436T-12-6 | |
| 18 | 3.0 | 2436T-18-3 | |
| 18 | 4.0 | 2436T-18-4 | |
| 18 | 5.0 | 2436T-18-5 | |
| 18 | 6.0 | 2436T-18-6 | |

## Entretoise
## Erhöhungsplatte
## Spacer

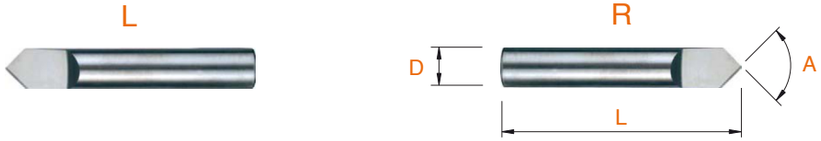
2436-S12




| Art. N° |
|---|
| 2436-S12 |

Zurück zum Index

1200 / 2200 | 90° | Forets à centrer plats
Zentrierflachbohrer
Centeringflat drills



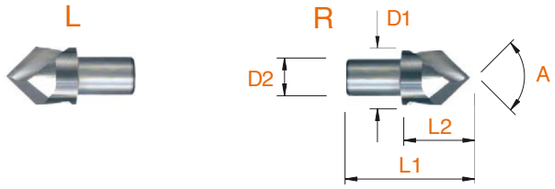

| MD VHM HM | | | L | R |
|---|---|---|---|---|
| A | D | L | Art. N° | Art. N° |
| 90° | 3 | 17 | 1200-317 | 2200-317 |
| 90° | 3 | 38 | 1200-338 | 2200-338 |
| 90° | 4 | 40 | 1200-440 | 2200-440 |
| 90° | 5 | 50 | 1200-550 | 2200-550 |
| 90° | 6 | 50 | 1200-650 | 2200-650 |
| 90° | 8 | 58 | 1200-858 | 2200-858 |
| 90° | 10 | 66 | 1200-1066 | 2200-1066 |
| 90° | 12 | 73 | 1200-1273 | 2200-1273 |



Zurück zum Kapitelanfang

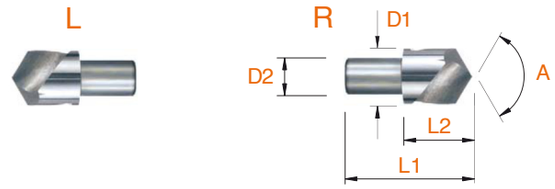


Forets à centrer hélicoïdaux
Zentrierspiralbohrer
Centeringtwist drills | 90° | 1500 / 2520



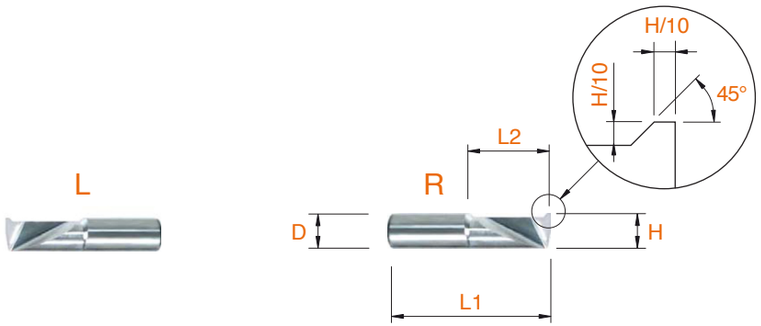

| | | | | | HSS | | MD / VHM / HM | |
|---|---|---|---|---|---|---|---|---|
| | | | | | L | R | L | R |
| A | D1 | D2 | L1 | L2 | Art. N° | Art. N° | Art. N° | Art. N° |
| 90° | 5 | 4 | 17 | 8 | 1500-5-HSS | 2520-5-HSS | 1500-5 | 2520-5 |
| 90° | 7 | 5 | 17 | 8 | 1500-7-HSS | 2520-7-HSS | 1500-7 | 2520-7 |
| 90° | 10 | 6 | 22 | 10 | 1500-10-HSS | 2520-10-HSS | 1500-10 | 2520-10 |
| 90° | 12 | 8 | 26 | 12 | 1500-12-HSS | 2520-12-HSS | 1500-12 | 2520-12 |

Forets à centrer hélicoïdaux
Zentrierspiralbohrer
Centeringtwist drills | 120° | 1510 / 2530




| MD VHM HM | | | | | L | R |
|---|---|---|---|---|---|---|
| A | D1 | D2 | L1 | L2 | Art. N° | Art. N° |
| 120° | 5 | 4 | 17 | 8 | 1510-5 | 2530-5 |
| 120° | 7 | 5 | 17 | 8 | 1510-7 | 2530-7 |
| 120° | 10 | 6 | 22 | 10 | 1510-10 | 2530-10 |
| 120° | 12 | 8 | 26 | 12 | 1510-12 | 2530-12 |

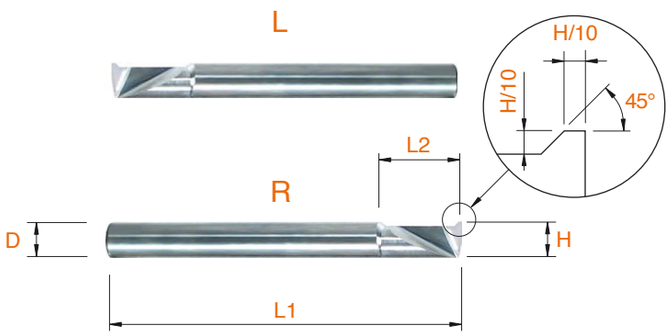
Zurück zum Index



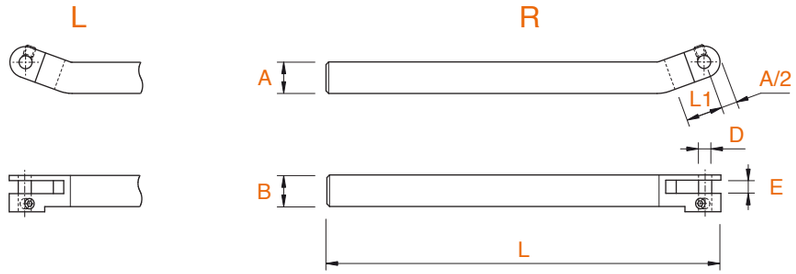

| MD VHM HM | | | | L | R |
|---|---|---|---|---|---|
| H 0/-0.05 | D | L1 | L2 | Art. N° | Art. N° |
| 2 | 3 | 13 | 4 | 1600-2-4 | 2620-2-4 |
| 3 | 3 | 15 | 6 | 1600-3-6 | 2620-3-6 |
| 4 | 4 | 17 | 8 | 1600-4-8 | 2620-4-8 |
| 4 | 4 | 21 | 12 | 1600-4-12 | 2620-4-12 |
| 5 | 5 | 21 | 10 | 1600-5-10 | 2620-5-10 |
| 5 | 5 | 26 | 15 | 1600-5-15 | 2620-5-15 |
| 6 | 6 | 25 | 12 | 1600-6-12 | 2620-6-12 |
| 6 | 6 | 31 | 18 | 1600-6-18 | 2620-6-18 |
| 8 | 8 | 32 | 16 | 1600-8-16 | 2620-8-16 |
| 8 | 8 | 40 | 24 | 1600-8-24 | 2620-8-24 |



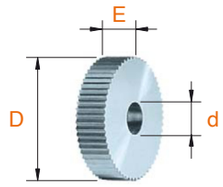





| MD VHM HM | | | | L | R |
|---|---|---|---|---|---|
| H 0/-0.05 | D | L1 | L2 | Art. N° | Art. N° |
| 2 | 3 | 38 | 4 | 1610-2-4 | 2630-2-4 |
| 3 | 3 | 38 | 6 | 1610-3-6 | 2630-3-6 |
| 4 | 4 | 40 | 8 | 1610-4-8 | 2630-4-8 |
| 4 | 4 | 40 | 12 | 1610-4-12 | 2630-4-12 |
| 5 | 5 | 50 | 10 | 1610-5-10 | 2630-5-10 |
| 5 | 5 | 54 | 15 | 1610-5-15 | 2630-5-15 |
| 6 | 6 | 50 | 12 | 1610-6-12 | 2630-6-12 |
| 6 | 6 | 57 | 18 | 1610-6-18 | 2630-6-18 |
| 8 | 8 | 58 | 16 | 1610-8-16 | 2630-8-16 |
| 8 | 8 | 63 | 24 | 1610-8-24 | 2630-8-24 |
| 10 | 10 | 72 | 30 | - | 2630-10-30 |
| 12 | 12 | 83 | 36 | - | 2630-12-36 |

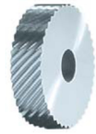



| A x B | L | E | D | L1 | A/2 | L (Art. N°) | R (Art. N°) | Pièces de rechange Ersatzteile Spare parts * (Art. N°) |
|---|---|---|---|---|---|---|---|---|
| 6 x 6 | 132 | 2 | 3 | 10 | 3 | 1402-623 | 2402-623 | GP-3X10-A6H2.5 |
| 6 x 6 | 132 | 3 | 3 | 10 | 3 | 1402-633 | 2402-633 | GP-3X10-A6H2.5 |
| 7 x 7 | 140 | 2 | 3 | 10 | 3.5 | 1402-723 | 2402-723 | GP-3X12-A6H2.5 |
| 7 x 7 | 140 | 3 | 3 | 10 | 3.5 | 1402-733 | 2402-733 | GP-3X12-A6H2.5 |
| 7 x 7 | 140 | 4 | 3 | 10 | 3.5 | 1402-743 | 2402-743 | GP-3X12-A6H2.5 |
| 7 x 7 | 140 | 2 | 4 | 10 | 3.5 | 1402-724 | 2402-724 | GP-4X12-A6H3.5 |
| 7 x 7 | 140 | 3 | 4 | 10 | 3.5 | 1402-734 | 2402-734 | GP-4X12-A6H3.5 |
| 7 x 7 | 140 | 4 | 4 | 10 | 3.5 | 1402-744 | 2402-744 | GP-4X12-A6H3.5 |
| 8 x 8 | 140 | 2 | 3 | 10 | 4 | 1402-823 | 2402-823 | GP-3X12-A6H2.5 |
| 8 x 8 | 140 | 3 | 3 | 10 | 4 | 1402-833 | 2402-833 | GP-3X12-A6H2.5 |
| 8 x 8 | 140 | 4 | 3 | 10 | 4 | 1402-843 | 2402-843 | GP-3X12-A6H2.5 |
| 8 x 8 | 140 | 2 | 4 | 10 | 4 | 1402-824 | 2402-824 | GP-4X12-A6H3.5 |
| 8 x 8 | 140 | 3 | 4 | 10 | 4 | 1402-834 | 2402-834 | GP-4X12-A6H3.5 |
| 8 x 8 | 140 | 4 | 4 | 10 | 4 | 1402-844 | 2402-844 | GP-4X12-A6H3.5 |
| 10 x 10 | 150 | 3 | 3 | 10 | 5 | 1402-1033 | 2402-1033 | GP-3X14-A8H2.5 |
| 10 x 10 | 150 | 4 | 3 | 10 | 5 | 1402-1043 | 2402-1043 | GP-3X14-A8H2.5 |
| 10 x 10 | 150 | 3 | 4 | 10 | 5 | 1402-1034 | 2402-1034 | GP-4X14-A8H3.5 |
| 10 x 10 | 150 | 4 | 4 | 10 | 5 | 1402-1044 | 2402-1044 | GP-4X14-A8H3.5 |
| 10 x 10 | 150 | 5 | 4 | 10 | 5 | 1402-1054 | - | GP-4X14-A8H3.5 |
| 12 x 12 | 150 | 4 | 4 | 12 | 6 | 1402-1244 | 2402-1244 | GP-4X14-A8H3.5 |
| 12 x 12 | 150 | 5 | 4 | 12 | 6 | 1402-1254 | 2402-1254 | GP-4X14-A8H3.5 |
| 12 x 12 | 150 | 4 | 5 | 12 | 6 | 1402-1245 | 2402-1245 | GP-5X14-A8H4.5 |
| 12 x 12 | 150 | 5 | 5 | 12 | 6 | 1402-1255 | 2402-1255 | GP-5X14-A8H4.5 |
| 16 x 16 | 150 | 4 | 4 | 12 | 8 | 1402-1644 | 2402-1644 | GP-4X16-A8H3.5 |
| 16 x 16 | 150 | 4 | 5 | 12 | 8 | - | 2402-1645 | GP-5X16-A9H4.5 |
| 16 x 16 | 150 | 5 | 5 | 12 | 8 | - | 2402-1655 | GP-5X16-A9H4.5 |
| 16 x 16 | 150 | 6 | 4 | 12 | 8 | - | 2402-1664 | GP-4X16-A8H3.5 |
| 16 x 16 | 150 | 6 | 6 | 12 | 8 | - | 2402-1666 | GP-6X16-A9H5.5 |
| 16 x 16 | 150 | 8 | 6 | 12 | 8 | - | 2402-1686 | GP-6X16-A9H5.5 |

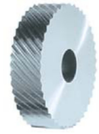





AA



BL



BR



GE

Art. N° ex:
10X2X3-0.2-AA

| D | E | d | Pas (tous les 0.1 mm) Teilung (alle 0.1 mm) Pitch (every 0.1 mm) | Molettes standards Standard Rändelrädchen Standard knurls |
|---|---|---|---|---|
| 8 | 2 | 3 | 0.2 - 0.6 | |
| 8 | 2 | 4 | 0.2 - 0.6 | |
| 8 | 3 | 3 | 0.2 - 0.6 | |
| 8 | 3 | 4 | 0.2 - 0.6 | |
| 8 | 4 | 3 | 0.2 - 0.6 | |
| 8 | 4 | 4 | 0.2 - 0.6 | |
| 10 | 2 | 3 | 0.2 - 0.8 | |
| 10 | 2 | 4 | 0.2 - 0.8 | AA (0°) |
| 10 | 3 | 3 | 0.2 - 0.8 | |
| 10 | 3 | 4 | 0.2 - 0.8 | BL 15° / BR 15° |
| 10 | 4 | 3 | 0.2 - 0.8 | BL 30° / BR 30° |
| 10 | 4 | 4 | 0.2 - 0.8 | BL 45° / BR 45° |
| 12 | 4 | 4 | 0.3 - 1.0 | GE 30° |
| 15 | 4 | 4 | 0.4 - 1.0 | GE 45° |
| 15 | 4 | 5 | 0.4 - 1.0 | |
| 15 | 5 | 4 | 0.4 - 1.0 | |
| 15 | 5 | 5 | 0.4 - 1.0 | |
| 20 | 4 | 5 | 0.5 - 1.2 | |
| 20 | 5 | 5 | 0.5 - 1.2 | |
| 20 | 6 | 6 | 0.5 - 1.2 | |
| 20 | 8 | 6 | 0.5 - 1.2 | |

Art. N° ex:
8.9X2.5X4-0.2-AA-Q

| D | E | d | Pas (tous les 0.1 mm) Teilung (alle 0.1 mm) Pitch (every 0.1 mm) | Molettes “Quick” “Quick”-Rändelrädchen “Quick”-knurling wheels |
|---|---|---|---|---|
| 8.9 | 2.5 | 4 | 0.2 - 0.8 | AA (0°) |
| 14.5 | 3 | 5 | 0.4 - 1.0 | BL 15° / BR 15° |
| 21.5 | 5 | 8 | 0.5 - 1.2 | BL 30° / BR 30° |

Exécutions spéciales sur demande / Sonderausführungen auf Anfrage / Special executions on request

# MICRO-Line



APPLITEC
CUTTING TOOLS

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Mikropräzisionsfräser
Precision micro end mills

> 16.06

Fraises en bout / Fraises à angler
Schaftfräser / Kegelsenker
End mills / Chamfering tools

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Executions for machine WM 701S

> 16.96

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Micro drills and centering drills

> 16.115

Informations techniques et symboles
Technische Informationen und Symbole
Technical information and symbols
> 16.136





## TiAlN



Revêtement PVD à couche mince
Dünnschicht PVD Beschichtung
Thin PVD coating

TF F M E

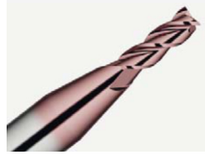
P ★★★★★
M ★★★★☆
N ★★★☆☆
S ★★★★☆

- revêtement de dernière génération couche mince et lisse
- idéal pour tous les aciers et aciers inoxydables
- bonne condition pour les grades de titane et les alliages de nickel
- excellente variante universelle pour un fraisage en finition ou ébauche
- très bonne résistance à la température

- neuesten Generation Beschichtung, dünne und glatte Schicht
- hervorragend für alle Stähle und rostfreie Stähle
- guter Zustand für Titan- und Nickellegierungssorten
- ausgezeichnete Universalsorte zum Schlicht- oder Schruppfräsen
- sehr gute Temperaturbeständigkeit

- latest generation coating thin and smooth layer
- specially adapted for our tools Ideal for all basic steels and stainless steels
- good condition for titanium grades and nickel alloys
- excellent universal variant for finishing or rough milling
- very good temperature resistance

## STF



Revêtement PVD à couche mince
Dünnschicht PVD Beschichtung
Thin PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★★★★☆
S ★★★★★

- revêtement de haute performance
- 1er choix pour les alliages de chrome/nickel, inox, titane, zirconium
- spécialement adapté aux matières extrêmes en général

- hochleistungsbeschichtung
- erste Wahl für Chrom/Nickel, rostfreiem Stahl, Titan, Zirkoniumlegierungen
- speziell angepasst für extreme Materialien im Allgemeinen

- high performance coating
- first choice for chrome/nickel, stainless steel, titanium, zirconium alloys
- specially adapted to extreme materials in general

## TiCN



Revêtement PVD à couche mince
Dünnschicht PVD Beschichtung
Thin PVD coating

TF F M E

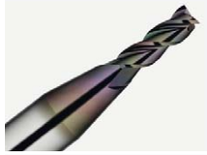
P ★★★★★
M ★★★★☆
N ★★★☆☆
S ★★★★☆

- revêtement de dernière génération offrant une excellente adhérence, avec une couche mince et lisse
- idéal pour le fraisage en finition de tous les aciers et aciers inoxydables
- excellente nuance pour les outils de petits diamètres (0.02-0.90 mm)

- Beschichtung der neuesten Generation mit ausgezeichneter Haftung, dünner und glatter Schicht
- hervorragend für Schlichtfräsen aller Stähle und rostfreien Stähle
- ausgezeichnete Sorte für Werkzeuge mit kleinem Durchmesser (0.02-0.90 mm)

- latest generation coating with excellent adhesion, thin and smooth layer
- ideal for finish milling for all steels and stainless steels
- specially adapted for small diameters (0.02-0.90 mm)

## DLC



Revêtement DLC à couche mince
Dünnschicht DLC Beschichtung
Thin DLC coating

TF F M E

P ☆☆☆☆☆
M ☆☆☆☆☆
N ★★★★★
S ★★☆☆☆

- revêtement de très haute performance et à couche extra-mince
- très faible coefficient de frottement
- 1er choix pour toutes les matières précieuses, non ferreuses et abrasives, telles que l'or, l'argent, le laiton sans plomb, le cuivre, l'aluminium, la fibre de carbone, la nacre et divers polymères…
- angles de coupe à finition poli miroir, offrant une excellente acuité d'arête
- durée de vie de l'outil considérablement prolongée

- hochleistungsbeschichtung mit extra-feiner Schicht
- sehr geringer Reibwert
- erste Wahl für alle edlen, nicht eisenhaltig und abrasiven Materialien wie Gold, Silber, bleifreies Messing, Kupfer, Aluminium, Kohlefaser, Perlmutt und diverse Polymere…
- Schneidkanten mit hochglanzpolierte Oberfläche, die eine hervorragende Schneidkantenschärfe bieten
- deutlich verlängerte Lebensdauer des Werkzeugs

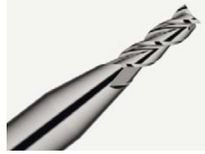
- very high-performance coating with extra-thin layer
- very low friction ratio
- first choice for all precious, non-ferrous and abrasive materials, such as gold, silver, lead-free brass, copper, aluminum, carbon fiber, mother-of-pearl and various polymers…
- cutting edges with mirror-polished finish, offering excellent edge sharpness
- significantly extended tool life



MICRO-Line

Nuances
Sorten
Grades

## N



Non revêtu
Unbeschichtet
Uncoated

P ★★☆☆☆
M ★★☆☆☆
N ★★★★☆
S ★★☆☆☆

- carbures de haute qualité, adaptés aux différents groupes de produits
- tous les carbures ont une excellente dureté et une bonne résistance à la déformation
- acuité d'arête maximale grâce à une finition super polie
- idéal pour l'usinage en super finition de matières non ferreuses ou faiblement alliées

- hochwertige und spezifische Hartmetalle gemäss den Produktgruppen
- alle Hartmetalle haben eine ausgezeichnete Härte und eine gute Verformungsbeständigkeit
- maximale Kantenschärfe durch hochpoliertes Finish
- ideal für superfinish Bearbeitung von Nichteisen- oder niedriglegierten Materialien

- high-quality and specific carbides according to the product groups in our catalog
- all carbides have excellent hardness and good resistance to deformation
- maximum edge sharpness thanks to a super polished tool finish
- ideal for super-finish machining of non-ferrous or low-alloy materials

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

> 16.07

| Z | λ | L2 | D1 | D2 | Type | Corner | page |
|---|---|---|---|---|---|---|---|
| Z=1 | 0° | 2x D1 | Ø0.20 - 3.00 | Ø3 h4 / Ø4 h5 | 3170-2 | Sharp Corner | > 16.08 |
| | | 2x D1 | Ø0.20 - 3.00 | Ø3 h4 / Ø4 h5 | 3170R-2 | | > 16.09 |
| | | 3x D1 | Ø0.20 - 3.00 | Ø3 h4 / Ø4 h5 | 3170R-3 | | > 16.10 |
| | | 4x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø4 h5 | 3170R-4 | | > 16.11 |
| Z=2 | 30° | 0.75x D1 | Ø0.20 - 2.00 | Ø3 h4 | 3271-0.75 | Sharp Corner | > 16.12 |
| | | 1x D1 | Ø0.30 - 2.50 | Ø3 h4 | 3271-1 | | > 16.13 |
| | | 1.5x D1 | Ø0.10- 2.00 | Ø3 h4 | 3271-1.5 | | > 16.14 |
| | | 2x D1 | Ø0.10- 2.00 | Ø3 h4 | 3271-2 | | > 16.15 |
| | | 3x D1 | Ø0.10- 2.90 | Ø3 h4 | 3271-3 | | > 16.16 |
| | | 5x D1 | Ø0.30 - 2.50 | Ø3 h4 | 3271-5 | | > 16.17 |
| | | 8x D1 | Ø0.40 - 2.50 | Ø3 h4 / Ø4 h5 | 3271-8 | | > 16.18 |
| | | 2x D1 | Ø0.20 - 3.00 | Ø3 h4 / Ø6 h5 | 3270S-3X | | > 16.19 |
| | | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3270S-6X | | > 16.20 |
| | | 2x D1 | Ø0.40 - 3.00 | Ø3 h4 / Ø6 h5 | 3270S-9X | | > 16.21 |
| | | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3279T-3X | Radius Corner | > 16.22 |
| | | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3279T-6X | | > 16.23 |
| | | 2x D1 | Ø0.40 - 3.00 | Ø3 h4 / Ø6 h5 | 3279T-9X | | > 16.24 |
| Z=3 | 30° | 1.3x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3371-1.3 | Sharp Corner | > 16.25 |
| | | 2x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3371-2 | | > 16.26 |
| | | 3x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3371-3 | | > 16.27 |
| | | 4x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3371-4 | | > 16.28 |
| | | 5x D1 | Ø0.50 - 2.50 | Ø3 h4 | 3371-5 | | > 16.29 |
| | | 8x D1 | Ø0.50 - 2.50 | Ø3 h4 / Ø4 h5 | 3371-8 | | > 16.30 |
| | 45° | 2.5x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3375-2.5 | | > 16.31 |
| | 36°-38°-40° | 1.5x D1 | Ø0.30 - 2.50 | Ø3 h4 | DHD3371-1.5 | | > 16.32 |
| | | 3x D1 | Ø0.30 - 2.50 | Ø3 h4 | DHD3371-3 | | > 16.33 |
| | 30° | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3370S-3X | | > 16.34 |
| | | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3370S-6X | | > 16.35 |
| | | 2x D1 | Ø0.40 - 3.00 | Ø3 h4 / Ø6 h5 | 3370S-9X | | > 16.36 |
| | | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3379T-3X | Radius Corner | > 16.37 |
| | | 2x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3379T-6X | | > 16.38 |
| | | 2x D1 | Ø0.40 - 3.00 | Ø3 h4 / Ø6 h5 | 3379T-9X | | > 16.39 |
| Z=4 | 30° | 1.5x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3471-1.5 | Sharp Corner | > 16.40 |
| | | 3x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3471-3 | | > 16.41 |
| | 40° | 2x D1 | Ø0.30 - 2.90 | Ø3 h4 | 3472-2 | | > 16.42 |
| | | 4x D1 | Ø0.40 - 2.90 | Ø3 h4 | 3472-4 | | > 16.43 |
| | 35°-38° | 3x D1 | Ø0.50 - 2.50 | Ø3 h4 | DHP3471-3 | | > 16.44 |
| Z=2 | 30° | 0.75x D1 | Ø0.20 - 2.50 | Ø3 h4 | 3278-0.75 | U | > 16.45 |
| | | 1x D1 | Ø0.20 - 2.90 | Ø3 h4 | 3278-1 | | > 16.46 |
| | | 1.5x D1 | Ø0.20 - 2.90 | Ø3 h4 | 3278-1.5 | | > 16.47 |
| | | 3x D1 | Ø0.20 - 2.90 | Ø3 h4 | 3278-3 | | > 16.48 |
| | | 1.5x D1 | Ø0.20 - 3.00 | Ø3 h4 / Ø6 h5 | 3278H-3X | | > 16.49 |
| | | 1.5x D1 | Ø0.30 - 3.00 | Ø3 h4 / Ø6 h5 | 3278H-6X | | > 16.50 |
| | | 1.5x D1 | Ø0.40 - 3.00 | Ø3 h4 / Ø6 h5 | 3278H-9X | | > 16.51 |





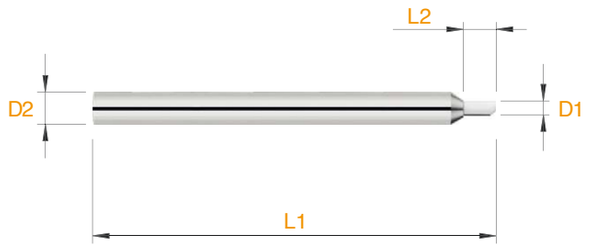
| Matière / Werkstoff / Material | | VC (m/min) | 0.10 - 0.50 fz (mm) | 0.60 - 1.50 fz (mm) | 1.60 - 2.90 fz (mm) | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 80 - 130 | 0.003 - 0.005 | 0.006 - 0.010 | 0.013 - 0.020 | - | ★★★ | ★★★ | ★★ | - |
| Acier<br>Stahl<br>Steel | P < 600 N/mm² | 70 - 100 | 0.003 - 0.005 | 0.006 - 0.010 | 0.013 - 0.020 | - | ★★★ | ★★★ | ★★ | - |
| Acier<br>Stahl<br>Steel | P < 800 N/mm² | 70 - 100 | 0.003 - 0.005 | 0.006 - 0.010 | 0.013 - 0.020 | - | ★★★ | ★★★ | ★★ | - |
| Acier<br>Stahl<br>Steel | P > 800 N/mm² | 50 - 80 | 0.003 - 0.005 | 0.006 - 0.010 | 0.013 - 0.020 | - | ★★★ | ★★★ | ★★ | - |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel | H | 60 - 90 | 0.001 - 0.002 | 0.003 - 0.005 | 0.007 - 0.010 | - | ★★★ | ★★★ | ★ | - |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel | H | 40 - 70 | 0.001 - 0.002 | 0.003 - 0.005 | 0.007 - 0.010 | - | ★★★ | ★★★ | ★ | - |
| Inox<br>Rostfreistahl<br>Stainless steel | M | 40 - 80 | 0.003 - 0.005 | 0.006 - 0.010 | 0.013 - 0.020 | - | ★★★ | ★★★ | ★★ | - |
| Aluminium | N | 200 - 300 | 0.002 - 0.005 | 0.005 - 0.010 | 0.010 - 0.030 | ★★★ | - | - | ★★ | ★★★ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 200 | 0.001 - 0.005 | 0.006 - 0.010 | 0.010 - 0.015 | ★★★ | ★★ | ★★ | ★★ | ★★★ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material | N | 200 - 700 | 0.002 - 0.004 | 0.006 - 0.015 | 0.015 - 0.050 | ★★★ | ★★ | ★★ | ★★ | ★★★ |
| Métaux précieux<br>Edelmetalle<br>Precious metals | N | 90 - 140 | 0.002 - 0.003 | 0.004 - 0.012 | 0.012 - 0.025 | ★★★ | ★★ | ★★ | ★ | ★★★ |
| Titane<br>Titan<br>Titanium | S | 25 - 70 | 0.001 - 0.003 | 0.004 - 0.010 | 0.006 - 0.015 | - | ★★★ | ★★★ | ★★ | - |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy | S | 40 - 70 | 0.001 - 0.003 | 0.004 - 0.008 | 0.008 - 0.012 | - | ★★★ | ★★★ | ★★ | - |
| Matière exotique<br>Exotisches material<br>Exotic material | O | 15 - 25 | 0.001 - 0.002 | 0.003 - 0.005 | 0.006 - 0.010 | - | ★★★ | ★★★ | ★★ | ★★★ |

Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30% erhöhen
With coating, increase data by 20-30%

★ Bien / Gut / Good
★★ Très bien / Sehr gut / Verygood
★★★ Excellent / Ausgezeichnet / Excellent

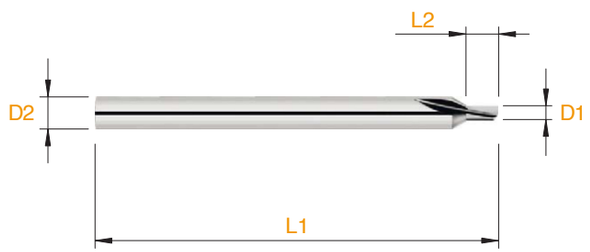
Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills






MD VHM HM | λ 0° | Sharp Corner | 2xD1 | Z=1

| D1 +0.005/ -0.010 | L2 | D2 h4 Ø3.0 h5 Ø4.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.40 | 3.00 | 39 | 3170-2-0.20 | ● | | | | |
| 0.30 | 0.60 | 3.00 | 39 | 3170-2-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 3.00 | 39 | 3170-2-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 39 | 3170-2-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.00 | 39 | 3170-2-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 3.00 | 39 | 3170-2-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 3.00 | 39 | 3170-2-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 3.00 | 39 | 3170-2-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 39 | 3170-2-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.00 | 39 | 3170-2-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.00 | 39 | 3170-2-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.00 | 39 | 3170-2-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 3.00 | 39 | 3170-2-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 3.00 | 39 | 3170-2-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 3.00 | 39 | 3170-2-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 3.00 | 39 | 3170-2-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 3.00 | 39 | 3170-2-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 3.00 | 39 | 3170-2-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 3.00 | 39 | 3170-2-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 3.00 | 39 | 3170-2-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 3.00 | 39 | 3170-2-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 3.00 | 39 | 3170-2-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 3.00 | 39 | 3170-2-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 3.00 | 39 | 3170-2-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 5.20 | 3.00 | 39 | 3170-2-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 5.40 | 3.00 | 39 | 3170-2-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 5.60 | 3.00 | 39 | 3170-2-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 5.80 | 3.00 | 39 | 3170-2-2.90 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 4.00 | 40 | 3170-2-3.00 | ● | ● | ● | ● | ● |

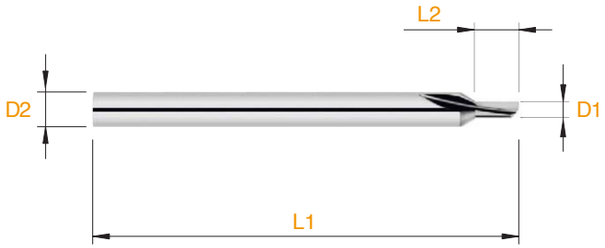



MD VHM HM | λ 0° | Sharp Corner | 2xD1 | Z=1

| D1 +0.005/ -0.010 | L2 | D2 h4 Ø3.0 h5 Ø4.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.40 | 3.00 | 39 | 3170R-2-0.20 | ● | | | | |
| 0.30 | 0.60 | 3.00 | 39 | 3170R-2-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 3.00 | 39 | 3170R-2-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 39 | 3170R-2-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.00 | 39 | 3170R-2-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 3.00 | 39 | 3170R-2-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 3.00 | 39 | 3170R-2-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 3.00 | 39 | 3170R-2-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 39 | 3170R-2-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.00 | 39 | 3170R-2-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.00 | 39 | 3170R-2-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.00 | 39 | 3170R-2-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 3.00 | 39 | 3170R-2-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 3.00 | 39 | 3170R-2-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 3.00 | 39 | 3170R-2-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 3.00 | 39 | 3170R-2-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 3.00 | 39 | 3170R-2-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 3.00 | 39 | 3170R-2-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 3.00 | 39 | 3170R-2-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.10 | 3.00 | 39 | 3170R-2-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 3.00 | 39 | 3170R-2-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 3.00 | 39 | 3170R-2-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 3.00 | 39 | 3170R-2-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 3.00 | 39 | 3170R-2-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 5.20 | 3.00 | 39 | 3170R-2-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 5.40 | 3.00 | 39 | 3170R-2-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 5.60 | 3.00 | 39 | 3170R-2-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 5.80 | 3.00 | 39 | 3170R-2-2.90 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 4.00 | 40 | 3170R-2-3.00 | ● | ● | ● | ● | ● |

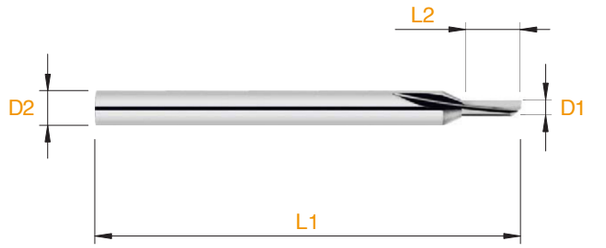
Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills





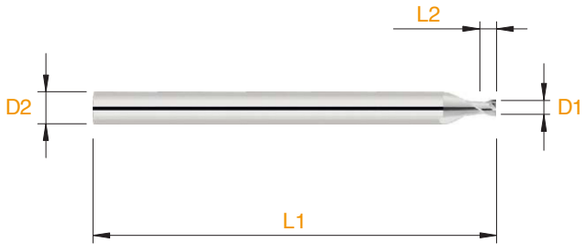

MD VHM HM | λ 0° | Sharp Corner | 3xD1 | Z=1

| D1 +0.005/ -0.010 | L2 | D2 h4 Ø3.0 h5 Ø4.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.60 | 3.00 | 39 | 3170R-3-0.20 | ● | | | | |
| 0.30 | 0.90 | 3.00 | 39 | 3170R-3-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.20 | 3.00 | 39 | 3170R-3-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.50 | 3.00 | 39 | 3170R-3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.80 | 3.00 | 39 | 3170R-3-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.10 | 3.00 | 39 | 3170R-3-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 2.40 | 3.00 | 39 | 3170R-3-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 2.70 | 3.00 | 39 | 3170R-3-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | 3170R-3-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 3.30 | 3.00 | 39 | 3170R-3-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 3.60 | 3.00 | 39 | 3170R-3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 3.90 | 3.00 | 39 | 3170R-3-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 4.20 | 3.00 | 39 | 3170R-3-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | 3170R-3-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | 3170R-3-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | 3170R-3-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 9.00 | 4.00 | 40 | 3170R-3-3.00 | ● | ● | ● | ● | ● |




MD VHM HM | λ 0° | Sharp Corner | 4xD1 | Z=1

| D1 +0.005/ -0.010 | L2 | D2 h4 Ø3.0 h5 Ø4.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 1.20 | 3.00 | 39 | 3170R-4-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.60 | 3.00 | 39 | 3170R-4-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 2.00 | 3.00 | 39 | 3170R-4-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 2.40 | 3.00 | 39 | 3170R-4-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.80 | 3.00 | 39 | 3170R-4-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 3.20 | 3.00 | 39 | 3170R-4-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 3.60 | 3.00 | 39 | 3170R-4-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 4.00 | 3.00 | 39 | 3170R-4-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 4.40 | 3.00 | 39 | 3170R-4-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 4.80 | 3.00 | 39 | 3170R-4-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 5.20 | 3.00 | 39 | 3170R-4-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 5.60 | 3.00 | 39 | 3170R-4-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 6.00 | 3.00 | 39 | 3170R-4-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 8.00 | 3.00 | 39 | 3170R-4-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 10.00 | 3.00 | 39 | 3170R-4-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 12.00 | 4.00 | 40 | 3170R-4-3.00 | ● | ● | ● | ● | ● |

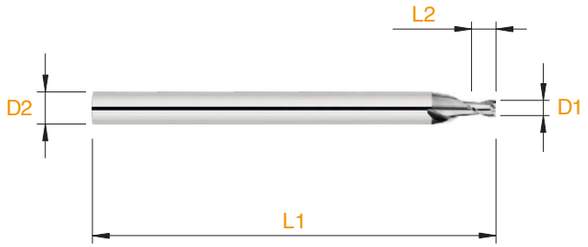



MD VHM HM | λ 30° | Sharp Corner | 0.75xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.15 | 3.00 | 39 | 3271-0.75-0.20 | ● | | | | |
| 0.30 | 0.25 | 3.00 | 39 | 3271-0.75-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.30 | 3.00 | 39 | 3271-0.75-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.37 | 3.00 | 39 | 3271-0.75-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.45 | 3.00 | 39 | 3271-0.75-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.53 | 3.00 | 39 | 3271-0.75-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.60 | 3.00 | 39 | 3271-0.75-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.70 | 3.00 | 39 | 3271-0.75-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.75 | 3.00 | 39 | 3271-0.75-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.90 | 3.00 | 39 | 3271-0.75-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.90 | 3.00 | 39 | 3271-0.75-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 1.00 | 3.00 | 39 | 3271-0.75-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 1.10 | 3.00 | 39 | 3271-0.75-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 1.15 | 3.00 | 39 | 3271-0.75-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 1.20 | 3.00 | 39 | 3271-0.75-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 1.30 | 3.00 | 39 | 3271-0.75-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 1.40 | 3.00 | 39 | 3271-0.75-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 1.45 | 3.00 | 39 | 3271-0.75-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 1.50 | 3.00 | 39 | 3271-0.75-2.00 | ● | ● | ● | ● | ● |





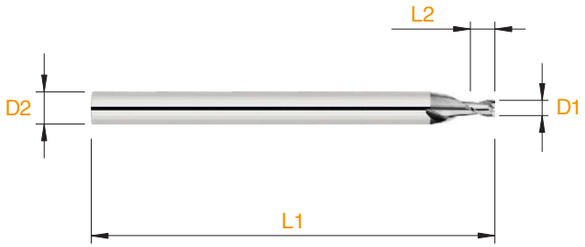



MD VHM HM | λ 30° | Sharp Corner | 1xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.30 | 3.00 | 39 | 3271-1-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.40 | 3.00 | 39 | 3271-1-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.50 | 3.00 | 39 | 3271-1-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.60 | 3.00 | 39 | 3271-1-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.70 | 3.00 | 39 | 3271-1-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.80 | 3.00 | 39 | 3271-1-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.90 | 3.00 | 39 | 3271-1-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 1.00 | 3.00 | 39 | 3271-1-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 1.10 | 3.00 | 39 | 3271-1-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 1.20 | 3.00 | 39 | 3271-1-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 1.30 | 3.00 | 39 | 3271-1-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 1.40 | 3.00 | 39 | 3271-1-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 1.50 | 3.00 | 39 | 3271-1-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 1.60 | 3.00 | 39 | 3271-1-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 1.70 | 3.00 | 39 | 3271-1-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 1.80 | 3.00 | 39 | 3271-1-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 1.90 | 3.00 | 39 | 3271-1-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 2.00 | 3.00 | 39 | 3271-1-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 2.50 | 3.00 | 39 | 3271-1-2.50 | ● | ● | ● | ● | ● |

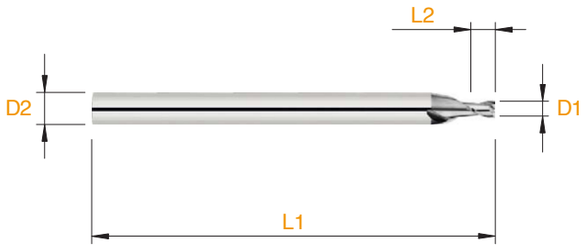
Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills






MD VHM HM | λ 30° | Sharp Corner | 1.5xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.10 | 0.15 | 3.00 | 39 | 3271-1.5-0.10 | ● | | | | |
| 0.15 | 0.20 | 3.00 | 39 | 3271-1.5-0.15 | ● | | | | |
| 0.20 | 0.30 | 3.00 | 39 | 3271-1.5-0.20 | ● | | | | |
| 0.25 | 0.35 | 3.00 | 39 | 3271-1.5-0.25 | ● | | | | |
| 0.30 | 0.45 | 3.00 | 39 | 3271-1.5-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.60 | 3.00 | 39 | 3271-1.5-0.40 | ● | ● | ● | ● | ● |
| 0.45 | 0.70 | 3.00 | 39 | 3271-1.5-0.45 | ● | ● | ● | ● | ● |
| 0.50 | 0.75 | 3.00 | 39 | 3271-1.5-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.90 | 3.00 | 39 | 3271-1.5-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.05 | 3.00 | 39 | 3271-1.5-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.20 | 3.00 | 39 | 3271-1.5-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.35 | 3.00 | 39 | 3271-1.5-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 1.50 | 3.00 | 39 | 3271-1.5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 1.65 | 3.00 | 39 | 3271-1.5-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 1.80 | 3.00 | 39 | 3271-1.5-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 1.95 | 3.00 | 39 | 3271-1.5-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.10 | 3.00 | 39 | 3271-1.5-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 2.25 | 3.00 | 39 | 3271-1.5-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 2.40 | 3.00 | 39 | 3271-1.5-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 2.55 | 3.00 | 39 | 3271-1.5-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 2.70 | 3.00 | 39 | 3271-1.5-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 2.85 | 3.00 | 39 | 3271-1.5-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 3.00 | 3.00 | 39 | 3271-1.5-2.00 | ● | ● | ● | ● | ● |

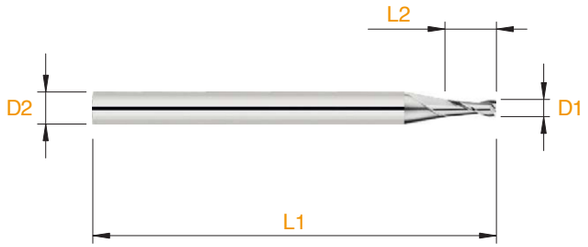



MD VHM HM | λ 30° | Sharp Corner | 2xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.10 | 0.20 | 3.00 | 39 | 3271-2-0.10 | ● | | | | |
| 0.15 | 0.30 | 3.00 | 39 | 3271-2-0.15 | ● | | | | |
| 0.20 | 0.40 | 3.00 | 39 | 3271-2-0.20 | ● | | | | |
| 0.25 | 0.50 | 3.00 | 39 | 3271-2-0.25 | ● | | | | |
| 0.30 | 0.60 | 3.00 | 39 | 3271-2-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 3.00 | 39 | 3271-2-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 39 | 3271-2-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.00 | 39 | 3271-2-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 3.00 | 39 | 3271-2-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 3.00 | 39 | 3271-2-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 3.00 | 39 | 3271-2-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 39 | 3271-2-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.00 | 39 | 3271-2-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.00 | 39 | 3271-2-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.00 | 39 | 3271-2-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 3.00 | 39 | 3271-2-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 3.00 | 39 | 3271-2-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 3.00 | 39 | 3271-2-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 3.00 | 39 | 3271-2-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 3.00 | 39 | 3271-2-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 3.00 | 39 | 3271-2-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 3.00 | 39 | 3271-2-2.00 | ● | ● | ● | ● | ● |

Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills

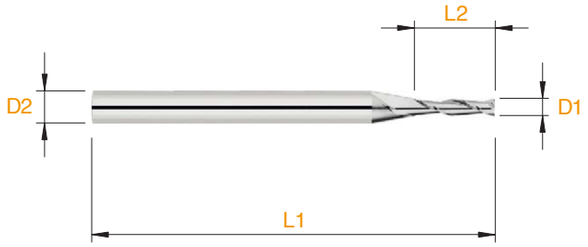





MD VHM HM | λ 30° | Sharp Corner | 3xD1 | Z=2

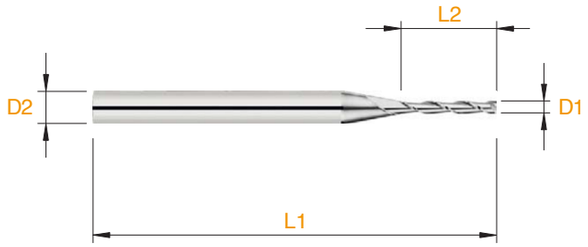
| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.10 | 0.25 | 3.00 | 39 | 3271-3-0.10 | ● | | | | |
| 0.15 | 0.45 | 3.00 | 39 | 3271-3-0.15 | ● | | | | |
| 0.20 | 0.50 | 3.00 | 39 | 3271-3-0.20 | ● | | | | |
| 0.25 | 0.75 | 3.00 | 39 | 3271-3-0.25 | ● | | | | |
| 0.30 | 1.00 | 3.00 | 39 | 3271-3-0.30 | ● | ● | ● | ● | ● |
| 0.35 | 1.10 | 3.00 | 39 | 3271-3-0.35 | ● | ● | ● | ● | ● |
| 0.40 | 1.20 | 3.00 | 39 | 3271-3-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.50 | 3.00 | 39 | 3271-3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 2.00 | 3.00 | 39 | 3271-3-0.60 | ● | ● | ● | ● | ● |
| 0.65 | 2.00 | 3.00 | 39 | 3271-3-0.65 | ● | ● | ● | ● | ● |
| 0.70 | 2.00 | 3.00 | 39 | 3271-3-0.70 | ● | ● | ● | ● | ● |
| 0.75 | 2.00 | 3.00 | 39 | 3271-3-0.75 | ● | ● | ● | ● | ● |
| 0.80 | 2.50 | 3.00 | 39 | 3271-3-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 2.50 | 3.00 | 39 | 3271-3-0.90 | ● | ● | ● | ● | ● |
| 0.95 | 3.00 | 3.00 | 39 | 3271-3-0.95 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | 3271-3-1.00 | ● | ● | ● | ● | ● |
| 1.05 | 3.00 | 3.00 | 39 | 3271-3-1.05 | ● | ● | ● | ● | ● |
| 1.10 | 3.00 | 3.00 | 39 | 3271-3-1.10 | ● | ● | ● | ● | ● |
| 1.15 | 3.50 | 3.00 | 39 | 3271-3-1.15 | ● | ● | ● | ● | ● |
| 1.20 | 4.00 | 3.00 | 39 | 3271-3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 4.00 | 3.00 | 39 | 3271-3-1.30 | ● | ● | ● | ● | ● |
| 1.35 | 4.00 | 3.00 | 39 | 3271-3-1.35 | ● | ● | ● | ● | ● |
| 1.40 | 4.00 | 3.00 | 39 | 3271-3-1.40 | ● | ● | ● | ● | ● |
| 1.45 | 4.40 | 3.00 | 39 | 3271-3-1.45 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | 3271-3-1.50 | ● | ● | ● | ● | ● |
| 1.55 | 4.50 | 3.00 | 39 | 3271-3-1.55 | ● | ● | ● | ● | ● |
| 1.60 | 4.50 | 3.00 | 39 | 3271-3-1.60 | ● | ● | ● | ● | ● |
| 1.65 | 5.00 | 3.00 | 39 | 3271-3-1.65 | ● | ● | ● | ● | ● |
| 1.70 | 5.00 | 3.00 | 39 | 3271-3-1.70 | ● | ● | ● | ● | ● |
| 1.75 | 5.30 | 3.00 | 39 | 3271-3-1.75 | ● | ● | ● | ● | ● |

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 1.80 | 6.00 | 3.00 | 39 | 3271-3-1.80 | ● | ● | ● | ● | ● |
| 1.85 | 6.00 | 3.00 | 39 | 3271-3-1.85 | ● | ● | ● | ● | ● |
| 1.90 | 6.00 | 3.00 | 39 | 3271-3-1.90 | ● | ● | ● | ● | ● |
| 1.95 | 6.00 | 3.00 | 39 | 3271-3-1.95 | ● | ● | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | 3271-3-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 6.00 | 3.00 | 39 | 3271-3-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 6.50 | 3.00 | 39 | 3271-3-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 7.00 | 3.00 | 39 | 3271-3-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 7.00 | 3.00 | 39 | 3271-3-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | 3271-3-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 7.50 | 3.00 | 39 | 3271-3-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 8.00 | 3.00 | 39 | 3271-3-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 8.00 | 3.00 | 39 | 3271-3-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 8.00 | 3.00 | 39 | 3271-3-2.90 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | 5xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 1.50 | 3.00 | 39 | 3271-5-0.30 | ● | ● | ● | ● | ● |
| 0.35 | 1.80 | 3.00 | 39 | 3271-5-0.35 | ● | ● | ● | ● | ● |
| 0.40 | 2.00 | 3.00 | 39 | 3271-5-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 2.50 | 3.00 | 39 | 3271-5-0.50 | ● | ● | ● | ● | ● |
| 0.55 | 2.80 | 3.00 | 39 | 3271-5-0.55 | ● | ● | ● | ● | ● |
| 0.60 | 3.00 | 3.00 | 39 | 3271-5-0.60 | ● | ● | ● | ● | ● |
| 0.65 | 3.30 | 3.00 | 39 | 3271-5-0.65 | ● | ● | ● | ● | ● |
| 0.70 | 3.50 | 3.00 | 39 | 3271-5-0.70 | ● | ● | ● | ● | ● |
| 0.75 | 3.80 | 3.00 | 39 | 3271-5-0.75 | ● | ● | ● | ● | ● |
| 0.80 | 4.00 | 3.00 | 39 | 3271-5-0.80 | ● | ● | ● | ● | ● |
| 0.85 | 4.30 | 3.00 | 39 | 3271-5-0.85 | ● | ● | ● | ● | ● |
| 0.90 | 4.50 | 3.00 | 39 | 3271-5-0.90 | ● | ● | ● | ● | ● |
| 0.95 | 4.80 | 3.00 | 39 | 3271-5-0.95 | ● | ● | ● | ● | ● |
| 1.00 | 5.00 | 3.00 | 39 | 3271-5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 5.50 | 3.00 | 39 | 3271-5-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 6.00 | 3.00 | 39 | 3271-5-1.20 | ● | ● | ● | ● | ● |
| 1.50 | 7.50 | 3.00 | 39 | 3271-5-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 10.00 | 3.00 | 39 | 3271-5-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 12.50 | 3.00 | 39 | 3271-5-2.50 | ● | ● | ● | ● | ● |

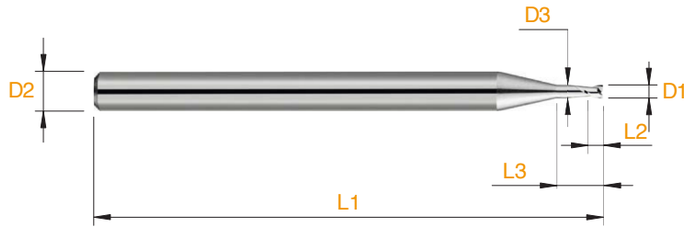



MD VHM HM | λ 30° | Sharp Corner | 8xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | D2 h4 Ø3.0 h5 Ø4.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 3.20 | 3.00 | 39 | 3271-8-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 4.00 | 3.00 | 39 | 3271-8-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 5.00 | 3.00 | 39 | 3271-8-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 5.60 | 3.00 | 39 | 3271-8-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 6.00 | 3.00 | 39 | 3271-8-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 7.20 | 3.00 | 39 | 3271-8-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 8.00 | 3.00 | 39 | 3271-8-1.00 | ● | ● | ● | ● | ● |
| 1.20 | 9.00 | 3.00 | 39 | 3271-8-1.20 | ● | ● | ● | ● | ● |
| 1.50 | 12.00 | 4.00 | 50 | 3271-8-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 16.00 | 4.00 | 50 | 3271-8-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 20.00 | 4.00 | 50 | 3271-8-2.50 | ● | ● | ● | ● | ● |








MD VHM HM | λ 30° | Sharp Corner | L3 3xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.40 | 0.60 | 0.17 | 3.00 | 39 | 3270S-3X-0.20 | ● | | | | |
| 0.30 | 0.60 | 0.90 | 0.27 | 3.00 | 39 | 3270S-3X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 1.20 | 0.37 | 3.00 | 39 | 3270S-3X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 1.50 | 0.45 | 3.00 | 39 | 3270S-3X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 1.80 | 0.55 | 3.00 | 39 | 3270S-3X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 2.10 | 0.65 | 3.00 | 39 | 3270S-3X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 2.40 | 0.75 | 3.00 | 39 | 3270S-3X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 2.70 | 0.85 | 3.00 | 39 | 3270S-3X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 0.95 | 3.00 | 39 | 3270S-3X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.30 | 1.05 | 3.00 | 39 | 3270S-3X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.60 | 1.15 | 3.00 | 39 | 3270S-3X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.90 | 1.25 | 3.00 | 39 | 3270S-3X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 4.20 | 1.35 | 3.00 | 39 | 3270S-3X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 4.50 | 1.45 | 3.00 | 39 | 3270S-3X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 4.80 | 1.55 | 3.00 | 39 | 3270S-3X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 5.10 | 1.65 | 3.00 | 39 | 3270S-3X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 5.40 | 1.75 | 3.00 | 39 | 3270S-3X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 5.70 | 1.85 | 3.00 | 39 | 3270S-3X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 1.95 | 6.00 | 50 | 3270S-3X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 6.30 | 2.05 | 6.00 | 50 | 3270S-3X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 6.60 | 2.15 | 6.00 | 50 | 3270S-3X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 6.90 | 2.25 | 6.00 | 50 | 3270S-3X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 7.20 | 2.35 | 6.00 | 50 | 3270S-3X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 7.50 | 2.45 | 6.00 | 50 | 3270S-3X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 9.00 | 2.95 | 6.00 | 50 | 3270S-3X-3.00 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | L3 6xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.60 | 1.80 | 0.27 | 3.00 | 39 | 3270S-6X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 2.40 | 0.37 | 3.00 | 39 | 3270S-6X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 0.45 | 3.00 | 39 | 3270S-6X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.60 | 0.55 | 3.00 | 39 | 3270S-6X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 4.20 | 0.65 | 3.00 | 39 | 3270S-6X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 4.80 | 0.75 | 3.00 | 39 | 3270S-6X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 5.40 | 0.85 | 3.00 | 39 | 3270S-6X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 6.00 | 0.95 | 3.00 | 39 | 3270S-6X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 6.60 | 1.05 | 3.00 | 39 | 3270S-6X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 7.20 | 1.15 | 3.00 | 39 | 3270S-6X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 7.80 | 1.25 | 3.00 | 39 | 3270S-6X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 8.40 | 1.35 | 3.00 | 39 | 3270S-6X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 9.00 | 1.45 | 3.00 | 39 | 3270S-6X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 9.60 | 1.55 | 3.00 | 39 | 3270S-6X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 10.20 | 1.65 | 3.00 | 39 | 3270S-6X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 10.80 | 1.75 | 3.00 | 39 | 3270S-6X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 11.40 | 1.85 | 3.00 | 39 | 3270S-6X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 12.00 | 1.95 | 6.00 | 50 | 3270S-6X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 12.60 | 2.05 | 6.00 | 50 | 3270S-6X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 13.20 | 2.15 | 6.00 | 50 | 3270S-6X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 13.80 | 2.25 | 6.00 | 50 | 3270S-6X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 14.40 | 2.35 | 6.00 | 50 | 3270S-6X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 15.00 | 2.45 | 6.00 | 50 | 3270S-6X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 18.00 | 2.95 | 6.00 | 50 | 3270S-6X-3.00 | ● | ● | ● | ● | ● |








MD VHM HM | λ 30° | Sharp Corner | L3 9xD1 | Z=2

| D1 +0.005/ -0.010 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 0.80 | 3.60 | 0.37 | 3.00 | 39 | 3270S-9X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 4.50 | 0.45 | 3.00 | 39 | 3270S-9X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 5.40 | 0.55 | 3.00 | 39 | 3270S-9X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 6.30 | 0.65 | 3.00 | 39 | 3270S-9X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 7.20 | 0.75 | 3.00 | 39 | 3270S-9X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 8.10 | 0.85 | 3.00 | 39 | 3270S-9X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 9.00 | 0.95 | 3.00 | 39 | 3270S-9X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 9.90 | 1.05 | 3.00 | 39 | 3270S-9X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 10.80 | 1.15 | 3.00 | 39 | 3270S-9X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 11.70 | 1.25 | 3.00 | 39 | 3270S-9X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 12.60 | 1.35 | 3.00 | 39 | 3270S-9X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 13.50 | 1.45 | 3.00 | 39 | 3270S-9X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 14.40 | 1.55 | 3.00 | 39 | 3270S-9X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 15.30 | 1.65 | 3.00 | 39 | 3270S-9X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 16.20 | 1.75 | 3.00 | 39 | 3270S-9X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 17.10 | 1.85 | 3.00 | 39 | 3270S-9X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 18.00 | 1.95 | 6.00 | 50 | 3270S-9X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 18.90 | 2.05 | 6.00 | 50 | 3270S-9X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 19.80 | 2.15 | 6.00 | 50 | 3270S-9X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 20.70 | 2.25 | 6.00 | 50 | 3270S-9X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 21.60 | 2.35 | 6.00 | 50 | 3270S-9X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 22.50 | 2.45 | 6.00 | 50 | 3270S-9X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 27.00 | 2.95 | 6.00 | 50 | 3270S-9X-3.00 | ● | ● | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

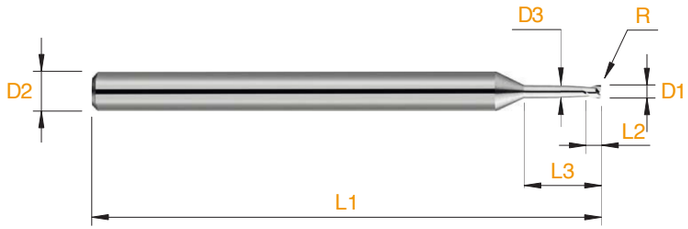



MD VHM HM | λ 30° | Radius Corner | L3 3xD1 | Z=2

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.05 | 0.60 | 0.90 | 0.27 | 3.00 | 39 | 3279T-3X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.05 | 0.80 | 1.20 | 0.37 | 3.00 | 39 | 3279T-3X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 1.50 | 0.45 | 3.00 | 39 | 3279T-3X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.05 | 1.20 | 1.80 | 0.55 | 3.00 | 39 | 3279T-3X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.05 | 1.40 | 2.10 | 0.65 | 3.00 | 39 | 3279T-3X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.05 | 1.60 | 2.40 | 0.75 | 3.00 | 39 | 3279T-3X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.05 | 1.80 | 2.70 | 0.85 | 3.00 | 39 | 3279T-3X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 3.00 | 0.95 | 3.00 | 39 | 3279T-3X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.10 | 2.20 | 3.30 | 1.05 | 3.00 | 39 | 3279T-3X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.10 | 2.40 | 3.60 | 1.15 | 3.00 | 39 | 3279T-3X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.10 | 2.60 | 3.90 | 1.25 | 3.00 | 39 | 3279T-3X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.10 | 2.80 | 4.20 | 1.35 | 3.00 | 39 | 3279T-3X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 4.50 | 1.45 | 3.00 | 39 | 3279T-3X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.20 | 3.20 | 4.80 | 1.55 | 3.00 | 39 | 3279T-3X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.20 | 3.40 | 5.10 | 1.65 | 3.00 | 39 | 3279T-3X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.20 | 3.60 | 5.40 | 1.75 | 3.00 | 39 | 3279T-3X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.20 | 3.80 | 5.70 | 1.85 | 3.00 | 39 | 3279T-3X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 6.00 | 1.95 | 6.00 | 50 | 3279T-3X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 0.20 | 4.20 | 6.30 | 2.05 | 6.00 | 50 | 3279T-3X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 0.20 | 4.40 | 6.60 | 2.15 | 6.00 | 50 | 3279T-3X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 0.20 | 4.60 | 6.90 | 2.25 | 6.00 | 50 | 3279T-3X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 0.20 | 4.80 | 7.20 | 2.35 | 6.00 | 50 | 3279T-3X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 0.20 | 5.00 | 7.50 | 2.45 | 6.00 | 50 | 3279T-3X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 0.20 | 6.00 | 9.00 | 2.95 | 6.00 | 50 | 3279T-3X-3.00 | ● | ● | ● | ● | ● |








MD VHM HM | λ 30° | Radius Corner | L3 6xD1 | Z=2

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.05 | 0.60 | 1.80 | 0.27 | 3.00 | 39 | 3279T-6X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.05 | 0.80 | 2.40 | 0.37 | 3.00 | 39 | 3279T-6X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 3.00 | 0.45 | 3.00 | 39 | 3279T-6X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.05 | 1.20 | 3.60 | 0.55 | 3.00 | 39 | 3279T-6X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.05 | 1.40 | 4.20 | 0.65 | 3.00 | 39 | 3279T-6X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.05 | 1.60 | 4.80 | 0.75 | 3.00 | 39 | 3279T-6X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.05 | 1.80 | 5.40 | 0.85 | 3.00 | 39 | 3279T-6X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 6.00 | 0.95 | 3.00 | 39 | 3279T-6X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.10 | 2.20 | 6.60 | 1.05 | 3.00 | 39 | 3279T-6X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.10 | 2.40 | 7.20 | 1.15 | 3.00 | 39 | 3279T-6X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.10 | 2.60 | 7.80 | 1.25 | 3.00 | 39 | 3279T-6X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.10 | 2.80 | 8.40 | 1.35 | 3.00 | 39 | 3279T-6X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 9.00 | 1.45 | 3.00 | 39 | 3279T-6X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.20 | 3.20 | 9.60 | 1.55 | 3.00 | 39 | 3279T-6X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.20 | 3.40 | 10.20 | 1.65 | 3.00 | 39 | 3279T-6X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.20 | 3.60 | 10.80 | 1.75 | 3.00 | 39 | 3279T-6X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.20 | 3.80 | 11.40 | 1.85 | 3.00 | 39 | 3279T-6X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 12.00 | 1.95 | 6.00 | 50 | 3279T-6X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 0.20 | 4.20 | 12.60 | 2.05 | 6.00 | 50 | 3279T-6X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 0.20 | 4.40 | 13.20 | 2.15 | 6.00 | 50 | 3279T-6X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 0.20 | 4.60 | 13.80 | 2.25 | 6.00 | 50 | 3279T-6X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 0.20 | 4.80 | 14.40 | 2.35 | 6.00 | 50 | 3279T-6X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 0.20 | 5.00 | 15.00 | 2.45 | 6.00 | 50 | 3279T-6X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 0.20 | 6.00 | 18.00 | 2.95 | 6.00 | 50 | 3279T-6X-3.00 | ● | ● | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

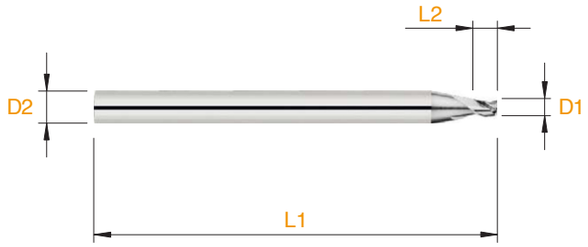



MD VHM HM | λ 30° | Radius Corner | L3 9xD1 | Z=2

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 0.05 | 0.80 | 3.60 | 0.37 | 3.00 | 39 | 3279T-9X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 4.50 | 0.45 | 3.00 | 39 | 3279T-9X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.05 | 1.20 | 5.40 | 0.55 | 3.00 | 39 | 3279T-9X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.05 | 1.40 | 6.30 | 0.65 | 3.00 | 39 | 3279T-9X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.05 | 1.60 | 7.20 | 0.75 | 3.00 | 39 | 3279T-9X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.05 | 1.80 | 8.10 | 0.85 | 3.00 | 39 | 3279T-9X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 9.00 | 0.95 | 3.00 | 39 | 3279T-9X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.10 | 2.20 | 9.90 | 1.05 | 3.00 | 39 | 3279T-9X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.10 | 2.40 | 10.80 | 1.15 | 3.00 | 39 | 3279T-9X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.10 | 2.60 | 11.70 | 1.25 | 3.00 | 39 | 3279T-9X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.10 | 2.80 | 12.60 | 1.35 | 3.00 | 39 | 3279T-9X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 13.50 | 1.45 | 3.00 | 39 | 3279T-9X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.20 | 3.20 | 14.40 | 1.55 | 3.00 | 39 | 3279T-9X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.20 | 3.40 | 15.30 | 1.65 | 3.00 | 39 | 3279T-9X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.20 | 3.60 | 16.20 | 1.75 | 3.00 | 39 | 3279T-9X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.20 | 3.80 | 17.10 | 1.85 | 3.00 | 39 | 3279T-9X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 18.00 | 1.95 | 6.00 | 50 | 3279T-9X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 0.20 | 4.20 | 18.90 | 2.05 | 6.00 | 50 | 3279T-9X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 0.20 | 4.40 | 19.80 | 2.15 | 6.00 | 50 | 3279T-9X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 0.20 | 4.60 | 20.70 | 2.25 | 6.00 | 50 | 3279T-9X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 0.20 | 4.80 | 21.60 | 2.35 | 6.00 | 50 | 3279T-9X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 0.20 | 5.00 | 22.50 | 2.45 | 6.00 | 50 | 3279T-9X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 0.20 | 6.00 | 27.00 | 2.95 | 6.00 | 50 | 3279T-9X-3.00 | ● | ● | ● | ● | ● |





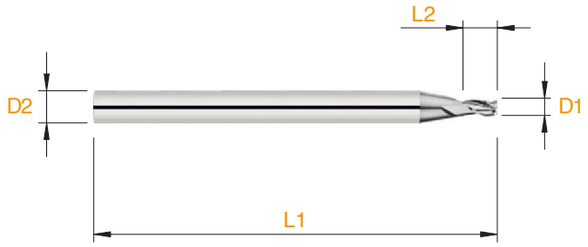



MD VHM HM | λ 30° | Sharp Corner | 1.3xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.40 | 3.00 | 39 | 3371-1.3-0.30 | ● | ● | ● | ● | ● |
| 0.35 | 0.50 | 3.00 | 39 | 3371-1.3-0.35 | ● | ● | ● | ● | ● |
| 0.40 | 0.50 | 3.00 | 39 | 3371-1.3-0.40 | ● | ● | ● | ● | ● |
| 0.45 | 0.60 | 3.00 | 39 | 3371-1.3-0.45 | ● | ● | ● | ● | ● |
| 0.50 | 0.70 | 3.00 | 39 | 3371-1.3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.80 | 3.00 | 39 | 3371-1.3-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.90 | 3.00 | 39 | 3371-1.3-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.00 | 3.00 | 39 | 3371-1.3-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.30 | 3.00 | 39 | 3371-1.3-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 1.30 | 3.00 | 39 | 3371-1.3-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 1.50 | 3.00 | 39 | 3371-1.3-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 1.60 | 3.00 | 39 | 3371-1.3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 1.80 | 3.00 | 39 | 3371-1.3-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 1.80 | 3.00 | 39 | 3371-1.3-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 2.00 | 3.00 | 39 | 3371-1.3-1.50 | ● | ● | ● | ● | ● |
| 1.55 | 2.00 | 3.00 | 39 | 3371-1.3-1.55 | ● | ● | ● | ● | ● |
| 1.60 | 2.00 | 3.00 | 39 | 3371-1.3-1.60 | ● | ● | ● | ● | ● |
| 1.65 | 2.00 | 3.00 | 39 | 3371-1.3-1.65 | ● | ● | ● | ● | ● |
| 1.70 | 2.00 | 3.00 | 39 | 3371-1.3-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 2.40 | 3.00 | 39 | 3371-1.3-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 2.40 | 3.00 | 39 | 3371-1.3-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 2.60 | 3.00 | 39 | 3371-1.3-2.00 | ● | ● | ● | ● | ● |
| 2.05 | 2.70 | 3.00 | 39 | 3371-1.3-2.05 | ● | ● | ● | ● | ● |
| 2.20 | 3.00 | 3.00 | 39 | 3371-1.3-2.20 | ● | ● | ● | ● | ● |
| 2.50 | 3.30 | 3.00 | 39 | 3371-1.3-2.50 | ● | ● | ● | ● | ● |
| 2.80 | 3.50 | 3.00 | 39 | 3371-1.3-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 3.50 | 3.00 | 39 | 3371-1.3-2.90 | ● | ● | ● | ● | ● |

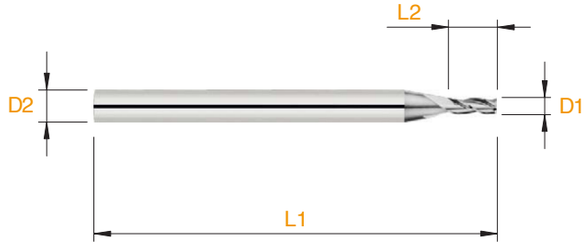
Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills






MD VHM HM | λ 30° | Sharp Corner | 2xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.60 | 3.00 | 39 | 3371-2-0.30 | ● | ● | ● | ● | ● |
| 0.35 | 0.70 | 3.00 | 39 | 3371-2-0.35 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 3.00 | 39 | 3371-2-0.40 | ● | ● | ● | ● | ● |
| 0.45 | 0.90 | 3.00 | 39 | 3371-2-0.45 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 39 | 3371-2-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.00 | 39 | 3371-2-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 3.00 | 39 | 3371-2-0.70 | ● | ● | ● | ● | ● |
| 0.75 | 1.50 | 3.00 | 39 | 3371-2-0.75 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 3.00 | 39 | 3371-2-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 3.00 | 39 | 3371-2-0.90 | ● | ● | ● | ● | ● |
| 0.95 | 1.90 | 3.00 | 39 | 3371-2-0.95 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 39 | 3371-2-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.00 | 39 | 3371-2-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.00 | 39 | 3371-2-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.00 | 39 | 3371-2-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 3.00 | 39 | 3371-2-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 3.00 | 39 | 3371-2-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 3.00 | 39 | 3371-2-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 3.00 | 39 | 3371-2-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 3.00 | 39 | 3371-2-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 3.00 | 39 | 3371-2-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 3.00 | 39 | 3371-2-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 3.00 | 39 | 3371-2-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 3.00 | 39 | 3371-2-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 3.00 | 39 | 3371-2-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 3.00 | 39 | 3371-2-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 3.00 | 39 | 3371-2-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 5.20 | 3.00 | 39 | 3371-2-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 5.40 | 3.00 | 39 | 3371-2-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 5.60 | 3.00 | 39 | 3371-2-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 5.80 | 3.00 | 39 | 3371-2-2.90 | ● | ● | ● | ● | ● |



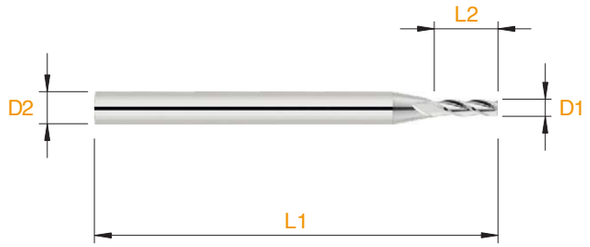

MD VHM HM | λ 30° | Sharp Corner | 3xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.90 | 3.00 | 39 | 3371-3-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.20 | 3.00 | 39 | 3371-3-0.40 | ● | ● | ● | ● | ● |
| 0.45 | 1.40 | 3.00 | 39 | 3371-3-0.45 | ● | ● | ● | ● | ● |
| 0.50 | 1.50 | 3.00 | 39 | 3371-3-0.50 | ● | ● | ● | ● | ● |
| 0.55 | 1.80 | 3.00 | 39 | 3371-3-0.55 | ● | ● | ● | ● | ● |
| 0.60 | 2.00 | 3.00 | 39 | 3371-3-0.60 | ● | ● | ● | ● | ● |
| 0.65 | 2.00 | 3.00 | 39 | 3371-3-0.65 | ● | ● | ● | ● | ● |
| 0.70 | 2.00 | 3.00 | 39 | 3371-3-0.70 | ● | ● | ● | ● | ● |
| 0.75 | 2.00 | 3.00 | 39 | 3371-3-0.75 | ● | ● | ● | ● | ● |
| 0.80 | 2.50 | 3.00 | 39 | 3371-3-0.80 | ● | ● | ● | ● | ● |
| 0.85 | 2.50 | 3.00 | 39 | 3371-3-0.85 | ● | ● | ● | ● | ● |
| 0.90 | 2.50 | 3.00 | 39 | 3371-3-0.90 | ● | ● | ● | ● | ● |
| 0.95 | 2.90 | 3.00 | 39 | 3371-3-0.95 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | 3371-3-1.00 | ● | ● | ● | ● | ● |
| 1.05 | 3.20 | 3.00 | 39 | 3371-3-1.05 | ● | ● | ● | ● | ● |
| 1.10 | 3.30 | 3.00 | 39 | 3371-3-1.10 | ● | ● | ● | ● | ● |
| 1.15 | 3.50 | 3.00 | 39 | 3371-3-1.15 | ● | ● | ● | ● | ● |
| 1.20 | 4.00 | 3.00 | 39 | 3371-3-1.20 | ● | ● | ● | ● | ● |
| 1.25 | 4.00 | 3.00 | 39 | 3371-3-1.25 | ● | ● | ● | ● | ● |
| 1.30 | 4.00 | 3.00 | 39 | 3371-3-1.30 | ● | ● | ● | ● | ● |
| 1.35 | 4.00 | 3.00 | 39 | 3371-3-1.35 | ● | ● | ● | ● | ● |
| 1.40 | 4.00 | 3.00 | 39 | 3371-3-1.40 | ● | ● | ● | ● | ● |
| 1.45 | 4.50 | 3.00 | 39 | 3371-3-1.45 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | 3371-3-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 4.50 | 3.00 | 39 | 3371-3-1.60 | ● | ● | ● | ● | ● |
| 1.65 | 5.00 | 3.00 | 39 | 3371-3-1.65 | ● | ● | ● | ● | ● |
| 1.70 | 5.00 | 3.00 | 39 | 3371-3-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 6.00 | 3.00 | 39 | 3371-3-1.80 | ● | ● | ● | ● | ● |
| 1.85 | 6.00 | 3.00 | 39 | 3371-3-1.85 | ● | ● | ● | ● | ● |
| 1.90 | 6.00 | 3.00 | 39 | 3371-3-1.90 | ● | ● | ● | ● | ● |
| 1.95 | 6.00 | 3.00 | 39 | 3371-3-1.95 | ● | ● | ● | ● | ● |

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 2.00 | 6.00 | 3.00 | 39 | 3371-3-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 6.00 | 3.00 | 39 | 3371-3-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 6.50 | 3.00 | 39 | 3371-3-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 7.00 | 3.00 | 39 | 3371-3-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 7.00 | 3.00 | 39 | 3371-3-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | 3371-3-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 7.50 | 3.00 | 39 | 3371-3-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 8.00 | 3.00 | 39 | 3371-3-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 8.00 | 3.00 | 39 | 3371-3-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 8.50 | 3.00 | 39 | 3371-3-2.90 | ● | ● | ● | ● | ● |

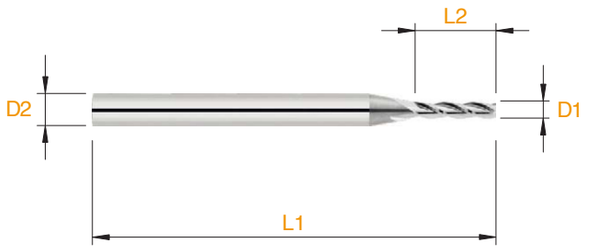
Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills





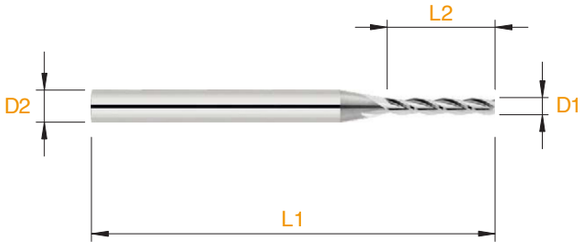

MD VHM HM | λ 30° | Sharp Corner | 4xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 1.20 | 3.00 | 39 | 3371-4-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.60 | 3.00 | 39 | 3371-4-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 2.00 | 3.00 | 39 | 3371-4-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 2.40 | 3.00 | 39 | 3371-4-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.80 | 3.00 | 39 | 3371-4-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 3.20 | 3.00 | 39 | 3371-4-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 3.60 | 3.00 | 39 | 3371-4-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 4.00 | 3.00 | 39 | 3371-4-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 4.40 | 3.00 | 39 | 3371-4-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 4.80 | 3.00 | 39 | 3371-4-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 5.20 | 3.00 | 39 | 3371-4-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 5.60 | 3.00 | 39 | 3371-4-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 6.00 | 3.00 | 39 | 3371-4-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 6.40 | 3.00 | 39 | 3371-4-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 6.80 | 3.00 | 39 | 3371-4-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 7.20 | 3.00 | 39 | 3371-4-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 7.60 | 3.00 | 39 | 3371-4-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 8.00 | 3.00 | 39 | 3371-4-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 8.40 | 3.00 | 39 | 3371-4-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 8.80 | 3.00 | 39 | 3371-4-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 9.20 | 3.00 | 39 | 3371-4-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 9.60 | 3.00 | 39 | 3371-4-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 10.00 | 3.00 | 39 | 3371-4-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 10.40 | 3.00 | 39 | 3371-4-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 10.80 | 3.00 | 39 | 3371-4-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 11.20 | 3.00 | 39 | 3371-4-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 11.60 | 3.00 | 39 | 3371-4-2.90 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | 5xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.50 | 2.50 | 3.00 | 39 | 3371-5-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 3.00 | 3.00 | 39 | 3371-5-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 3.50 | 3.00 | 39 | 3371-5-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 4.00 | 3.00 | 39 | 3371-5-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 4.50 | 3.00 | 39 | 3371-5-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 5.00 | 3.00 | 39 | 3371-5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 5.50 | 3.00 | 39 | 3371-5-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 6.00 | 3.00 | 39 | 3371-5-1.20 | ● | ● | ● | ● | ● |
| 1.50 | 7.50 | 3.00 | 39 | 3371-5-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 10.00 | 3.00 | 39 | 3371-5-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 12.50 | 3.00 | 39 | 3371-5-2.50 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | 8xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 Ø3.0 h5 Ø4.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.50 | 4.00 | 3.00 | 39 | 3371-8-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 5.00 | 3.00 | 39 | 3371-8-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 5.60 | 3.00 | 39 | 3371-8-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 6.00 | 3.00 | 39 | 3371-8-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 7.20 | 3.00 | 39 | 3371-8-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 8.00 | 3.00 | 39 | 3371-8-1.00 | ● | ● | ● | ● | ● |
| 1.20 | 9.00 | 3.00 | 39 | 3371-8-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 11.00 | 3.00 | 39 | 3371-8-1.30 | ● | ● | ● | ● | ● |
| 1.50 | 12.00 | 4.00 | 50 | 3371-8-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 16.00 | 4.00 | 50 | 3371-8-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 20.00 | 4.00 | 50 | 3371-8-2.50 | ● | ● | ● | ● | ● |

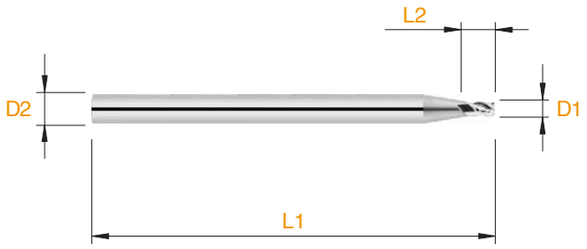







MD VHM HM | λ 45° | Sharp Corner | 2.5xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.80 | 3.00 | 39 | 3375-2.5-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.00 | 3.00 | 39 | 3375-2.5-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.30 | 3.00 | 39 | 3375-2.5-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.50 | 3.00 | 39 | 3375-2.5-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.70 | 3.00 | 39 | 3375-2.5-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 2.00 | 3.00 | 39 | 3375-2.5-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 2.30 | 3.00 | 39 | 3375-2.5-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.50 | 3.00 | 39 | 3375-2.5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.80 | 3.00 | 39 | 3375-2.5-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 3.00 | 3.00 | 39 | 3375-2.5-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 3.30 | 3.00 | 39 | 3375-2.5-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 3.50 | 3.00 | 39 | 3375-2.5-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.80 | 3.00 | 39 | 3375-2.5-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 4.00 | 3.00 | 39 | 3375-2.5-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 4.30 | 3.00 | 39 | 3375-2.5-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 4.50 | 3.00 | 39 | 3375-2.5-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 4.80 | 3.00 | 39 | 3375-2.5-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 5.00 | 3.00 | 39 | 3375-2.5-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 5.30 | 3.00 | 39 | 3375-2.5-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 5.50 | 3.00 | 39 | 3375-2.5-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 5.80 | 3.00 | 39 | 3375-2.5-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 6.00 | 3.00 | 39 | 3375-2.5-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 6.30 | 3.00 | 39 | 3375-2.5-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 6.50 | 3.00 | 39 | 3375-2.5-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 6.80 | 3.00 | 39 | 3375-2.5-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 7.00 | 3.00 | 39 | 3375-2.5-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 7.30 | 3.00 | 39 | 3375-2.5-2.90 | ● | ● | ● | ● | ● |




MD
VHM
HM

λ 36° 38° 40°

Sharp Corner

1.5xD1

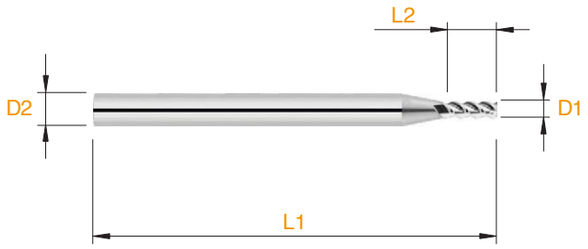
Z=3

DHD — Dentureàpas irrégulier,hélicedifférente
UngleicheTeilung, unterschiedlicheSpirale
Uneventooth pitch, different helix

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.45 | 3.00 | 39 | DHD3371-1.5-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.60 | 3.00 | 39 | DHD3371-1.5-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.75 | 3.00 | 39 | DHD3371-1.5-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.90 | 3.00 | 39 | DHD3371-1.5-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.05 | 3.00 | 39 | DHD3371-1.5-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.20 | 3.00 | 39 | DHD3371-1.5-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.35 | 3.00 | 39 | DHD3371-1.5-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 1.50 | 3.00 | 39 | DHD3371-1.5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 1.65 | 3.00 | 39 | DHD3371-1.5-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 1.80 | 3.00 | 39 | DHD3371-1.5-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 1.95 | 3.00 | 39 | DHD3371-1.5-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.10 | 3.00 | 39 | DHD3371-1.5-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 2.25 | 3.00 | 39 | DHD3371-1.5-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 2.40 | 3.00 | 39 | DHD3371-1.5-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 2.55 | 3.00 | 39 | DHD3371-1.5-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 2.70 | 3.00 | 39 | DHD3371-1.5-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 2.85 | 3.00 | 39 | DHD3371-1.5-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 3.00 | 3.00 | 39 | DHD3371-1.5-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 3.75 | 3.00 | 39 | DHD3371-1.5-2.50 | ● | ● | ● | ● | ● |








MD
VHM
HM

λ 36° 38° 40°

Sharp Corner

3xD1

Z=3

DHD — Dentureàpas irrégulier,hélicedifférente
UngleicheTeilung, unterschiedlicheSpirale
Uneventooth pitch, different helix

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.90 | 3.00 | 39 | DHD3371-3-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.20 | 3.00 | 39 | DHD3371-3-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.50 | 3.00 | 39 | DHD3371-3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.80 | 3.00 | 39 | DHD3371-3-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.10 | 3.00 | 39 | DHD3371-3-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 2.40 | 3.00 | 39 | DHD3371-3-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 2.70 | 3.00 | 39 | DHD3371-3-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | DHD3371-3-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 3.30 | 3.00 | 39 | DHD3371-3-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 3.60 | 3.00 | 39 | DHD3371-3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 3.90 | 3.00 | 39 | DHD3371-3-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 4.20 | 3.00 | 39 | DHD3371-3-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | DHD3371-3-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 4.80 | 3.00 | 39 | DHD3371-3-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 5.10 | 3.00 | 39 | DHD3371-3-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 5.40 | 3.00 | 39 | DHD3371-3-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 5.70 | 3.00 | 39 | DHD3371-3-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | DHD3371-3-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | DHD3371-3-2.50 | ● | ● | ● | ● | ● |

Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills






MD VHM HM | λ 30° | Sharp Corner | L3 3xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.60 | 0.90 | 0.27 | 3.00 | 39 | 3370S-3X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 1.20 | 0.37 | 3.00 | 39 | 3370S-3X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 1.50 | 0.45 | 3.00 | 39 | 3370S-3X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 1.80 | 0.55 | 3.00 | 39 | 3370S-3X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 2.10 | 0.65 | 3.00 | 39 | 3370S-3X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 2.40 | 0.75 | 3.00 | 39 | 3370S-3X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 2.70 | 0.85 | 3.00 | 39 | 3370S-3X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 0.95 | 3.00 | 39 | 3370S-3X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.30 | 1.05 | 3.00 | 39 | 3370S-3X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.60 | 1.15 | 3.00 | 39 | 3370S-3X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.90 | 1.25 | 3.00 | 39 | 3370S-3X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 4.20 | 1.35 | 3.00 | 39 | 3370S-3X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 4.50 | 1.45 | 3.00 | 39 | 3370S-3X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 4.80 | 1.55 | 3.00 | 39 | 3370S-3X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 5.10 | 1.65 | 3.00 | 39 | 3370S-3X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 5.40 | 1.75 | 3.00 | 39 | 3370S-3X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 5.70 | 1.85 | 3.00 | 39 | 3370S-3X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 1.95 | 6.00 | 50 | 3370S-3X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 6.30 | 2.05 | 6.00 | 50 | 3370S-3X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 6.60 | 2.15 | 6.00 | 50 | 3370S-3X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 6.90 | 2.25 | 6.00 | 50 | 3370S-3X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 7.20 | 2.35 | 6.00 | 50 | 3370S-3X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 7.50 | 2.45 | 6.00 | 50 | 3370S-3X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 9.00 | 2.95 | 6.00 | 50 | 3370S-3X-3.00 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | L3 6xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.60 | 1.80 | 0.27 | 3.00 | 39 | 3370S-6X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 2.40 | 0.37 | 3.00 | 39 | 3370S-6X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 0.45 | 3.00 | 39 | 3370S-6X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.60 | 0.55 | 3.00 | 39 | 3370S-6X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 4.20 | 0.65 | 3.00 | 39 | 3370S-6X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 4.80 | 0.75 | 3.00 | 39 | 3370S-6X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 5.40 | 0.85 | 3.00 | 39 | 3370S-6X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 6.00 | 0.95 | 3.00 | 39 | 3370S-6X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 6.60 | 1.05 | 3.00 | 39 | 3370S-6X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 7.20 | 1.15 | 3.00 | 39 | 3370S-6X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 7.80 | 1.25 | 3.00 | 39 | 3370S-6X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 8.40 | 1.35 | 3.00 | 39 | 3370S-6X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 9.00 | 1.45 | 3.00 | 39 | 3370S-6X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 9.60 | 1.55 | 3.00 | 39 | 3370S-6X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 10.20 | 1.65 | 3.00 | 39 | 3370S-6X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 10.80 | 1.75 | 3.00 | 39 | 3370S-6X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 11.40 | 1.85 | 3.00 | 39 | 3370S-6X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 12.00 | 1.95 | 6.00 | 50 | 3370S-6X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 12.60 | 2.05 | 6.00 | 50 | 3370S-6X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 13.20 | 2.15 | 6.00 | 50 | 3370S-6X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 13.80 | 2.25 | 6.00 | 50 | 3370S-6X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 14.40 | 2.35 | 6.00 | 50 | 3370S-6X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 15.00 | 2.45 | 6.00 | 50 | 3370S-6X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 18.00 | 2.95 | 6.00 | 50 | 3370S-6X-3.00 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | L3 9xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 0.80 | 3.60 | 0.37 | 3.00 | 39 | 3370S-9X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 4.50 | 0.45 | 3.00 | 39 | 3370S-9X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 5.40 | 0.55 | 3.00 | 39 | 3370S-9X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 6.30 | 0.65 | 3.00 | 39 | 3370S-9X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 7.20 | 0.75 | 3.00 | 39 | 3370S-9X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 8.10 | 0.85 | 3.00 | 39 | 3370S-9X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 9.00 | 0.95 | 3.00 | 39 | 3370S-9X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 9.90 | 1.05 | 3.00 | 39 | 3370S-9X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 10.80 | 1.15 | 3.00 | 39 | 3370S-9X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 11.70 | 1.25 | 3.00 | 39 | 3370S-9X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 12.60 | 1.35 | 3.00 | 39 | 3370S-9X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 13.50 | 1.45 | 3.00 | 39 | 3370S-9X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 14.40 | 1.55 | 3.00 | 39 | 3370S-9X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 15.30 | 1.65 | 3.00 | 39 | 3370S-9X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 16.20 | 1.75 | 3.00 | 39 | 3370S-9X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 17.10 | 1.85 | 3.00 | 39 | 3370S-9X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 18.00 | 1.95 | 6.00 | 50 | 3370S-9X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 18.90 | 2.05 | 6.00 | 50 | 3370S-9X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 19.80 | 2.15 | 6.00 | 50 | 3370S-9X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 20.70 | 2.25 | 6.00 | 50 | 3370S-9X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 21.60 | 2.35 | 6.00 | 50 | 3370S-9X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 22.50 | 2.45 | 6.00 | 50 | 3370S-9X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 27.00 | 2.95 | 6.00 | 50 | 3370S-9X-3.00 | ● | ● | ● | ● | ● |








MD VHM HM | λ 30° | Radius Corner | L3 3xD1 | Z=3

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.05 | 0.60 | 0.90 | 0.27 | 3.00 | 39 | 3379T-3X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.05 | 0.80 | 1.20 | 0.37 | 3.00 | 39 | 3379T-3X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 1.50 | 0.45 | 3.00 | 39 | 3379T-3X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.05 | 1.20 | 1.80 | 0.55 | 3.00 | 39 | 3379T-3X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.05 | 1.40 | 2.10 | 0.65 | 3.00 | 39 | 3379T-3X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.05 | 1.60 | 2.40 | 0.75 | 3.00 | 39 | 3379T-3X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.05 | 1.80 | 2.70 | 0.85 | 3.00 | 39 | 3379T-3X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 3.00 | 0.95 | 3.00 | 39 | 3379T-3X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.10 | 2.20 | 3.30 | 1.05 | 3.00 | 39 | 3379T-3X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.10 | 2.40 | 3.60 | 1.15 | 3.00 | 39 | 3379T-3X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.10 | 2.60 | 3.90 | 1.25 | 3.00 | 39 | 3379T-3X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.10 | 2.80 | 4.20 | 1.35 | 3.00 | 39 | 3379T-3X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 4.50 | 1.45 | 3.00 | 39 | 3379T-3X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.20 | 3.20 | 4.80 | 1.55 | 3.00 | 39 | 3379T-3X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.20 | 3.40 | 5.10 | 1.65 | 3.00 | 39 | 3379T-3X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.20 | 3.60 | 5.40 | 1.75 | 3.00 | 39 | 3379T-3X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.20 | 3.80 | 5.70 | 1.85 | 3.00 | 39 | 3379T-3X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 6.00 | 1.95 | 6.00 | 50 | 3379T-3X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 0.20 | 4.20 | 6.30 | 2.05 | 6.00 | 50 | 3379T-3X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 0.20 | 4.40 | 6.60 | 2.15 | 6.00 | 50 | 3379T-3X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 0.20 | 4.60 | 6.90 | 2.25 | 6.00 | 50 | 3379T-3X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 0.20 | 4.80 | 7.20 | 2.35 | 6.00 | 50 | 3379T-3X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 0.20 | 5.00 | 7.50 | 2.45 | 6.00 | 50 | 3379T-3X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 0.20 | 6.00 | 9.00 | 2.95 | 6.00 | 50 | 3379T-3X-3.00 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Radius Corner | L3 6xD1 | Z=3

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.05 | 0.60 | 1.80 | 0.27 | 3.00 | 39 | 3379T-6X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.05 | 0.80 | 2.40 | 0.37 | 3.00 | 39 | 3379T-6X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 3.00 | 0.45 | 3.00 | 39 | 3379T-6X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.05 | 1.20 | 3.60 | 0.55 | 3.00 | 39 | 3379T-6X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.05 | 1.40 | 4.20 | 0.65 | 3.00 | 39 | 3379T-6X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.05 | 1.60 | 4.80 | 0.75 | 3.00 | 39 | 3379T-6X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.05 | 1.80 | 5.40 | 0.85 | 3.00 | 39 | 3379T-6X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 6.00 | 0.95 | 3.00 | 39 | 3379T-6X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.10 | 2.20 | 6.60 | 1.05 | 3.00 | 39 | 3379T-6X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.10 | 2.40 | 7.20 | 1.15 | 3.00 | 39 | 3379T-6X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.10 | 2.60 | 7.80 | 1.25 | 3.00 | 39 | 3379T-6X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.10 | 2.80 | 8.40 | 1.35 | 3.00 | 39 | 3379T-6X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 9.00 | 1.45 | 3.00 | 39 | 3379T-6X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.20 | 3.20 | 9.60 | 1.55 | 3.00 | 39 | 3379T-6X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.20 | 3.40 | 10.20 | 1.65 | 3.00 | 39 | 3379T-6X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.20 | 3.60 | 10.80 | 1.75 | 3.00 | 39 | 3379T-6X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.20 | 3.80 | 11.40 | 1.85 | 3.00 | 39 | 3379T-6X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 12.00 | 1.95 | 6.00 | 50 | 3379T-6X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 0.20 | 4.20 | 12.60 | 2.05 | 6.00 | 50 | 3379T-6X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 0.20 | 4.40 | 13.20 | 2.15 | 6.00 | 50 | 3379T-6X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 0.20 | 4.60 | 13.80 | 2.25 | 6.00 | 50 | 3379T-6X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 0.20 | 4.80 | 14.40 | 2.35 | 6.00 | 50 | 3379T-6X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 0.20 | 5.00 | 15.00 | 2.45 | 6.00 | 50 | 3379T-6X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 0.20 | 6.00 | 18.00 | 2.95 | 6.00 | 50 | 3379T-6X-3.00 | ● | ● | ● | ● | ● |

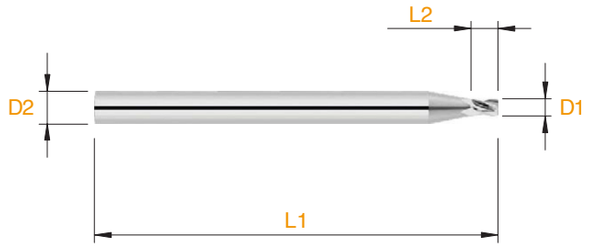







MD VHM HM | λ 30° | Radius Corner | L3 9xD1 | Z=3

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 0.05 | 0.80 | 3.60 | 0.37 | 3.00 | 39 | 3379T-9X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 4.50 | 0.45 | 3.00 | 39 | 3379T-9X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.05 | 1.20 | 5.40 | 0.55 | 3.00 | 39 | 3379T-9X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.05 | 1.40 | 6.30 | 0.65 | 3.00 | 39 | 3379T-9X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.05 | 1.60 | 7.20 | 0.75 | 3.00 | 39 | 3379T-9X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.05 | 1.80 | 8.10 | 0.85 | 3.00 | 39 | 3379T-9X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 9.00 | 0.95 | 3.00 | 39 | 3379T-9X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.10 | 2.20 | 9.90 | 1.05 | 3.00 | 39 | 3379T-9X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.10 | 2.40 | 10.80 | 1.15 | 3.00 | 39 | 3379T-9X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.10 | 2.60 | 11.70 | 1.25 | 3.00 | 39 | 3379T-9X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.10 | 2.80 | 12.60 | 1.35 | 3.00 | 39 | 3379T-9X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 13.50 | 1.45 | 3.00 | 39 | 3379T-9X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.20 | 3.20 | 14.40 | 1.55 | 3.00 | 39 | 3379T-9X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.20 | 3.40 | 15.30 | 1.65 | 3.00 | 39 | 3379T-9X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.20 | 3.60 | 16.20 | 1.75 | 3.00 | 39 | 3379T-9X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.20 | 3.80 | 17.10 | 1.85 | 3.00 | 39 | 3379T-9X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 18.00 | 1.95 | 6.00 | 50 | 3379T-9X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 0.20 | 4.20 | 18.90 | 2.05 | 6.00 | 50 | 3379T-9X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 0.20 | 4.40 | 19.80 | 2.15 | 6.00 | 50 | 3379T-9X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 0.20 | 4.60 | 20.70 | 2.25 | 6.00 | 50 | 3379T-9X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 0.20 | 4.80 | 21.60 | 2.35 | 6.00 | 50 | 3379T-9X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 0.20 | 5.00 | 22.50 | 2.45 | 6.00 | 50 | 3379T-9X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 0.20 | 6.00 | 27.00 | 2.95 | 6.00 | 50 | 3379T-9X-3.00 | ● | ● | ● | ● | ● |

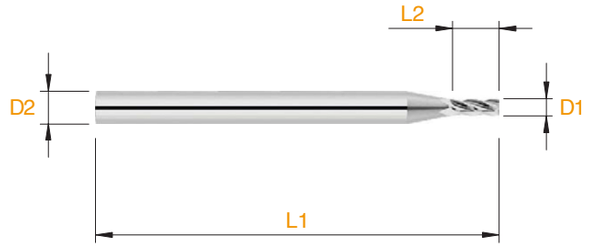



MD VHM HM | λ 30° | Sharp Corner | 1.5xD1 | Z=4

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.45 | 3.00 | 39 | 3471-1.5-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.60 | 3.00 | 39 | 3471-1.5-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.75 | 3.00 | 39 | 3471-1.5-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.90 | 3.00 | 39 | 3471-1.5-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.05 | 3.00 | 39 | 3471-1.5-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.20 | 3.00 | 39 | 3471-1.5-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.35 | 3.00 | 39 | 3471-1.5-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 1.50 | 3.00 | 39 | 3471-1.5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 1.65 | 3.00 | 39 | 3471-1.5-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 1.80 | 3.00 | 39 | 3471-1.5-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 1.95 | 3.00 | 39 | 3471-1.5-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.10 | 3.00 | 39 | 3471-1.5-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 2.25 | 3.00 | 39 | 3471-1.5-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 2.40 | 3.00 | 39 | 3471-1.5-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 2.55 | 3.00 | 39 | 3471-1.5-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 2.70 | 3.00 | 39 | 3471-1.5-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 2.85 | 3.00 | 39 | 3471-1.5-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 3.00 | 3.00 | 39 | 3471-1.5-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 3.15 | 3.00 | 39 | 3471-1.5-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 3.30 | 3.00 | 39 | 3471-1.5-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 3.45 | 3.00 | 39 | 3471-1.5-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 3.60 | 3.00 | 39 | 3471-1.5-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 3.75 | 3.00 | 39 | 3471-1.5-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 3.90 | 3.00 | 39 | 3471-1.5-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 4.05 | 3.00 | 39 | 3471-1.5-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 4.20 | 3.00 | 39 | 3471-1.5-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 4.35 | 3.00 | 39 | 3471-1.5-2.90 | ● | ● | ● | ● | ● |





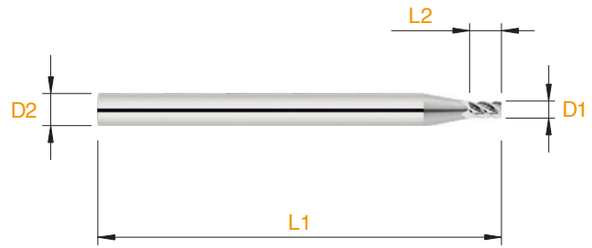



MD VHM HM | λ 30° | Sharp Corner | 3xD1 | Z=4

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.90 | 3.00 | 39 | 3471-3-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.20 | 3.00 | 39 | 3471-3-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.50 | 3.00 | 39 | 3471-3-0.50 | ● | ● | ● | ● | ● |
| 0.55 | 1.70 | 3.00 | 39 | 3471-3-0.55 | ● | ● | ● | ● | ● |
| 0.60 | 1.80 | 3.00 | 39 | 3471-3-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.10 | 3.00 | 39 | 3471-3-0.70 | ● | ● | ● | ● | ● |
| 0.75 | 2.30 | 3.00 | 39 | 3471-3-0.75 | ● | ● | ● | ● | ● |
| 0.80 | 2.40 | 3.00 | 39 | 3471-3-0.80 | ● | ● | ● | ● | ● |
| 0.85 | 2.60 | 3.00 | 39 | 3471-3-0.85 | ● | ● | ● | ● | ● |
| 0.90 | 2.70 | 3.00 | 39 | 3471-3-0.90 | ● | ● | ● | ● | ● |
| 0.95 | 2.90 | 3.00 | 39 | 3471-3-0.95 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | 3471-3-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 3.30 | 3.00 | 39 | 3471-3-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 3.60 | 3.00 | 39 | 3471-3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 3.90 | 3.00 | 39 | 3471-3-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 4.20 | 3.00 | 39 | 3471-3-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | 3471-3-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 4.80 | 3.00 | 39 | 3471-3-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 5.10 | 3.00 | 39 | 3471-3-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 5.40 | 3.00 | 39 | 3471-3-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 5.70 | 3.00 | 39 | 3471-3-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | 3471-3-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 6.30 | 3.00 | 39 | 3471-3-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 6.60 | 3.00 | 39 | 3471-3-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 6.90 | 3.00 | 39 | 3471-3-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 7.20 | 3.00 | 39 | 3471-3-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | 3471-3-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 7.80 | 3.00 | 39 | 3471-3-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 8.10 | 3.00 | 39 | 3471-3-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 8.40 | 3.00 | 39 | 3471-3-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 8.70 | 3.00 | 39 | 3471-3-2.90 | ● | ● | ● | ● | ● |

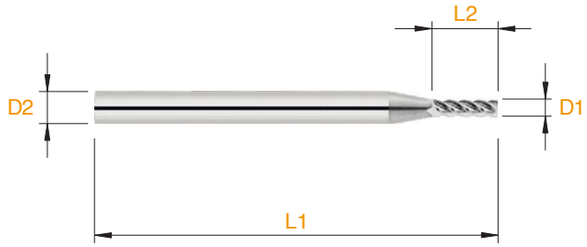
Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills






MD VHM HM | λ 40° | Sharp Corner | 2xD1 | Z=4

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.60 | 3.00 | 39 | 3472-2-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 3.00 | 39 | 3472-2-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 3.00 | 39 | 3472-2-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 3.00 | 39 | 3472-2-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 1.40 | 3.00 | 39 | 3472-2-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 3.00 | 39 | 3472-2-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 1.80 | 3.00 | 39 | 3472-2-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 3.00 | 39 | 3472-2-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 2.20 | 3.00 | 39 | 3472-2-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 3.00 | 39 | 3472-2-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 2.60 | 3.00 | 39 | 3472-2-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 2.80 | 3.00 | 39 | 3472-2-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 3.00 | 39 | 3472-2-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 3.20 | 3.00 | 39 | 3472-2-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 3.40 | 3.00 | 39 | 3472-2-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 3.00 | 39 | 3472-2-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 3.80 | 3.00 | 39 | 3472-2-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 3.00 | 39 | 3472-2-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 4.20 | 3.00 | 39 | 3472-2-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 4.40 | 3.00 | 39 | 3472-2-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 4.60 | 3.00 | 39 | 3472-2-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 4.80 | 3.00 | 39 | 3472-2-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 3.00 | 39 | 3472-2-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 5.20 | 3.00 | 39 | 3472-2-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 5.40 | 3.00 | 39 | 3472-2-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 5.60 | 3.00 | 39 | 3472-2-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 5.80 | 3.00 | 39 | 3472-2-2.90 | ● | ● | ● | ● | ● |

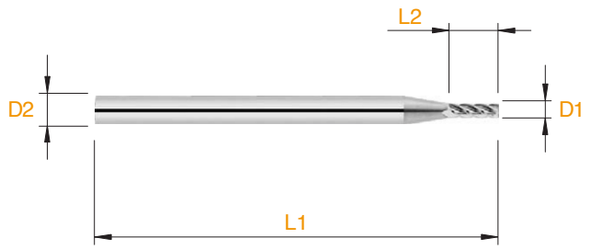



MD VHM HM | λ 40° | Sharp Corner | 4xD1 | Z=4

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 1.60 | 3.00 | 39 | 3472-4-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 2.00 | 3.00 | 39 | 3472-4-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 2.40 | 3.00 | 39 | 3472-4-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.80 | 3.00 | 39 | 3472-4-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 3.20 | 3.00 | 39 | 3472-4-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 3.60 | 3.00 | 39 | 3472-4-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 4.00 | 3.00 | 39 | 3472-4-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 4.40 | 3.00 | 39 | 3472-4-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 4.80 | 3.00 | 39 | 3472-4-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 5.20 | 3.00 | 39 | 3472-4-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 5.60 | 3.00 | 39 | 3472-4-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 6.00 | 3.00 | 39 | 3472-4-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 6.40 | 3.00 | 39 | 3472-4-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 6.80 | 3.00 | 39 | 3472-4-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 7.20 | 3.00 | 39 | 3472-4-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 7.60 | 3.00 | 39 | 3472-4-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 8.00 | 3.00 | 39 | 3472-4-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 8.40 | 3.00 | 39 | 3472-4-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 8.80 | 3.00 | 39 | 3472-4-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 9.20 | 3.00 | 39 | 3472-4-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 9.60 | 3.00 | 39 | 3472-4-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 10.00 | 3.00 | 39 | 3472-4-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 10.40 | 3.00 | 39 | 3472-4-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 10.80 | 3.00 | 39 | 3472-4-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 11.20 | 3.00 | 39 | 3472-4-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 11.60 | 3.00 | 39 | 3472-4-2.90 | ● | ● | ● | ● | ● |

# DHP3471-3

Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills




MD VHM HM | λ 35° ↓ 38° | Sharp Corner | 3xD1 | Z=4

DHP — Dentureàpas irrégulier,héliceprogressive
UngleicheTeilung, progressiveSpirale
Uneventooth pitch, progressivehelix

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.50 | 1.50 | 3.00 | 39 | DHP3471-3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.80 | 3.00 | 39 | DHP3471-3-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 2.10 | 3.00 | 39 | DHP3471-3-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 2.40 | 3.00 | 39 | DHP3471-3-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 2.70 | 3.00 | 39 | DHP3471-3-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | DHP3471-3-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 3.30 | 3.00 | 39 | DHP3471-3-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 3.60 | 3.00 | 39 | DHP3471-3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 3.90 | 3.00 | 39 | DHP3471-3-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 4.20 | 3.00 | 39 | DHP3471-3-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | DHP3471-3-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 4.80 | 3.00 | 39 | DHP3471-3-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 5.10 | 3.00 | 39 | DHP3471-3-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 5.40 | 3.00 | 39 | DHP3471-3-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 5.70 | 3.00 | 39 | DHP3471-3-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | DHP3471-3-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | DHP3471-3-2.50 | ● | ● | ● | ● | ● |



Zurück zum Kapitelanfang



# 3278-0.75

Micro-fraises hémisphériques
Vollradius Mikrofräser
Ball nose micro end mills




MD VHM HM | λ 30° | ∪ | 0.75xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.10 | 0.15 | 3.00 | 39 | 3278-0.75-0.20 | ● | | | | |
| 0.30 | 0.15 | 0.20 | 3.00 | 39 | 3278-0.75-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.20 | 0.30 | 3.00 | 39 | 3278-0.75-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 0.35 | 3.00 | 39 | 3278-0.75-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 0.45 | 3.00 | 39 | 3278-0.75-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 0.55 | 3.00 | 39 | 3278-0.75-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 0.60 | 3.00 | 39 | 3278-0.75-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 0.70 | 3.00 | 39 | 3278-0.75-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 0.75 | 3.00 | 39 | 3278-0.75-1.00 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 1.15 | 3.00 | 39 | 3278-0.75-1.50 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 1.50 | 3.00 | 39 | 3278-0.75-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 1.90 | 3.00 | 39 | 3278-0.75-2.50 | ● | ● | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Zurück zum Index

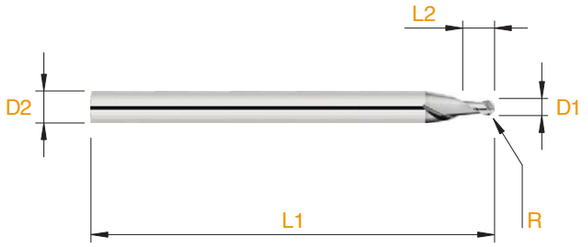
Micro-fraises hémisphériques
Vollradius Mikrofräser
Ball nose micro end mills






MD VHM HM | λ 30° | 1xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.10 | 0.20 | 3.00 | 39 | 3278-1-0.20 | ● | | | | |
| 0.30 | 0.15 | 0.30 | 3.00 | 39 | 3278-1-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.20 | 0.40 | 3.00 | 39 | 3278-1-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 0.50 | 3.00 | 39 | 3278-1-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 0.60 | 3.00 | 39 | 3278-1-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 0.70 | 3.00 | 39 | 3278-1-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 0.80 | 3.00 | 39 | 3278-1-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 0.90 | 3.00 | 39 | 3278-1-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 1.00 | 3.00 | 39 | 3278-1-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.55 | 1.10 | 3.00 | 39 | 3278-1-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.60 | 1.20 | 3.00 | 39 | 3278-1-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.35 | 1.30 | 3.00 | 39 | 3278-1-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.70 | 1.40 | 3.00 | 39 | 3278-1-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 1.50 | 3.00 | 39 | 3278-1-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.80 | 1.60 | 3.00 | 39 | 3278-1-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.85 | 1.70 | 3.00 | 39 | 3278-1-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.90 | 1.80 | 3.00 | 39 | 3278-1-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.95 | 1.90 | 3.00 | 39 | 3278-1-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 2.00 | 3.00 | 39 | 3278-1-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 1.05 | 2.10 | 3.00 | 39 | 3278-1-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 1.10 | 2.20 | 3.00 | 39 | 3278-1-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 1.15 | 2.30 | 3.00 | 39 | 3278-1-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 1.20 | 2.40 | 3.00 | 39 | 3278-1-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 2.50 | 3.00 | 39 | 3278-1-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 1.30 | 2.60 | 3.00 | 39 | 3278-1-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 1.35 | 2.70 | 3.00 | 39 | 3278-1-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 1.40 | 2.80 | 3.00 | 39 | 3278-1-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 1.45 | 2.90 | 3.00 | 39 | 3278-1-2.90 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | 1.5xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.10 | 0.30 | 3.00 | 39 | 3278-1.5-0.20 | ● | | | | |
| 0.25 | 0.125 | 0.35 | 3.00 | 39 | 3278-1.5-0.25 | ● | | | | |
| 0.30 | 0.15 | 0.45 | 3.00 | 39 | 3278-1.5-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.20 | 0.60 | 3.00 | 39 | 3278-1.5-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 0.75 | 3.00 | 39 | 3278-1.5-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 0.90 | 3.00 | 39 | 3278-1.5-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 1.05 | 3.00 | 39 | 3278-1.5-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 1.20 | 3.00 | 39 | 3278-1.5-0.80 | ● | ● | ● | ● | ● |
| 0.85 | 0.40 | 1.30 | 3.00 | 39 | 3278-1.5-0.85 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 1.35 | 3.00 | 39 | 3278-1.5-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 1.50 | 3.00 | 39 | 3278-1.5-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.55 | 1.65 | 3.00 | 39 | 3278-1.5-1.10 | ● | ● | ● | ● | ● |
| 1.15 | 0.55 | 1.75 | 3.00 | 39 | 3278-1.5-1.15 | ● | ● | ● | ● | ● |
| 1.20 | 0.60 | 1.80 | 3.00 | 39 | 3278-1.5-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.65 | 1.95 | 3.00 | 39 | 3278-1.5-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.70 | 2.10 | 3.00 | 39 | 3278-1.5-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 2.25 | 3.00 | 39 | 3278-1.5-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.80 | 2.40 | 3.00 | 39 | 3278-1.5-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.85 | 2.60 | 3.00 | 39 | 3278-1.5-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.90 | 2.70 | 3.00 | 39 | 3278-1.5-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.95 | 2.90 | 3.00 | 39 | 3278-1.5-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 3.00 | 3.00 | 39 | 3278-1.5-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 1.05 | 3.20 | 3.00 | 39 | 3278-1.5-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 1.10 | 3.30 | 3.00 | 39 | 3278-1.5-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 1.15 | 3.50 | 3.00 | 39 | 3278-1.5-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 1.20 | 3.60 | 3.00 | 39 | 3278-1.5-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 3.75 | 3.00 | 39 | 3278-1.5-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 1.30 | 3.90 | 3.00 | 39 | 3278-1.5-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 1.35 | 4.00 | 3.00 | 39 | 3278-1.5-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 1.40 | 4.20 | 3.00 | 39 | 3278-1.5-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 1.45 | 4.40 | 3.00 | 39 | 3278-1.5-2.90 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | 3xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.10 | 0.60 | 3.00 | 39 | 3278-3-0.20 | ● | | | | |
| 0.30 | 0.15 | 1.00 | 3.00 | 39 | 3278-3-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.20 | 1.00 | 3.00 | 39 | 3278-3-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 1.50 | 3.00 | 39 | 3278-3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 1.50 | 3.00 | 39 | 3278-3-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 2.00 | 3.00 | 39 | 3278-3-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 2.00 | 3.00 | 39 | 3278-3-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 2.50 | 3.00 | 39 | 3278-3-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 3.00 | 3.00 | 39 | 3278-3-1.00 | ● | ● | ● | ● | ● |
| 1.20 | 0.60 | 4.00 | 3.00 | 39 | 3278-3-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.65 | 4.00 | 3.00 | 39 | 3278-3-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.70 | 4.00 | 3.00 | 39 | 3278-3-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 4.50 | 3.00 | 39 | 3278-3-1.50 | ● | ● | ● | ● | ● |
| 1.55 | 0.775 | 5.00 | 3.00 | 39 | 3278-3-1.55 | ● | ● | ● | ● | ● |
| 1.60 | 0.80 | 5.00 | 3.00 | 39 | 3278-3-1.60 | ● | ● | ● | ● | ● |
| 1.80 | 0.90 | 5.50 | 3.00 | 39 | 3278-3-1.80 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 6.00 | 3.00 | 39 | 3278-3-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 1.05 | 6.50 | 3.00 | 39 | 3278-3-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 1.10 | 7.00 | 3.00 | 39 | 3278-3-2.20 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 7.50 | 3.00 | 39 | 3278-3-2.50 | ● | ● | ● | ● | ● |
| 2.60 | 1.30 | 7.80 | 3.00 | 39 | 3278-3-2.60 | ● | ● | ● | ● | ● |
| 2.70 | 1.35 | 8.10 | 3.00 | 39 | 3278-3-2.70 | ● | ● | ● | ● | ● |
| 2.80 | 1.40 | 8.40 | 3.00 | 39 | 3278-3-2.80 | ● | ● | ● | ● | ● |
| 2.90 | 1.45 | 8.70 | 3.00 | 39 | 3278-3-2.90 | ● | ● | ● | ● | ● |








MD VHM HM | λ 30° | L3 3xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.20 | 0.10 | 0.30 | 0.60 | 0.19 | 3.00 | 39 | 3278H-3X-0.20 | ● | | | | |
| 0.30 | 0.15 | 0.45 | 0.90 | 0.27 | 3.00 | 39 | 3278H-3X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.20 | 0.60 | 1.20 | 0.37 | 3.00 | 39 | 3278H-3X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 0.75 | 1.50 | 0.45 | 3.00 | 39 | 3278H-3X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 0.90 | 1.80 | 0.55 | 3.00 | 39 | 3278H-3X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 1.05 | 2.10 | 0.65 | 3.00 | 39 | 3278H-3X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 1.20 | 2.40 | 0.75 | 3.00 | 39 | 3278H-3X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 1.35 | 2.70 | 0.85 | 3.00 | 39 | 3278H-3X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 1.50 | 3.00 | 0.95 | 3.00 | 39 | 3278H-3X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.55 | 1.65 | 3.30 | 1.05 | 3.00 | 39 | 3278H-3X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.60 | 1.80 | 3.60 | 1.15 | 3.00 | 39 | 3278H-3X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.65 | 1.95 | 3.90 | 1.25 | 3.00 | 39 | 3278H-3X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.70 | 2.10 | 4.20 | 1.35 | 3.00 | 39 | 3278H-3X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 2.25 | 4.50 | 1.45 | 3.00 | 39 | 3278H-3X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.80 | 2.40 | 4.80 | 1.55 | 3.00 | 39 | 3278H-3X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.85 | 2.55 | 5.10 | 1.65 | 3.00 | 39 | 3278H-3X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.90 | 2.70 | 5.40 | 1.75 | 3.00 | 39 | 3278H-3X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.95 | 2.85 | 5.70 | 1.85 | 3.00 | 39 | 3278H-3X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 3.00 | 6.00 | 1.95 | 6.00 | 50 | 3278H-3X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 1.05 | 3.15 | 6.30 | 2.05 | 6.00 | 50 | 3278H-3X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 1.10 | 3.30 | 6.60 | 2.15 | 6.00 | 50 | 3278H-3X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 1.15 | 3.45 | 6.90 | 2.25 | 6.00 | 50 | 3278H-3X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 1.20 | 3.60 | 7.20 | 2.35 | 6.00 | 50 | 3278H-3X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 3.75 | 7.50 | 2.45 | 6.00 | 50 | 3278H-3X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 1.50 | 4.50 | 9.00 | 2.95 | 6.00 | 50 | 3278H-3X-3.00 | ● | ● | ● | ● | ● |

# 3278H-6X

Micro-fraises hémisphériques
Vollradius Mikrofräser
Ball nose micro end mills




MD VHM HM | λ 30° | L3 6xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.15 | 0.45 | 1.80 | 0.27 | 3.00 | 39 | 3278H-6X-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.20 | 0.60 | 2.40 | 0.37 | 3.00 | 39 | 3278H-6X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 0.75 | 3.00 | 0.45 | 3.00 | 39 | 3278H-6X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 0.90 | 3.60 | 0.55 | 3.00 | 39 | 3278H-6X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 1.05 | 4.20 | 0.65 | 3.00 | 39 | 3278H-6X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 1.20 | 4.80 | 0.75 | 3.00 | 39 | 3278H-6X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 1.35 | 5.40 | 0.85 | 3.00 | 39 | 3278H-6X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 1.50 | 6.00 | 0.95 | 3.00 | 39 | 3278H-6X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.55 | 1.65 | 6.60 | 1.05 | 3.00 | 39 | 3278H-6X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.60 | 1.80 | 7.20 | 1.15 | 3.00 | 39 | 3278H-6X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.65 | 1.95 | 7.80 | 1.25 | 3.00 | 39 | 3278H-6X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.70 | 2.10 | 8.40 | 1.35 | 3.00 | 39 | 3278H-6X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 2.25 | 9.00 | 1.45 | 3.00 | 39 | 3278H-6X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.80 | 2.40 | 9.60 | 1.55 | 3.00 | 39 | 3278H-6X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.85 | 2.55 | 10.20 | 1.65 | 3.00 | 39 | 3278H-6X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.90 | 2.70 | 10.80 | 1.75 | 3.00 | 39 | 3278H-6X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.95 | 2.85 | 11.40 | 1.85 | 3.00 | 39 | 3278H-6X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 3.00 | 12.00 | 1.95 | 6.00 | 50 | 3278H-6X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 1.05 | 3.15 | 12.60 | 2.05 | 6.00 | 50 | 3278H-6X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 1.10 | 3.30 | 13.20 | 2.15 | 6.00 | 50 | 3278H-6X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 1.15 | 3.45 | 13.80 | 2.25 | 6.00 | 50 | 3278H-6X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 1.20 | 3.60 | 14.40 | 2.35 | 6.00 | 50 | 3278H-6X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 3.75 | 15.00 | 2.45 | 6.00 | 50 | 3278H-6X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 1.50 | 4.50 | 18.00 | 2.95 | 6.00 | 50 | 3278H-6X-3.00 | ● | ● | ● | ● | ● |



Zurück zum Kapitelanfang



# 3278H-9X

Micro-fraises hémisphériques
Vollradius Mikrofräser
Ball nose micro end mills




MD VHM HM | λ 30° | L3 9xD1 | Z=2

| D1 +0.005/ -0.010 | R | L2 | L3 | D3 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 0.20 | 0.60 | 3.60 | 0.37 | 3.00 | 39 | 3278H-9X-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.25 | 0.75 | 4.50 | 0.45 | 3.00 | 39 | 3278H-9X-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.30 | 0.90 | 5.40 | 0.55 | 3.00 | 39 | 3278H-9X-0.60 | ● | ● | ● | ● | ● |
| 0.70 | 0.35 | 1.05 | 6.30 | 0.65 | 3.00 | 39 | 3278H-9X-0.70 | ● | ● | ● | ● | ● |
| 0.80 | 0.40 | 1.20 | 7.20 | 0.75 | 3.00 | 39 | 3278H-9X-0.80 | ● | ● | ● | ● | ● |
| 0.90 | 0.45 | 1.35 | 8.10 | 0.85 | 3.00 | 39 | 3278H-9X-0.90 | ● | ● | ● | ● | ● |
| 1.00 | 0.50 | 1.50 | 9.00 | 0.95 | 3.00 | 39 | 3278H-9X-1.00 | ● | ● | ● | ● | ● |
| 1.10 | 0.55 | 1.65 | 9.90 | 1.05 | 3.00 | 39 | 3278H-9X-1.10 | ● | ● | ● | ● | ● |
| 1.20 | 0.60 | 1.80 | 10.80 | 1.15 | 3.00 | 39 | 3278H-9X-1.20 | ● | ● | ● | ● | ● |
| 1.30 | 0.65 | 1.95 | 11.70 | 1.25 | 3.00 | 39 | 3278H-9X-1.30 | ● | ● | ● | ● | ● |
| 1.40 | 0.70 | 2.10 | 12.60 | 1.35 | 3.00 | 39 | 3278H-9X-1.40 | ● | ● | ● | ● | ● |
| 1.50 | 0.75 | 2.25 | 13.50 | 1.45 | 3.00 | 39 | 3278H-9X-1.50 | ● | ● | ● | ● | ● |
| 1.60 | 0.80 | 2.40 | 14.40 | 1.55 | 3.00 | 39 | 3278H-9X-1.60 | ● | ● | ● | ● | ● |
| 1.70 | 0.85 | 2.55 | 15.30 | 1.65 | 3.00 | 39 | 3278H-9X-1.70 | ● | ● | ● | ● | ● |
| 1.80 | 0.90 | 2.70 | 16.20 | 1.75 | 3.00 | 39 | 3278H-9X-1.80 | ● | ● | ● | ● | ● |
| 1.90 | 0.95 | 2.85 | 17.10 | 1.85 | 3.00 | 39 | 3278H-9X-1.90 | ● | ● | ● | ● | ● |
| 2.00 | 1.00 | 3.00 | 18.00 | 1.95 | 6.00 | 50 | 3278H-9X-2.00 | ● | ● | ● | ● | ● |
| 2.10 | 1.05 | 3.15 | 18.90 | 2.05 | 6.00 | 50 | 3278H-9X-2.10 | ● | ● | ● | ● | ● |
| 2.20 | 1.10 | 3.30 | 19.80 | 2.15 | 6.00 | 50 | 3278H-9X-2.20 | ● | ● | ● | ● | ● |
| 2.30 | 1.15 | 3.45 | 20.70 | 2.25 | 6.00 | 50 | 3278H-9X-2.30 | ● | ● | ● | ● | ● |
| 2.40 | 1.20 | 3.60 | 21.60 | 2.35 | 6.00 | 50 | 3278H-9X-2.40 | ● | ● | ● | ● | ● |
| 2.50 | 1.25 | 3.75 | 22.50 | 2.45 | 6.00 | 50 | 3278H-9X-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 1.50 | 4.50 | 27.00 | 2.95 | 6.00 | 50 | 3278H-9X-3.00 | ● | ● | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Zurück zum Index

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

> 16.54

| Z | λ | D1 | D2 | Type | Corner | page |
|---|---|---|---|---|---|---|
| Z=3 | Div. | Ø1.00- 8.00 | Ø3/6/8 | E-DHP3300-1.5 | | > 16.57 |
| Z=4 | 26° / 33° | Ø10.00 | Ø10h6 | E-DHP3400-1.5 | | |
| Z=3 | Div. | Ø1.00- 8.00 | Ø3/6/8 | E-DHP3300-2.5 | | |
| Z=4 | 26° / 33° | Ø10.00 | Ø10h6 | E-DHP3400-2.5 | | |
| Z=1 | 23° | Ø1.00 - 6.00 | Ø6 h5 | 3123-2 | Sharp Corner | > 16.58 |
| | | Ø1.00 - 6.00 | Ø6 h5 | 3123-4 | | > 16.59 |
| Z=2 | 60° | Ø0.50 - 6.00 | Ø3/6/8 | 3260MV | | > 16.60 |
| | 90° | Ø0.30 - 6.00 | Ø3/6/8 | 3290MV | | > 16.61 |
| | 120° | Ø0.50 - 6.00 | Ø3/6/8 | 32120MV | | > 16.62 |
| Z=2 | 30° | Ø1.00 - 6.00 | Ø6 h5 | 3230 | Sharp Corner | > 16.63 |
| | | Ø3.00 - 6.00 | Ø6 h5 | 3230-1.5 | | > 16.64 |
| | | Ø3.00 - 6.00 | Ø6 h5 | 3230-3 | | > 16.65 |
| | | Ø2.00 - 6.00 | D1 = D2 | 3231 | | > 16.66 |
| | | Ø3.00 - 6.00 | Ø6 h5 | 3239T-2.5X | U | > 16.67 |
| | | Ø3.00 - 6.00 | Ø6 h5 | 3239T-4X | | > 16.68 |
| Z=3 | 30° | Ø1.00 - 6.00 | Ø6 h5 | 3330-S | Sharp Corner | > 16.69 |
| | | Ø3.00-12.00 | D1 = D2 | 3330 | | > 16.70 |
| | | Ø3.00 - 6.00 | Ø6 h5 | 3330-4 | | > 16.71 |
| | | Ø2.00 - 6.00 | D1 = D2 | 3331 | | > 16.72 |
| | | Ø1.50 - 6.00 | Ø6 h5 | 3336-HA | | > 16.73 |
| | | Ø1.50 - 6.00 | Ø6 h5 | 3337-HA | | > 16.73 |
| | 45° | Ø2.00 - 6.00 | D1 = D2 | 3341 | | > 16.74 |
| | | Ø0.50 - 6.00 | Ø6 h5 | 3345-S | | > 16.75 |
| | 60° | Ø2.00 - 6.00 | D1 = D2 | 3361 | | > 16.76 |
| | 35° / 38° | Ø1.00- 6.00 | Ø6 h5 | DHP3336 | | > 16.77 |
| Z=4 | 30° | Ø3.00 - 6.00 | D1 = D2 | 3430 | Sharp Corner | > 16.78 |
| | | Ø2.00 - 6.00 | D1 = D2 | 3431 | | > 16.79 |
| | 45° | Ø2.00 - 6.00 | D1 = D2 | 3441 | | > 16.80 |
| | | Ø0.50 - 6.00 | Ø6 h5 | 3445-S | | > 16.81 |
| | 50° | Ø1.00- 6.00 | Ø6 h5 | 3450 | | > 16.82 |
| | 35° / 38° | Ø1.00- 6.00 | Ø6 h5 | DHP3436 | | > 16.83 |
| | 30° | Ø3.00 - 6.00 | Ø6 h5 | 3439T-2.5X | U | > 16.84 |
| | | Ø3.00 - 6.00 | Ø6 h5 | 3439T-4X | | > 16.85 |
| Z=5 | 45° | Ø1.00- 6.00 | Ø6 h5 | 3545 | Sharp Corner | > 16.86 |
| Z=4/5/6 | | Ø1.00- 6.00 | Ø6 h5 | 35645 | | > 16.87 |
| Z=8 | 10° | Ø6.00 | Ø6 h5 | 3810 | | > 16.88 |



MICRO-Line

Fraises en bout
Schaftfräser
End mills

Index

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

> 16.54

| Z | λ | D1 | D2 | Type | Corner | page |
|---|---|---|---|---|---|---|
| Z=2 | 30° | Ø2.00 - 6.00 | D1 = D2 | 3238 | U | > 16.89 |
| Z=3 | 30° | Ø2.00 - 6.00 | D1 = D2 | 3338 | | > 16.90 |
| Z=3 | 30° | Ø8.00-12.00 | Ø6 h6 | 3383 | Sharp Corner | > 16.91 |
| Z=10 | 30° | Ø16.3 / 20.30 | Ø10h6 | 3831 / 3833 | | > 16.92 |
| Z=3 | 0° | Ø0.50 -3.00 | Ø3 h4 | 3611 | Sharp Corner | > 16.93 |
| Z=3 | 0° | Ø0.50 -3.00 | Ø3 h4 | 3911 | | > 16.94 |
| Z=4 | 0° | Ø3.00-8.00 | Ø3 h4<br>Ø6 h5<br>Ø8 h6 | 1901 / 3901 | | > 16.95 |

| Matière / Werkstoff / Material | | VC (m/min) | 1.0 - 2.0 fz (mm) | 2.0 - 4.0 fz (mm) | 4.0 - 6.0 fz (mm) | 6.0 - 10.0 fz (mm) | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 100 - 140 | 0.010 - 0.015 | 0.015 - 0.030 | 0.030 - 0.040 | 0.040 - 0.060 | - | ★★★ | ★★★ |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 90 - 140 | 0.010 - 0.015 | 0.015 - 0.030 | 0.030 - 0.040 | 0.040 - 0.060 | - | ★★★ | ★★★ |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 90 - 140 | 0.010 - 0.015 | 0.015 - 0.030 | 0.030 - 0.040 | 0.040 - 0.060 | - | ★★★ | ★★★ |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 80 - 120 | 0.010 - 0.015 | 0.015 - 0.030 | 0.030 - 0.040 | 0.040 - 0.060 | - | ★★★ | ★★★ |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel | H | 120 - 170 | 0.005 - 0.008 | 0.008 - 0.015 | 0.015 - 0.020 | 0.020 - 0.035 | - | ★★★ | ★★★ |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel | H | 110 - 150 | 0.005 - 0.008 | 0.008 - 0.015 | 0.015 - 0.020 | 0.020 - 0.035 | - | ★★★ | ★★★ |
| Inox<br>Rostfreistahl<br>Stainless steel | M | 50 - 90 | 0.004 - 0.008 | 0.008 - 0.012 | 0.012 - 0.020 | 0.020 - 0.040 | - | ★★★ | ★★★ |
| Aluminium | N | 250 - 350 | 0.008 - 0.015 | 0.015 - 0.030 | 0.030 - 0.040 | 0.040 - 0.065 | - | ★★★ | ★★ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 130 - 240 | 0.005 - 0.010 | 0.010 - 0.020 | 0.020 - 0.030 | 0.030 - 0.050 | - | ★★★ | ★★ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material | N | 150 - 300 | 0.020 - 0.030 | 0.030 - 0.050 | 0.050 - 0.080 | 0.080 - 0.150 | - | ★★★ | ★★ |
| Métaux précieux<br>Edelmetalle<br>Precious metals | N | 120 - 150 | 0.005 - 0.010 | 0.010 - 0.020 | 0.020 - 0.030 | 0.030 - 0.050 | - | ★★★ | ★★ |
| Titane<br>Titan<br>Titanium | S | 50 - 100 | 0.010 - 0.015 | 0.015 - 0.020 | 0.020 - 0.030 | 0.030 - 0.050 | - | ★★★ | ★★★ |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy | S | 40 - 60 | 0.005 - 0.007 | 0.007-0.012 | 0.012 - 0.020 | 0.020 - 0.030 | - | ★★★ | ★★★ |
| Matière exotique<br>Exotisches material<br>Exotic material | O | 15 - 25 | 0.005 - 0.010 | 0.010 - 0.020 | 0.020 - 0.030 | 0.030 - 0.050 | - | ★★★ | ★★★ |

Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30%erhöhen
With coating, increase data by 20-30%

★ Bien / Gut / Good
★★ Très bien / Sehr gut / Verygood
★★★ Excellent / Ausgezeichnet / Excellent





| Matière / Werkstoff / Material | | VC (m/min) | 0.50 - 2.0 fz (mm) | 2.0 - 4.0 fz (mm) | 4.0 - 6.0 fz (mm) | 6.0 - 8.0 fz (mm) | 8.0 - 12.0 fz (mm) | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 80 - 130 | 0.004-0.015 | 0.015- 0.025 | 0.025 - 0.035 | 0.035 - 0.050 | 0.050 - 0.080 | - | ★★★ | ★★★ | - |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 70 - 100 | 0.004-0.015 | 0.015- 0.025 | 0.025 - 0.035 | 0.035 - 0.050 | 0.050 - 0.080 | - | ★★★ | ★★★ | - |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 70 - 100 | 0.004-0.015 | 0.015- 0.025 | 0.025 - 0.035 | 0.035 - 0.050 | 0.050 - 0.080 | - | ★★★ | ★★★ | - |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 50 - 80 | 0.004-0.015 | 0.015- 0.025 | 0.025 - 0.035 | 0.035 - 0.050 | 0.050 - 0.080 | - | ★★★ | ★★★ | - |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel | H | 60 - 90 | 0.002 - 0.008 | 0.008 - 0.015 | 0.012- 0.020 | 0.020 - 0.025 | 0.025 - 0.030 | - | ★★★ | ★★★ | - |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel | H | 40 - 70 | 0.002 - 0.008 | 0.008 - 0.015 | 0.012- 0.020 | 0.020 - 0.025 | 0.020 - 0.030 | - | ★★★ | ★★★ | - |
| Inox<br>Rostfreistahl<br>Stainless steel | M | 40 - 80 | 0.003 - 0.008 | 0.008 - 0.015 | 0.015- 0.020 | 0.020 - 0.030 | 0.030 - 0.050 | - | ★★★ | ★★★ | - |
| Aluminium | N | 230 - 320 | 0.003 - 0.010 | 0.010- 0.025 | 0.025 - 0.030 | 0.030 - 0.050 | 0.050 - 0.080 | ★★ | ★ | ★★ | ★★★ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 190 | 0.003 - 0.010 | 0.010- 0.020 | 0.020 - 0.030 | 0.030 - 0.040 | 0.040 - 0.070 | ★★ | ★ | ★★ | ★★★ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material | N | 250 - 500 | 0.005 - 0.030 | 0.030 - 0.050 | 0.050 - 0.080 | 0.080 - 0.100 | 0.100- 0.200 | ★★★ | - | ★★ | ★★★ |
| Métaux précieux<br>Edelmetalle<br>Precious metals | N | 90 - 150 | 0.003 - 0.015 | 0.015- 0.025 | 0.025 - 0.030 | 0.030 - 0.050 | 0.050 - 0.080 | ★★★ | ★ | ★★ | ★★★ |
| Titane<br>Titan<br>Titanium | S | 30 - 70 | 0.004 - 0.010 | 0.010- 0.017 | 0.017-0.025 | 0.025 - 0.035 | 0.035 - 0.050 | - | ★★ | ★★★ | - |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy | S | 30 - 60 | 0.003 - 0.008 | 0.008 - 0.015 | 0.015- 0.020 | 0.020 - 0.025 | 0.025 - 0.040 | - | ★★★ | ★★★ | - |
| Matière exotique<br>Exotisches material<br>Exotic material | O | 15- 25 | 0.002 - 0.008 | 0.008 - 0.020 | 0.020 - 0.030 | 0.030 - 0.040 | 0.040 - 0.050 | - | ★★★ | ★★★ | ★★ |

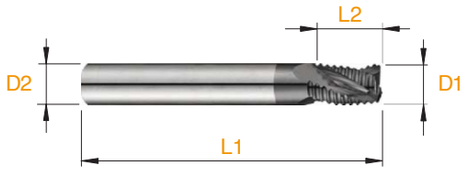
Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30%erhöhen
With coating, increase data by 20-30%

★ Bien / Gut / Good
★★ Très bien / Sehr gut / Verygood
★★★ Excellent / Ausgezeichnet / Excellent

| Matière<br>Werkstoff<br>Material | | VC<br>(m/min) | N | TiAlN | STF |
|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 80 - 130 | ★ | ★★★ | ★★★ |
| Acier<br>Stahl <600 N/mm²<br>Steel | P | 70 - 100 | ★ | ★★★ | ★★★ |
| Acier<br>Stahl <800 N/mm²<br>Steel | P | 70 - 100 | ★ | ★★★ | ★★★ |
| Acier<br>Stahl >800 N/mm²<br>Steel | P | 50 - 80 | ★ | ★★★ | ★★★ |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel | H | 60 - 90 | - | ★★ | ★★★ |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel | H | 40 - 70 | - | ★★ | ★★★ |
| Inox<br>Rostfreistahl<br>Stainless steel | M | 50 - 100 | ★ | ★★★ | ★★★ |
| Aluminium | N | 200 - 300 | ★★★ | ★★ | ★★★ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 100 - 200 | ★★★ | ★★ | ★★★ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material | N | 200 - 500 | ★★★ | ★★ | ★★ |
| Métaux précieux<br>Edelmetalle<br>Precious metals | N | 90 - 140 | ★★★ | ★★ | ★★★ |
| Titane<br>Titan<br>Titanium | S | 30 - 80 | - | ★★★ | ★★★ |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy | S | 30 - 60 | - | ★★★ | ★★★ |
| Matière exotique<br>Exotisches material<br>Exotic material | O | 20 - 30 | - | ★★★ | ★★★ |

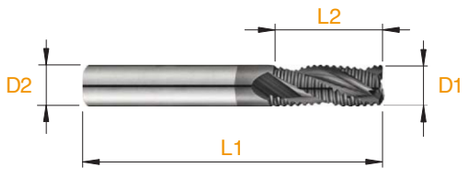
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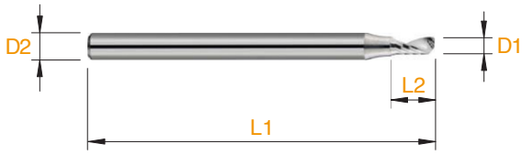

MD VHM HM — 45° E — 1.5xD1

| | Z | E | λ | D1 h10 | L2 | D2 Ø3 h4 Ø6 h5 Ø8 h6 Ø10 h6 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 0.05 | 26°/30° | 1.00 | 1.50 | 3.00 | 39 | E-DHP3300-1.5-1.00 | ● | ● | ● |
| | 3 | 0.10 | 26°/30° | 1.50 | 2.25 | 3.00 | 39 | E-DHP3300-1.5-1.50 | ● | ● | ● |
| | 3 | 0.20 | 26°/30° | 2.00 | 3.00 | 3.00 | 39 | E-DHP3300-1.5-2.00 | ● | ● | ● |
| | 3 | 0.20 | 26°/33° | 2.50 | 3.75 | 6.00 | 50 | E-DHP3300-1.5-2.50 | ● | ● | ● |
| | 3 | 0.20 | 26°/33° | 3.00 | 4.25 | 6.00 | 50 | E-DHP3300-1.5-3.00 | ● | ● | ● |
| | 3 | 0.30 | 26°/33° | 4.00 | 6.00 | 6.00 | 50 | E-DHP3300-1.5-4.00 | ● | ● | ● |
| | 3 | 0.30 | 26°/33° | 5.00 | 7.50 | 6.00 | 50 | E-DHP3300-1.5-5.00 | ● | ● | ● |
| | 3 | 0.40 | 26°/33° | 6.00 | 9.00 | 6.00 | 50 | E-DHP3300-1.5-6.00 | ● | ● | ● |
| | 3 | 0.50 | 26°/33° | 8.00 | 12.00 | 8.00 | 64 | E-DHP3300-1.5-8.00 | ● | ● | ● |
| | 4 | 0.50 | 26°/33° | 10.00 | 15.00 | 10.00 | 73 | E-DHP3400-1.5-10.00 | ● | ● | ● |




MD VHM HM — 45° E — 2.5xD1

| | Z | E | λ | D1 h10 | L2 | D2 Ø3 h4 Ø6 h5 Ø8 h6 Ø10 h6 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 0.05 | 26°/30° | 1.00 | 2.50 | 3.00 | 39 | E-DHP3300-2.5-1.00 | ● | ● | ● |
| | 3 | 0.10 | 26°/30° | 1.50 | 3.75 | 3.00 | 39 | E-DHP3300-2.5-1.50 | ● | ● | ● |
| | 3 | 0.20 | 26°/30° | 2.00 | 5.00 | 3.00 | 39 | E-DHP3300-2.5-2.00 | ● | ● | ● |
| | 3 | 0.20 | 26°/33° | 2.50 | 6.25 | 6.00 | 57 | E-DHP3300-2.5-2.50 | ● | ● | ● |
| | 3 | 0.20 | 26°/33° | 3.00 | 7.50 | 6.00 | 57 | E-DHP3300-2.5-3.00 | ● | ● | ● |
| | 3 | 0.30 | 26°/33° | 4.00 | 10.00 | 6.00 | 57 | E-DHP3300-2.5-4.00 | ● | ● | ● |
| | 3 | 0.30 | 26°/33° | 5.00 | 12.50 | 6.00 | 57 | E-DHP3300-2.5-5.00 | ● | ● | ● |
| | 3 | 0.40 | 26°/33° | 6.00 | 15.00 | 6.00 | 57 | E-DHP3300-2.5-6.00 | ● | ● | ● |
| | 3 | 0.50 | 26°/33° | 8.00 | 20.00 | 8.00 | 64 | E-DHP3300-2.5-8.00 | ● | ● | ● |
| | 4 | 0.50 | 26°/33° | 10.00 | 25.00 | 10.00 | 73 | E-DHP3400-2.5-10.00 | ● | ● | ● |




MD
VHM
HM

λ 23°

Sharp Corner

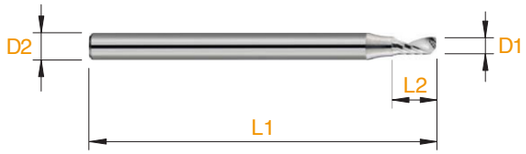
2xD1

Z=1

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|
| 1.00 | 2.00 | 6.00 | 50 | 3123-2-1.0 | ● | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 50 | 3123-2-2.0 | ● | ● | ● | ● |
| 3.00 | 6.00 | 6.00 | 50 | 3123-2-3.0 | ● | ● | ● | ● |
| 4.00 | 8.00 | 6.00 | 50 | 3123-2-4.0 | ● | ● | ● | ● |
| 5.00 | 10.00 | 6.00 | 50 | 3123-2-5.0 | ● | ● | ● | ● |
| 6.00 | 12.00 | 6.00 | 50 | 3123-2-6.0 | ● | ● | ● | ● |








MD
VHM
HM

λ 23°

Sharp Corner

4xD1

Z=1

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|
| 1.00 | 4.00 | 6.00 | 50 | 3123-4-1.0 | ● | ● | ● | ● |
| 2.00 | 8.00 | 6.00 | 50 | 3123-4-2.0 | ● | ● | ● | ● |
| 3.00 | 12.00 | 6.00 | 50 | 3123-4-3.0 | ● | ● | ● | ● |
| 4.00 | 16.00 | 6.00 | 50 | 3123-4-4.0 | ● | ● | ● | ● |
| 5.00 | 20.00 | 6.00 | 50 | 3123-4-5.0 | ● | ● | ● | ● |
| 6.00 | 24.00 | 6.00 | 50 | 3123-4-6.0 | ● | ● | ● | ● |




MD
VHM
HM

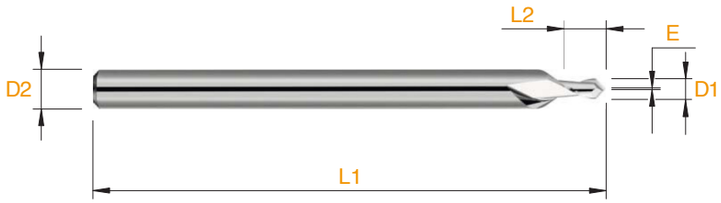
60°

Z=2

| D1 h10 | E | L2 | D2 Ø3 h4 Ø6 h5 Ø8 h6 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|
| 0.50 | 0.05 | 1.00 | 3.00 | 39 | 3260MV-0.5 | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 3.00 | 39 | 3260MV-1.0 | ● | ● | ● |
| 1.50 | 0.15 | 3.00 | 3.00 | 39 | 3260MV-1.5 | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 3.00 | 39 | 3260MV-2.0 | ● | ● | ● |
| 2.50 | 0.25 | 5.00 | 3.00 | 39 | 3260MV-2.5 | ● | ● | ● |
| 3.00 | 0.30 | 6.00 | 6.00 | 50 | 3260MV-3.0 | ● | ● | ● |
| 4.00 | 0.40 | 8.00 | 6.00 | 50 | 3260MV-4.0 | ● | ● | ● |
| 6.00 | 0.60 | 12.00 | 8.00 | 64 | 3260MV-6.0 | ● | ● | ● |








MD
VHM
HM

90°

Z=2

| D1 h10 | E | L2 | D2 Ø3 h4 Ø6 h5 Ø8 h6 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.03 | 0.60 | 3.00 | 39 | 3290MV-0.3 | ● | ● | ● |
| 0.40 | 0.04 | 0.80 | 3.00 | 39 | 3290MV-0.4 | ● | ● | ● |
| 0.50 | 0.05 | 1.00 | 3.00 | 39 | 3290MV-0.5 | ● | ● | ● |
| 0.60 | 0.06 | 1.20 | 3.00 | 39 | 3290MV-0.6 | ● | ● | ● |
| 0.70 | 0.07 | 1.40 | 3.00 | 39 | 3290MV-0.7 | ● | ● | ● |
| 0.80 | 0.08 | 1.60 | 3.00 | 39 | 3290MV-0.8 | ● | ● | ● |
| 0.90 | 0.09 | 1.80 | 3.00 | 39 | 3290MV-0.9 | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 3.00 | 39 | 3290MV-1.0 | ● | ● | ● |
| 1.10 | 0.11 | 2.20 | 3.00 | 39 | 3290MV-1.1 | ● | ● | ● |
| 1.20 | 0.12 | 2.40 | 3.00 | 39 | 3290MV-1.2 | ● | ● | ● |
| 1.30 | 0.13 | 2.60 | 3.00 | 39 | 3290MV-1.3 | ● | ● | ● |
| 1.40 | 0.14 | 2.80 | 3.00 | 39 | 3290MV-1.4 | ● | ● | ● |
| 1.50 | 0.15 | 3.00 | 3.00 | 39 | 3290MV-1.5 | ● | ● | ● |
| 1.60 | 0.16 | 3.20 | 3.00 | 39 | 3290MV-1.6 | ● | ● | ● |
| 1.70 | 0.17 | 3.40 | 3.00 | 39 | 3290MV-1.7 | ● | ● | ● |
| 1.80 | 0.18 | 3.60 | 3.00 | 39 | 3290MV-1.8 | ● | ● | ● |
| 1.90 | 0.19 | 3.80 | 3.00 | 39 | 3290MV-1.9 | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 3.00 | 39 | 3290MV-2.0 | ● | ● | ● |
| 2.50 | 0.25 | 5.00 | 3.00 | 39 | 3290MV-2.5 | ● | ● | ● |
| 3.00 | 0.30 | 6.00 | 6.00 | 50 | 3290MV-3.0 | ● | ● | ● |
| 4.00 | 0.40 | 8.00 | 6.00 | 50 | 3290MV-4.0 | ● | ● | ● |
| 6.00 | 0.60 | 12.00 | 8.00 | 64 | 3290MV-6.0 | ● | ● | ● |




MD
VHM
HM

120°

Z=2

| D1 h10 | E | L2 | D2 Ø3 h4 Ø6 h5 Ø8 h6 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|
| 0.50 | 0.05 | 1.00 | 3.00 | 39 | 32120MV-0.5 | ● | ● | ● |
| 1.00 | 0.10 | 2.00 | 3.00 | 39 | 32120MV-1.0 | ● | ● | ● |
| 1.50 | 0.15 | 3.00 | 3.00 | 39 | 32120MV-1.5 | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 3.00 | 39 | 32120MV-2.0 | ● | ● | ● |
| 2.50 | 0.25 | 5.00 | 3.00 | 39 | 32120MV-2.5 | ● | ● | ● |
| 3.00 | 0.30 | 6.00 | 6.00 | 50 | 32120MV-3.0 | ● | ● | ● |
| 4.00 | 0.40 | 8.00 | 6.00 | 50 | 32120MV-4.0 | ● | ● | ● |
| 6.00 | 0.60 | 12.00 | 8.00 | 64 | 32120MV-6.0 | ● | ● | ● |







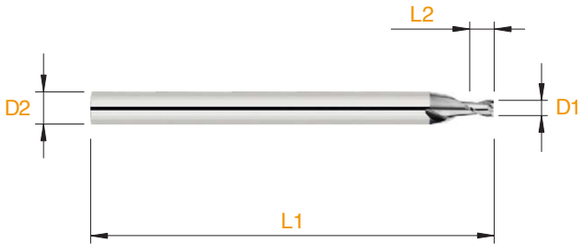

MD
VHM
HM

λ 30°

Sharp Corner

Z=2

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.00 | 1.00 | 6.00 | 50 | 3230-1.0 | ● | ● | ● |
| 1.50 | 1.50 | 6.00 | 50 | 3230-1.5 | ● | ● | ● |
| 2.00 | 2.00 | 6.00 | 50 | 3230-2.0 | ● | ● | ● |
| 2.50 | 2.50 | 6.00 | 50 | 3230-2.5 | ● | ● | ● |
| 3.00 | 3.00 | 6.00 | 50 | 3230-3.0 | ● | ● | ● |
| 4.00 | 4.00 | 6.00 | 50 | 3230-4.0 | ● | ● | ● |
| 5.00 | 5.00 | 6.00 | 50 | 3230-5.0 | ● | ● | ● |
| 6.00 | 6.00 | 6.00 | 50 | 3230-6.0 | ● | ● | ● |

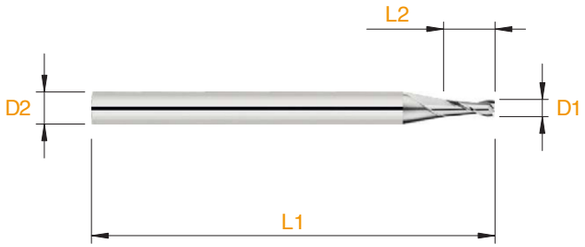



MD VHM HM | λ 30° | Sharp Corner | 1.5xD1 | Z=2

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 3.00 | 4.50 | 6.00 | 50 | 3230-1.5-3.0 | ● | ● | ● |
| 3.50 | 5.00 | 6.00 | 50 | 3230-1.5-3.5 | ● | ● | ● |
| 4.00 | 6.00 | 6.00 | 50 | 3230-1.5-4.0 | ● | ● | ● |
| 4.50 | 7.00 | 6.00 | 50 | 3230-1.5-4.5 | ● | ● | ● |
| 5.00 | 8.00 | 6.00 | 50 | 3230-1.5-5.0 | ● | ● | ● |
| 6.00 | 9.00 | 6.00 | 50 | 3230-1.5-6.0 | ● | ● | ● |

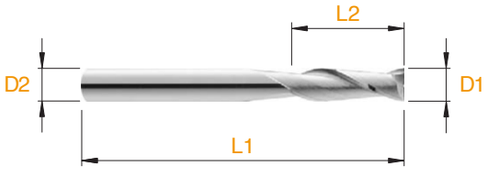







MD VHM HM | λ 30° | Sharp Corner | 3xD1 | Z=2

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 3.00 | 9.00 | 6.00 | 50 | 3230-3-3.0 | ● | ● | ● |
| 3.50 | 10.00 | 6.00 | 50 | 3230-3-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 6.00 | 50 | 3230-3-4.0 | ● | ● | ● |
| 4.50 | 13.00 | 6.00 | 50 | 3230-3-4.5 | ● | ● | ● |
| 5.00 | 15.00 | 6.00 | 50 | 3230-3-5.0 | ● | ● | ● |
| 6.00 | 18.00 | 6.00 | 50 | 3230-3-6.0 | ● | ● | ● |

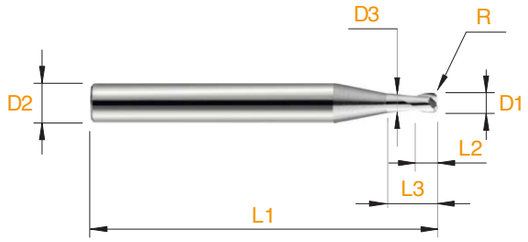



MD VHM HM | λ 30° | Sharp Corner | Z=2

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3231-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3231-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3231-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3231-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3231-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3231-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3231-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3231-6.0 | ● | ● | ● |

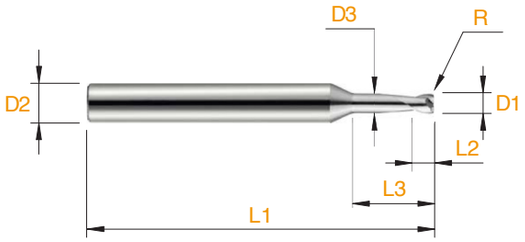







MD VHM HM | λ 30° | Radius Corner | L3 2.5xD1 | Z=2

| D1 h10 | R +/- 0.02 | L2 | L3 | D3 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 0.50 | 3.00 | 7.50 | 2.95 | 6.00 | 57 | 3239T-2.5X-3.0 | ● | ● | ● |
| 3.50 | 0.50 | 3.50 | 8.75 | 3.45 | 6.00 | 57 | 3239T-2.5X-3.5 | ● | ● | ● |
| 4.00 | 0.50 | 4.00 | 10.00 | 3.95 | 6.00 | 57 | 3239T-2.5X-4.0 | ● | ● | ● |
| 4.50 | 0.50 | 4.50 | 11.25 | 4.45 | 6.00 | 57 | 3239T-2.5X-4.5 | ● | ● | ● |
| 5.00 | 0.50 | 5.00 | 12.50 | 4.95 | 6.00 | 57 | 3239T-2.5X-5.0 | ● | ● | ● |
| 5.50 | 0.50 | 5.50 | 13.75 | 5.45 | 6.00 | 57 | 3239T-2.5X-5.5 | ● | ● | ● |
| 6.00 | 0.50 | 6.00 | 15.00 | 5.95 | 6.00 | 57 | 3239T-2.5X-6.0 | ● | ● | ● |

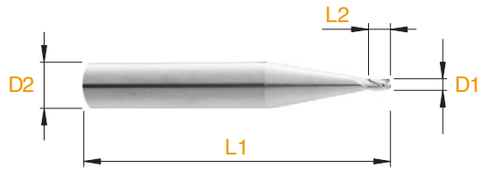



MD VHM HM | λ 30° | Radius Corner | L3 4xD1 | Z=2

| D1 h10 | R +/- 0.02 | L2 | L3 | D3 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 0.50 | 3.00 | 12.00 | 2.95 | 6.00 | 57 | 3239T-4X-3.0 | ● | ● | ● |
| 3.50 | 0.50 | 3.50 | 14.00 | 3.45 | 6.00 | 57 | 3239T-4X-3.5 | ● | ● | ● |
| 4.00 | 0.50 | 4.00 | 16.00 | 3.95 | 6.00 | 57 | 3239T-4X-4.0 | ● | ● | ● |
| 4.50 | 0.50 | 4.50 | 18.00 | 4.45 | 6.00 | 57 | 3239T-4X-4.5 | ● | ● | ● |
| 5.00 | 0.50 | 5.00 | 20.00 | 4.95 | 6.00 | 57 | 3239T-4X-5.0 | ● | ● | ● |
| 5.50 | 0.50 | 5.50 | 22.00 | 5.45 | 6.00 | 57 | 3239T-4X-5.5 | ● | ● | ● |
| 6.00 | 0.50 | 6.00 | 24.00 | 5.95 | 6.00 | 57 | 3239T-4X-6.0 | ● | ● | ● |

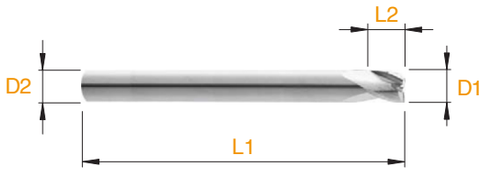







MD VHM HM | λ 30° | Sharp Corner | Z=3

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.00 | 3.00 | 6.00 | 40 | 3330-S-1.0 | ● | ● | ● |
| 1.50 | 3.00 | 6.00 | 40 | 3330-S-1.5 | ● | ● | ● |
| 2.00 | 3.00 | 6.00 | 40 | 3330-S-2.0 | ● | ● | ● |
| 2.50 | 3.00 | 6.00 | 40 | 3330-S-2.5 | ● | ● | ● |
| 3.00 | 4.00 | 6.00 | 40 | 3330-S-3.0 | ● | ● | ● |
| 3.50 | 4.00 | 6.00 | 40 | 3330-S-3.5 | ● | ● | ● |
| 4.00 | 5.00 | 6.00 | 40 | 3330-S-4.0 | ● | ● | ● |
| 4.50 | 5.00 | 6.00 | 40 | 3330-S-4.5 | ● | ● | ● |
| 5.00 | 6.00 | 6.00 | 40 | 3330-S-5.0 | ● | ● | ● |
| 6.00 | 7.00 | 6.00 | 40 | 3330-S-6.0 | ● | ● | ● |

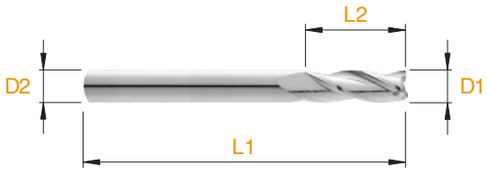



MD VHM HM | λ 30° | Sharp Corner | Z=3

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 3.00 | 3.00 | 3.00 | 39 | 3330-3.0 | ● | ● | ● |
| 4.00 | 4.00 | 4.00 | 50 | 3330-4.0 | ● | ● | ● |
| 5.00 | 5.00 | 5.00 | 50 | 3330-5.0 | ● | ● | ● |
| 6.00 | 6.00 | 6.00 | 50 | 3330-6.0 | ● | ● | ● |
| 8.00 | 8.00 | 8.00 | 58 | 3330-8.0 | ● | | |
| 10.00 | 10.00 | 10.00 | 66 | 3330-10.0 | ● | | |
| 12.00 | 12.00 | 12.00 | 73 | 3330-12.0 | ● | | |

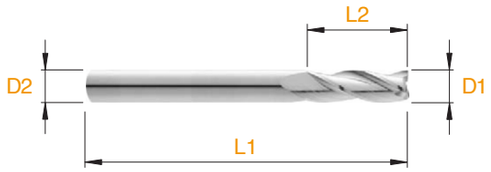







MD VHM HM | λ 30° | Sharp Corner | 4xD1 | Z=3

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 3.00 | 12.00 | 6.00 | 50 | 3330-4-3.0 | ● | ● | ● |
| 4.00 | 16.00 | 6.00 | 50 | 3330-4-4.0 | ● | ● | ● |
| 5.00 | 20.00 | 6.00 | 50 | 3330-4-5.0 | ● | ● | ● |
| 6.00 | 24.00 | 6.00 | 57 | 3330-4-6.0 | ● | ● | ● |

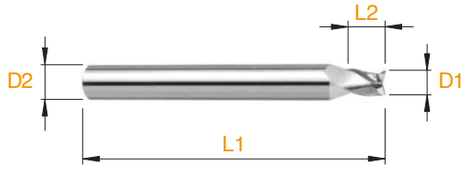



MD VHM HM | λ 30° | Sharp Corner | Z=3

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3331-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3331-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3331-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3331-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3331-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3331-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3331-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3331-6.0 | ● | ● | ● |

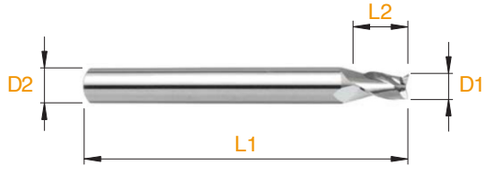







MD VHM HM | λ 30° | Sharp Corner | DIN 6527K | Z=3

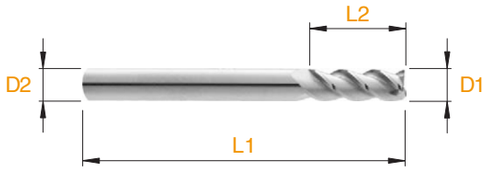
| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.50 | 3.00 | 6.00 | 50 | 3336-HA-1.5 | ● | ● | ● |
| 1.80 | 3.00 | 6.00 | 50 | 3336-HA-1.8 | ● | ● | ● |
| 2.00 | 3.00 | 6.00 | 50 | 3336-HA-2.0 | ● | ● | ● |
| 2.50 | 3.00 | 6.00 | 50 | 3336-HA-2.5 | ● | ● | ● |
| 2.80 | 4.00 | 6.00 | 50 | 3336-HA-2.8 | ● | ● | ● |
| 3.00 | 4.00 | 6.00 | 50 | 3336-HA-3.0 | ● | ● | ● |
| 3.50 | 4.00 | 6.00 | 50 | 3336-HA-3.5 | ● | ● | ● |
| 3.80 | 5.00 | 6.00 | 54 | 3336-HA-3.8 | ● | ● | ● |
| 4.00 | 5.00 | 6.00 | 54 | 3336-HA-4.0 | ● | ● | ● |
| 4.50 | 5.00 | 6.00 | 54 | 3336-HA-4.5 | ● | ● | ● |
| 4.80 | 6.00 | 6.00 | 54 | 3336-HA-4.8 | ● | ● | ● |
| 5.00 | 6.00 | 6.00 | 54 | 3336-HA-5.0 | ● | ● | ● |
| 5.50 | 7.00 | 6.00 | 54 | 3336-HA-5.5 | ● | ● | ● |
| 5.80 | 7.00 | 6.00 | 54 | 3336-HA-5.8 | ● | ● | ● |
| 6.00 | 7.00 | 6.00 | 54 | 3336-HA-6.0 | ● | ● | ● |




MD VHM HM | λ 30° | Sharp Corner | DIN 6527L | Z=3

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.50 | 6.00 | 6.00 | 57 | 3337-HA-1.5 | ● | ● | ● |
| 1.80 | 6.00 | 6.00 | 57 | 3337-HA-1.8 | ● | ● | ● |
| 2.00 | 6.00 | 6.00 | 57 | 3337-HA-2.0 | ● | ● | ● |
| 2.50 | 6.00 | 6.00 | 57 | 3337-HA-2.5 | ● | ● | ● |
| 2.80 | 7.00 | 6.00 | 57 | 3337-HA-2.8 | ● | ● | ● |
| 3.00 | 7.00 | 6.00 | 57 | 3337-HA-3.0 | ● | ● | ● |
| 3.50 | 7.00 | 6.00 | 57 | 3337-HA-3.5 | ● | ● | ● |
| 3.80 | 8.00 | 6.00 | 57 | 3337-HA-3.8 | ● | ● | ● |
| 4.00 | 8.00 | 6.00 | 57 | 3337-HA-4.0 | ● | ● | ● |
| 4.50 | 8.00 | 6.00 | 57 | 3337-HA-4.5 | ● | ● | ● |
| 4.80 | 10.00 | 6.00 | 57 | 3337-HA-4.8 | ● | ● | ● |
| 5.00 | 10.00 | 6.00 | 57 | 3337-HA-5.0 | ● | ● | ● |
| 5.50 | 10.00 | 6.00 | 57 | 3337-HA-5.5 | ● | ● | ● |
| 5.80 | 10.00 | 6.00 | 57 | 3337-HA-5.8 | ● | ● | ● |
| 6.00 | 10.00 | 6.00 | 57 | 3337-HA-6.0 | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

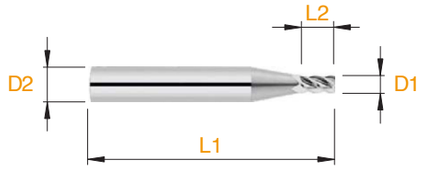



MD VHM HM | λ 45° | Sharp Corner | Z=3

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3341-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3341-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3341-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3341-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3341-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3341-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3341-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3341-6.0 | ● | ● | ● |

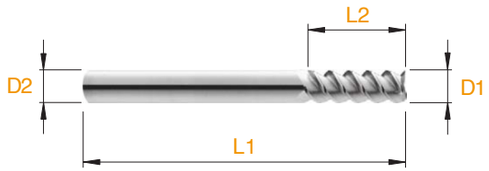







MD VHM HM | λ 45° | Sharp Corner | Z=3

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 0.50 | 1.00 | 6.00 | 40 | 3345-S-0.5 | ● | ● | ● |
| 0.60 | 1.20 | 6.00 | 40 | 3345-S-0.6 | ● | ● | ● |
| 0.70 | 1.40 | 6.00 | 40 | 3345-S-0.7 | ● | ● | ● |
| 0.80 | 1.60 | 6.00 | 40 | 3345-S-0.8 | ● | ● | ● |
| 0.90 | 1.80 | 6.00 | 40 | 3345-S-0.9 | ● | ● | ● |
| 1.00 | 2.00 | 6.00 | 40 | 3345-S-1.0 | ● | ● | ● |
| 1.10 | 2.20 | 6.00 | 40 | 3345-S-1.1 | ● | ● | ● |
| 1.20 | 2.40 | 6.00 | 40 | 3345-S-1.2 | ● | ● | ● |
| 1.30 | 2.60 | 6.00 | 40 | 3345-S-1.3 | ● | ● | ● |
| 1.40 | 2.80 | 6.00 | 40 | 3345-S-1.4 | ● | ● | ● |
| 1.50 | 3.00 | 6.00 | 40 | 3345-S-1.5 | ● | ● | ● |
| 1.60 | 3.20 | 6.00 | 40 | 3345-S-1.6 | ● | ● | ● |
| 1.70 | 3.40 | 6.00 | 40 | 3345-S-1.7 | ● | ● | ● |
| 1.80 | 3.60 | 6.00 | 40 | 3345-S-1.8 | ● | ● | ● |
| 1.90 | 3.80 | 6.00 | 40 | 3345-S-1.9 | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 40 | 3345-S-2.0 | ● | ● | ● |
| 2.10 | 4.20 | 6.00 | 40 | 3345-S-2.1 | ● | ● | ● |
| 2.20 | 4.40 | 6.00 | 40 | 3345-S-2.2 | ● | ● | ● |
| 2.30 | 4.60 | 6.00 | 40 | 3345-S-2.3 | ● | ● | ● |
| 2.40 | 4.80 | 6.00 | 40 | 3345-S-2.4 | ● | ● | ● |
| 2.50 | 5.00 | 6.00 | 40 | 3345-S-2.5 | ● | ● | ● |
| 2.60 | 5.20 | 6.00 | 40 | 3345-S-2.6 | ● | ● | ● |
| 2.70 | 5.40 | 6.00 | 40 | 3345-S-2.7 | ● | ● | ● |
| 2.80 | 5.60 | 6.00 | 40 | 3345-S-2.8 | ● | ● | ● |
| 2.90 | 5.80 | 6.00 | 40 | 3345-S-2.9 | ● | ● | ● |
| 3.00 | 6.00 | 6.00 | 40 | 3345-S-3.0 | ● | ● | ● |
| 3.50 | 7.00 | 6.00 | 40 | 3345-S-3.5 | ● | ● | ● |
| 4.00 | 8.00 | 6.00 | 40 | 3345-S-4.0 | ● | ● | ● |
| 4.50 | 9.00 | 6.00 | 40 | 3345-S-4.5 | ● | ● | ● |
| 5.00 | 10.00 | 6.00 | 40 | 3345-S-5.0 | ● | ● | ● |
| 6.00 | 12.00 | 6.00 | 40 | 3345-S-6.0 | ● | ● | ● |

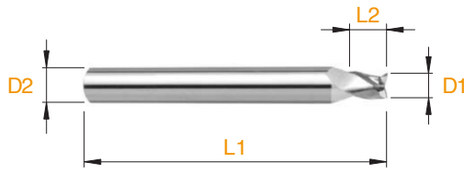



MD VHM HM | λ 60° | Sharp Corner | Z=3

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3361-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3361-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3361-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3361-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3361-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3361-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3361-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3361-6.0 | ● | ● | ● |



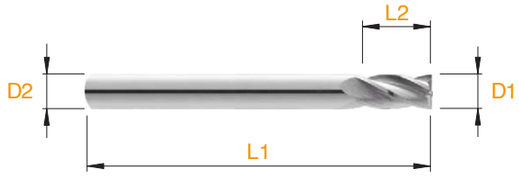





MD VHM HM | λ 35° ↓ 38° | Sharp Corner | Z=3

DHP — Dentureàpas irrégulier,héliceprogressive
UngleicheTeilung, progressiveSpirale
Uneventooth pitch, progressivehelix

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.00 | 4.00 | 6.00 | 40 | DHP3336-1.0 | ● | ● | ● |
| 1.50 | 4.00 | 6.00 | 40 | DHP3336-1.5 | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 40 | DHP3336-2.0 | ● | ● | ● |
| 2.50 | 4.00 | 6.00 | 40 | DHP3336-2.5 | ● | ● | ● |
| 3.00 | 5.00 | 6.00 | 40 | DHP3336-3.0 | ● | ● | ● |
| 3.50 | 5.00 | 6.00 | 40 | DHP3336-3.5 | ● | ● | ● |
| 4.00 | 6.00 | 6.00 | 40 | DHP3336-4.0 | ● | ● | ● |
| 5.00 | 7.00 | 6.00 | 40 | DHP3336-5.0 | ● | ● | ● |
| 6.00 | 8.00 | 6.00 | 40 | DHP3336-6.0 | ● | ● | ● |




MD
VHM
HM

λ 30°

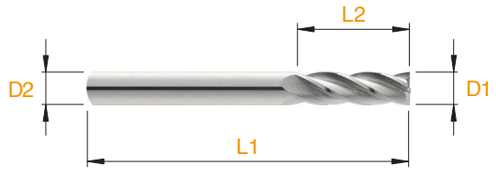
Sharp Corner

Z=4

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 3.00 | 3.00 | 3.00 | 39 | 3430-3.0 | ● | ● | ● |
| 4.00 | 4.00 | 4.00 | 50 | 3430-4.0 | ● | ● | ● |
| 5.00 | 5.00 | 5.00 | 50 | 3430-5.0 | ● | ● | ● |
| 6.00 | 6.00 | 6.00 | 50 | 3430-6.0 | ● | ● | ● |







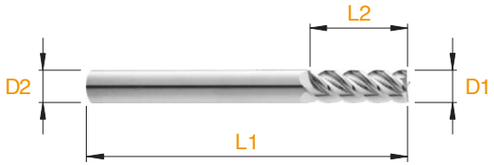

MD
VHM
HM

λ 30°

Sharp Corner

Z=4

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3431-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3431-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3431-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3431-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3431-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3431-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3431-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3431-6.0 | ● | ● | ● |

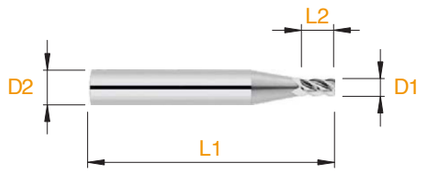



MD VHM HM | λ 45° | Sharp Corner | Z=4

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3441-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3441-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3441-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3441-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3441-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3441-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3441-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3441-6.0 | ● | ● | ● |

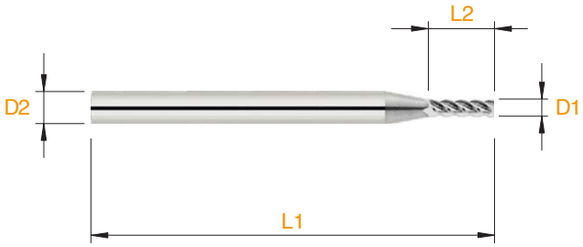







MD VHM HM | λ 45° | Sharp Corner | Z=4

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 0.50 | 1.00 | 6.00 | 40 | 3445-S-0.5 | ● | ● | ● |
| 0.60 | 1.20 | 6.00 | 40 | 3445-S-0.6 | ● | ● | ● |
| 0.70 | 1.40 | 6.00 | 40 | 3445-S-0.7 | ● | ● | ● |
| 0.80 | 1.60 | 6.00 | 40 | 3445-S-0.8 | ● | ● | ● |
| 0.90 | 1.80 | 6.00 | 40 | 3445-S-0.9 | ● | ● | ● |
| 1.00 | 2.00 | 6.00 | 40 | 3445-S-1.0 | ● | ● | ● |
| 1.10 | 2.20 | 6.00 | 40 | 3445-S-1.1 | ● | ● | ● |
| 1.20 | 2.40 | 6.00 | 40 | 3445-S-1.2 | ● | ● | ● |
| 1.30 | 2.60 | 6.00 | 40 | 3445-S-1.3 | ● | ● | ● |
| 1.40 | 2.80 | 6.00 | 40 | 3445-S-1.4 | ● | ● | ● |
| 1.50 | 3.00 | 6.00 | 40 | 3445-S-1.5 | ● | ● | ● |
| 1.60 | 3.20 | 6.00 | 40 | 3445-S-1.6 | ● | ● | ● |
| 1.70 | 3.40 | 6.00 | 40 | 3445-S-1.7 | ● | ● | ● |
| 1.80 | 3.60 | 6.00 | 40 | 3445-S-1.8 | ● | ● | ● |
| 1.90 | 3.80 | 6.00 | 40 | 3445-S-1.9 | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 40 | 3445-S-2.0 | ● | ● | ● |
| 2.10 | 4.20 | 6.00 | 40 | 3445-S-2.1 | ● | ● | ● |
| 2.20 | 4.40 | 6.00 | 40 | 3445-S-2.2 | ● | ● | ● |
| 2.30 | 4.60 | 6.00 | 40 | 3445-S-2.3 | ● | ● | ● |
| 2.40 | 4.80 | 6.00 | 40 | 3445-S-2.4 | ● | ● | ● |
| 2.50 | 5.00 | 6.00 | 40 | 3445-S-2.5 | ● | ● | ● |
| 2.60 | 5.20 | 6.00 | 40 | 3445-S-2.6 | ● | ● | ● |
| 2.70 | 5.40 | 6.00 | 40 | 3445-S-2.7 | ● | ● | ● |
| 2.80 | 5.60 | 6.00 | 40 | 3445-S-2.8 | ● | ● | ● |
| 2.90 | 5.80 | 6.00 | 40 | 3445-S-2.9 | ● | ● | ● |
| 3.00 | 6.00 | 6.00 | 40 | 3445-S-3.0 | ● | ● | ● |
| 3.50 | 7.00 | 6.00 | 40 | 3445-S-3.5 | ● | ● | ● |
| 4.00 | 8.00 | 6.00 | 40 | 3445-S-4.0 | ● | ● | ● |
| 4.50 | 9.00 | 6.00 | 40 | 3445-S-4.5 | ● | ● | ● |
| 5.00 | 10.00 | 6.00 | 40 | 3445-S-5.0 | ● | ● | ● |
| 6.00 | 12.00 | 6.00 | 40 | 3445-S-6.0 | ● | ● | ● |

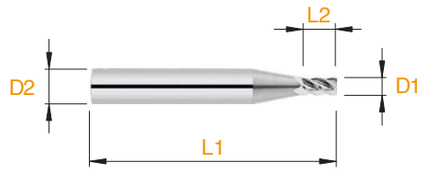



MD VHM HM | λ 50° | Sharp Corner | 1.5xD1 | Z=4

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.00 | 1.50 | 6.00 | 50 | 3450-1.0 | ● | ● | ● |
| 1.50 | 2.25 | 6.00 | 50 | 3450-1.5 | ● | ● | ● |
| 2.00 | 3.00 | 6.00 | 50 | 3450-2.0 | ● | ● | ● |
| 2.50 | 3.75 | 6.00 | 50 | 3450-2.5 | ● | ● | ● |
| 3.00 | 4.50 | 6.00 | 50 | 3450-3.0 | ● | ● | ● |
| 3.50 | 5.25 | 6.00 | 50 | 3450-3.5 | ● | ● | ● |
| 4.00 | 6.00 | 6.00 | 50 | 3450-4.0 | ● | ● | ● |
| 5.00 | 7.50 | 6.00 | 50 | 3450-5.0 | ● | ● | ● |
| 6.00 | 9.00 | 6.00 | 50 | 3450-6.0 | ● | ● | ● |



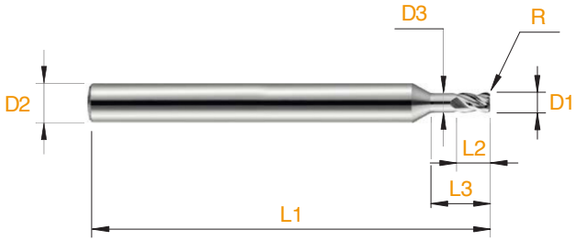





MD VHM HM | λ 35° ↓ 38° | Sharp Corner | Z=4

DHP — Dentureàpas irrégulier,héliceprogressive
UngleicheTeilung, progressiveSpirale
Uneventooth pitch, progressivehelix

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.00 | 4.00 | 6.00 | 40 | DHP3436-1.0 | ● | ● | ● |
| 1.50 | 4.00 | 6.00 | 40 | DHP3436-1.5 | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 40 | DHP3436-2.0 | ● | ● | ● |
| 2.50 | 4.00 | 6.00 | 40 | DHP3436-2.5 | ● | ● | ● |
| 3.00 | 5.00 | 6.00 | 40 | DHP3436-3.0 | ● | ● | ● |
| 3.50 | 5.00 | 6.00 | 40 | DHP3436-3.5 | ● | ● | ● |
| 4.00 | 6.00 | 6.00 | 40 | DHP3436-4.0 | ● | ● | ● |
| 5.00 | 7.00 | 6.00 | 40 | DHP3436-5.0 | ● | ● | ● |
| 6.00 | 8.00 | 6.00 | 40 | DHP3436-6.0 | ● | ● | ● |

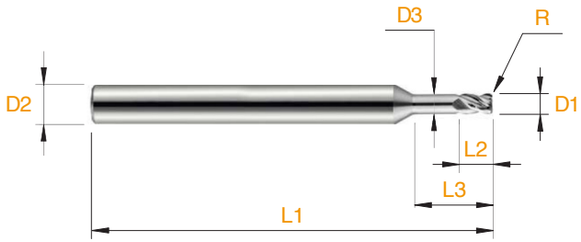



MD VHM HM | λ 30° | Radius Corner | L3 2.5xD1 | Z=4

| D1 h10 | R +/- 0.02 | L2 | L3 | D3 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 0.50 | 3.00 | 7.50 | 2.95 | 6.00 | 57 | 3439T-2.5X-3.0 | ● | ● | ● |
| 3.50 | 0.50 | 3.50 | 8.75 | 3.45 | 6.00 | 57 | 3439T-2.5X-3.5 | ● | ● | ● |
| 4.00 | 0.50 | 4.00 | 10.00 | 3.95 | 6.00 | 57 | 3439T-2.5X-4.0 | ● | ● | ● |
| 4.50 | 0.50 | 4.50 | 11.25 | 4.45 | 6.00 | 57 | 3439T-2.5X-4.5 | ● | ● | ● |
| 5.00 | 0.50 | 5.00 | 12.50 | 4.95 | 6.00 | 57 | 3439T-2.5X-5.0 | ● | ● | ● |
| 5.50 | 0.50 | 5.50 | 13.75 | 5.45 | 6.00 | 57 | 3439T-2.5X-5.5 | ● | ● | ● |
| 6.00 | 0.50 | 6.00 | 15.00 | 5.95 | 6.00 | 57 | 3439T-2.5X-6.0 | ● | ● | ● |

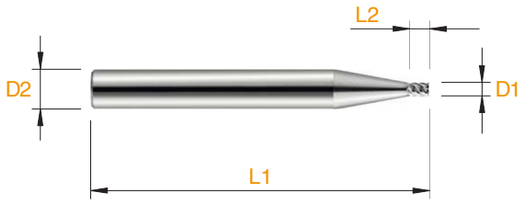







MD VHM HM | λ 30° | Radius Corner | L3 4xD1 | Z=4

| D1 h10 | R +/- 0.02 | L2 | L3 | D3 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 0.50 | 3.00 | 12.00 | 2.95 | 6.00 | 57 | 3439T-4X-3.0 | ● | ● | ● |
| 3.50 | 0.50 | 3.50 | 14.00 | 3.45 | 6.00 | 57 | 3439T-4X-3.5 | ● | ● | ● |
| 4.00 | 0.50 | 4.00 | 16.00 | 3.95 | 6.00 | 57 | 3439T-4X-4.0 | ● | ● | ● |
| 4.50 | 0.50 | 4.50 | 18.00 | 4.45 | 6.00 | 57 | 3439T-4X-4.5 | ● | ● | ● |
| 5.00 | 0.50 | 5.00 | 20.00 | 4.95 | 6.00 | 57 | 3439T-4X-5.0 | ● | ● | ● |
| 5.50 | 0.50 | 5.50 | 22.00 | 5.45 | 6.00 | 57 | 3439T-4X-5.5 | ● | ● | ● |
| 6.00 | 0.50 | 6.00 | 24.00 | 5.95 | 6.00 | 57 | 3439T-4X-6.0 | ● | ● | ● |

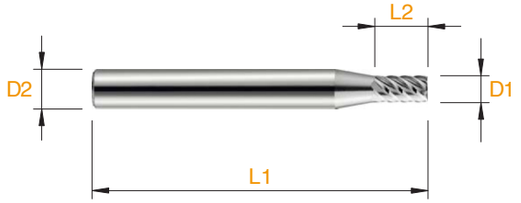



MD VHM HM | λ 45° | Sharp Corner | 1.5xD1 | Z=5

| D1 h10 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 1.00 | 1.50 | 6.00 | 50 | 3545-1.0 | ● | ● | ● |
| 2.00 | 3.00 | 6.00 | 50 | 3545-2.0 | ● | ● | ● |
| 3.00 | 4.50 | 6.00 | 50 | 3545-3.0 | ● | ● | ● |
| 4.00 | 6.00 | 6.00 | 50 | 3545-4.0 | ● | ● | ● |
| 5.00 | 7.50 | 6.00 | 50 | 3545-5.0 | ● | ● | ● |
| 6.00 | 9.00 | 6.00 | 50 | 3545-6.0 | ● | ● | ● |





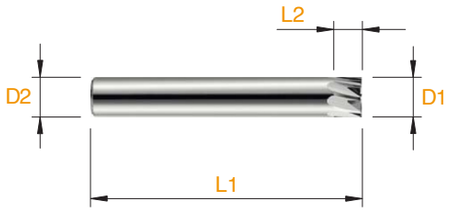



MD VHM HM | λ 45° | Sharp Corner | Z=4 Z=5 Z=6

| D1 h10 | L2 | Z | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|
| 1.00 | 2.00 | 4 | 6.00 | 50 | 35645-1.0 | ● | ● | ● |
| 1.50 | 3.00 | 5 | 6.00 | 50 | 35645-1.5 | ● | ● | ● |
| 2.00 | 4.00 | 5 | 6.00 | 50 | 35645-2.0 | ● | ● | ● |
| 2.50 | 5.00 | 5 | 6.00 | 50 | 35645-2.5 | ● | ● | ● |
| 3.00 | 6.00 | 5 | 6.00 | 50 | 35645-3.0 | ● | ● | ● |
| 3.50 | 7.00 | 5 | 6.00 | 50 | 35645-3.5 | ● | ● | ● |
| 4.00 | 8.00 | 6 | 6.00 | 50 | 35645-4.0 | ● | ● | ● |
| 4.50 | 9.00 | 6 | 6.00 | 50 | 35645-4.5 | ● | ● | ● |
| 5.00 | 10.00 | 6 | 6.00 | 50 | 35645-5.0 | ● | ● | ● |
| 6.00 | 12.00 | 6 | 6.00 | 50 | 35645-6.0 | ● | ● | ● |

3810

Fraises en bout de finition
Schlicht Schaftfräser
Finishing end mills




MD
VHM
HM

λ 10°

Sharp Corner

Z=8

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 6.00 | 4.00 | 6.00 | 50 | 3810-0.65-6.0 | ● | ● | ● |
| 6.00 | 6.00 | 6.00 | 57 | 3810-1.0-6.0 | ● | ● | ● |
| 6.00 | 9.00 | 6.00 | 57 | 3810-1.5-6.0 | ● | ● | ● |

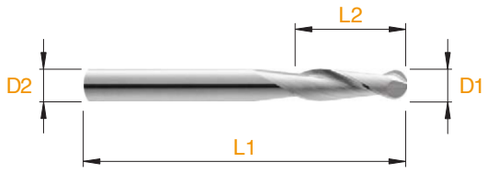


Zurück zum Kapitelanfang



3238

Fraises en bout hémisphériques
Vollradius Schaftfräser
Ball nose end mills




MD
VHM
HM

λ 30°

Z=2

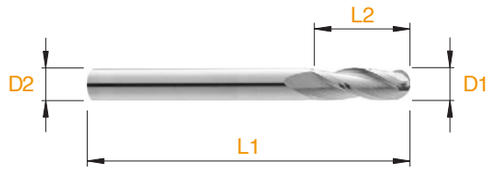
| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3238-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3238-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3238-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3238-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3238-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3238-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3238-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3238-6.0 | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Zurück zum Index

3338

Fraises en bout hémisphériques
Vollradius Schaftfräser
Ball nose end mills




MD VHM HM | λ 30° | Z=3

| D1 e9 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 32 | 3338-2.0 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 32 | 3338-2.5 | ● | ● | ● |
| 3.00 | 12.00 | 3.00 | 32 | 3338-3.0 | ● | ● | ● |
| 3.50 | 12.00 | 3.50 | 32 | 3338-3.5 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 40 | 3338-4.0 | ● | ● | ● |
| 4.50 | 14.00 | 4.50 | 50 | 3338-4.5 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 3338-5.0 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 3338-6.0 | ● | ● | ● |

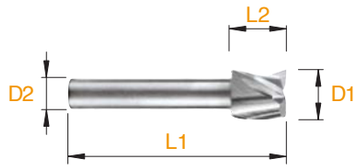


Zurück zum Kapitelanfang



3383

Fraises en bout pour usinage en bout plat
Schaftfräser für flache Frontbearbeitung
End mills for flat front machining

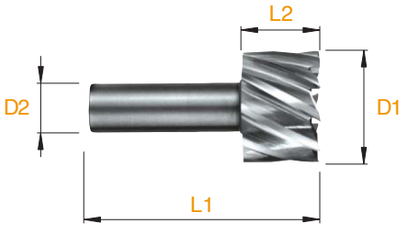



MD VHM HM | λ 30° | Sharp Corner | Z=3

| D1 h10 | L2 | D2 h6 | L1 | Art. N° | N |
|---|---|---|---|---|---|
| 8.00 | 8.00 | 6.00 | 40 | 3383-8.0 | ● |
| 10.00 | 10.00 | 6.00 | 40 | 3383-10.0 | ● |
| 12.00 | 12.00 | 6.00 | 40 | 3383-12.0 | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Zurück zum Index




MD VHM HM | λ 30° | Sharp Corner | Z=10

| D1 h10 | L2 | D2 h6 | L1 | Art. N° | N |
|---|---|---|---|---|---|
| 16.30 | 15.00 | 10.00 | 45 | 3831 | ● |
| 20.30 | 15.00 | 10.00 | 45 | 3833 | ● |








MD VHM HM | λ 0° | Z=3 | 60°

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | d | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|
| 0.50 | 3.00 | 3.00 | 39 | 0.10 | 3611-0.5 | ● | ● | ● |
| 0.60 | 3.00 | 3.00 | 39 | 0.10 | 3611-0.6 | ● | ● | ● |
| 0.70 | 3.00 | 3.00 | 39 | 0.10 | 3611-0.7 | ● | ● | ● |
| 0.80 | 3.00 | 3.00 | 39 | 0.10 | 3611-0.8 | ● | ● | ● |
| 0.90 | 3.00 | 3.00 | 39 | 0.10 | 3611-0.9 | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | 0.10 | 3611-1.0 | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | 0.10 | 3611-1.5 | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | 0.10 | 3611-2.0 | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | 0.10 | 3611-2.5 | ● | ● | ● |
| 3.00 | - | 3.00 | 39 | 0.10 | 3611-3.0 | ● | ● | ● |










MD
VHM
HM

λ 0°

Z=3

90°

| D1 +0.010/ -0.010 | L2 | D2 h4 | L1 | d | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|---|
| 0.30 | 2.00 | 3.00 | 39 | 0.05 | 3911-0.30 | ● | ● | ● |
| 0.40 | 2.00 | 3.00 | 39 | 0.05 | 3911-0.40 | ● | ● | ● |
| 0.50 | 3.00 | 3.00 | 39 | 0.10 | 3911-0.50 | ● | ● | ● |
| 0.60 | 3.00 | 3.00 | 39 | 0.10 | 3911-0.60 | ● | ● | ● |
| 0.70 | 3.00 | 3.00 | 39 | 0.10 | 3911-0.70 | ● | ● | ● |
| 0.80 | 3.00 | 3.00 | 39 | 0.10 | 3911-0.80 | ● | ● | ● |
| 0.90 | 3.00 | 3.00 | 39 | 0.10 | 3911-0.90 | ● | ● | ● |
| 1.00 | 3.00 | 3.00 | 39 | 0.10 | 3911-1.00 | ● | ● | ● |
| 1.10 | 3.00 | 3.00 | 39 | 0.10 | 3911-1.10 | ● | ● | ● |
| 1.20 | 3.00 | 3.00 | 39 | 0.10 | 3911-1.20 | ● | ● | ● |
| 1.30 | 3.00 | 3.00 | 39 | 0.10 | 3911-1.30 | ● | ● | ● |
| 1.40 | 3.00 | 3.00 | 39 | 0.10 | 3911-1.40 | ● | ● | ● |
| 1.50 | 4.50 | 3.00 | 39 | 0.10 | 3911-1.50 | ● | ● | ● |
| 2.00 | 6.00 | 3.00 | 39 | 0.10 | 3911-2.00 | ● | ● | ● |
| 2.50 | 7.50 | 3.00 | 39 | 0.10 | 3911-2.50 | ● | ● | ● |
| 3.00 | - | 3.00 | 39 | 0.10 | 3911-3.00 | ● | ● | ● |

MD
VHM
HM

λ 0°

Z=4

90°

| D2 Ø3 h4 Ø6 h5 Ø8 h6 | d | L1 | L Art. N° | L N | R Art. N° | R N | R TiAlN | R STF |
|---|---|---|---|---|---|---|---|---|
| 3.00 | 0.30 | 39 | 1901-3.0 | ● | 3901-3.0 | ● | ● | ● |
| 6.00 | 0.70 | 50 | 1901-6.0 | ● | 3901-6.0 | ● | ● | ● |
| 8.00 | 1.20 | 59 | 1901-8.0 | ● | 3901-8.0 | ● | ● | ● |

MICRO-Line

Fraises pour machine WM 701S
Werkzeuge für Maschine WM 701S
Executions for machine WM 701S

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

> 16.98

| Z | λ | D1 | D2 | Type | Corner | page |
|---|---|---|---|---|---|---|
| | | | Ø6 h4 | 701SE330-P | | > 16.99 |
| | | | Ø6 h4 | 701SE330-R | | > 16.100 |
| Z=1 | 0° | Ø0.50 -3.00 | Ø6 h4 | 701S3170R-2 | Sharp Corner | > 16.101 |
| Z=2 | 0° | Ø0.30 -3.00 | Ø6 h4 | 701S3279T-3X | U | > 16.102 |
| Z=3 | | Ø0.30 - 3.50 | Ø6 h5 | 701S3371-1 | Sharp Corner | > 16.103 |
| | | Ø0.30 - 3.00 | Ø6 h5 | 701S3371-2 | | > 16.104 |
| | | Ø0.30 - 2.50 | Ø6 h5 | 701S3371-3 | | > 16.105 |
| Z=3 | 30° | Ø1.00 -2.00 | Ø6 h4 | 701S3379T-3X | U | > 16.106 |
| Z=3 | 0° | Ø0.40 -2.00 | Ø6 h4 | 701S3911 | | > 16.107 |



Tous les outils de la gamme MICRO-Line sont réalisables pour la machine WM 701S sur demande.

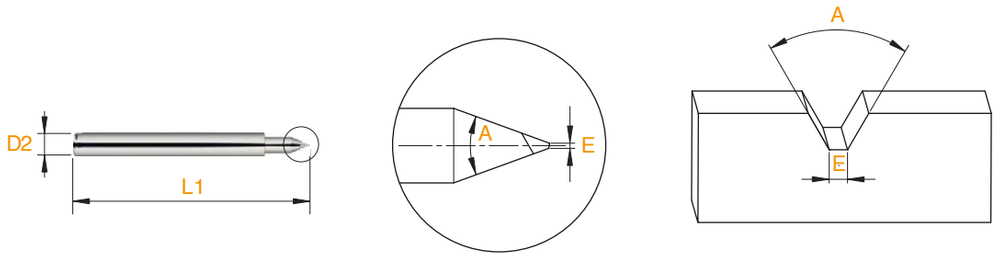
Alle Werkzeuge aus der MICRO-Line sind machbar für die Maschine WM 701S auf Anfrage.

All tools of MICRO-Line can be produced for the machine WM 701S on request.

| Matière / Werkstoff / Material | | VC (m/min) | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|
| Acier de décolletage / Automatenstahl / Free-cutting steel | P | 120 - 180 | - | ★★★ | ★★★ | - |
| Acier / Stahl <600 N/mm² / Steel | P | 100 - 150 | - | ★★★ | ★★★ | - |
| Acier / Stahl <800 N/mm² / Steel | P | 100 - 130 | - | ★★★ | ★★★ | - |
| Acier / Stahl >800 N/mm² / Steel | P | 80 - 100 | - | ★★★ | ★★★ | - |
| Acier trempé / Gehärteter Stahl -55HRC / Hardened steel | H | - | - | ★★★ | ★★★ | - |
| Acier trempé / Gehärteter Stahl +55HRC / Hardened steel | H | - | - | ★★★ | ★★★ | - |
| Inox / Rostfreistahl / Stainless steel | M | 60 - 90 | - | ★★★ | ★★★ | - |
| Aluminium | N | 250 - 400 | ★★ | ★★★ | ★★★ | ★★★ |
| Cuivre, laiton, bronze / Kupfer, Messing, Bronze / Copper, brass, bronze | N | 150 - 200 | ★★★ | ★★ | ★★ | ★★★ |
| Matière synthétique / Synthetisches Material / Synthetic material | N | 100 - 150 | ★★★ | ★★ | ★★ | ★★★ |
| Métaux précieux / Edelmetalle / Precious metals | N | 140 - 200 | ★★★ | ★★ | ★★ | ★★★ |
| Titane / Titan / Titanium | S | 40 - 70 | - | ★★★ | ★★★ | - |
| Alliage de nickel / Nickel-Legierung / Nickel alloy | S | 30 - 60 | - | ★★★ | ★★★ | - |
| Matière exotique / Exotisches material / Exotic material | O | 30 - 60 | - | ★★★ | ★★★ | ★★★ |

Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30% erhöhen
With coating, increase data by 20-30%

★ Bien / Gut / Good
★★ Très bien / Sehr gut / Very good
★★★ Excellent / Ausgezeichnet / Excellent




MD
VHM
HM

| A | E | D2 h4 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|
| 30° | 0.02-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE330-P-_(E) | ● | ● | ● | ● |
| 35° | 0.02-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE335-P-_(E) | ● | ● | ● | ● |
| 40° | 0.02-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE340-P-_(E) | ● | ● | ● | ● |
| 50° | 0.02-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE350-P-_(E) | ● | ● | ● | ● |
| 60° | 0.02-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE360-P-_(E) | ● | ● | ● | ● |

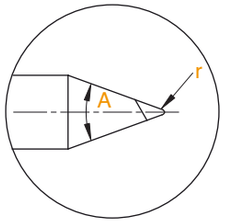
* tous les 0.01mm / alle 0.01mm / every0.01 mm

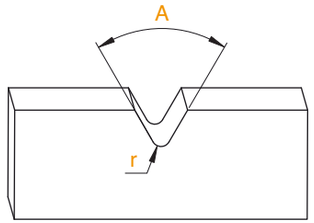
** tous les 0.05mm / alle 0.05mm / every0.05 mm

# 701SE330-R

Fraises à graver à rayon - WM 701S
Gravierfräser mit Radius - WM 701S
Engraving mills with radius - WM 701S




MD
VHM
HM

| A | r | D2 h4 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|
| 30° | 0.04-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE330-R-_(r) | ● | ● | ● | ● |
| 35° | 0.04-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE335-R-_(r) | ● | ● | ● | ● |
| 40° | 0.04-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE340-R-_(r) | ● | ● | ● | ● |
| 50° | 0.04-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE350-R-_(r) | ● | ● | ● | ● |
| 60° | 0.04-0.10* / 0.10-0.30** | 6.00 | 33 | 701SE360-R-_(r) | ● | ● | ● | ● |

* tous les 0.01mm
alle 0.01mm
every0.01 mm

** tous les 0.05mm
alle 0.05mm
every0.05 mm

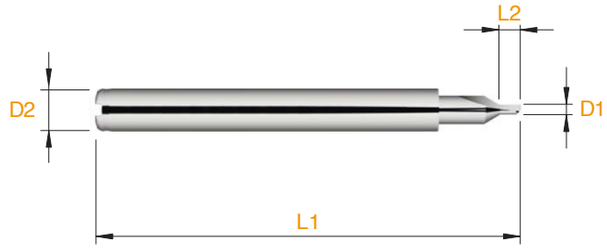


Zurück zum Kapitelanfang



# 701S3170R-2

Fraises en bout - WM 701S
Schaftfräser - WM 701S
End mills - WM 701S




MD
VHM
HM

λ 0°

Sharp
Corner

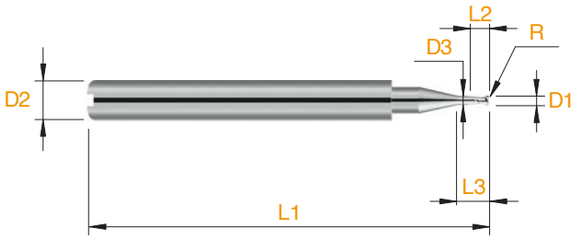
2xD1

Z=1

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|
| 0.50 | 1.00 | 6.00 | 33 | 701S3170R-2-0.50 | ● | ● | ● | ● |
| 1.00 | 2.00 | 6.00 | 33 | 701S3170R-2-1.00 | ● | ● | ● | ● |
| 1.50 | 3.00 | 6.00 | 33 | 701S3170R-2-1.50 | ● | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 33 | 701S3170R-2-2.00 | ● | ● | ● | ● |
| 2.50 | 5.00 | 6.00 | 33 | 701S3170R-2-2.50 | ● | ● | ● | ● |
| 3.00 | 6.00 | 6.00 | 33 | 701S3170R-2-3.00 | ● | ● | ● | ● |

# 701S3279T-3X

Fraises en bout toriques - WM 701S
Torische Schaftfräser - WM 701S
Toric end mills - WM 701S




MD VHM HM | Radius Corner | L3 3xD1 | Z=2

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.05 | 0.30 | 0.90 | 0.27 | 6.00 | 33 | 701S3279T-3X-0.30 | ● | ● | ● | ● |
| 0.40 | 0.05 | 0.40 | 1.20 | 0.45 | 6.00 | 33 | 701S3279T-3X-0.40 | ● | ● | ● | ● |
| 0.50 | 0.05 | 0.50 | 1.50 | 0.45 | 6.00 | 33 | 701S3279T-3X-0.50 | ● | ● | ● | ● |
| 0.60 | 0.05 | 0.60 | 1.80 | 0.55 | 6.00 | 33 | 701S3279T-3X-0.60 | ● | ● | ● | ● |
| 0.80 | 0.05 | 0.80 | 2.40 | 0.75 | 6.00 | 33 | 701S3279T-3X-0.80 | ● | ● | ● | ● |
| 1.00 | 0.10 | 1.00 | 3.00 | 0.95 | 6.00 | 33 | 701S3279T-3X-1.00 | ● | ● | ● | ● |
| 1.20 | 0.10 | 1.20 | 3.60 | 1.15 | 6.00 | 33 | 701S3279T-3X-1.20 | ● | ● | ● | ● |
| 1.50 | 0.20 | 1.50 | 4.50 | 1.45 | 6.00 | 33 | 701S3279T-3X-1.50 | ● | ● | ● | ● |
| 1.80 | 0.20 | 1.80 | 5.40 | 1.75 | 6.00 | 33 | 701S3279T-3X-1.80 | ● | ● | ● | ● |
| 2.00 | 0.20 | 2.00 | 6.00 | 1.95 | 6.00 | 33 | 701S3279T-3X-2.00 | ● | ● | ● | ● |
| 2.50 | 0.20 | 2.50 | 7.50 | 2.45 | 6.00 | 33 | 701S3279T-3X-2.50 | ● | ● | ● | ● |
| 3.00 | 0.20 | 3.00 | 9.00 | 2.95 | 6.00 | 33 | 701S3279T-3X-3.00 | ● | ● | ● | ● |

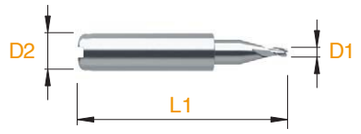


Zurück zum Kapitelanfang



# 701S3371-1

Fraises en bout - WM 701S
Schaftfräser - WM 701S
End mills - WM 701S

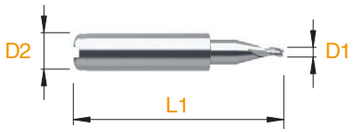



MD VHM HM | λ 36° ↓ 38° | Sharp Corner | 1xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.30 | 6.00 | 33 | 701S3371-1-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.40 | 6.00 | 33 | 701S3371-1-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 0.50 | 6.00 | 33 | 701S3371-1-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 0.60 | 6.00 | 33 | 701S3371-1-0.60 | ● | ● | ● | ● | ● |
| 0.80 | 0.80 | 6.00 | 33 | 701S3371-1-0.80 | ● | ● | ● | ● | ● |
| 1.00 | 1.00 | 6.00 | 33 | 701S3371-1-1.00 | ● | ● | ● | ● | ● |
| 1.20 | 1.20 | 6.00 | 33 | 701S3371-1-1.20 | ● | ● | ● | ● | ● |
| 1.50 | 1.50 | 6.00 | 33 | 701S3371-1-1.50 | ● | ● | ● | ● | ● |
| 1.80 | 1.80 | 6.00 | 33 | 701S3371-1-1.80 | ● | ● | ● | ● | ● |
| 2.00 | 2.00 | 6.00 | 33 | 701S3371-1-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 2.50 | 6.00 | 33 | 701S3371-1-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 3.00 | 6.00 | 33 | 701S3371-1-3.00 | ● | ● | ● | ● | ● |
| 3.20 | 3.20 | 6.00 | 33 | 701S3371-1-3.20 | ● | ● | ● | ● | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Zurück zum Index

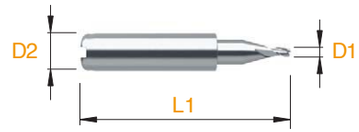



MD VHM HM | λ 36° ↓ 38° | Sharp Corner | 2xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.60 | 6.00 | 33 | 701S3371-2-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 0.80 | 6.00 | 33 | 701S3371-2-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.00 | 6.00 | 33 | 701S3371-2-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.20 | 6.00 | 33 | 701S3371-2-0.60 | ● | ● | ● | ● | ● |
| 0.80 | 1.60 | 6.00 | 33 | 701S3371-2-0.80 | ● | ● | ● | ● | ● |
| 1.00 | 2.00 | 6.00 | 33 | 701S3371-2-1.00 | ● | ● | ● | ● | ● |
| 1.20 | 2.40 | 6.00 | 33 | 701S3371-2-1.20 | ● | ● | ● | ● | ● |
| 1.50 | 3.00 | 6.00 | 33 | 701S3371-2-1.50 | ● | ● | ● | ● | ● |
| 1.80 | 3.60 | 6.00 | 33 | 701S3371-2-1.80 | ● | ● | ● | ● | ● |
| 2.00 | 4.00 | 6.00 | 33 | 701S3371-2-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 5.00 | 6.00 | 33 | 701S3371-2-2.50 | ● | ● | ● | ● | ● |
| 3.00 | 6.00 | 6.00 | 33 | 701S3371-2-3.00 | ● | ● | ● | ● | ● |

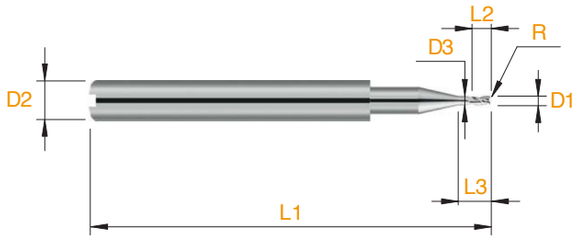







MD VHM HM | λ 36° ↓ 38° | Sharp Corner | 3xD1 | Z=3

| D1 +0.005/ -0.010 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.30 | 0.90 | 6.00 | 33 | 701S3371-3-0.30 | ● | ● | ● | ● | ● |
| 0.40 | 1.20 | 6.00 | 33 | 701S3371-3-0.40 | ● | ● | ● | ● | ● |
| 0.50 | 1.50 | 6.00 | 33 | 701S3371-3-0.50 | ● | ● | ● | ● | ● |
| 0.60 | 1.80 | 6.00 | 33 | 701S3371-3-0.60 | ● | ● | ● | ● | ● |
| 0.80 | 2.40 | 6.00 | 33 | 701S3371-3-0.80 | ● | ● | ● | ● | ● |
| 1.00 | 3.00 | 6.00 | 33 | 701S3371-3-1.00 | ● | ● | ● | ● | ● |
| 1.20 | 3.60 | 6.00 | 33 | 701S3371-3-1.20 | ● | ● | ● | ● | ● |
| 1.50 | 4.50 | 6.00 | 33 | 701S3371-3-1.50 | ● | ● | ● | ● | ● |
| 1.80 | 5.40 | 6.00 | 33 | 701S3371-3-1.80 | ● | ● | ● | ● | ● |
| 2.00 | 6.00 | 6.00 | 33 | 701S3371-3-2.00 | ● | ● | ● | ● | ● |
| 2.50 | 7.50 | 6.00 | 33 | 701S3371-3-2.50 | ● | ● | ● | ● | ● |




MD VHM HM | λ 30° | Radius Corner | L3 3xD1 | Z=3

| D1 +0.005/ -0.010 | R +/- 0.02 | L2 | L3 | D3 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | 0.10 | 2.00 | 3.00 | 0.95 | 6.00 | 33 | 701S3379T-3X-1.00 | ● | ● | ● | ● |
| 1.50 | 0.20 | 3.00 | 4.50 | 1.45 | 6.00 | 33 | 701S3379T-3X-1.50 | ● | ● | ● | ● |
| 2.00 | 0.20 | 4.00 | 6.00 | 1.95 | 6.00 | 33 | 701S3379T-3X-2.00 | ● | ● | ● | ● |






MD VHM HM | λ 0° | Z=3 | 90°

| D1 +0.010/ -0.010 | L2 | D2 h4 | L1 | d +/- 0.02 | Art. N° | N | TiAlN | STF | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 0.40 | 2.00 | 6.00 | 33 | 0.05 | 701S3911-0.40 | ● | ● | ● | ● |
| 0.50 | 2.50 | 6.00 | 33 | 0.05 | 701S3911-0.50 | ● | ● | ● | ● |
| 0.60 | 2.50 | 6.00 | 33 | 0.05 | 701S3911-0.60 | ● | ● | ● | ● |
| 1.00 | 3.00 | 6.00 | 33 | 0.05 | 701S3911-1.00 | ● | ● | ● | ● |
| 1.50 | 4.50 | 6.00 | 33 | 0.05 | 701S3911-1.50 | ● | ● | ● | ● |
| 2.00 | 4.50 | 6.00 | 33 | 0.05 | 701S3911-2.00 | ● | ● | ● | ● |

Index

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data > 16.109

| A | Plat [E] / Rayon [r]<br>Fläche [E] / Radius [r]<br>Flat [E] / Radius [r] | D2 | Type | Page |
|---|---|---|---|---|
| 20° / 30° / 35° / 40°<br>45° / 50° / 55° / 60°<br>65° / 70° / 90° / 120° | 0.05-0.30<br>0.05-0.10 / every 0.01<br>0.10-0.30 / every 0.05 | Ø3 h4<br>Ø6 h5 | E100-P | > 16.110 |
| 20° / 30° / 35° / 40°<br>45° / 50° / 55° / 60°<br>65° / 70° / 90° | 0.02-0.30<br>0.02-0.10 / every 0.01<br>0.10-0.30 / every 0.05 | Ø3 h4 | E300-P | > 16.111 |
| 20° / 30° / 35° / 40°<br>45° / 50° / 55° / 60°<br>65° / 70° / 90° | 0.04-0.30<br>0.04-0.10 / every 0.01<br>0.10-0.30 / every 0.05 | Ø3 h4 | E300-R | > 16.112 |
| 20° / 30° / 35° / 40°<br>45° / 50° / 55° / 60°<br>65° / 70° / 90° | 0.04-0.30<br>0.04-0.10 / every 0.01<br>0.10-0.30 / every 0.05 | Ø3 h4 | E900-P | > 16.113 |
| 20° / 30° / 35° / 40°<br>45° / 50° / 55° / 60°<br>65° / 70° / 90° | 0.04-0.30<br>0.04-0.10 / every 0.01<br>0.10-0.30 / every 0.05 | Ø3 h4 | E900-R | > 16.114 |



Zurück zum Kapitelanfang

MICRO-Line
Fraises à graver
Gravierfräser
Engraving mills

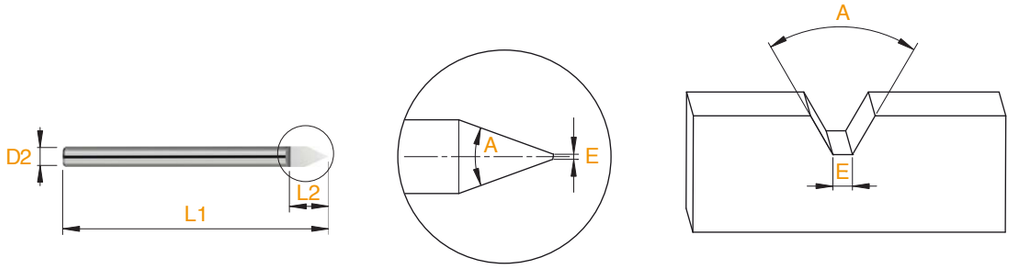
Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

| Matière<br>Werkstoff<br>Material | n<br>(tr/min) | Vf<br>(mm/min) | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel (P) | 20 - 50'000 | 100 - 180 | - | ★★★ | ★★★ | ★★ | - |
| Acier<br>Stahl < 600 N/mm²<br>Steel (P) | 20 - 50'000 | 100 - 180 | - | ★★★ | ★★★ | ★★ | - |
| Acier<br>Stahl < 800 N/mm²<br>Steel (P) | 20 - 50'000 | 100 - 180 | - | ★★★ | ★★★ | ★★ | - |
| Acier<br>Stahl > 800 N/mm²<br>Steel (P) | 20 - 50'000 | 100 - 150 | - | ★★★ | ★★★ | ★★ | - |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel (H) | 20 - 50'000 | - | - | ★★★ | ★★★ | ★ | - |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel (H) | 20 - 50'00 | - | - | ★★★ | ★★★ | ★ | - |
| Inox<br>Rostfreistahl<br>Stainless steel (M) | 20 - 50'000 | 100 - 170 | - | ★★★ | ★★★ | ★★ | - |
| Aluminium (N) | 20 - 50'000 | 100 - 250 | ★★★ | ★★ | ★★ | ★ | ★★★ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze (N) | 20 - 50'000 | 70 - 150 | ★★★ | ★★ | ★★ | ★★ | ★★★ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material (N) | 20 - 50'000 | 100 - 200 | ★★★ | ★★ | ★★ | ★★ | ★★★ |
| Métaux précieux<br>Edelmetalle<br>Precious metals (N) | 20 - 50'000 | 100 - 200 | ★★★ | ★★ | ★★ | ★★ | ★★★ |
| Titane<br>Titan<br>Titanium (S) | 20 - 50'000 | 70 - 150 | - | ★★★ | ★★★ | ★★ | - |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy (S) | 20 - 50'000 | 80 - 180 | - | ★★★ | ★★★ | ★★ | - |
| Matière exotique<br>Exotisches material<br>Exotic material (O) | 20 - 50'000 | 80 - 180 | ★ | ★★★ | ★★★ | ★★ | ★★★ |

Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30% erhöhen
With coating, increase data by 20-30%

★ Bien / Gut / Good
★★ Très bien / Sehr gut / Verygood
★★★ Excellent / Ausgezeichnet / Excellent

Zurück zum Index




MD
VHM
HM

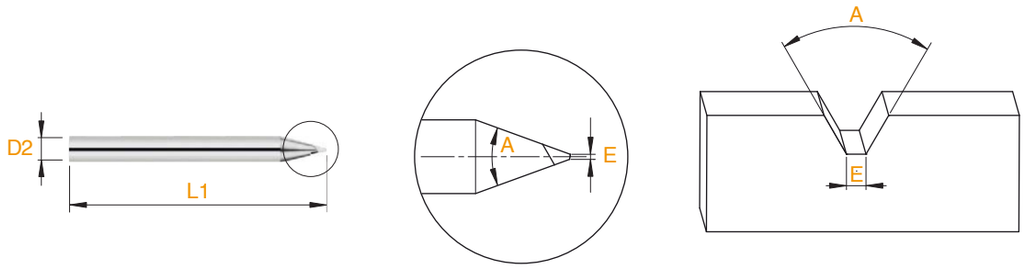
| A | E | L2 | D2 h4 Ø3.0 h5 Ø6.0 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|
| 20° | 0.05-0.10* / 0.10-0.30** | 5.20 | 3.00 | 33 | E120-P-_(E) | ● | ● | ● | ● | ● |
| 30° | 0.05-0.10* / 0.10-0.30** | 5.20 | 3.00 | 33 | E130-P-_(E) | ● | ● | ● | ● | ● |
| 35° | 0.05-0.10* / 0.10-0.30** | 5.20 | 3.00 | 33 | E135P-_(E) | ● | ● | ● | ● | ● |
| 40° | 0.05-0.10* / 0.10-0.30** | 6.00 | 3.00 | 33 | E140-P-_(E) | ● | ● | ● | ● | ● |
| 45° | 0.05-0.10* / 0.10-0.30** | 6.00 | 3.00 | 33 | E145-P-_(E) | ● | ● | ● | ● | ● |
| 50° | 0.05-0.10* / 0.10-0.30** | 6.00 | 3.00 | 33 | E150-P-_(E) | ● | ● | ● | ● | ● |
| 55° | 0.05-0.10* / 0.10-0.30** | 6.00 | 3.00 | 33 | E155-P-_(E) | ● | ● | ● | ● | ● |
| 60° | 0.05-0.10* / 0.10-0.30** | 8.00 | 3.00 | 33 | E160-P-_(E) | ● | ● | ● | ● | ● |
| 65° | 0.05-0.10* / 0.10-0.30** | 8.00 | 3.00 | 33 | E165-P-_(E) | ● | ● | ● | ● | ● |
| 70° | 0.05-0.10* / 0.10-0.30** | 8.00 | 3.00 | 33 | E170-P-_(E) | ● | ● | ● | ● | ● |
| 90° | 0.05-0.10* / 0.10-0.30** | 8.00 | 3.00 | 33 | E190-P-_(E) | ● | ● | ● | ● | ● |
| 120° | 0.05-0.10* / 0.10-0.30** | 8.00 | 3.00 | 33 | E1120-P-_(E) | ● | ● | ● | ● | ● |
| 30° | 0.05-0.10* / 0.10-0.30** | 12.00 | 6.00 | 40 | E130-6-P-_(E) | ● | ● | ● | ● | ● |
| 40° | 0.05-0.10* / 0.10-0.30** | 12.00 | 6.00 | 40 | E140-6-P-_(E) | ● | ● | ● | ● | ● |

* tous les 0.01mm
alle 0.01mm
every0.01 mm

** tous les 0.05mm
alle 0.05mm
every0.05 mm








MD
VHM
HM

| A | E | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 20° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E320-P-_(E) | ● | ● | ● | ● | ● |
| 30° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E330-P-_(E) | ● | ● | ● | ● | ● |
| 35° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E335-P-_(E) | ● | ● | ● | ● | ● |
| 40° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E340-P-_(E) | ● | ● | ● | ● | ● |
| 45° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E345-P-_(E) | ● | ● | ● | ● | ● |
| 50° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E350-P-_(E) | ● | ● | ● | ● | ● |
| 55° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E355-P-_(E) | ● | ● | ● | ● | ● |
| 60° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E360-P-_(E) | ● | ● | ● | ● | ● |
| 65° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E365-P-_(E) | ● | ● | ● | ● | ● |
| 70° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E370-P-_(E) | ● | ● | ● | ● | ● |
| 90° | 0.02-0.10* / 0.10-0.30** | 3.00 | 33 | E390-P-_(E) | ● | ● | ● | ● | ● |

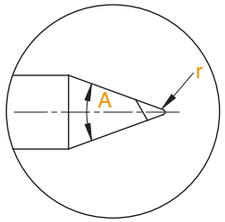
* tous les 0.01mm
alle 0.01mm
every0.01 mm

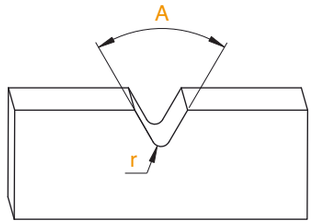
** tous les 0.05mm
alle 0.05mm
every0.05 mm

# E300-R

Fraises à graver à rayon
Gravierfräser mit Radius
Engraving mills with radius




MD
VHM
HM

| A | r | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|
| 20° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E320-R-_(r) | ● | ● | ● | ● | ● |
| 30° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E330-R-_(r) | ● | ● | ● | ● | ● |
| 35° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E335-R-_(r) | ● | ● | ● | ● | ● |
| 40° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E340-R-_(r) | ● | ● | ● | ● | ● |
| 45° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E345-R-_(r) | ● | ● | ● | ● | ● |
| 50° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E350-R-_(r) | ● | ● | ● | ● | ● |
| 55° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E355-R-_(r) | ● | ● | ● | ● | ● |
| 60° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E360-R-_(r) | ● | ● | ● | ● | ● |
| 65° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E365-R-_(r) | ● | ● | ● | ● | ● |
| 70° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E370-R-_(r) | ● | ● | ● | ● | ● |
| 90° | 0.04-0.10* / 0.10-0.30** | 3.00 | 33 | E390-R-_(r) | ● | ● | ● | ● | ● |

* tous les 0.01mm
alle 0.01mm
every0.01 mm

** tous les 0.05mm
alle 0.05mm
every0.05 mm



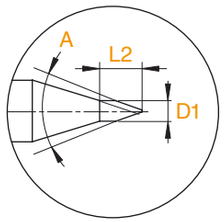
Zurück zum Kapitelanfang

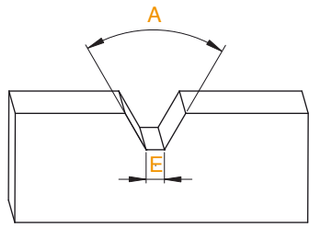


# E900-P

Fraises à graver renforcées
Verstärkte Gravierfräser
Reinforced engraving mills




MD
VHM
HM

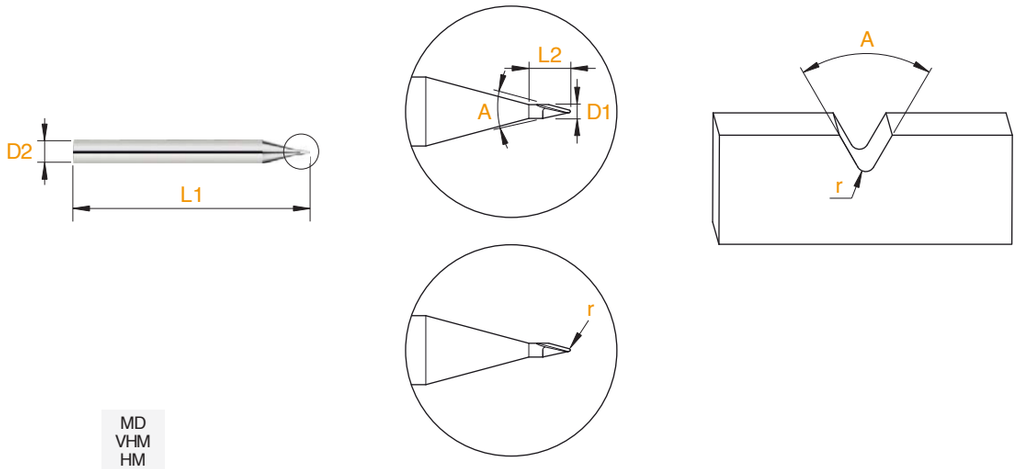
| A | E | D1 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20° | 0.04-0.10* / 0.10-0.30** | 0.60 | 1.80 | 3.00 | 33 | E920-P-_(E) | ● | ● | ● | ● | ● |
| 30° | 0.04-0.10* / 0.10-0.30** | 0.60 | 1.80 | 3.00 | 33 | E930-P-_(E) | ● | ● | ● | ● | ● |
| 35° | 0.04-0.10* / 0.10-0.30** | 0.60 | 1.80 | 3.00 | 33 | E935-P-_(E) | ● | ● | ● | ● | ● |
| 40° | 0.04-0.10* / 0.10-0.30** | 0.60 | 1.80 | 3.00 | 33 | E940-P-_(E) | ● | ● | ● | ● | ● |
| 45° | 0.04-0.10* / 0.10-0.30** | 1.00 | 1.80 | 3.00 | 33 | E945-P-_(E) | ● | ● | ● | ● | ● |
| 50° | 0.04-0.10* / 0.10-0.30** | 1.00 | 2.00 | 3.00 | 33 | E950-P-_(E) | ● | ● | ● | ● | ● |
| 55° | 0.04-0.10* / 0.10-0.30** | 1.00 | 2.00 | 3.00 | 33 | E955-P-_(E) | ● | ● | ● | ● | ● |
| 60° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E960-P-_(E) | ● | ● | ● | ● | ● |
| 65° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E965-P-_(E) | ● | ● | ● | ● | ● |
| 70° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E970-P-_(E) | ● | ● | ● | ● | ● |
| 90° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E990-P-_(E) | ● | ● | ● | ● | ● |

* tous les 0.01mm
alle 0.01mm
every0.01 mm

** tous les 0.05mm
alle 0.05mm
every0.05 mm

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Zurück zum Index




MD
VHM
HM

| A | r | D1 | L2 | D2 h4 | L1 | Art. N° | N | TiAlN | STF | TiCN | DLC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20° | 0.04-0.10* / 0.10-0.20** | 0.60 | 1.80 | 3.00 | 33 | E920-R-_(E) | ● | ● | ● | ● | ● |
| 30° | 0.04-0.10* / 0.10-0.20** | 0.60 | 1.80 | 3.00 | 33 | E930-R-_(E) | ● | ● | ● | ● | ● |
| 35° | 0.04-0.10* / 0.10-0.20** | 0.60 | 1.80 | 3.00 | 33 | E935-R-_(E) | ● | ● | ● | ● | ● |
| 40° | 0.04-0.10* / 0.10-0.20** | 0.60 | 1.80 | 3.00 | 33 | E940-R-_(E) | ● | ● | ● | ● | ● |
| 45° | 0.04-0.10* / 0.10-0.30** | 1.00 | 1.80 | 3.00 | 33 | E945-R-_(E) | ● | ● | ● | ● | ● |
| 50° | 0.04-0.10* / 0.10-0.30** | 1.00 | 2.00 | 3.00 | 33 | E950-R-_(E) | ● | ● | ● | ● | ● |
| 55° | 0.04-0.10* / 0.10-0.30** | 1.00 | 2.00 | 3.00 | 33 | E955-R-_(E) | ● | ● | ● | ● | ● |
| 60° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E960-R-_(E) | ● | ● | ● | ● | ● |
| 65° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E965-R-_(E) | ● | ● | ● | ● | ● |
| 70° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E970-R-_(E) | ● | ● | ● | ● | ● |
| 90° | 0.04-0.10* / 0.10-0.30** | 1.20 | 2.00 | 3.00 | 33 | E990-R-_(E) | ● | ● | ● | ● | ● |

* tous les 0.01mm
alle 0.01mm
every0.01 mm

** tous les 0.05mm
alle 0.05mm
every0.05 mm

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data > 16.116

Micro-forets et forets à centrer
Mikrobohrer und Zentrierbohrer
Micro drills and centering drills

| Point angle | λ | L2 | D1 | D2 | Type | Page |
|---|---|---|---|---|---|---|
| 60° | 25° | Div. | Ø2.00 - 6.00 | D1 = D2 | 2680-60 | > 16.118 |
| 90° | 25° | Div. | Ø0.50 - 20.00 | Ø2.0 - 20.0 h5 | 2680-90 | > 16.119 |
| 90° | 25° | Div. | Ø2.00 - 16.00 | D1 = D2 | 1680-90 | > 16.119 |
| 120° | 25° | Div. | Ø0.50 - 20.00 | Ø2.0 - 20.0 h5 | 2680-120 | > 16.120 |
| 120° | 25° | Div. | Ø2.00 - 12.00 | D1 = D2 | 1680-120 | > 16.120 |

Micro-forets de préperçage
Mikro Pilotbohrer
Micro pilot drill

| Z | Point angle | λ | L2 | D1 | D2 | Type | Page |
|---|---|---|---|---|---|---|---|
| Z2 | 90° | 25° - 32° | Div. | Ø0.50 - 3.00 | Ø2 h5<br>Ø3 h4 | 2690 | > 16.121 |
| Z2 | 130° | 30° | ~ 2 x D1 | Ø0.10 - 2.00 | Ø3 h6 | 2020 | > 16.126 |

Micro-forets avec affûtage à facettes
Mikrobohrer mit Facettenschliff
Micro drills with faceted drill point

| Z | Point angle | λ | L2 | D1 | D2 | Type | Page |
|---|---|---|---|---|---|---|---|
| Z2 | 118° | 25° | ~ 5-10 x D1 | Ø0.50 - 6.00 | D1 = D2 | 1010 | > 16.122 |
| Z2 | 118° | 25°/35° | ~ 5-10 x D1 | Ø0.50 - 6.00 | D1 = D2 | 2010 | > 16.123 |
| Z2 | 120° | 30° | ~ 2 x D1 | Ø0.80 - 2.00 | Ø2 h6 | 2011 | > 16.124 |
| Z2 | 120° | 24° | ~ 3 x D1 | Ø0.50 - 2.40 | Ø1.5- 3.0 h6 | 2012 | > 16.124 |
| Z2 | 120° | 35° | ~ 8 x D1 | Ø0.40 - 1.90 | Ø1.0- 2.0 h6 | 2013 | > 16.125 |
| Z2 | 120° | 30° | ~ 12 x D1 | Ø0.50 - 1.95 | Ø1.5- 2.0 h6 | 2014 | > 16.125 |
| Z2 | 130° | 35° | 6 x D1 | Ø0.10 - 3.00 | Ø3 h6 | 2023 | > 16.128 |
| Z2 | 130° | 35° | 12 x D1 | Ø0.20 - 2.00 | Ø3 h6 | 2026 | > 16.131 |
| Z3 | 140° | 35° | 5 x D1 | Ø0.20 - 2.99 | Ø3 h6 | 2030 | > 16.133 |

| Matière<br>Werkstoff<br>Material | | VC<br>(m/min) | f<br>(mm) | N | TiAlN | STF |
|---|---|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 60 | D1/55 | ★★ | ★★★ | ★★★ |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 55 | D1/55 | ★★ | ★★★ | ★★★ |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 55 | D1/55 | ★★ | ★★★ | ★★★ |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 55 | D1/55 | ★★ | ★★★ | ★★★ |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel | H | 10 | D1/100 | - | ★★★ | ★★★ |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel | H | - | - | - | - | - |
| Inox<br>Rostfreistahl<br>Stainless steel | M | 30 | D1/85 | ★★ | ★★★ | ★★★ |
| Aluminium | N | 100 - 180 | D1/50 | ★★★ | ★★ | ★★ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 60 - 90 | D1/60 | ★★★ | ★★ | ★★ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material | N | 350 - 700 | D1/60 | ★★★ | ★★ | ★★ |
| Métaux précieux<br>Edelmetalle<br>Precious metals | N | 50 - 80 | D1/100 | ★★★ | ★★ | ★★ |
| Titane<br>Titan<br>Titanium | S | 30 | D1/115 | ★★ | ★★★ | ★★★ |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy | S | 15 - 20 | D1/120 | ★★ | ★★★ | ★★★ |
| Matière exotique<br>Exotisches material<br>Exotic material | O | 10 | D1/100 | ★★ | ★★★ | ★★★ |

Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30%erhöhen
With coating, increase data by20-30%

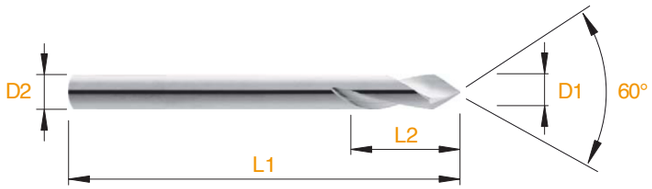
★ Bien / Gut / Good
★★ Très bien / Sehr gut / Verygood
★★★ Excellent / Ausgezeichnet / Excellent





| Matière<br>Werkstoff<br>Material | | VC<br>(m/min) | f<br>(mm) | Débourrage<br>Entspannvorgang<br>Pecking |
|---|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel | P | 60 - 90 | D1/70 | 1.5xØ |
| Acier<br>Stahl<br>Steel <600 N/mm² | P | 50 - 80 | D1/70 | 1.5xØ |
| Acier<br>Stahl<br>Steel <800 N/mm² | P | 50 - 80 | D1/70 | 1.5xØ |
| Acier<br>Stahl<br>Steel >800 N/mm² | P | 50 - 80 | D1/70 | 1.5xØ |
| Acier trempé<br>Gehärteter Stahl -55HRC<br>Hardened steel | H | - | - | - |
| Acier trempé<br>Gehärteter Stahl +55HRC<br>Hardened steel | H | - | - | - |
| Inox<br>Rostfreistahl<br>Stainless steel | M | 20 - 30 | D1/70 | 3xØ |
| Aluminium | N | 100 - 180 | D1/40 | 2xØ |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze | N | 50 - 85 | D1/120 | 1xØ |
| Matière synthétique<br>Synthetisches Material<br>Synthetic material | N | 350 - 750 | D1/40 | 2xØ |
| Métaux précieux<br>Edelmetalle<br>Precious metals | N | 60 - 90 | D1/100 | 0.85xØ |
| Titane<br>Titan<br>Titanium | S | 20 - 40 | D1/120 | 1.3xØ |
| Alliage de nickel<br>Nickel-Legierung<br>Nickel alloy | S | 20 | D1/120 | 1xØ |
| Matière exotique<br>Exotisches material<br>Exotic material | O | 5 - 10 | D1/100 | 1xØ |

Avec revêtement, augmenter les valeurs de 20-30%
Mit Beschichtung, Datenum 20-30%erhöhen
With coating, increase data by20-30%

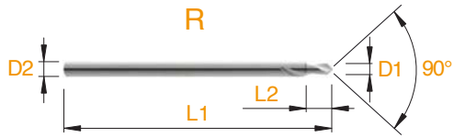



MD
VHM
HM
λ 25°
60°

| D1 h6 | L2 | D2 h5 | L1 | Art. N° | N | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 39 | 2680-2.00-60 | ● | ● | ● |
| 3.00 | 10.00 | 3.00 | 39 | 2680-3.00-60 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 50 | 2680-4.00-60 | ● | ● | ● |
| 5.00 | 14.00 | 5.00 | 50 | 2680-5.00-60 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 50 | 2680-6.00-60 | ● | ● | ● |





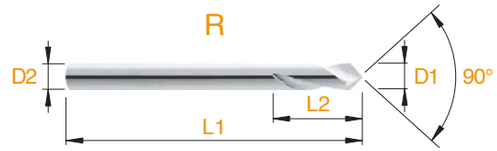



MD
VHM
HM
λ 25°
90°

R

| D1 h6 | L2 | D2 h5 | L1 | Art. N° | N |
|---|---|---|---|---|---|
| 0.50 | 1.50 | 2.00 | 39 | 2680-0.50-90 | ● |
| 0.60 | 1.50 | 2.00 | 39 | 2680-0.60-90 | ● |
| 0.70 | 1.50 | 2.00 | 39 | 2680-0.70-90 | ● |
| 0.80 | 1.50 | 2.00 | 39 | 2680-0.80-90 | ● |
| 0.90 | 1.50 | 2.00 | 39 | 2680-0.90-90 | ● |
| 1.00 | 3.00 | 2.00 | 39 | 2680-1.00-90 | ● |
| 1.10 | 3.00 | 2.00 | 39 | 2680-1.10-90 | ● |
| 1.20 | 3.00 | 2.00 | 39 | 2680-1.20-90 | ● |
| 1.30 | 3.00 | 2.00 | 39 | 2680-1.30-90 | ● |
| 1.40 | 3.00 | 2.00 | 39 | 2680-1.40-90 | ● |
| 1.50 | 4.00 | 2.00 | 39 | 2680-1.50-90 | ● |
| 1.60 | 4.00 | 2.00 | 39 | 2680-1.60-90 | ● |
| 1.70 | 4.00 | 2.00 | 39 | 2680-1.70-90 | ● |
| 1.80 | 4.00 | 2.00 | 39 | 2680-1.80-90 | ● |
| 1.90 | 4.00 | 2.00 | 39 | 2680-1.90-90 | ● |




MD
VHM
HM
λ 25°
90°

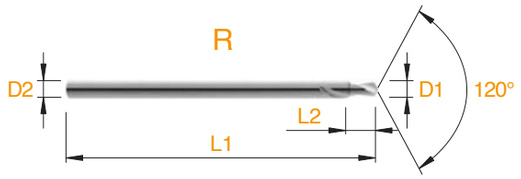
L

R

HSS

R

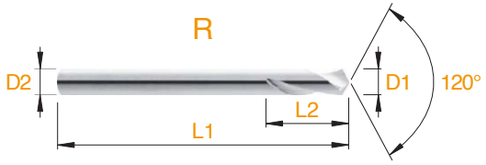
| D1 h6 | L2 | D2 h5 | L1 | Art. N° | N | Art. N° | N | TiAlN | STF | Art. N° | N |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 39 | 1680-2.00-90 | ● | 2680-2.00-90 | ● | ● | ● | - | |
| 2.50 | 8.00 | 2.50 | 39 | 1680-2.50-90 | ● | 2680-2.50-90 | ● | ● | ● | - | |
| 3.00 | 10.00 | 3.00 | 39 | 1680-3.00-90 | ● | 2680-3.00-90 | ● | ● | ● | 2680-3.00-90-HSS | ● |
| 4.00 | 12.00 | 4.00 | 50 | 1680-4.00-90 | ● | 2680-4.00-90 | ● | ● | ● | 2680-4.00-90-HSS | ● |
| 5.00 | 15.00 | 5.00 | 50 | 1680-5.00-90 | ● | 2680-5.00-90 | ● | ● | ● | 2680-5.00-90-HSS | ● |
| 6.00 | 16.00 | 6.00 | 57 | 1680-6.00-90 | ● | 2680-6.00-90 | ● | ● | ● | 2680-6.00-90-HSS | ● |
| 8.00 | 20.00 | 8.00 | 63 | 1680-8.00-90 | ● | 2680-8.00-90 | ● | | | 2680-8.00-90-HSS | ● |
| 10.00 | 22.00 | 10.00 | 72 | 1680-10.00-90 | ● | 2680-10.00-90 | ● | | | 2680-10.00-90-HSS | ● |
| 12.00 | 24.00 | 12.00 | 73 | 1680-12.00-90 | ● | 2680-12.00-90 | ● | | | 2680-12.00-90-HSS | ● |
| 16.00 | 26.00 | 16.00 | 82 | 1680-16.00-90 | ● | 2680-16.00-90 | ● | | | - | |
| 20.00 | 30.00 | 20.00 | 92 | - | | 2680-20.00-90 | ● | | | - | |




MD VHM HM | λ 25° | 120°

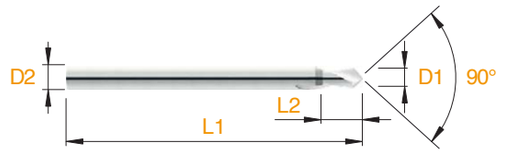
| D1 h6 | L2 | D2 h5 | L1 | R Art. N° | R Z |
|---|---|---|---|---|---|
| 0.50 | 1.50 | 2.00 | 39 | 2680-0.50-120 | ● |
| 0.60 | 1.50 | 2.00 | 39 | 2680-0.60-120 | ● |
| 0.70 | 1.50 | 2.00 | 39 | 2680-0.70-120 | ● |
| 0.80 | 1.50 | 2.00 | 39 | 2680-0.80-120 | ● |
| 0.90 | 1.50 | 2.00 | 39 | 2680-0.90-120 | ● |
| 1.00 | 3.00 | 2.00 | 39 | 2680-1.00-120 | ● |
| 1.10 | 3.00 | 2.00 | 39 | 2680-1.10-120 | ● |
| 1.20 | 3.00 | 2.00 | 39 | 2680-1.20-120 | ● |
| 1.30 | 3.00 | 2.00 | 39 | 2680-1.30-120 | ● |
| 1.40 | 3.00 | 2.00 | 39 | 2680-1.40-120 | ● |
| 1.50 | 4.00 | 2.00 | 39 | 2680-1.50-120 | ● |
| 1.60 | 4.00 | 2.00 | 39 | 2680-1.60-120 | ● |
| 1.70 | 4.00 | 2.00 | 39 | 2680-1.70-120 | ● |
| 1.80 | 4.00 | 2.00 | 39 | 2680-1.80-120 | ● |
| 1.90 | 4.00 | 2.00 | 39 | 2680-1.90-120 | ● |



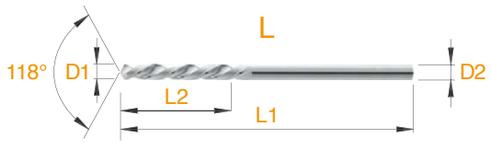

MD VHM HM | λ 25° | 120°

| D1 h6 | L2 | D2 h5 | L1 | L Art. N° | L Z | R Art. N° | R Z | R TiAlN | R STF |
|---|---|---|---|---|---|---|---|---|---|
| 2.00 | 8.00 | 2.00 | 39 | 1680-2.00-120 | ● | 2680-2.00-120 | ● | ● | ● |
| 2.50 | 8.00 | 2.50 | 39 | 1680-2.50-120 | ● | 2680-2.50-120 | ● | ● | ● |
| 3.00 | 10.00 | 3.00 | 39 | 1680-3.00-120 | ● | 2680-3.00-120 | ● | ● | ● |
| 4.00 | 12.00 | 4.00 | 50 | 1680-4.00-120 | ● | 2680-4.00-120 | ● | ● | ● |
| 5.00 | 15.00 | 5.00 | 50 | 1680-5.00-120 | ● | 2680-5.00-120 | ● | ● | ● |
| 6.00 | 16.00 | 6.00 | 57 | 1680-6.00-120 | ● | 2680-6.00-120 | ● | ● | ● |
| 8.00 | 20.00 | 8.00 | 63 | 1680-8.00-120 | ● | 2680-8.00-120 | ● | | |
| 10.00 | 22.00 | 10.00 | 72 | 1680-10.00-120 | ● | 2680-10.00-120 | ● | | |
| 12.00 | 24.00 | 12.00 | 73 | 1680-12.00-120 | ● | 2680-12.00-120 | ● | | |
| 16.00 | 26.00 | 16.00 | 82 | - | | 2680-16.00-120 | ● | | |
| 20.00 | 30.00 | 20.00 | 92 | - | | 2680-20.00-120 | ● | | |




MD VHM HM | λ 32° * λ 25° | 90°

| D1 h5 | L2 | D2 h5 | L1 | Art. N° | Z | TiAlN | STF |
|---|---|---|---|---|---|---|---|
| 0.50* | 2.50 | 2.00 | 39 | 2690-0.50 | ● | | |
| 0.60* | 2.50 | 2.00 | 39 | 2690-0.60 | ● | | |
| 0.70* | 2.50 | 2.00 | 39 | 2690-0.70 | ● | | |
| 0.80* | 2.50 | 2.00 | 39 | 2690-0.80 | ● | | |
| 0.90* | 2.50 | 2.00 | 39 | 2690-0.90 | ● | | |
| 1.00 | 3.00 | 2.00 | 39 | 2690-1.00 | ● | | |
| 1.10 | 3.00 | 2.00 | 39 | 2690-1.10 | ● | | |
| 1.20 | 3.00 | 2.00 | 39 | 2690-1.20 | ● | | |
| 1.30 | 3.00 | 2.00 | 39 | 2690-1.30 | ● | | |
| 1.40 | 3.00 | 2.00 | 39 | 2690-1.40 | ● | | |
| 1.50 | 3.50 | 2.00 | 39 | 2690-1.50 | ● | | |
| 1.60 | 3.50 | 2.00 | 39 | 2690-1.60 | ● | | |
| 1.70 | 3.50 | 2.00 | 39 | 2690-1.70 | ● | | |
| 1.80 | 3.50 | 2.00 | 39 | 2690-1.80 | ● | | |
| 1.90 | 3.50 | 2.00 | 39 | 2690-1.90 | ● | | |
| 2.00 | - | 2.00 | 39 | 2690-2.00 | ● | ● | ● |
| 2.10 | 4.00 | 3.00 | 39 | 2690-2.10 | ● | ● | ● |
| 2.20 | 4.00 | 3.00 | 39 | 2690-2.20 | ● | ● | ● |
| 2.30 | 4.00 | 3.00 | 39 | 2690-2.30 | ● | ● | ● |
| 2.40 | 4.00 | 3.00 | 39 | 2690-2.40 | ● | ● | ● |
| 2.50 | 4.00 | 3.00 | 39 | 2690-2.50 | ● | ● | ● |
| 2.60 | 4.00 | 3.00 | 39 | 2690-2.60 | ● | ● | ● |
| 2.70 | 4.00 | 3.00 | 39 | 2690-2.70 | ● | ● | ● |
| 2.80 | 4.00 | 3.00 | 39 | 2690-2.80 | ● | ● | ● |
| 2.90 | 4.00 | 3.00 | 39 | 2690-2.90 | ● | ● | ● |
| 3.00 | - | 3.00 | 50 | 2690-3.00 | ● | ● | ● |




MD
VHM
HM

λ 25°

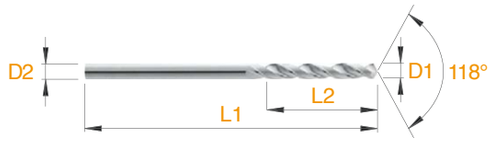
Z=2

118°

| D1 h6 D2 h6 | L1 | L2 | Art. N° | z | D1 h6 D2 h6 | L1 | L2 | Art. N° | z |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | L | | | | L |
| 0.50 | 30 | 5.00 | 1010-0.50 | ● | 2.55 | 45 | 18.00 | 1010-2.55 | ● |
| 0.55 | 30 | 5.00 | 1010-0.55 | ● | 2.60 | 45 | 18.00 | 1010-2.60 | ● |
| 0.60 | 30 | 5.00 | 1010-0.60 | ● | 2.65 | 45 | 18.00 | 1010-2.65 | ● |
| 0.65 | 30 | 6.00 | 1010-0.65 | ● | 2.70 | 45 | 18.00 | 1010-2.70 | ● |
| 0.70 | 30 | 6.00 | 1010-0.70 | ● | 2.75 | 45 | 18.00 | 1010-2.75 | ● |
| 0.75 | 30 | 8.00 | 1010-0.75 | ● | 2.80 | 45 | 18.00 | 1010-2.80 | ● |
| 0.80 | 30 | 8.00 | 1010-0.80 | ● | 2.85 | 45 | 18.00 | 1010-2.85 | ● |
| 0.85 | 30 | 9.00 | 1010-0.85 | ● | 2.90 | 45 | 18.00 | 1010-2.90 | ● |
| 0.90 | 30 | 9.00 | 1010-0.90 | ● | 2.95 | 45 | 18.00 | 1010-2.95 | ● |
| 0.95 | 30 | 10.00 | 1010-0.95 | ● | 3.00 | 45 | 18.00 | 1010-3.00 | ● |
| 1.00 | 30 | 10.00 | 1010-1.00 | ● | 3.10 | 50 | 20.00 | 1010-3.10 | ● |
| 1.05 | 30 | 10.00 | 1010-1.05 | ● | 3.20 | 50 | 20.00 | 1010-3.20 | ● |
| 1.10 | 30 | 10.00 | 1010-1.10 | ● | 3.30 | 50 | 20.00 | 1010-3.30 | ● |
| 1.15 | 30 | 12.00 | 1010-1.15 | ● | 3.40 | 50 | 20.00 | 1010-3.40 | ● |
| 1.20 | 30 | 12.00 | 1010-1.20 | ● | 3.50 | 50 | 20.00 | 1010-3.50 | ● |
| 1.25 | 30 | 12.00 | 1010-1.25 | ● | 3.60 | 50 | 20.00 | 1010-3.60 | ● |
| 1.30 | 30 | 12.00 | 1010-1.30 | ● | 3.70 | 50 | 20.00 | 1010-3.70 | ● |
| 1.35 | 30 | 12.00 | 1010-1.35 | ● | 3.80 | 50 | 20.00 | 1010-3.80 | ● |
| 1.40 | 30 | 12.00 | 1010-1.40 | ● | 3.90 | 50 | 20.00 | 1010-3.90 | ● |
| 1.45 | 30 | 12.00 | 1010-1.45 | ● | 4.00 | 50 | 20.00 | 1010-4.00 | ● |
| 1.50 | 30 | 12.00 | 1010-1.50 | ● | 4.10 | 50 | 25.00 | 1010-4.10 | ● |
| 1.55 | 40 | 16.00 | 1010-1.55 | ● | 4.20 | 50 | 25.00 | 1010-4.20 | ● |
| 1.60 | 40 | 16.00 | 1010-1.60 | ● | 4.30 | 50 | 25.00 | 1010-4.30 | ● |
| 1.65 | 40 | 16.00 | 1010-1.65 | ● | 4.40 | 50 | 25.00 | 1010-4.40 | ● |
| 1.70 | 40 | 16.00 | 1010-1.70 | ● | 4.50 | 50 | 25.00 | 1010-4.50 | ● |
| 1.75 | 40 | 16.00 | 1010-1.75 | ● | 4.60 | 50 | 25.00 | 1010-4.60 | ● |
| 1.80 | 40 | 16.00 | 1010-1.80 | ● | 4.70 | 50 | 25.00 | 1010-4.70 | ● |
| 1.85 | 40 | 16.00 | 1010-1.85 | ● | 4.80 | 50 | 25.00 | 1010-4.80 | ● |
| 1.90 | 40 | 16.00 | 1010-1.90 | ● | 4.90 | 50 | 25.00 | 1010-4.90 | ● |
| 1.95 | 40 | 16.00 | 1010-1.95 | ● | 5.00 | 50 | 25.00 | 1010-5.00 | ● |
| 2.00 | 40 | 16.00 | 1010-2.00 | ● | 5.10 | 50 | 25.00 | 1010-5.10 | ● |
| 2.05 | 40 | 18.00 | 1010-2.05 | ● | 5.20 | 50 | 25.00 | 1010-5.20 | ● |
| 2.10 | 40 | 18.00 | 1010-2.10 | ● | 5.30 | 50 | 25.00 | 1010-5.30 | ● |
| 2.15 | 40 | 18.00 | 1010-2.15 | ● | 5.40 | 50 | 25.00 | 1010-5.40 | ● |
| 2.20 | 40 | 18.00 | 1010-2.20 | ● | 5.50 | 50 | 25.00 | 1010-5.50 | ● |
| 2.25 | 40 | 18.00 | 1010-2.25 | ● | 5.60 | 50 | 25.00 | 1010-5.60 | ● |
| 2.30 | 40 | 18.00 | 1010-2.30 | ● | 5.70 | 50 | 25.00 | 1010-5.70 | ● |
| 2.35 | 40 | 18.00 | 1010-2.35 | ● | 5.80 | 50 | 25.00 | 1010-5.80 | ● |
| 2.40 | 40 | 18.00 | 1010-2.40 | ● | 5.90 | 50 | 25.00 | 1010-5.90 | ● |
| 2.45 | 40 | 18.00 | 1010-2.45 | ● | 6.00 | 50 | 25.00 | 1010-6.00 | ● |
| 2.50 | 40 | 18.00 | 1010-2.50 | ● | | | | | |








MD
VHM
HM

λ 25°/35°

Z=2

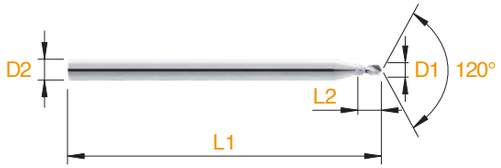
118°

| D1 h6 D2 h6 | L1 | L2 | Art. N° | z | D1 h6 D2 h6 | L1 | L2 | Art. N° | z |
|---|---|---|---|---|---|---|---|---|---|
| 0.50 | 30 | 5.00 | 2010-0.50 | ● | 2.55 | 45 | 18.00 | 2010-2.55 | ● |
| 0.55 | 30 | 5.00 | 2010-0.55 | ● | 2.60 | 45 | 18.00 | 2010-2.60 | ● |
| 0.60 | 30 | 5.00 | 2010-0.60 | ● | 2.65 | 45 | 18.00 | 2010-2.65 | ● |
| 0.65 | 30 | 6.00 | 2010-0.65 | ● | 2.70 | 45 | 18.00 | 2010-2.70 | ● |
| 0.70 | 30 | 6.00 | 2010-0.70 | ● | 2.75 | 45 | 18.00 | 2010-2.75 | ● |
| 0.75 | 30 | 8.00 | 2010-0.75 | ● | 2.80 | 45 | 18.00 | 2010-2.80 | ● |
| 0.80 | 30 | 8.00 | 2010-0.80 | ● | 2.85 | 45 | 18.00 | 2010-2.85 | ● |
| 0.85 | 30 | 9.00 | 2010-0.85 | ● | 2.90 | 45 | 18.00 | 2010-2.90 | ● |
| 0.90 | 30 | 9.00 | 2010-0.90 | ● | 2.95 | 45 | 18.00 | 2010-2.95 | ● |
| 0.95 | 30 | 10.00 | 2010-0.95 | ● | 3.00 | 45 | 18.00 | 2010-3.00 | ● |
| 1.00 | 30 | 10.00 | 2010-1.00 | ● | 3.10 | 50 | 20.00 | 2010-3.10 | ● |
| 1.05 | 30 | 10.00 | 2010-1.05 | ● | 3.20 | 50 | 20.00 | 2010-3.20 | ● |
| 1.10 | 30 | 10.00 | 2010-1.10 | ● | 3.30 | 50 | 20.00 | 2010-3.30 | ● |
| 1.15 | 30 | 12.00 | 2010-1.15 | ● | 3.40 | 50 | 20.00 | 2010-3.40 | ● |
| 1.20 | 30 | 12.00 | 2010-1.20 | ● | 3.50 | 50 | 20.00 | 2010-3.50 | ● |
| 1.25 | 30 | 12.00 | 2010-1.25 | ● | 3.60 | 50 | 20.00 | 2010-3.60 | ● |
| 1.30 | 30 | 12.00 | 2010-1.30 | ● | 3.70 | 50 | 20.00 | 2010-3.70 | ● |
| 1.35 | 30 | 12.00 | 2010-1.35 | ● | 3.80 | 50 | 20.00 | 2010-3.80 | ● |
| 1.40 | 30 | 12.00 | 2010-1.40 | ● | 3.90 | 50 | 20.00 | 2010-3.90 | ● |
| 1.45 | 30 | 12.00 | 2010-1.45 | ● | 4.00 | 50 | 20.00 | 2010-4.00 | ● |
| 1.50 | 30 | 12.00 | 2010-1.50 | ● | 4.10 | 50 | 25.00 | 2010-4.10 | ● |
| 1.55 | 40 | 16.00 | 2010-1.55 | ● | 4.20 | 50 | 25.00 | 2010-4.20 | ● |
| 1.60 | 40 | 16.00 | 2010-1.60 | ● | 4.30 | 50 | 25.00 | 2010-4.30 | ● |
| 1.65 | 40 | 16.00 | 2010-1.65 | ● | 4.40 | 50 | 25.00 | 2010-4.40 | ● |
| 1.70 | 40 | 16.00 | 2010-1.70 | ● | 4.50 | 50 | 25.00 | 2010-4.50 | ● |
| 1.75 | 40 | 16.00 | 2010-1.75 | ● | 4.60 | 50 | 25.00 | 2010-4.60 | ● |
| 1.80 | 40 | 16.00 | 2010-1.80 | ● | 4.70 | 50 | 25.00 | 2010-4.70 | ● |
| 1.85 | 40 | 16.00 | 2010-1.85 | ● | 4.80 | 50 | 25.00 | 2010-4.80 | ● |
| 1.90 | 40 | 16.00 | 2010-1.90 | ● | 4.90 | 50 | 25.00 | 2010-4.90 | ● |
| 1.95 | 40 | 16.00 | 2010-1.95 | ● | 5.00 | 50 | 25.00 | 2010-5.00 | ● |
| 2.00 | 40 | 16.00 | 2010-2.00 | ● | 5.10 | 50 | 25.00 | 2010-5.10 | ● |
| 2.05 | 40 | 18.00 | 2010-2.05 | ● | 5.20 | 50 | 25.00 | 2010-5.20 | ● |
| 2.10 | 40 | 18.00 | 2010-2.10 | ● | 5.30 | 50 | 25.00 | 2010-5.30 | ● |
| 2.15 | 40 | 18.00 | 2010-2.15 | ● | 5.40 | 50 | 25.00 | 2010-5.40 | ● |
| 2.20 | 40 | 18.00 | 2010-2.20 | ● | 5.50 | 50 | 25.00 | 2010-5.50 | ● |
| 2.25 | 40 | 18.00 | 2010-2.25 | ● | 5.60 | 50 | 25.00 | 2010-5.60 | ● |
| 2.30 | 40 | 18.00 | 2010-2.30 | ● | 5.70 | 50 | 25.00 | 2010-5.70 | ● |
| 2.35 | 40 | 18.00 | 2010-2.35 | ● | 5.80 | 50 | 25.00 | 2010-5.80 | ● |
| 2.40 | 40 | 18.00 | 2010-2.40 | ● | 5.90 | 50 | 25.00 | 2010-5.90 | ● |
| 2.45 | 40 | 18.00 | 2010-2.45 | ● | 6.00 | 50 | 25.00 | 2010-6.00 | ● |
| 2.50 | 40 | 18.00 | 2010-2.50 | ● | | | | | |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

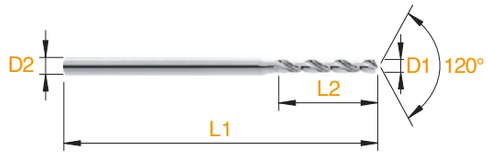
Micro-forets
Mikrobohrer
Micro drills

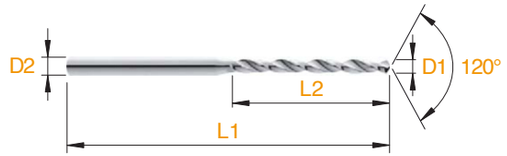











MD VHM HM | λ 30° | Z=2 | 120°

| D1 h6 | L2 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|
| 0.80 | 2.50 | 2.00 | 30 | 2011-0.80 | ● |
| 0.90 | 2.50 | 2.00 | 30 | 2011-0.90 | ● |
| 1.00 | 2.50 | 2.00 | 30 | 2011-1.00 | ● |
| 1.10 | 2.50 | 2.00 | 30 | 2011-1.10 | ● |
| 1.20 | 2.50 | 2.00 | 30 | 2011-1.20 | ● |
| 1.30 | 2.50 | 2.00 | 30 | 2011-1.30 | ● |
| 1.40 | 2.50 | 2.00 | 30 | 2011-1.40 | ● |
| 1.50 | 2.50 | 2.00 | 30 | 2011-1.50 | ● |
| 2.00 | 2.50 | 2.00 | 30 | 2011-2.00 | ● |

MD VHM HM | λ 24° | Z=2 | 120°

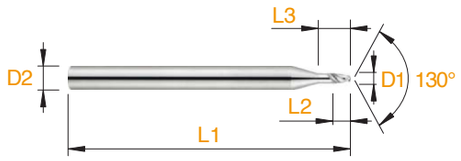
| D1 h6 | L2 | D2 Ø1.5h6 Ø2h6 Ø3h5 | L1 | Art. N° | Z |
|---|---|---|---|---|---|
| 0.50 | 1.70 | 1.50 | 30 | 2012-0.50 | ● |
| 0.55 | 1.90 | 1.50 | 30 | 2012-0.55 | ● |
| 0.60 | 1.90 | 1.50 | 30 | 2012-0.60 | ● |
| 0.65 | 1.90 | 1.50 | 30 | 2012-0.65 | ● |
| 0.70 | 2.40 | 1.50 | 30 | 2012-0.70 | ● |
| 0.75 | 2.40 | 1.50 | 30 | 2012-0.75 | ● |
| 0.80 | 2.60 | 1.50 | 30 | 2012-0.80 | ● |
| 0.85 | 2.60 | 1.50 | 30 | 2012-0.85 | ● |
| 0.90 | 3.00 | 1.50 | 30 | 2012-0.90 | ● |
| 0.95 | 3.00 | 1.50 | 30 | 2012-0.95 | ● |
| 1.00 | 3.40 | 1.50 | 30 | 2012-1.00 | ● |
| 1.10 | 3.80 | 1.50 | 30 | 2012-1.10 | ● |
| 1.20 | 4.20 | 1.50 | 30 | 2012-1.20 | ● |
| 1.30 | 4.20 | 1.50 | 30 | 2012-1.30 | ● |
| 1.40 | 4.70 | 1.50 | 30 | 2012-1.40 | ● |
| 1.50 | 4.70 | 2.00 | 38 | 2012-1.50 | ● |
| 1.60 | 5.40 | 2.00 | 38 | 2012-1.60 | ● |
| 1.70 | 5.40 | 2.00 | 38 | 2012-1.70 | ● |
| 1.80 | 6.50 | 2.00 | 38 | 2012-1.80 | ● |
| 1.90 | 6.50 | 2.00 | 38 | 2012-1.90 | ● |
| 2.00 | 6.50 | 3.00 | 38 | 2012-2.00 | ● |
| 2.10 | 6.50 | 3.00 | 38 | 2012-2.10 | ● |
| 2.20 | 6.50 | 3.00 | 38 | 2012-2.20 | ● |
| 2.30 | 6.50 | 3.00 | 38 | 2012-2.30 | ● |
| 2.40 | 6.50 | 3.00 | 38 | 2012-2.40 | ● |

MD VHM HM | λ 35° | Z=2 | 120°

| D1 h6 | L2 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|
| 0.40 | 3.60 | 1.00 | 25 | 2013-0.40 | ● |
| 0.45 | 3.60 | 1.00 | 25 | 2013-0.45 | ● |
| 0.50 | 4.00 | 1.00 | 25 | 2013-0.50 | ● |
| 0.55 | 4.50 | 1.00 | 25 | 2013-0.55 | ● |
| 0.60 | 4.50 | 1.50 | 30 | 2013-0.60 | ● |
| 0.65 | 5.00 | 1.50 | 30 | 2013-0.65 | ● |
| 0.70 | 5.60 | 1.50 | 30 | 2013-0.70 | ● |
| 0.75 | 5.60 | 1.50 | 30 | 2013-0.75 | ● |
| 0.80 | 6.30 | 1.50 | 30 | 2013-0.80 | ● |
| 0.85 | 6.30 | 1.50 | 30 | 2013-0.85 | ● |
| 0.90 | 7.10 | 1.50 | 30 | 2013-0.90 | ● |
| 0.95 | 7.10 | 1.50 | 30 | 2013-0.95 | ● |
| 1.00 | 8.00 | 1.50 | 30 | 2013-1.00 | ● |
| 1.05 | 8.00 | 1.50 | 30 | 2013-1.05 | ● |
| 1.10 | 9.00 | 1.50 | 30 | 2013-1.10 | ● |
| 1.15 | 9.00 | 1.50 | 30 | 2013-1.15 | ● |
| 1.20 | 10.00 | 1.50 | 30 | 2013-1.20 | ● |
| 1.25 | 10.00 | 1.50 | 30 | 2013-1.25 | ● |
| 1.30 | 10.00 | 1.50 | 30 | 2013-1.30 | ● |
| 1.35 | 11.20 | 1.50 | 30 | 2013-1.35 | ● |
| 1.40 | 11.20 | 1.50 | 30 | 2013-1.40 | ● |
| 1.45 | 11.20 | 1.50 | 30 | 2013-1.45 | ● |
| 1.50 | 12.00 | 2.00 | 38 | 2013-1.50 | ● |
| 1.60 | 12.00 | 2.00 | 38 | 2013-1.60 | ● |
| 1.70 | 12.00 | 2.00 | 38 | 2013-1.70 | ● |
| 1.80 | 12.00 | 2.00 | 38 | 2013-1.80 | ● |
| 1.90 | 12.00 | 2.00 | 38 | 2013-1.90 | ● |

MD VHM HM | λ 30° | Z=2 | 120°

| D1 h6 | L2 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|
| 0.50 | 6.00 | 1.50 | 30 | 2014-0.50 | ● |
| 0.55 | 6.50 | 1.50 | 30 | 2014-0.55 | ● |
| 0.60 | 6.50 | 1.50 | 30 | 2014-0.60 | ● |
| 0.65 | 7.50 | 1.50 | 30 | 2014-0.65 | ● |
| 0.70 | 8.50 | 1.50 | 30 | 2014-0.70 | ● |
| 0.75 | 8.50 | 1.50 | 30 | 2014-0.75 | ● |
| 0.80 | 9.50 | 1.50 | 30 | 2014-0.80 | ● |
| 0.85 | 9.50 | 1.50 | 30 | 2014-0.85 | ● |
| 0.90 | 10.50 | 1.50 | 30 | 2014-0.90 | ● |
| 0.95 | 10.50 | 1.50 | 30 | 2014-0.95 | ● |
| 1.00 | 12.00 | 1.50 | 38 | 2014-1.00 | ● |
| 1.05 | 12.00 | 1.50 | 38 | 2014-1.05 | ● |
| 1.10 | 13.50 | 1.50 | 38 | 2014-1.10 | ● |
| 1.15 | 13.50 | 1.50 | 38 | 2014-1.15 | ● |
| 1.20 | 15.00 | 1.50 | 38 | 2014-1.20 | ● |
| 1.25 | 15.00 | 1.50 | 38 | 2014-1.25 | ● |
| 1.30 | 17.00 | 1.50 | 38 | 2014-1.30 | ● |
| 1.35 | 17.00 | 1.50 | 38 | 2014-1.35 | ● |
| 1.40 | 17.00 | 1.50 | 38 | 2014-1.40 | ● |
| 1.45 | 17.00 | 1.50 | 38 | 2014-1.45 | ● |
| 1.50 | 18.00 | 2.00 | 38 | 2014-1.50 | ● |
| 1.55 | 18.00 | 2.00 | 38 | 2014-1.55 | ● |
| 1.60 | 18.00 | 2.00 | 38 | 2014-1.60 | ● |
| 1.65 | 18.00 | 2.00 | 38 | 2014-1.65 | ● |
| 1.70 | 18.00 | 2.00 | 38 | 2014-1.70 | ● |
| 1.75 | 18.00 | 2.00 | 38 | 2014-1.75 | ● |
| 1.80 | 18.00 | 2.00 | 38 | 2014-1.80 | ● |
| 1.85 | 18.00 | 2.00 | 38 | 2014-1.85 | ● |
| 1.90 | 18.00 | 2.00 | 38 | 2014-1.90 | ● |
| 1.95 | 18.00 | 2.00 | 38 | 2014-1.95 | ● |




MD VHM HM | λ 30° | 2xD1 | Z=2 | 130°

| D1 +0.005/ 0 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 0.10 | 0.35 | 0.55 | 3.00 | 38 | 2020-0.10 | ● |
| 0.11 | 0.35 | 0.55 | 3.00 | 38 | 2020-0.11 | ● |
| 0.12 | 0.35 | 0.55 | 3.00 | 38 | 2020-0.12 | ● |
| 0.13 | 0.40 | 0.60 | 3.00 | 38 | 2020-0.13 | ● |
| 0.14 | 0.40 | 0.60 | 3.00 | 38 | 2020-0.14 | ● |
| 0.15 | 0.40 | 0.60 | 3.00 | 38 | 2020-0.15 | ● |
| 0.16 | 0.40 | 0.60 | 3.00 | 38 | 2020-0.16 | ● |
| 0.17 | 0.50 | 0.70 | 3.00 | 38 | 2020-0.17 | ● |
| 0.18 | 0.50 | 0.70 | 3.00 | 38 | 2020-0.18 | ● |
| 0.19 | 0.50 | 0.70 | 3.00 | 38 | 2020-0.19 | ● |
| 0.20 | 0.55 | 0.75 | 3.00 | 38 | 2020-0.20 | ● |
| 0.21 | 0.55 | 0.75 | 3.00 | 38 | 2020-0.21 | ● |
| 0.22 | 0.60 | 0.80 | 3.00 | 38 | 2020-0.22 | ● |
| 0.23 | 0.60 | 0.80 | 3.00 | 38 | 2020-0.23 | ● |
| 0.24 | 0.60 | 0.80 | 3.00 | 38 | 2020-0.24 | ● |
| 0.25 | 0.70 | 0.90 | 3.00 | 38 | 2020-0.25 | ● |
| 0.26 | 0.70 | 0.90 | 3.00 | 38 | 2020-0.26 | ● |
| 0.27 | 0.70 | 0.90 | 3.00 | 38 | 2020-0.27 | ● |
| 0.28 | 0.80 | 1.00 | 3.00 | 38 | 2020-0.28 | ● |
| 0.29 | 0.80 | 1.00 | 3.00 | 38 | 2020-0.29 | ● |
| 0.30 | 0.90 | 1.20 | 3.00 | 38 | 2020-0.30 | ● |
| 0.31 | 0.90 | 1.20 | 3.00 | 38 | 2020-0.31 | ● |
| 0.32 | 0.90 | 1.20 | 3.00 | 38 | 2020-0.32 | ● |
| 0.33 | 0.90 | 1.20 | 3.00 | 38 | 2020-0.33 | ● |
| 0.34 | 0.90 | 1.35 | 3.00 | 38 | 2020-0.34 | ● |
| 0.35 | 0.90 | 1.35 | 3.00 | 38 | 2020-0.35 | ● |
| 0.36 | 0.95 | 1.35 | 3.00 | 38 | 2020-0.36 | ● |
| 0.37 | 0.95 | 1.35 | 3.00 | 38 | 2020-0.37 | ● |
| 0.38 | 0.95 | 1.50 | 3.00 | 38 | 2020-0.38 | ● |
| 0.39 | 0.95 | 1.50 | 3.00 | 38 | 2020-0.39 | ● |
| 0.40 | 0.80 | 1.60 | 3.00 | 38 | 2020-0.40 | ● |
| 0.41 | 0.82 | 1.60 | 3.00 | 38 | 2020-0.41 | ● |
| 0.42 | 0.84 | 1.60 | 3.00 | 38 | 2020-0.42 | ● |
| 0.43 | 0.86 | 1.60 | 3.00 | 38 | 2020-0.43 | ● |
| 0.44 | 0.88 | 1.60 | 3.00 | 38 | 2020-0.44 | ● |
| 0.45 | 0.90 | 1.60 | 3.00 | 38 | 2020-0.45 | ● |
| 0.46 | 0.92 | 1.70 | 3.00 | 38 | 2020-0.46 | ● |
| 0.47 | 0.94 | 1.70 | 3.00 | 38 | 2020-0.47 | ● |
| 0.48 | 0.96 | 1.70 | 3.00 | 38 | 2020-0.48 | ● |
| 0.49 | 0.98 | 1.70 | 3.00 | 38 | 2020-0.49 | ● |
| 0.50 | 1.00 | 1.70 | 3.00 | 38 | 2020-0.50 | ● |
| 0.51 | 1.02 | 1.80 | 3.00 | 38 | 2020-0.51 | ● |
| 0.52 | 1.04 | 1.80 | 3.00 | 38 | 2020-0.52 | ● |
| 0.53 | 1.06 | 1.80 | 3.00 | 38 | 2020-0.53 | ● |
| 0.54 | 1.08 | 1.80 | 3.00 | 38 | 2020-0.54 | ● |
| 0.55 | 1.10 | 1.80 | 3.00 | 38 | 2020-0.55 | ● |
| 0.56 | 1.12 | 1.90 | 3.00 | 38 | 2020-0.56 | ● |
| 0.57 | 1.14 | 1.90 | 3.00 | 38 | 2020-0.57 | ● |
| 0.58 | 1.16 | 1.90 | 3.00 | 38 | 2020-0.58 | ● |
| 0.59 | 1.18 | 1.90 | 3.00 | 38 | 2020-0.59 | ● |
| 0.60 | 1.20 | 1.90 | 3.00 | 38 | 2020-0.60 | ● |
| 0.61 | 1.22 | 2.00 | 3.00 | 38 | 2020-0.61 | ● |
| 0.62 | 1.24 | 2.00 | 3.00 | 38 | 2020-0.62 | ● |
| 0.63 | 1.26 | 2.00 | 3.00 | 38 | 2020-0.63 | ● |
| 0.64 | 1.28 | 2.00 | 3.00 | 38 | 2020-0.64 | ● |
| 0.65 | 1.30 | 2.00 | 3.00 | 38 | 2020-0.65 | ● |
| 0.66 | 1.32 | 2.10 | 3.00 | 38 | 2020-0.66 | ● |
| 0.67 | 1.34 | 2.10 | 3.00 | 38 | 2020-0.67 | ● |
| 0.68 | 1.36 | 2.10 | 3.00 | 38 | 2020-0.68 | ● |
| 0.69 | 1.38 | 2.10 | 3.00 | 38 | 2020-0.69 | ● |
| 0.70 | 1.40 | 2.10 | 3.00 | 38 | 2020-0.70 | ● |
| 0.71 | 1.42 | 2.20 | 3.00 | 38 | 2020-0.71 | ● |
| 0.72 | 1.44 | 2.20 | 3.00 | 38 | 2020-0.72 | ● |
| 0.73 | 1.46 | 2.20 | 3.00 | 38 | 2020-0.73 | ● |
| 0.74 | 1.48 | 2.20 | 3.00 | 38 | 2020-0.74 | ● |
| 0.75 | 1.50 | 2.20 | 3.00 | 38 | 2020-0.75 | ● |
| 0.76 | 1.52 | 2.30 | 3.00 | 38 | 2020-0.76 | ● |
| 0.77 | 1.54 | 2.30 | 3.00 | 38 | 2020-0.77 | ● |
| 0.78 | 1.56 | 2.30 | 3.00 | 38 | 2020-0.78 | ● |
| 0.79 | 1.58 | 2.30 | 3.00 | 38 | 2020-0.79 | ● |
| 0.80 | 1.60 | 2.30 | 3.00 | 38 | 2020-0.80 | ● |
| 0.81 | 1.62 | 2.40 | 3.00 | 38 | 2020-0.81 | ● |
| 0.82 | 1.64 | 2.40 | 3.00 | 38 | 2020-0.82 | ● |
| 0.83 | 1.66 | 2.40 | 3.00 | 38 | 2020-0.83 | ● |
| 0.84 | 1.68 | 2.40 | 3.00 | 38 | 2020-0.84 | ● |
| 0.85 | 1.70 | 2.40 | 3.00 | 38 | 2020-0.85 | ● |
| 0.86 | 1.72 | 2.50 | 3.00 | 38 | 2020-0.86 | ● |
| 0.87 | 1.74 | 2.50 | 3.00 | 38 | 2020-0.87 | ● |
| 0.88 | 1.76 | 2.50 | 3.00 | 38 | 2020-0.88 | ● |
| 0.89 | 1.78 | 2.50 | 3.00 | 38 | 2020-0.89 | ● |
| 0.90 | 1.80 | 2.50 | 3.00 | 38 | 2020-0.90 | ● |
| 0.91 | 1.82 | 2.60 | 3.00 | 38 | 2020-0.91 | ● |
| 0.92 | 1.84 | 2.60 | 3.00 | 38 | 2020-0.92 | ● |
| 0.93 | 1.86 | 2.60 | 3.00 | 38 | 2020-0.93 | ● |
| 0.94 | 1.88 | 2.60 | 3.00 | 38 | 2020-0.94 | ● |
| 0.95 | 1.90 | 2.60 | 3.00 | 38 | 2020-0.95 | ● |
| 0.96 | 1.92 | 2.70 | 3.00 | 38 | 2020-0.96 | ● |
| 0.97 | 1.94 | 2.70 | 3.00 | 38 | 2020-0.97 | ● |
| 0.98 | 1.96 | 2.70 | 3.00 | 38 | 2020-0.98 | ● |
| 0.99 | 1.98 | 2.70 | 3.00 | 38 | 2020-0.99 | ● |



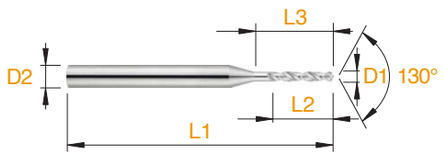


| D1 +0.005/ 0 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 1.00 | 2.00 | 2.70 | 3.00 | 38 | 2020-1.00 | ● |
| 1.01 | 2.02 | 3.50 | 3.00 | 38 | 2020-1.01 | ● |
| 1.02 | 2.04 | 3.50 | 3.00 | 38 | 2020-1.02 | ● |
| 1.03 | 2.06 | 3.50 | 3.00 | 38 | 2020-1.03 | ● |
| 1.04 | 2.08 | 3.50 | 3.00 | 38 | 2020-1.04 | ● |
| 1.05 | 2.10 | 3.50 | 3.00 | 38 | 2020-1.05 | ● |
| 1.06 | 2.12 | 3.60 | 3.00 | 38 | 2020-1.06 | ● |
| 1.07 | 2.14 | 3.60 | 3.00 | 38 | 2020-1.07 | ● |
| 1.08 | 2.16 | 3.60 | 3.00 | 38 | 2020-1.08 | ● |
| 1.09 | 2.18 | 3.60 | 3.00 | 38 | 2020-1.09 | ● |
| 1.10 | 2.20 | 3.60 | 3.00 | 38 | 2020-1.10 | ● |
| 1.11 | 2.22 | 3.70 | 3.00 | 38 | 2020-1.11 | ● |
| 1.12 | 2.24 | 3.70 | 3.00 | 38 | 2020-1.12 | ● |
| 1.13 | 2.26 | 3.70 | 3.00 | 38 | 2020-1.13 | ● |
| 1.14 | 2.28 | 3.70 | 3.00 | 38 | 2020-1.14 | ● |
| 1.15 | 2.30 | 3.70 | 3.00 | 38 | 2020-1.15 | ● |
| 1.16 | 2.32 | 3.80 | 3.00 | 38 | 2020-1.16 | ● |
| 1.17 | 2.34 | 3.80 | 3.00 | 38 | 2020-1.17 | ● |
| 1.18 | 2.36 | 3.80 | 3.00 | 38 | 2020-1.18 | ● |
| 1.19 | 2.38 | 3.80 | 3.00 | 38 | 2020-1.19 | ● |
| 1.20 | 2.40 | 3.80 | 3.00 | 38 | 2020-1.20 | ● |
| 1.21 | 2.42 | 4.20 | 3.00 | 38 | 2020-1.21 | ● |
| 1.22 | 2.44 | 4.20 | 3.00 | 38 | 2020-1.22 | ● |
| 1.23 | 2.46 | 4.20 | 3.00 | 38 | 2020-1.23 | ● |
| 1.24 | 2.48 | 4.20 | 3.00 | 38 | 2020-1.24 | ● |
| 1.25 | 2.50 | 4.20 | 3.00 | 38 | 2020-1.25 | ● |
| 1.26 | 2.52 | 4.30 | 3.00 | 38 | 2020-1.26 | ● |
| 1.27 | 2.54 | 4.30 | 3.00 | 38 | 2020-1.27 | ● |
| 1.28 | 2.56 | 4.30 | 3.00 | 38 | 2020-1.28 | ● |
| 1.29 | 2.58 | 4.30 | 3.00 | 38 | 2020-1.29 | ● |
| 1.30 | 2.60 | 4.30 | 3.00 | 38 | 2020-1.30 | ● |
| 1.31 | 2.62 | 4.40 | 3.00 | 38 | 2020-1.31 | ● |
| 1.32 | 2.64 | 4.40 | 3.00 | 38 | 2020-1.32 | ● |
| 1.33 | 2.66 | 4.40 | 3.00 | 38 | 2020-1.33 | ● |
| 1.34 | 2.68 | 4.40 | 3.00 | 38 | 2020-1.34 | ● |
| 1.35 | 2.70 | 4.40 | 3.00 | 38 | 2020-1.35 | ● |
| 1.36 | 2.72 | 4.50 | 3.00 | 38 | 2020-1.36 | ● |
| 1.37 | 2.74 | 4.50 | 3.00 | 38 | 2020-1.37 | ● |
| 1.38 | 2.76 | 4.50 | 3.00 | 38 | 2020-1.38 | ● |
| 1.39 | 2.78 | 4.50 | 3.00 | 38 | 2020-1.39 | ● |
| 1.40 | 2.80 | 4.50 | 3.00 | 38 | 2020-1.40 | ● |
| 1.41 | 2.82 | 4.60 | 3.00 | 38 | 2020-1.41 | ● |
| 1.42 | 2.84 | 4.60 | 3.00 | 38 | 2020-1.42 | ● |
| 1.43 | 2.86 | 4.60 | 3.00 | 38 | 2020-1.43 | ● |
| 1.44 | 2.88 | 4.60 | 3.00 | 38 | 2020-1.44 | ● |
| 1.45 | 2.90 | 4.60 | 3.00 | 38 | 2020-1.45 | ● |
| 1.46 | 2.92 | 4.70 | 3.00 | 38 | 2020-1.46 | ● |
| 1.47 | 2.94 | 4.70 | 3.00 | 38 | 2020-1.47 | ● |
| 1.48 | 2.96 | 4.70 | 3.00 | 38 | 2020-1.48 | ● |
| 1.49 | 2.98 | 4.70 | 3.00 | 38 | 2020-1.49 | ● |
| 1.50 | 3.00 | 4.70 | 3.00 | 38 | 2020-1.50 | ● |
| 1.51 | 3.02 | 5.10 | 3.00 | 38 | 2020-1.51 | ● |
| 1.52 | 3.04 | 5.10 | 3.00 | 38 | 2020-1.52 | ● |
| 1.53 | 3.06 | 5.10 | 3.00 | 38 | 2020-1.53 | ● |
| 1.54 | 3.08 | 5.10 | 3.00 | 38 | 2020-1.54 | ● |
| 1.55 | 3.10 | 5.10 | 3.00 | 38 | 2020-1.55 | ● |
| 1.56 | 3.12 | 5.20 | 3.00 | 38 | 2020-1.56 | ● |
| 1.57 | 3.14 | 5.20 | 3.00 | 38 | 2020-1.57 | ● |
| 1.58 | 3.16 | 5.20 | 3.00 | 38 | 2020-1.58 | ● |
| 1.59 | 3.18 | 5.20 | 3.00 | 38 | 2020-1.59 | ● |
| 1.60 | 3.20 | 5.20 | 3.00 | 38 | 2020-1.60 | ● |
| 1.61 | 3.22 | 5.30 | 3.00 | 38 | 2020-1.61 | ● |
| 1.62 | 3.24 | 5.30 | 3.00 | 38 | 2020-1.62 | ● |
| 1.63 | 3.26 | 5.30 | 3.00 | 38 | 2020-1.63 | ● |
| 1.64 | 3.28 | 5.30 | 3.00 | 38 | 2020-1.64 | ● |
| 1.65 | 3.30 | 5.30 | 3.00 | 38 | 2020-1.65 | ● |
| 1.66 | 3.32 | 5.40 | 3.00 | 38 | 2020-1.66 | ● |
| 1.67 | 3.34 | 5.40 | 3.00 | 38 | 2020-1.67 | ● |
| 1.68 | 3.36 | 5.40 | 3.00 | 38 | 2020-1.68 | ● |
| 1.69 | 3.38 | 5.40 | 3.00 | 38 | 2020-1.69 | ● |
| 1.70 | 3.40 | 5.40 | 3.00 | 38 | 2020-1.70 | ● |
| 1.71 | 3.42 | 5.50 | 3.00 | 38 | 2020-1.71 | ● |
| 1.72 | 3.44 | 5.50 | 3.00 | 38 | 2020-1.72 | ● |
| 1.73 | 3.46 | 5.50 | 3.00 | 38 | 2020-1.73 | ● |
| 1.74 | 3.48 | 5.50 | 3.00 | 38 | 2020-1.74 | ● |
| 1.75 | 3.50 | 5.50 | 3.00 | 38 | 2020-1.75 | ● |
| 1.76 | 3.52 | 5.60 | 3.00 | 38 | 2020-1.76 | ● |
| 1.77 | 3.54 | 5.60 | 3.00 | 38 | 2020-1.77 | ● |
| 1.78 | 3.56 | 5.60 | 3.00 | 38 | 2020-1.78 | ● |
| 1.79 | 3.58 | 5.60 | 3.00 | 38 | 2020-1.79 | ● |
| 1.80 | 3.60 | 5.60 | 3.00 | 38 | 2020-1.80 | ● |
| 1.81 | 3.62 | 5.70 | 3.00 | 38 | 2020-1.81 | ● |
| 1.82 | 3.64 | 5.70 | 3.00 | 38 | 2020-1.82 | ● |
| 1.83 | 3.66 | 5.70 | 3.00 | 38 | 2020-1.83 | ● |
| 1.84 | 3.68 | 5.70 | 3.00 | 38 | 2020-1.84 | ● |
| 1.85 | 3.70 | 5.70 | 3.00 | 38 | 2020-1.85 | ● |
| 1.86 | 3.72 | 5.80 | 3.00 | 38 | 2020-1.86 | ● |
| 1.87 | 3.74 | 5.80 | 3.00 | 38 | 2020-1.87 | ● |
| 1.88 | 3.76 | 5.80 | 3.00 | 38 | 2020-1.88 | ● |
| 1.89 | 3.78 | 5.80 | 3.00 | 38 | 2020-1.89 | ● |
| 1.90 | 3.80 | 5.80 | 3.00 | 38 | 2020-1.90 | ● |
| 1.91 | 3.82 | 5.90 | 3.00 | 38 | 2020-1.91 | ● |
| 1.92 | 3.84 | 5.90 | 3.00 | 38 | 2020-1.92 | ● |
| 1.93 | 3.86 | 5.90 | 3.00 | 38 | 2020-1.93 | ● |
| 1.94 | 3.88 | 5.90 | 3.00 | 38 | 2020-1.94 | ● |
| 1.95 | 3.90 | 5.90 | 3.00 | 38 | 2020-1.95 | ● |
| 1.96 | 3.92 | 6.00 | 3.00 | 38 | 2020-1.96 | ● |
| 1.97 | 3.94 | 6.00 | 3.00 | 38 | 2020-1.97 | ● |
| 1.98 | 3.96 | 6.00 | 3.00 | 38 | 2020-1.98 | ● |
| 1.99 | 3.98 | 6.00 | 3.00 | 38 | 2020-1.99 | ● |
| 2.00 | 4.00 | 6.00 | 3.00 | 38 | 2020-2.00 | ● |

Autre revêtement sur demande/ Andere Beschichtung auf Anfrage / Other coating on request

Micro-forets / Mikrobohrer / Micro drills | Ø1.00 - Ø2.00 mm | 2023

MICRO-Line




MD
VHM
HM

λ 35°

6xD1

Z=2

130°



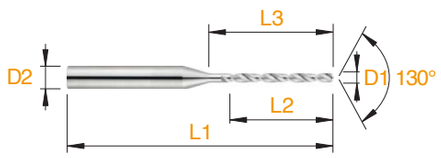
| D1 0/ -0.004 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 0.10 | 0.50 | 0.70 | 3.00 | 38 | 2023-0.10 | ● |
| 0.11 | 0.50 | 0.70 | 3.00 | 38 | 2023-0.11 | ● |
| 0.12 | 0.50 | 0.70 | 3.00 | 38 | 2023-0.12 | ● |
| 0.13 | 0.80 | 1.00 | 3.00 | 38 | 2023-0.13 | ● |
| 0.14 | 0.80 | 1.00 | 3.00 | 38 | 2023-0.14 | ● |
| 0.15 | 0.80 | 1.00 | 3.00 | 38 | 2023-0.15 | ● |
| 0.16 | 1.10 | 1.40 | 3.00 | 38 | 2023-0.16 | ● |
| 0.17 | 1.10 | 1.40 | 3.00 | 38 | 2023-0.17 | ● |
| 0.18 | 1.10 | 1.40 | 3.00 | 38 | 2023-0.18 | ● |
| 0.19 | 1.10 | 1.40 | 3.00 | 38 | 2023-0.19 | ● |
| 0.20 | 1.50 | 1.80 | 3.00 | 38 | 2023-0.20 | ● |
| 0.21 | 1.50 | 1.80 | 3.00 | 38 | 2023-0.21 | ● |
| 0.22 | 1.50 | 1.80 | 3.00 | 38 | 2023-0.22 | ● |
| 0.23 | 1.50 | 1.80 | 3.00 | 38 | 2023-0.23 | ● |
| 0.24 | 1.50 | 1.80 | 3.00 | 38 | 2023-0.24 | ● |
| 0.25 | 1.90 | 2.20 | 3.00 | 38 | 2023-0.25 | ● |
| 0.26 | 1.90 | 2.20 | 3.00 | 38 | 2023-0.26 | ● |
| 0.27 | 1.90 | 2.20 | 3.00 | 38 | 2023-0.27 | ● |
| 0.28 | 1.90 | 2.20 | 3.00 | 38 | 2023-0.28 | ● |
| 0.29 | 1.90 | 2.20 | 3.00 | 38 | 2023-0.29 | ● |
| 0.30 | 1.80 | 2.40 | 3.00 | 38 | 2023-0.30 | ● |
| 0.31 | 1.80 | 2.40 | 3.00 | 38 | 2023-0.31 | ● |
| 0.32 | 1.80 | 2.40 | 3.00 | 38 | 2023-0.32 | ● |
| 0.33 | 1.80 | 2.40 | 3.00 | 38 | 2023-0.33 | ● |
| 0.34 | 1.80 | 2.40 | 3.00 | 38 | 2023-0.34 | ● |
| 0.35 | 2.20 | 2.80 | 3.00 | 38 | 2023-0.35 | ● |
| 0.36 | 2.20 | 2.80 | 3.00 | 38 | 2023-0.36 | ● |
| 0.37 | 2.20 | 2.80 | 3.00 | 38 | 2023-0.37 | ● |
| 0.38 | 2.20 | 2.80 | 3.00 | 38 | 2023-0.38 | ● |
| 0.39 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.39 | ● |
| 0.40 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.40 | ● |
| 0.41 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.41 | ● |
| 0.42 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.42 | ● |
| 0.43 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.43 | ● |
| 0.44 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.44 | ● |
| 0.45 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.45 | ● |
| 0.46 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.46 | ● |
| 0.47 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.47 | ● |
| 0.48 | 2.70 | 3.60 | 3.00 | 38 | 2023-0.48 | ● |
| 0.49 | 3.20 | 4.00 | 3.00 | 38 | 2023-0.49 | ● |
| 0.50 | 3.20 | 4.00 | 3.00 | 38 | 2023-0.50 | ● |
| 0.51 | 3.20 | 4.00 | 3.00 | 38 | 2023-0.51 | ● |
| 0.52 | 3.20 | 4.00 | 3.00 | 38 | 2023-0.52 | ● |
| 0.53 | 3.20 | 4.00 | 3.00 | 38 | 2023-0.53 | ● |
| 0.54 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.54 | ● |
| 0.55 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.55 | ● |
| 0.56 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.56 | ● |
| 0.57 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.57 | ● |
| 0.58 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.58 | ● |
| 0.59 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.59 | ● |
| 0.60 | 3.60 | 4.50 | 3.00 | 38 | 2023-0.60 | ● |
| 0.61 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.61 | ● |
| 0.62 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.62 | ● |
| 0.63 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.63 | ● |
| 0.64 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.64 | ● |
| 0.65 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.65 | ● |
| 0.66 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.66 | ● |
| 0.67 | 3.90 | 5.00 | 3.00 | 38 | 2023-0.67 | ● |
| 0.68 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.68 | ● |
| 0.69 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.69 | ● |
| 0.70 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.70 | ● |
| 0.71 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.71 | ● |
| 0.72 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.72 | ● |
| 0.73 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.73 | ● |
| 0.74 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.74 | ● |
| 0.75 | 4.50 | 5.60 | 3.00 | 38 | 2023-0.75 | ● |
| 0.76 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.76 | ● |
| 0.77 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.77 | ● |
| 0.78 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.78 | ● |
| 0.79 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.79 | ● |
| 0.80 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.80 | ● |
| 0.81 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.81 | ● |
| 0.82 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.82 | ● |
| 0.83 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.83 | ● |
| 0.84 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.84 | ● |
| 0.85 | 5.00 | 6.30 | 3.00 | 38 | 2023-0.85 | ● |
| 0.86 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.86 | ● |
| 0.87 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.87 | ● |
| 0.88 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.88 | ● |
| 0.89 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.89 | ● |
| 0.90 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.90 | ● |
| 0.91 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.91 | ● |
| 0.92 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.92 | ● |
| 0.93 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.93 | ● |
| 0.94 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.94 | ● |
| 0.95 | 5.70 | 7.10 | 3.00 | 38 | 2023-0.95 | ● |
| 0.96 | 6.50 | 8.00 | 3.00 | 38 | 2023-0.96 | ● |
| 0.97 | 6.50 | 8.00 | 3.00 | 38 | 2023-0.97 | ● |
| 0.98 | 6.50 | 8.00 | 3.00 | 38 | 2023-0.98 | ● |
| 0.99 | 6.50 | 8.00 | 3.00 | 38 | 2023-0.99 | ● |
| 1.00 | 6.50 | 8.00 | 3.00 | 38 | 2023-1.00 | ● |
| 1.01 | 6.50 | 8.00 | 3.00 | 38 | 2023-1.01 | ● |
| 1.02 | 6.50 | 8.00 | 3.00 | 38 | 2023-1.02 | ● |
| 1.03 | 6.50 | 8.00 | 3.00 | 38 | 2023-1.03 | ● |
| 1.04 | 6.50 | 8.00 | 3.00 | 38 | 2023-1.04 | ● |
| 1.05 | 6.50 | 8.00 | 3.00 | 38 | 2023-1.05 | ● |
| 1.06 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.06 | ● |
| 1.07 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.07 | ● |
| 1.08 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.08 | ● |
| 1.09 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.09 | ● |
| 1.10 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.10 | ● |
| 1.11 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.11 | ● |
| 1.12 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.12 | ● |
| 1.13 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.13 | ● |
| 1.14 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.14 | ● |
| 1.15 | 7.30 | 9.00 | 3.00 | 38 | 2023-1.15 | ● |
| 1.16 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.16 | ● |
| 1.17 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.17 | ● |
| 1.18 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.18 | ● |
| 1.19 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.19 | ● |
| 1.20 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.20 | ● |
| 1.21 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.21 | ● |
| 1.22 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.22 | ● |
| 1.23 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.23 | ● |
| 1.24 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.24 | ● |
| 1.25 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.25 | ● |
| 1.26 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.26 | ● |
| 1.27 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.27 | ● |
| 1.28 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.28 | ● |
| 1.29 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.29 | ● |
| 1.30 | 8.20 | 10.00 | 3.00 | 38 | 2023-1.30 | ● |
| 1.31 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.31 | ● |
| 1.32 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.32 | ● |
| 1.33 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.33 | ● |
| 1.34 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.34 | ● |
| 1.35 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.35 | ● |
| 1.36 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.36 | ● |
| 1.37 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.37 | ● |
| 1.38 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.38 | ● |
| 1.39 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.39 | ● |
| 1.40 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.40 | ● |
| 1.41 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.41 | ● |
| 1.42 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.42 | ● |
| 1.43 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.43 | ● |
| 1.44 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.44 | ● |
| 1.45 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.45 | ● |
| 1.46 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.46 | ● |
| 1.47 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.47 | ● |
| 1.48 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.48 | ● |
| 1.49 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.49 | ● |
| 1.50 | 9.20 | 11.20 | 3.00 | 38 | 2023-1.50 | ● |
| 1.51 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.51 | ● |
| 1.52 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.52 | ● |
| 1.53 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.53 | ● |
| 1.54 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.54 | ● |
| 1.55 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.55 | ● |
| 1.56 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.56 | ● |
| 1.57 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.57 | ● |
| 1.58 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.58 | ● |
| 1.59 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.59 | ● |
| 1.60 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.60 | ● |
| 1.61 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.61 | ● |
| 1.62 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.62 | ● |
| 1.63 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.63 | ● |
| 1.64 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.64 | ● |
| 1.65 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.65 | ● |
| 1.66 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.66 | ● |
| 1.67 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.67 | ● |
| 1.68 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.68 | ● |
| 1.69 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.69 | ● |
| 1.70 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.70 | ● |
| 1.71 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.71 | ● |
| 1.72 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.72 | ● |
| 1.73 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.73 | ● |
| 1.74 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.74 | ● |
| 1.75 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.75 | ● |
| 1.76 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.76 | ● |
| 1.77 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.77 | ● |
| 1.78 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.78 | ● |
| 1.79 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.79 | ● |
| 1.80 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.80 | ● |
| 1.81 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.81 | ● |
| 1.82 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.82 | ● |
| 1.83 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.83 | ● |
| 1.84 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.84 | ● |
| 1.85 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.85 | ● |
| 1.86 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.86 | ● |
| 1.87 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.87 | ● |
| 1.88 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.88 | ● |
| 1.89 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.89 | ● |
| 1.90 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.90 | ● |
| 1.91 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.91 | ● |
| 1.92 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.92 | ● |
| 1.93 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.93 | ● |
| 1.94 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.94 | ● |
| 1.95 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.95 | ● |
| 1.96 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.96 | ● |
| 1.97 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.97 | ● |
| 1.98 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.98 | ● |
| 1.99 | 11.20 | 13.40 | 3.00 | 38 | 2023-1.99 | ● |
| 2.00 | 11.20 | 13.40 | 3.00 | 38 | 2023-2.00 | ● |

| D1 0/ -0.004 | L2 | L3 | D2 h6 | L1 | Art. N° | z |
|---|---|---|---|---|---|---|
| 2.01 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.01 | ● |
| 2.02 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.02 | ● |
| 2.03 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.03 | ● |
| 2.04 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.04 | ● |
| 2.05 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.05 | ● |
| 2.06 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.06 | ● |
| 2.07 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.07 | ● |
| 2.08 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.08 | ● |
| 2.09 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.09 | ● |
| 2.10 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.10 | ● |
| 2.11 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.11 | ● |
| 2.12 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.12 | ● |
| 2.13 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.13 | ● |
| 2.14 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.14 | ● |
| 2.15 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.15 | ● |
| 2.16 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.16 | ● |
| 2.17 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.17 | ● |
| 2.18 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.18 | ● |
| 2.19 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.19 | ● |
| 2.20 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.20 | ● |
| 2.21 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.21 | ● |
| 2.22 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.22 | ● |
| 2.23 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.23 | ● |
| 2.24 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.24 | ● |
| 2.25 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.25 | ● |
| 2.26 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.26 | ● |
| 2.27 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.27 | ● |
| 2.28 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.28 | ● |
| 2.29 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.29 | ● |
| 2.30 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.30 | ● |
| 2.31 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.31 | ● |
| 2.32 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.32 | ● |
| 2.33 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.33 | ● |
| 2.34 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.34 | ● |
| 2.35 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.35 | ● |
| 2.36 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.36 | ● |
| 2.37 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.37 | ● |
| 2.38 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.38 | ● |
| 2.39 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.39 | ● |
| 2.40 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.40 | ● |
| 2.41 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.41 | ● |
| 2.42 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.42 | ● |
| 2.43 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.43 | ● |
| 2.44 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.44 | ● |
| 2.45 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.45 | ● |
| 2.46 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.46 | ● |
| 2.47 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.47 | ● |
| 2.48 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.48 | ● |
| 2.49 | 12.50 | 14.00 | 3.00 | 38 | 2023-2.49 | ● |
| 2.50 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.50 | ● |

| D1 0/ -0.004 | L2 | L3 | D2 h6 | L1 | Art. N° | z |
|---|---|---|---|---|---|---|
| 2.51 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.51 | ● |
| 2.52 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.52 | ● |
| 2.53 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.53 | ● |
| 2.54 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.54 | ● |
| 2.55 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.55 | ● |
| 2.56 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.56 | ● |
| 2.57 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.57 | ● |
| 2.58 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.58 | ● |
| 2.59 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.59 | ● |
| 2.60 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.60 | ● |
| 2.61 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.61 | ● |
| 2.62 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.62 | ● |
| 2.63 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.63 | ● |
| 2.64 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.64 | ● |
| 2.65 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.65 | ● |
| 2.66 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.66 | ● |
| 2.67 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.67 | ● |
| 2.68 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.68 | ● |
| 2.69 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.69 | ● |
| 2.70 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.70 | ● |
| 2.71 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.71 | ● |
| 2.72 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.72 | ● |
| 2.73 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.73 | ● |
| 2.74 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.74 | ● |
| 2.75 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.75 | ● |
| 2.76 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.76 | ● |
| 2.77 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.77 | ● |
| 2.78 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.78 | ● |
| 2.79 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.79 | ● |
| 2.80 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.80 | ● |
| 2.81 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.81 | ● |
| 2.82 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.82 | ● |
| 2.83 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.83 | ● |
| 2.84 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.84 | ● |
| 2.85 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.85 | ● |
| 2.86 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.86 | ● |
| 2.87 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.87 | ● |
| 2.88 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.88 | ● |
| 2.89 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.89 | ● |
| 2.90 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.90 | ● |
| 2.91 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.91 | ● |
| 2.92 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.92 | ● |
| 2.93 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.93 | ● |
| 2.94 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.94 | ● |
| 2.95 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.95 | ● |
| 2.96 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.96 | ● |
| 2.97 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.97 | ● |
| 2.98 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.98 | ● |
| 2.99 | 14.00 | 17.00 | 3.00 | 38 | 2023-2.99 | ● |
| 3.00 | 14.00 | 17.00 | 3.00 | 38 | 2023-3.00 | ● |







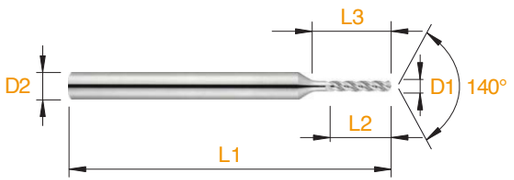

| MD VHM HM | λ 25° | Z=2 | 12xD1 | 130° | |
|---|---|---|---|---|---|

| D1 h6 | L2 | L3 | D2 h6 | L1 | Art. N° | z |
|---|---|---|---|---|---|---|
| 0.20 | 2.40 | 3.50 | 3.00 | 38 | 2026-0.20 | ● |
| 0.21 | 2.50 | 3.50 | 3.00 | 38 | 2026-0.21 | ● |
| 0.22 | 2.70 | 3.50 | 3.00 | 38 | 2026-0.22 | ● |
| 0.23 | 2.80 | 3.50 | 3.00 | 38 | 2026-0.23 | ● |
| 0.24 | 2.90 | 4.00 | 3.00 | 38 | 2026-0.24 | ● |
| 0.25 | 3.00 | 4.00 | 3.00 | 38 | 2026-0.25 | ● |
| 0.26 | 3.10 | 4.00 | 3.00 | 38 | 2026-0.26 | ● |
| 0.27 | 3.30 | 4.00 | 3.00 | 38 | 2026-0.27 | ● |
| 0.28 | 3.40 | 4.50 | 3.00 | 38 | 2026-0.28 | ● |
| 0.29 | 3.50 | 4.50 | 3.00 | 38 | 2026-0.29 | ● |
| 0.30 | 3.60 | 4.50 | 3.00 | 38 | 2026-0.30 | ● |
| 0.31 | 3.70 | 4.50 | 3.00 | 38 | 2026-0.31 | ● |
| 0.32 | 3.90 | 5.00 | 3.00 | 38 | 2026-0.32 | ● |
| 0.33 | 4.00 | 5.00 | 3.00 | 38 | 2026-0.33 | ● |
| 0.34 | 4.10 | 5.00 | 3.00 | 38 | 2026-0.34 | ● |
| 0.35 | 4.20 | 5.00 | 3.00 | 38 | 2026-0.35 | ● |
| 0.36 | 4.30 | 5.50 | 3.00 | 38 | 2026-0.36 | ● |
| 0.37 | 4.50 | 5.50 | 3.00 | 38 | 2026-0.37 | ● |
| 0.38 | 4.60 | 5.50 | 3.00 | 38 | 2026-0.38 | ● |
| 0.39 | 4.70 | 5.50 | 3.00 | 38 | 2026-0.39 | ● |
| 0.40 | 4.80 | 6.00 | 3.00 | 38 | 2026-0.40 | ● |
| 0.41 | 4.90 | 6.00 | 3.00 | 38 | 2026-0.41 | ● |
| 0.42 | 5.10 | 6.00 | 3.00 | 38 | 2026-0.42 | ● |
| 0.43 | 5.20 | 6.00 | 3.00 | 38 | 2026-0.43 | ● |
| 0.44 | 5.30 | 6.50 | 3.00 | 38 | 2026-0.44 | ● |
| 0.45 | 5.40 | 6.50 | 3.00 | 38 | 2026-0.45 | ● |
| 0.46 | 5.50 | 6.50 | 3.00 | 38 | 2026-0.46 | ● |
| 0.47 | 5.70 | 6.50 | 3.00 | 38 | 2026-0.47 | ● |
| 0.48 | 5.80 | 7.00 | 3.00 | 38 | 2026-0.48 | ● |
| 0.49 | 5.90 | 7.00 | 3.00 | 38 | 2026-0.49 | ● |
| 0.50 | 6.00 | 7.00 | 3.00 | 38 | 2026-0.50 | ● |
| 0.51 | 6.10 | 7.00 | 3.00 | 38 | 2026-0.51 | ● |
| 0.52 | 6.30 | 7.50 | 3.00 | 38 | 2026-0.52 | ● |
| 0.53 | 6.40 | 7.50 | 3.00 | 38 | 2026-0.53 | ● |
| 0.54 | 6.50 | 7.50 | 3.00 | 38 | 2026-0.54 | ● |
| 0.55 | 6.60 | 7.50 | 3.00 | 38 | 2026-0.55 | ● |
| 0.56 | 6.70 | 8.00 | 3.00 | 38 | 2026-0.56 | ● |
| 0.57 | 6.90 | 8.00 | 3.00 | 38 | 2026-0.57 | ● |
| 0.58 | 7.00 | 8.00 | 3.00 | 38 | 2026-0.58 | ● |
| 0.59 | 7.10 | 8.00 | 3.00 | 38 | 2026-0.59 | ● |
| 0.60 | 7.20 | 9.00 | 3.00 | 38 | 2026-0.60 | ● |
| 0.61 | 7.30 | 9.00 | 3.00 | 38 | 2026-0.61 | ● |
| 0.62 | 7.50 | 9.00 | 3.00 | 38 | 2026-0.62 | ● |
| 0.63 | 7.60 | 9.00 | 3.00 | 38 | 2026-0.63 | ● |
| 0.64 | 7.70 | 9.50 | 3.00 | 38 | 2026-0.64 | ● |
| 0.65 | 7.80 | 9.50 | 3.00 | 38 | 2026-0.65 | ● |
| 0.66 | 7.90 | 9.50 | 3.00 | 38 | 2026-0.66 | ● |
| 0.67 | 8.10 | 9.50 | 3.00 | 38 | 2026-0.67 | ● |
| 0.68 | 8.20 | 10.00 | 3.00 | 38 | 2026-0.68 | ● |
| 0.69 | 8.30 | 10.00 | 3.00 | 38 | 2026-0.69 | ● |
| 0.70 | 8.40 | 10.00 | 3.00 | 38 | 2026-0.70 | ● |
| 0.71 | 8.50 | 10.00 | 3.00 | 38 | 2026-0.71 | ● |
| 0.72 | 8.70 | 10.50 | 3.00 | 38 | 2026-0.72 | ● |
| 0.73 | 8.80 | 10.50 | 3.00 | 38 | 2026-0.73 | ● |
| 0.74 | 8.90 | 10.50 | 3.00 | 38 | 2026-0.74 | ● |
| 0.75 | 9.00 | 10.50 | 3.00 | 38 | 2026-0.75 | ● |
| 0.76 | 9.10 | 11.00 | 3.00 | 38 | 2026-0.76 | ● |
| 0.77 | 9.30 | 11.00 | 3.00 | 38 | 2026-0.77 | ● |
| 0.78 | 9.40 | 11.00 | 3.00 | 38 | 2026-0.78 | ● |
| 0.79 | 9.50 | 11.00 | 3.00 | 38 | 2026-0.79 | ● |
| 0.80 | 9.60 | 11.50 | 3.00 | 38 | 2026-0.80 | ● |
| 0.81 | 9.70 | 11.50 | 3.00 | 38 | 2026-0.81 | ● |
| 0.82 | 9.90 | 11.50 | 3.00 | 38 | 2026-0.82 | ● |
| 0.83 | 10.00 | 11.50 | 3.00 | 38 | 2026-0.83 | ● |
| 0.84 | 10.10 | 12.00 | 3.00 | 38 | 2026-0.84 | ● |
| 0.85 | 10.20 | 12.00 | 3.00 | 38 | 2026-0.85 | ● |
| 0.86 | 10.30 | 12.00 | 3.00 | 38 | 2026-0.86 | ● |
| 0.87 | 10.50 | 12.00 | 3.00 | 38 | 2026-0.87 | ● |
| 0.88 | 10.60 | 12.50 | 3.00 | 38 | 2026-0.88 | ● |
| 0.89 | 10.70 | 12.50 | 3.00 | 38 | 2026-0.89 | ● |
| 0.90 | 10.80 | 12.50 | 3.00 | 38 | 2026-0.90 | ● |
| 0.91 | 10.90 | 12.50 | 3.00 | 38 | 2026-0.91 | ● |
| 0.92 | 11.10 | 13.00 | 3.00 | 38 | 2026-0.92 | ● |
| 0.93 | 11.20 | 13.00 | 3.00 | 38 | 2026-0.93 | ● |
| 0.94 | 11.30 | 13.00 | 3.00 | 38 | 2026-0.94 | ● |
| 0.95 | 11.40 | 13.00 | 3.00 | 38 | 2026-0.95 | ● |
| 0.96 | 11.50 | 13.50 | 3.00 | 38 | 2026-0.96 | ● |
| 0.97 | 11.70 | 13.50 | 3.00 | 38 | 2026-0.97 | ● |
| 0.98 | 11.80 | 13.50 | 3.00 | 38 | 2026-0.98 | ● |
| 0.99 | 11.90 | 13.50 | 3.00 | 38 | 2026-0.99 | ● |
| 1.00 | 12.00 | 14.50 | 3.00 | 38 | 2026-1.00 | ● |
| 1.01 | 12.10 | 14.50 | 3.00 | 38 | 2026-1.01 | ● |
| 1.02 | 12.30 | 14.50 | 3.00 | 38 | 2026-1.02 | ● |
| 1.03 | 12.40 | 14.50 | 3.00 | 38 | 2026-1.03 | ● |
| 1.04 | 12.50 | 15.00 | 3.00 | 38 | 2026-1.04 | ● |
| 1.05 | 12.60 | 15.00 | 3.00 | 38 | 2026-1.05 | ● |
| 1.06 | 12.70 | 15.00 | 3.00 | 38 | 2026-1.06 | ● |
| 1.07 | 12.90 | 15.00 | 3.00 | 38 | 2026-1.07 | ● |
| 1.08 | 13.00 | 15.50 | 3.00 | 38 | 2026-1.08 | ● |
| 1.09 | 13.10 | 15.50 | 3.00 | 38 | 2026-1.09 | ● |

| D1 h6 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 1.10 | 13.20 | 15.50 | 3.00 | 38 | 2026-1.10 | ● |
| 1.11 | 13.30 | 15.50 | 3.00 | 38 | 2026-1.11 | ● |
| 1.12 | 13.50 | 16.00 | 3.00 | 38 | 2026-1.12 | ● |
| 1.13 | 13.60 | 16.00 | 3.00 | 38 | 2026-1.13 | ● |
| 1.14 | 13.70 | 16.00 | 3.00 | 38 | 2026-1.14 | ● |
| 1.15 | 13.80 | 16.00 | 3.00 | 38 | 2026-1.15 | ● |
| 1.16 | 13.90 | 16.50 | 3.00 | 38 | 2026-1.16 | ● |
| 1.17 | 14.10 | 16.50 | 3.00 | 38 | 2026-1.17 | ● |
| 1.18 | 14.20 | 16.50 | 3.00 | 38 | 2026-1.18 | ● |
| 1.19 | 14.30 | 16.50 | 3.00 | 38 | 2026-1.19 | ● |
| 1.20 | 14.40 | 17.00 | 3.00 | 38 | 2026-1.20 | ● |
| 1.21 | 14.50 | 17.00 | 3.00 | 38 | 2026-1.21 | ● |
| 1.22 | 14.70 | 17.00 | 3.00 | 38 | 2026-1.22 | ● |
| 1.23 | 14.80 | 17.00 | 3.00 | 38 | 2026-1.23 | ● |
| 1.24 | 14.90 | 17.50 | 3.00 | 38 | 2026-1.24 | ● |
| 1.25 | 15.00 | 17.50 | 3.00 | 38 | 2026-1.25 | ● |
| 1.26 | 15.10 | 17.50 | 3.00 | 50 | 2026-1.26 | ● |
| 1.27 | 15.30 | 17.50 | 3.00 | 50 | 2026-1.27 | ● |
| 1.28 | 15.40 | 18.00 | 3.00 | 50 | 2026-1.28 | ● |
| 1.29 | 15.50 | 18.00 | 3.00 | 50 | 2026-1.29 | ● |
| 1.30 | 15.60 | 18.00 | 3.00 | 50 | 2026-1.30 | ● |
| 1.31 | 15.70 | 18.00 | 3.00 | 50 | 2026-1.31 | ● |
| 1.32 | 15.90 | 18.50 | 3.00 | 50 | 2026-1.32 | ● |
| 1.33 | 16.00 | 18.50 | 3.00 | 50 | 2026-1.33 | ● |
| 1.34 | 16.10 | 18.50 | 3.00 | 50 | 2026-1.34 | ● |
| 1.35 | 16.20 | 18.50 | 3.00 | 50 | 2026-1.35 | ● |
| 1.36 | 16.30 | 19.00 | 3.00 | 50 | 2026-1.36 | ● |
| 1.37 | 16.50 | 19.00 | 3.00 | 50 | 2026-1.37 | ● |
| 1.38 | 16.60 | 19.00 | 3.00 | 50 | 2026-1.38 | ● |
| 1.39 | 16.70 | 19.00 | 3.00 | 50 | 2026-1.39 | ● |
| 1.40 | 16.80 | 19.50 | 3.00 | 50 | 2026-1.40 | ● |
| 1.41 | 16.90 | 19.50 | 3.00 | 50 | 2026-1.41 | ● |
| 1.42 | 17.10 | 19.50 | 3.00 | 50 | 2026-1.42 | ● |
| 1.43 | 17.20 | 19.50 | 3.00 | 50 | 2026-1.43 | ● |
| 1.44 | 17.30 | 20.00 | 3.00 | 50 | 2026-1.44 | ● |
| 1.45 | 17.40 | 20.00 | 3.00 | 50 | 2026-1.45 | ● |
| 1.46 | 17.50 | 20.00 | 3.00 | 50 | 2026-1.46 | ● |
| 1.47 | 17.70 | 20.00 | 3.00 | 50 | 2026-1.47 | ● |
| 1.48 | 17.80 | 20.50 | 3.00 | 50 | 2026-1.48 | ● |
| 1.49 | 17.90 | 20.50 | 3.00 | 50 | 2026-1.49 | ● |
| 1.50 | 18.00 | 21.00 | 3.00 | 50 | 2026-1.50 | ● |
| 1.51 | 18.10 | 21.00 | 3.00 | 50 | 2026-1.51 | ● |
| 1.52 | 18.30 | 21.00 | 3.00 | 50 | 2026-1.52 | ● |
| 1.53 | 18.40 | 21.00 | 3.00 | 50 | 2026-1.53 | ● |
| 1.54 | 18.50 | 21.50 | 3.00 | 50 | 2026-1.54 | ● |
| 1.55 | 18.60 | 21.50 | 3.00 | 50 | 2026-1.55 | ● |
| 1.56 | 18.70 | 21.50 | 3.00 | 50 | 2026-1.56 | ● |
| 1.57 | 18.90 | 21.50 | 3.00 | 50 | 2026-1.57 | ● |
| 1.58 | 19.00 | 22.00 | 3.00 | 50 | 2026-1.58 | ● |
| 1.59 | 19.10 | 22.00 | 3.00 | 50 | 2026-1.59 | ● |
| 1.60 | 19.20 | 22.00 | 3.00 | 50 | 2026-1.60 | ● |
| 1.61 | 19.30 | 22.00 | 3.00 | 50 | 2026-1.61 | ● |
| 1.62 | 19.40 | 22.50 | 3.00 | 50 | 2026-1.62 | ● |
| 1.63 | 19.60 | 22.50 | 3.00 | 50 | 2026-1.63 | ● |
| 1.64 | 19.70 | 22.50 | 3.00 | 50 | 2026-1.64 | ● |
| 1.65 | 19.80 | 22.50 | 3.00 | 50 | 2026-1.65 | ● |
| 1.66 | 19.90 | 23.00 | 3.00 | 50 | 2026-1.66 | ● |
| 1.67 | 20.10 | 23.00 | 3.00 | 50 | 2026-1.67 | ● |
| 1.68 | 20.20 | 23.00 | 3.00 | 50 | 2026-1.68 | ● |
| 1.69 | 20.30 | 23.00 | 3.00 | 50 | 2026-1.69 | ● |
| 1.70 | 20.40 | 23.50 | 3.00 | 50 | 2026-1.70 | ● |
| 1.71 | 20.50 | 23.50 | 3.00 | 50 | 2026-1.71 | ● |
| 1.72 | 20.70 | 23.50 | 3.00 | 50 | 2026-1.72 | ● |
| 1.73 | 20.80 | 23.50 | 3.00 | 50 | 2026-1.73 | ● |
| 1.74 | 20.90 | 24.00 | 3.00 | 50 | 2026-1.74 | ● |
| 1.75 | 21.00 | 24.00 | 3.00 | 50 | 2026-1.75 | ● |
| 1.76 | 21.10 | 24.00 | 3.00 | 50 | 2026-1.76 | ● |
| 1.77 | 21.30 | 24.00 | 3.00 | 50 | 2026-1.77 | ● |
| 1.78 | 21.40 | 24.50 | 3.00 | 50 | 2026-1.78 | ● |
| 1.79 | 21.50 | 24.50 | 3.00 | 50 | 2026-1.79 | ● |
| 1.80 | 21.60 | 25.00 | 3.00 | 50 | 2026-1.80 | ● |
| 1.81 | 21.70 | 25.00 | 3.00 | 50 | 2026-1.81 | ● |
| 1.82 | 21.90 | 25.00 | 3.00 | 50 | 2026-1.82 | ● |
| 1.83 | 22.00 | 25.00 | 3.00 | 50 | 2026-1.83 | ● |
| 1.84 | 22.10 | 25.50 | 3.00 | 50 | 2026-1.84 | ● |
| 1.85 | 22.20 | 25.50 | 3.00 | 50 | 2026-1.85 | ● |
| 1.86 | 22.30 | 25.50 | 3.00 | 50 | 2026-1.86 | ● |
| 1.87 | 22.50 | 25.50 | 3.00 | 50 | 2026-1.87 | ● |
| 1.88 | 22.60 | 26.00 | 3.00 | 50 | 2026-1.88 | ● |
| 1.89 | 22.70 | 26.00 | 3.00 | 50 | 2026-1.89 | ● |
| 1.90 | 22.80 | 26.00 | 3.00 | 50 | 2026-1.90 | ● |
| 1.91 | 22.90 | 26.00 | 3.00 | 50 | 2026-1.91 | ● |
| 1.92 | 23.10 | 26.50 | 3.00 | 50 | 2026-1.92 | ● |
| 1.93 | 23.20 | 26.50 | 3.00 | 50 | 2026-1.93 | ● |
| 1.94 | 23.30 | 26.50 | 3.00 | 50 | 2026-1.94 | ● |
| 1.95 | 23.40 | 26.50 | 3.00 | 50 | 2026-1.95 | ● |
| 1.96 | 23.50 | 27.00 | 3.00 | 50 | 2026-1.96 | ● |
| 1.97 | 23.70 | 27.00 | 3.00 | 50 | 2026-1.97 | ● |
| 1.98 | 23.80 | 27.00 | 3.00 | 50 | 2026-1.98 | ● |
| 1.99 | 23.90 | 27.00 | 3.00 | 50 | 2026-1.99 | ● |
| 2.00 | 24.00 | 27.00 | 3.00 | 50 | 2026-2.00 | ● |








| MD VHM HM | λ 35° | 5xD1 | Z=3 | 140° |
|---|---|---|---|---|

| D1 h6 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 0.20 | 1.00 | 1.50 | 3.00 | 38 | 2030-0.20 | ● |
| 0.21 | 1.05 | 1.50 | 3.00 | 38 | 2030-0.21 | ● |
| 0.22 | 1.10 | 1.60 | 3.00 | 38 | 2030-0.22 | ● |
| 0.23 | 1.15 | 1.60 | 3.00 | 38 | 2030-0.23 | ● |
| 0.24 | 1.20 | 1.70 | 3.00 | 38 | 2030-0.24 | ● |
| 0.25 | 1.25 | 1.70 | 3.00 | 38 | 2030-0.25 | ● |
| 0.26 | 1.30 | 1.80 | 3.00 | 38 | 2030-0.26 | ● |
| 0.27 | 1.35 | 1.80 | 3.00 | 38 | 2030-0.27 | ● |
| 0.28 | 1.40 | 1.90 | 3.00 | 38 | 2030-0.28 | ● |
| 0.29 | 1.45 | 1.90 | 3.00 | 38 | 2030-0.29 | ● |
| 0.30 | 1.50 | 2.00 | 3.00 | 38 | 2030-0.30 | ● |
| 0.31 | 1.55 | 2.00 | 3.00 | 38 | 2030-0.31 | ● |
| 0.32 | 1.60 | 2.10 | 3.00 | 38 | 2030-0.32 | ● |
| 0.33 | 1.65 | 2.10 | 3.00 | 38 | 2030-0.33 | ● |
| 0.34 | 1.70 | 2.20 | 3.00 | 38 | 2030-0.34 | ● |
| 0.35 | 1.75 | 2.20 | 3.00 | 38 | 2030-0.35 | ● |
| 0.36 | 1.80 | 2.30 | 3.00 | 38 | 2030-0.36 | ● |
| 0.37 | 1.85 | 2.30 | 3.00 | 38 | 2030-0.37 | ● |
| 0.38 | 1.90 | 2.40 | 3.00 | 38 | 2030-0.38 | ● |
| 0.39 | 1.95 | 2.40 | 3.00 | 38 | 2030-0.39 | ● |
| 0.40 | 2.00 | 2.50 | 3.00 | 38 | 2030-0.40 | ● |
| 0.41 | 2.05 | 2.50 | 3.00 | 38 | 2030-0.41 | ● |
| 0.42 | 2.10 | 2.60 | 3.00 | 38 | 2030-0.42 | ● |
| 0.43 | 2.15 | 2.60 | 3.00 | 38 | 2030-0.43 | ● |
| 0.44 | 2.20 | 2.70 | 3.00 | 38 | 2030-0.44 | ● |
| 0.45 | 2.25 | 2.70 | 3.00 | 38 | 2030-0.45 | ● |
| 0.46 | 2.30 | 2.80 | 3.00 | 38 | 2030-0.46 | ● |
| 0.47 | 2.35 | 2.80 | 3.00 | 38 | 2030-0.47 | ● |
| 0.48 | 2.40 | 2.90 | 3.00 | 38 | 2030-0.48 | ● |
| 0.49 | 2.45 | 2.90 | 3.00 | 38 | 2030-0.49 | ● |
| 0.50 | 2.50 | 3.00 | 3.00 | 38 | 2030-0.50 | ● |
| 0.51 | 2.55 | 3.00 | 3.00 | 38 | 2030-0.51 | ● |
| 0.52 | 2.60 | 3.10 | 3.00 | 38 | 2030-0.52 | ● |
| 0.53 | 2.65 | 3.10 | 3.00 | 38 | 2030-0.53 | ● |
| 0.54 | 2.70 | 3.20 | 3.00 | 38 | 2030-0.54 | ● |
| 0.55 | 2.75 | 3.20 | 3.00 | 38 | 2030-0.55 | ● |
| 0.56 | 2.80 | 3.30 | 3.00 | 38 | 2030-0.56 | ● |
| 0.57 | 2.85 | 3.30 | 3.00 | 38 | 2030-0.57 | ● |
| 0.58 | 2.90 | 3.40 | 3.00 | 38 | 2030-0.58 | ● |
| 0.59 | 2.95 | 3.40 | 3.00 | 38 | 2030-0.59 | ● |
| 0.60 | 3.00 | 3.50 | 3.00 | 38 | 2030-0.60 | ● |
| 0.61 | 3.05 | 3.50 | 3.00 | 38 | 2030-0.61 | ● |
| 0.62 | 3.10 | 3.60 | 3.00 | 38 | 2030-0.62 | ● |
| 0.63 | 3.15 | 3.60 | 3.00 | 38 | 2030-0.63 | ● |
| 0.64 | 3.20 | 3.70 | 3.00 | 38 | 2030-0.64 | ● |
| 0.65 | 3.25 | 3.70 | 3.00 | 38 | 2030-0.65 | ● |
| 0.66 | 3.30 | 3.80 | 3.00 | 38 | 2030-0.66 | ● |
| 0.67 | 3.35 | 3.80 | 3.00 | 38 | 2030-0.67 | ● |
| 0.68 | 3.40 | 3.90 | 3.00 | 38 | 2030-0.68 | ● |
| 0.69 | 3.45 | 3.90 | 3.00 | 38 | 2030-0.69 | ● |
| 0.70 | 3.50 | 4.00 | 3.00 | 38 | 2030-0.70 | ● |
| 0.71 | 3.55 | 4.00 | 3.00 | 38 | 2030-0.71 | ● |
| 0.72 | 3.60 | 4.10 | 3.00 | 38 | 2030-0.72 | ● |
| 0.73 | 3.65 | 4.10 | 3.00 | 38 | 2030-0.73 | ● |
| 0.74 | 3.70 | 4.20 | 3.00 | 38 | 2030-0.74 | ● |
| 0.75 | 3.75 | 4.20 | 3.00 | 38 | 2030-0.75 | ● |
| 0.76 | 3.80 | 4.30 | 3.00 | 38 | 2030-0.76 | ● |
| 0.77 | 3.85 | 4.30 | 3.00 | 38 | 2030-0.77 | ● |
| 0.78 | 3.90 | 4.40 | 3.00 | 38 | 2030-0.78 | ● |
| 0.79 | 3.95 | 4.40 | 3.00 | 38 | 2030-0.79 | ● |
| 0.80 | 4.00 | 4.50 | 3.00 | 38 | 2030-0.80 | ● |
| 0.81 | 4.05 | 4.50 | 3.00 | 38 | 2030-0.81 | ● |
| 0.82 | 4.10 | 4.60 | 3.00 | 38 | 2030-0.82 | ● |
| 0.83 | 4.15 | 4.60 | 3.00 | 38 | 2030-0.83 | ● |
| 0.84 | 4.20 | 4.70 | 3.00 | 38 | 2030-0.84 | ● |
| 0.85 | 4.25 | 4.70 | 3.00 | 38 | 2030-0.85 | ● |
| 0.86 | 4.30 | 4.80 | 3.00 | 38 | 2030-0.86 | ● |
| 0.87 | 4.35 | 4.80 | 3.00 | 38 | 2030-0.87 | ● |
| 0.88 | 4.40 | 4.90 | 3.00 | 38 | 2030-0.88 | ● |
| 0.89 | 4.45 | 4.90 | 3.00 | 38 | 2030-0.89 | ● |
| 0.90 | 4.50 | 5.00 | 3.00 | 38 | 2030-0.90 | ● |
| 0.91 | 4.55 | 5.00 | 3.00 | 38 | 2030-0.91 | ● |
| 0.92 | 4.60 | 5.10 | 3.00 | 38 | 2030-0.92 | ● |
| 0.93 | 4.65 | 5.10 | 3.00 | 38 | 2030-0.93 | ● |
| 0.94 | 4.70 | 5.20 | 3.00 | 38 | 2030-0.94 | ● |
| 0.95 | 4.75 | 5.20 | 3.00 | 38 | 2030-0.95 | ● |
| 0.96 | 4.80 | 5.30 | 3.00 | 38 | 2030-0.96 | ● |
| 0.97 | 4.85 | 5.30 | 3.00 | 38 | 2030-0.97 | ● |
| 0.98 | 4.90 | 5.40 | 3.00 | 38 | 2030-0.98 | ● |
| 0.99 | 4.95 | 5.40 | 3.00 | 38 | 2030-0.99 | ● |
| 1.00 | 5.00 | 6.50 | 3.00 | 38 | 2030-1.00 | ● |
| 1.01 | 5.05 | 6.50 | 3.00 | 38 | 2030-1.01 | ● |
| 1.02 | 5.10 | 6.50 | 3.00 | 38 | 2030-1.02 | ● |
| 1.03 | 5.15 | 6.50 | 3.00 | 38 | 2030-1.03 | ● |
| 1.04 | 5.20 | 6.50 | 3.00 | 38 | 2030-1.04 | ● |
| 1.05 | 5.25 | 6.50 | 3.00 | 38 | 2030-1.05 | ● |
| 1.06 | 5.30 | 6.50 | 3.00 | 38 | 2030-1.06 | ● |
| 1.07 | 5.35 | 7.50 | 3.00 | 38 | 2030-1.07 | ● |
| 1.08 | 5.40 | 7.50 | 3.00 | 38 | 2030-1.08 | ● |
| 1.09 | 5.45 | 7.50 | 3.00 | 38 | 2030-1.09 | ● |

Micro-forets / Mikrobohrer / Micro drills | Ø2.12 - Ø2.99 mm | 2030

MICRO-Line

| D1 h6 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 1.10 | 5.50 | 7.50 | 3.00 | 38 | 2030-1.10 | ● |
| 1.11 | 5.55 | 7.50 | 3.00 | 38 | 2030-1.11 | ● |
| 1.12 | 5.60 | 7.50 | 3.00 | 38 | 2030-1.12 | ● |
| 1.13 | 5.65 | 7.50 | 3.00 | 38 | 2030-1.13 | ● |
| 1.14 | 5.70 | 7.50 | 3.00 | 38 | 2030-1.14 | ● |
| 1.15 | 5.75 | 7.50 | 3.00 | 38 | 2030-1.15 | ● |
| 1.16 | 5.80 | 7.50 | 3.00 | 38 | 2030-1.16 | ● |
| 1.17 | 5.85 | 7.50 | 3.00 | 38 | 2030-1.17 | ● |
| 1.18 | 5.90 | 8.50 | 3.00 | 38 | 2030-1.18 | ● |
| 1.19 | 5.95 | 8.50 | 3.00 | 38 | 2030-1.19 | ● |
| 1.20 | 6.00 | 8.50 | 3.00 | 38 | 2030-1.20 | ● |
| 1.21 | 6.05 | 8.50 | 3.00 | 38 | 2030-1.21 | ● |
| 1.22 | 6.10 | 8.50 | 3.00 | 38 | 2030-1.22 | ● |
| 1.23 | 6.15 | 8.50 | 3.00 | 38 | 2030-1.23 | ● |
| 1.24 | 6.20 | 8.50 | 3.00 | 38 | 2030-1.24 | ● |
| 1.25 | 6.25 | 8.50 | 3.00 | 38 | 2030-1.25 | ● |
| 1.26 | 6.30 | 8.50 | 3.00 | 38 | 2030-1.26 | ● |
| 1.27 | 6.35 | 8.50 | 3.00 | 38 | 2030-1.27 | ● |
| 1.28 | 6.40 | 8.50 | 3.00 | 38 | 2030-1.28 | ● |
| 1.29 | 6.45 | 8.50 | 3.00 | 38 | 2030-1.29 | ● |
| 1.30 | 6.50 | 8.50 | 3.00 | 38 | 2030-1.30 | ● |
| 1.31 | 6.55 | 8.50 | 3.00 | 38 | 2030-1.31 | ● |
| 1.32 | 6.60 | 8.50 | 3.00 | 38 | 2030-1.32 | ● |
| 1.33 | 6.65 | 9.50 | 3.00 | 38 | 2030-1.33 | ● |
| 1.34 | 6.70 | 9.50 | 3.00 | 38 | 2030-1.34 | ● |
| 1.35 | 6.75 | 9.50 | 3.00 | 38 | 2030-1.35 | ● |
| 1.36 | 6.80 | 9.50 | 3.00 | 38 | 2030-1.36 | ● |
| 1.37 | 6.85 | 9.50 | 3.00 | 38 | 2030-1.37 | ● |
| 1.38 | 6.90 | 9.50 | 3.00 | 38 | 2030-1.38 | ● |
| 1.39 | 6.95 | 9.50 | 3.00 | 38 | 2030-1.39 | ● |
| 1.40 | 7.00 | 9.50 | 3.00 | 38 | 2030-1.40 | ● |
| 1.41 | 7.05 | 9.50 | 3.00 | 38 | 2030-1.41 | ● |
| 1.42 | 7.10 | 9.50 | 3.00 | 38 | 2030-1.42 | ● |
| 1.43 | 7.15 | 9.50 | 3.00 | 38 | 2030-1.43 | ● |
| 1.44 | 7.20 | 9.50 | 3.00 | 38 | 2030-1.44 | ● |
| 1.45 | 7.25 | 9.50 | 3.00 | 38 | 2030-1.45 | ● |
| 1.46 | 7.30 | 9.50 | 3.00 | 38 | 2030-1.46 | ● |
| 1.47 | 7.35 | 9.50 | 3.00 | 38 | 2030-1.47 | ● |
| 1.48 | 7.40 | 9.50 | 3.00 | 38 | 2030-1.48 | ● |
| 1.49 | 7.45 | 9.50 | 3.00 | 38 | 2030-1.49 | ● |
| 1.50 | 7.50 | 9.50 | 3.00 | 38 | 2030-1.50 | ● |
| 1.51 | 7.55 | 10.50 | 3.00 | 38 | 2030-1.51 | ● |
| 1.52 | 7.60 | 10.50 | 3.00 | 38 | 2030-1.52 | ● |
| 1.53 | 7.65 | 10.50 | 3.00 | 38 | 2030-1.53 | ● |
| 1.54 | 7.70 | 10.50 | 3.00 | 38 | 2030-1.54 | ● |
| 1.55 | 7.75 | 10.50 | 3.00 | 38 | 2030-1.55 | ● |
| 1.56 | 7.80 | 10.50 | 3.00 | 38 | 2030-1.56 | ● |
| 1.57 | 7.85 | 10.50 | 3.00 | 38 | 2030-1.57 | ● |
| 1.58 | 7.90 | 10.50 | 3.00 | 38 | 2030-1.58 | ● |
| 1.59 | 7.95 | 10.50 | 3.00 | 38 | 2030-1.59 | ● |
| 1.60 | 8.00 | 10.50 | 3.00 | 38 | 2030-1.60 | ● |
| 1.61 | 8.05 | 10.50 | 3.00 | 38 | 2030-1.61 | ● |
| 1.62 | 8.10 | 10.50 | 3.00 | 38 | 2030-1.62 | ● |
| 1.63 | 8.15 | 10.50 | 3.00 | 38 | 2030-1.63 | ● |
| 1.64 | 8.20 | 10.50 | 3.00 | 38 | 2030-1.64 | ● |
| 1.65 | 8.25 | 10.50 | 3.00 | 38 | 2030-1.65 | ● |
| 1.66 | 8.30 | 10.50 | 3.00 | 38 | 2030-1.66 | ● |
| 1.67 | 8.35 | 10.50 | 3.00 | 38 | 2030-1.67 | ● |
| 1.68 | 8.40 | 10.50 | 3.00 | 38 | 2030-1.68 | ● |
| 1.69 | 8.45 | 10.50 | 3.00 | 38 | 2030-1.69 | ● |
| 1.70 | 8.50 | 10.50 | 3.00 | 38 | 2030-1.70 | ● |
| 1.71 | 8.55 | 11.50 | 3.00 | 38 | 2030-1.71 | ● |
| 1.72 | 8.60 | 11.50 | 3.00 | 38 | 2030-1.72 | ● |
| 1.73 | 8.65 | 11.50 | 3.00 | 38 | 2030-1.73 | ● |
| 1.74 | 8.70 | 11.50 | 3.00 | 38 | 2030-1.74 | ● |
| 1.75 | 8.75 | 11.50 | 3.00 | 38 | 2030-1.75 | ● |
| 1.76 | 8.80 | 11.50 | 3.00 | 38 | 2030-1.76 | ● |
| 1.77 | 8.85 | 11.50 | 3.00 | 38 | 2030-1.77 | ● |
| 1.78 | 8.90 | 11.50 | 3.00 | 38 | 2030-1.78 | ● |
| 1.79 | 8.95 | 11.50 | 3.00 | 38 | 2030-1.79 | ● |
| 1.80 | 9.00 | 11.50 | 3.00 | 38 | 2030-1.80 | ● |
| 1.81 | 9.05 | 11.50 | 3.00 | 38 | 2030-1.81 | ● |
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| 1.83 | 9.15 | 11.50 | 3.00 | 38 | 2030-1.83 | ● |
| 1.84 | 9.20 | 11.50 | 3.00 | 38 | 2030-1.84 | ● |
| 1.85 | 9.25 | 11.50 | 3.00 | 38 | 2030-1.85 | ● |
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| 1.89 | 9.45 | 11.50 | 3.00 | 38 | 2030-1.89 | ● |
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| 1.94 | 9.70 | 12.50 | 3.00 | 38 | 2030-1.94 | ● |
| 1.95 | 9.75 | 12.50 | 3.00 | 38 | 2030-1.95 | ● |
| 1.96 | 9.80 | 12.50 | 3.00 | 38 | 2030-1.96 | ● |
| 1.97 | 9.85 | 12.50 | 3.00 | 38 | 2030-1.97 | ● |
| 1.98 | 9.90 | 12.50 | 3.00 | 38 | 2030-1.98 | ● |
| 1.99 | 9.95 | 12.50 | 3.00 | 38 | 2030-1.99 | ● |
| 2.00 | 10.00 | 12.50 | 3.00 | 38 | 2030-2.00 | ● |
| 2.01 | 10.05 | 12.50 | 3.00 | 38 | 2030-2.01 | ● |
| 2.02 | 10.10 | 12.50 | 3.00 | 38 | 2030-2.02 | ● |
| 2.03 | 10.15 | 12.50 | 3.00 | 38 | 2030-2.03 | ● |
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| 2.05 | 10.25 | 12.50 | 3.00 | 38 | 2030-2.05 | ● |
| 2.06 | 10.30 | 12.50 | 3.00 | 38 | 2030-2.06 | ● |
| 2.07 | 10.35 | 12.50 | 3.00 | 38 | 2030-2.07 | ● |
| 2.08 | 10.40 | 12.50 | 3.00 | 38 | 2030-2.08 | ● |
| 2.09 | 10.45 | 12.50 | 3.00 | 38 | 2030-2.09 | ● |
| 2.10 | 10.50 | 12.50 | 3.00 | 38 | 2030-2.10 | ● |
| 2.11 | 10.55 | 12.50 | 3.00 | 38 | 2030-2.11 | ● |

| D1 h6 | L2 | L3 | D2 h6 | L1 | Art. N° | Z |
|---|---|---|---|---|---|---|
| 2.12 | 10.60 | 12.50 | 3.00 | 38 | 2030-2.12 | ● |
| 2.13 | 10.65 | 13.50 | 3.00 | 38 | 2030-2.13 | ● |
| 2.14 | 10.70 | 13.50 | 3.00 | 38 | 2030-2.14 | ● |
| 2.15 | 10.75 | 13.50 | 3.00 | 38 | 2030-2.15 | ● |
| 2.16 | 10.80 | 13.50 | 3.00 | 38 | 2030-2.16 | ● |
| 2.17 | 10.85 | 13.50 | 3.00 | 38 | 2030-2.17 | ● |
| 2.18 | 10.90 | 13.50 | 3.00 | 38 | 2030-2.18 | ● |
| 2.19 | 10.95 | 13.50 | 3.00 | 38 | 2030-2.19 | ● |
| 2.20 | 11.00 | 13.50 | 3.00 | 38 | 2030-2.20 | ● |
| 2.21 | 11.05 | 13.50 | 3.00 | 38 | 2030-2.21 | ● |
| 2.22 | 11.10 | 13.50 | 3.00 | 38 | 2030-2.22 | ● |
| 2.23 | 11.15 | 13.50 | 3.00 | 38 | 2030-2.23 | ● |
| 2.24 | 11.20 | 13.50 | 3.00 | 38 | 2030-2.24 | ● |
| 2.25 | 11.25 | 13.50 | 3.00 | 38 | 2030-2.25 | ● |
| 2.26 | 11.30 | 13.50 | 3.00 | 38 | 2030-2.26 | ● |
| 2.27 | 11.35 | 13.50 | 3.00 | 38 | 2030-2.27 | ● |
| 2.28 | 11.40 | 13.50 | 3.00 | 38 | 2030-2.28 | ● |
| 2.29 | 11.45 | 13.50 | 3.00 | 38 | 2030-2.29 | ● |
| 2.30 | 11.50 | 13.50 | 3.00 | 38 | 2030-2.30 | ● |
| 2.31 | 11.55 | 13.50 | 3.00 | 38 | 2030-2.31 | ● |
| 2.32 | 11.60 | 13.50 | 3.00 | 38 | 2030-2.32 | ● |
| 2.33 | 11.65 | 13.50 | 3.00 | 38 | 2030-2.33 | ● |
| 2.34 | 11.70 | 13.50 | 3.00 | 38 | 2030-2.34 | ● |
| 2.35 | 11.75 | 13.50 | 3.00 | 38 | 2030-2.35 | ● |
| 2.36 | 11.80 | 13.50 | 3.00 | 38 | 2030-2.36 | ● |
| 2.37 | 11.85 | 14.50 | 3.00 | 38 | 2030-2.37 | ● |
| 2.38 | 11.90 | 14.50 | 3.00 | 38 | 2030-2.38 | ● |
| 2.39 | 11.95 | 14.50 | 3.00 | 38 | 2030-2.39 | ● |
| 2.40 | 12.00 | 14.50 | 3.00 | 38 | 2030-2.40 | ● |
| 2.41 | 12.05 | 14.50 | 3.00 | 38 | 2030-2.41 | ● |
| 2.42 | 12.10 | 14.50 | 3.00 | 38 | 2030-2.42 | ● |
| 2.43 | 12.15 | 14.50 | 3.00 | 38 | 2030-2.43 | ● |
| 2.44 | 12.20 | 14.50 | 3.00 | 38 | 2030-2.44 | ● |
| 2.45 | 12.25 | 14.50 | 3.00 | 38 | 2030-2.45 | ● |
| 2.46 | 12.30 | 14.50 | 3.00 | 38 | 2030-2.46 | ● |
| 2.47 | 12.35 | 14.50 | 3.00 | 38 | 2030-2.47 | ● |
| 2.48 | 12.40 | 14.50 | 3.00 | 38 | 2030-2.48 | ● |
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| 2.50 | 12.50 | 14.50 | 3.00 | 38 | 2030-2.50 | ● |
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| 2.54 | 12.70 | 14.50 | 3.00 | 38 | 2030-2.54 | ● |
| 2.55 | 12.75 | 14.50 | 3.00 | 38 | 2030-2.55 | ● |
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| 2.57 | 12.85 | 14.50 | 3.00 | 38 | 2030-2.57 | ● |
| 2.58 | 12.90 | 14.50 | 3.00 | 38 | 2030-2.58 | ● |
| 2.59 | 12.95 | 14.50 | 3.00 | 38 | 2030-2.59 | ● |
| 2.60 | 13.00 | 14.50 | 3.00 | 38 | 2030-2.60 | ● |
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| 2.66 | 13.30 | 16.50 | 3.00 | 38 | 2030-2.66 | ● |
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| 2.70 | 13.50 | 16.50 | 3.00 | 38 | 2030-2.70 | ● |
| 2.71 | 13.55 | 16.55 | 3.00 | 38 | 2030-2.71 | ● |
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| 2.73 | 13.65 | 16.50 | 3.00 | 38 | 2030-2.73 | ● |
| 2.74 | 13.70 | 16.50 | 3.00 | 38 | 2030-2.74 | ● |
| 2.75 | 13.75 | 16.50 | 3.00 | 38 | 2030-2.75 | ● |
| 2.76 | 13.80 | 16.50 | 3.00 | 38 | 2030-2.76 | ● |
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| 2.79 | 13.95 | 16.50 | 3.00 | 38 | 2030-2.79 | ● |
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| 2.81 | 14.05 | 16.50 | 3.00 | 38 | 2030-2.81 | ● |
| 2.82 | 14.10 | 16.50 | 3.00 | 38 | 2030-2.82 | ● |
| 2.83 | 14.15 | 16.50 | 3.00 | 38 | 2030-2.83 | ● |
| 2.84 | 14.20 | 16.50 | 3.00 | 38 | 2030-2.84 | ● |
| 2.85 | 14.25 | 16.50 | 3.00 | 38 | 2030-2.85 | ● |
| 2.86 | 14.30 | 16.50 | 3.00 | 38 | 2030-2.86 | ● |
| 2.87 | 14.35 | 16.50 | 3.00 | 38 | 2030-2.87 | ● |
| 2.88 | 14.40 | 16.50 | 3.00 | 38 | 2030-2.88 | ● |
| 2.89 | 14.45 | 16.50 | 3.00 | 38 | 2030-2.89 | ● |
| 2.90 | 14.50 | 16.50 | 3.00 | 38 | 2030-2.90 | ● |
| 2.91 | 14.55 | 16.50 | 3.00 | 38 | 2030-2.91 | ● |
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| 2.93 | 14.65 | 16.50 | 3.00 | 38 | 2030-2.93 | ● |
| 2.94 | 14.70 | 16.50 | 3.00 | 38 | 2030-2.94 | ● |
| 2.95 | 14.75 | 16.50 | 3.00 | 38 | 2030-2.95 | ● |
| 2.96 | 14.80 | 16.50 | 3.00 | 38 | 2030-2.96 | ● |
| 2.97 | 14.85 | 16.50 | 3.00 | 38 | 2030-2.97 | ● |
| 2.98 | 14.90 | 16.50 | 3.00 | 38 | 2030-2.98 | ● |
| 2.99 | 14.95 | 16.50 | 3.00 | 38 | 2030-2.99 | ● |

MICRO-Line

Informations techniques et symboles
Technische Informationen und Symbole
Technical information and symbols

60° 90° 120° — Angle / Winkel / Angle

λ 25° — Angle d'hélice / Spiralwinkel / Helix angle

λ 36° λ 38° λ 40° — Hélice différente / Unterschiedliche Spirale / Different helix

λ 35°/38° — Hélice progressive / Progressive Spirale / Progressive helix

Z — Nombre de dents / Anzahl der Zähne / Number of teeth

2xD1 — Rapport longueur-diamètre / Länge-Durchmesser Verhältnis / Length to diameter ratio

 — Lèvres, affûtage à facettes / Schneiden, Facettenschärfen / Flutes, sharpening with facets

 — Taillage demi-lune / Kanonenbohrer Spitze / Gundrills tip

 — Taillage renforcé 3/4 / 3/4 genuteter Fräser / 3/4 straight fluted

 — Usinage radial, diagonal et axial / Radiale, diagonale und axiale Bearbeitung / Radial, diagonal and axial machining

 — Usinage radial et axial / Radiale und axiale Bearbeitung / Radial and axial machining



Chanfrein / Fase / Chamfer

Sharp Corner — Coin vif / Scharfkantige Ecke / Sharp corner

 — Fraises hémisphériques / Radiusfräser / End mills with ball nose

Radius Corner — Rayon de coin / Eckradius / Corner radius

 — Dents avec coupe centrale / Zähne Zentrumschnitt / Teeth center cutting

 — Denture décalée / Versetzte Verzahnung / Alterned teeth

DHD — Denture à pas irrégulier, hélice différente / Ungleiche Teilung, unterschiedliche Spirale / Uneven tooth pitch, different helix

DHP — Denture à pas irrégulier, hélice progressive / Ungleiche Teilung, progressive Spirale / Uneven tooth pitch, progressive helix

 — Usinage torique / Torusbearbeitung / Toroidal machining

MD VHM HM — Métal dur / Vollhartmetall / Hard metal

| | | | |
|---|---|---|---|
| Diamètre outil<br>Werkzeugdurchmesser<br>Tool diametre | D (mm) | | |
| Nombre de dents<br>Zähnezahl<br>Number of teeth | Z | | |
| Profondeur de coupe<br>Schnitttiefe<br>Cutting depth | ap (mm) | | |
| Largeur de coupe<br>Schnittbreite<br>Cutting width | ae (mm) | | |
| Vitesse de coupe<br>Schnittgeschwindigkeit<br>Cutting speed | (m/min) | Vc = | $\frac{D \times \pi \times n}{1000}$ |
| Nombre de tours<br>Umdrehungen<br>Rotations | (U/min) | n = | $\frac{Vc \times 1000}{\pi \times D}$ |
| Avance par dent<br>Vorschub pro Zahn<br>Cutting feed per teeth | (mm/tooth) | fz = | $\frac{Vf}{n \times Z}$ |
| Vitesse d'avance<br>Vorschubgeschwindigkeit<br>Feed rate | (mm/min) | Vf = | fz x Z x n |
| Débit d'enlèvement de copeaux<br>Spanvolumen<br>Chip flow rate | ($mm^3$/min) | Q= | ap x ae x Vf |
| Avance par tour<br>Vorschub pro Umdrehung<br>Cutting feed per rotation | (mm/U) | f = | $\frac{Vf}{n}$ |

Nos propositions techniques s'appliquent à la plupart des utilisations courantes.
N'hésitez pas à nous contacter pour des conseils plus précis.

Diese technische Empfehlungen gelten für die Mehrzahl der Standardanwendungen.
Unsere Techniker beraten Sie gerne für spezifische Anliegen.

These technical propositions apply to the majority of standard usages.
Do not hesitate to contact us for more specific advices.

# CIRCO-Line



APPLITEC
CUTTING TOOLS

Codification
Kodifizierung
Coding guide > 17.03

Définition du nombre de dents
Empfohlene Zähnezahl
Recommended number of teeth > 17.04

Exécutions spéciales
Sonderanfertigungen
Special executions > 17.05

Conseils d'utilisation
Anwendungsempfehlungen
Application recommendations > 17.06

Nuances
Sorten
Grades > 17.07

Fraises circulaires en métal dur – denture fine
VHM-Kreissägeblätter – feine Verzahnung
Solid carbide slitting saws – fine teeth
1101 > 17.08

Fraises circulaires en métal dur – denture grossière
VHM-Kreissägeblätter – grobe Verzahnung
Solid carbide slitting saws – large teeth
1102 > 17.10

Fraises circulaires en métal dur – denture extra-fine
VHM-Kreissägeblätter – extra feine Verzahnung
Solid carbide slitting saws – extra fine teeth
1103 > 17.12

Fraises circulaires en métal dur - denture revêtue pour INOX
VHM-Kreissägeblätter - Verzahnung beschichtet für INOX
Solid carbide slitting saws - Teeth coated for INOX
1104 > 17.14

Fraises circulaires en métal dur avec un biais - CW-CCW
VHM-Kreissägeblätter mit Schräge - CW-CCW
Solid carbide angled slitting saws - CW-CCW
1105 > 17.16

Disques en métal dur rectifiés
Fertig geschliffene VHM-Ronden
Fully ground solid carbide discs
1106 > 17.18

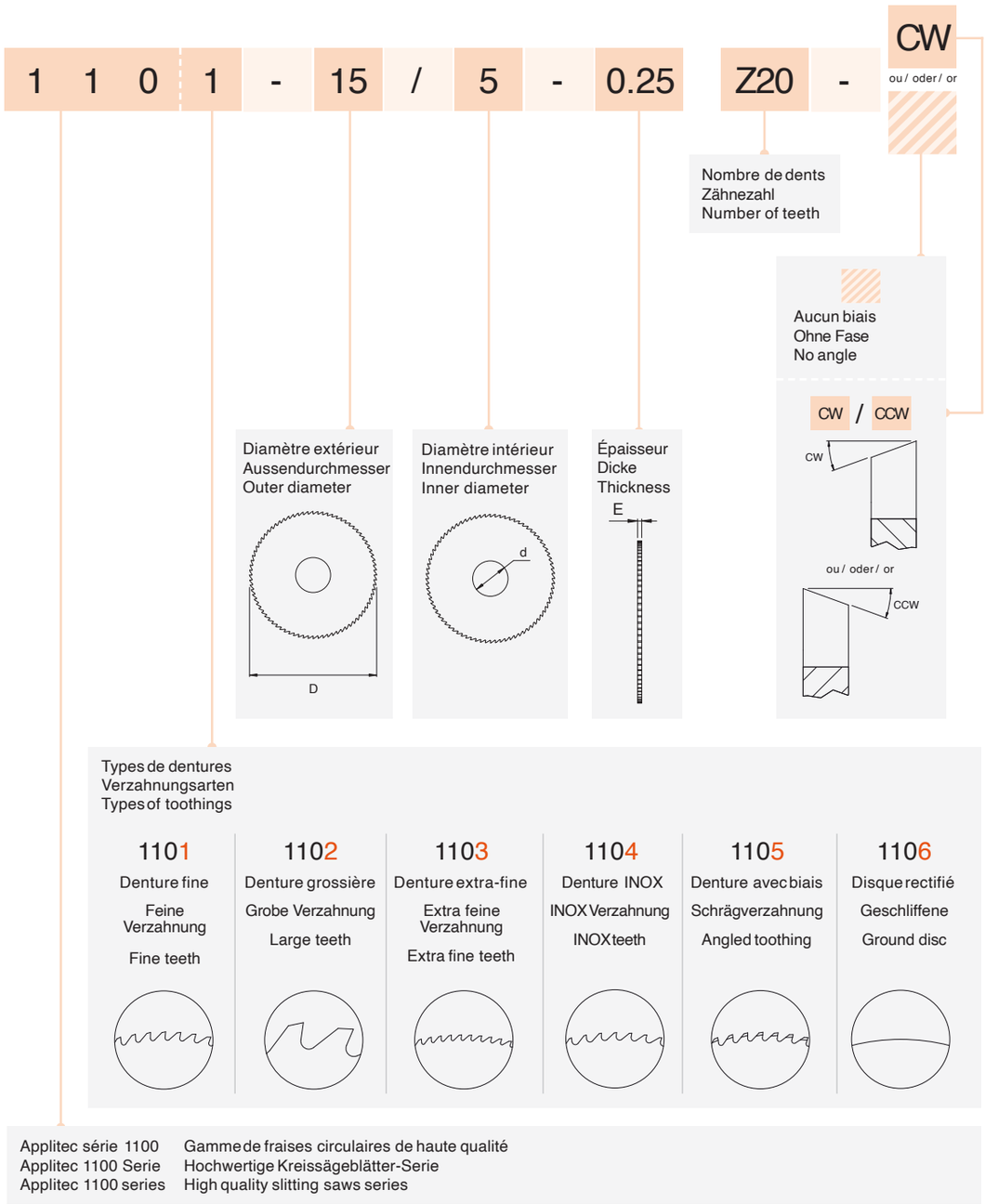
Tasseaux porte-fraise avec serrage avant
Fräsdorne mit vorderer Klemmung
Milling arbors with front clamping
2810 / 2811 / 2815 > 17.22

Tasseaux porte-fraise avec serrage arrière
Fräsdorne mit rückseitiger Klemmung
Milling arbors with rear clamping
2820 / 1820 > 17.23

Pièces de rechange
Ersatzteile
Spare parts > 17.24








Applitec série 1100 — Gamme de fraises circulaires de haute qualité
Applitec 1100 Serie — Hochwertige Kreissägeblätter-Serie
Applitec 1100 series — High quality slitting saws series

Idéalement 2-3 dents en contact

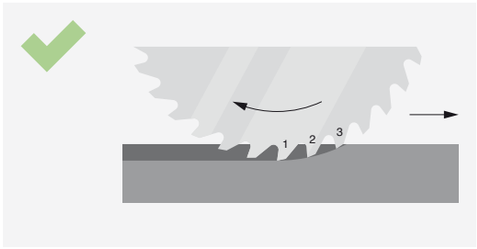
Im Idealfall 2-3 Zähneim Einsatz

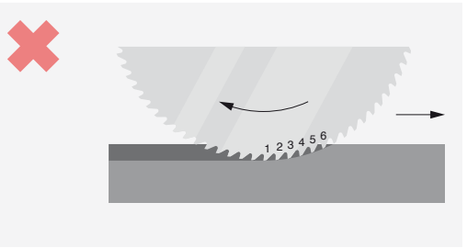
Ideally 2-3 teeth in contact

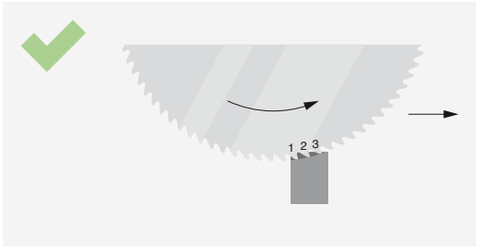
Trop de dents = avancetrop faible par dent / pas assez de place pour le copeau
Trop peu de dents = risque de vibration / usure prématurée

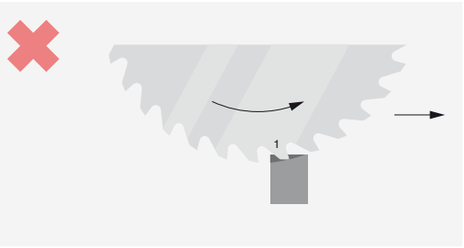
Zu viele Zähne = zu geringer Vorschub pro Zahn / zu kleiner Spanraum
Zu wenig Zähne = Vibrationen / Verschleissrisiko

Too many teeth = feed too low per tooth / not enough place for the chips
Not enough teeth = vibration / risk of quick wearout














En complément de l'offre présentée dans le catalogue, des réalisations spéciales peuvent également être effectuées sur demande.

Ergänzend zu unserem Katalogsortiment sind auf Anfrage auch Sonderanfertigungen möglich.

In addition to our catalog range, special executions can also be carried out upon request.

Alésage avec entrée de clavett

Bohrung mit Keilnute

Bore with keyway



Train de fraises

Spezielle Kreissägeblätter im Satz

Special slitting saws in set



Denture à rayon

Radiusfräser

Radius tooth



Denture forme B

Zahnform B

Tooth form B



Denture alternée forme W

Wechselverzahnung Form W

Alternate teeth form W



Denture isocèle

Prismenfräser

Biconical slitting saws



Denture hélicoïdale

Schrägverzahnung

Helical teeth



Revêtement sur demande

Beschichtung auf Anfrage

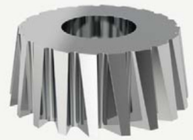
Coating on request



Denture conique 1 taille

Winkelfräser 1 Schnitt

Conical single cut saw



Denture conique 2 tailles

Winkelfräser 2 Schnitt

Conical double cut saw



| Matière<br>Werkstoff<br>Material | Lubrifiant*<br>Kühlung*<br>Coolant* | VC<br>(m/min) | Choix de la denture / avance<br>Verzahnungswahl / Vorschub<br>Teeth selection / cutting feed |
|---|---|---|---|
| Acier de décolletage<br>Automatenstahl<br>Free-cutting steel (P) | O/ E | 120 - 240 | Type 1101 / 1104 / 1105<br>• Pour usinage peu profond ou longueur à fendre faible. Avance par dent: 0.005-0.05**<br>• Für geringe Bearbeitungstiefen oder kurze Schlitzlängen. Vorschub pro Zahn: 0.005-0.05**<br>• For low machining depth or short slots. Feed per tooth: 0.005-0.05** |
| Acier<br>Stahl<br>Steel <600 N/mm² (P) | O/ E | 100 - 200 | |
| Acier<br>Stahl<br>Steel <800 N/mm² (P) | O/ E | 80 - 160 | |
| Acier<br>Stahl<br>Steel <1000 N/mm² (P) | O/ E | 60 - 120 | |
| Acier<br>Stahl<br>Steel >1000 N/mm² (P) | O/ E | 40 - 80 | Type 1102<br>• Pour usinage profond ou grande longueur à fendre. Avance par dent: 0.01-0.1**<br>• Für grosse Bearbeitungstiefen oder grosse Schlitzlängen. Vorschub pro Zahn: 0.01-0.1**<br>• For deep machining or long slots. Feed per tooth: 0.01-0.1** |
| Fonte<br>Gusseisen<br>Cast iron (K) | A / E | 60 - 120 | |
| Acier inoxydable<br>Rostfreistahl<br>Stainless steel (M) | O/ E | 50 - 100 | |
| Aluminium Si < 12% (N) | O/ E | 150 - 600 | Type 1103<br>• Pour usinage de pièces fragiles ou fines. Avance par dent: 0.002-0.02**<br>• Für die Bearbeitung von empfindlichen oder dünnwandigen Werkstücken. Vorschub pro Zahn: 0.002-0.02**<br>• For machining of fragile or thin workpieces. Feed per tooth: 0.002-0.02** |
| Aluminium Si > 12% (N) | O/E | 80 - 300 | |
| Cuivre, laiton, bronze<br>Kupfer, Messing, Bronze<br>Copper, brass, bronze (N) | A / O/ E | 80 - 300 | |
| Thermoplastique<br>Thermoplaste<br>Thermoplastics (N) | A | 200 - 700 | |
| Duroplastique<br>Duroplaste<br>Duroplastics (N) | A | 150 - 600 | ** selon la matière, l'épaisseur ainsi que la rigidité globale<br>** je nach Werkstoff, Dicke und Gesamtstarrheit<br>** according to material, thickness and global rigidity |
| Acier réfractaire<br>Warmfester Stahl<br>Heat resistant steel (S) | O/ E | 25 - 60 | |
| Titane<br>Titan<br>Titanium (S) | O/ E | 30 - 60 | |

Fraises circulaires en métal dur
VHM-Kreissägeblätter
Solid carbide slitting saws

* O=huile de coupe / Schneidöl / cutting oil
* E=Emulsion
* A =sec (air comprimé)/ Trocken (Pressluft)/ dry(air)

avec revêtement, augmenter les valeurs de 20%
mit Beschichtung, Daten um 20% erhöhen
with coating, increase data by 20%

## MAXINOX



Revêtement PVD
PVD Beschichtung
PVD coating

TF F M E

P ★★★★☆
M ★★★★★
N ★☆☆☆☆
S ★★☆☆☆

- 1er choix pour l'usinage des aciers inoxydables
- recommandé également pour les aciers alliés contenant: chrome nickel, vanadium, molybdène, …

- erste Wahl für die Bearbeitung von rostfreiem Stahl
- auch empfohlen für legierte Stähle mit Chrom-Nickel, Vanadium, Molybdän, ...

- first choice for stainless machining
- also recommended for alloy steels with: Chrome-Nickel, Vanadium, Molybdenum, …

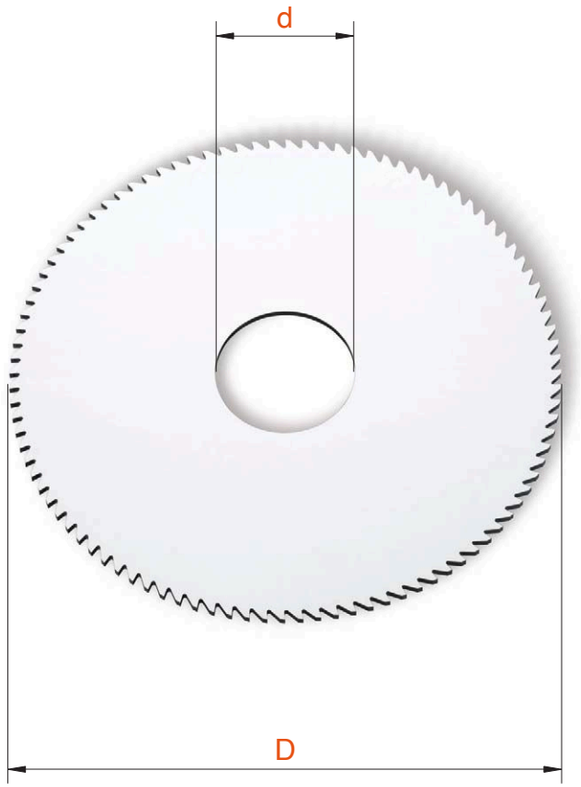
CIRCO-Line

Fraises circulaires en métal dur
VHM-Kreissägeblätter
Solid carbide slitting saws

1101

## Denture fine / Feine Verzahnung / Fine teeth — DIN 1837

- Pour usinage peu profond ou longueur à fendre faible
- Avancepar dent: 0.005 - 0.05 mm
- Revêtement sur demande
- Für geringe Bearbeitungstiefen oder kurze Schlitzlängen
- Vorschubpro Zahn: 0.005 - 0.05 mm
- Beschichtung auf Anfrage
- For low machining depth or short slots
- Feedper tooth: 0.005 - 0.05 mm
- Coating on request




MD
VHM
HM

Art. N° ex:
1101-20/5-1.7 Z32

Denture fine / Feine Verzahnung / Fine teeth — DIN 1837

| D js12 | 15 | 20 | 25 | 30 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | D js12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d H7 | 5 | 5 | 8 | 8 | 10 | 13 | 16 | 22 | 22 | 22 | 32 | d H7 |
| Epaisseur / Dicke / Thickness E ±0.01 | Z = Nombre de dents / Zähnezahl / Number of teeth | | | | | | | | | | | Epaisseur / Dicke / Thickness E ±0.01 |
| 0.10 | 64 | 80 | 80 | 100 | 128 | | | | | | | 0.10 |
| 0.15 | 64 | 80 | 80 | 100 | 128 | | | | | | | 0.15 |
| 0.20 | 64 | 80 | 80 | 100 | 128 | 128 | 160 | | | | | 0.20 |
| 0.25 | 64 | 64 | 80 | 100 | 100 | 128 | 128 | | | | | 0.25 |
| 0.30 | 64 | 64 | 80 | 80 | 100 | 128 | 128 | 160 | | | | 0.30 |
| 0.35 | 64 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | | | | 0.35 |
| 0.40 | 64 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | | | | 0.40 |
| 0.45 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | | | | 0.45 |
| 0.50 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | 160 | | | 0.50 |
| 0.60 | 48 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | 160 | | 0.60 |
| 0.70 | 48 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | 160 | | 0.70 |
| 0.80 | 40 | 40 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | 160 | | 0.80 |
| 0.90 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | | 0.90 |
| 1.00 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | 160 | 1.00 |
| 1.10 | 40 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | | 1.10 |
| 1.20 | 40 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | 160 | 1.20 |
| 1.30 | 40 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | | | 1.30 |
| 1.40 | 40 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | | 1.40 |
| 1.50 | 40 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | 1.50 |
| 1.60 | 40 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | 160 | 1.60 |
| 1.70 | 40 | 32 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | | | 1.70 |
| 1.80 | 40 | 32 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | 1.80 |
| 1.90 | 40 | 32 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | | | 1.90 |
| 2.00 | 40 | 32 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 128 | 2.00 |
| 2.50 | 40 | 32 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | 100 | 128 | 2.50 |
| 3.00 | 40 | 32 | 32 | 40 | 48 | 48 | 64 | 80 | 80 | 100 | 128 | 3.00 |
| 3.50 | 24 | 24 | 32 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | | 3.50 |
| 4.00 | 24 | 24 | 32 | 40 | 40 | 48 | 64 | 64 | 80 | 100 | | 4.00 |
| 5.00 | 24 | 24 | 32 | 32 | 40 | 48 | 48 | 64 | 80 | 100 | | 5.00 |
| 6.00 | 24 | 24 | 24 | 32 | 40 | 40 | 48 | 64 | 64 | 100 | | 6.00 |

CIRCO-Line

Fraises circulaires en métal dur
VHM-Kreissägeblätter
Solid carbide slitting saws

1102

Denture grossière
Grobe Verzahnung
Large teeth

## DIN 1838

- Pour usinage profond ou grande longueur à fendre
- Avancepar dent: 0.01 - 0.1 mm
- Revêtement sur demande
- Für grosse Bearbeitungstiefen oder grosse Schlitzlängen
- Vorschubpro Zahn: 0.01 - 0.1 mm
- Beschichtung auf Anfrage
- For deep machining or long slots
- Feedper tooth: 0.01 - 0.1 mm
- Coating on request




MD
VHM
HM

Art. N° ex:
1102-40/10-0.8 Z32

Denture grossière
Grobe Verzahnung
Large teeth

DIN 1838

| D js12 | 15 | 20 | 25 | 30 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | D js12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d H7 | 5 | 5 | 8 | 8 | 10 | 13 | 16 | 22 | 22 | 22 | 32 | d H7 |
| Epaisseur Dicke Thickness E ±0.01 | Z = Nombre de dents Zähnezahl Number of teeth | | | | | | | | | | | Epaisseur Dicke Thickness E ±0.01 |
| 0.20 | 20 | 20 | 20 | 30 | 40 | | | | | | | 0.20 |
| 0.25 | 20 | 20 | 20 | 30 | 40 | | | | | | | 0.25 |
| 0.30 | 20 | 20 | 20 | 30 | 40 | | 64 | | | | | 0.30 |
| 0.40 | 20 | 20 | 20 | 30 | 40 | 48 | 64 | | | | | 0.40 |
| 0.50 | 20 | 20 | 20 | 30 | 40 | 48 | 64 | | | | | 0.50 |
| 0.60 | 20 | 20 | 20 | 30 | 40 | 48 | 48 | 64 | 80 | | | 0.60 |
| 0.70 | 20 | 20 | 20 | 30 | 40 | 40 | 48 | 64 | 64 | | | 0.70 |
| 0.80 | 20 | 20 | 20 | 24 | 32 | 40 | 48 | 64 | 64 | 80 | | 0.80 |
| 0.90 | 20 | 20 | 20 | 24 | 32 | 40 | 48 | 48 | 64 | 80 | | 0.90 |
| 1.00 | 20 | 20 | 20 | 24 | 32 | 40 | 48 | 48 | 64 | 80 | 80 | 1.00 |
| 1.20 | 20 | 20 | 20 | 24 | 32 | 40 | 40 | 48 | 64 | 64 | 80 | 1.20 |
| 1.50 | 20 | 20 | 20 | 24 | 32 | 32 | 40 | 48 | 48 | 64 | 80 | 1.50 |
| 1.60 | 20 | 20 | 20 | 24 | 32 | 32 | 40 | 48 | 48 | 64 | | 1.60 |
| 1.80 | 20 | 20 | 20 | 24 | 24 | 32 | 40 | 40 | 48 | 64 | | 1.80 |
| 2.00 | 20 | 20 | 20 | 24 | 24 | 32 | 40 | 40 | 48 | 64 | 80 | 2.00 |
| 2.50 | 20 | 20 | 20 | 24 | 24 | 32 | 32 | 40 | 48 | 48 | 80 | 2.50 |
| 3.00 | 20 | 20 | 20 | 24 | 24 | 24 | 32 | 40 | 40 | 48 | 64 | 3.00 |
| 4.00 | 20 | 20 | 20 | 24 | 20 | 24 | 32 | 32 | 40 | 48 | | 4.00 |
| 5.00 | 20 | 20 | 20 | 24 | 20 | 24 | 24 | 32 | 40 | 40 | | 5.00 |
| 6.00 | 20 | 20 | 20 | 24 | 20 | 20 | 24 | 32 | 32 | 40 | | 6.00 |

CIRCO-Line

Fraises circulaires en métal dur
VHM-Kreissägeblätter
Solid carbide slitting saws

1103

Denture extra-fine
Extra feine Verzahnung
Extra fine teeth

- Pour usinage de pièces fragiles ou fines
- Avancepar dent: 0.002 - 0.03 mm
- Idéal pour le décolletage
- Revêtementsur demande

- Für die Bearbeitung von empfindlichen oder dünnwandigen Werkstücken
- Vorschubpro Zahn: 0.002 - 0.03 mm
- Für Langdrehautomaten besonders empfehlenswert
- Beschichtungauf Anfrage

- For machining of fragile or thin workpieces
- Feedper tooth: 0.002 - 0.03 mm
- Recommended on automatic lathes
- Coating on request




MD
VHM
HM

Art. N° ex:
1103-15/5-0.2 Z80

Denture extra-fine
Extra feine Verzahnung
Extra fine teeth

| D js12 | 8 | 10 | 12 | 15 | D js12 |
|---|---|---|---|---|---|
| d H7 | 3 | 3 | 5 | 5 | d H7 |
| Epaisseur Dicke Thickness E ±0.005 | Z = Nombre de dents Zähnezahl Number of teeth | | | | Epaisseur Dicke Thickness E ±0.005 |
| 0.10 | 48 | 64 | 64 | 80 | 0.10 |
| 0.11 | 48 | 64 | 64 | 80 | 0.11 |
| 0.12 | 48 | 64 | 64 | 80 | 0.12 |
| 0.13 | 48 | 64 | 64 | 80 | 0.13 |
| 0.14 | 48 | 64 | 64 | 80 | 0.14 |
| 0.15 | 48 | 64 | 64 | 80 | 0.15 |
| 0.16 | 48 | 64 | 64 | 80 | 0.16 |
| 0.17 | 48 | 64 | 64 | 80 | 0.17 |
| 0.18 | 48 | 64 | 64 | 80 | 0.18 |
| 0.19 | 48 | 64 | 64 | 80 | 0.19 |
| 0.20 | 48 | 64 | 64 | 80 | 0.20 |

Denture extra-fine
Extra feine Verzahnung
Extra fine teeth

| D js12 | 8 | 10 | 12 | 15 | 20 | 20 | 20 | 25 | 25 | 25 | 30 | 32 | D js12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d H7 | 3 | 3 | 5 | 5 | 5 | 5 | 6 | 5 | 6 | 8 | 8 | 8 | d H7 |
| Epaisseur Dicke Thickness E ±0.01 | Z = Nombre de dents Zähnezahl Number of teeth | | | | | | | | | | | | Epaisseur Dicke Thickness E ±0.01 |
| 0.10 | ** | ** | ** | ** | * | 100 | 80 | 80 | | | * | | 0.10 |
| 0.15 | ** | ** | ** | ** | * | 100 | 80 | 80 | 100 | 100 | * | 80 | 0.15 |
| 0.20 | ** | ** | ** | ** | * | 100 | 80 | 80 | 100 | 100 | * | 80 | 0.20 |
| 0.25 | 48 | 64 | 64 | 80 | 80 | 100 | 80 | 80 | 100 | 100 | * | 80 | 0.25 |
| 0.30 | 48 | 64 | 64 | 80 | 80 | 100 | 80 | 80 | 100 | 100 | 100 | 80 | 0.30 |
| 0.35 | 48 | 64 | 64 | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 0.35 |
| 0.40 | 48 | 64 | 64 | 80 | 80 | 100 | 80 | 80 | 100 | 100 | 100 | 80 | 0.40 |
| 0.50 | 48 | 64 | 64 | 80 | 80 | 100 | 80 | 80 | 100 | 100 | 100 | 80 | 0.50 |
| 0.60 | 48 | 64 | 64 | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 0.60 |
| 0.70 | 48 | 64 | 64 | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 0.70 |
| 0.80 | 48 | 64 | 64 | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 0.80 |
| 0.90 | 48 | 64 | 64 | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 0.90 |
| 1.00 | 48 | 64 | 64 | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 1.00 |
| 1.20 | | | | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 1.20 |
| 1.50 | | | | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 1.50 |
| 2.00 | | | | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 2.00 |
| 2.50 | | | | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 2.50 |
| 3.00 | | | | 80 | 80 | | 80 | 80 | 100 | 100 | 100 | 80 | 3.00 |

| Djs12 | 35 | 40 | 40 | 40 | 40 | 45 | 45 | 50 | 50 | 63 | 80 | Djs12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d H7 | 8 | 8 | 8 | 10 | 10 | 8 | 8 | 10 | 13 | 16 | 16 | d H7 |
| 0.10 | | | | | | | | | | | | 0.10 |
| 0.15 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | | | | | 0.15 |
| 0.20 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | | | | 0.20 |
| 0.25 | 96 | 100 | 160 | * | 160 | 100 | 160 | 100 | 120 | 120 | | 0.25 |
| 0.30 | 96 | 100 | 160 | * | 160 | 100 | 160 | 100 | 120 | 120 | | 0.30 |
| 0.35 | 96 | 100 | 160 | * | 160 | 100 | 160 | 100 | 120 | 120 | | 0.35 |
| 0.40 | 96 | 100 | 160 | * | 160 | 100 | 160 | 100 | 120 | 120 | | 0.40 |
| 0.50 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 0.50 |
| 0.60 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 0.60 |
| 0.70 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 0.70 |
| 0.80 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 0.80 |
| 0.90 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 0.90 |
| 1.00 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 1.00 |
| 1.20 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 1.20 |
| 1.50 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 1.50 |
| 2.00 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 2.00 |
| 2.50 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 2.50 |
| 3.00 | 96 | 100 | 160 | 100 | 160 | 100 | 160 | 100 | 120 | 120 | 128 | 3.00 |

** voir page 17.12/ siehe Seite 17.12/ see page 17.12
* voir type 1101/ siehe Typ 1101/ see type 1101

CIRCO-Line

Fraises circulaires en métal dur optimisées pour INOX
VHM-Kreissägeblätter mit optimierter INOX-Verzahnung
Solid carbide slitting saws with optimized INOXteeth

1104

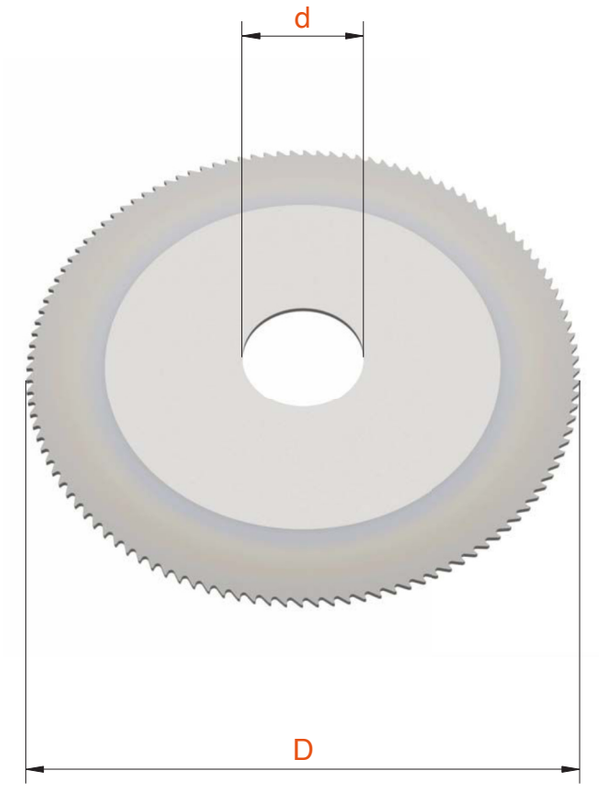
Denture fine
Feine Verzahnung
Fine teeth

DIN 1837

- Pour usinage peu profond ou longueur à fendre faible
- Avancepar dent: 0.005 - 0.05 mm

- Für geringe Bearbeitungstiefen oder kurze Schlitzlängen
- Vorschubpro Zahn: 0.005 - 0.05 mm

- For low machining depth or short slots
- Feedper tooth: 0.005 - 0.05 mm




MD
VHM
HM

Art. N° ex:
1104-63/16-0.8 Z80-MAXINOX

Denture fine
Feine Verzahnung
Fine teeth

DIN 1837

| Djs12 | 63 | 80 | 100 | Djs12 | |
|---|---|---|---|---|---|
| d H7 | 16 | 22 | 22 | d H7 | |
| Epaisseur Dicke Thickness E ±0.01 | Z = Nombre de dents Zähnezahl Number of teeth | | | Epaisseur Dicke Thickness E ±0.01 | MAXINOX |
| 0.80 | 80 | 100 | 120 | 0.80 | ● |
| 1.00 | 80 | 100 | 120 | 1.00 | ● |

CIRCO-Line

Fraises circulaires en métal dur avec un biais - CW-CCW
VHM-Kreissägeblätter mit Schräge - CW-CCW
Solid carbide angled slitting saws - CW-CCW

1105

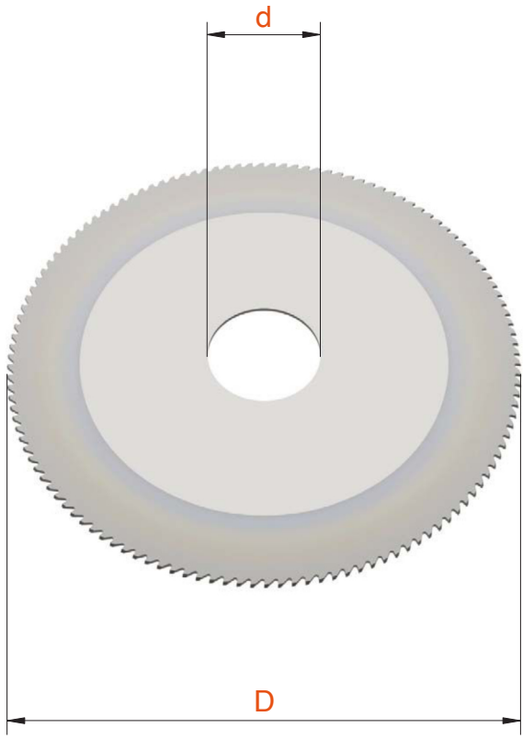
Denture fine
Feine Verzahnung
Fine teeth

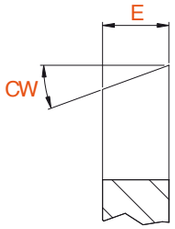
DIN 1837

- Pour usinage peu profond ou longueur à fendre faible
- Avancepar dent: 0.005 - 0.05 mm
- Autre revêtement sur demande

- Für geringe Bearbeitungstiefen oder kurze Schlitzlängen
- Vorschubpro Zahn: 0.005 - 0.05 mm
- Andere Beschichtung auf Anfrage

- For low machining depth or short slots
- Feed per tooth: 0.005 - 0.05 mm
- Other coating on request




MD
VHM
HM

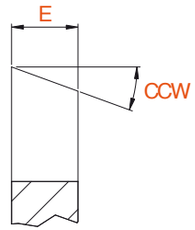
CW

Art. N° ex:
1105-100/22-0.6-CW20 Z160-N

Denture fine
Feine Verzahnung
Fine teeth

DIN 1837

| D js12 | 63 | 80 | 100 | | |
|---|---|---|---|---|---|
| d H7 | 16 | 22 | 22 | | |
| CW | 20° | 20° | 20° | | |
| Epaisseur / Dicke / Thickness E ±0.01 | Z = Nombre de dents / Zähnezahl / Number of teeth | | | N | MAXINOX |
| 0.60 | 100 | 128 | 160 | ● | ● |
| 0.80 | 100 | 128 | 128 | ● | ● |
| 1.00 | 100 | 100 | 128 | ● | ● |
| 1.20 | 80 | 100 | 128 | ● | ● |




MD
VHM
HM

CCW

Art. N° ex:
1105-100/22-0.6-CCW20 Z160-N

Denture fine
Feine Verzahnung
Fine teeth

DIN 1837

| D js12 | 63 | 80 | 100 | | |
|---|---|---|---|---|---|
| d H7 | 16 | 22 | 22 | | |
| CCW | 20° | 20° | 20° | | |
| Epaisseur / Dicke / Thickness E ±0.01 | Z = Nombre de dents / Zähnezahl / Number of teeth | | | N | MAXINOX |
| 0.60 | 100 | 128 | 160 | ● | ● |
| 0.80 | 100 | 128 | 128 | ● | ● |
| 1.00 | 100 | 100 | 128 | ● | ● |
| 1.20 | 80 | 100 | 128 | ● | ● |

Disques en métal dur rectifiés
Fertig geschliffene VHM-Ronden
Fully ground solid carbide discs



Prêt pour le taillage de la denture
Bereit zum Verzahnen
Readyfor teeth grinding

- Finition poli miroir des deux faces avecdépouille
- Alésage tolérance H7
- Diamètre surdimensionné ~0.15mm

- Hochglanzpoliert beidseitig mit Hohlschliff
- H7 Bohrung Toleranz
- Aussendurchmesser mit ~0.15mm Übermass

- Mirror finish on both sides with clearance
- Bore with H7 tolerance
- Outside diameter with ~0.15mm oversize




MD
VHM
HM

Art. N° ex:
1106-20/6-0.8

Prêt pour le taillage de la denture
Bereit zum Verzahnen
Readyfor teeth grinding

| D+0.20/+0.10 | 8 | 10 | 12 | 15 | 20 | 20 | 25 | 25 | 25 | 30 | 32 | 35 | D+0.20/+0.10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d H7 | 3 | 3 | 5 | 5 | 5 | 6 | 5 | 6 | 8 | 8 | 8 | 8 | d H7 |
| Epaisseur Dicke Thickness E ±0.01 | Epaisseurs et alésages spéciaux sur demande Andere Dicken und Bohrungen auf Anfrage Other thicknesses and bores on request | | | | | | | | | | | | Epaisseur Dicke Thickness E ±0.01 |
| 0.10 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.10 |
| 0.15 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.15 |
| 0.20 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.20 |
| 0.25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.25 |
| 0.30 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.30 |
| 0.35 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.35 |
| 0.40 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.40 |
| 0.45 | | | | ● | ● | ● | ● | ● | ● | ● | | ● | 0.45 |
| 0.50 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.50 |
| 0.60 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.60 |
| 0.70 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.70 |
| 0.80 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.80 |
| 0.90 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.90 |
| 1.00 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 1.00 |
| 1.10 | | | | ● | ● | | | | ● | ● | | | 1.10 |
| 1.20 | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | 1.20 |
| 1.30 | | | | ● | ● | | | | ● | ● | | | 1.30 |
| 1.40 | | | | ● | ● | | | | ● | ● | | | 1.40 |
| 1.50 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 1.50 |
| 1.60 | | | | ● | ● | | | | ● | ● | | | 1.60 |
| 1.70 | | | | ● | ● | | | | ● | ● | | | 1.70 |
| 1.80 | | | | ● | ● | | | | ● | ● | | | 1.80 |
| 1.90 | | | | ● | ● | | | | ● | ● | | | 1.90 |
| 2.00 | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | 2.00 |
| 2.50 | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | 2.50 |
| 3.00 | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | 3.00 |
| 3.50 | | | | | | | | | | | | | 3.50 |
| 4.00 | | | | | | | | | | | | | 4.00 |
| 5.00 | | | | | | | | | | | | | 5.00 |
| 6.00 | | | | | | | | | | | | | 6.00 |

CIRCO-Line

Disques en métal dur rectifiés
Fertig geschliffene VHM-Ronden
Fully ground solid carbide discs



Prêt pour le taillage de la denture
Bereit zum Verzahnen
Ready for teeth grinding

- Finition poli miroir des deux faces avec dépouille
- Alésage tolérance H7
- Diamètre surdimensionné ~0.15 mm

- Hochglanzpoliert beidseitig mit Hohlschliff
- H7 Bohrung Toleranz
- Aussendurchmesser mit ~0.15 mm Übermass

- Mirror finish on both sides with clearance
- Bore with H7 tolerance
- Outside diameter with ~0.15 mm oversize




MD
VHM
HM

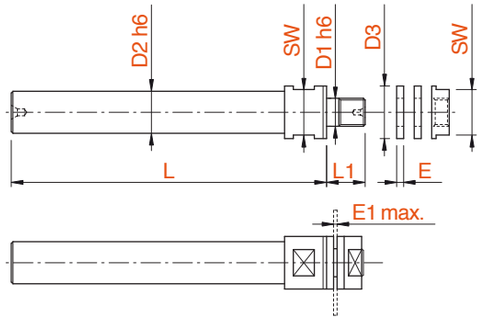
Art. N° ex:
1106-63/16-0.35

Prêt pour le taillage de la denture
Bereit zum Verzahnen
Ready for teeth grinding

| D+0.20/+0.10 | 40 | 40 | 45 | 50 | 50 | 63 | 80 | 80 | 100 | 125 | 160 | 160 | D+0.20/+0.10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d H7 | 8 | 10 | 8 | 10 | 13 | 16 | 16 | 22 | 22 | 22 | 22 | 32 | d H7 |
| Epaisseur Dicke Thickness E ±0.01 | Epaisseurs et alésages spéciaux sur demande Andere Dicken und Bohrungen auf Anfrage Other thicknesses and bores on request | | | | | | | | | | | | Epaisseur Dicke Thickness E ±0.01 |
| 0.10 | | ● | | | | | | | | | | | 0.10 |
| 0.15 | ● | ● | ● | | | | | | | | | | 0.15 |
| 0.20 | ● | ● | ● | ● | ● | ● | | | | | | | 0.20 |
| 0.25 | ● | ● | ● | ● | ● | ● | | | | | | | 0.25 |
| 0.30 | ● | ● | ● | ● | ● | ● | | ● | | | | | 0.30 |
| 0.35 | ● | ● | ● | ● | ● | ● | | ● | | | | | 0.35 |
| 0.40 | ● | ● | ● | ● | ● | ● | | ● | | | | | 0.40 |
| 0.45 | ● | ● | | ● | ● | ● | | ● | | | | | 0.45 |
| 0.50 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 0.50 |
| 0.60 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 0.60 |
| 0.70 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 0.70 |
| 0.80 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 0.80 |
| 0.90 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 0.90 |
| 1.00 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 1.00 |
| 1.10 | | ● | | | ● | ● | | ● | | | | | 1.10 |
| 1.20 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 1.20 |
| 1.30 | ● | ● | | | ● | ● | | ● | | | | | 1.30 |
| 1.40 | ● | ● | | | ● | ● | | ● | | | | | 1.40 |
| 1.50 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | 1.50 |
| 1.60 | | ● | | | ● | ● | | | | | | | 1.60 |
| 1.70 | | ● | | | ● | ● | | | | | | | 1.70 |
| 1.80 | | ● | | | ● | ● | | | | | | | 1.80 |
| 1.90 | | ● | | | ● | ● | | | | | | | 1.90 |
| 2.00 | ● | ● | ● | ● | ● | ● | | | | | | | 2.00 |
| 2.50 | ● | ● | ● | ● | ● | ● | | | | | | | 2.50 |
| 3.00 | ● | ● | ● | ● | ● | ● | | | | | | | 3.00 |
| 3.50 | | | | | | | | | | | | | 3.50 |
| 4.00 | | | | | | | | | | | | | 4.00 |
| 5.00 | | | | | | | | | | | | | 5.00 |
| 6.00 | | | | | | | | | | | | | 6.00 |

# Tasseaux porte-fraise avec serrage avant
# Fräsdorne mit vorderer Klemmung
# Milling arbors with front clamping






| Type 2810 | Rotation à droite (filet à droite)<br>Drehrichtung rechts (Rechtsgewinde)<br>Right hand rotation (right hand thread) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D1 h6 | D2 h6 | D3 | L | L1 | E | SW | E1 max. | Art. N° |
| 5.0 | 6.0 | 10.0 | 70 | 9.0 | 2.0 | 8.0 | 6.0 | 2810-5-6 |
| 5.0 | 10.0 | 10.0 | 80 | 9.0 | 2.0 | 8.0 | 6.0 | 2810-5-10 |
| 6.0 | 10.0 | 12.0 | 80 | 9.5 | 2.0 | 10.0 | 6.0 | 2810-6-10 |
| 8.0 | 10.0 | 15.0 | 80 | 10.0 | 2.0 | 13.0 | 6.0 | 2810-8-10 |
| 8.0 | 12.0 | 15.0 | 90 | 10.0 | 2.0 | 13.0 | 6.0 | 2810-8-12 |
| 10.0 | 6.0 | 18.0 | 80 | 10.5 | 2.0 | 15.0 | 6.0 | 2810-10-6 |
| 10.0 | 10.0 | 18.0 | 80 | 10.5 | 2.0 | 15.0 | 6.0 | 2810-10-10 |
| 10.0 | 16.0 | 18.0 | 100 | 10.5 | 2.0 | 15.0 | 6.0 | 2810-10-16 |
| 13.0 | 16.0 | 22.0 | 110 | 11.0 | 2.0 | 19.0 | 6.0 | 2810-13-16 |
| 16.0 | 20.0 | 26.0 | 120 | 12.0 | 2.0 | 22.0 | 6.0 | 2810-16-20 |
| 22.0 | 16.0 | 32.0 | 120 | 12.0 | 2.0 | 27.0 | 6.0 | 2810-22-16 |

| Type 2811 | Rotation à droite (filet à droite)<br>Drehrichtung rechts (Rechtsgewinde)<br>Right hand rotation (right hand thread) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D1 h6 | D2 h6 | D3 | L | L1 | E | SW | E1 max. | Art. N° |
| 16.0 | 10.0 | 22.0 | 80 | 8.0 | 2.0 | 19.0 | 3.0 | 2811-16-10 |

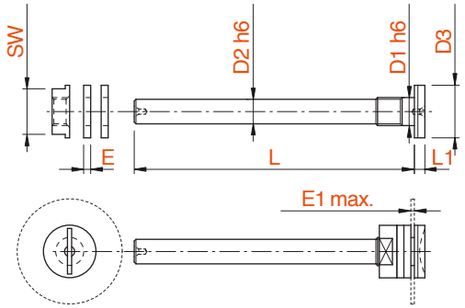
| Type 2815 | Pour petites fraises circulaires (filet à droite)<br>Für kleine Kreissägeblätter (Rechtsgewinde)<br>For small slitting saws (right hand thread) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D1 h6 | D2 h6 | D3 | L | L1 | E | SW | E1 max. | Art. N° |
| 3.0 | 5.0 | 5.0 | 60 | 7.0 | 1.0 | 4.0 | 3.0 | 2815-3-5 |
| 5.0 | 6.0 | 7.5 | 70 | 7.0 | 1.0 | 6.0 | 3.0 | 2815-5-6 |





# Tasseaux porte-fraise avec serrage arrière
# Fräsdorne mit rückseitiger Klemmung
# Milling arbors with rear clamping






| Type 2820 | Rotation à droite (filet à gauche)<br>Drehrichtung rechts (Linksgewinde)<br>Right hand rotation (left hand thread) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D1 h6 | D2 h6 | D3 | L | L1 | E | SW | E1 max. | Art. N° |
| 5.0 | 4.0 | 10.0 | 50 | 3.0 | 2.0 | 8.0 | 6.0 | 2820-5-4 |
| 6.0 | 5.0 | 12.0 | 60 | 3.0 | 2.0 | 10.0 | 6.0 | 2820-6-5 |
| 8.0 | 6.0 | 15.0 | 80 | 3.0 | 2.0 | 13.0 | 6.0 | 2820-8-6 |
| 8.0 | 7.0 | 15.0 | 80 | 3.0 | 2.0 | 13.0 | 6.0 | 2820-8-7 |
| 10.0 | 6.0 | 18.0 | 70 | 3.5 | 2.0 | 15.0 | 6.0 | 2820-10-6 |
| 10.0 | 8.0 | 18.0 | 90 | 3.5 | 2.0 | 15.0 | 6.0 | 2820-10-8 |
| 13.0 | 10.0 | 22.0 | 110 | 3.5 | 2.0 | 19.0 | 6.0 | 2820-13-10 |
| 16.0 | 12.0 | 26.0 | 120 | 3.5 | 2.0 | 22.0 | 6.0 | 2820-16-12 |

| Type 1820 | Rotation à gauche (filet à droite)<br>Drehrichtung links (Rechtsgewinde)<br>Left hand rotation (right hand thread) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D1 h6 | D2 h6 | D3 | L | L1 | E | SW | E1 max. | Art. N° |
| 5.0 | 4.0 | 10.0 | 50 | 3.0 | 2.0 | 8.0 | 6.0 | 1820-5-4 |
| 6.0 | 5.0 | 12.0 | 60 | 3.0 | 2.0 | 10.0 | 6.0 | 1820-6-5 |
| 8.0 | 6.0 | 15.0 | 70 | 3.0 | 2.0 | 13.0 | 6.0 | 1820-8-6 |
| 10.0 | 6.0 | 18.0 | 70 | 3.5 | 2.0 | 15.0 | 6.0 | 1820-10-6 |

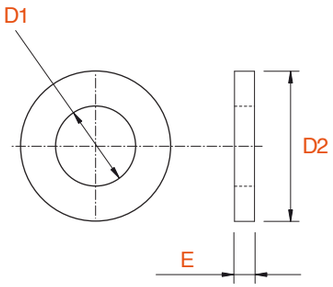
Chaque tasseau est livré avec 2 entretoises et 1 écrou
Jeder Fräsdorn wird mit 2 Abstandsringen und 1 Mutter geliefert
2 distance rings and 1 nut are included with each arbor

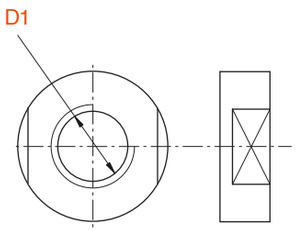
Pièces de rechange
Ersatzteile
Spare parts



Entretoise
Abstandsring
Ring

| Correspondance tasseaux Passende Fräsdorne Matching milling arbors | | E | D2 | Art. N° |
|---|---|---|---|---|
| Type | D1 | | | |
| 1820 | 5 | 1.0 | 10.0 | 1820-5-A1 |
| | | 2.0 | | 1820-5-A2 |
| | 6 | 1.0 | 12.0 | 1820-6-A1 |
| | | 2.0 | | 1820-6-A2 |
| | 8 | 1.0 | 15.0 | 1820-8-A1 |
| | | 2.0 | | 1820-8-A2 |
| | 10 | 1.0 | 18.0 | 1820-10-A1 |
| | | 2.0 | | 1820-10-A2 |
| 2810 | 5 | 1.0 | 10.0 | 2810-5-A1 |
| | | 2.0 | | 2810-5-A2 |
| | 6 | 1.0 | 12.0 | 2810-6-A1 |
| | | 2.0 | | 2810-6-A2 |
| | 8 | 1.0 | 15.0 | 2810-8-A1 |
| | | 2.0 | | 2810-8-A2 |
| | 10 | 1.0 | 18.0 | 2810-10-A1 |
| | | 2.0 | | 2810-10-A2 |
| | 13 | 1.0 | 22.0 | 2810-13-A1 |
| | | 2.0 | | 2810-13-A2 |
| | 16 | 1.0 | 26.0 | 2810-16-A1 |
| | | 2.0 | | 2810-16-A2 |
| | 22 | 1.0 | 32.0 | 2810-22-A1 |
| | | 2.0 | | 2810-22-A2 |
| 2811 | 16 | 1.0 | 22.0 | 2811-16-A1 |
| | | 2.0 | | 2811-16-A2 |
| 2815 | 3 | 1.0 | 5.0 | 2815-3-A1 |
| | 5 | | 7.5 | 2815-5-A1 |
| 2820 | 5 | 1.0 | 10.0 | 2820-5-A1 |
| | | 2.0 | | 2820-5-A2 |
| | 6 | 1.0 | 12.0 | 2820-6-A1 |
| | | 2.0 | | 2820-6-A2 |
| | 8 | 1.0 | 15.0 | 2820-8-A1 |
| | | 2.0 | | 2820-8-A2 |
| | 10 | 1.0 | 18.0 | 2820-10-A1 |
| | | 2.0 | | 2820-10-A2 |
| | 13 | 1.0 | 22.0 | 2820-13-A1 |
| | | 2.0 | | 2820-13-A2 |
| | 16 | 1.0 | 26.0 | 2820-16-A1 |
| | | 2.0 | | 2820-16-A2 |



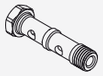

Écrou
Mutter
Nut

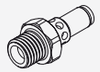
| Correspondance tasseaux Passende Fräsdorne Matching milling arbors | | M | Art. N° |
|---|---|---|---|
| Type | D1 | | |
| 1820 | 5.0 | M5x0.5 | 1820-5-B |
| | 6.0 | M6x0.5 | 1820-6-B |
| | 8.0 | M8x0.75 | 1820-8-B |
| | 10.0 | M10x0.75 | 1820-10-B |
| 2810 | 5.0 | M5x0.5 | 2810-5-B |
| | 6.0 | M6x0.5 | 2810-6-B |
| | 8.0 | M8x0.75 | 2810-8-B |
| | 10.0 | M10x0.75 | 2810-10-B |
| | 13.0 | M13x1 | 2810-13-B |
| | 16.0 | M16x1 | 2810-16-B |
| | 22.0 | M22x1 | 2810-22-B |
| 2811 | 16.0 | M16x1 | 2811-16-B |
| 2815 | 3.0 | M3x0.5 | 2815-3-B |
| | 5.0 | M5x0.5 | 2815-5-B |
| 2820 | 5.0 | M5x0.5 | 2820-5-B |
| | 6.0 | M6x0.5 | 2820-6-B |
| | 8.0 | M8x0.75 | 2820-8-B |
| | 10.0 | M10x0.75 | 2820-10-B |
| | 13.0 | M13x1 | 2820-13-B |
| | 16.0 | M16x1 | 2820-16-B |

# JET-Line

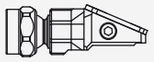


APPLITEC
CUTTING TOOLS

| | | | |
|---|---|---|---|
| Infos et avantages<br>Infos und Vorteile<br>Infos and advantages | | | > 18.05 |
| JKIT | |  | > 18.08 |
| STARTER-KIT | | | > 18.14 |
| JS | Raccords rapides<br>Schnellkupplungen<br>Quick connectors |  | > 18.16 |
| JSFA | Raccords rapides Banjos avec régulateur de débit<br>Schnellkupplungen-Banjos mit Durchflussregler<br>Banjo quick couplings with flow regulators |  | > 18.17 |
| JSR | Raccords rapides rotatifs<br>Drehbare Schnellkupplungen<br>Rotating quick couplings |  | > 18.18 |
| JO | Joints d'étanchéité en cuivre<br>Kupferdichtungsringe<br>Copper sealing gaskets |  | > 18.19 |
| JTS-AC | Tubes de distribution flexibles en acier avec fiche de connexion rapide<br>Stahlflex-Verteilschläuche mit Schnellkupplungsstecker<br>Flexible distribution tubes of steel with quick connection plug | | > 18.20 |
| JTX-AC | Tubes de distribution flexibles en acier inoxydable tressé<br>Rostfreier Stahlflex-Schlauch<br>Flexible distribution tubes of stainless steel braiding |  | > 18.21 |
| JT-CU | Tubes de distribution en cuivre<br>Kupferrohre<br>Copper distribution tubes |  | > 18.22 |
| JRMF | Connecteurs mâles/femelles<br>Gewindeadapter Innen und Außengewinde<br>Male/female connectors |  | > 18.23 |
| JRFF | Connecteurs femelles/femelles<br>Gewindeadapter Innengewinde<br>Female connectors |  | > 18.25 |
| JRMM | Connecteurs mâles/mâles<br>Gewindeadapter Außengewinde<br>Male connectors |  | > 18.26 |
| JN | Écrous d'étanchéité<br>Dichtungsmuttern<br>Sealing nuts |  | > 18.27 |
| JNG | Bagues d'étanchéité<br>Dichtungsringe<br>Sealing rings |  | > 18.28 |
| JCBF | Banjos courts femelles<br>Kurzer Innengewinde-Banjo<br>Short female Banjo |  | > 18.29 |
| JCBM | Banjos courts mâles<br>Kurze Außengewinde-Banjo<br>Short male Banjo |  | > 18.30 |
| JABF | Banjos longs droits femelles<br>Lange Innengewinde-Banjo<br>Long straight female Banjo |  | > 18.31 |
| JABF-45° | Banjos longs coudés femelles<br>Lange 45° Innengewinde-Banjos<br>Long curved female banjos |  | > 18.32 |
| JEB | Vis Banjo<br>Hohlschrauben einfach<br>Banjo screws |  | > 18.33 |
| JEB-DUO | Vis Banjo doubles<br>Hohlschrauben doppelt<br>Double banjo screws |  | > 18.34 |
| JVB | Fiches de verrouillage<br>Verschlußstecker<br>Sealing connecting plugs |  | > 18.35 |
| JVF | Fiches de connexion<br>Innengewindestecker<br>Connecting plugs |  | > 18.36 |
| JWF | Fiches de connexion fixes femelles<br>Innengewindestecker mit Verdrehsicherung<br>Female positionning connection plugs |  | > 18.37 |

| | | | |
|---|---|---|---|
| JWM | Fiches de connexion fixes mâles<br>Aussengewindestecker mit Verdrehsicherung<br>Male positionning connection plugs |  | > 18.38 |
| JK | Blocs de distribution<br>Kühlmittelverteiler<br>Distribution blocks |  | > 18.39 |
| JBB | Bouchons d'étanchéité<br>Verschlußstopfen<br>Sealing plugs |  | > 18.40 |

Systèmes articulés avec arrosage I Gelenksysteme mit Kühlung I Articulated systems with coolant

| | | | |
|---|---|---|---|
| JKIT-AR | Kits articulés avec buse d'arrosage<br>Gelenkkits mit Kühlungsdüse<br>Articulated kits with coolant nozzles |  | > 18.41 |
| JKIT-CU | Kits tubes en cuivre avec buse d'arrosage<br>Kits Kupferrohr mit Kühlungsdüse<br>Kit copper tubes with coolant nozzle |  | > 18.43 |
| JAR | Systèmes articulés<br>Gelenksysteme<br>Articulated systems |  | > 18.44 |
| JRMM-AR | Connecteurs mâles/mâles<br>Anschlüsse Außengewinde<br>Male connectors |  | > 18.45 |
| JJ-AR | Buses<br>Düse<br>Nozzle |  | > 18.46 |
| JJ-AR6 | Buses plates<br>Flachdüse<br>Flat nozzle |  | > 18.47 |
| Accessoires<br>Zubehöre<br>Accessories | | | > 18.48 |





Changement rapide
Schnellwechselsystem
Quick change



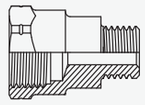
Réduit le temps de préparation et garantit le repositionnement des sorties de liquide de refroidissement
Verkürzung der Rüstzeiten bei gleicher Position der Kühlmittelauslässe
Reduces set-up time and ensures repositioning of coolant outlets

Refroidissement à haute pression
Hochdruckkühlung
High-pressure cooling



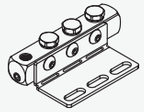

Tuyaux flexibles renforcés garantis jusqu'à 220 bar
Verstärkte Schläuche bis 220 bar garantiert
Reinforced flexible hoses guaranteed up to 220 bar

Facilité d'adaptation
Einfache Anpassungsmöglichkeiten
Easy to adapt



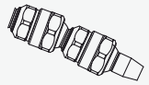
Adaptateurs disponibles pour filetage M5, M6, M8X1 et BSP1/8
Adapter für M5, M6, M8X1 und BSP1/8 erhältlich
Adaptors available for M5, M6, M8X1, and BSP1/8 thread

Multiples possibilités de connexion
Vielfältige Anschlussoptionen
Large range of connection possibilites



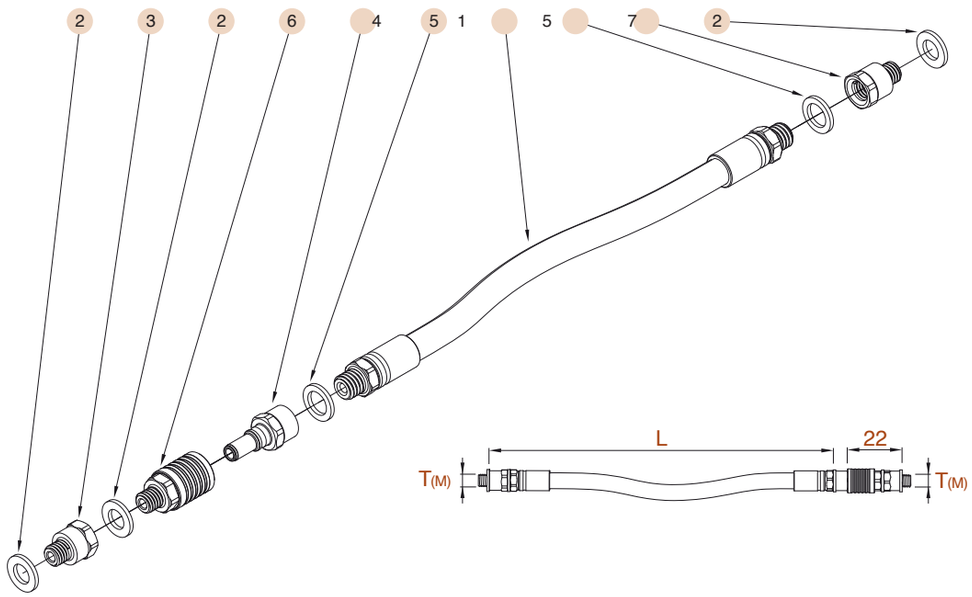
Vaste gamme de connecteurs pour tous les types de machines
Grosse Auswahl von Anschlüsse für alle Machinentypen
Huge range of possible coolant connections to suit all machine types

Système articulé
Gelenksystem
Articulated system



Module flexible d'arrosage en acier pour une meilleure stabilité
Flexibler Stahlkühlmittelmodul für eine bessere Stabilität
Flexible steel coolant unit for better stability

Durée de vie prolongée et performance de coupe optimisée par la maîtrise du flux de copeaux
Verlängerte Werkzeugstandzeit und optimierte Schnittleistung durch kontrollierten Spanfluss
Extended tool life and optimized cutting performance through controlled chip flow




| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-M6-L… |
| 2 | 3 | JO-M5 |
| 3 | 1 | JRMF-M5-M5-L6.5 |
| 4 | 1 | JVF-M6-D4 |
| 5 | 2 | JO-M6 |
| 6 | 1 | -M5-D4 |
| 7 | 1 | JRMF-M5-M6-L7.5 |

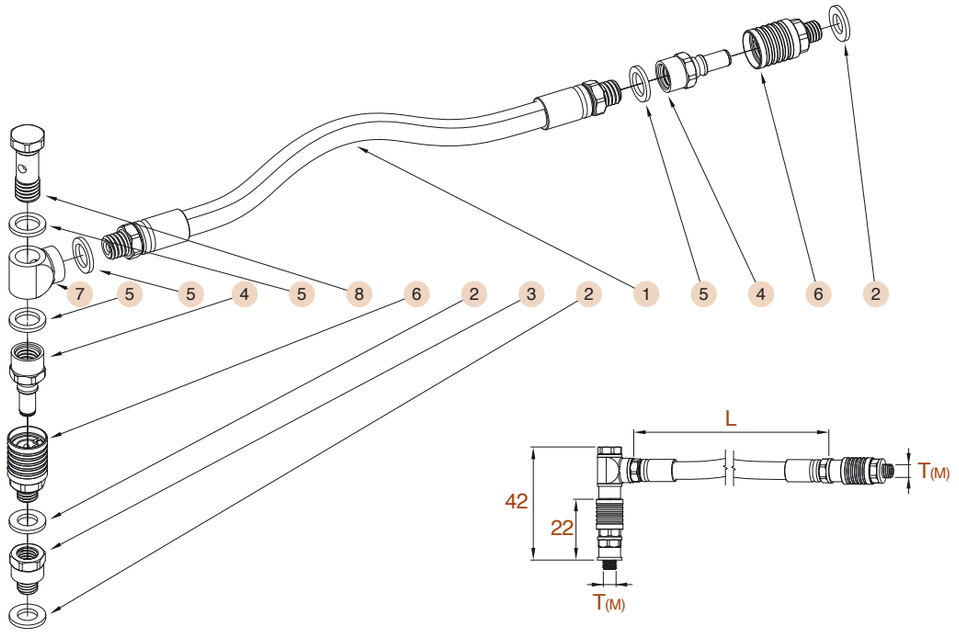
| D | T (M) | L | Art. N° |
|---|---|---|---|
| 4 | M5 | 102 | JKIT-M5-D4-102-QF |
| | | 203 | JKIT-M5-D4-203-QF |
| | | 305 | JKIT-M5-D4-305-QF |
| | | 406 | JKIT-M5-D4-406-QF |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder M5 |
| | ISO-Line 8X10<br>MODU-Line<br>TOP-Line 8X10<br>TURN-Line 8X10 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-M5-1010-4T | C-SW8-E2.5 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |

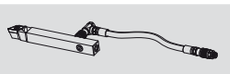




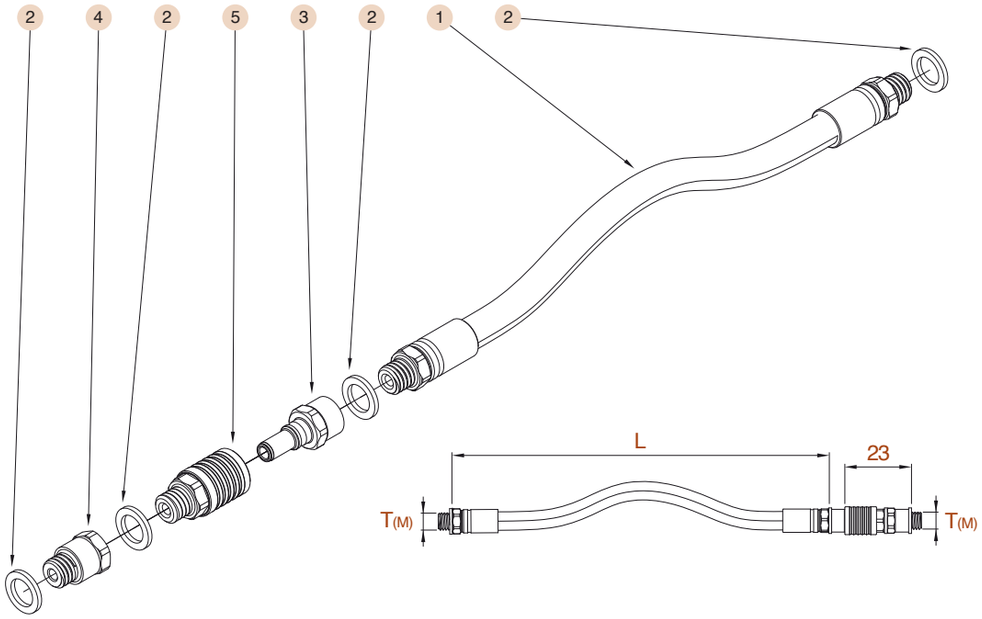



| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-M6-L… |
| 2 | 3 | JO-M5 |
| 3 | 1 | JRMF-M5-M5-L6.5 |
| 4 | 2 | JVF-M6-D4 |
| 5 | 4 | JO-M6 |
| 6 | 2 | JS-M5-D4 |
| 7 | 1 | JCBF-Ø6-M6 |
| 8 | 1 | JEB-M6-L19 |

| D | T (M) | L | Art. N° |
|---|---|---|---|
| 4 | M5 | 102 | JKIT-M5-D4-102-QQ |
| | | 203 | JKIT-M5-D4-203-QQ |
| | | 305 | JKIT-M5-D4-305-QQ |
| | | 406 | JKIT-M5-D4-406-QQ |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder M5 |
| | ISO-Line 8X10<br>MODU-Line<br>TOP-Line 8X10<br>TURN-Line 8X10 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-M5-1010-4T | C-SW8-E2.5 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |




| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-M6-L… |
| 2 | 4 | JO-M6 |
| 3 | 1 | JVF-M6-D4 |
| 4 | 1 | JRMF-M6-M6-L7.5 |
| 5 | 1 | JS-M6-D4 |

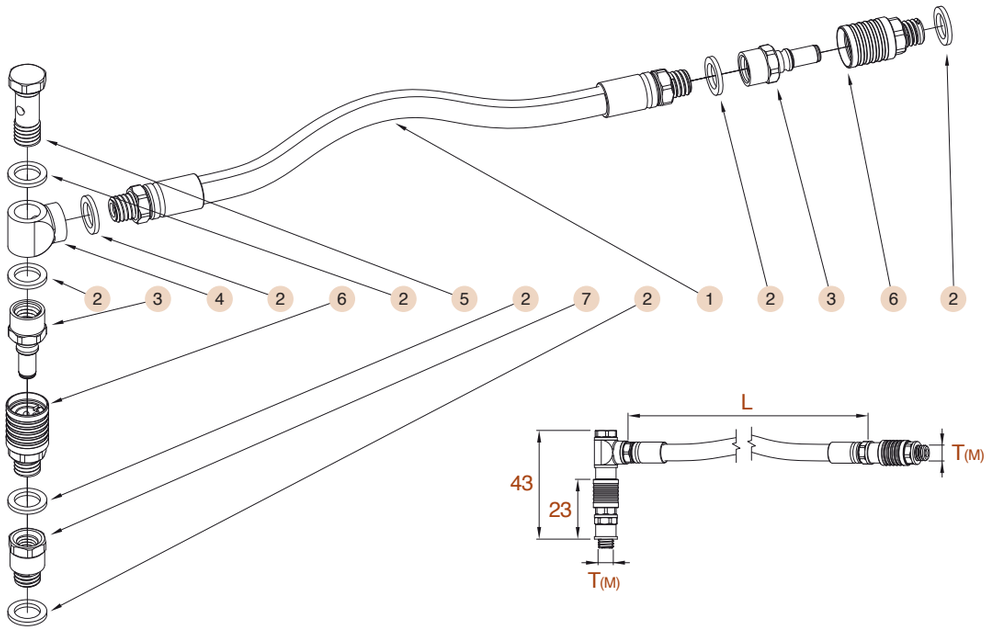
| D | T (M) | L | Art. N° |
|---|---|---|---|
| 4 | M6 | 102 | JKIT-M6-D4-102-QF |
| | | 203 | JKIT-M6-D4-203-QF |
| | | 305 | JKIT-M6-D4-305-QF |
| | | 406 | JKIT-M6-D4-406-QF |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder M6 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-M6-1010-4T | C-SW8-E2.5 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |





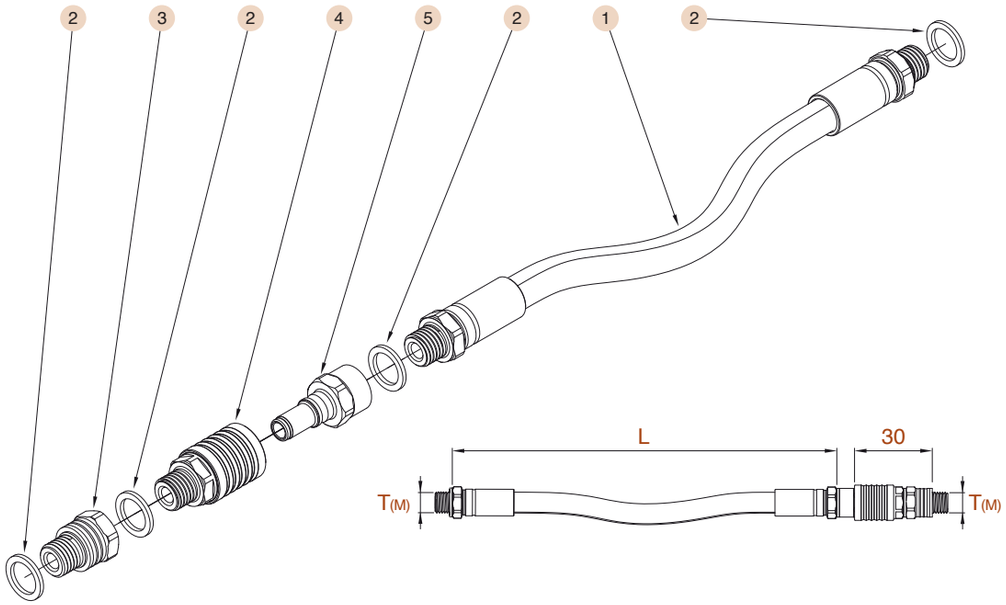



| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-M6-L… |
| 2 | 7 | JO-M6 |
| 3 | 2 | JVF-M6-D4 |
| 4 | 1 | JCBF-Ø6-M6 |
| 5 | 1 | JEB-M6-L19 |
| 6 | 2 | JS-M6-D4 |
| 7 | 1 | JRMF-M6-M6-L7.5 |

| D | T (M) | L | Art. N° |
|---|---|---|---|
| 4 | M6 | 102 | JKIT-M6-D4-102-QQ |
| | | 203 | JKIT-M6-D4-203-QQ |
| | | 305 | JKIT-M6-D4-305-QQ |
| | | 406 | JKIT-M6-D4-406-QQ |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder M6 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-M6-1010-4T | C-SW8-E2.5 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |




| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-M8X1-L… |
| 2 | 4 | JO-M8X1 |
| 3 | 1 | JRMF-M8X1-M8X1-L9.5 |
| 4 | 1 | JS-M8X1-D6 |
| 5 | 1 | JVF-M8X1-D6 |

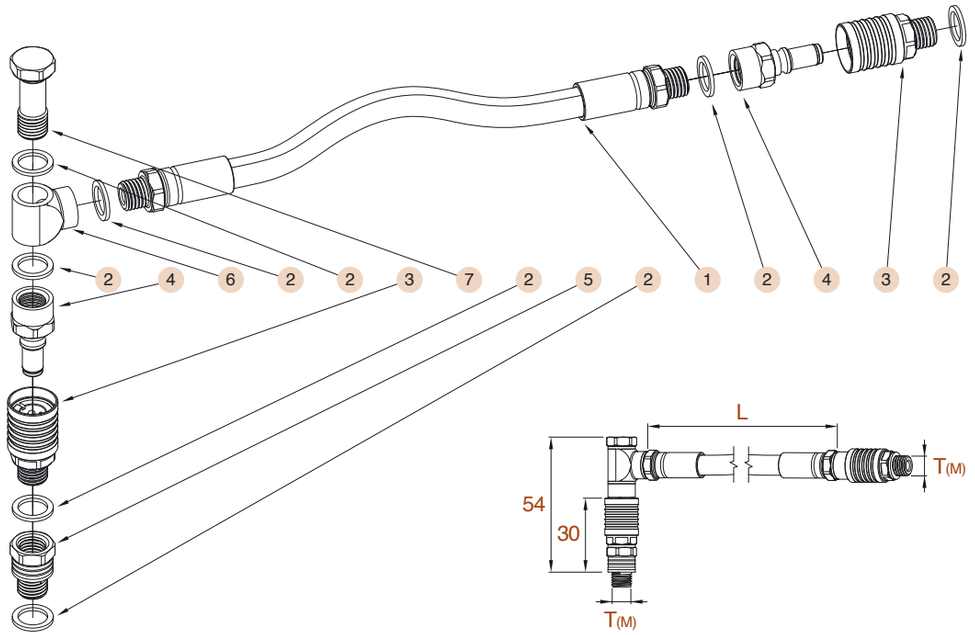
| D | T (M) | L | Art. N° |
|---|---|---|---|
| 6 | M8X1 | 102 | JKIT-M8X1-D6-102-QF |
| | | 203 | JKIT-M8X1-D6-203-QF |
| | | 305 | JKIT-M8X1-D6-305-QF |
| | | 406 | JKIT-M8X1-D6-406-QF |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder M8X1 |
| | CUT-Line 16X16- 25X25<br>ECO-Line 10X12- 20X20<br>EVOCUT-Line 10X12- 20X20<br>IN-Line Ø12- Ø28<br>ISO-Line 10X10- 20X20<br>MODU-Line<br>PRO-Line 10X12- 20X20<br>TOP-Line 10X12- 20X20<br>TURN-Line 10X12- 20X20 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-M8X1-1515-4T | C-SW11-E3.7 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |





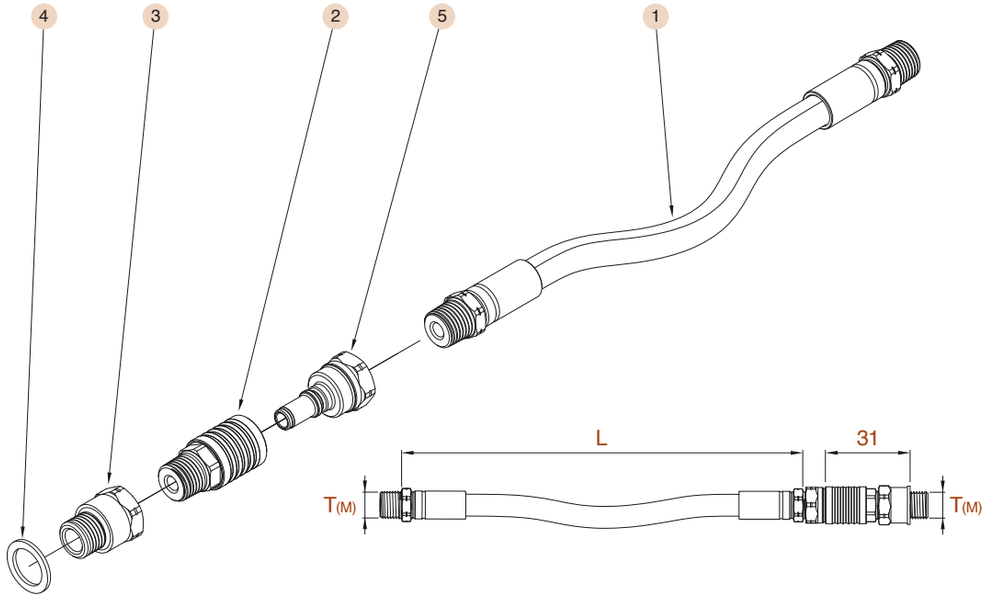



| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-M8X1-L… |
| 2 | 7 | JO-M8X1 |
| 3 | 2 | JS-M8X1-D6 |
| 4 | 2 | JVF-M8X1-D6 |
| 5 | 1 | JRMF-M8X1-M8X1-L9.5 |
| 6 | 1 | JCBF-Ø8-M8X1 |
| 7 | 1 | JEB-M8X1-L24 |

| D | T (M) | L | Art. N° |
|---|---|---|---|
| 6 | M8X1 | 102 | JKIT-M8X1-D6-102-QQ |
| | | 203 | JKIT-M8X1-D6-203-QQ |
| | | 305 | JKIT-M8X1-D6-305-QQ |
| | | 406 | JKIT-M8X1-D6-406-QQ |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder M8X1 |
| | CUT-Line 16X16- 25X25<br>ECO-Line 10X12- 20X20<br>EVOCUT-Line 10X12- 20X20<br>IN-Line Ø12- Ø28<br>ISO-Line 10X10- 20X20<br>MODU-Line<br>PRO-Line 10X12- 20X20<br>TOP-Line 10X12- 20X20<br>TURN-Line 10X12- 20X20 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-M8X1-1515-4T | C-SW11-E3.7 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |




| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-BSPT1/8-L… |
| 2 | 1 | JS-BSPT1/8-D6 |
| 3 | 1 | JRMF-BSP1/8-BSP1/8-L10.5 |
| 4 | 1 | JO-BSP1/8 |
| 5 | 1 | JVF-BSP1/8-D6 |

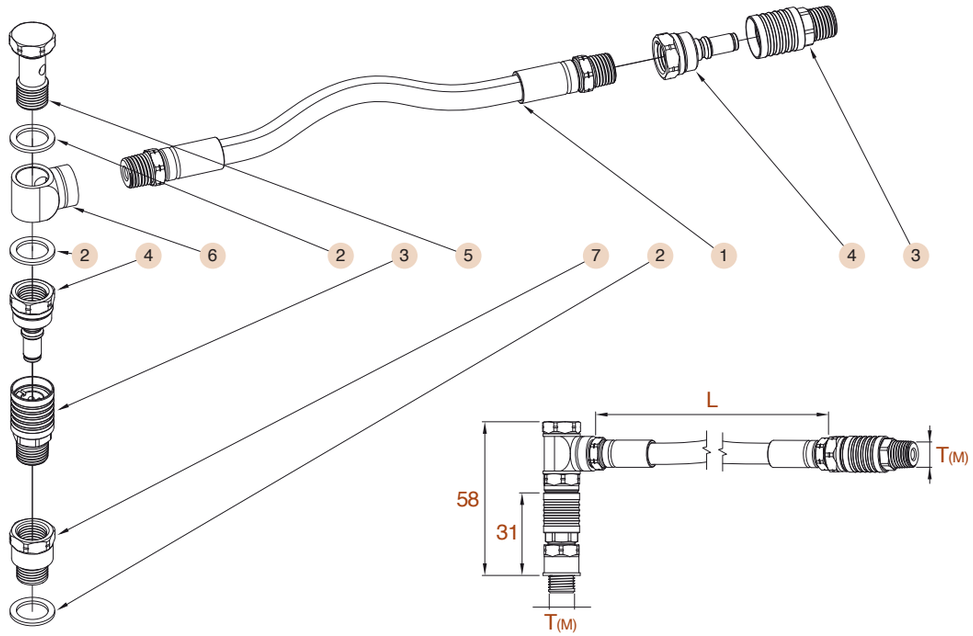
| D | T (M) | L | Art. N° |
|---|---|---|---|
| 6 | BSP1/8 | 102 | JKIT-BSP1/8-D6-102-QF |
| | | 203 | JKIT-BSP1/8-D6-203-QF |
| | | 305 | JKIT-BSP1/8-D6-305-QF |
| | | 406 | JKIT-BSP1/8-D6-406-QF |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder BSP1/8 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-BSP1/8-1515-4T | C-SW11-E3.7 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |








| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JTX-AC-BSPT1/8-L… |
| 2 | 3 | JO-BSP1/8 |
| 3 | 2 | JS-BSPT1/8-D6 |
| 4 | 2 | JVF-BSP1/8-D6 |
| 5 | 1 | JEB-BSP1/8-L26 |
| 6 | 1 | JCBF-Ø10-BSP1/8 |
| 7 | 1 | JRMF-BSP1/8-BSP1/8-L10.5 |

| D | T (M) | L | Art. N° |
|---|---|---|---|
| 6 | BSP1/8 | 102 | JKIT-BSP1/8-D6-102-QQ |
| | | 203 | JKIT-BSP1/8-D6-203-QQ |
| | | 305 | JKIT-BSP1/8-D6-305-QQ |
| | | 406 | JKIT-BSP1/8-D6-406-QQ |

| Compatibilité<br>Kompatibilität<br>Compatibility |  |
|---|---|
| | Porte-outil/Halter/Holder BSP1/8 |

| Options |  |  |
|---|---|---|
| | Art. N° | Art. N° |
| | JK-BSP1/8-1515-4T | C-SW11-E3.7 |
| | voir page 18.39<br>siehe Seite 18.39<br>see page 18.39 | voir page 18.51<br>siehe Seite 18.51<br>see page 18.51 |



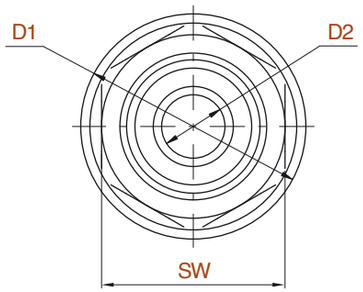
| Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition | Art. N° |
|---|---|---|
| 2 | C-SW8-E2.5 | JSTART-D4 |
| 4 | JO-M6 | |
| 2 | JO-M5 | |
| 2 | JK-M6-1010-4T | |
| 10 | JS-M6-D4 | |
| 2 | JTX-AC-M6-102 | |
| 2 | JTX-AC-M6-203 | |
| 2 | JTX-AC-M6-305 | |
| 2 | JTX-AC-M6-406 | |
| 10 | JVF-M6-D4 | |
| 2 | JVB-D4 | |
| 2 | JWF-M6-D4 | |
| 2 | JRMF-M6-M6-L7.5 | |
| 2 | JRMF-M6-M6-L12.5 | |
| 2 | JRMF-M6-M6-L17.5 | |
| 10 | JRMF-M5-M6-L7.5 | |
| 2 | JRFF-M6-L9.0 | |
| 5 | JCBF-Ø6-M6 | |
| 2 | JABF-Ø6-M6-45° | |
| 5 | JEB-M6-L19 | |
| 2 | JEB-M6-L30-DUO | |
| 1 | JT-CU-M6-102 | |
| 1 | JT-CU-M6-203 | |

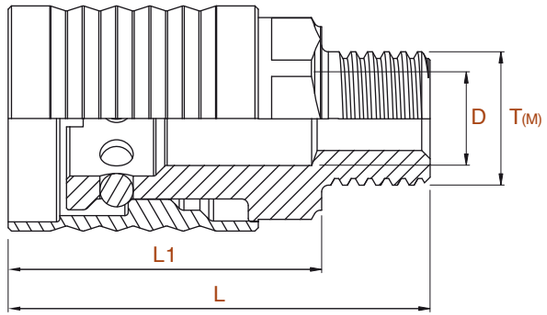


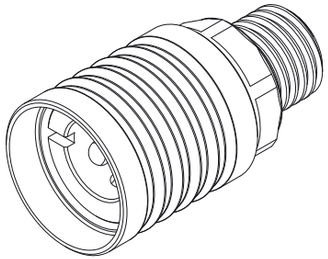




| Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition | Art. N° |
|---|---|---|
| 2 | C-SW11-E3.7 | JSTART-D6 |
| 4 | JO-M8X1 | |
| 2 | JK-M8X1-1515-4T | |
| 10 | JS-M8X1-D6 | |
| 2 | JTX-AC-M8X1-102 | |
| 2 | JTX-AC-M8X1-203 | |
| 2 | JTX-AC-M8X1-305 | |
| 2 | JTX-AC-M8X1-406 | |
| 10 | JVF-M8X1-D6 | |
| 2 | JVB-D6 | |
| 2 | JWF-M8X1-D6 | |
| 2 | JRMF-M8X1-M8X1-L9.5 | |
| 2 | JRMF-M8X1-M8X1-L14.5 | |
| 2 | JRMF-M8X1-M8X1-L19.5 | |
| 10 | JRMF-BSPT1/8-M8X1-L9.0 | |
| 2 | JRFF-M8X1-L12.0 | |
| 5 | JCBF-Ø8-M8X1 | |
| 2 | JABF-Ø8-M8X1-45° | |
| 5 | JEB-M8X1-L24 | |
| 2 | JEB-M8X1-L38-DUO | |
| 1 | JT-CU-M8X1-102 | |
| 1 | JT-CU-M8X1-203 | |



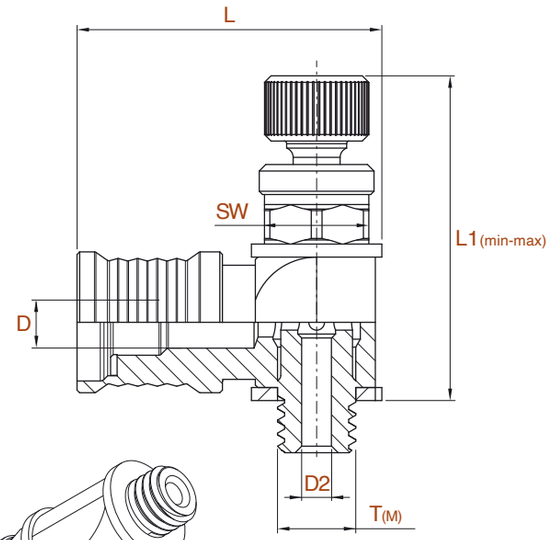



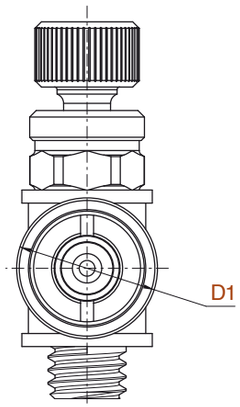
| T (M) | L | L1 | SW | D | D1 | D2 | Art. N° |
|---|---|---|---|---|---|---|---|
| M5 | 18 | 14 | 8 | 4 | 9.8 | 2.3 | JS-M5-D4 |
| M6 | 18 | 14 | 8 | 4 | 9.8 | 2.3 | JS-M6-D4 |
| M8X1KEG | 20 | 14 | 8 | 4 | 9.8 | 2.3 | JS-M8X1KEG-D4 |
| M8X1 | 25 | 19 | 11 | 6 | 13.5 | 3.8 | JS-M8X1-D6 |
| BSPT1/8 | 29.3 | 19 | 11 | 6 | 13.5 | 3.8 | JS-BSPT1/8-D6 |

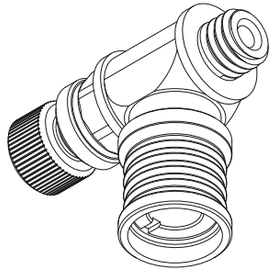
| Pression max<br>Max. Druck<br>Max. pressure | KEG = | BSPT = |
|---|---|---|
| = 220 Bar (3.190 PSI) | filetage conique<br>konisches Gewinde<br>conical thread | filetage conique<br>konisches Gewinde<br>conical thread |





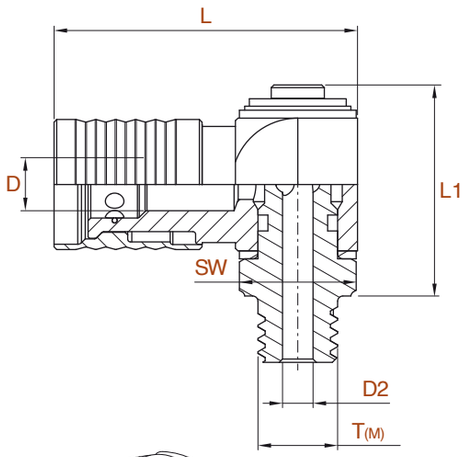


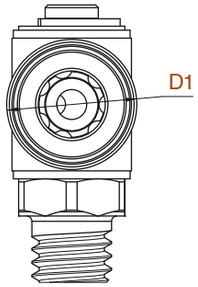



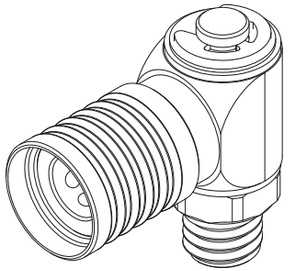



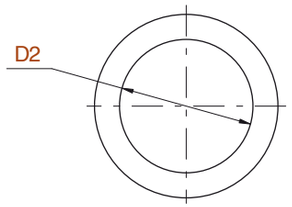
| T (M) | L | L1 (min-max) | SW | D | D1 | D2 | Art. N° |
|---|---|---|---|---|---|---|---|
| M6 | 23.4 | 23.1-24.9 | 8 | 4 | 10.8 | 2.3 | JSFA-M6-D4 |
| M8x1 | 30.5 | 29.4-32.1 | 11 | 6 | 14.5 | 3.8 | JSFA-M8x1-D6 |

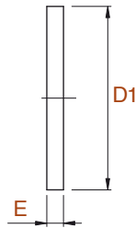
| Pression max<br>Max. Druck<br>Max. pressure |
|---|
| = 220 Bar (3.190 PSI) |

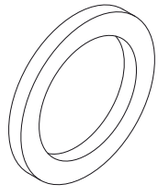




| T (M) | L | L1 | SW | D | D1 | D2 | Art. N° |
|---|---|---|---|---|---|---|---|
| M5 | 22.9 | 15.2 | 8 | 4 | 9.8 | 2.3 | JSR-M5-D4 |
| M6 | 22.9 | 15.9 | 8 | 4 | 9.8 | 2.3 | JSR-M6-D4 |
| M8x1 | 29.9 | 21 | 11 | 6 | 13.5 | 3.8 | JSR-M8x1-D6 |
| BSP1/8" | 29.9 | 22 | 13 | 6 | 13.5 | 3.8 | JSR-BSP1/8"-D6 |

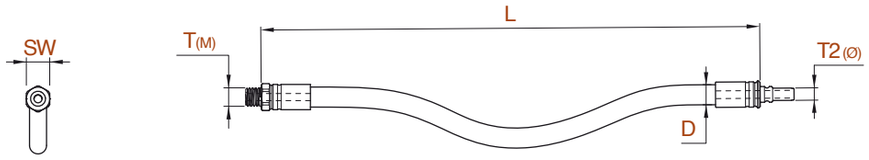
| Pression max<br>Max. Druck<br>Max. pressure |
|---|
| = 220 Bar (3.190 PSI) |

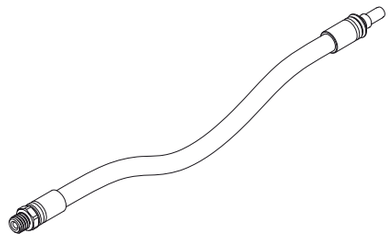
| D1 | D2 | E | Art. N° |
|---|---|---|---|
| 9 | 5 | 1 | JO-M5* |
| 9 | 6 | 1 | JO-M6* |
| 11 | 8 | 1 | JO-M8X1* |
| 14 | 10 | 1 | JO-BSP1/8* |

* vendu par 10 pièces
verkauft in 10 Stück
sold by 10 pieces

# JTS-AC

Tubes de distribution flexibles en acier avec fiche de connexion rapide
Stahlflex-Verteilschläuche mit Schnellkupplungsstecker
Flexible distribution tubes of steel with quick connection plug



| T (M) | T2 (Ø) | L* | SW | D | Art. N° |
|---|---|---|---|---|---|
| M6 | 4 | 102 | 8 | 6.5 | JTS-AC-M6-102 |
| | | 152 | | | JTS-AC-M6-152 |
| | | 203 | | | JTS-AC-M6-203 |
| | | 305 | | | JTS-AC-M6-305 |
| | | 406 | | | JTS-AC-M6-406 |
| M8x1 | 6 | 102 | 11 | 8 | JTS-AC-M8x1-102 |
| | | 152 | | | JTS-AC-M8x1-152 |
| | | 203 | | | JTS-AC-M8x1-203 |
| | | 305 | | | JTS-AC-M8x1-305 |
| | | 406 | | | JTS-AC-M8x1-406 |

* Longueur spécifiquepossiblesur demande
Spezifische Länge auf Anfrage möglich
Specific length possible on request

| Pression max<br>Max. Druck<br>Max. pressure | Couple de serrage<br>Anzugsmoment<br>Torque setting |
|---|---|
| = 150 Bar (2.175 PSI) | 1.8 Nm |

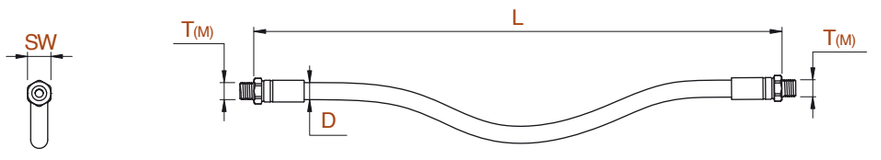


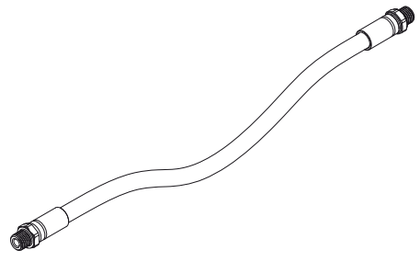
Zurück zum Kapitelanfang



# JTX-AC

Tubes de distribution flexibles en acier inoxydable tressé
Rostfreier Stahlflex-Schlauch
Flexible distribution tubes of stainless steel braiding



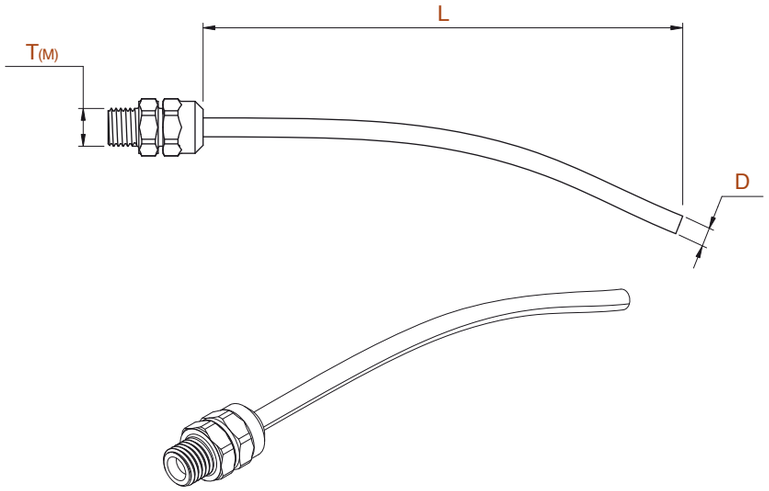
| T (M) | L* | SW | D | Art. N° |
|---|---|---|---|---|
| M6 | 102 | 8 | Ø6.5 | JTX-AC-M6-102 |
| | 203 | 8 | Ø6.5 | JTX-AC-M6-203 |
| | 305 | 8 | Ø6.5 | JTX-AC-M6-305 |
| | 406 | 8 | Ø6.5 | JTX-AC-M6-406 |
| M8X1 | 102 | 11 | Ø8 | JTX-AC-M8X1-102 |
| | 203 | 11 | Ø8 | JTX-AC-M8X1-203 |
| | 305 | 11 | Ø8 | JTX-AC-M8X1-305 |
| | 406 | 11 | Ø8 | JTX-AC-M8X1-406 |
| BSPT1/8 | 102 | 11 | Ø8 | JTX-AC-BSPT1/8-102 |
| | 203 | 11 | Ø8 | JTX-AC-BSPT1/8-203 |
| | 305 | 11 | Ø8 | JTX-AC-BSPT1/8-305 |
| | 406 | 11 | Ø8 | JTX-AC-BSPT1/8-406 |

* Longueur spécifiquepossiblesur demande
Spezifische Länge auf Anfrage möglich
Specific length possible on request

| Pression max<br>Max. Druck<br>Max. pressure | KEG= | BSPT = | Pression (bar) | Ø6.5 (l/min) | Ø8 (l/min) |
|---|---|---|---|---|---|
| = 220 Bar (3.190 PSI) | filetage conique<br>konisches Gewinde<br>conical thread | filetage conique<br>konisches Gewinde<br>conical thread | 2 | 3.5 | 9.5 |
| | | | 8 | 7.0 | 19.0 |
| | | | 15 | 9.6 | 26.0 |
| | | | 20 | 11.0 | 30.1 |
| | | | 30 | 13.5 | 36.9 |
| | | | 50 | 17.5 | 47.6 |
| | | | 80 | 22.1 | 60.3 |
| | | | 100 | 24.7 | 67.4 |
| | | | 150 | 30.2 | 82.5 |

Zurück zum Index



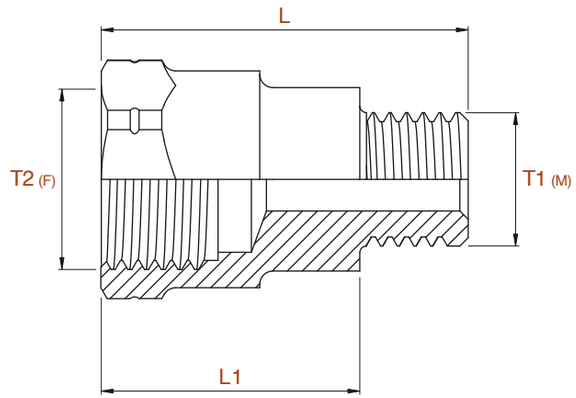

| T (M) | L* | SW | D | Art. N° |
|---|---|---|---|---|
| M6 | 102 | 8 | Ø3 | JT-CU-M6-102 |
| | 203 | 8 | Ø3 | JT-CU-M6-203 |
| | 305 | 8 | Ø3 | JT-CU-M6-305 |
| | 406 | 8 | Ø3 | JT-CU-M6-406 |
| M8X1 | 102 | 11 | Ø4 | JT-CU-M8X1-102 |
| | 203 | 11 | Ø4 | JT-CU-M8X1-203 |
| | 305 | 11 | Ø4 | JT-CU-M8X1-305 |
| | 406 | 11 | Ø4 | JT-CU-M8X1-406 |

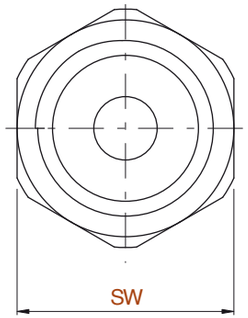
* Longueur spécifique possible sur demande
Spezifische Länge auf Anfrage möglich
Specific length possible on request

| Pression max<br>Max. Druck<br>Max. pressure |
|---|
| = 220 Bar<br>(3.190 PSI) |

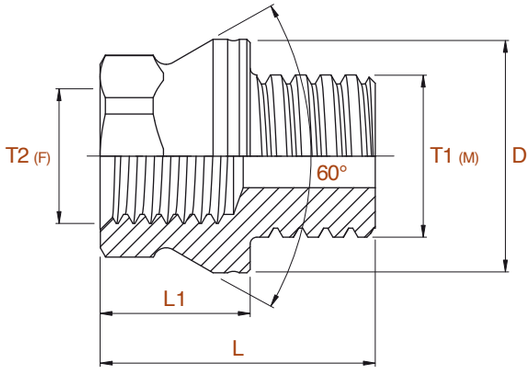


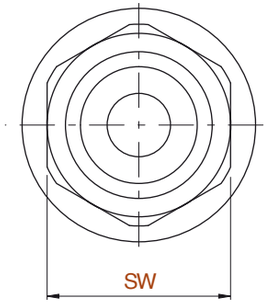


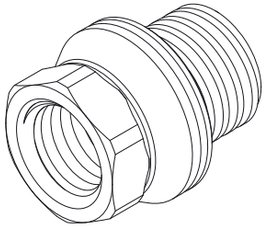



| T1 (M) | T2 (F) | L1 | L | SW | Art. N° |
|---|---|---|---|---|---|
| M5 | M5 | 6.5 | 11 | 8 | JRMF-M5-M5-L6.5 |
| | | 11.5 | 16 | 8 | JRMF-M5-M5-L11.5 |
| | | 16.5 | 21 | 8 | JRMF-M5-M5-L16.5 |
| | M6 | 7.5 | 12 | 8 | JRMF-M5-M6-L7.5 |
| | M8X1 | 9.5 | 14 | 11 | JRMF-M5-M8X1-L9.5 |
| M6 | M6 | 7.5 | 12.5 | 8 | JRMF-M6-M6-L7.5 |
| | | 12.5 | 17.5 | 8 | JRMF-M6-M6-L12.5 |
| | | 17.5 | 22.5 | 8 | JRMF-M6-M6-L17.5 |
| | M8X1 | 9.5 | 14.5 | 11 | JRMF-M6-M8X1-L9.5 |
| M8X1KEG | M6 | 6 | 12 | 8 | JRMF-M8X1KEG-M6-L6.0 |
| | M8X1 | 9.5 | 16.5 | 11 | JRMF-M8X1KEG-M8X1-L9.5 |
| M8X1 | M5 | 5.5 | 12 | 11 | JRMF-M8X1-M5-L5.5 |
| | M6 | 7 | 13.5 | 11 | JRMF-M8X1-M6-L7.0 |
| | M8X1 | 9.5 | 16 | 11 | JRMF-M8X1-M8X1-L9.5 |
| | | 14.5 | 21 | 11 | JRMF-M8X1-M8X1-L14.5 |
| | | 19.5 | 26 | 11 | JRMF-M8X1-M8X1-L19.5 |
| | BSP1/8 | 10.5 | 17 | 13 | JRMF-M8X1-BSP1/8-L10.5 |
| | | 15.5 | 22 | 13 | JRMF-M8X1-BSP1/8-L15.5 |
| | | 20.5 | 27 | 13 | JRMF-M8X1-BSP1/8-L20.5 |
| | NPT1/8 | 11 | 17.5 | 13 | JRMF-M8X1-NPT1/8-L11 |
| M8X1.25 | M8X1 | 9.5 | 16 | 11 | JRMF-M8X1.25-M8X1-L9.5 |
| BSPT1/8 | M5 | 3.5 | 14.6 | 11 | JRMF-BSPT1/8-M5-L3.5 |
| | M6 | 3.5 | 14.6 | 11 | JRMF-BSPT1/8-M6-L3.5 |
| | M8X1 | 9 | 20.3 | 11 | JRMF-BSPT1/8-M8X1-L9.0 |
| BSP1/8 | BSP1/8 | 10.5 | 18 | 13 | JRMF-BSP1/8-BSP1/8-L10.5 |
| | | 15.5 | 23 | 13 | JRMF-BSP1/8-BSP1/8-L15.5 |
| | | 20.5 | 28 | 13 | JRMF-BSP1/8-BSP1/8-L20.5 |
| NPT1/8 | M8X1 | 7 | 17 | 13 | JRMF-NPT1/8-M8X1-L7.0 |
| | BSP1/8 | 9 | 20.3 | 13 | JRMF-NPT1/8-BSP1/8-L9.0 |
| NTP1/16 | M6 | 6 | 15 | 11 | JRMF-NPT1/16-M6-L6.0 |
| | M8X1 | 9 | 18 | 13 | JRMF-NPT1/16-M8X1-L9.0 |
| SAE7/16-20 | M6 | 4.5 | 12 | 13 | JRMF-SAE7/16-20-M6-L4.5 |
| | M8X1 | 7 | 14.5 | 13 | JRMF-SAE7/16-20-M8X1-L7 |

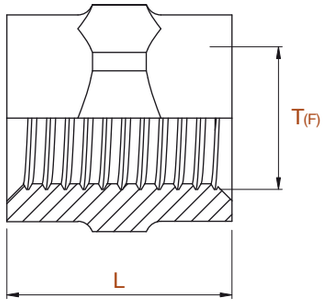


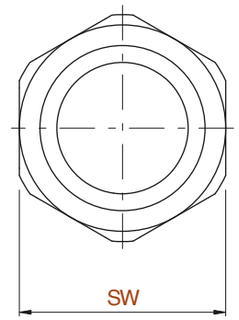



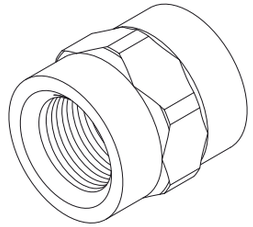



| T1 (M) | T2 (F) | L1 | L | D | SW | Art. N° |
|---|---|---|---|---|---|---|
| BSP1/8 | M8X1 | 9 | 16.5 | 14 | 11 | JRMF-BSP1/8-M8X1-A60°-L9.0 |

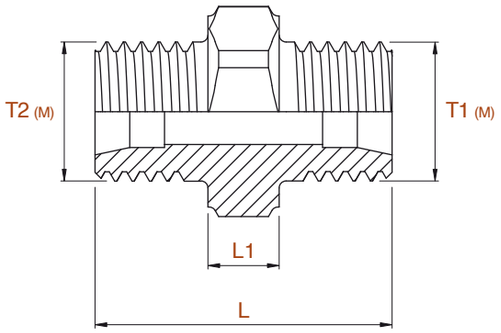


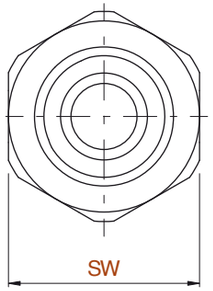


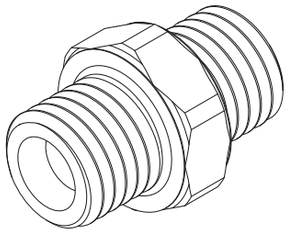



| T (F) | L | SW | Art. N° |
|---|---|---|---|
| M6 | 9 | 8 | JRFF-M6-L9.0 |
| M8X1 | 12 | 11 | JRFF-M8X1-L12.0 |



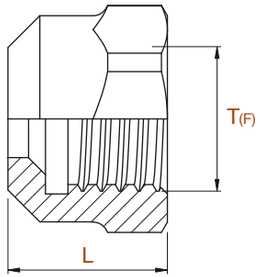



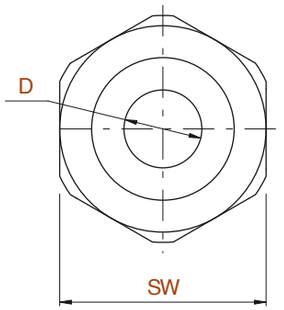



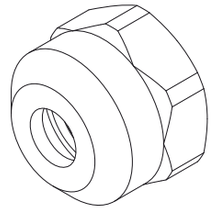
| T1 (M) | T2 (M) | L1 | L | SW | Art. N° |
|---|---|---|---|---|---|
| M6 | M6 | 3 | 13 | 8 | JRMM-M6-M6-L3.0 |
| M8X1 | M8X1 | 4 | 17 | 11 | JRMM-M8X1-M8X1-L4.0 |
| M10 | M8X1 | 3.5 | 17.5 | 11 | JRMM-M10-M8X1-3.5 |



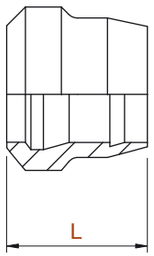


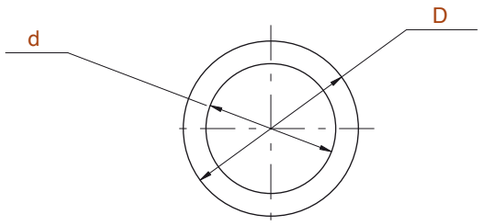


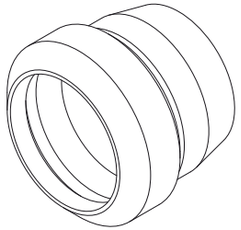



| T (F) | L | D | SW | Art. N° |
|---|---|---|---|---|
| M6 | 6.5 | 3 | 8 | JN-M6-D3 |
| M8X1 | 8.5 | 4 | 11 | JN-M8X1-D4 |
| M10 | 11.5 | 6 | 12 | JN-M10-D6 |

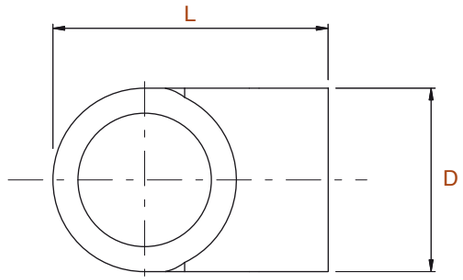


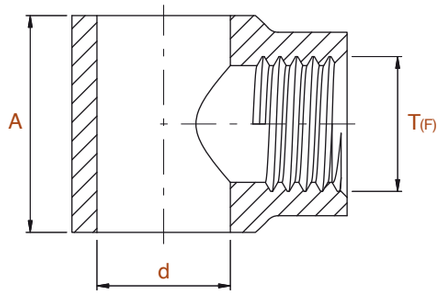



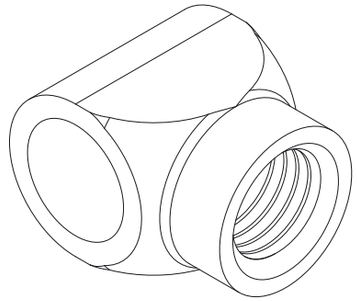



| d | D | L | Art. N° |
|---|---|---|---|
| 3 | 4 | 3.3 | JNG-D3 |
| 4 | 5.5 | 4.5 | JNG-D4 |
| 6 | 8.5 | 7 | JNG-D6 |





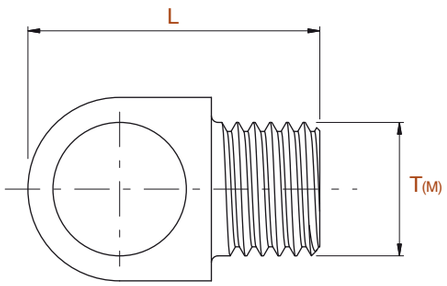



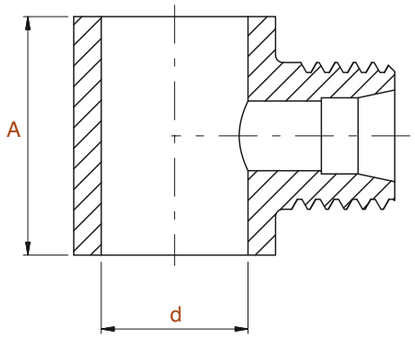



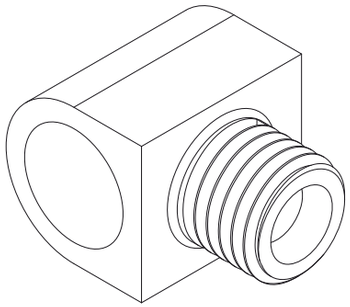
| T (F) | A | L | d | D | Art. N° |
|---|---|---|---|---|---|
| M6 | 10 | 12.5 | 6 | 9 | JCBF-Ø6-M6 |
| M8X1 | 13 | 16.5 | 8 | 11 | JCBF-Ø8-M8X1 |
| | 13 | 18.5 | 10 | 11 | JCBF-Ø10-M8X1 |
| BSP1/8 | 13 | 19.5 | 10 | 13 | JCBF-Ø10-BSP1/8 |

# JCBM

Banjos courts mâles
Kurze Außengewinde-Banjo
Short male Banjo



| T (M) | A | L | d | Art. N° |
|---|---|---|---|---|
| M6 | 10 | 14 | 6 | JCBM-Ø6-M6 |
| M8X1 | 13 | 17.5 | 8 | JCBM-Ø8-M8X1 |
| | 13 | 19.5 | 10 | JCBM-Ø10-M8X1 |

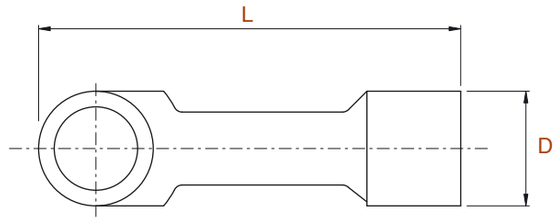


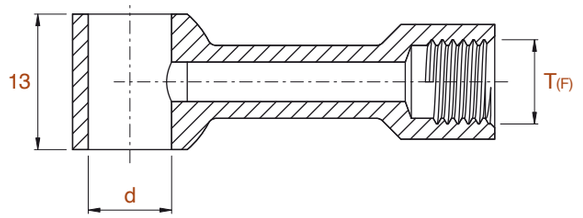
Zurück zum Kapitelanfang

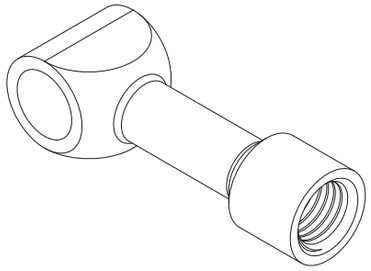


# JABF

Banjos longs droits femelles
Lange Innengewinde-Banjo
Long straight female Banjo

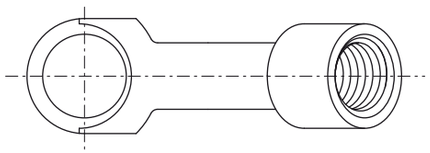


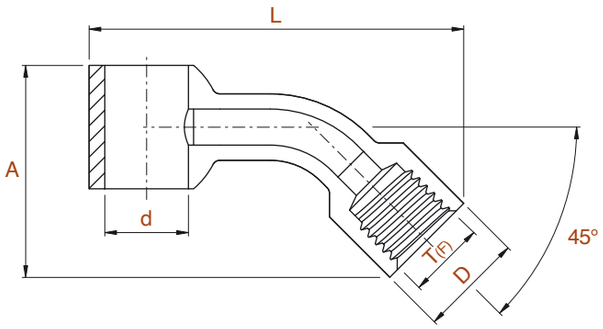



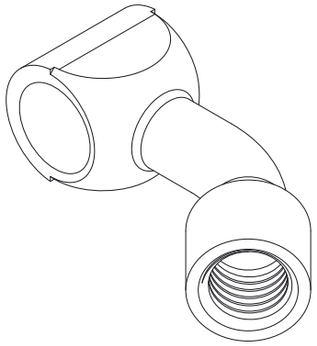



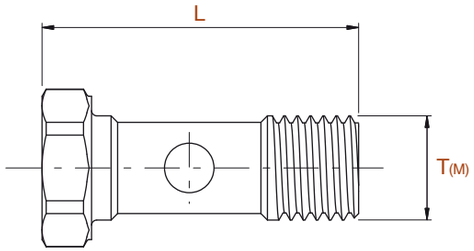
| T (F) | A | L | d | D | Art. N° |
|---|---|---|---|---|---|
| M6 | 10 | 31.5 | 6 | 9 | JABF-Ø6-M6 |
| M8X1 | 13 | 40.5 | 8 | 11 | JABF-Ø8-M8X1 |
| | 13 | 42.5 | 10 | 11 | JABF-Ø10-M8X1 |
| BSP1/8 | 13 | 42.5 | 10 | 13 | JABF-Ø10-BSP1/8 |

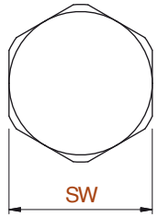
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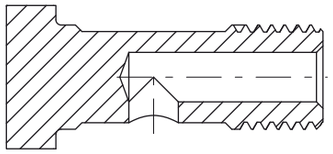


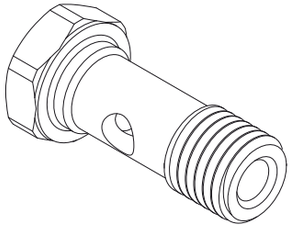




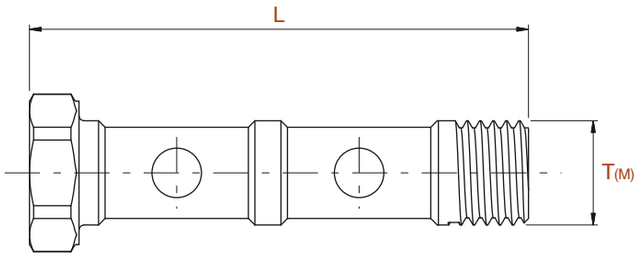



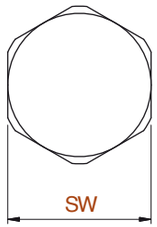



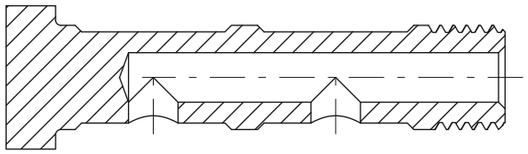


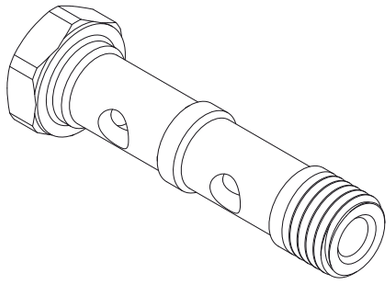
| T (F) | A | L | d | D | Art. N° |
|---|---|---|---|---|---|
| M6 | 10 | 33 | 6 | 9 | JABF-Ø6-M6-45° |
| M8X1 | 11.8 | 40 | 8 | 11 | JABF-Ø8-M8X1-45° |
| | 13 | 40.5 | 10 | 11 | JABF-Ø10-M8X1-45° |

| T (M) | L | SW | Art. N° |
|---|---|---|---|
| M5 | 18.3 | 8 | JEB-M5-L18 |
| M6 | 18.8 | 8 | JEB-M6-L19 |
| M8X1 | 24.3 | 11 | JEB-M8X1-L24 |
| BSP1/8 | 26 | 13 | JEB-BSP1/8-L26 |



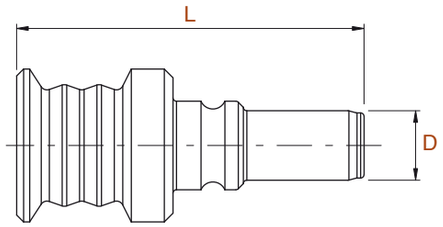



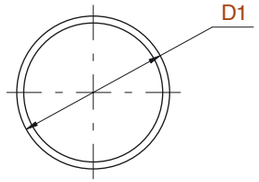



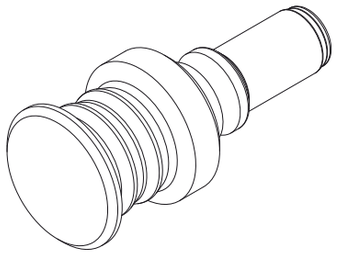


| T (M) | L | SW | Art. N° |
|---|---|---|---|
| M6 | 29.8 | 8 | JEB-M6-L30-DUO |
| M8X1 | 38.3 | 11 | JEB-M8X1-L38-DUO |
| BSP1/8 | 40 | 13 | JEB-BSP1/8-L40-DUO |

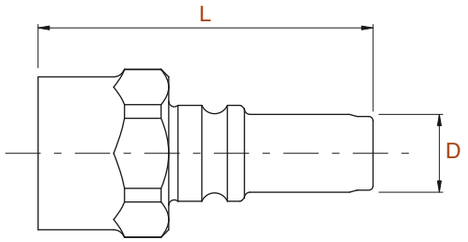


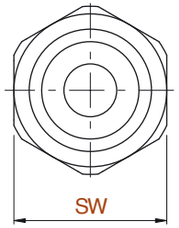


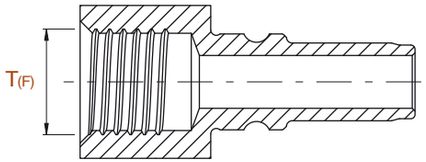



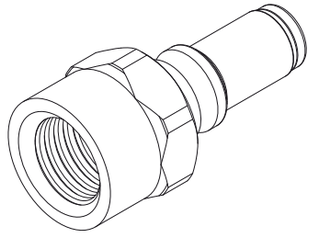



| D | D1 | L | Art. N° |
|---|---|---|---|
| 4 | 8.8 | 20 | JVB-D4 |
| 6 | 12 | 27 | JVB-D6 |



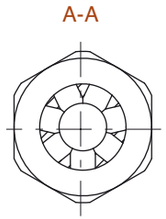



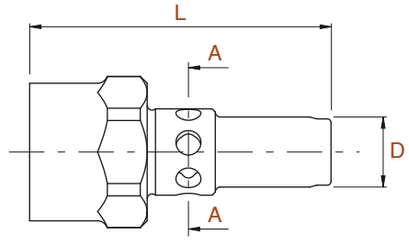



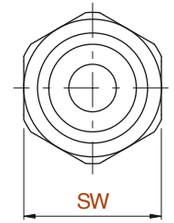
| D | T (F) | L | SW | Art. N° |
|---|---|---|---|---|
| 4 | M6 | 18.3 | 8 | JVF-M6-D4 |
| 6 | M8X1 | 24 | 11 | JVF-M8X1-D6 |
| 6 | BSP1/8 | 25.5 | 11 | JVF-BSP1/8-D6 |

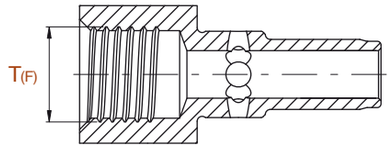


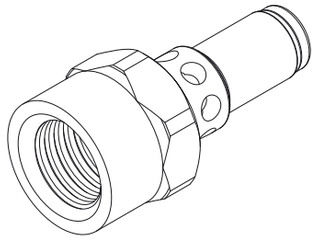




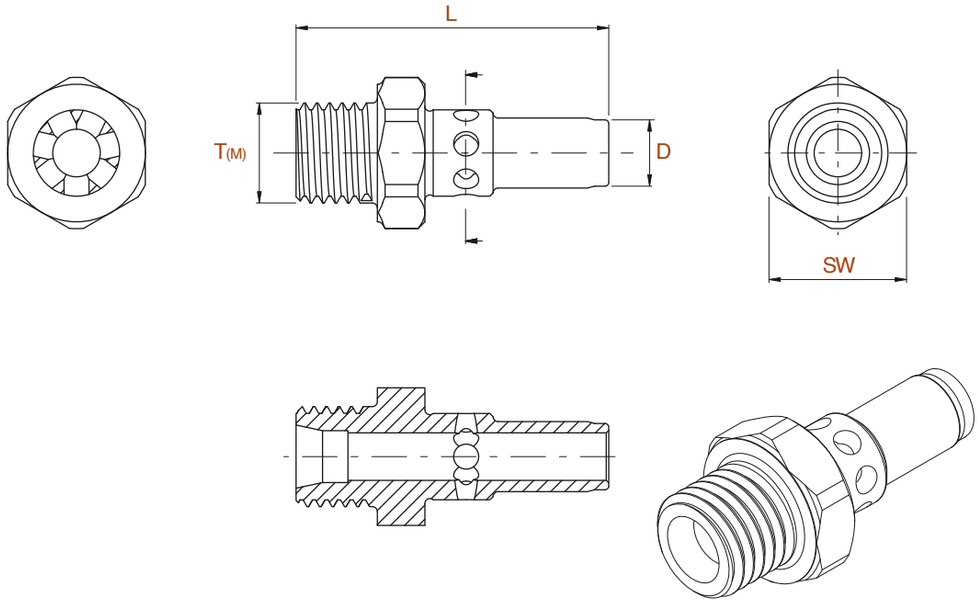



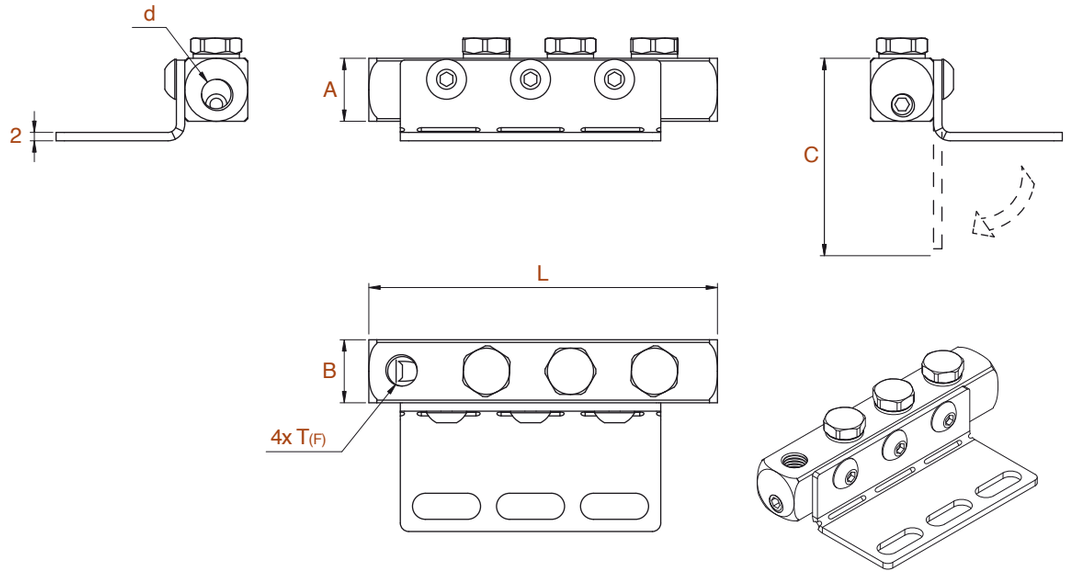



| D | T (F) | L | SW | Art. N° |
|---|---|---|---|---|
| 4 | M6 | 18.3 | 8 | JWF-M6-D4 |
| 6 | M8X1 | 24 | 11 | JWF-M8X1-D6 |



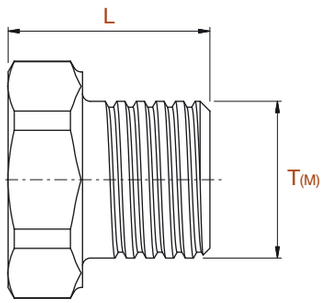

| D | T (M) | L | SW | Art. N° |
|---|---|---|---|---|
| 4 | M6 | 18.3 | 8 | JWM-M6-D4 |
| 6 | M8X1 | 25 | 11 | JWM-M8X1-D6 |

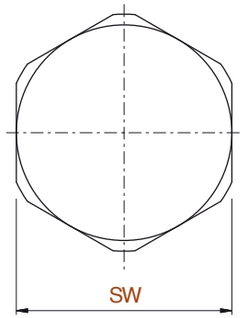


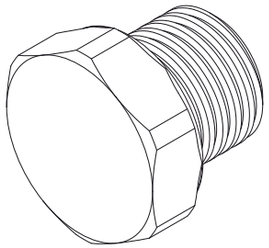



| T (F) | A | B | C | d | L | Art. N° |
|---|---|---|---|---|---|---|
| M5 | 10 | 10 | 37 | M5 | 62 | JK-M5-1010-4T |
| M6 | 10 | 10 | 37 | M6 | 62 | JK-M6-1010-4T |
| M8X1 | 15 | 15 | 47 | M8X1 | 83 | JK-M8X1-1515-4T |
| BSP1/8 | 15 | 15 | 47 | BSP1/8 | 83 | JK-BSP1/8-1515-4T |

| Qty | Livré avec | Mitgeliefert | Supplied with |
|---|---|---|---|
| 1 | Plaque de serrage pliable | Faltbare Klemmplatte | Foldable clamping plate |
| 3 | Vis bombée | Linsenkopfschraube | Domed clamping screw |
| 3 | Vis sans tête bouchon | Dichtungsschraube | Sealing screw |
| 3 | Joint d'étanchéité en cuivre | Kupferdichtungsringe | Copper sealing basket |
| 1 | Vis sans tête bouchon | Dichtungsschraube | Sealing screw |

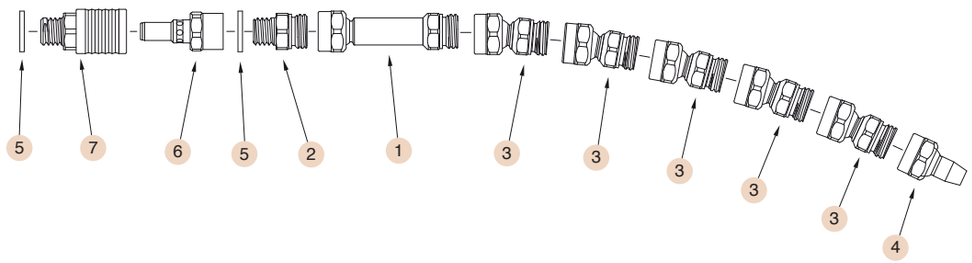


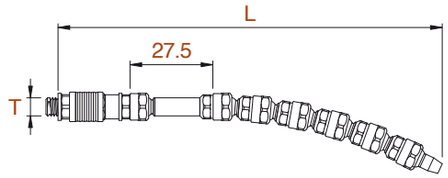



| SW | T (M) | L | Art. N° |
|---|---|---|---|
| 8 | M5 | 7.3 | JBB-M5-L7.0 |
| 8 | M6 | 7.8 | JBB-M6-L8.0 |
| 11 | M8X1 | 10.3 | JBB-M8X1-L10.0 |
| 11 | BSP1/8 | 10.3 | JBB-BSP1/8-L10.0 |






| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JAR3-L27.5 |
| 2 | 1 | JRMM-AR3-M6-L3.0 |
| 3 | 5 | JAR3-L12.5 |
| 4 | 1 | JJ-AR3-D3-L9 |
| 5 | 2 | JO-M6 |
| 6 | 1 | JWF-M6-D4 |
| 7 | 1 | JS-M6-D4 |

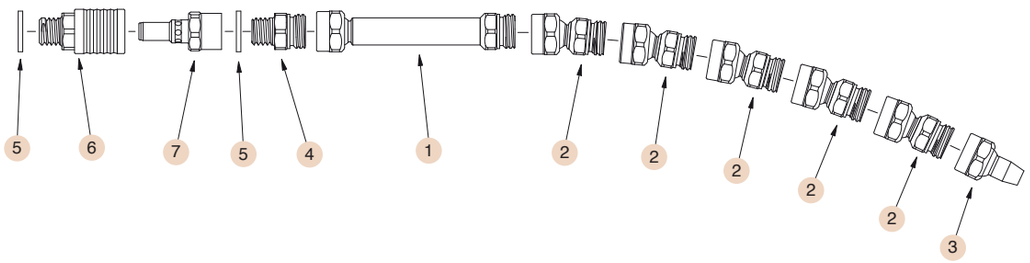
| T (M) | L | Art. N° |
|---|---|---|
| M6 | 130 | JKIT-AR3-M6-D3-130 |

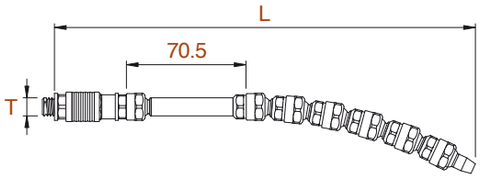
| Pression max<br>Max. Druck<br>Max. pressure | Couple de serrage<br>Anzugsmoment<br>Torque setting |
|---|---|
| 150 bar (2.175psi) | 1.8 Nm |

| Option recommandée<br>Empfohlene Option<br>Recommended option | Page<br>Seite<br>Page |
|---|---|
| C-AR3 | 18.51 |

# JKIT-AR6

Kit articulé avec buse d'arrosage
Gelenkkit mit Kühlungsdüse
Articulated kit with coolant nozzle




| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JAR6-L70.5 |
| 2 | 5 | JAR6-L20.5 |
| 3 | 1 | JJ-AR6-D6-L16 |
| 4 | 1 | JRMM-AR6-M8X1-L4 |
| 5 | 2 | JO-M8X1 |
| 6 | 1 | JS-M8X1-D6 |
| 7 | 1 | JWF-M8X1-D6 |

| T (M) | L | Art. N° |
|---|---|---|
| M8X1 | 225 | JKIT-AR6-M8X1-D6-225 |

| Pression max<br>Max. Druck<br>Max. pressure | Couple de serrage<br>Anzugsmoment<br>Torque setting |
|---|---|
| 100 bar (1.450 psi) | 6 Nm |

| Option recommandée<br>Empfohlene Option<br>Recommended option | Page<br>Seite<br>Page |
|---|---|
| C-AR6 | 18.51 |

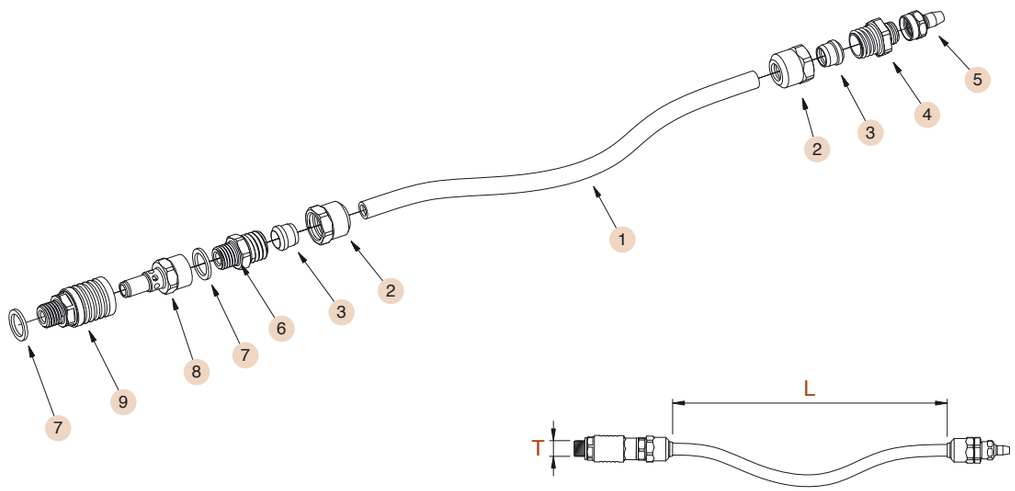


Zurück zum Kapitelanfang



# JKIT-CU

Kit tube en cuivre avec buse d'arrosage
Kit Kupferrohr mit Kühlungsdüse
Kit copper tube with coolant nozzle

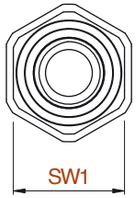


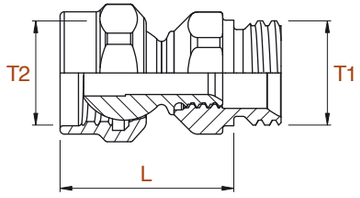

| Ref | Qty | Composition du kit<br>Zusammensetzung Kit<br>Kit composition |
|---|---|---|
| 1 | 1 | JT-CU |
| 2 | 2 | JN-M10-D6 |
| 3 | 2 | JNG-D6 |
| 4 | 1 | JRMM-AR3-M10-L3.0 |
| 5 | 1 | JJ-AR3-D3-L9 |
| 6 | 1 | JRMM-M10-M8X1-L3.5 |
| 7 | 2 | JO-M8X1-D6 |
| 8 | 1 | JWF-M8X1-D6 |
| 9 | 1 | JS-M8X1-D6 |

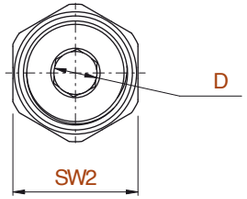
| T (M) | L | Art. N° |
|---|---|---|
| M8X1 | 305 | JKIT-CU-AR3-M8X1-D3-305 |

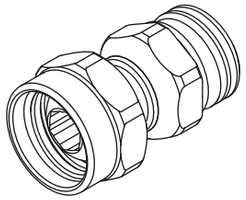
| Pression max<br>Max. Druck<br>Max. pressure |
|---|
| = 220 Bar (3.190 PSI) |

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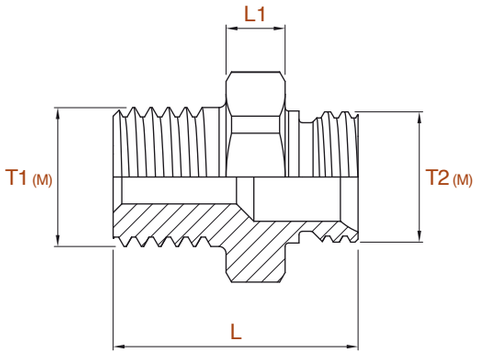


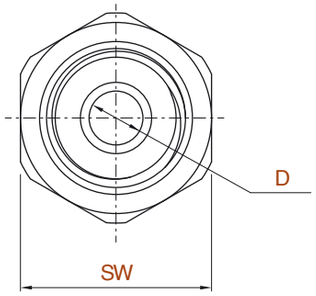



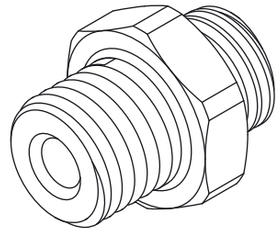



| T1 (M) | T2 (F) | L | D | SW1 | SW2 | Art. N° |
|---|---|---|---|---|---|---|
| M7.5 | M7.5 | 12.5 | 3 | 8 | 9 | JAR3-L12.5 |
| | | 27.5 | 3 | | | JAR3-L27.5 |
| | | 42.5 | 3 | | | JAR3-L42.5 |
| M13 | M13 | 20.5 | 6 | 13 | 15 | JAR6-L20.5 |
| | | 45.5 | 6 | | | JAR6-L45.5 |
| | | 70.5 | 6 | | | JAR6-L70.5 |

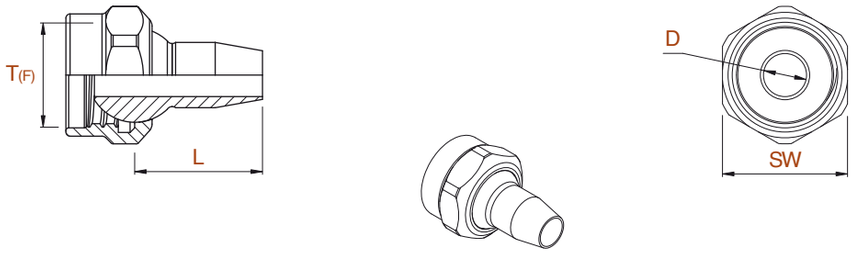


| T1 (M) | T2 (M) | L | L1 | D | SW | Art. N° |
|---|---|---|---|---|---|---|
| M6 | M7.5 | 12 | 3 | 3 | 8 | JRMM-AR3-M6-L3.0 |
| M8X1 | M7.5 | 14 | 3.5 | 3 | 11 | JRMM-AR3-M8X1-L3.5 |
| M10 | M7.5 | 15 | 3 | 3 | 11 | JRMM-AR3-M10-L3.0 |
| M8X1 | M13 | 17 | 4 | 6 | 13 | JRMM-AR6-M8X1-L4.0 |
| M10X1 | M13 | 18 | 4 | 6 | 13 | JRMM-AR6-M10X1-L4.0 |
| BSP 1/8" | M13 | 18 | 4 | 6 | 13 | JRMM-AR6-BSP1/8-L4.0 |

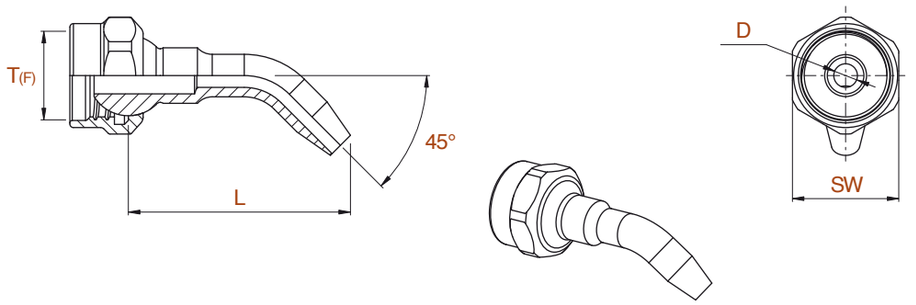
## JJ-AR-SHORT




| T (F) | L | D | SW | Art. N° |
|---|---|---|---|---|
| M7.5 | 9 | 3 | 9 | JJ-AR3-D3-L9 |
| M13 | 16 | 6 | 15 | JJ-AR6-D6-L16 |



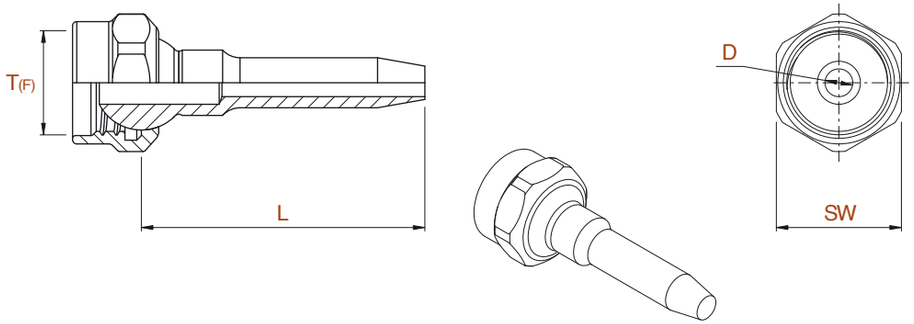
## JJ-AR-CURVED




| T (F) | L | D | SW | Art. N° |
|---|---|---|---|---|
| M7.5 | 19 | 2 | 9 | JJ-AR3-D2-L19-45° |
| M13 | 23,5 | 6 | 15 | JJ-AR6-D6-L23.5-45° |



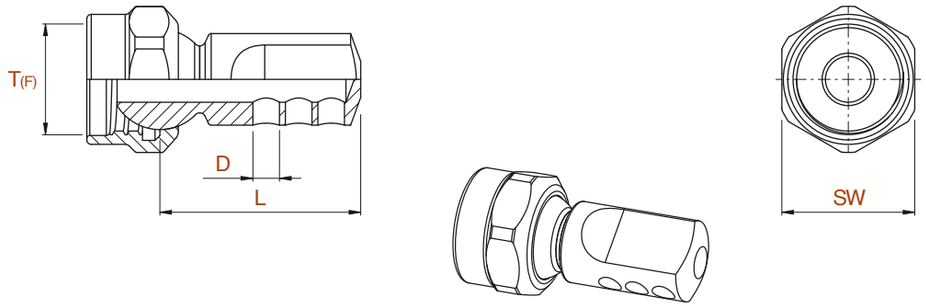
## JJ-AR-LONG




| T (F) | L | D | SW | Art. N° |
|---|---|---|---|---|
| M7.5 | 20 | 2 | 9 | JJ-AR3-D2-L20 |
| M13 | 35 | 3 | 15 | JJ-AR6-D3-L35 |



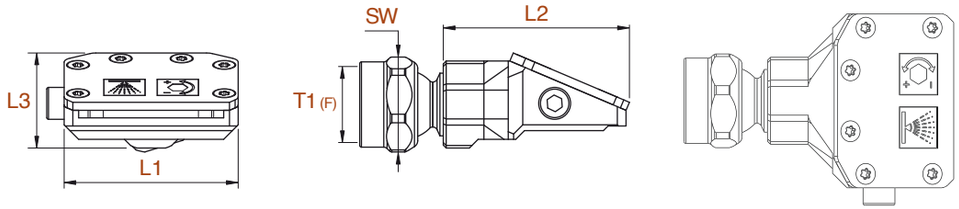
## JJ-AR-3XD




| T (F) | L | D | SW | Art. N° |
|---|---|---|---|---|
| M7.5 | 15 | 1.8 | 9 | JJ-AR3-3XD1.8-L13.5 |
| M13 | 24 | 3.4 | 15 | JJ-AR6-3XD3.4-L24 |

## JJ-AR6-V

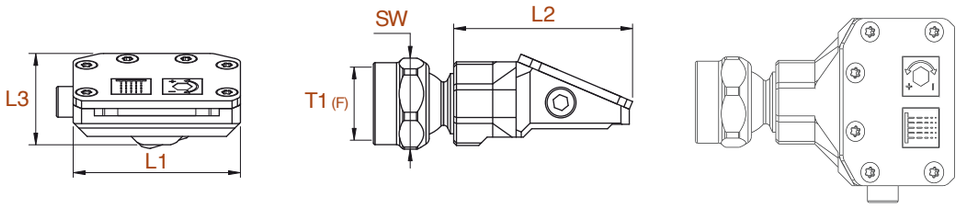
Buses plates jet diffusé
Flachdüse mit breitem Sprühstrahl
Diverging flat nozzle




| T1 (F) | L1 | L2 | L3 | SW | Art. N° |
|---|---|---|---|---|---|
| ML13 | 20 | 30.6 | 16.4 | 15 | JJ-AR6-V20 |
| | 30 | 32 | | | JJ-AR6-V30 |
| | 40 | 38.5 | | | JJ-AR6-V40 |
| | 50 | 43.5 | | | JJ-AR6-V50 |

## JJ-AR6-W

Buses plates jet droit
Flachdüse mit geradem Sprühstrahl
Straight flat nozzle




| T1 (F) | L1 | L2 | L3 | SW | Art. N° |
|---|---|---|---|---|---|
| M13 | 20 | 30.6 | 16.4 | 15 | JJ-AR6-W20 |
| | 30 | 32 | | | JJ-AR6-W30 |
| | 40 | 38.5 | | | JJ-AR6-W40 |
| | 50 | 43.5 | | | JJ-AR6-W50 |

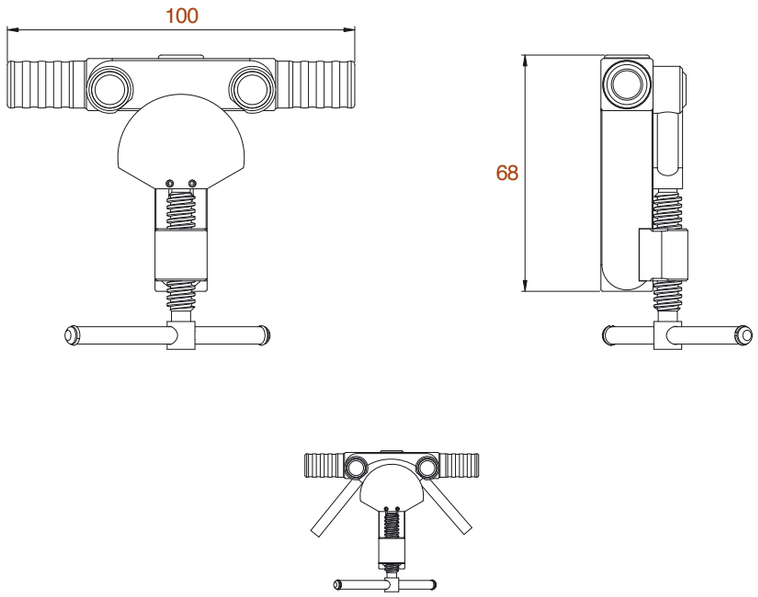


Zurück zum Kapitelanfang



## JTB

Appareil de cintrage
Biegegerät
Bending tool

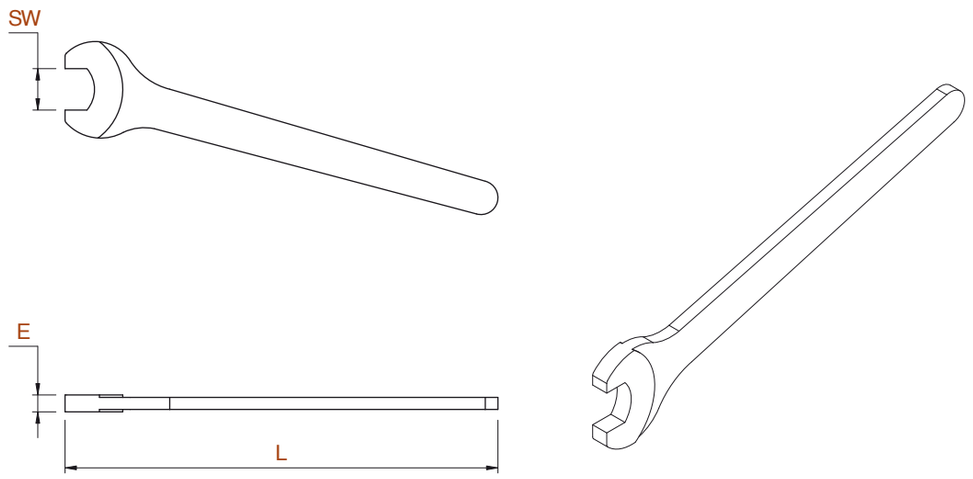



| Art. N° |
|---|
| JTB-D6 |

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| Largeur<br>Breite<br>Width | Épaisseur<br>Dicke<br>Thickness | Longueur<br>Länge<br>Length | Art. N° |
|---|---|---|---|
| 6 mm | 0.1 mm | 12 m | TEF-6010 |




| SW | E | L | Art. N° |
|---|---|---|---|
| 8 | 2.5 | 90 | C-SW8-E2.5 |
| 11 | 3.7 | 110 | C-SW11-E3.7 |
| 13 | 5.8 | 130 | C-SW13-E5.8 |
| 8 | 2.5 | 55 | C-AR3 |
| 9 | 3 | | |
| 13 | 3 | 65 | C-AR6 |
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● Article standart
Standardartikel
Standard item

**P** Acier
Stahl
Steel

**M** Inox
Rostfreistahl
Stainless steel

**N** Alliages d'aluminium et non ferreux
Aluminium- und Nichteisenlegierungen
Aluminium and non-ferrous alloys

**S** Titane et superalliages
Titan und Superlegierungen
Titanium and superalloys

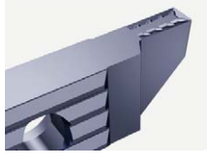
**H** Acier trempé
Gehärteter Stahl
Hardened steel

**K** Fonte
Gusseisen
Cast iron

**O** Matière exotique
Exotisches material
Exotic material

Carbure
Hartmetall
Carbide

TiAlN



K20

µK20 + revêtement PVD
µK20 + PVDBeschichtung
µK20 + PVDcoating

TF F M E

P ★★★★★
M ★★★★★
N ★★★★☆
S ★★★★☆

Épaisseur du revêtement
Dicken der Beschichtung
Thickness of the coating

**TF** Très fin
Sehr dünn
Very thin

**F** Fin
Dünn
Thin

**M** Moyen
Mittel
Medium

**E** Épais
Dick
Thick

Zurück zum Kapitelanfang



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# NOTES

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Notizseite
Notes page

**PERFORMANCE | PRECISION | RIGIDITY**





PERFORMANCE | PRECISION | RIGIDITY


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