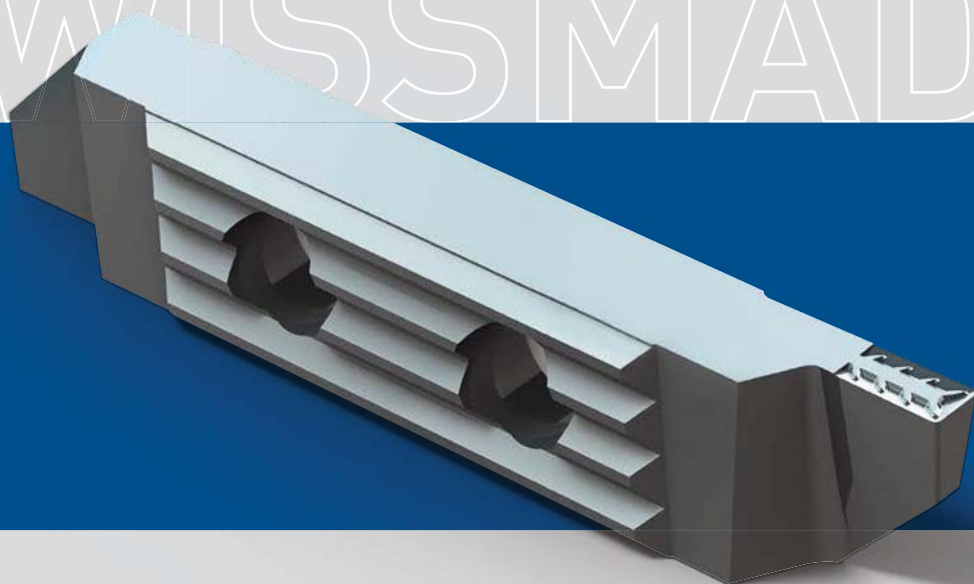


APPLITEC

SWISS TOOLING



SWISSMADE

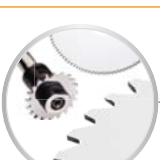


EDITION 2020-2022

**OUTILS DE HAUTES PERFORMANCES
POUR LE DÉCOLLETAGE
ET LA MICROMÉCANIQUE**

**HOCHLEISTUNGSWERKZEUGE
FÜR DREHAUTOMATEN
UND MIKROMECHANIK**

**HIGH PERFORMANCE TOOLING
FOR AUTOMATIC LATHES
AND MICROMECHANICS**

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Nouveautés présentées dans ce catalogue
 Neuheiten dieses Kataloges
 New products introduced in this catalogue



APPLIED

New references		
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740	740-8-80-NOVIBRA	1.30
	740-0810-JET	1.27
741	741-0.6	1.32
	741X4-0.6	1.33
	741X4-0.8	1.33
744	744-1.5-R15	1.56
	744-2.0-R15	1.56
	744X-1.5-R15	1.56
	744X-2.0-R15	1.56
745	745X-90	1.62
746	746-55-1.5-R02	1.63
	746-55-2.0-R02	1.63
751	751RZU	1.96
754	754ZXT10-1.5-R20	1.122
	754ZXT10-2.0-R20	1.122
	754ZXT10-2.5-R20	1.122
756	756-55-2-R02	1.123
	756-55-3-R02	1.123
760	760/750-AX	1.77
761	761U-1.5	1.85
	761ZU	1.86
762	762VX-800	1.103
	762VUX	1.104
763	763VUX	1.114
764	764-1.5-R15	1.117
	764-2.0-R15	1.117
	764-2.5-R15	1.117
	764-3.0-R15	1.117
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	764X-1.8	1.119
	764X-2.0-R15	1.119
	764X-2.0-R35	1.119
	764X-2.5-R15	1.119
	764X-2.5-R35	1.119
	764X-3.0-R15	1.119
	764X-3.0-R35	1.119
	764X-4.0-R35	1.119

764	764X5-EP	1.120
	764X10-EP	1.121
	764ZXB	1.123
	764ZXT10-2.0-R40	1.124
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766	766-55-2-R02	1.125
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770	770-10	1.132
	770-JET	1.133
771	771RU	1.138
780	780-10	1.132
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W751	W751-EP5	1.150
	W751-EP6	1.151
W761	W761-EP5	1.150
	W761-EP6	1.151
Capto	C3-760	1.152
	C4-750	1.153
HSK	HSK	1.154
Schütte	Schütte	1.164

New TiAlX		
Type Typ Type	TiAlX	Page Seite Page
741	741	1.32
	741X4	1.33
	741X12	1.35
	741X25	1.36
742	742	1.46
	742X	1.48
743	743	1.49
	743X	1.50
744	744	1.56
	744X	1.58
	744ZX10	1.59
	744ZXT	1.60
751	751R	1.88
	751R-R05	1.90
	751RS	1.89
761	761	1.78
	761-R05	1.80
	761S	1.79
762	762S05	1.106

763	763S05	1.106
764	764	1.117
	764X	1.119
	764ZX	1.122
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	764X10-EP	1.121
	764ZXB	1.123
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New HTAX		
Type Typ Type	HTAX	Page Seite Page
744	744	1.56
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New LOX		
Type Typ Type	Lox	Page Seite Page
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	744ZXT	1.60
764	764X	1.119
	764X5-EP	1.120
	764X10-EP	1.121
	764ZXB	1.123
	764ZXT	1.124

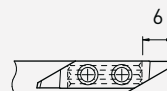
INFO

Nuances et paramètres de coupe
Sorten und Schnittwerte
Grades and machining data

> 1.02

710 / 720

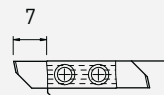
Pour machines à cames
Für kurvengesteuerte Maschinen
For cam driven machines



> 1.12

730 / 740

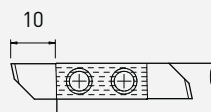
Main series
Small type



> 1.24

750 / 760

Main series
Large type



> 1.68

770 / 780
7050 / 7060
W750 / W760
CAPTO
HSK
740Z / 760Z
TORNOS
SCHÜTTE

Tronçonnage de grande capacité et ébauches larges pour
profilage + porte-outils spéciaux

Abstechen für grössere Durchmesser und breite Rohlinge
für Profilschleifen + Sonderwerkzeughalter

High capacity parting off and wide blanks for profiling +
special tool holders

> 1.131

Pièces de rechange
Ersatzteile
Spare parts

> 1.165

TOP-LINE

Codification des plaquettes TOP-Line série 700

WSP-Bezeichnungssystem für TOP-Line 700 Serie

Inserts designation key for TOP-Line 700 series

7 6 4 X - 2.0 - R20 - HTA

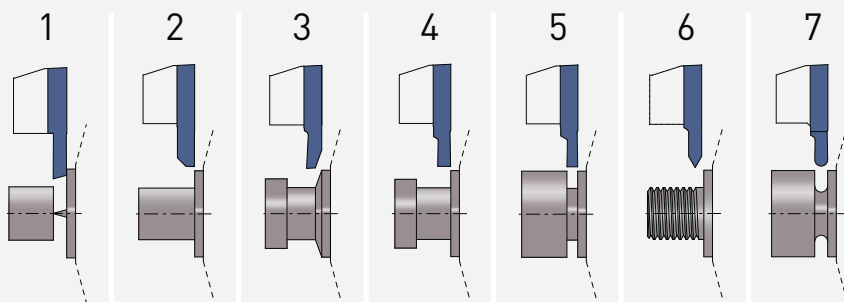
Dimension
Abmessung
Dimension

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



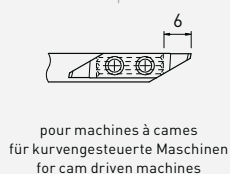
Gamme de produit
Produktserie
Product series

définit la compatibilité des plaquettes avec le porte-outil
bestimmt die WSP und Halter Kompatibilität
shows the inserts and holder compatibility

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

R = 2, 4, 6, 8 (chiffre pair / gerade Zahl / even number)

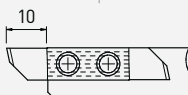
L 710 R 720



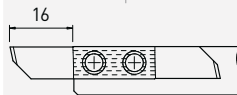
L 730 R 740



L 750 R 760



L 770 R 780



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

L'outil de référence pour le décolletage

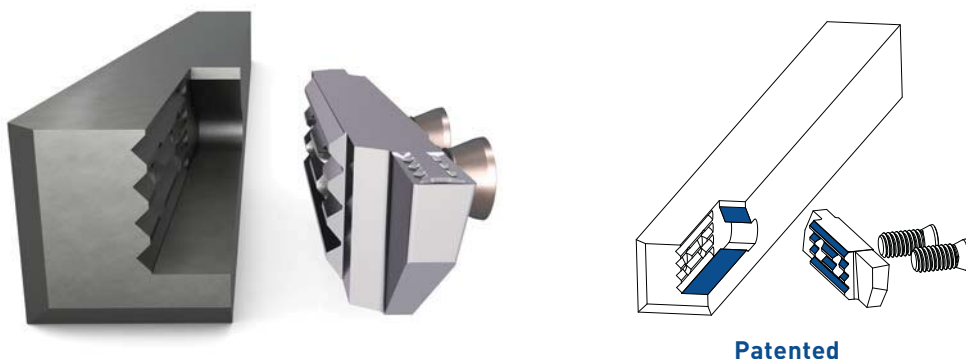
Hochwertiges Wendelattensystem für Langdrehautomaten

Top class turning tool for automatic lathes

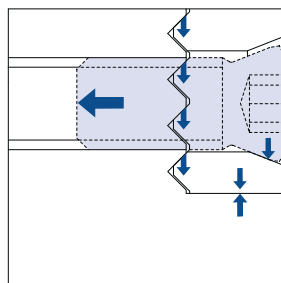
700 Series

100% rigid!

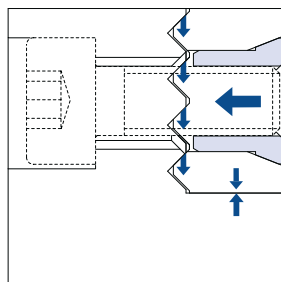
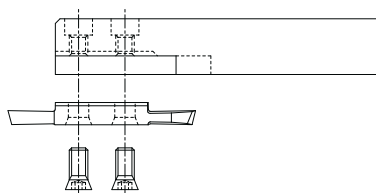
Système de serrage Applitec à denture décalée
Applitec-Spannsystem mit verschobener Verzahnung
Applitec clamping system with shifted teeth



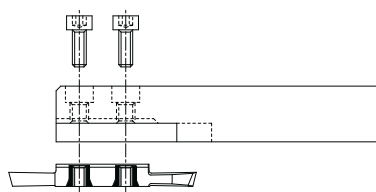
Patented



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

700-ZX geometries

Très bonne maîtrise du copeau
pour matières difficiles

Sehr gute Spankontrolle für
schwierige Werkstoffe

Very efficient chip control for
difficult materials



Multitude de géométries possibles

Mehrere mögliche Spangeometrien

Many different cutting geometries are possible



700-honed

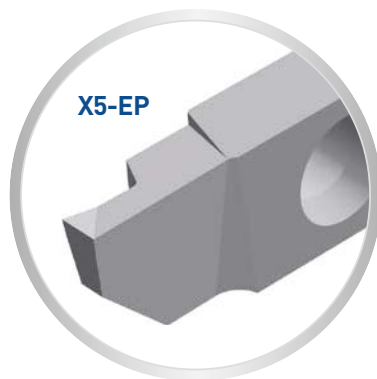


Géométrie positive 5° avec arête de coupe renforcée (honée)
Meilleure durée de vie dans l'usinage des matériaux abrasifs (aciers au carbone, aciers alliés)

Positive Geometrie 5° mit verstärkte Schneidkante (gehont)
Bessere Standzeit für die Bearbeitung von abrasive Materialien (Kohlenstoff Stahl, legierter Stahl)

Positive geometry 5° with reinforced cutting edge (honed)
Better tool life for abrasive materials (carbon steel, alloy steel)

X5-EP

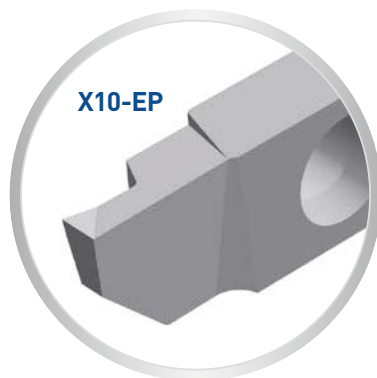


Géométrie positive 10° avec arête de coupe renforcée (honée)
Meilleure durée de vie dans l'usinage des matériaux tenace (acier inox, inox martensitique)

Positive Geometrie 10° mit verstärkte Schneidkante (gehont)
Bessere Standzeit für die Bearbeitung von zähe Materialien (Rostfreier Stahl, martensitische Rostfreier Stahl)

Positive geometry 10° with reinforced cutting edge (honed)
Better tool life for tough materials (stainless steel, martensitic steel)

X10-EP



Géométries de coupe Spanformgeometrien Cutting geometries		Acier de décolletage Automatenstahl Free-cutting steel	Acier Stahl Steel	Acier inoxydable Rostfreistahl Stainless steel	Aluminium	Titane Titan Titanium	Laiton, bronze Messing, Bronze Brass, bronze	Cuivre Kupfer Copper	★ ☆ ☑	1 ^{er} choix 1. Wahl 1 st choice Recommandé Empfohlen Recommended Pour pièces fragiles de très petits diamètres Für empfindliche und sehr kleine Werkstücke For fragile and very small work pieces
	0°	★	☑	☑	☑	☑	★	☑		Permet un réaffûtage aisé Erlaubt einfaches Nachschleifen Allows easy regrinding
	X4°	★	★	★	☑	☑		☑		Réduit l'effort de coupe, réaffûtable Reduziert Schneidkräfte, nachschleifbar Decreases cutting force, allows regrinding
	XF	☆	★	★				☆		Pour matières difficiles (pointe renforcée) Für schwierige Werkstoffe (verstärkte Spitze) For difficult materials (reinforced point)
	X12°			☆	★	★		★		Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control
	X25°			☆	★	☆		☆		Pour matières collantes faisant de très longs copeaux Für klebrige Werkstoffe mit sehr langen Spänen For long chipping sticky materials
	U	☆	☆	☆						Pour resserrer le copeau, réaffûtage aisé Für Spanversmälnerung, einfaches Nachschleifen To narrow the chips, easy regrinding
	ZU8	★	★	★	☆ <5% Si	☆	☆			Très bonne maîtrise du copeau (arête de coupe honée) Sehr gute Spankontrolle (gehönte Schneidkante) Very efficient chip control (honed edge) f min: 0.02 mm/U

Conseils d'utilisation

Anwendungsempfehlungen

Application recommendations

Tournage

Drehen

Turning

700 Series

Géométries de coupe Spanformgeometrien Cutting geometries		Acier de décolletage Automatenstahl Free-cutting steel	Acier Stahl Steel	Acier inoxydable Rostfreistahl Stainless steel	Aluminium	Titane Titan Titanium	Laiton, bronze Messing, Bronze Brass, bronze	Cuivre Kupfer Copper	★ 1 ^{er} choix 1. Wahl 1 st choice	★ 1 ^{er} choix 1. Wahl 1 st choice
									☆ Recommandé Empfohlen Recommended	☆ Recommandé Empfohlen Recommended
									☑ Pour pièces fragiles de très petits diamètres Für empfindliche und sehr kleine Werkstücke For fragile and very small work pieces	☑ Pour pièces fragiles de très petits diamètres Für empfindliche und sehr kleine Werkstücke For fragile and very small work pieces
	0°	★	☑	☑	☑	☑	★	☑	Permet un réaffûtage aisé Erlaubt einfaches Nachschleifen Allows easy regrinding	Permet un réaffûtage aisé Erlaubt einfaches Nachschleifen Allows easy regrinding
	X	★	★	★	★	★		★	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control
	X5-EP	★	★	☆					Très bonne maîtrise du copeau (arête de coupe honée) Sehr gute Spankontrolle (gehonte Schneidkante) Very efficient chip control (honed edge) f min: 0.02 mm/U	Très bonne maîtrise du copeau (arête de coupe honée) Sehr gute Spankontrolle (gehonte Schneidkante) Very efficient chip control (honed edge) f min: 0.02 mm/U
	X10-EP	☆	☆	★	☆	☆			Très bonne maîtrise du copeau (arête de coupe honée) Sehr gute Spankontrolle (gehonte Schneidkante) Very efficient chip control (honed edge) f min: 0.02 mm/U	Très bonne maîtrise du copeau (arête de coupe honée) Sehr gute Spankontrolle (gehonte Schneidkante) Very efficient chip control (honed edge) f min: 0.02 mm/U
	VX800	★	★	☆	☆	☆		☆	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control
	VX8°	★	★	☆	☆	☆		☆	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control
	VUX	☆	☆	★	☆	★		☆	Roule-copeau bidirectionnel Bidirektionaler Spanroller Bi-directional chip-breaker	Roule-copeau bidirectionnel Bidirektionaler Spanroller Bi-directional chip-breaker
	VX15°	☆		☆	★	★		★	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control
	VS	☆		☆	☑	☑		☑	Brise-copeau pour usinage léger en finition Spanbrecher für leichte Schlichtbearbeitung Chip-breaker for light finishing operation	Brise-copeau pour usinage léger en finition Spanbrecher für leichte Schlichtbearbeitung Chip-breaker for light finishing operation
	ZX10	★	★	★	☆ <5% Si	☆	☆		Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U
	ZX17			☆	★ <5% Si	★		★	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U
	ZX25			☆	★ <5% Si	★		★	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U
	ZXT	★	★	★	☆ <5% Si	☆	☆		Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control f min: 0.02 mm/U

TiAlN

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

- excellente nuance universelle
- 1^{er} 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

TiAlX

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

- 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

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

- 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 creates build-up edge
- very low friction ratio
- not suitable for titanium machining

LOX

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

- nuance résistante à l'usure et à la température, destinée à l'usinage des matières suivantes: Inox, Titanes, alliages à base de Nickel, Chrome Cobalt, les matières avec une dureté supérieure à > 50HRC
- bonne alternative pour l'usinage des aciers de construction types ETG88, ETG100, 36SMnPb14

- verschleissfeste und temperaturbeständige Sorte. Für folgende Materialien empfohlen: Inox, Titan, Nickellegierungen, Chrom-Kobalt, Materialien härter als > 50HRC
- gute Alternative für die Bearbeitung von Baustähle Typ ETG88, ETG100, 36SMnPb14

- wear and high temperature resistant grade. Recommended for following materials: inox, titanium, nickel alloys, materials harder than > 50HRC
- good alternative for machining of structural steels type ETG88, ETG100, 36SMnPb14

N (μK20)

non revêtu
unbeschichtet
uncoated

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

- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen geeignet

- suitable for interrupted cut and other unfavourable machining conditions

Nuances micro-grain à dureté élevée

Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

μK 10

HTA

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

- 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

HTAX

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

- nuance très résistante à l'usure et à la température, pour l'usinage en finition avec faibles avances 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: Chrome-nickel, Vanadium, Molybdenum, ...

HTiN

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

- 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 creates build-up edge
- very low friction ratio
- not suitable for titanium machining

HAS

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

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

- Sorte für Nichteisenmetalle
- sehr geringer Reibwert
- für die Bearbeitung von Aluminium bis 5% Si, Kupfer und niedriglegiertem Titan bestens geeignet

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

HN (μK10)

non revêtu
unbeschichtet
uncoated

- 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

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

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

Indications pour premier réglage**Hinweise für die erste Einrichtung****Indications for first setting**

Ébauche Schruppen Roughing	Finition Schlichten Finishing
• vitesse de coupe moyenne • avance élevée	• vitesse de coupe élevée • avance faible
• durchschnittliche Schnittgeschwindigkeit • hohe Schnittgeschwindigkeit	• hohe Schnittgeschwindigkeit • niedriger Vorschub
• average cutting speed • high cutting speed	• high cutting speed • low cutting feed

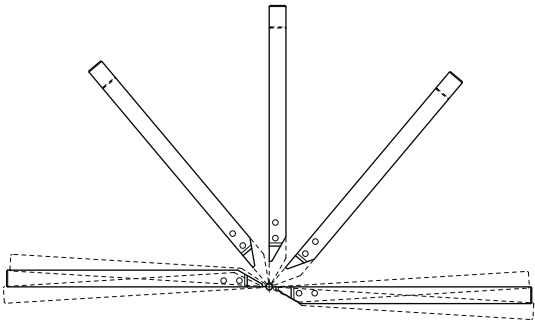
Remarques importantes
Wichtige Bemerkungen
Important remarks

- 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 Schnittbedingungen leistungsfähig zu sein
- die in der nebenstehenden Tabelle nicht erwähnten Anwendungsfälle können sich auch effizient erweisen

- in many cases, it is impossible to reach the recommended cutting speed, due to the machine limits
- Applitec tools are especially designed to be efficient even in bad cutting conditions
- applications not mentioned in the opposite table can also be efficient

L		R	
Type	Page	Type	Page
710	1.14	720	1.14
710-NOVIBRA	1.15	721	1.16
711	1.16	721-EP	1.23
711-EP	1.23	722	1.17
712	1.17	723-30	1.18
713-30	1.18	723-45	1.19
713-45	1.19	723-60	1.20
713-60	1.20	724	1.21
714	1.21	726	1.22
716	1.22		



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

710 / 720

Porte-outils
Halter
Holders

> 1.14

711 / 721

Tronçonnage
Abstechen
Parting off

> 1.16

712 / 722

Tournage avant
Vorwärts drehen
Front turning

> 1.17

713 / 723

Tournage arrière
Rückwärts drehen
Back turning

> 1.18

714 / 724

Fonçage-tournage
Einstechen und drehen
Grooving and turning

> 1.21

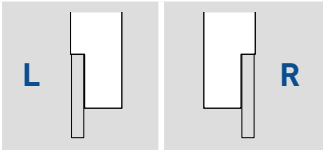
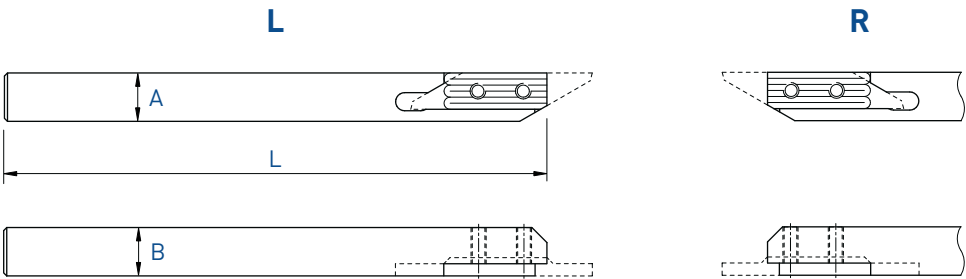
716 / 726

Filetage
Gewinde drehen
Threading

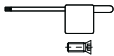
> 1.22

Plaquette ébauche
WSP-Rohling
Blank insert

> 1.23



A x B	L	Serrage Spannsystem Clamping	Art. N°	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



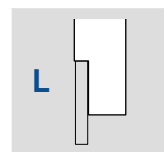
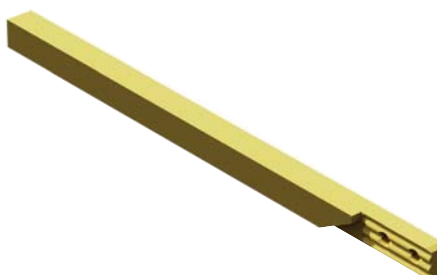
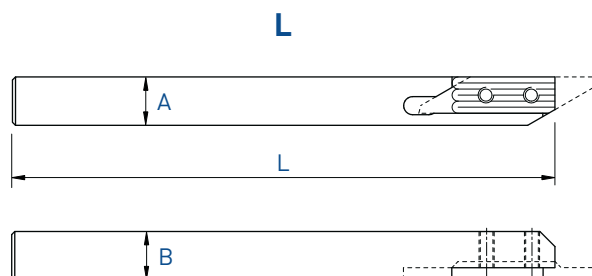
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils en métal lourd anti-vibratoire

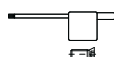
Schwingungsdämpfende Schwermetallhalter

Low vibration heavy metal holders

710-NOVIBRA



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



Chaque support est livré avec vis et clé.

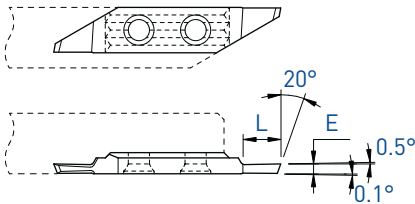
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.

Screw(s) and key are included with each tool holder.

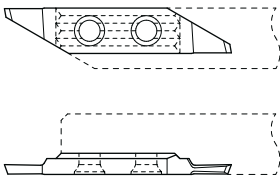
Tronçonnage
Abstechen
Parting off

711 / 721

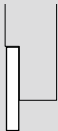
L



R



L



R

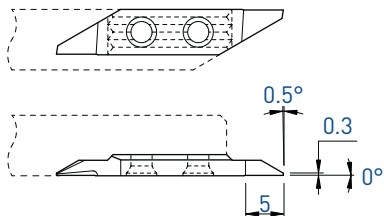


E	L	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
0.5	2	711-0.5	■	■	■	■	□	■	-						
0.8	3	711-0.8	■	■	■	■	■	■	721-0.8	■	■	■			
0.9	3	711-0.9	■	■	■	■	□	■	-						
1.0	4	711-1.0	■	■	■	■	■	■	721-1.0	■	■	■	■	□	■
1.1	4	711-1.1	■	■	■	■	■	■	-						
1.2	5	711-1.2	■	■	■	■	■	■	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	■	■	■			

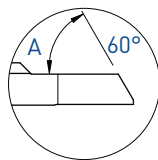
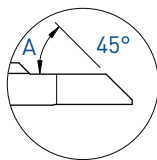
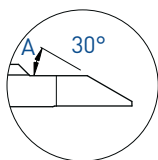
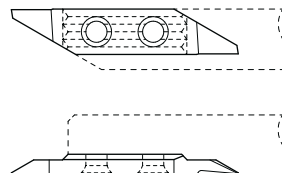
Tournage avant
Vorwärts drehen
Front turning

712 / 722

L



R



L



R

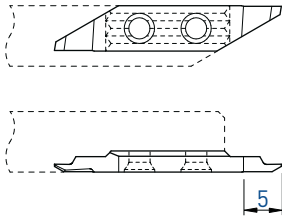


A	Art. N°	L			R		
		TiAlN	TiN	N (μk20)	HTA	HTIN	HN (μk10)
30°	712-30	■	■	■	■	□	■
45°	712-45	■	■	■	■	■	■
60°	712-60	■	■	■	■	□	■

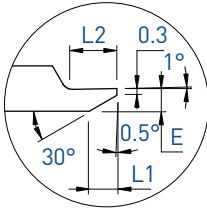
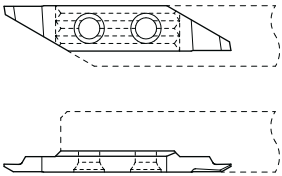
Tournage arrière
Rückwärts drehen
Back turning

713-30° / 723-30°

L



R



L

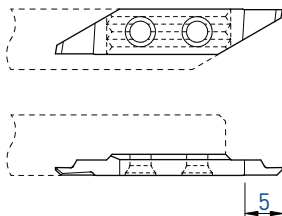
R

E	~ L1	L2	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
0.8	0.85	1.6	713-30-0.8	■	■	■				723-30-0.8	■	■	■	■	□	■
0.9	1.05	1.6	713-30-0.9	■	■	■				-						
1.0	1.2	2.0	713-30-1.0	■	■	■	■	□	■	723-30-1.0	■	■	■	■	□	■
1.1	1.4	2.0	713-30-1.1	■	■	■				-						
1.2	1.55	2.5	713-30-1.2	■	■	■				723-30-1.2	■	■	■			
1.3	1.7	2.5	713-30-1.3	■	■	■				-						
1.4	1.9	3.0	713-30-1.4	■	■	■				-						
1.5	2.1	3.0	713-30-1.5	■	■	■	■	■	■	723-30-1.5	■	■	■			
1.8	2.6	4.0	713-30-1.8	■	■	■				723-30-1.8	■	■	■			
2.0	3.0	4.0	713-30-2.0	■	■	■	■	■	■	723-30-2.0	■	■	■			

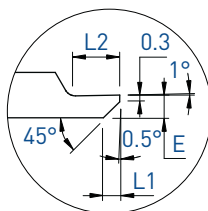
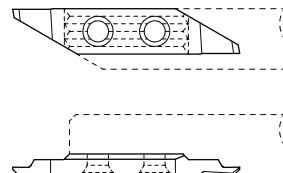
Tournage arrière
Rückwärts drehen
Back turning

713-45° / 723-45°

L



R



L

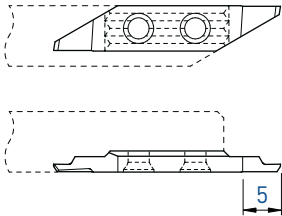
R

E	~ L1	L2	Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)	Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)
0.8	0.5	1.6	713-45-0.8	■	■	■	■	□	■	723-45-0.8	■	■	■			
0.9	0.6	1.6	713-45-0.9	■	■	■				-						
1.0	0.7	2.0	713-45-1.0	■	■	■	■	□	■	723-45-1.0	■	□	■			
1.1	0.8	2.0	713-45-1.1	■	■	■				-						
1.2	0.9	2.5	713-45-1.2	■	■	■				723-45-1.2	■	■	■			
1.3	1.0	2.5	713-45-1.3	■	■	■				-						
1.4	1.1	3.0	713-45-1.4	■	■	■				-						
1.5	1.2	3.0	713-45-1.5	■	■	■	■	■	■	723-45-1.5	■	□	■			
1.8	1.5	4.0	713-45-1.8	■	■	■				723-45-1.8	■	□	■			
2.0	1.7	4.0	713-45-2.0	■	■	■				723-45-2.0	■	■	■			

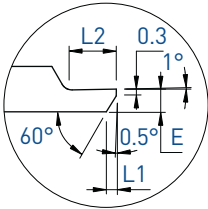
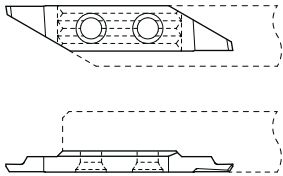
Tournage arrière
Rückwärts drehen
Back turning

713-60° / 723-60°

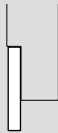
L



R



L



R



E	~ L1	L2	Art. N°	TiAlN	TiN	N (µk20)	Art. N°	TiAlN	TiN	N (µk20)
0.8	0.3	1.6	713-60-0.8	■	■	■	723-60-0.8	■	■	■
0.9	0.35	1.6	713-60-0.9	■	■	■	-			
1.0	0.4	2.0	713-60-1.0	■	■	■	723-60-1.0	■	□	■
1.1	0.45	2.0	713-60-1.1	■	■	■	-			
1.2	0.5	2.5	713-60-1.2	■	■	■	723-60-1.2	■	□	■
1.3	0.6	2.5	713-60-1.3	■	■	■	-			
1.4	0.65	3.0	713-60-1.4	■	■	■	-			
1.5	0.7	3.0	713-60-1.5	■	■	■	723-60-1.5	■	■	■
1.8	0.85	4.0	713-60-1.8	■	■	■	723-60-1.8	■	□	■
2.0	1.0	4.0	713-60-2.0	■	■	■	723-60-2.0	■	■	■

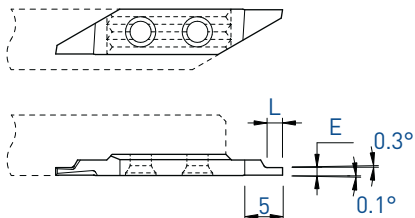
Fonçage-tournage

Einstechen und drehen

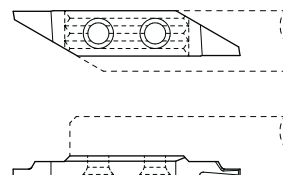
Grooving and turning

714 / 724

L



R



L

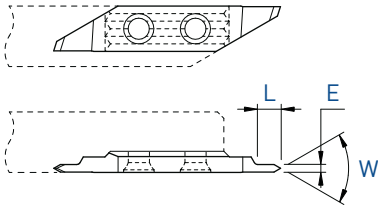


R

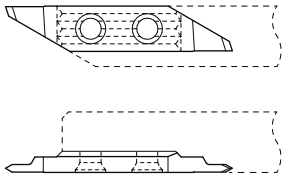


E	L	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
0.5	1.0	714-0.5	■	■	■				724-0.5	■	■	■	■	□	■
0.6	1.0	714-0.6	■	■	■				724-0.6	■	■	■			
0.7	1.5	714-0.7	■	■	■				724-0.7	■	■	■			
0.8	1.5	714-0.8	■	■	■	■	□	■	724-0.8	■	■	■			
0.9	2.0	714-0.9	■	■	■				724-0.9	■	□	■			
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	■	■	■			

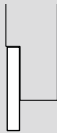
L



R



L



R



W	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	■	□	■

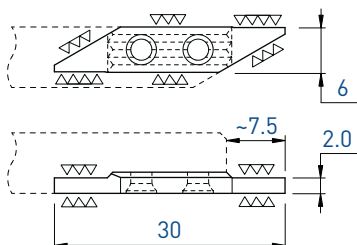
Plaquettes ébauches

WSP-Rohlinge

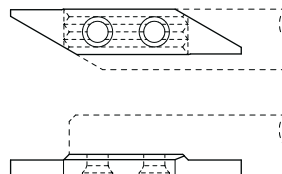
Blank inserts

711-EP / 721-EP

L



R



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	1.26	740	740	1.26
	730-JET	1.27		740/730-D	1.31
	730-NOVIBRA	1.30		740-C	1.28
	730RC	1.29		740-JET	1.27
731	731	1.32		740-NOVIBRA	1.30
	731-E	1.67	741	741	1.32
	731-EP	1.67		741-E	1.67
	731N	1.38/1.45		741-EP	1.67
	731R	1.39		741L	1.39
	731RU	1.44		741LX12	1.42
	731RX12	1.42		741LX25	1.43
	731RX25	1.43		741LX4	1.40
	731RX4	1.40		741LXF	1.41
	731RXF	1.41		741N	1.38/1.45
	731U	1.37		741U	1.37
	731X12	1.35		741X12	1.35
	731X25	1.36		741X25	1.36
	731X4	1.33		741X4	1.33
	731XF	1.34		741XF	1.34
732	732	1.46	742	742	1.46
	732PX	1.47		742PX	1.47
	732X	1.48		742X	1.48
733	733	1.49	743	743	1.49
	733P	1.55		743P	1.55
	733VX-15°	1.53		743VX-15°	1.53
	733VX-8°	1.51		743VX-8°	1.51
	733VX-805	1.52		743VX-805	1.52
	733X	1.50		743X	1.50
	733ZX10	1.54		743ZX10	1.54
734	734	1.56	744	744	1.56
	734VS	1.57		744VS	1.57
	734X	1.58		744X	1.58
	734ZX10	1.59		744ZX10	1.59
735	735	1.61		744ZX17	1.59
	735X-90	1.62		744ZXT	1.60
736	736-55	1.63	745	745	1.61
	736-60	1.63		745X-90	1.62
	736-A60°	1.64	746	746-55	1.63
	736-M	1.65		746-60	1.63
737	737	1.66		746-A60°	1.64
				746-M	1.65
			747	747	1.66

730 / 740

Porte-outils
Halter
Holders

> 1.26

731 / 741

Tronçonnage
Abstechen
Parting off

> 1.32

741L / 731R

Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line

> 1.39

732 / 742

Tournage avant
Vorwärts drehen
Front turning

> 1.46

733 / 743

Tournage arrière
Rückwärts drehen
Back turning

> 1.49

734 / 744

Fonçage-tournage
Einstechen und drehen
Grooving and turning

> 1.56

735 / 745

Gorges
Einstechen
Grooving

> 1.61

736 / 746

Filetage
Gewinde drehen
Threading

> 1.63

737 / 747

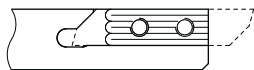
Plaquettes à rayon
Radius Wendeplatten
Radius inserts

> 1.66

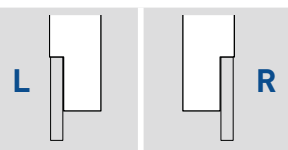
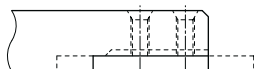
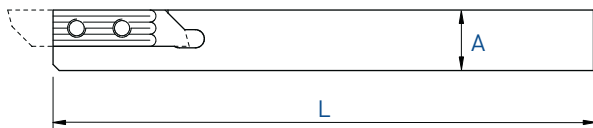
Plaquettes ébauches
WSP-Rohlinge
Blank inserts

> 1.67

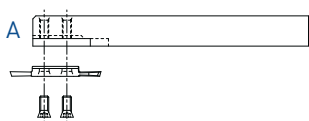
L



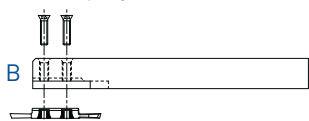
R



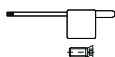
Serrage standard A
Standard Spannsystem A
Standard clamping system A



Serrage B
Spannsystem B
Clamping system B



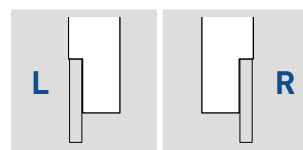
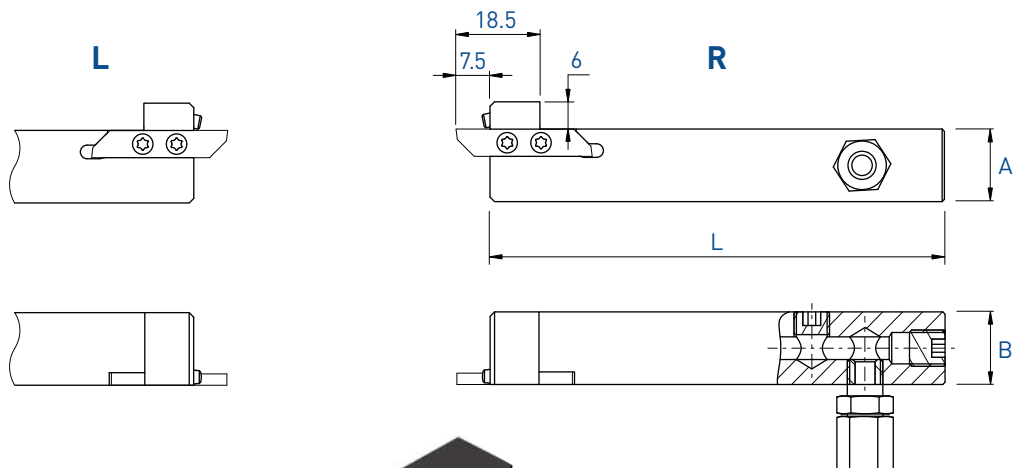
A x B	L	Serrage Spannsystem Clamping	Art. N°	Art. N°
7 x 7	115	A	730-7	740-7
8 x 8	115	A + B	730-8	740-8
8 x 8	140	A + B	730-8-140	-
10 x 10	115	A + B	730-10	740-10
10 x 10	50	A + B	730-10-50	740-10-50
12 x 12	130	A + B	730-12	740-12
12 x 12	90	A + B	730-12-90	740-12-90
12.7 x 12.7	130	A + B	730-12.7	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



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

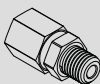
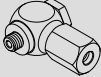
Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

730-JET / 740-JET

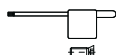


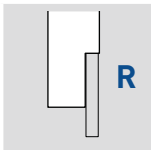
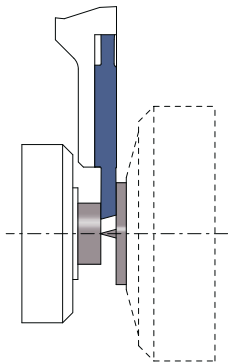
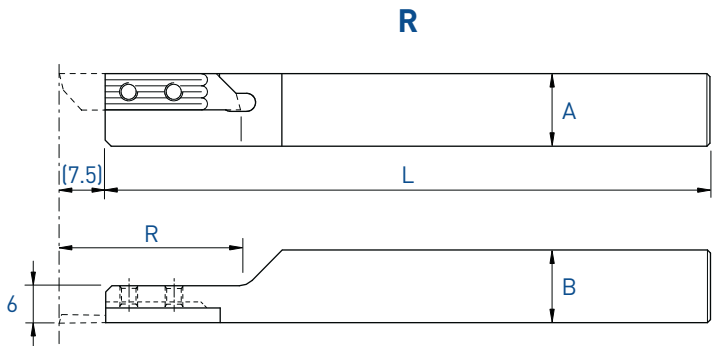
A x B	L	Serrage Spannsystem Clamping	Art. N°	Art. N°
8 x 10	100	A + B	-	740-0810-JET
10 x 12	100	A + B	730-1012-JET	740-1012-JET
12 x 12	100	A + B	730-12-JET	740-12-JET
12.7 x 12.7	100	A + B	730-12.7-JET	740-12.7-JET
16 x 16	100	A + B	730-16-JET	740-16-JET
20 x 20	100	A + B	730-20-JET	740-20-JET



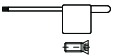
Pièces de rechange Ersatzteile Spare parts			Buse Düse Nozzle 	Option 
	Art. N°	Art. N°	Art. N°	Art. N°
740-0810-JET	J-M5-D5	JB-M5	-	JC-M5-D5
730-JET / 740-JET	J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5	-

Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
 Screw(s) and key are included with each tool holder.





A x B	L	R	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
16 x 16	130	40	A	740-C-16



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

Halter

Holders

Coupe à droite déportée

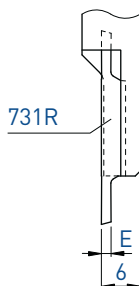
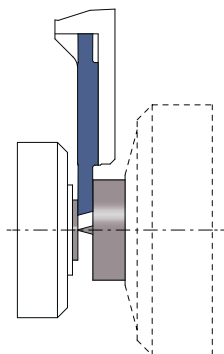
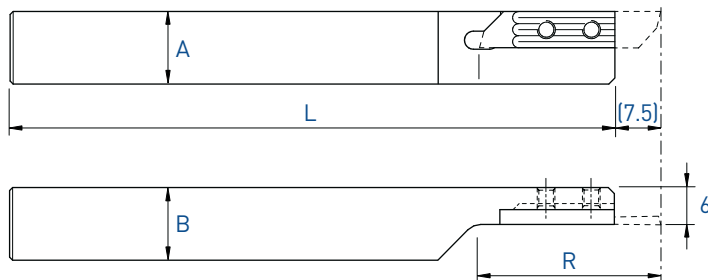
Versetztes Rechtsschneiden

Right cut off line

730RC

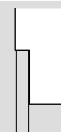
Utiliser des plaquettes type 731R
 WSP Typ 731R verwenden
 Use inserts type 731R

Voir pages 1.39 - 1.45
 Siehe Seiten 1.39 - 1.45
 See pages 1.39 - 1.45

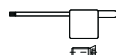


L (R)

Coupe à droite déportée
 Versetztes Rechtsschneiden
 Right cut off line



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

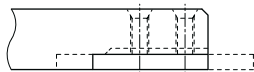


Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
 Screw(s) and key are included with each tool holder.

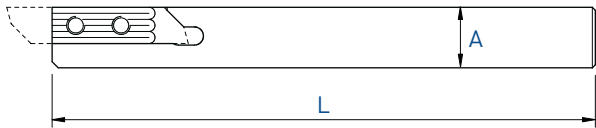
Porte-outils en métal lourd anti-vibratoire
Schwingungsdämpfende Schwermetallhalter
Low vibration heavy metal holders

730-NOVIBRA
740-NOVIBRA

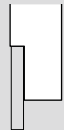
L



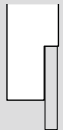
R



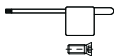
L



R



A x B	L	Serrage Spannsystem Clamping	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



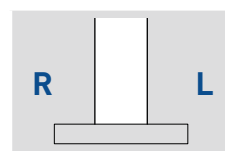
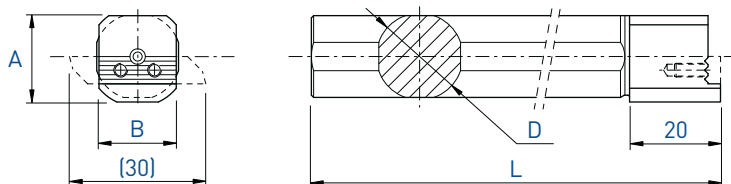
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

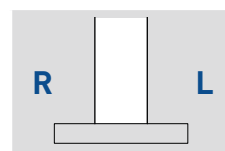
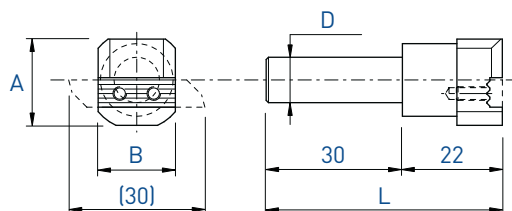
Halter

Holders

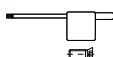
740 / 730-D



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

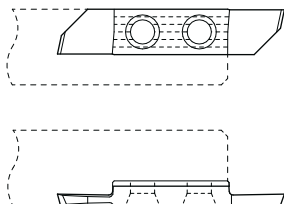


D	L	A	B	Art. N°
10	52	19	17	740/730-D10

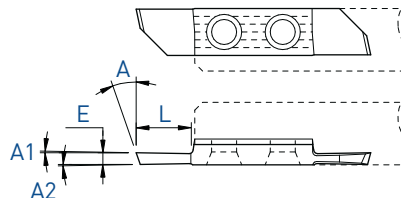


Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
 Screw(s) and key are included with each tool holder.

L



R



L



R



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)
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	■	■	■	■	■	□	■

7XX-XX-B



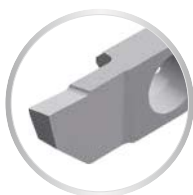
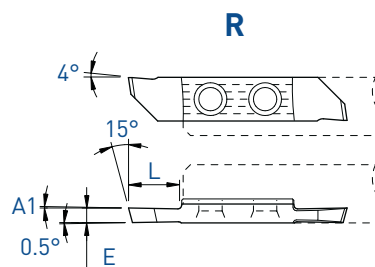
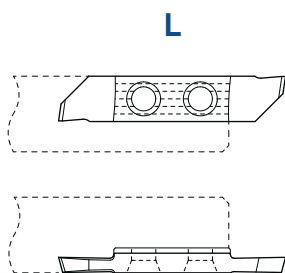
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tronçonnage

Abstechen

Parting off

731X4 / 741X4



L										R									
Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)			Art. N°		TiAlN	TiAlX	TiN	N (µk20)	HTA	HTiN	HN (µk10)	
731X4-0.6		■		■	■		■			741X4-0.6		■	■		■	■		■	
-										741X4-0.8						■		■	
731X4-1.0		■	■	■						741X4-1.0		■	■	■	■	■	□	■	
731X4-1.5		■	■	■	■	□	■			741X4-1.5		■	■	■	■	■	□	■	
731X4-2.0		■	■	■						741X4-2.0		■	■	■	■				

7XX-XX-B



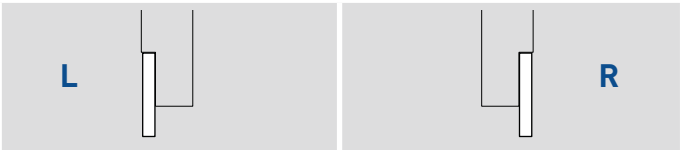
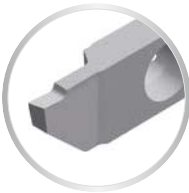
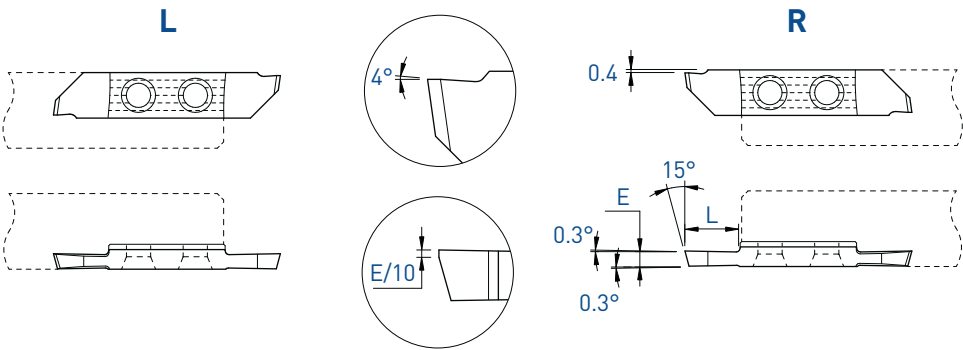
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

731XF / 741XF



E	L	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
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



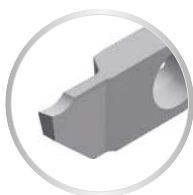
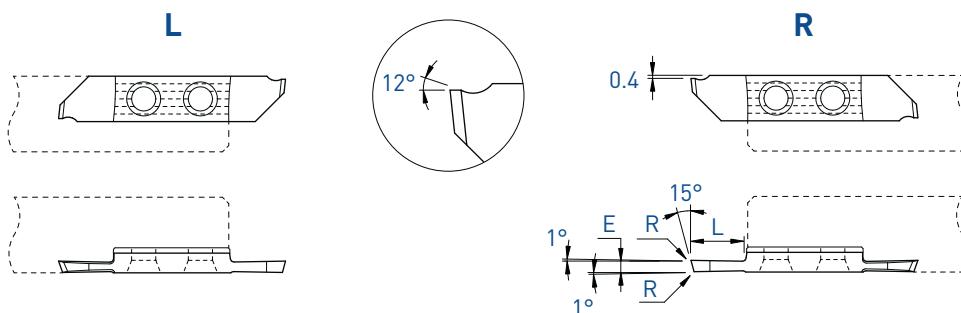
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tronçonnage

Abstechen

Parting off

731X12 / 741X12



L						R										
Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°		TiAlN	TiAlX	TiN	N (µk20)	HTA	HTiN	HN (µk10)
-								741X12-0.5						■		■
731X12-1.0		■	■	■				741X12-1.0		■	■	■	■	■	□	■
731X12-1.5		■	■	■				741X12-1.5		■	■	■	■	■	■	■
731X12-2.0		■	■	■				741X12-2.0		■	■	■	■	■	□	■

7XX-XX-B



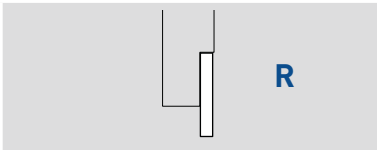
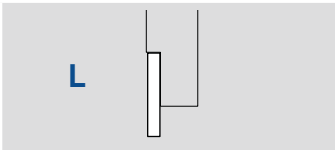
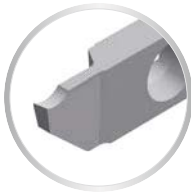
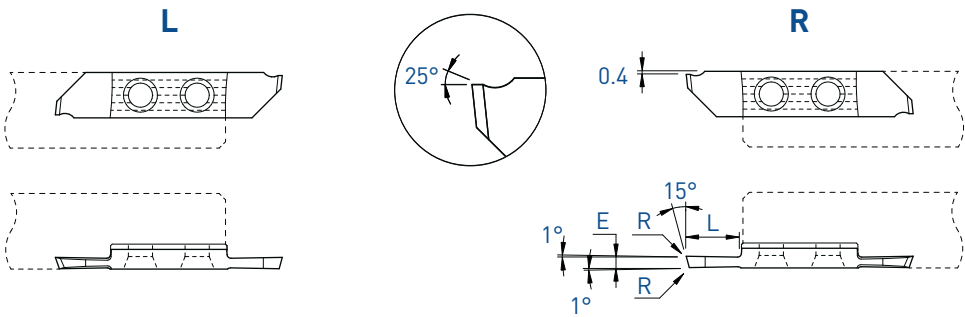
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

731X25 / 741X25



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



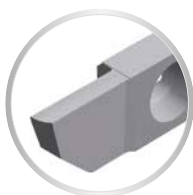
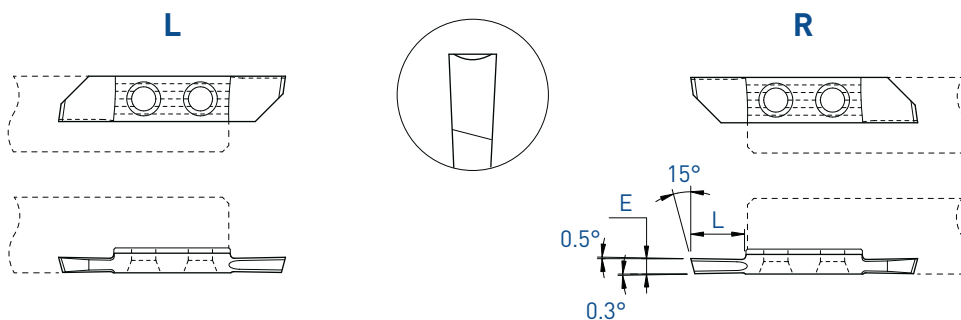
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tronçonnage

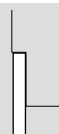
Abstechen

Parting off

731U / 741U



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	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 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

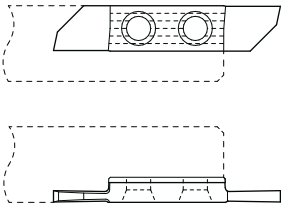
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

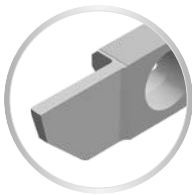
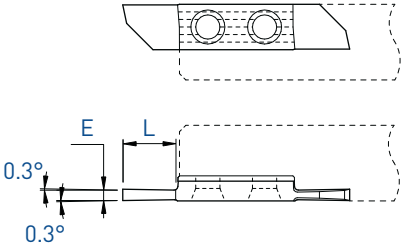
Tronçonnage
Abstechen
Parting off

731N / 741N

L



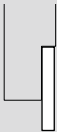
R



L



R



E	L	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
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 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tronçonnage

Abstechen

Parting off

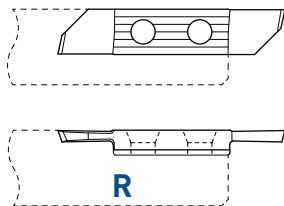
Coupe déportée

Versetztes Schneiden

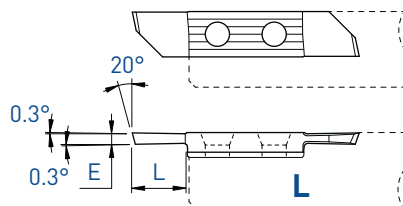
Cut off line

741L / 731R

Cut L



Cut R



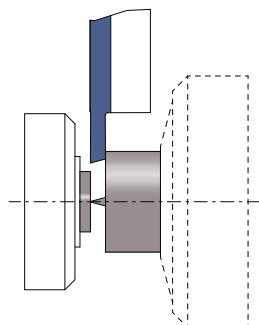
R (L)

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)
1.0	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	■	■	■			

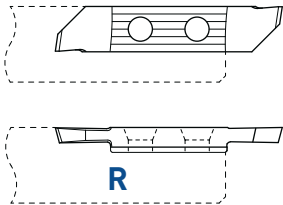


Tronçonnage
Abstechen
Parting off

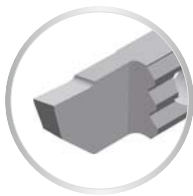
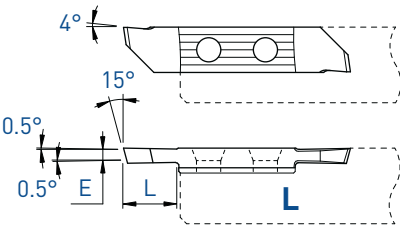
Coupe déportée
Versetztes Schneiden
Cut off line

741LX4 / 731RX4

Cut L



Cut R



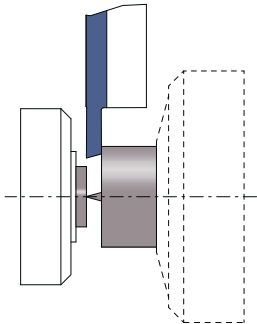
R (L)

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	5	741LX4-1.5	■	■	■				731RX4-1.5	■	■	■	■	■	■



Tronçonnage

Abstechen

Parting off

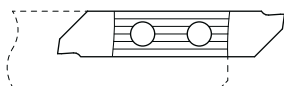
Coupe déportée

Versetztes Schneiden

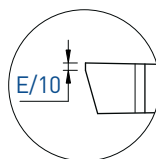
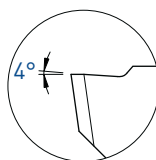
Cut off line

741LXF / 731RXF

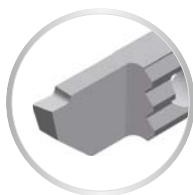
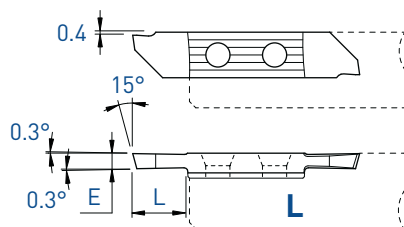
Cut L



R



Cut R



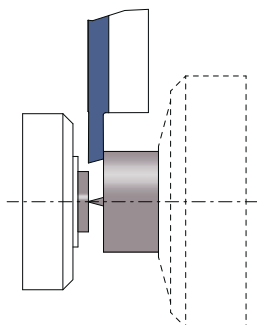
R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

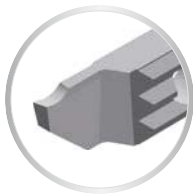
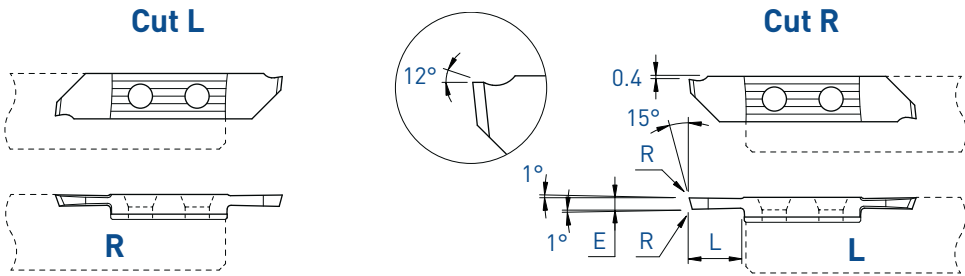
E	L	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
1.5	7	741LXF-1.5	■	■	■				731RXF-1.5	■	■	■	■	■	■
2.0	7	741LXF-2.0	■	■	■				731RXF-2.0	■	■	■	■	□	■
2.5	7	741LXF-2.5	■	■	■				731RXF-2.5	■	■	■			



Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

741LX12 / 731RX12



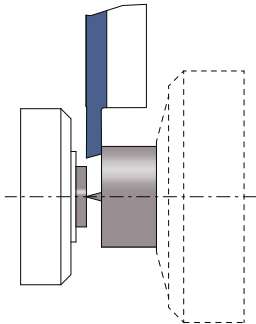
R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

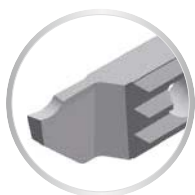
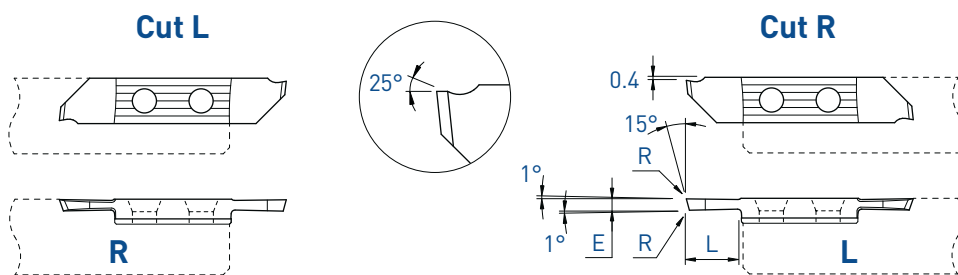
L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

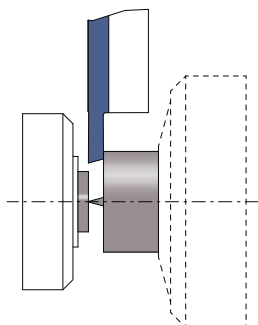
E	L	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
1.0	5	0.03	-							731RX12-1.0	■	□	■			
1.5	7	0.03	741LX12-1.5	■	■	■				731RX12-1.5	■	■	■	■	■	■



741LX25 / 731RX25



										
			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	■	■	■

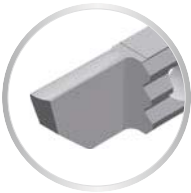
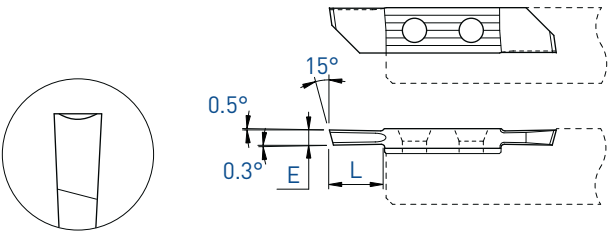


Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

731RU

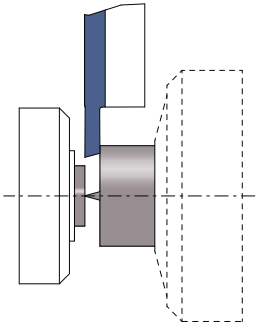
Cut R



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	■	□	■			



Tronçonnage

Abstechen

Parting off

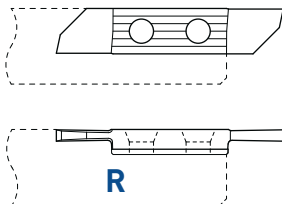
Coupe déportée

Versetztes Schneiden

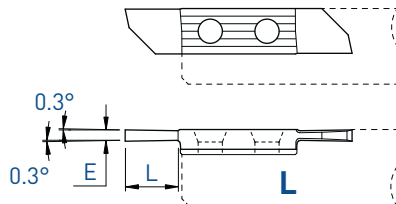
Cut off line

741N / 731N

Cut L



Cut R



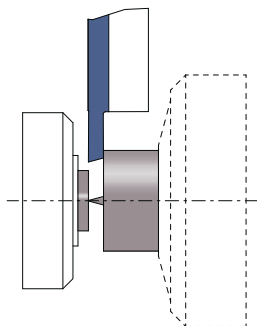
R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

L (R)

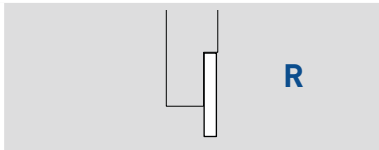
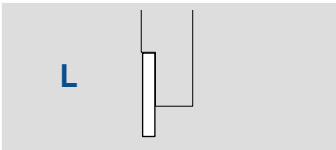
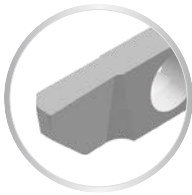
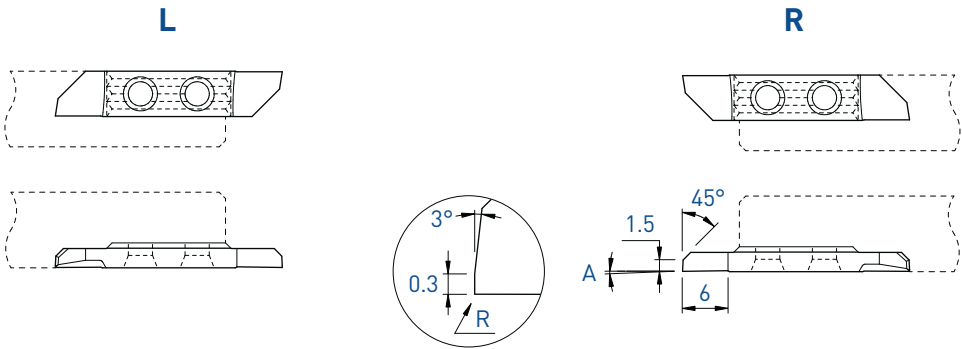
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

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



Tournage avant
Vorwärts drehen
Front turning

732 / 742



A	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiAlX	TiN	N (µk20)	HTA	HTiN	HN (µk10)
0°	0	732	■	■	■	■	■	■	742	■	■	■	■	■	■	■
2°	0	732-2°	■	■	■	■	□	■	742-2°	■	■	■	■	■	■	■

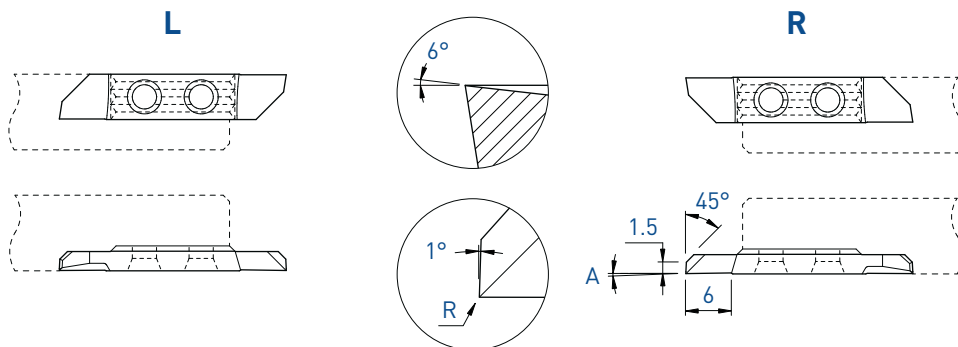
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage avant
Vorwärts drehen
Front turning

732PX / 742PX



A	R	Art. N°	TiAlN	TiN	N (µk20)	Art. N°	TiAlN	TiN	N (µk20)
0°	0	732PX	■	■	■	742PX	■	■	■

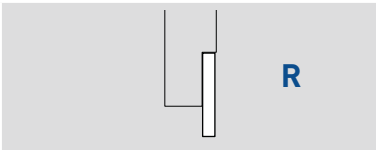
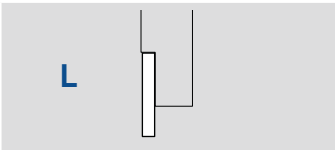
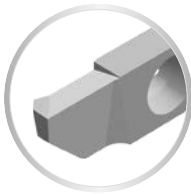
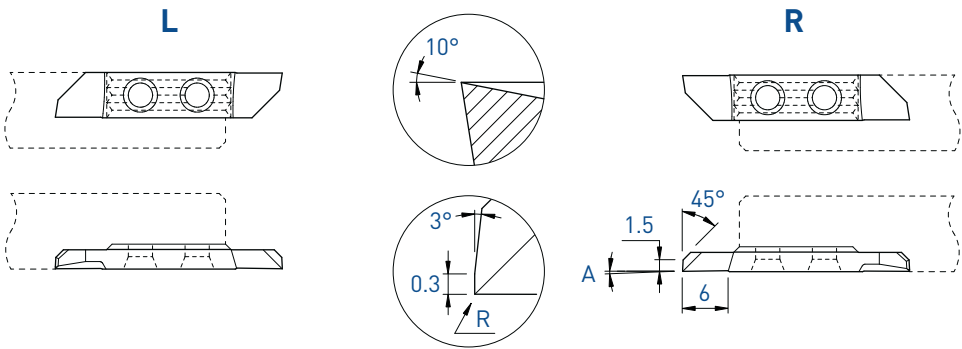
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage avant
Vorwärts drehen
Front turning

732X / 742X



A	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiAlX	TiN	N (µk20)	HTA	HTiN	HN (µk10)
0°	0	732X	■	■	■	■	■	■	742X	■	■	■	■	■	■	■

7XX-XX-B

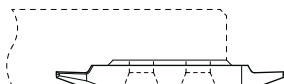
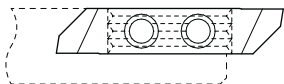


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

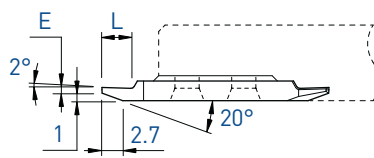
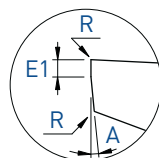
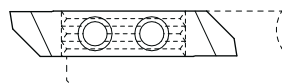
Tournage arrière
Rückwärts drehen
Back turning

733 / 743

L



R



L



R



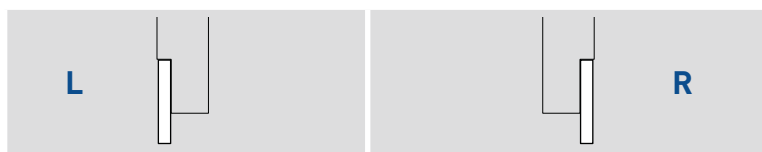
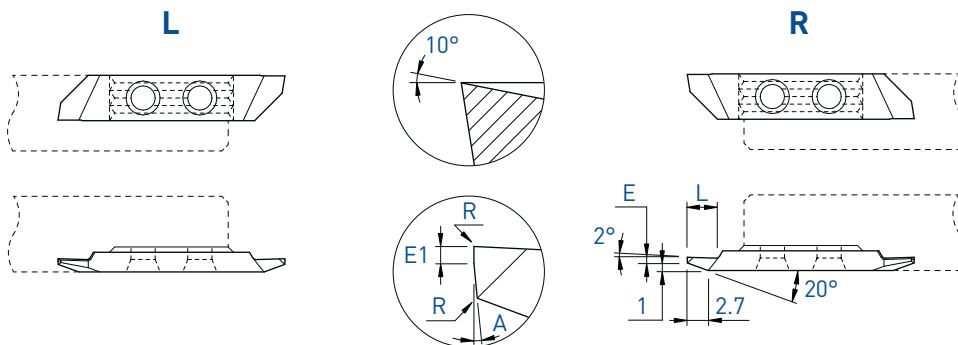
E	E1	A	L	R	Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)	Art. N°	TiAlN	TiAlX	TiN	N (μk20)	HTA	HTiN	HN (μk10)
0.5	0.25	3°	3	0	733-0.5	■	■	■	■	□	■	743-0.5	■	■	■	■	■	■	■
0.5	-	2°	3	0.08	733-0.5-R08	■	■	■	■	□	■	743-0.5-R08	■	■	■	■	■	□	■
0.8	0.30	3°	4	0	733-0.8	■	■	■	■	□	■	743-0.8	■	■	■	■	■	□	■
1.0	0.40	3°	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 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



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	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	■		■	■	■	□	■

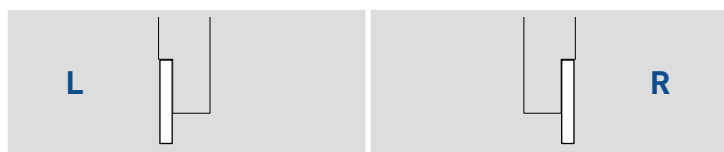
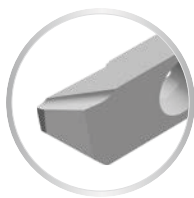
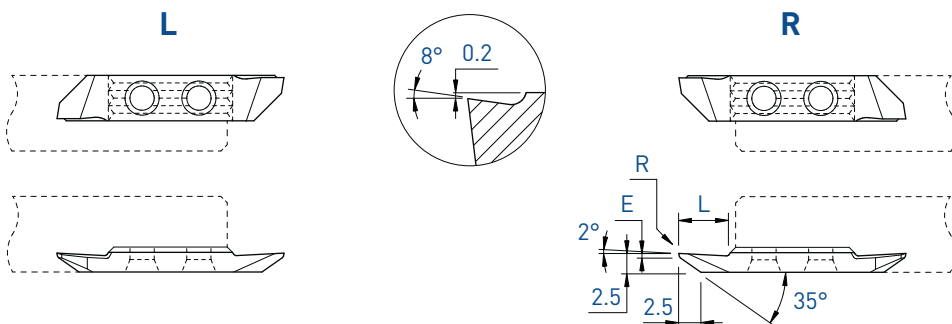
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

733VX-8° / 743VX-8°



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	6.5	0	733VX-8°	■	■	■	■	■	■	743VX-8°	■	■	■	■	■	■
~ 1.0	6.5	0.08	733VX-8°-R08	■	■	■	■	□	■	743VX-8°-R08	■	■	■	■	□	■

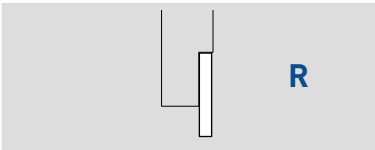
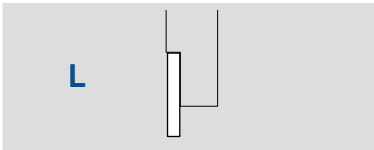
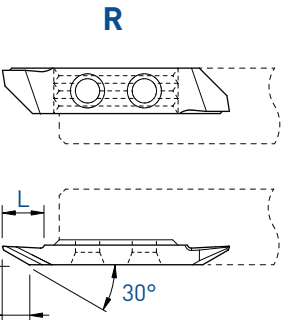
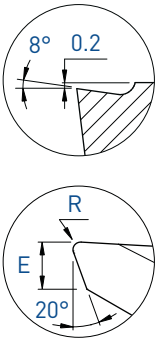
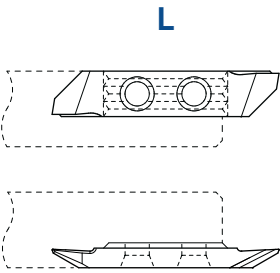
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

733VX-805 / 743VX-805



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	6	0.08	733VX-805-R08	■	□	■	■	□	■	743VX-805-R08	■	■	■	■	□	■

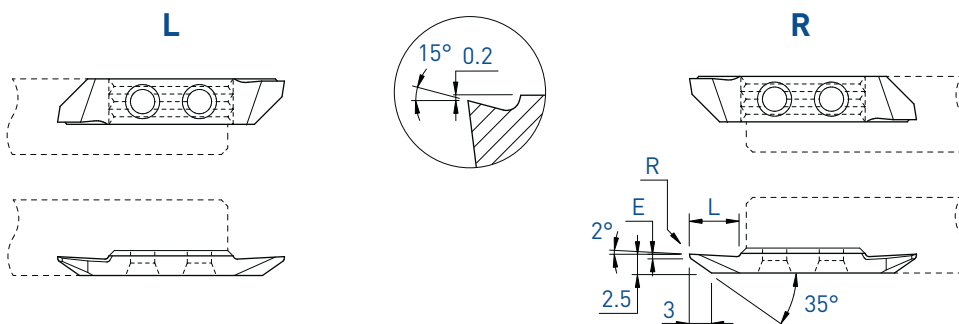
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

733VX-15° / 743VX-15°



L										R									
Art. N°			TiAlN TiN N (µk20)			HTA HTiN HN (µk10)				Art. N°			TiAlN TiN N (µk20)			HTA HTiN HN (µk10)			
733VX-15°			■ ■ ■			■ □ ■				743VX-15°			■ ■ ■			■ □ ■			
733VX-15°-R08			■ ■ ■							743VX-15°-R08			■ ■ ■			■ □ ■			

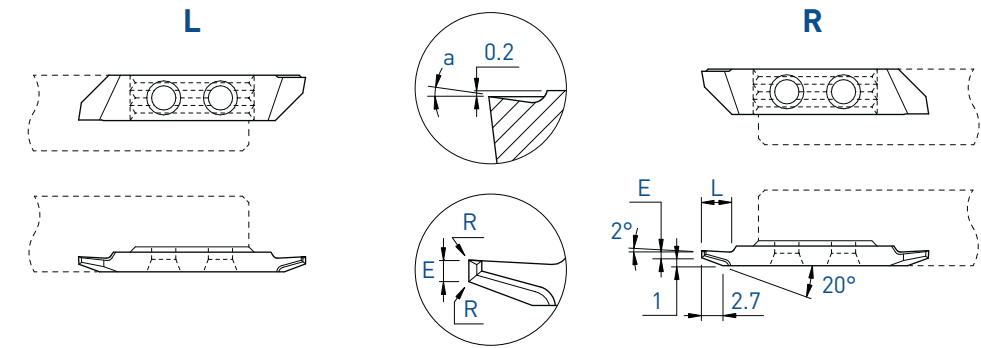
7XX-XX-B



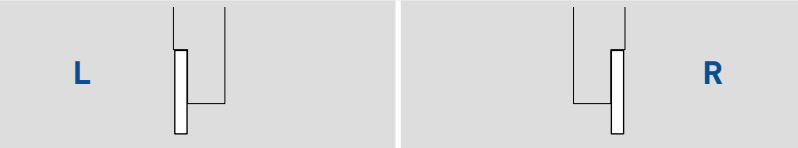
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

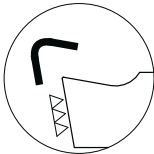
733ZX / 743ZX



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

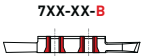


a	E	L	R	Art. N°	TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]	Art. N°	TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]
10°	1.0	4	0.01	733ZX10-1.0	■	□					743ZX10-1.0	■	□		■	□	
	1.0	4	0.08	733ZX10-1.0-R08	■	□					743ZX10-1.0-R08	■	□		■	□	



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U



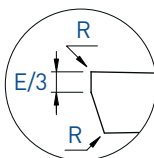
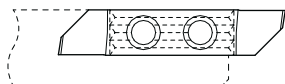
7XX-XX-B

Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

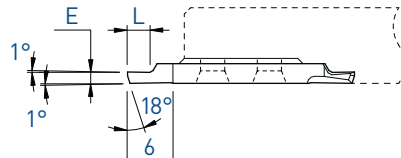
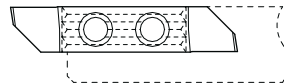
Tournage arrière / pré-coupe
 Rückwärts drehen / vorstechen
 Back turning / pre-parting off

733P / 743P

L



R



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)
0.8	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	■	■	■			

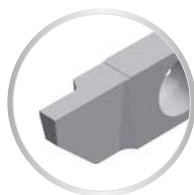
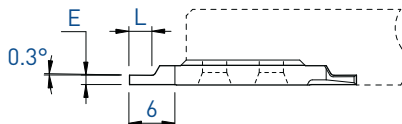
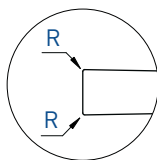
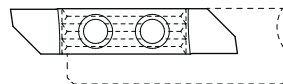
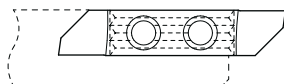
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

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]
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	■	■	■	■	■	■	□	■

7XX-XX-B



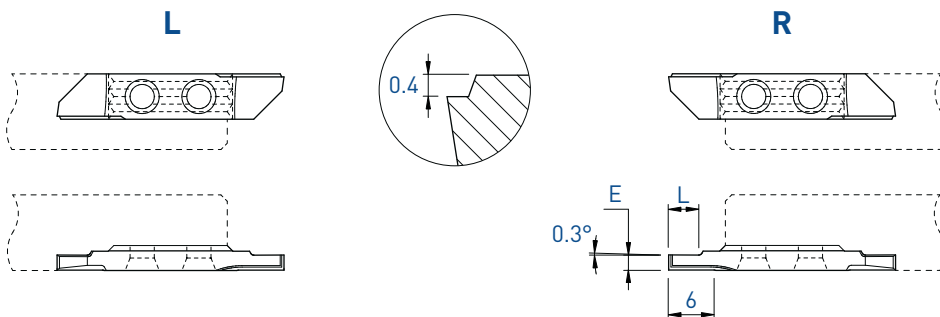
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Fonçage-tournage

Einstechen und drehen

Grooving and turning

734VS / 744VS



L 									R 								
Art. N°			TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°			TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
734VS-1.0			■	■	■	■	□	■	744VS-1.0			■	■	■	■	□	■
734VS-1.2			■	■	■	■	□	■	744VS-1.2			■	■	■	■	□	■
734VS-1.5			■	■	■	■	□	■	744VS-1.5			■	■	■	■	□	■
734VS-1.8			■	■	■				744VS-1.8			■	■	■			
734VS-2.0			■	■	■				744VS-2.0			■	■	■	■	□	■
734VS-2.5			■	■	■				744VS-2.5			■	■	■			

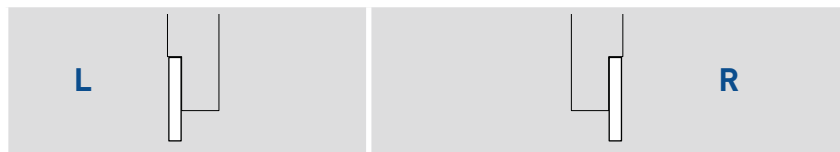
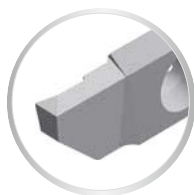
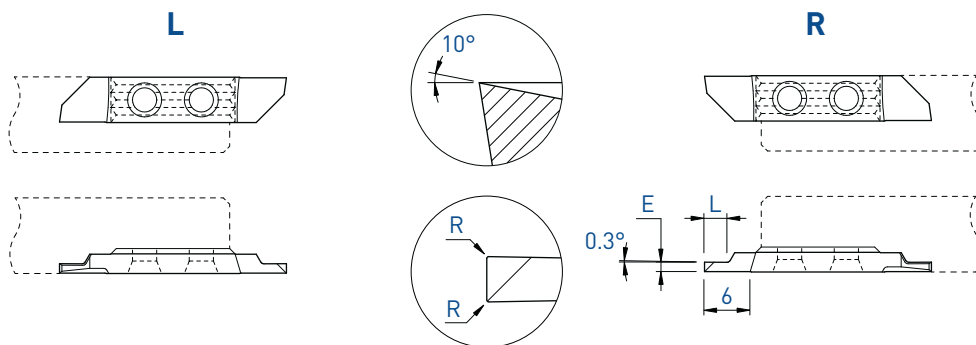
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



E	L	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiAlX	LoX	TiN	N (µk20)	HTA	HTAX	HTiN	HN (µk10)
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



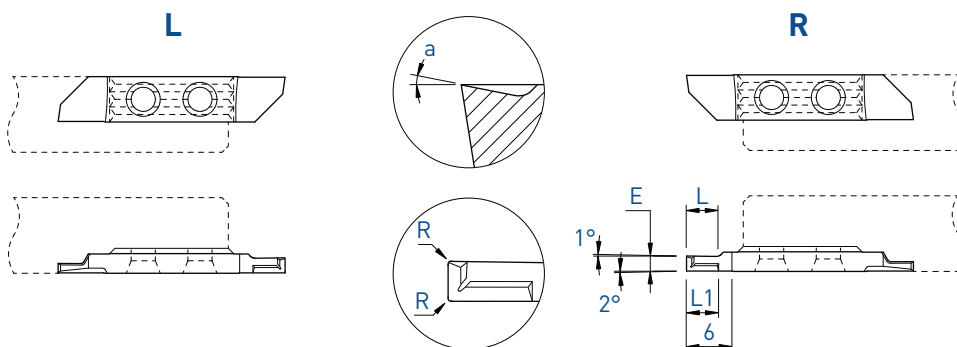
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Fonçage-tournage

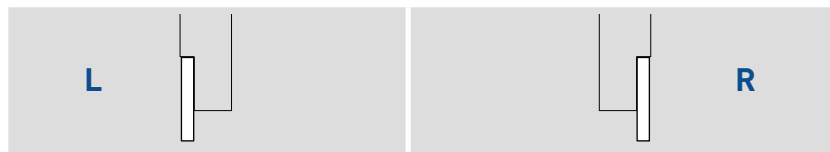
Einstecken und drehen

Grooving and turning

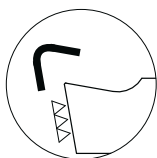
734ZX / 744ZX



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	HAS	HTiN	HN (µk10)	Art. N°	TiAlN	TiAlX	TiN	N (µk20)	HTA	HAS	HTiN	HN (µk10)
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: 0.02 mm/U

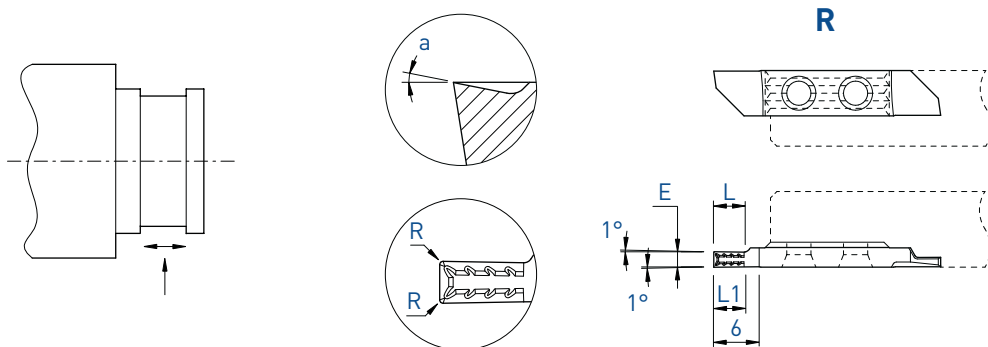
7XX-XX-B



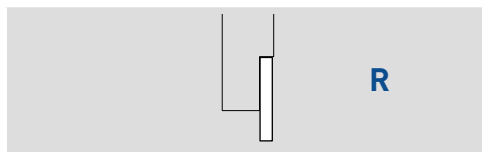
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

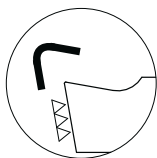
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



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



a	E	L	L1	R	Art. N°	TiAlN	TiAlX	LoX	TiN	N (µk20)	HTA	HTiN	HN (µk10)
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: 0.02 mm/U

7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

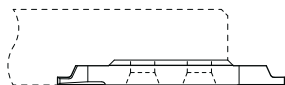
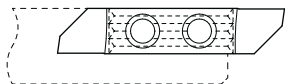
Gorges

Einstechen

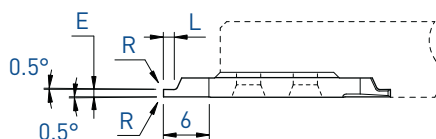
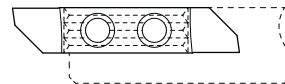
Grooving

735 / 745

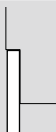
L



R



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	■	□	■	■	□	■

7XX-XX-B



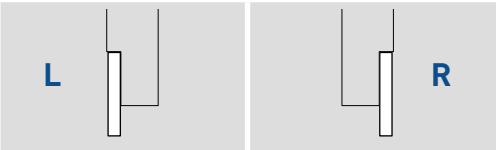
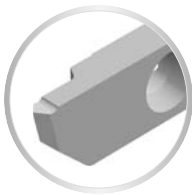
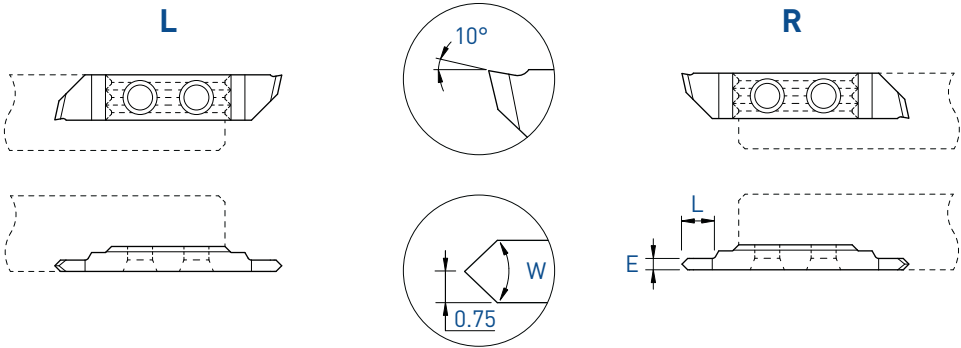
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

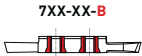
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Gorges
Einstechen
Grooving

735X-90 / 745X-90



W	E	L	Art. N°	TiAlN	TiN	N (µk20)	Art. N°	TiAlN	TiN	N (µk20)
90°	1.5	4	735X-90-1.5	☐	☐	☐	745X-90-1.5	☒	☐	☒



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

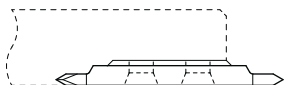
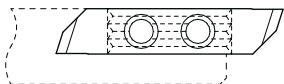
Filetage

Gewinde drehen

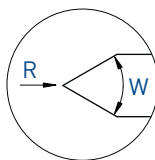
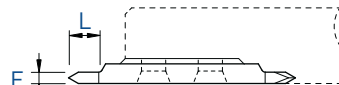
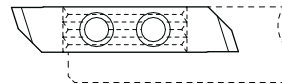
Threading

736 / 746

L

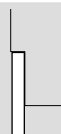


R



Profil partiel
Teilprofil
Partial profile

L



R



W	E	L	R	Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)	Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)
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	■	■	■			

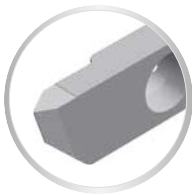
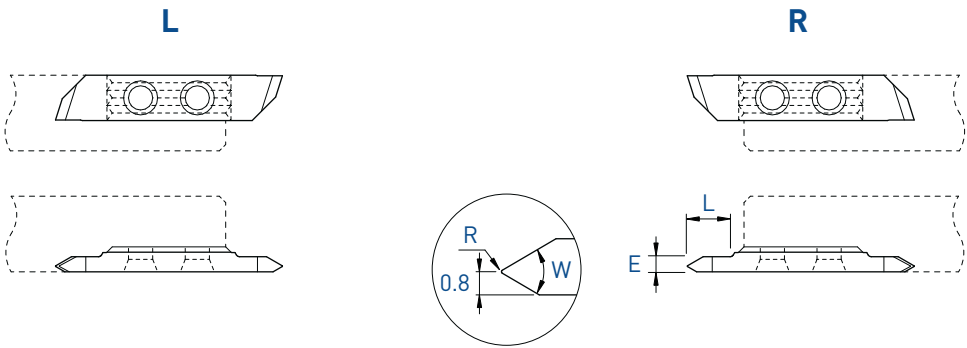
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

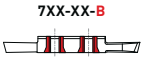


Profil partiel
Teilprofil
Partial profile



W	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 1.126
WSP Gewindedrehen mit positivem Schnitt 2°, siehe Seite 1.126
Threading inserts with positive cut 2°, see page 1.126



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

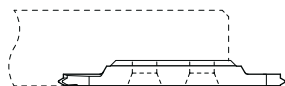
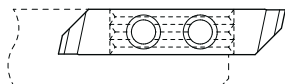
Filetage

Gewinde drehen

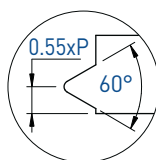
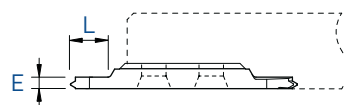
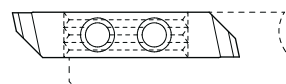
Threading

736-M / 746-M

L



R



Profil complet métrique
Metrisches Vollprofil
Metric full profile

L

R

Pas steigung Pitch P	E	L	Art. N°	Ti	Al	TiN	N (µk20)	Art. N°	Ti	Al	TiN	N (µk20)
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 1.127
WSP Gewindedrehen mit positivem Schnitt 2°, siehe Seite 1.127
Threading inserts with positive cut 2°, see page 1.127

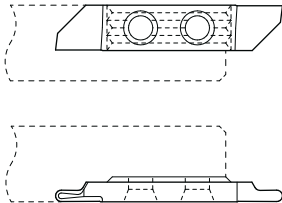
7XX-XX-B



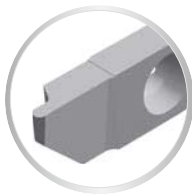
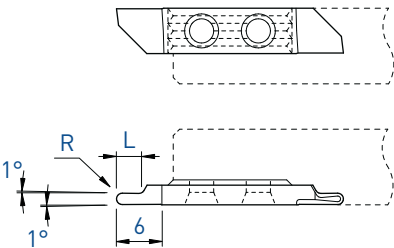
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

L



R



L

R

R	L	Art. N°	TiAlN	TiN	N (µk20)	Art. N°	TiAlN	TiN	N (µk20)
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

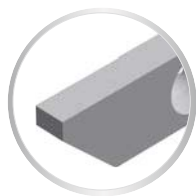


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

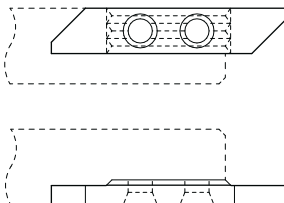
Plaquettes ébauches

WSP-Rohlinge

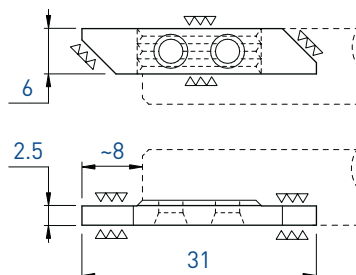
Blank inserts

731-E / 741-E
731-EP / 741-EP


L



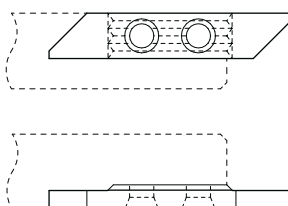
R



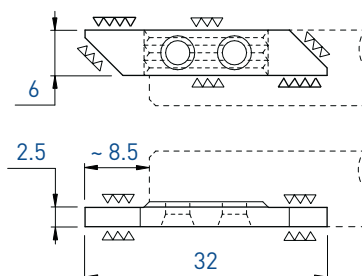
L

L			R		
Art. N°	N (µk20)	HN (µk10)	Art. N°	N (µk20)	HN (µk10)
731-E	■	■	741-E	■	■

L



R


Face de coupe polie
Polierte Schneidfläche
Polished cutting face


L

L						R							
													
Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
731-EP	■	■	■	■	■	■	741-EP	■	■	■	■	□	■

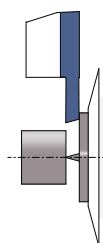
7XX-XX-B



Sur demande pour serrage type B,
voir page 1.03
Wahlweise mit B-Spannsystem,
siehe Seite 1.03
On request for B clamping system,
see page 1.03

■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

L			R		
Type		Page	Type		Page
750	750	1.70	760	760	1.70
	750-JET	1.71		760/750-D	1.75/ 1.76
	750RC	1.72		760/750-AX	1.77
751	751	1.78		760-JET	1.71
	751-E	1.128		760LC	1.73
	751-EP	1.128		760-NOVIBRA	1.74
	751NXF	1.87/ 1.97	761	761	1.78
	751R	1.88		761-E	1.128
	751-R05	1.80		761-EP	1.128
	751RAS	1.99		761L	1.88
	751RD	1.98		761LD	1.98
	751R-R05	1.90		761L-R05	1.90
	751RS	1.89		761LS	1.89
	751RU	1.95		761LX12	1.93
	751RZU	1.96		761LX25	1.94
	751RX12	1.93		761LX4	1.91
	751RX25	1.94		761LXF	1.92
	751RX4	1.91		761NXF	1.87/ 1.97
	751RXF	1.92		761-R05	1.80
	751S	1.79		761S	1.79
	751U	1.85		761U	1.85
	751X12	1.83		761ZU	1.86
	751X25	1.84		761X12	1.83
	751X4	1.81		761X25	1.84
	751XF	1.82		761X4	1.81
752	752	1.100	762	761XF	1.82
	752PX	1.101		762	1.100
	752S05	1.105		762PX	1.101
	752X	1.102		762S05	1.105
753	753	1.106		762X	1.102
	753P	1.116		762VX-800	1.103
	753S05	1.105		762ZX	1.104
	753VX-15°	1.112	763	763	1.106
	753VX-8°	1.109		763P	1.116
	753VX-805	1.110		763S05	1.105
	753X	1.107		763VUX	1.114
	753XS	1.108		763VX-15°	1.112
	753ZX10	1.115		763VX-8°	1.109
754	754	1.117		763VX-800	1.111
	754VS	1.118		763VX-805	1.110
	754X	1.119		763X	1.107
	754ZX10	1.122		763XS	1.108
	754ZXT	1.124		763ZX10	1.115
756	756-55	1.125	764	764	1.117
	756-60	1.125		764VS	1.118
	756-AG60°	1.126		764X	1.119
	756-G60°	1.126		764X5	1.120
	756-M	1.127		764X10	1.121
757	757	1.128		764ZX10	1.122
	757ZX	1.129		764ZX25	1.122
				764ZXB	1.123
				764ZXT	1.124
			766	766-55	1.125
				766-60	1.125
				766-AG60°	1.126
				766-G60°	1.126
				766-M	1.127
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				767ZX	1.129

**751 / 761**

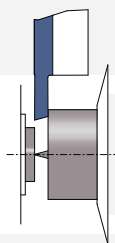
Tronçonnage
Abstechen
Parting off

750 / 760

Porte-outils
Halter
Holders

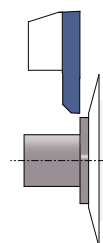
> 1.70

> 1.78

**761L / 751R**

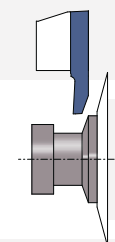
Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line

> 1.88

**752 / 762**

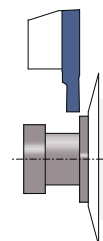
Tournage avant
Vorwärts drehen
Front turning

> 1.100

**753 / 763**

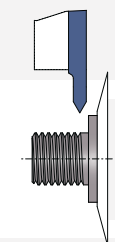
Tournage arrière
Rückwärts drehen
Back turning

> 1.106

**754 / 764**

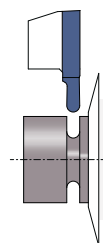
Fonçage-tournage
Einstecken und drehen
Grooving and turning

> 1.117

**756 / 766**

Filetage
Gewinde drehen
Threading

> 1.125

**757 / 767**

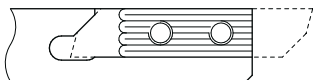
Plaquettes à rayon
Radius Wendeplatten
Radius inserts

> 1.128

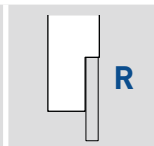
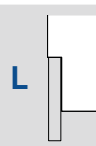
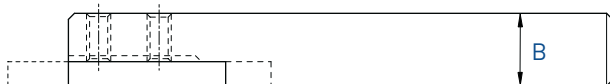
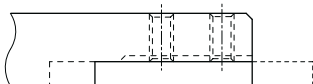
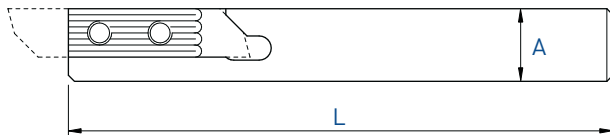
Plaquettes ébauches
WSP-Rohlinge
Blank inserts

> 1.130

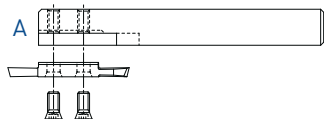
L



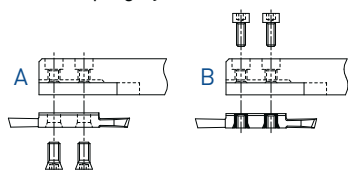
R



Serrage standard A
Standard Spannsystem A
Standard clamping system A

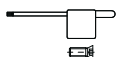


Serrage A + B
Spannsystem A + B
Clamping system A + B



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	

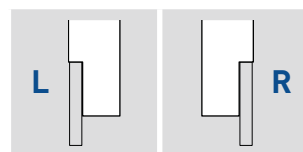
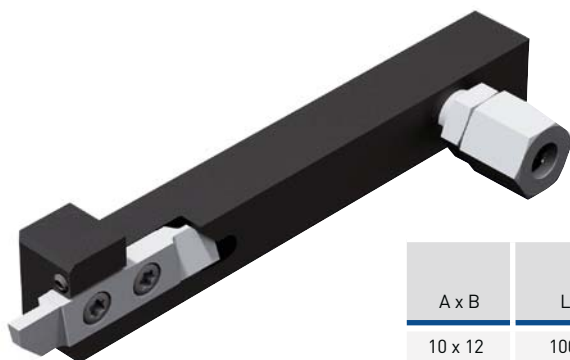
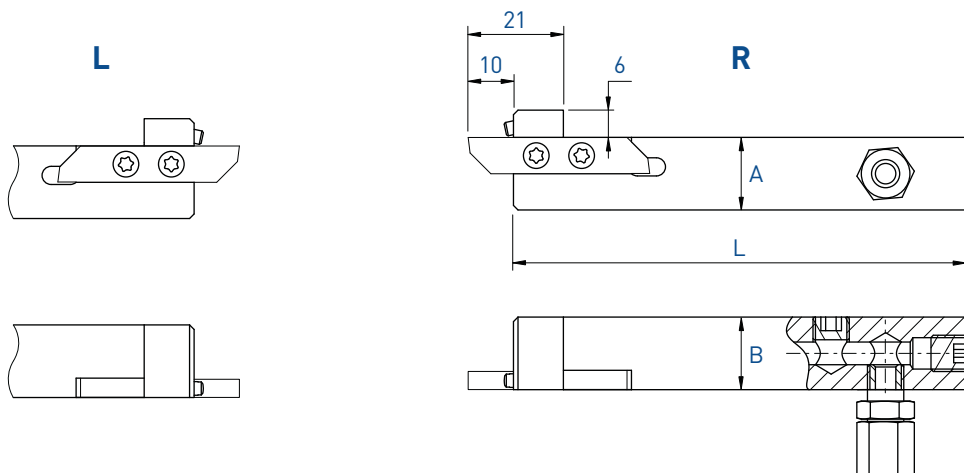
760/750-25
R + L



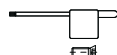
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
 Halter mit integrierter Kühlmittelzufuhr
 Holders with integrated coolant supply

750-JET / 760-JET



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

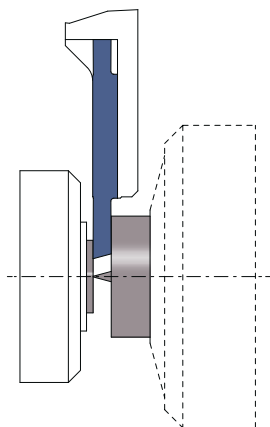
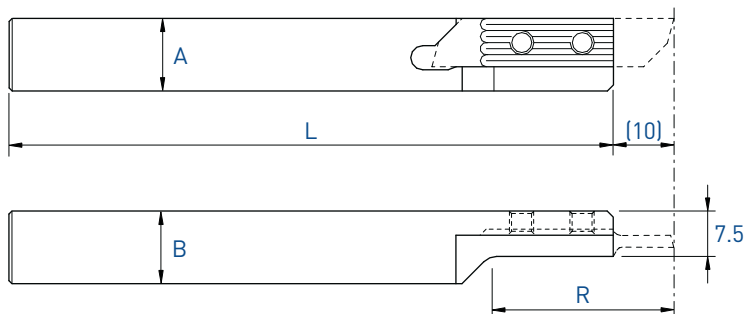


Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n)
 und Schlüssel geliefert.
 Screw(s) and key are included with each
 tool holder.

Pièces de rechange Ersatzteile Spare parts	Art. N°	Art. N°	Buse Düse Nozzle Art. N°
750-JET / 760-JET	J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5

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

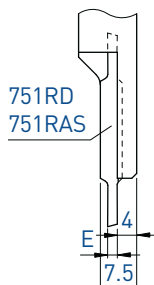
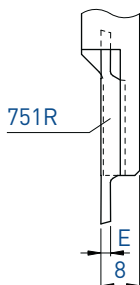
Voir pages 1.88 - 1.99
Siehe Seiten 1.88 - 1.99
See pages 1.88 - 1.99



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

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



(p. 1.98 - 1.99)



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

Halter

Holders

Coupe à gauche déportée

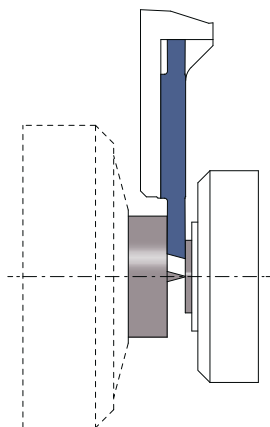
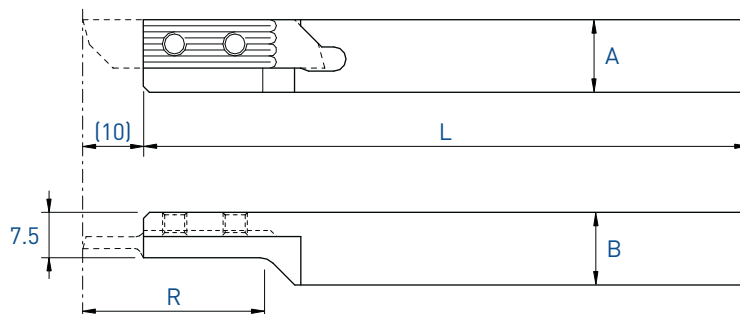
Versetztes Linksschneiden

Left cut off line

760LC

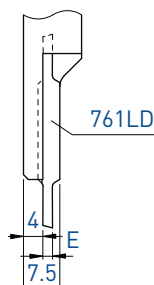
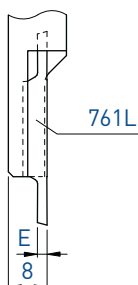
Utiliser des plaquettes type 761L
WSP Typ 761L verwenden
Use insets type 761L

Voir pages 1.88 - 1.94 + 1.98
Siehe Seiten 1.88 - 1.94 + 1.98
See pages 1.88 - 1.94 + 1.98

**R (L)**

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

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



(p. 1.98)

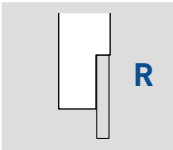
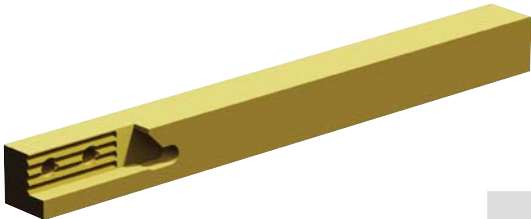
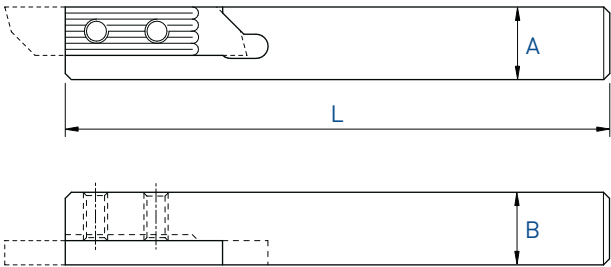


Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

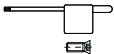
Porte-outils en métal lourd anti-vibratoire
Schwingungsdämpfende Schwermetallhalter
Low vibration heavy metal holders

760-NOVIBRA

R



A x B	L	Serrage Spannsystem Clamping	Art. N°
10 x 10	115	A	760-10-NOVIBRA
12 x 12	130	A	760-12-NOVIBRA



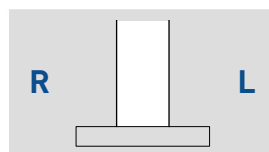
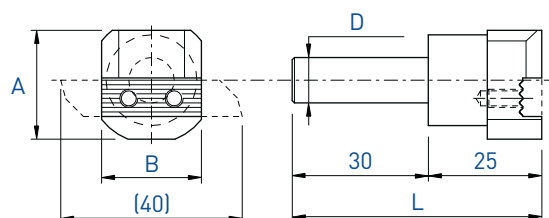
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

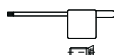
Halter

Holders

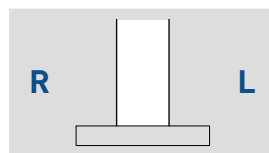
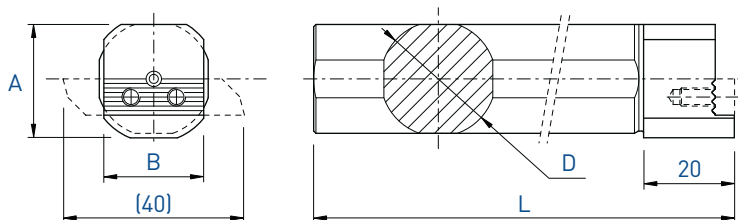
760 / 750-D10



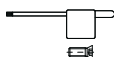
D	L	A	B	Art. N°
10	55	24	22	760/750-D10



Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
 Screw(s) and key are included with each tool holder.



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



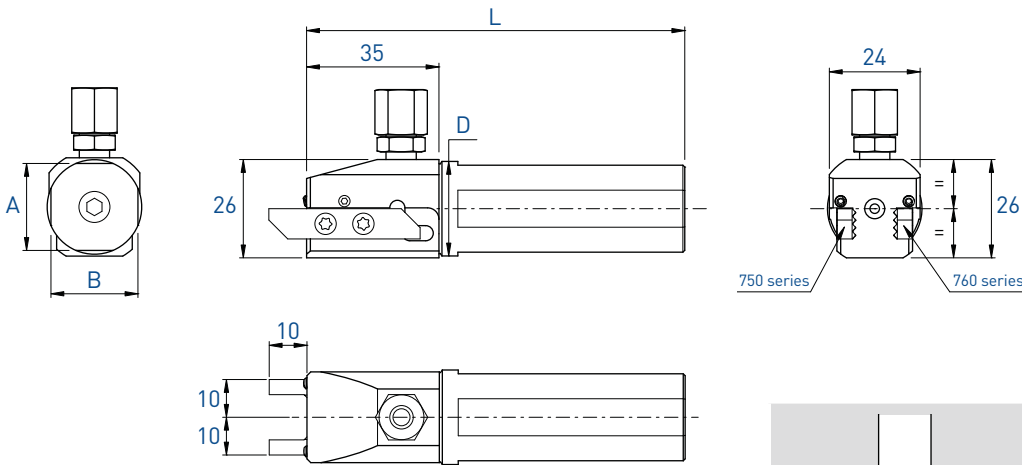
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

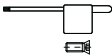
Halter

Holders

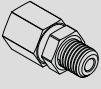
760 / 750-AX



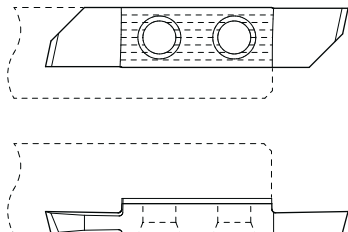
D	L	A	B	Art. N°
25	100	23	23	760/750-AX-D25-JET
25.4	100	23	23	760/750-AX-D25.4-JET



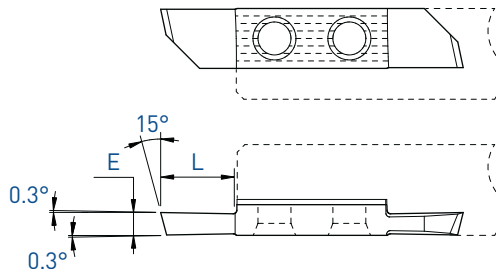
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n)
und Schlüssel geliefert.
Screw(s) and key are included with each
tool holder.

Pièces de rechange Ersatzteile Spare parts			Buse Düse Nozzle
	Art. N°	Art. N°	Art. N°
760/750-AX	J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5

L



R



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 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

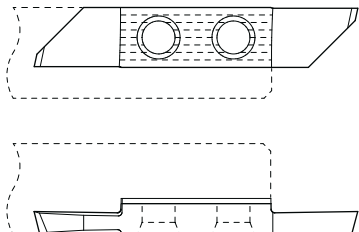
Tronçonnage

Abstechen

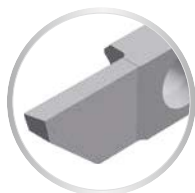
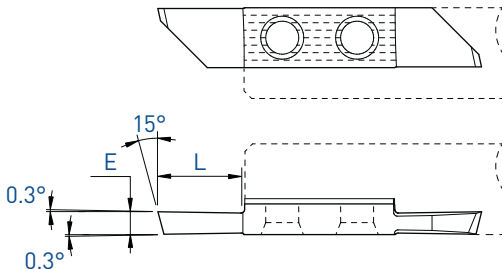
Parting off

751S / 761S

L



R



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)
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 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

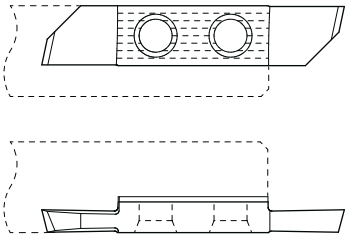
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

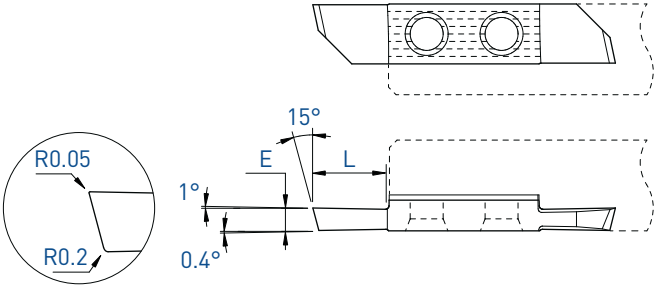
Tronçonnage
Abstechen
Parting off

751-R05 / 761-R05

L



R



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)
1.5	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	■	■	■	■			

7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

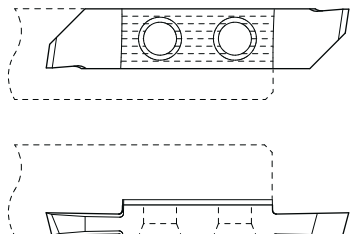
Tronçonnage

Abstechen

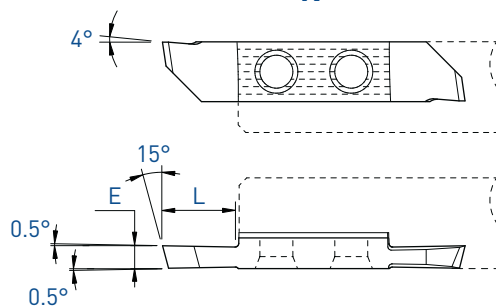
Parting off

751X4 / 761X4

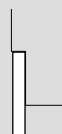
L



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)
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



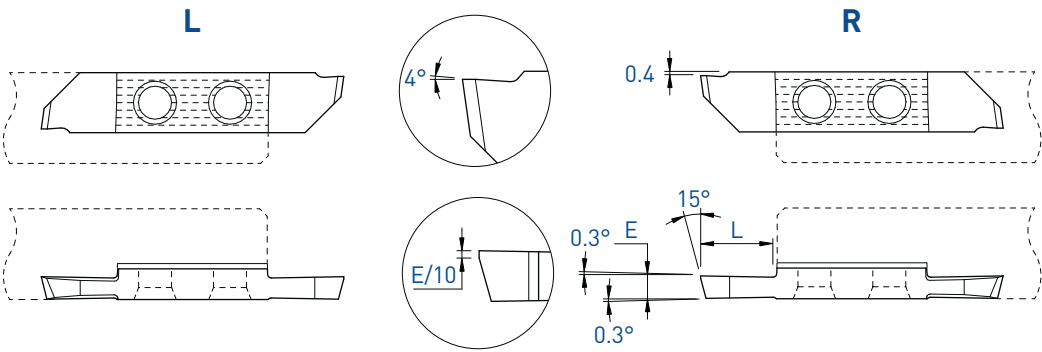
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

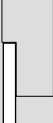
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

751XF / 761XF



L 									R								
Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)		Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	
751XF-1.5		■	■	■	■	□	■		761XF-1.5		■	■	■	■	□	■	
751XF-2.0		■	■	■	■	■	■		761XF-2.0		■	■	■	■	■	■	
751XF-2.2		■	■	■					761XF-2.2		■	■	■				
751XF-2.5		■	■	■	■	□	■		761XF-2.5		■	■	■				
751XF-3.0		■	■	■					761XF-3.0		■	■	■	■	□	■	

7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

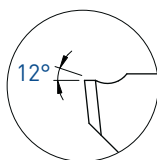
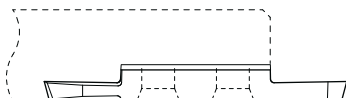
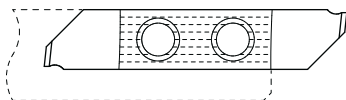
Tronçonnage

Abstechen

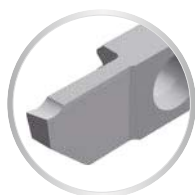
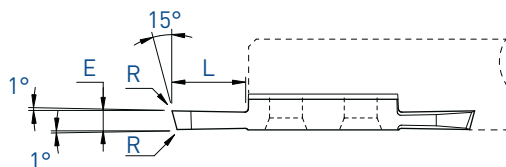
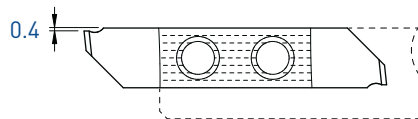
Parting off

751X12 / 761X12

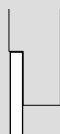
L



R



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	■	■	■	■	□	■

7XX-XX-B



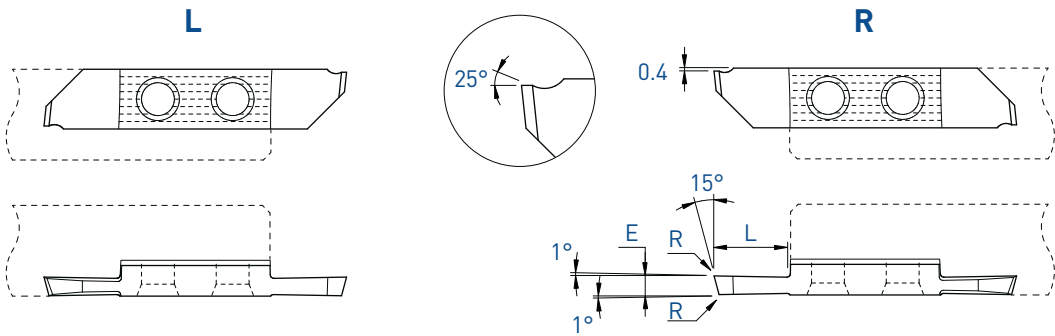
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

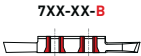
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

751X25 / 761X25



L 							 R								
Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
751X25-1.5		■	■	■	■	□	■	761X25-1.5		■	■	■			
751X25-2.0		■	■	■				761X25-2.0		■	■	■	■	□	■
751X25-2.5		■	■	■				761X25-2.5		■	■	■	■	□	■



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

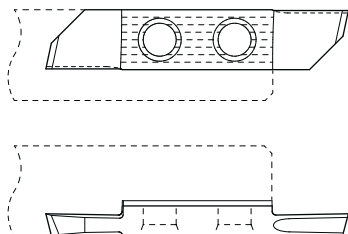
Tronçonnage

Abstechen

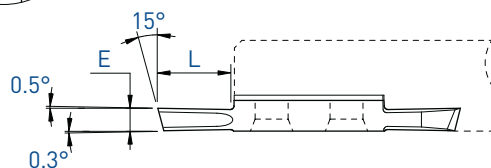
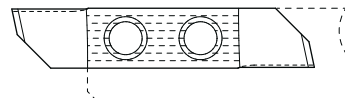
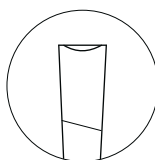
Parting off

751U / 761U

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)
1.5	7.5	-							761U-1.5	■	□	■	■	□	■
2.0	10	751U-2.0	■	■	■				761U-2.0	■	■	■		□	■

7XX-XX-B



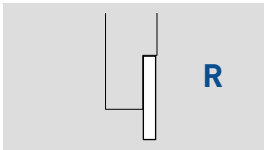
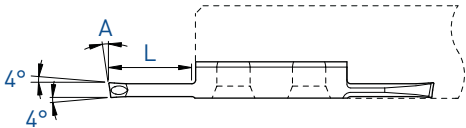
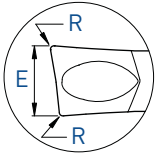
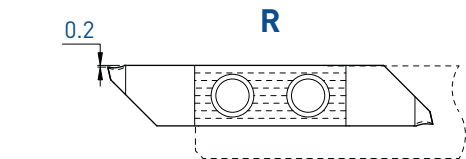
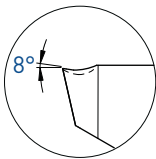
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

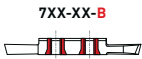
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

761ZU



E	A	L	R	Art. N°	TiAlN N [µk20]
2.0	0°	11	0.10	761ZU8-2.0-R10	■
2.0	8°	11	0.10	761ZU8-2.0-8°-R10	■



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

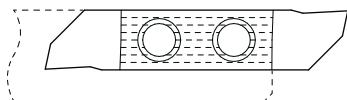
Tronçonnage

Abstechen

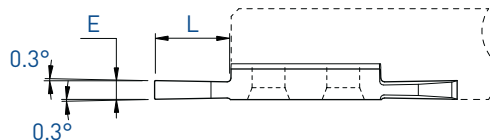
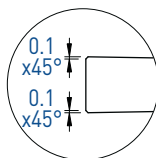
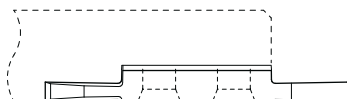
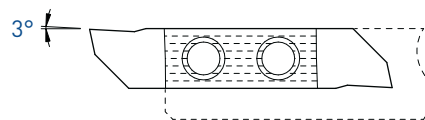
Parting off

751NXF / 761NXF

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)
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	■	■	■			

7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

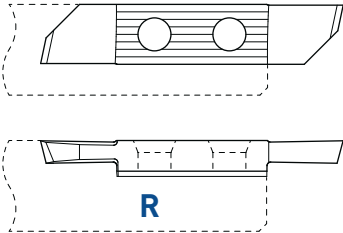
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

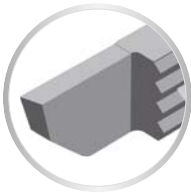
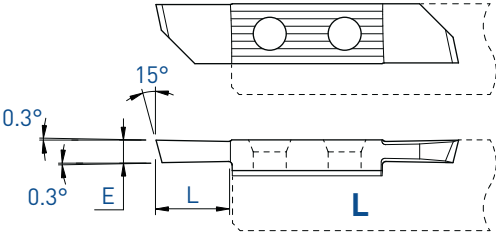
Coupe déportée
Versetztes Schneiden
Cut off line

761L / 751R

Cut L



Cut R



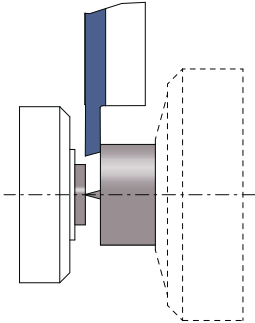
R (L)

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	■	■	■	■	■	□	■



Tronçonnage

Abstechen

Parting off

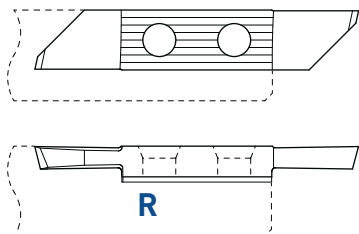
Coupe déportée

Versetztes Schneiden

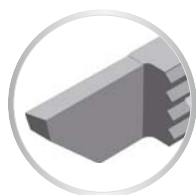
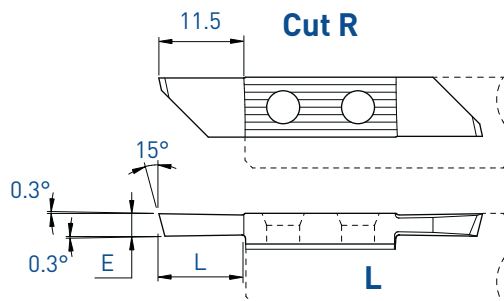
Cut off line

761LS / 751RS

Cut L



Cut R



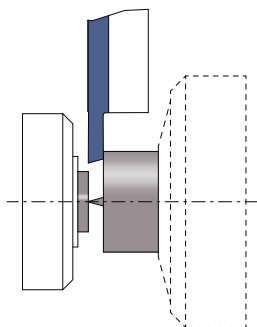
R (L)

Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

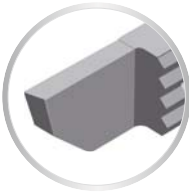
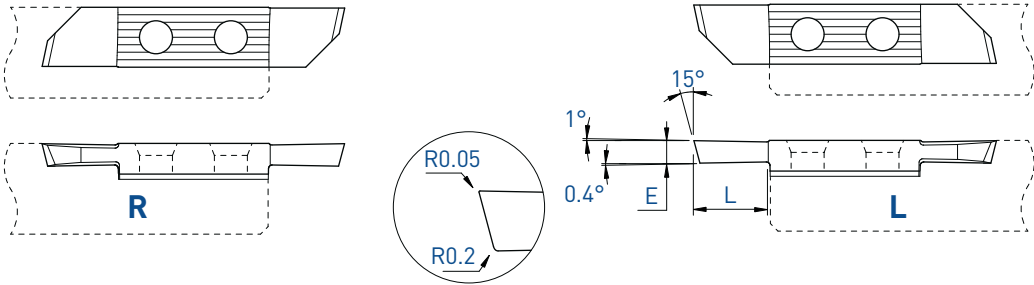
E	L	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiAlX	TiN	N (µk20)	HTA	HTiN	HN (µk10)
1.0	5.5	761LS-1.0	■	■	■	■	□	■	751RS-1.0	■	■	■	■	■	□	■
1.5	8	761LS-1.5	■	■	■	■	□	■	751RS-1.5	■	■	■	■	■	□	■
2.0	11.5	761LS-2.0	■	■	■				751RS-2.0	■	■	■	■	■	■	■
2.2	11.5	761LS-2.2	■	■	■				751RS-2.2	■	■	■	■	■	□	■
2.5	11.5	761LS-2.5	■	■	■				751RS-2.5	■	■	■	■	■	□	■
3.0	11.5	761LS-3.0	■	■	■				751RS-3.0	■	■	■	■	■	□	■



Tronçonnage	Coupe déportée	761L-R05 / 751R-R05
Abstechen	Versetztes Schneiden	
Parting off	Cut off line	

Cut L

Cut R



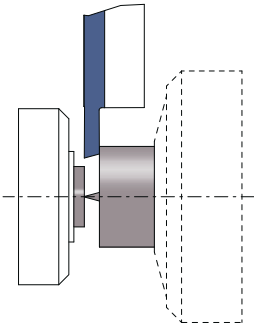
R (L)

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)
1.5	7.5	761L-1.5-R05	■	■	■				751R-1.5-R05	■	■	■	■	■	□	■
2.0	10	761L-2.0-R05	■	■	■				751R-2.0-R05	■	■	■	■			



Tronçonnage

Abstechen

Parting off

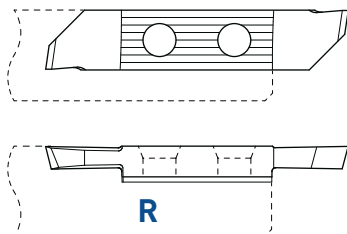
Coupe déportée

Versetztes Schneiden

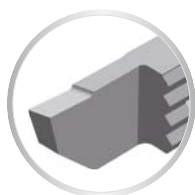
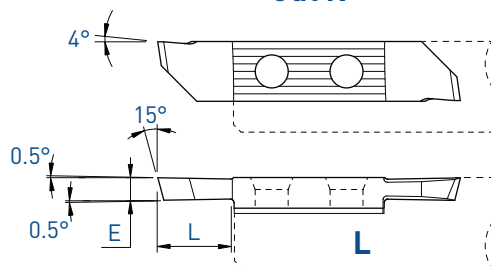
Cut off line

761LX4 / 751RX4

Cut L



Cut R



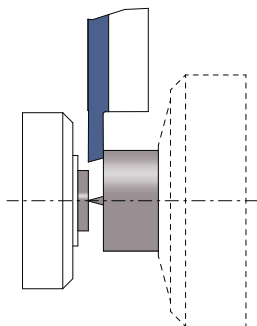
R (L)

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	■	■	■			

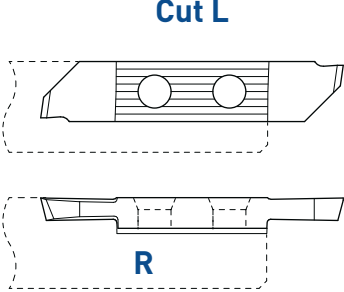


Tronçonnage
Abstechen
Parting off

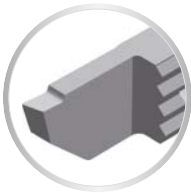
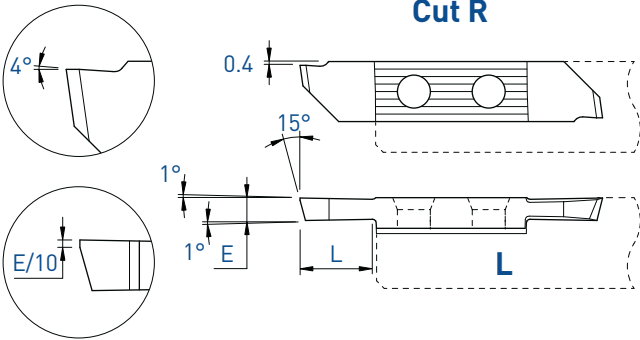
Coupe déportée
Versetztes Schneiden
Cut off line

761LXF / 751RXF

Cut L



Cut R



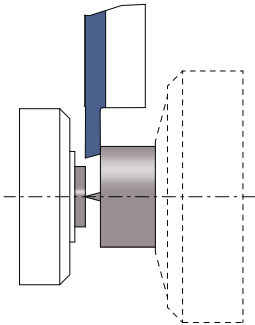
R (L)

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	-							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	■	■	■	■	□	■



Tronçonnage

Abstechen

Parting off

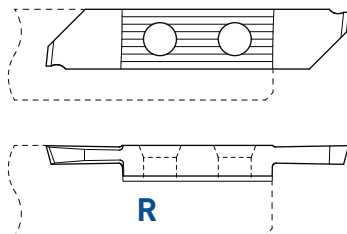
Coupe déportée

Versetzttes Schneiden

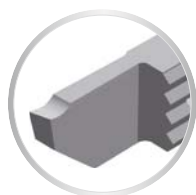
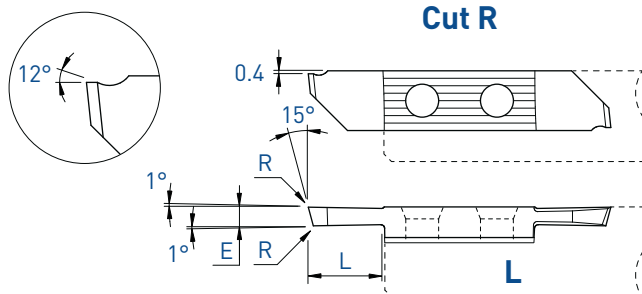
Cut off line

761LX12 / 751RX12

Cut L



Cut R



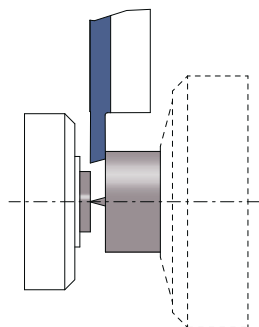
R (L)

Coupe à gauche déportée
Versetzttes Linksschneiden
Left cut off line

L (R)

Coupe à droite déportée
Versetzttes Rechtsschneiden
Right cut off line

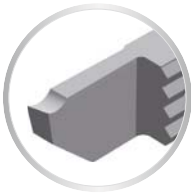
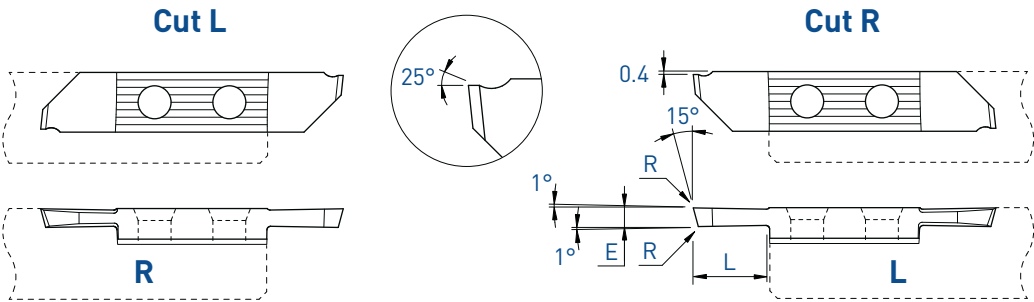
E	L	R	Art. N°	TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]	Art. N°	TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]
1.5	7.5	0.03	-							751RX12-1.5	■	■	■			
2.0	10	0.03	761LX12-2.0	■	■	■				751RX12-2.0	■	■	■	■	■	■



Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

761LX25 / 751RX25



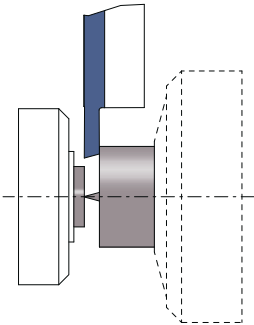
R (L)

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°	Ti	AIN	Ti	N (µk20)	Art. N°	Ti	AIN	Ti	N (µk20)
2.0	10	0.03	761LX25-2.0	■	■	■		751RX25-2.0	■	■	■	



Tronçonnage

Abstechen

Parting off

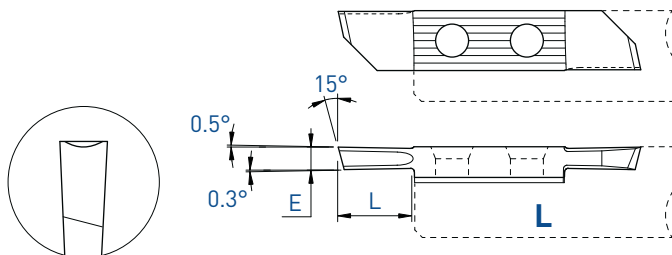
Coupe déportée

Versetztes Schneiden

Cut off line

751RU

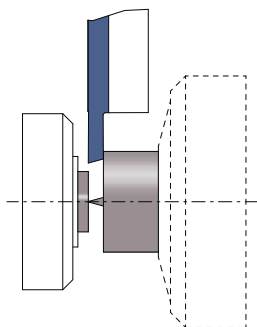
Cut R



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

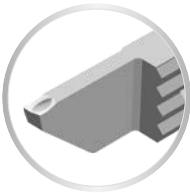
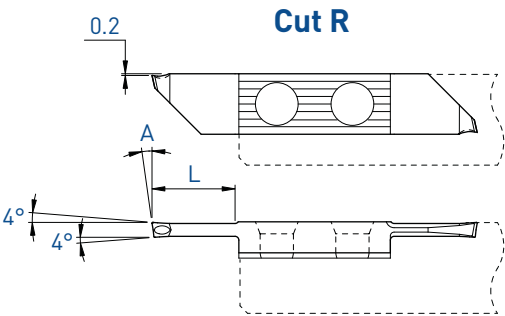
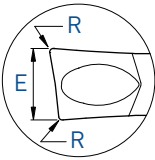
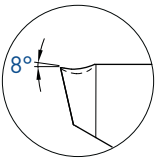
E	L	Art. N°	TiAlN	TiN	N (µk20)
1.5	7.5	751RU-1.5	■	■	■
2.0	10	751RU-2.0	■	■	■



Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

751RZU



R (L)



Coupe à gauche déportée
Versetztes Linksschneiden
Left cut off line

E	A	L	R	Art. N°	TiAlN TiN N [µk20]
2.0	8°	11.0	0.10	751RZU8-2.0-8°-R10	■

Tronçonnage

Abstechen

Parting off

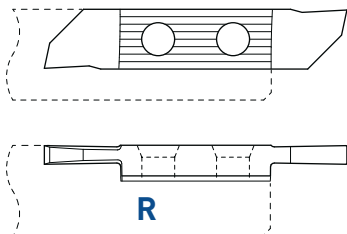
Coupe déportée

Versetztes Schneiden

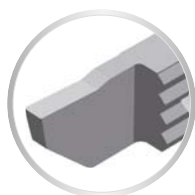
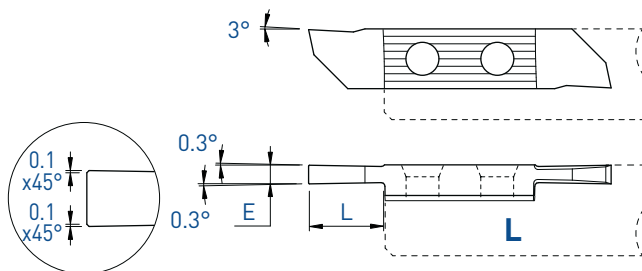
Cut off line

761NXF / 751NXF

Cut L



Cut R



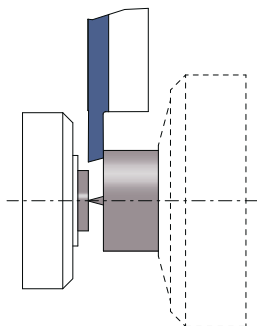
R (L)

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	■	■	■			



Tronçonnage

Abstechen

Parting off

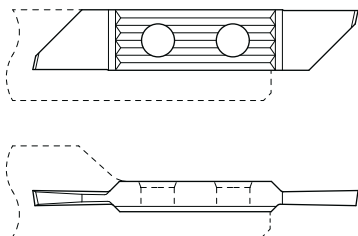
Coupe déportée

Versetztes Schneiden

Cut off line

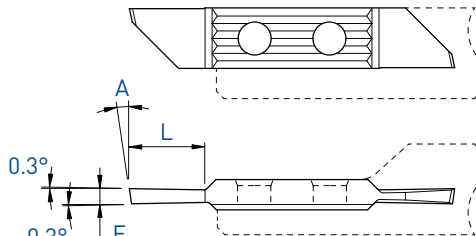
761LD / 751RD

Cut L



R

Cut R



L



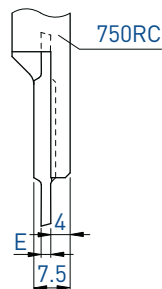
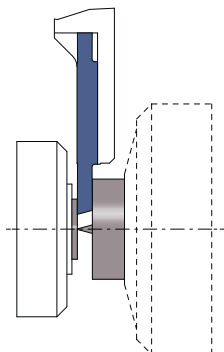
R (L)

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

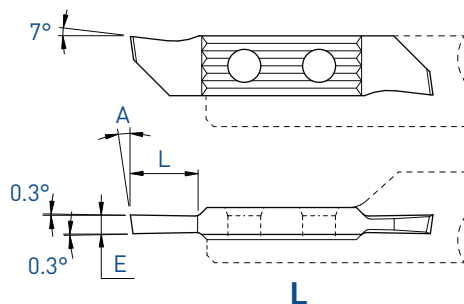
Coupe déportée

Versetztes Schneiden

Cut off line

751RAS

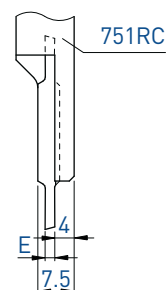
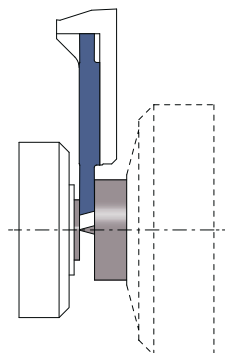
Cut R



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)
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°	■	■	■			



■ = disponible / verfügbar / available

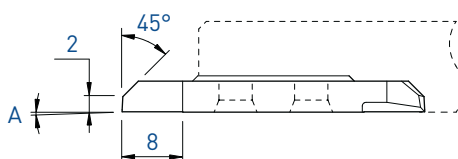
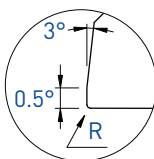
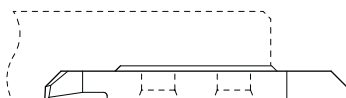
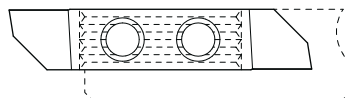
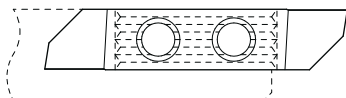
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tournage avant
Vorwärts drehen
Front turning

752 / 762

L

R



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	752	■	■	■	■	□	■	762	■	■	■	■	□	■
0°	0.20	-							762-R20	■	■	■	■	□	■
3°	0	752-3°	■	■	■	■	□	■	762-3°	■	■	■	■	□	■

7XX-XX-B

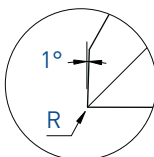
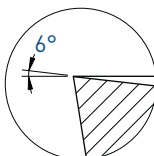
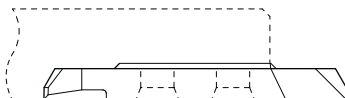
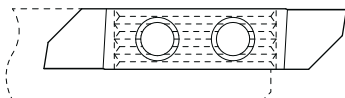


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

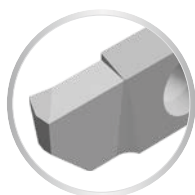
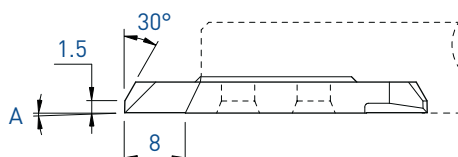
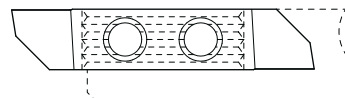
Tournage avant
Vorwärts drehen
Front turning

752PX / 762PX

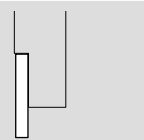
L



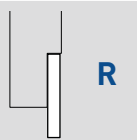
R



L



R



A	R	Art. N°	TiAlN	TiN	N [μk20]	Art. N°	TiAlN	TiN	N [μk20]
0°	0	752PX	■	■	■	762PX	■	■	■

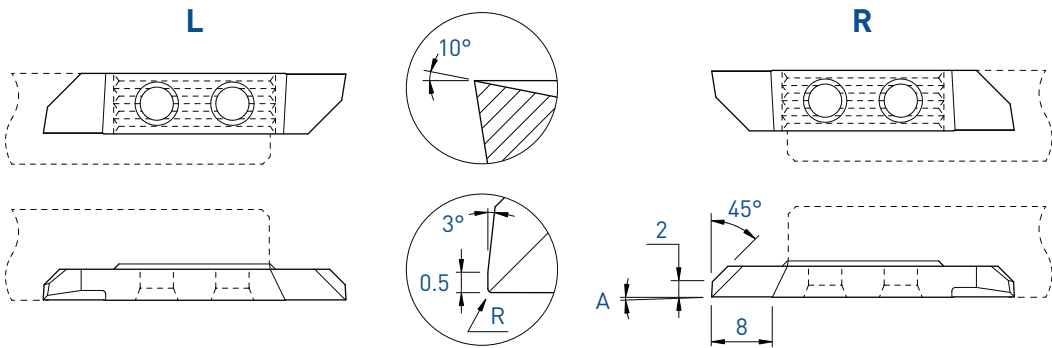
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage avant
Vorwärts drehen
Front turning

752X / 762X

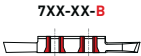


L

R

Art. N°	TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]
752X	■	■	■	■	■	■
752X-R20	■	■	■			

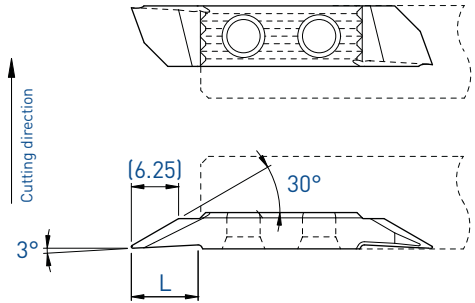
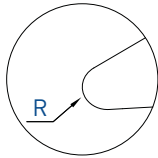
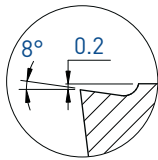
Art. N°	TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]
762X	■	■	■	■	■	■
762X-R20	■	■	■	■	■	■



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage avant
Vorwärts drehen
Front turning

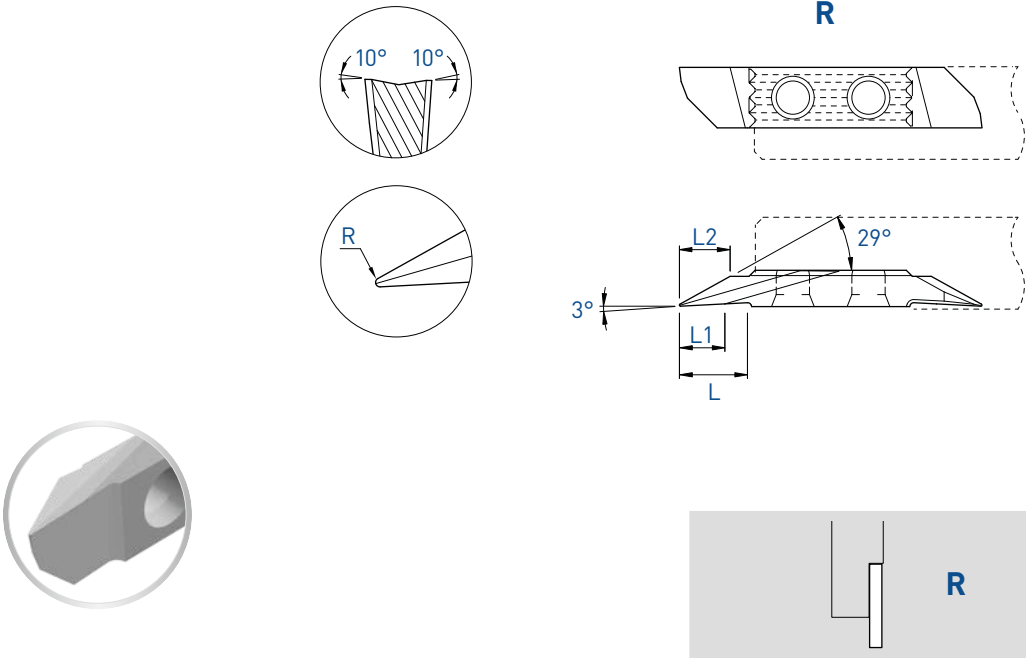
762VX-800



		Art. N°	R		
L	R		HTA	HTiN	HN [μk10]
9	0.15	762VX-800-R15	■	■	■

Tournage avant
Vorwärts drehen
Front turning

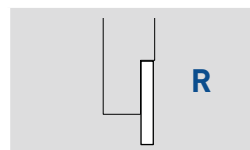
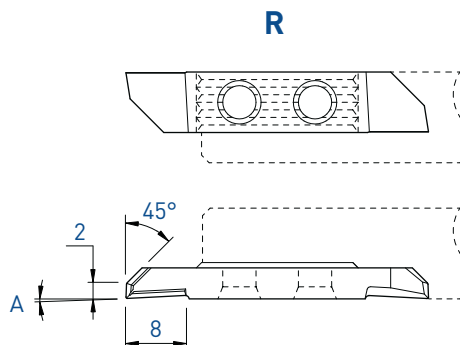
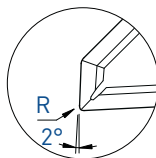
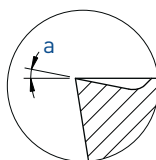
762VUX



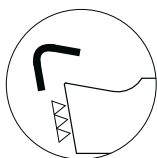
L	L1	L2	R	Art. N°	TiAlN N [µk20]	HTA	HN [µk10]
9	6	6.9	0.08	762VUX10-29°-R08	■	■	■
9	6	6.7	0.15	762VUX10-29°-R15	■	■	■
9	6	6.1	0.35	762VUX10-29°-R35	■	■	■
9	6	4.9	0.75	762VUX10-29°-R75	■	■	■

Tournage avant
Vorwärts drehen
Front turning

762ZX



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

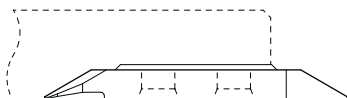
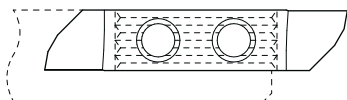
f min: 0.02 mm/U

7XX-XX-B



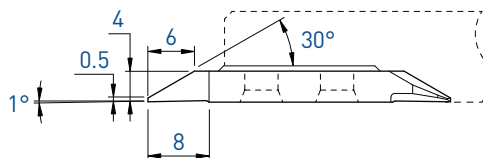
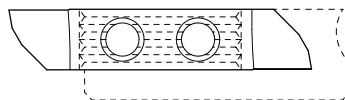
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

L



Tournage avant
Vorwärts drehen
Front turning

R



L

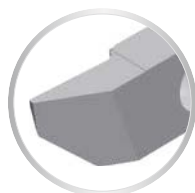
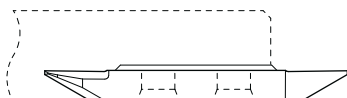
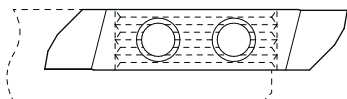


R



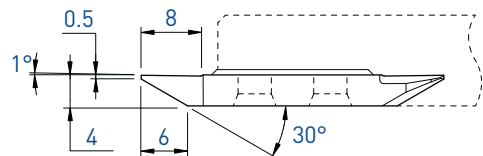
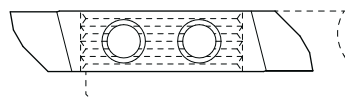
Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)	Art. N°	TiAlN	TiAlX	TiN	N (μk20)	HTA	HTiN	HN (μk10)
752S05	■	■	■	■	□	■	762S05	■	■	■	■	■	■	■

L



Tournage arrière
Rückwärts drehen
Back turning

R



L



R

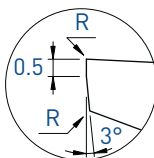
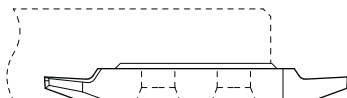
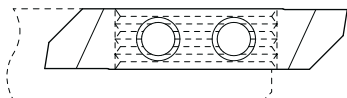


Art. N°	TiAlN	TiN	N (μk20)	HTA	HTiN	HN (μk10)	Art. N°	TiAlN	TiAlX	TiN	N (μk20)	HTA	HTiN	HN (μk10)
753S05	■	■	■	■	■	■	763S05	■	■	■	■	■	■	■

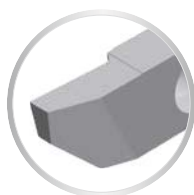
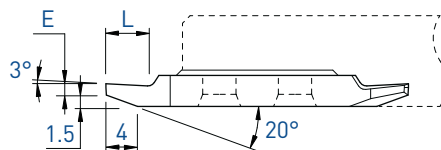
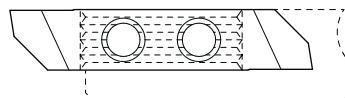
Tournage arrière
Rückwärts drehen
Back turning

753 / 763

L



R



L



R

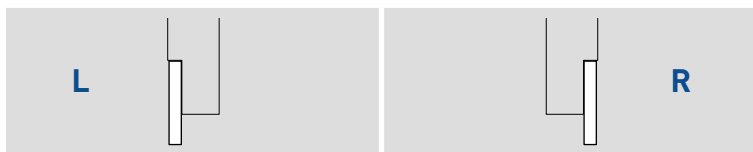
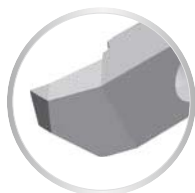
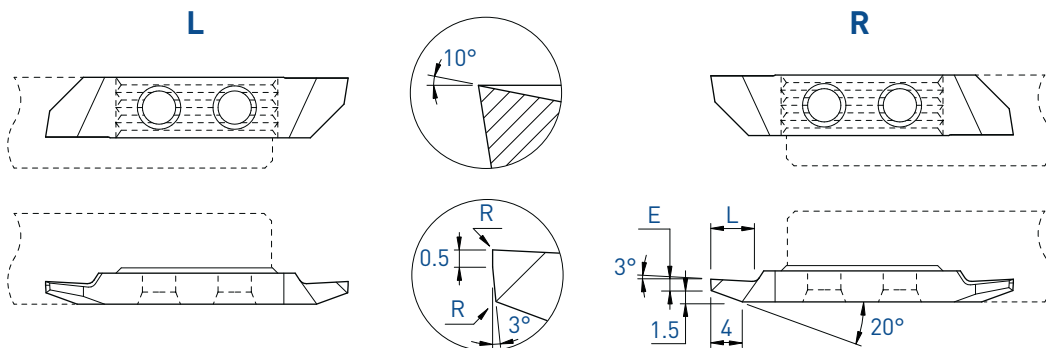


E	L	R	Art. N°	TiAlN	TiN	N [μk20]	HTA	HTiN	HN [μk10]	Art. N°	TiAlN	TiN	N [μk20]	HTA	HTiN	HN [μk10]
1.0	5	0	753-1.0	■	■	■	■	□	■	763-1.0	■	■	■	■	■	■
1.0	5	0.08	753-1.0-R08	■	■	■				763-1.0-R08	■	■	■	■	□	■
1.5	6	0	753-1.5	■	■	■				763-1.5	■	■	■	■	□	■
2.0	7.5	0	753-2.0	■	■	■				763-2.0	■	■	■	■	□	■
2.5	9	0	753-2.5	■	■	■				763-2.5	■	■	■	■	□	■

7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03



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	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	■	■	■			

7XX-XX-B

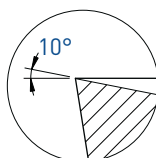
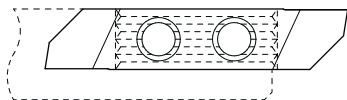


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

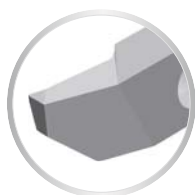
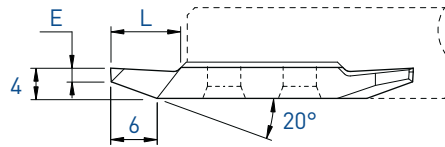
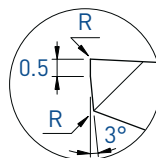
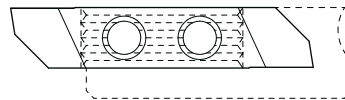
Tournage arrière
Rückwärts drehen
Back turning

753XS / 763XS

L



R



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)
1.8	9	0	753XS-1.8	■	■	■				763XS-1.8	■	■	■	■	□	■
1.8	9	0.20	753XS-1.8-R20	■	■	■				763XS-1.8-R20	■	■	■			

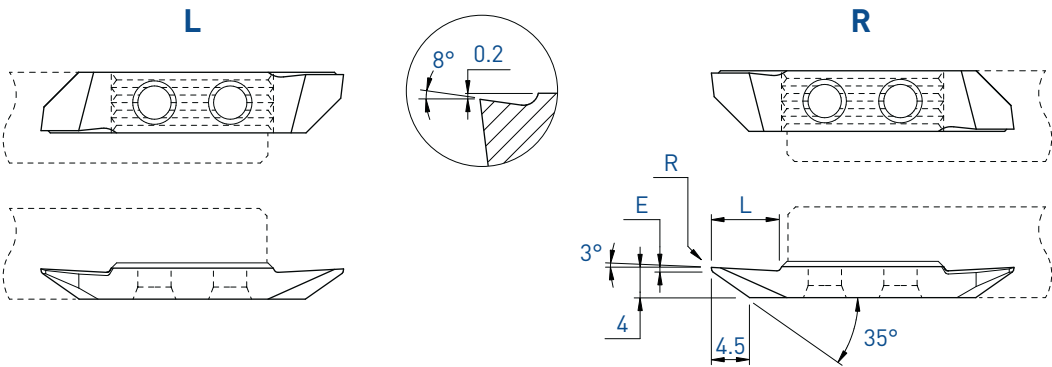
7XX-XX-B



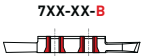
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

753VX-8° / 763VX-8°



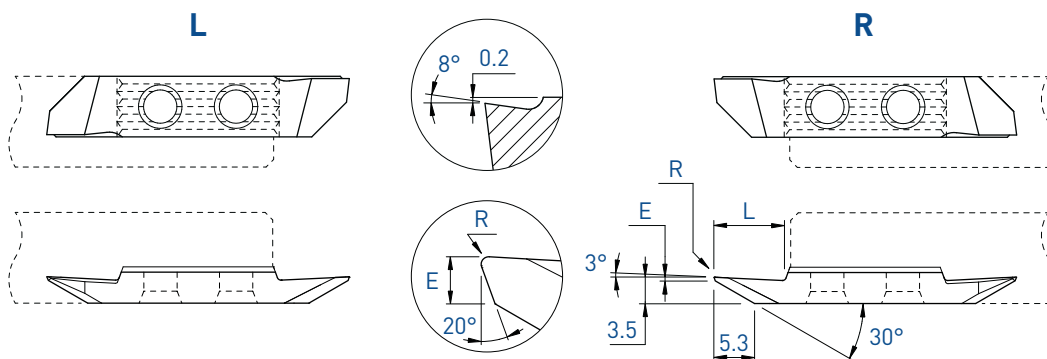
L 							R 										
Art. N°			TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]	Art. N°			TiAlN	TiN	N [µk20]	HTA	HTiN	HN [µk10]
753VX-8°			■	■	■				763VX-8°			■	■	■	■		
753VX-8°-R08			■	■	■				763VX-8°-R08			■	■	■	■	□	■
-									763VX-8°-R20			■	■	■			



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

753VX-805 / 763VX-805



L									R								
Art. N°			TiAlN	TiN	N [μk20]	HTA	HTiN	HN [μk10]	Art. N°			TiAlN	TiN	N [μk20]	HTA	HTiN	HN [μk10]
753VX-805-R08			■	■	■	■	□	■	763VX-805-R08			■	■	■	■	□	■

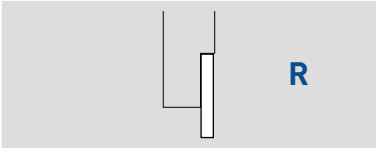
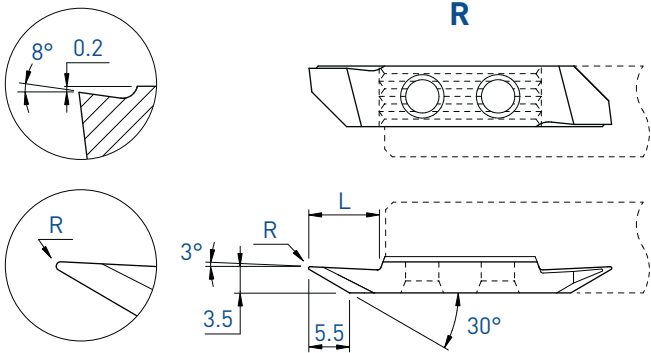
7XX-XX-B



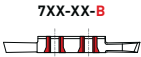
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

763VX-800



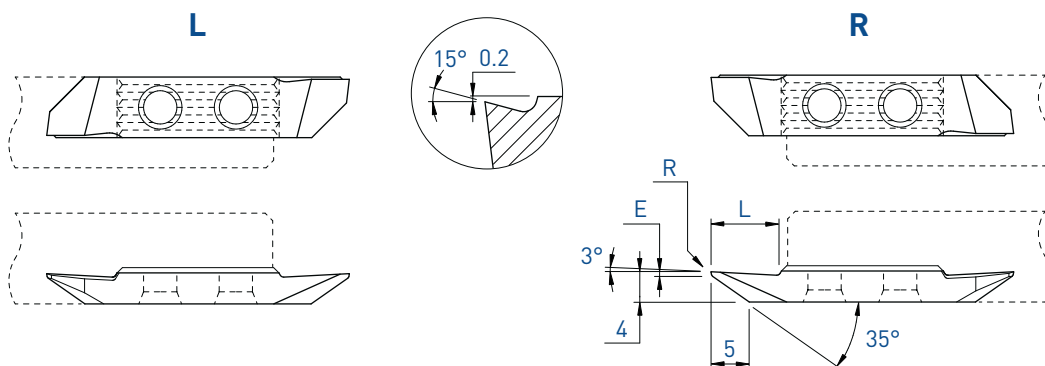
L	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
9	0.08	763VX-800-R08	■	■	■	■	□	■
9	0.20	763VX-800-R20	■	■	■	■	□	■

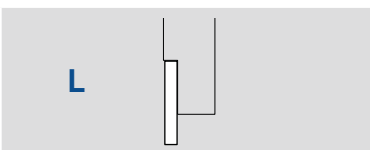
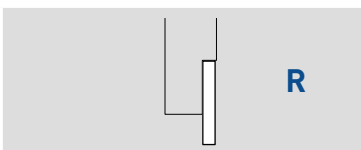


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière
Rückwärts drehen
Back turning

753VX-15° / 763VX-15°

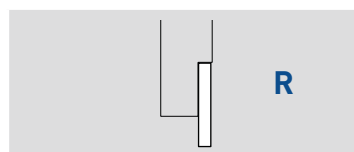
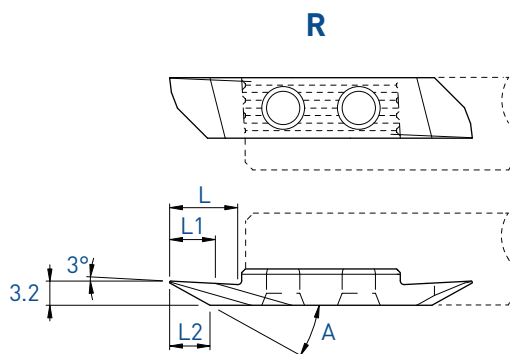
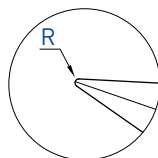
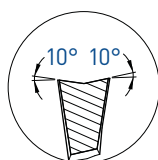


															
Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
753VX-15°		■	■	■				763VX-15°		■	■	■	■	□	■
753VX-15°-R08		■	■	■				763VX-15°-R08		■	■	■	■	□	■

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Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03



L	L1	L2	A	R	Art. N°	TiAlN N [μk20]	HTA	HN [μk10]
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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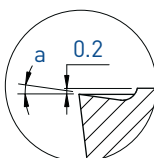
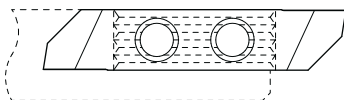


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

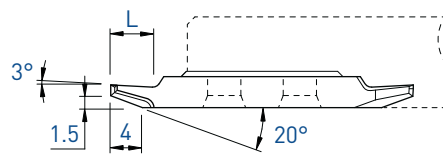
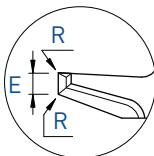
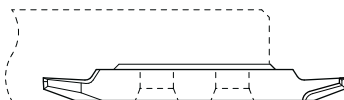
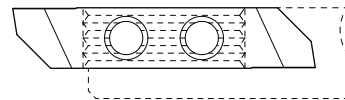
Tournage arrière
Rückwärts drehen
Back turning

753ZX / 763ZX

L

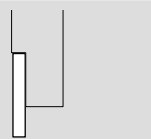


R

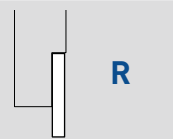


Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

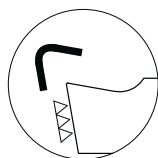
L



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: 0.02 mm/U

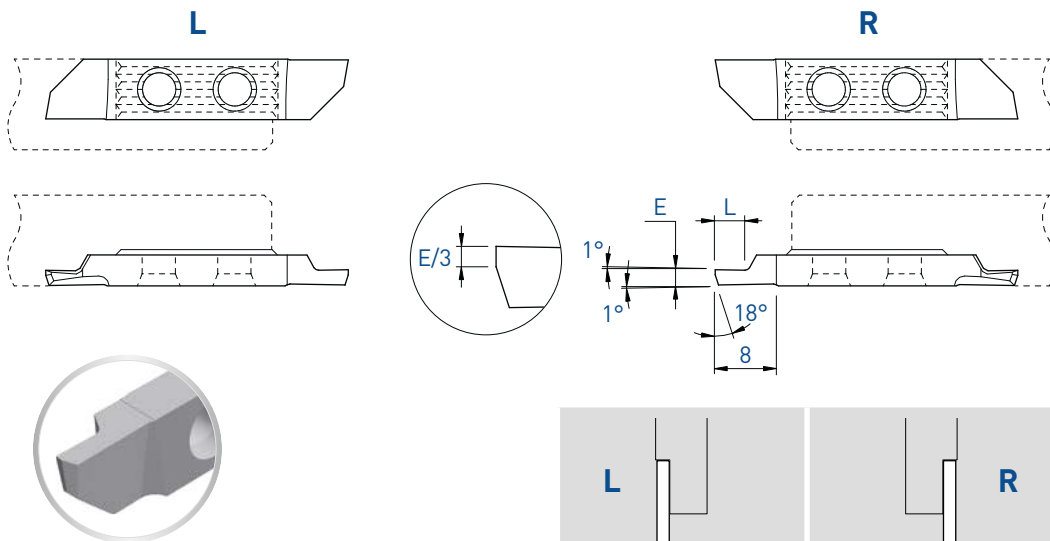
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Tournage arrière / pré-coupe
Rückwärts drehen / vorstechen
Back turning / pre-parting off

753P / 763P



		L			R		
E	L	Art. N°			Art. N°		
1.5	3	753P-1.5	TiAlN	TiN	763P-1.5	TiAlN	TiN
1.8	3.5	753P-1.8	TiAlN	TiN	763P-1.8	TiAlN	TiN
2.0	4	753P-2.0	TiAlN	TiN	763P-2.0	TiAlN	TiN
2.2	4.5	753P-2.2	TiAlN	TiN	763P-2.2	TiAlN	TiN
2.5	5	753P-2.5	TiAlN	TiN	763P-2.5	TiAlN	TiN
3.0	6	753P-3.0	TiAlN	TiN	763P-3.0	TiAlN	TiN

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Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

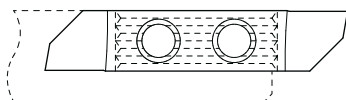
Fonçage-tournage

Einstechen und drehen

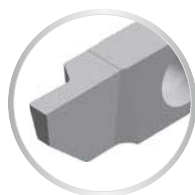
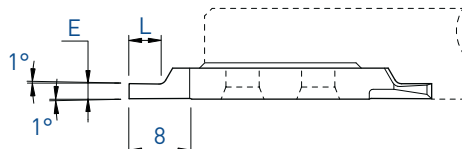
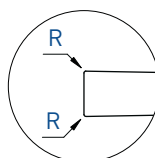
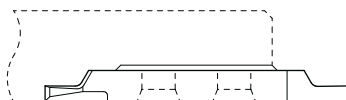
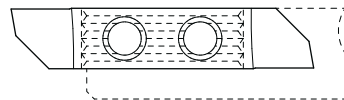
Grooving and turning

754 / 764

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	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	■	■	■	■		■	□

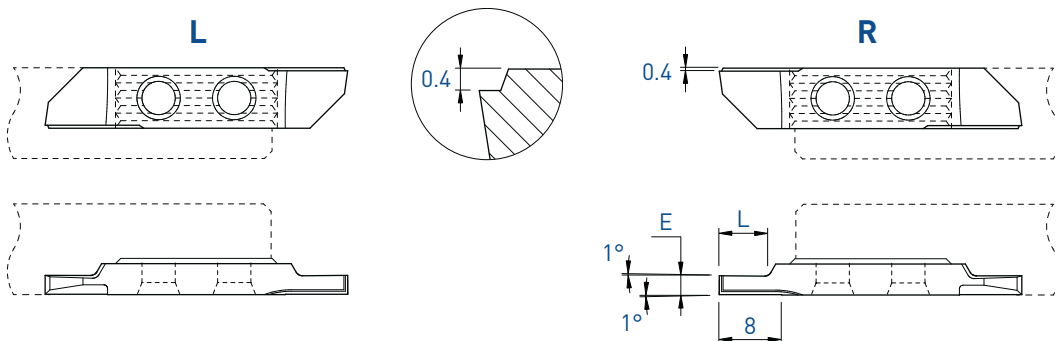
7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



L						R							
Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
754VS-1.0	■	■	■				764VS-1.0	■	■	■			
754VS-1.2	■	■	■	■	□	■	764VS-1.2	■	■	■			
754VS-1.5	■	■	■				764VS-1.5	■	■	■			
754VS-2.0	■	■	■				764VS-2.0	■	■	■			
754VS-2.5	■	■	■				764VS-2.5	■	■	■	■	□	■
754VS-3.0	■	■	■				764VS-3.0	■	■	■			

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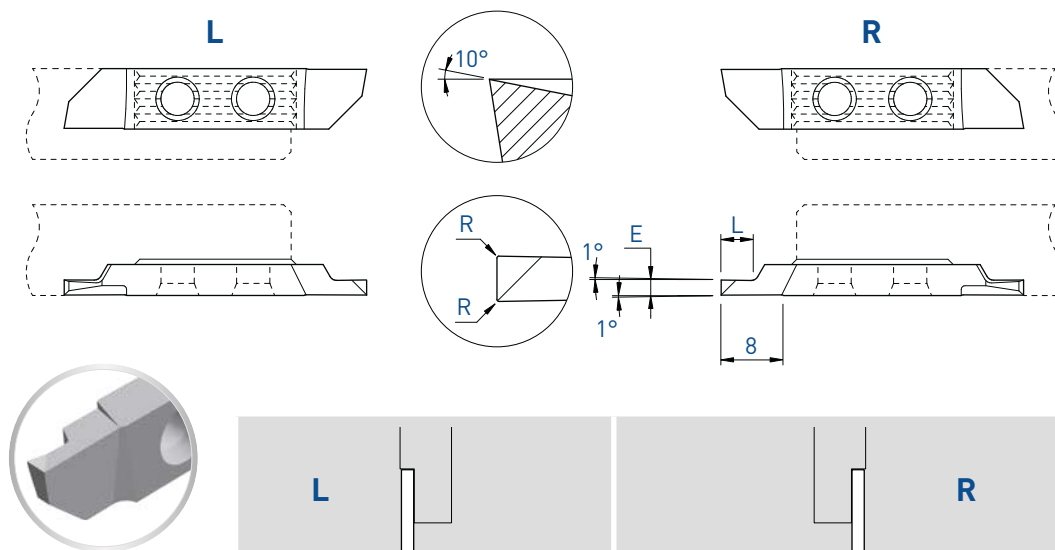
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Fonçage-tournage

Einstechen und drehen

Grooving and turning

754X / 764X



E	L	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiAlX	LoX	TiN	N (µk20)	HTA	HTiN	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	■	■	■	□	■	■		■

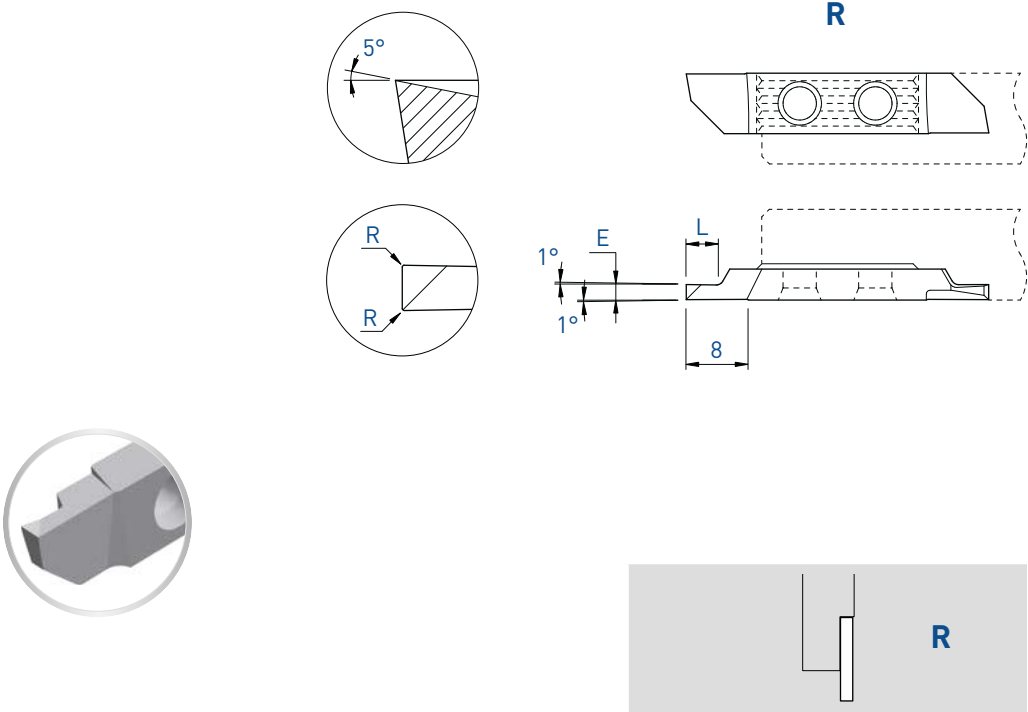
7XX-XX-B



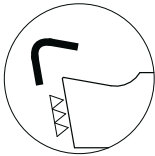
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

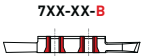
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



E	L	R	Art. N°	TiAlN	TiAlX	LoX	TiN	N [µm20]
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



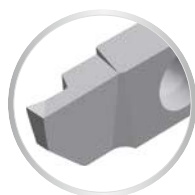
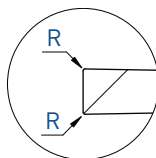
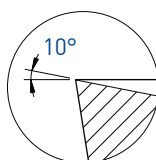
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Fonçage-tournage

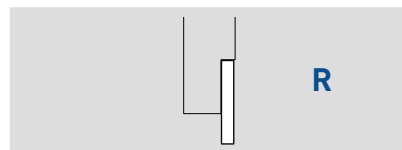
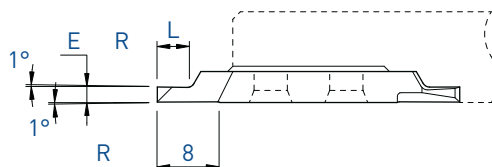
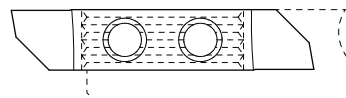
Einstechen und drehen

Grooving and turning

764X10-EP

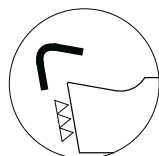


R



R

E	L	R	Art. N°	TiAlN	TiAlX	LoX	TiN	N (μm20)
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

7XX-XX-B

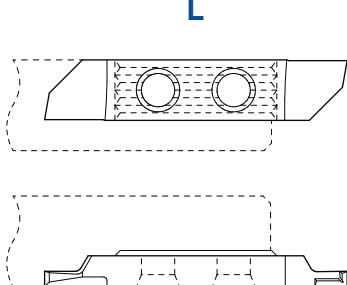


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

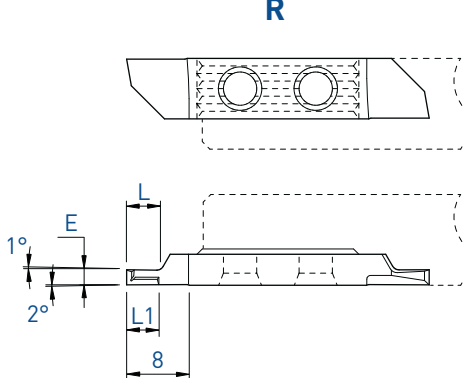
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / je nach Lagerverfügbarkeit / depending on stock availability

L



R



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

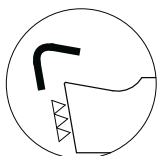
L



R



a	E	L	L1	R	Art. N°	TiAlN	TiN	N (μk20)	HTA	HAS	HTiN	HN (μk10)	Art. N°	TiAlN	TiAlX	TiN	N (μk20)	HTA	HAS	HTiN	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	■	■	■					
25°	4.0	6	6	0.20	-								764ZX10-4.0-R20	■	■	□					
	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					■	■	□	



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

7XX-XX-B



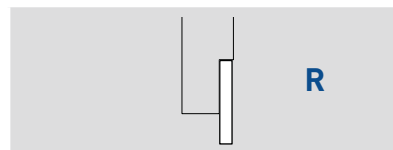
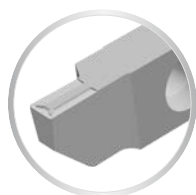
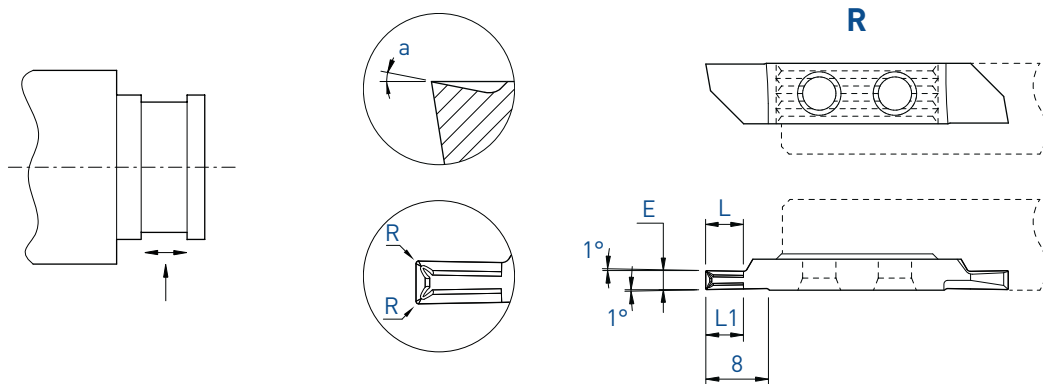
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Fonçage-tournage

Einstecken und drehen

Grooving and turning

764ZXB



a	E	L	L1	R	Art. N°	TiAlN	TiAlX	LoX	TiN	N (μm20)
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	■	■	■	□	

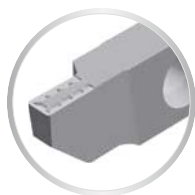
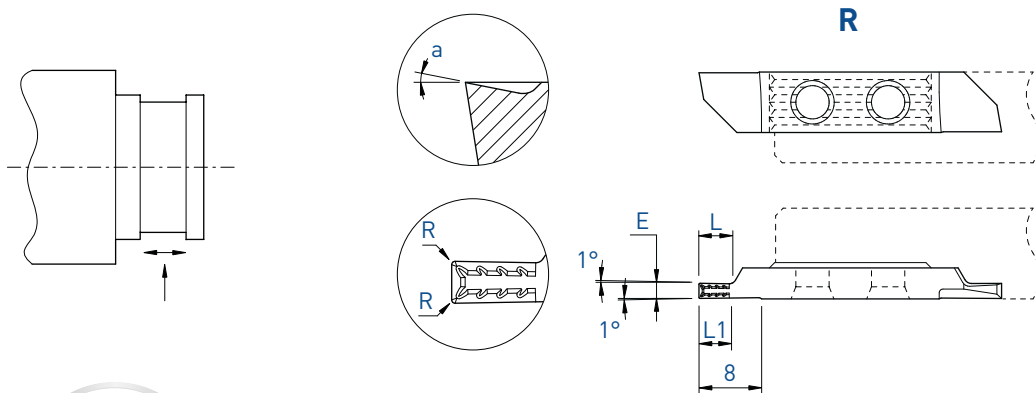
7XX-XX-B



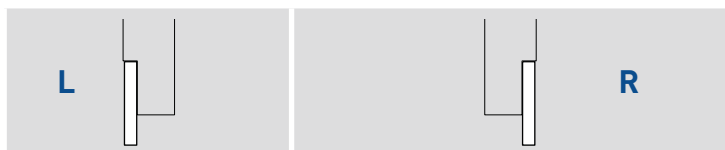
Sur demande pour serrage type B, voir page 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available

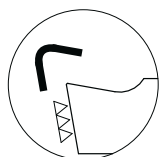
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



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)	Art. N°	TiAlN	TiAlX	LOX	TiN	N (µk20)	HTA	HN (µk10)
10°	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	■	■	■	□			
	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	■	■	■				



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

7XX-XX-B



Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

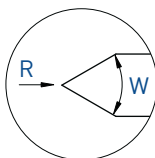
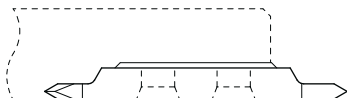
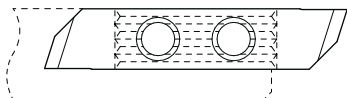
Filetage

Gewinde drehen

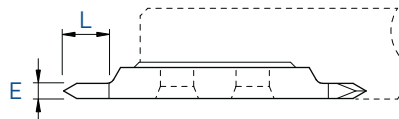
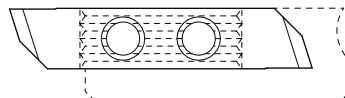
Threading

756 / 766

L



R



L



R



W	E	L	R	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
60°	2.0	6	-	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	-	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	-	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	-	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 1.03
 Wahlweise mit B-Spannsystem, siehe Seite 1.03
 On request for B clamping system, see page 1.03

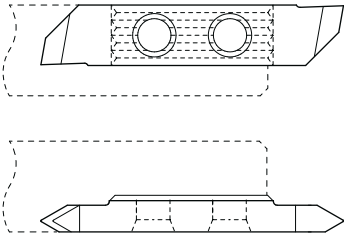
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

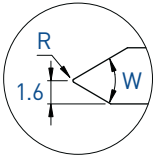
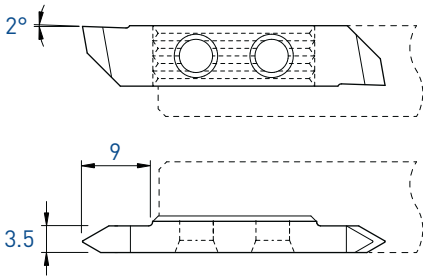
Filetage
Gewinde drehen
Threading

756-AG60° / 766-AG60°
756-G60° / 766-G60°

L



R



Profil partiel
Teilprofil
Partial profile

L

R

			L				R			
W	R	Pas Steigung Pitch P	Art. N°	TiAlN	TiN	N [µk20]	Art. N°	TiAlN	TiN	N [µk20]
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 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

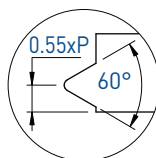
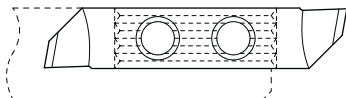
Filetage

Gewinde drehen

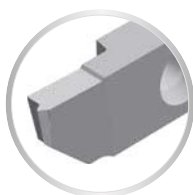
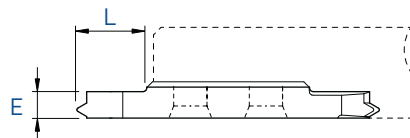
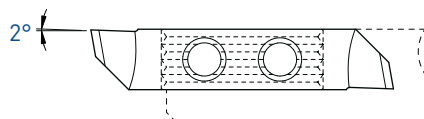
Threading

756-M / 766-M

L



R



Profil complet métrique
Metrisches Vollprofil
Metric full profile

L



R



E	L	Pas Steigung Pitch P	Art. N°	TiAIN	TiN	N (μk20)	Art. N°	TiAIN	TiN	N (μk20)
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 1.65
Für kleinere Steigungen, siehe Seite 1.65
For smaller pitches, see page 1.65

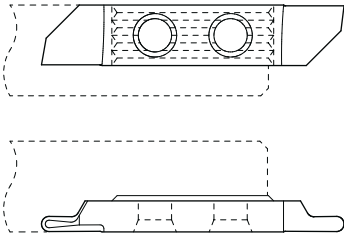
7XX-XX-B



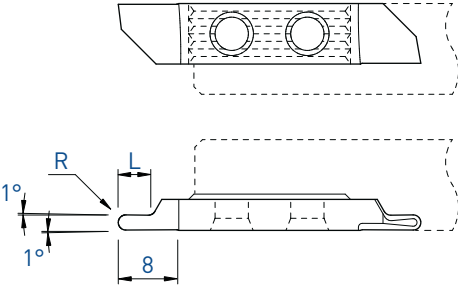
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

L



R



L

R

R	L	Art. N°	TiAlN			Art. N°	TiAlN		
			TiN	N	(μk20)		TiN	N	(μk20)
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	■	■	■

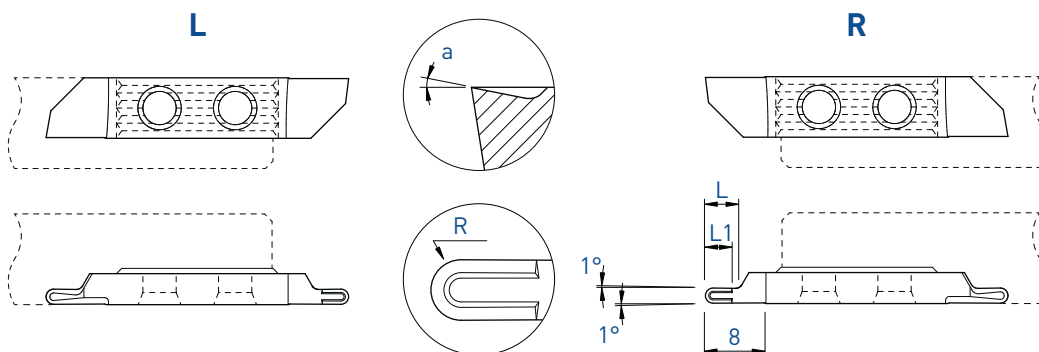
7XX-XX-B



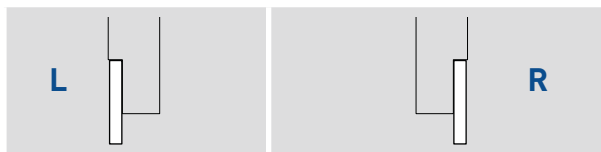
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

Plaquettes à rayon
Radius Wendeplatten
Radius inserts

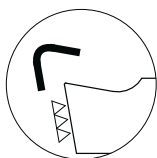
757ZX10 / 767ZX10



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	N (μk20)
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

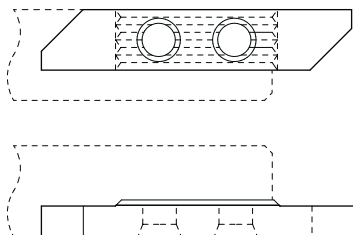
f min: 0.02 mm/U

7XX-XX-B

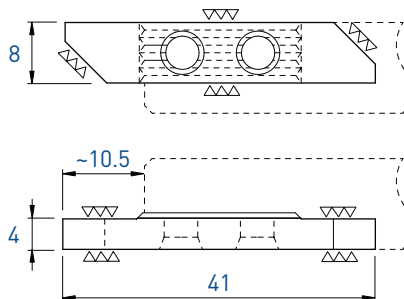


Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

L



R



7XX-XX-B



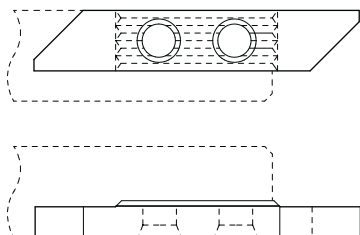
Sur demande pour serrage type B, voir page 1.03
Wahlweise mit B-Spannsystem, siehe Seite 1.03
On request for B clamping system, see page 1.03

L

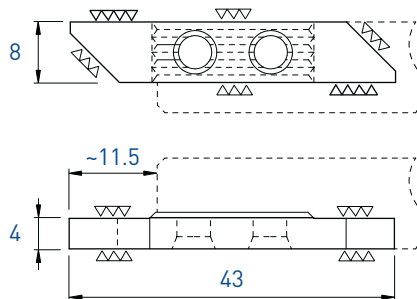
R

Art. N°	N (µk20)	HN (µk10)	Art. N°	N (µk20)	HN (µk10)
751-E	■	■	761-E	■	■

L



R



Face de coupe polie
Polierte Schneidfläche
Polished cutting face

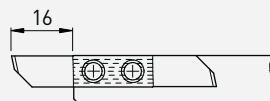
Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)	Art. N°	TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
751-EP	■	■	■	□	□	■	761-EP	■	■	■	■	□	■

■ = disponible / verfügbar / available

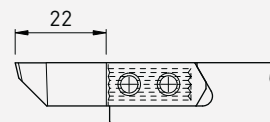
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

770 / 780

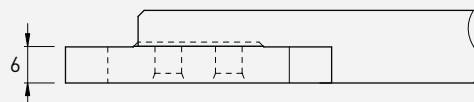
Tronçonnage de grande capacité
Abstechen für grössere Durchmesser
High capacity parting

> **1.132****7050 / 7060**

Tronçonnage de grande capacité
Abstechen für grössere Durchmesser
High capacity parting

> **1.142****W750 / W760**

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

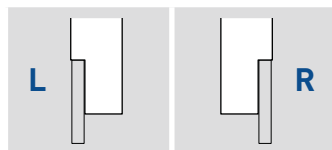
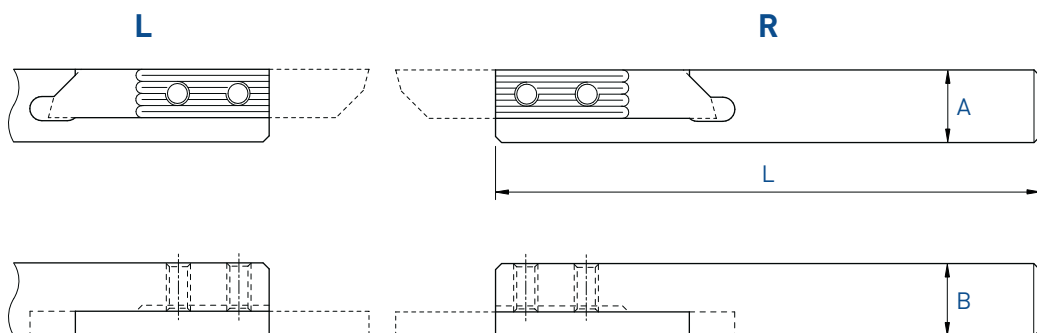
> **1.148**

Porte-outils spécifiques / Spezifische Werkzeughalter / Specific tool holders

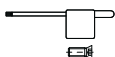
CAPTO C3 / C4 / HSK> **1.152****740Z / 760Z**

Porte-outils pour usinage déporté
Halter für versetzte Bearbeitung
Holders for shifted machining

> **1.155****Tornos****DECO 7/10 - EvoDECO 10****R**> **1.156****DECO 7/10 - EvoDECO 10****L**> **1.158****DECO 13 - EvoDECO 16
DECO 20/26 - EvoDECO 20/32**> **1.160****MultiSwiss 6x16**> **1.162****AS14 / SAS16**> **1.163****Schütte**> **1.164**



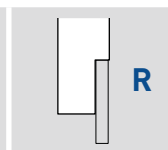
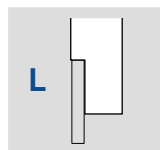
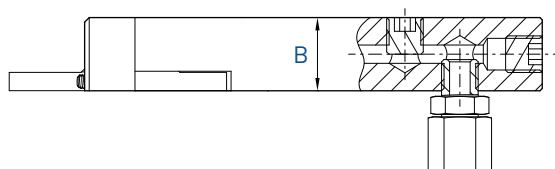
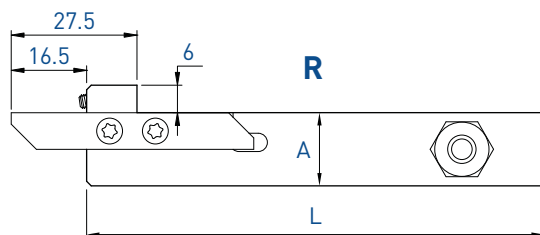
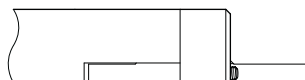
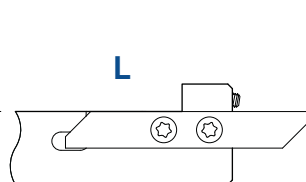
A x B	L	Serrage Spannsystem Clamping	Art. N°	Art. N°
10 x 10	115	A	770-10	780-10
12 x 12	130	A	770-12	780-12
12 x 12	90	A	770-12-90	780-12-90
12.7 x 12.7	130	A	770-12.7	780-12.7
14 x 14	130	A	770-14	780-14
16 x 16	130	A	770-16	780-16
16 x 16	75	A	770-16-75	780-16-75
20 x 20	120	A	770-20	780-20
25 x 25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



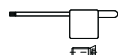
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

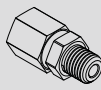
770-JET / 780-JET

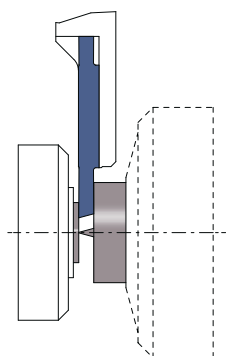
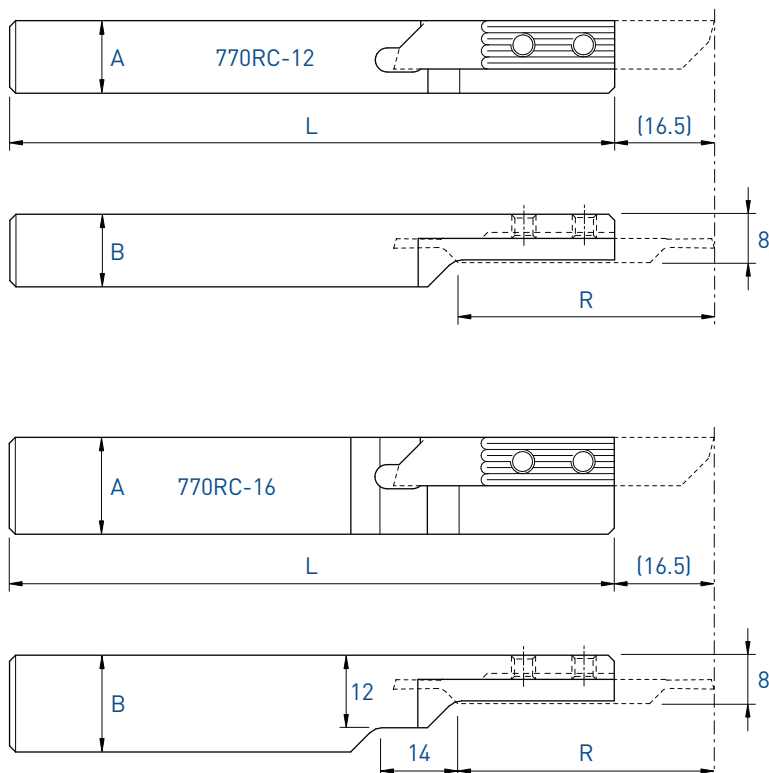


A x B	L	Serrage Spannsystem Clamping	Art. N°	Art. N°
16 x 16	100	A	770-16-JET	780-16-JET



Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n)
 und Schlüssel geliefert.
 Screw(s) and key are included with each
 tool holder.

Pièces de rechange Ersatzteile Spare parts			Buse Düse Nozzle 
	Art. N°	Art. N°	Art. N°
770-JET / 780-JET	J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5



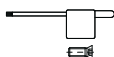
Utiliser des plaquettes type 771R
WSP Typ 771R verwenden
Use inserts type 771R

Voir pages 1.137 - 1.140
Siehe Seiten 1.137 - 1.140
See pages 1.137 - 1.140

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

A x B	L	R	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 vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

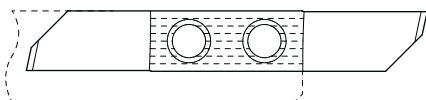
Tronçonnage

Abstechen

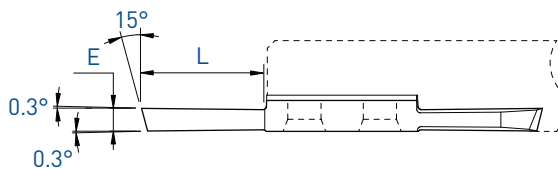
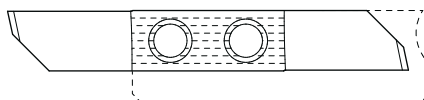
Parting off

771 / 781

L



R



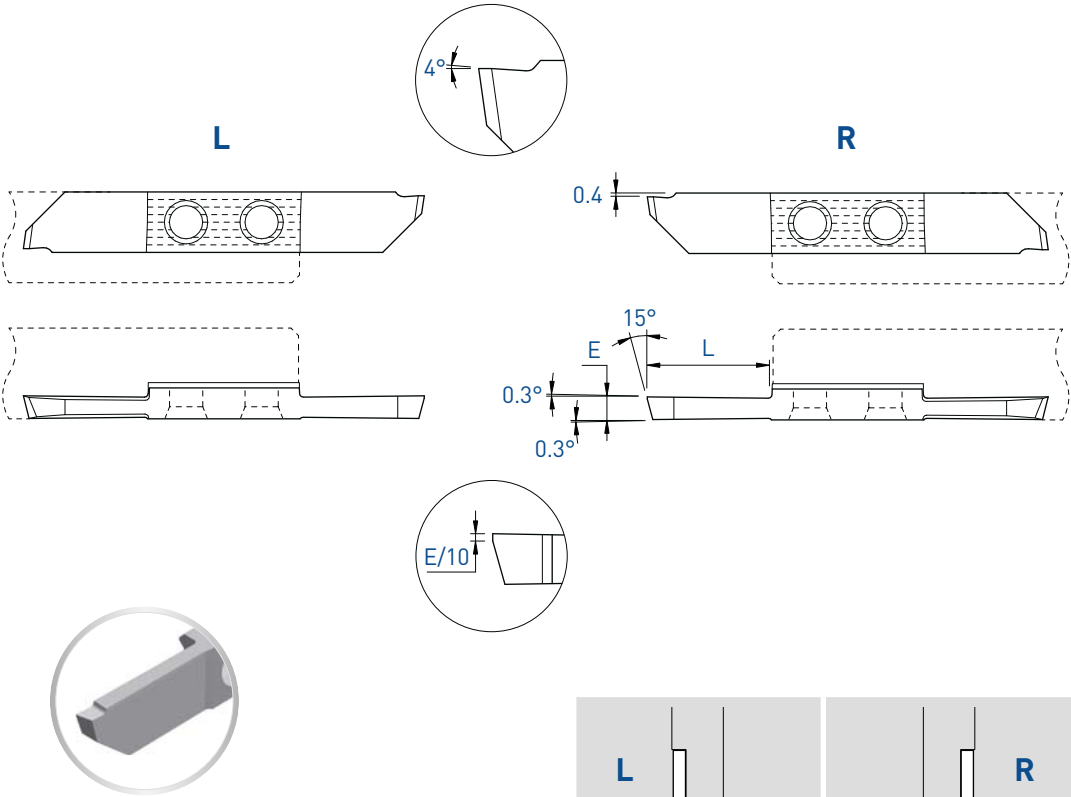
L

R

E	L	Art. N°	TiAlN TiN N (µk20)			Art. N°	TiAlN TiN N (µk20)		
			TiAlN	TiN	N (µk20)		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	■	■	■

Tronçonnage
Abstechen
Parting off

771XF / 781XF



		L				R			
		Art. N°				Art. N°			
		TiAlN				TiAlN			
		TiN				TiN			
		N (µk20)				N (µk20)			
E	L	Art. N°				Art. N°			
2.0	16	-				771XF-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			

Tronçonnage

Abstechen

Parting off

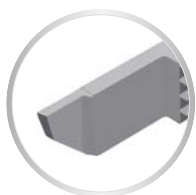
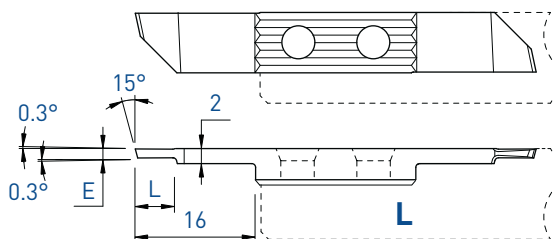
Coupe déportée

Versetztes Schneiden

Cut off line

781L / 771R

Cut R

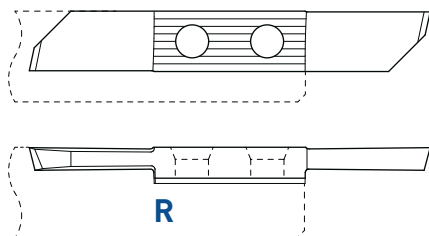


L (R)

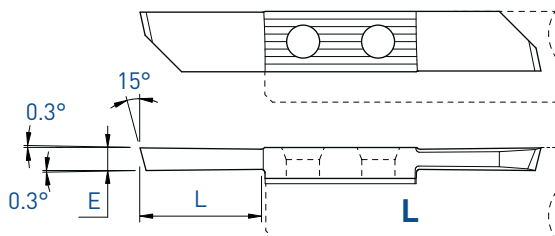
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

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

E	L	Art. N°	TiAlN	TiN	N (µk20)
2.0	16	781L-2.0	■	■	■
2.5	16	781L-2.5	■	■	■
3.0	16	781L-3.0	■	■	■
3.5	16	781L-3.5	■	■	■

L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

Art. N°	TiAlN	TiN	N (µk20)
771R-2.0	■	■	■
771R-2.5	■	■	■
771R-3.0	■	■	■
771R-3.5	■	■	■

■ = disponible / verfügbar / available

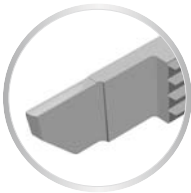
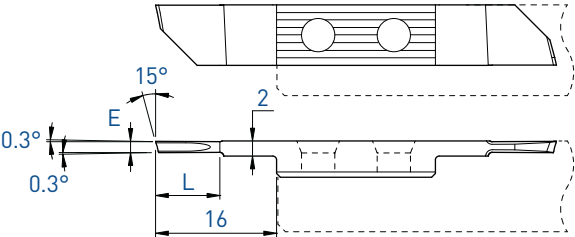
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

771RU

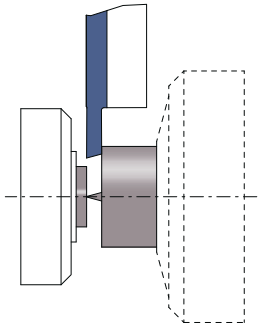
Cut R



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	■	□	■



Tronçonnage

Abstechen

Parting off

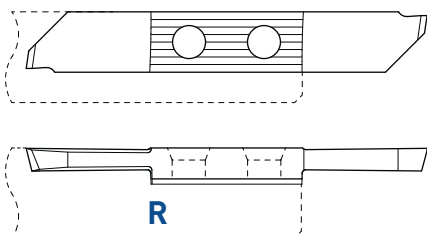
Coupe déportée

Versetztes Schneiden

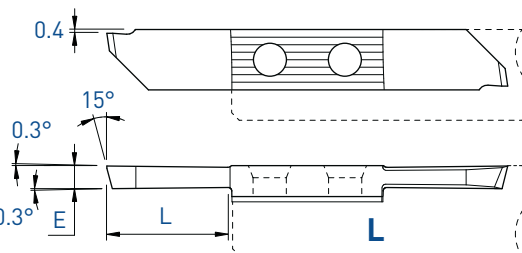
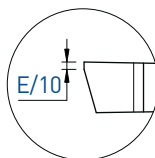
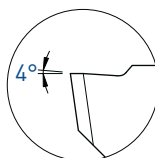
Cut off line

781LXF / 771RXF

Cut L



Cut R



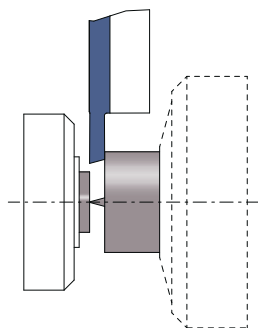
R (L)

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	■	■	■

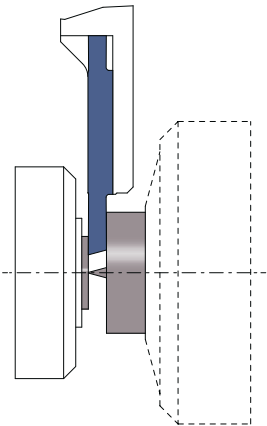
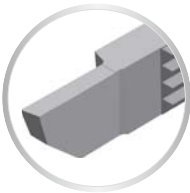
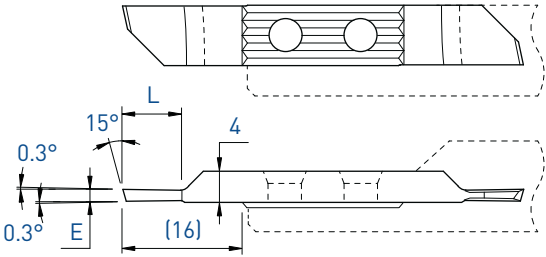


Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

771RD

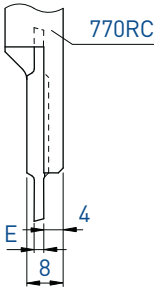
Cut R



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	■	■	■



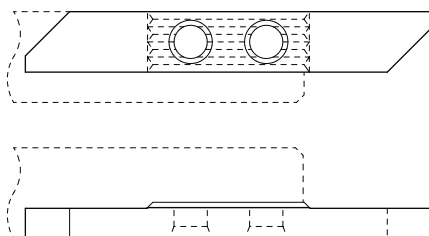
Plaquettes ébauches

WSP-Rohlinge

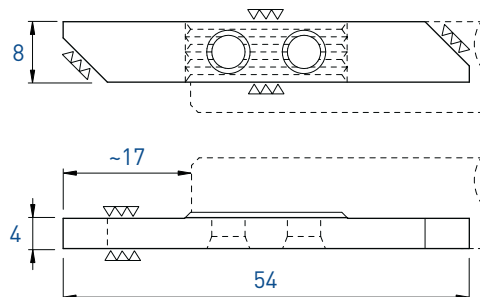
Blank inserts

771-E / 781-E

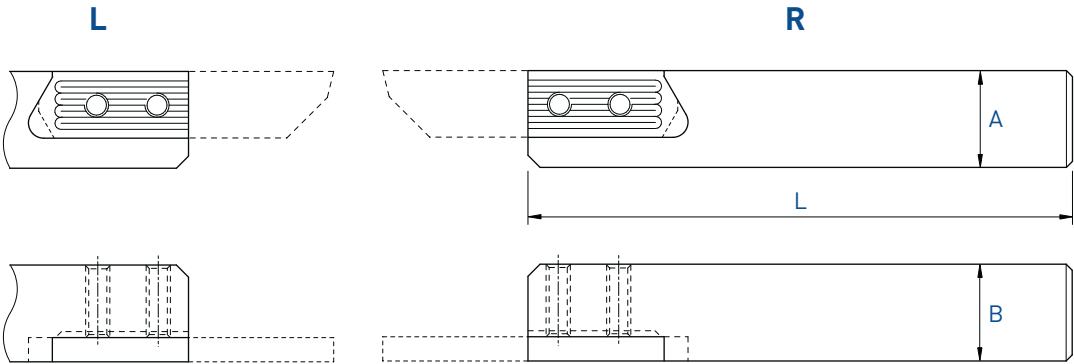
L

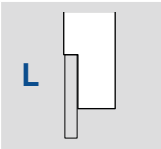
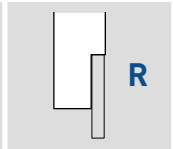


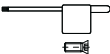
R



L		R	
Art. N°	■ $\geq$ (µk20)	Art. N°	■ $\geq$ (µk20)
771-E	■	781-E	■



			 	
A x B	L	Serrage Spannsystem Clamping	Art. N°	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



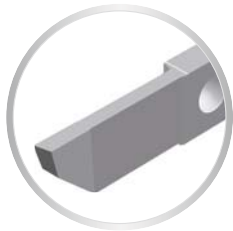
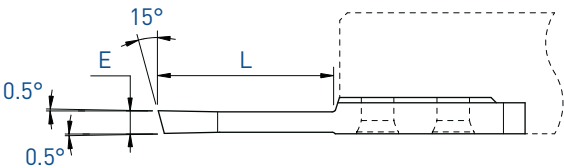
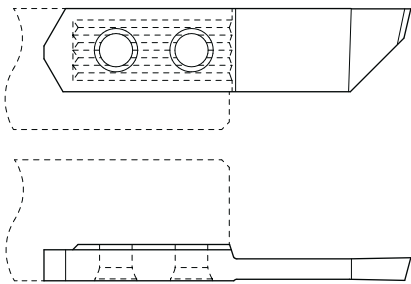
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Tronçonnage
Abstechen
Parting off

7051 / 7061

L

R



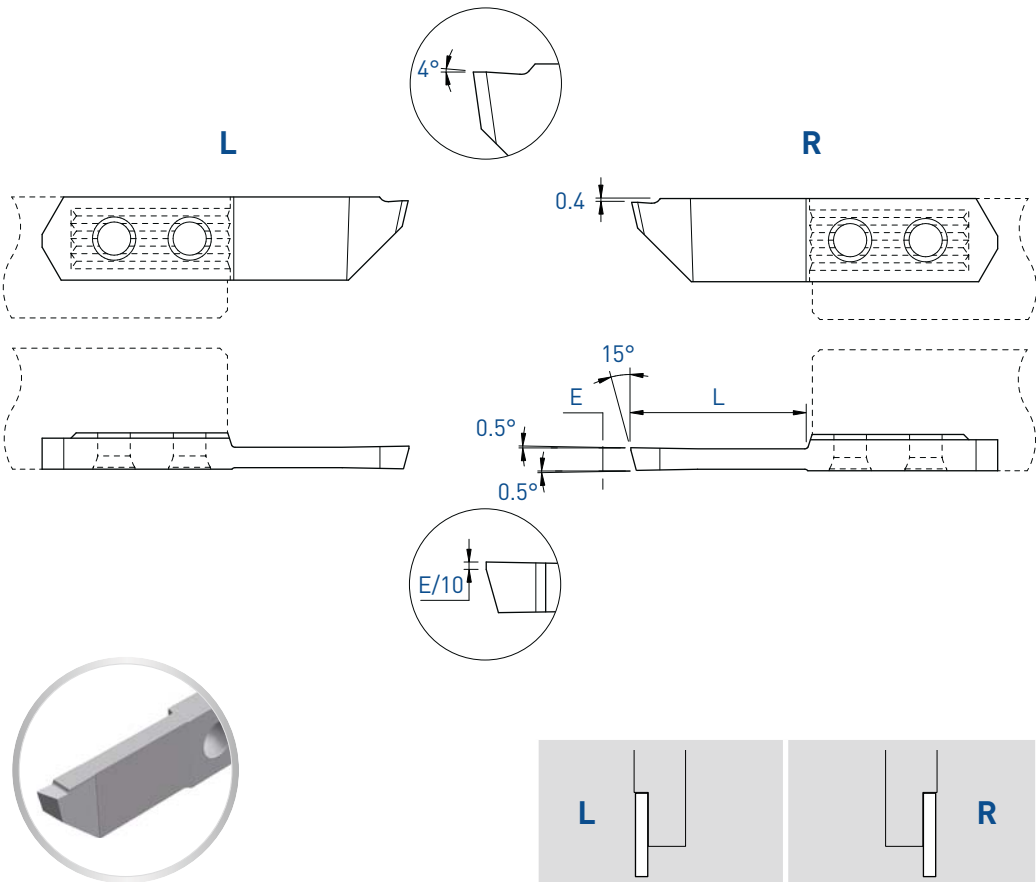
L

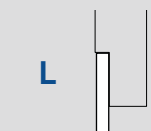
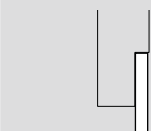
R

E	L	Art. N°	TiAlN TiN N [µk20]			Art. N°	TiAlN TiN N [µk20]		
			TiAlN	TiN	N [µk20]		TiAlN	TiN	N [µk20]
2.5	22	-				7061-2.5	■	■	■
3.0	22	7051-3.0	■	■	■	7061-3.0	■	■	■
3.5	22	-				7061-3.5	■	■	■

Tronçonnage
Abstechen
Parting off

7051XF / 7061XF



									
E	L	Art. N°	TiAlN	TiN	N (µk20)	Art. N°	TiAlN	TiN	N (µk20)
3.0	22	7051XF-3.0	■	■	■	7061XF-3.0	■	■	■

Tronçonnage

Abstechen

Parting off

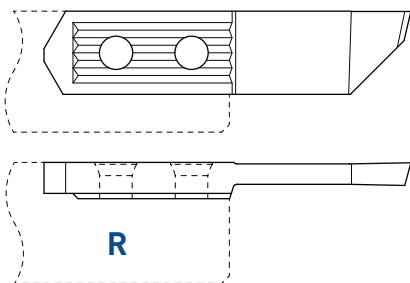
Coupe déportée

Versetztsschneiden

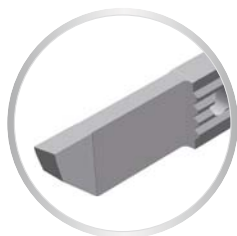
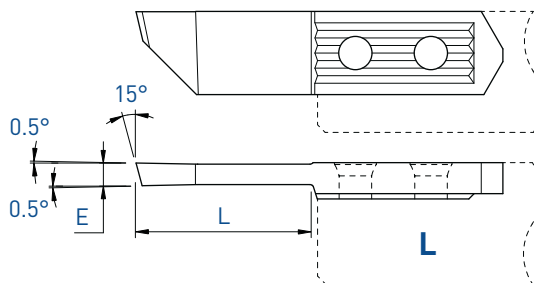
Cut off line

7061L / 7051R

Cut L



Cut R



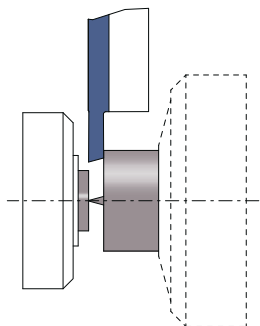
R (L)

Coupe à gauche déportée
Versetztsschneiden
Left cut off line

L (R)

Coupe à droite déportée
Versetztsschneiden
Right cut off line

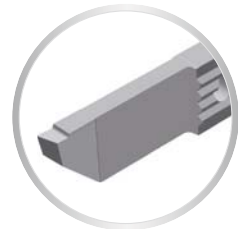
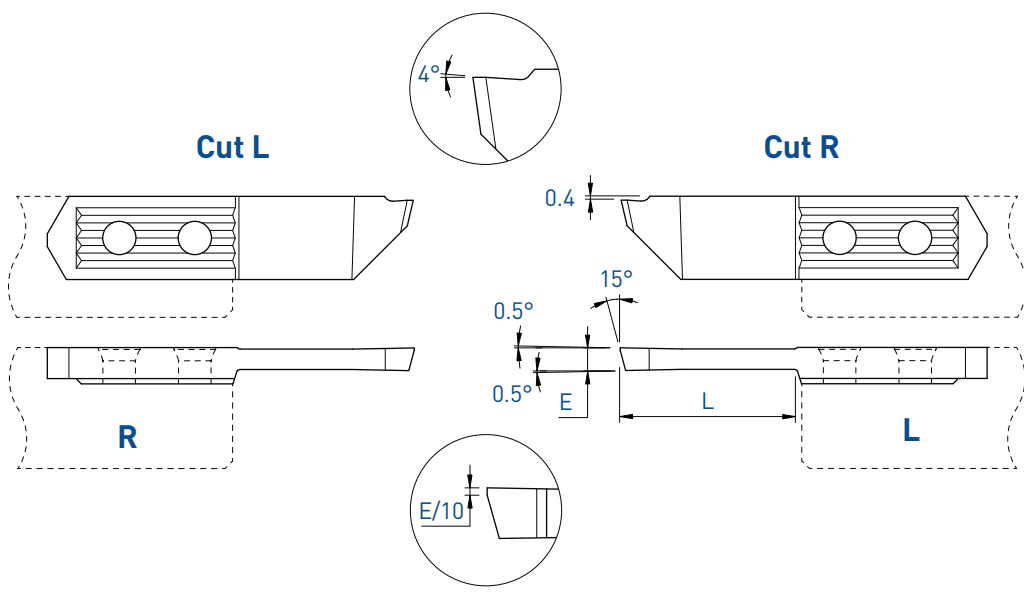
E	L	Art. N°	TiAlN	TiN	N (µk20)	Art. N°	TiAlN	TiN	N (µk20)
2.5	22	-				7051R-2.5	■	■	■
3.0	22	7061L-3.0	■	■	■	7051R-3.0	■	■	■
3.5	22	-				7051R-3.5	■	■	■



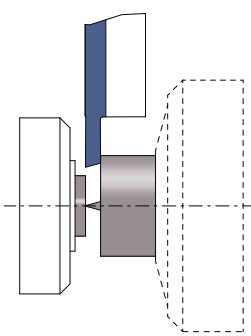
Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

7061LXF / 7051RXF



R (L)				L (R)			
Coupe à gauche déportée Versetztes Linksschneiden Left cut off line				Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line			
E	L	Art. N°	TiAlN TiN N (µk20)	Art. N°	TiAlN TiN N (µk20)		
3.0	22	7061LXF-3.0	■ ■ ■	7051RXF-3.0	■ ■ ■		



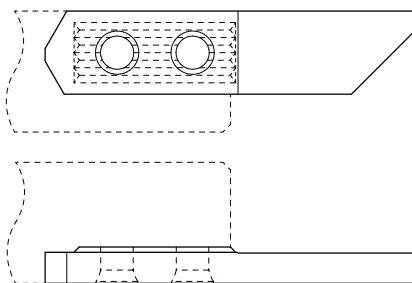
Plaquettes ébauches

WSP-Rohlinge

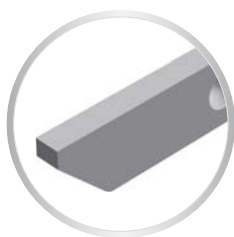
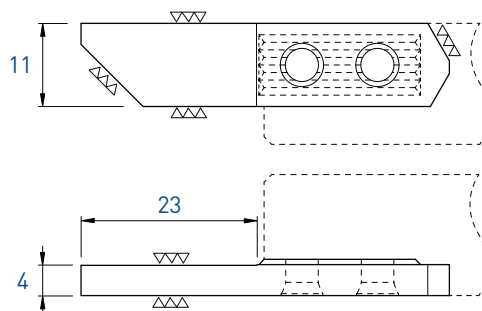
Blank inserts

7051-E / 7061-E

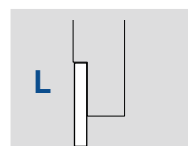
L



R



L



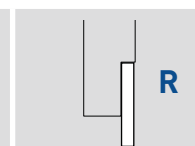
Art. N°

7051-E

N

■

R



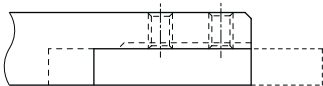
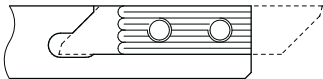
Art. N°

7061-E

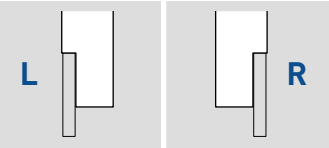
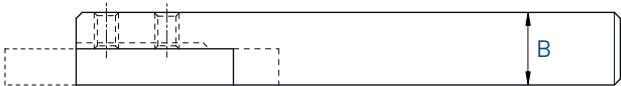
N

■

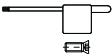
L



R



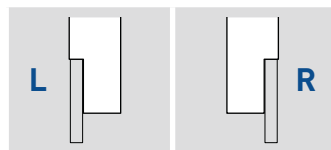
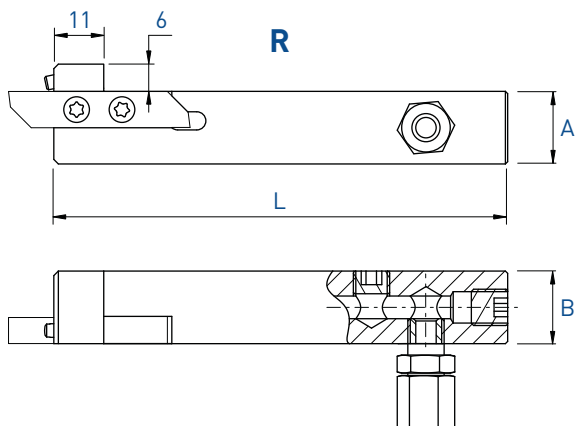
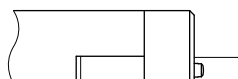
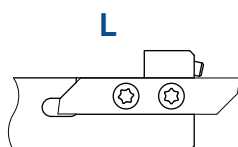
A x B	L	Serrage Spannsystem Clamping	Art. N°	Art. N°
12 x 12	130	A	W750-12	W760-12
16 x 16	130	A	W750-16	W760-16
20 x 20	120	A	W750-20	W760-20



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
 Halter mit integrierter Kühlmittelzufuhr
 Holders with integrated coolant supply

W750-JET / W760-JET



A x B	L	Serrage Spannsystem Clamping	Art. N°	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 vis et clé.
 Jeder Halter wird mit Spannschraube(n)
 und Schlüssel geliefert.
 Screw(s) and key are included with each
 tool holder.

Pièces de rechange Ersatzteile Spare parts	Art. N°	Art. N°	Art. N°
	J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5

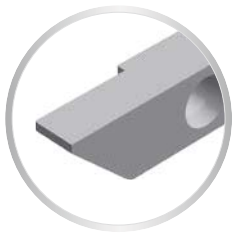
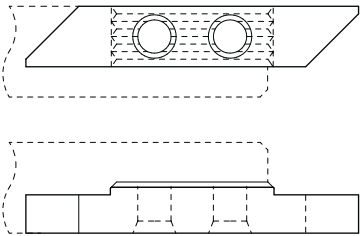
Buse
Düse
Nozzle



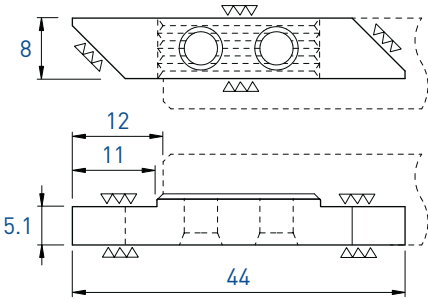
Plaquettes ébauches
WSP-Rohlinge
Blank inserts

W751-E5 / W761-E5
W751-EP5 / W761-EP5

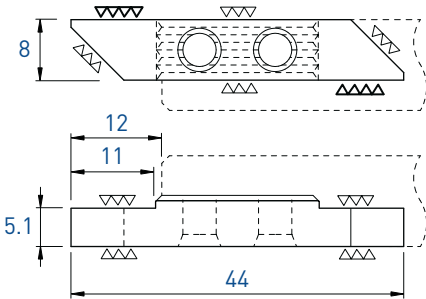
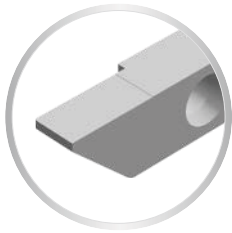
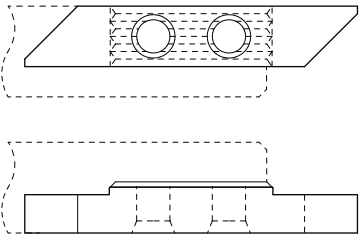
L



R



L		R	
Art. N°	N (µk20)	Art. N°	N (µk20)
W751-E5	■	W761-E5	■



L		R	
Art. N°	N (µk20)	Art. N°	N (µk20)
W751-EP5	■	W761-EP5	■

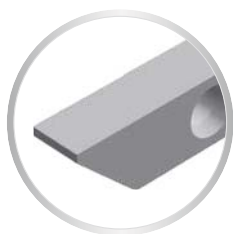
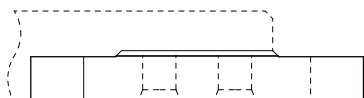
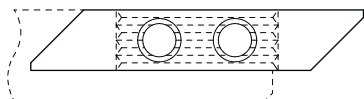
Plaquettes ébauches

WSP-Rohlinge

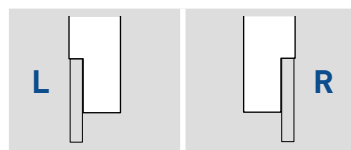
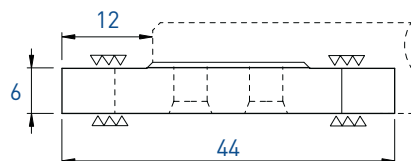
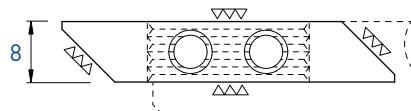
Blank inserts

W751-E6 / W761-E6
W751-EP6 / W761-EP6

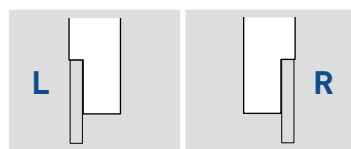
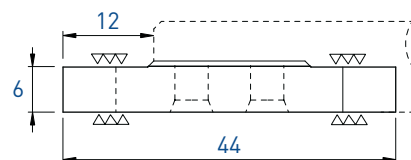
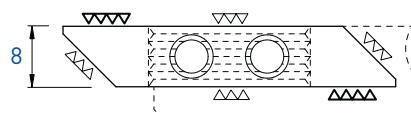
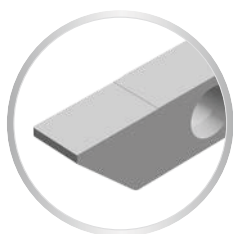
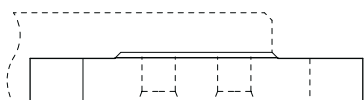
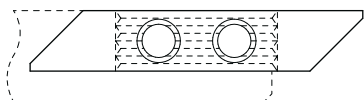
L



R



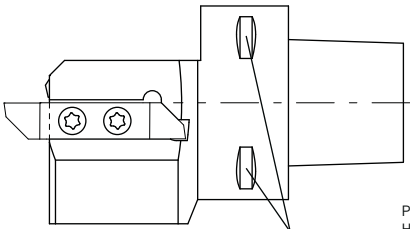
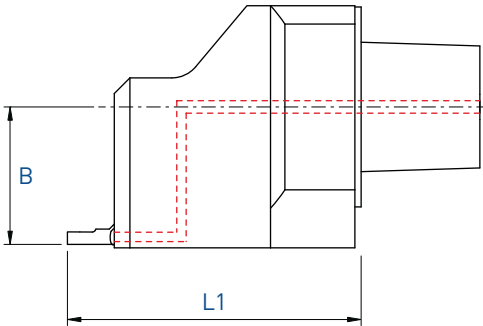
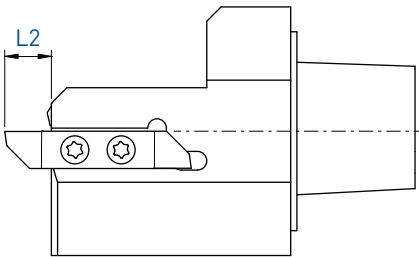
Art. N°	N (μk20)	Art. N°	N (μk20)
W751-E6	■	W761-E6	■



Art. N°	N (μk20)	Art. N°	N (μk20)
W751-EP6	■	W761-EP6	■

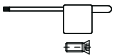
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

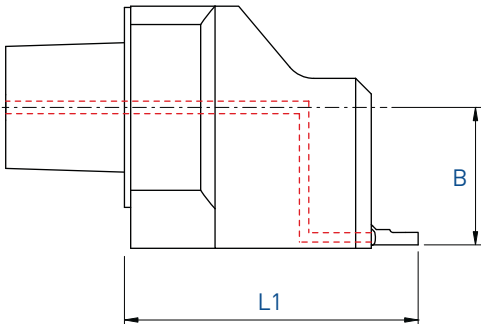
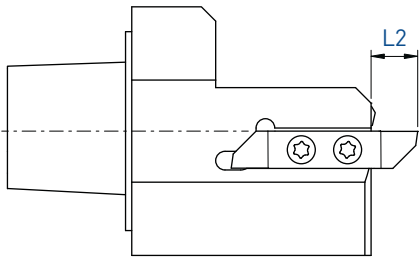


Porte-outils pour changeur automatique sur demande.
Halter für Werkzeugwechsler auf Anfrage.
Holders for tool changer on request.

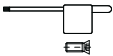
CAPTO type	Plaquettes type WSP Typ Insert type	Pages Seiten Pages	L1	B	L2	Art. N°	Buse Düse Nozzle 
							Art. N°
C3	740	> 1.32	47	22	7.5	C3-740-22047	JJ-M3X6-D1.5
C3	760	> 1.78	47	22	10	C3-760-22047	JJ-M3X6-D1.5
C4	760	> 1.78	62	27	10	C4-760-27062	JJ-M3X6-D1.5



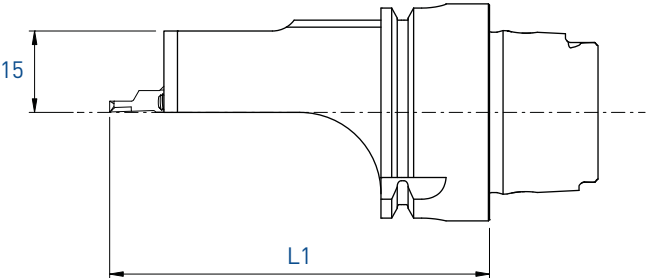
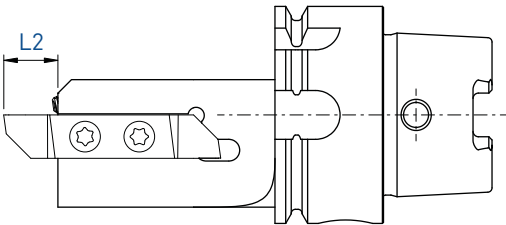
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.



CAPTO type	Plaquettes type WSP Typ Insert type	Pages Seiten Pages	L1	B	L2	Art. N°	Buse Düse Nozzle 
							Art. N°
C4	750	> 1.78	62	27	10	C4-750-27062	JJ-M3X6-D1.5

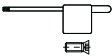


Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.



Utilisable sur toutes les machines avec broches HSK-T ou HSK-A
Auf allen Maschinen mit HSK-T oder HSK-A verwendbar
Applicable on all machines with HSK-T or HSK-A spindle

Plaquettes type WSP Typ Insert type	Pages Seiten Pages	L1	L2	Art. N°	Buse Düse Nozzle 
					Art. N°
740	> 1.32	65	7.5	HSK-T40-740-0065-JET	JJ-M3X6-D1.5
760	> 1.78	70	10	HSK-T40-760-0070-JET	JJ-M3X6-D1.5



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

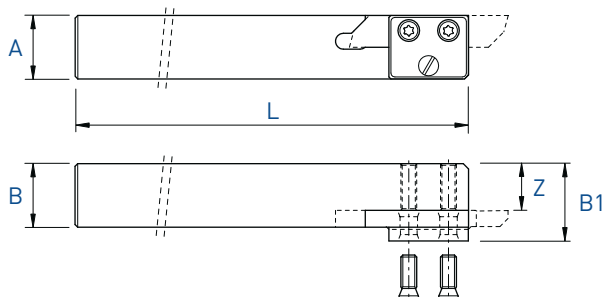
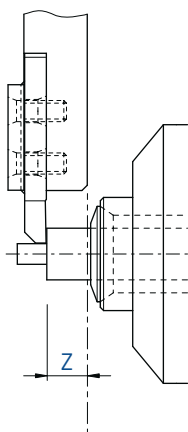
Porte-outils pour usinage déporté

Halter für versetzte Bearbeitung

Holders for shifted machining

R

740Z / 760Z

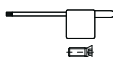


740 Series

A x B	L	Z	B1	Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
12 x 12	130	9.5	14.5	740Z-12	741 - 747	> 1.32
16 x 16	130	13.5	18.5	740Z-16	741 - 747	> 1.32

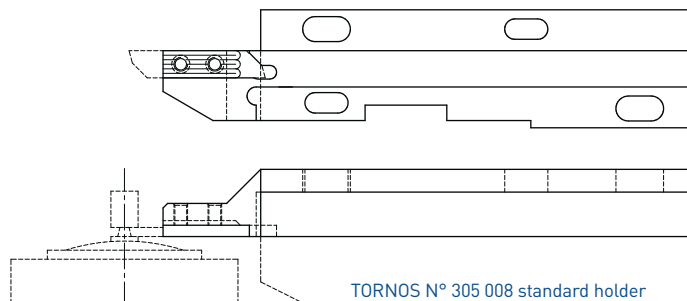
760 Series

A x B	L	Z	B1	Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
12 x 12	130	8	15	760Z-12	761 - 767	> 1.78
16 x 16	130	12	19	760Z-16	761 - 767	> 1.78



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

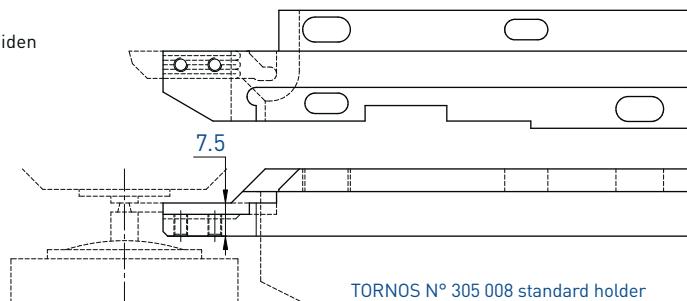
Coupe à droite
Rechtsschneiden
Right hand cut



TORNOS N° 305 008 standard holder

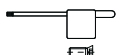
Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
740-DECO10	741 - 747	> 1.32

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line



TORNOS N° 305 008 standard holder

Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
730R-DECO10	731R / 731N	1.39 - 1.45



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils pour machine Tornos

Halter für Tornos Maschine

Holders for Tornos machine

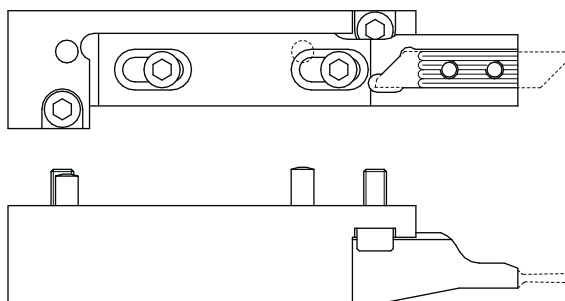
R

DECO 7/10
EvoDECO 10

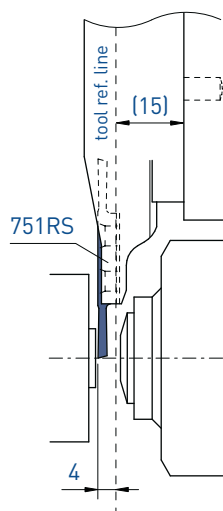
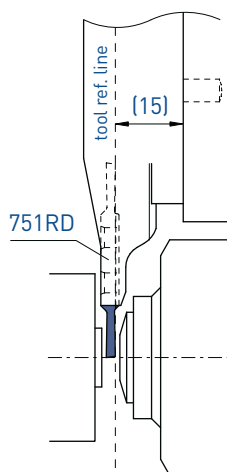
Pour le tronçonnage de petites pièces
Zum Abstechen von kleinen Werkstücken
For small parts parting off



Réglable en longueur
Längseinstellbar
Adjustable length



Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
750R-DECO10	751R / 751N	1.88 - 1.99



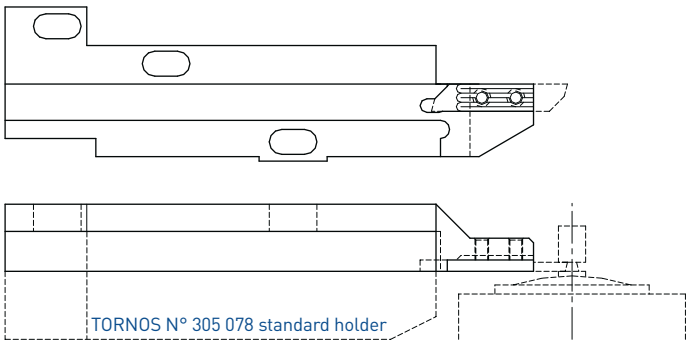
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

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

L

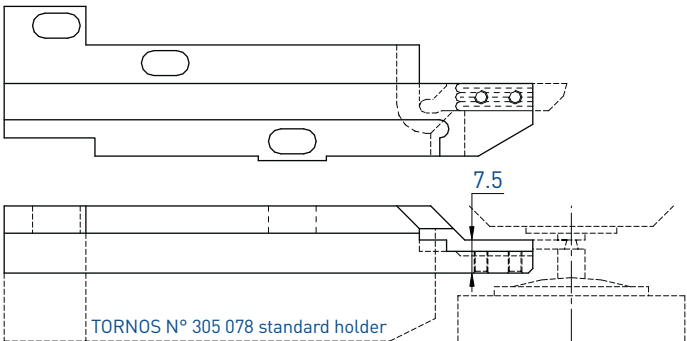
DECO 7/10
EvoDECO 10

Coupe à gauche
Linksschneiden
Left hand cut

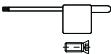


Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
730-DECO10	731 - 737	> 1.32

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	1.39 - 1.45



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraub(e)n und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils pour machine Tornos

Halter für Tornos Maschine

Holders for Tornos machine

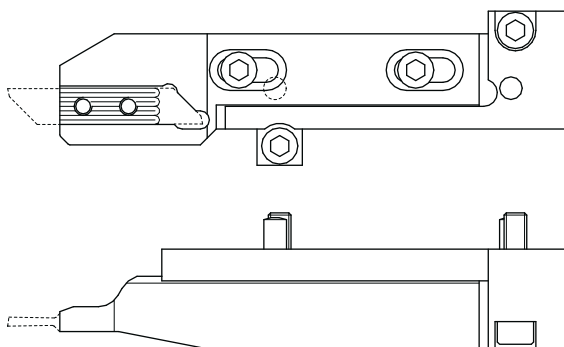
L

DECO 7/10
EvoDECO 10

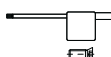
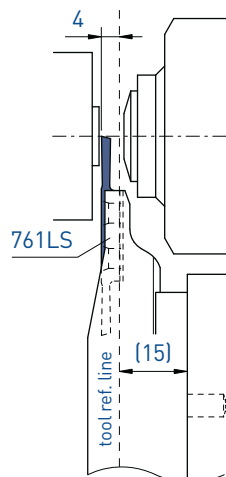
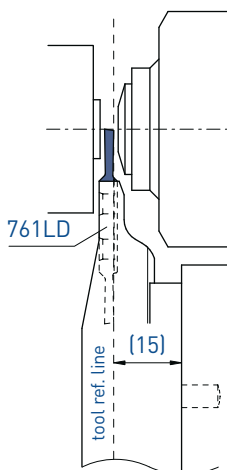
Pour le tronçonnage de petites pièces
Zum Abstechen von kleinen Werkstücken
For small parts parting off



Réglable en longueur
Längseinstellbar
Adjustable length

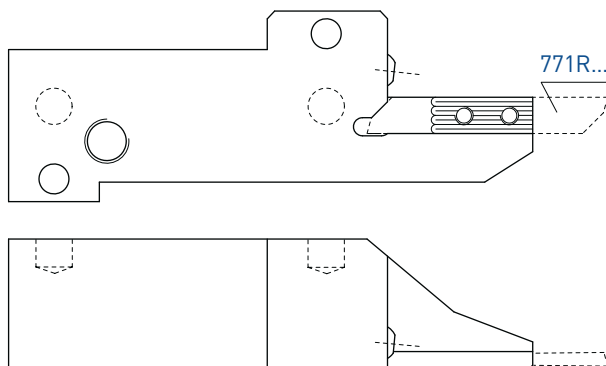


Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
760L-DECO10	761L / 761N	1.88 - 1.98

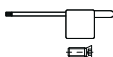
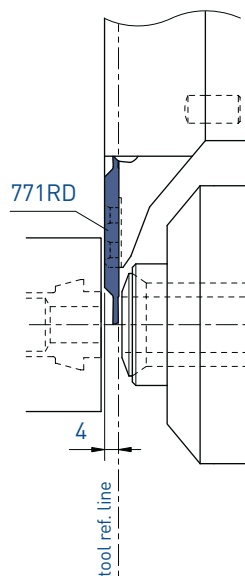
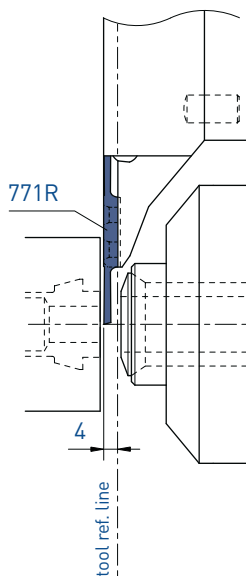


Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

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



Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
770R-DEC013	771R	1.137 - 1.140



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

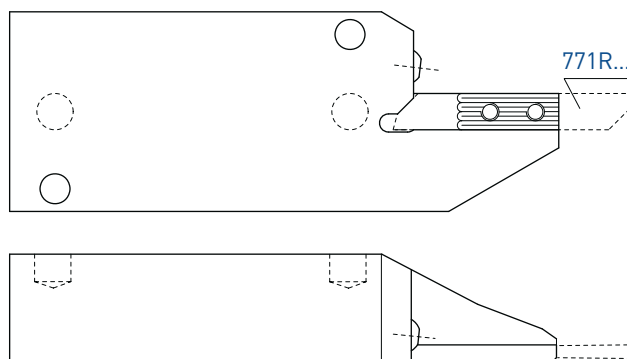
Porte-outils pour machine Tornos

Halter für Tornos Maschine

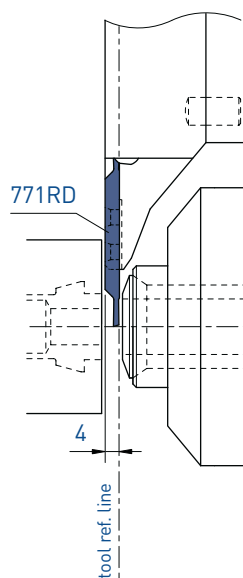
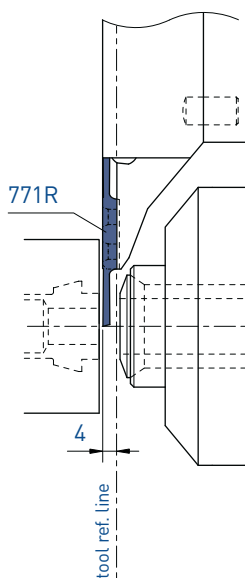
Holders for Tornos machine

DECO 20
EvoDECO 20/32

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



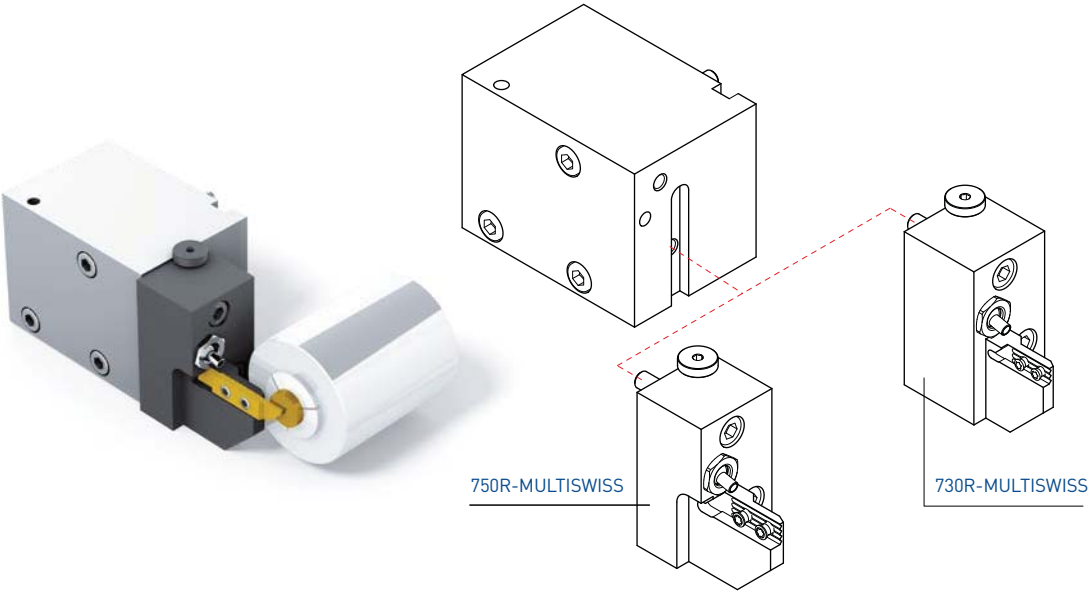
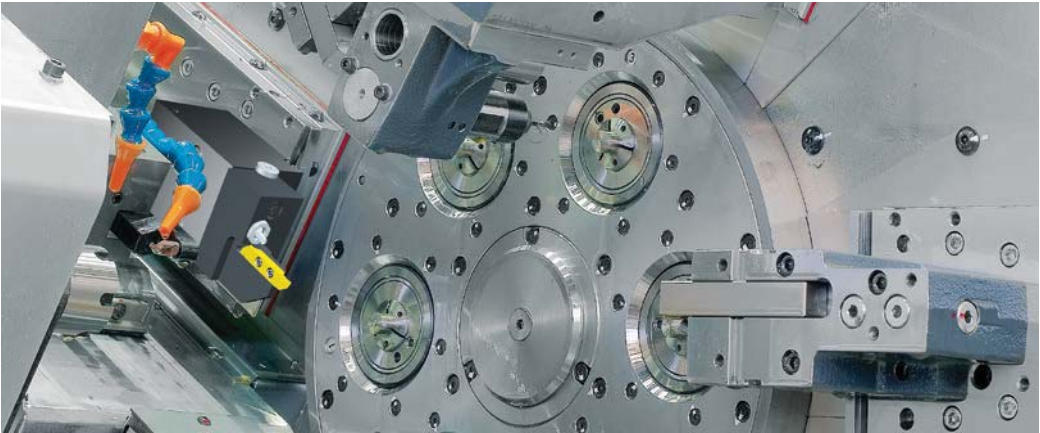
Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
770R-DECO20	771R	1.137 - 1.140



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

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

MultiSwiss 6x16



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und
Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
730R-MULTISWISS	731R / 731N	1.39 - 1.45
750R-MULTISWISS	751R / 751N	1.88 - 1.99

Porte-outils

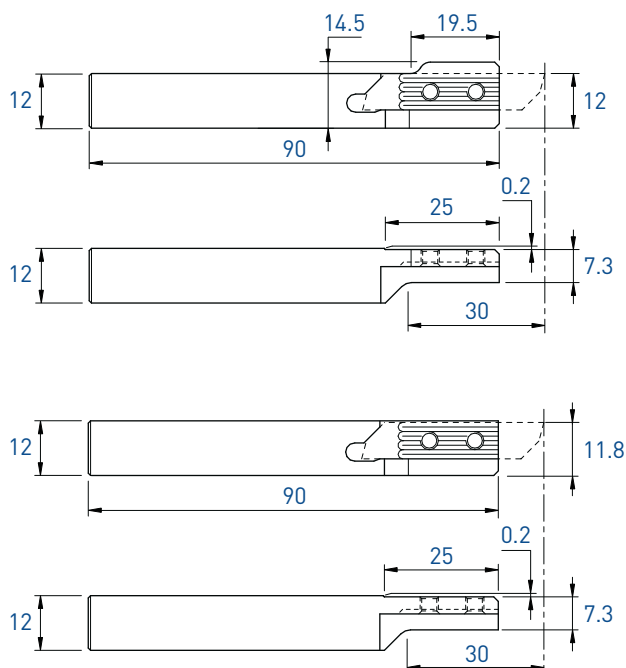
Halter

Holders

Tornos AS 14
SAS 16

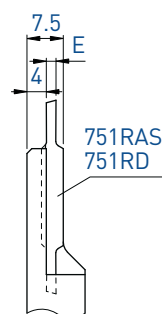
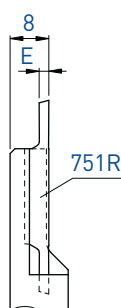
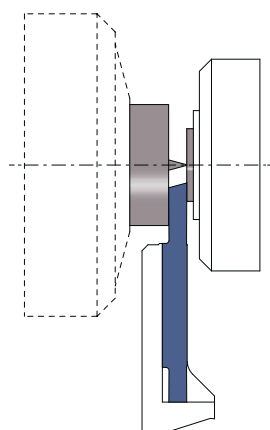
R

750RAS



Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
750RAS-12	751R	1.88 - 1.96

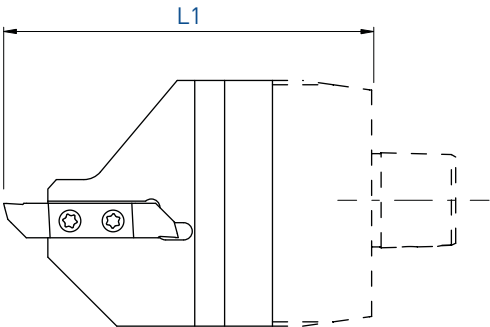
Art. N°	Plaquettes type WSP Typ Inserts type	Pages Seiten Pages
750RAS-12-H11.8	751R	1.88 - 1.96



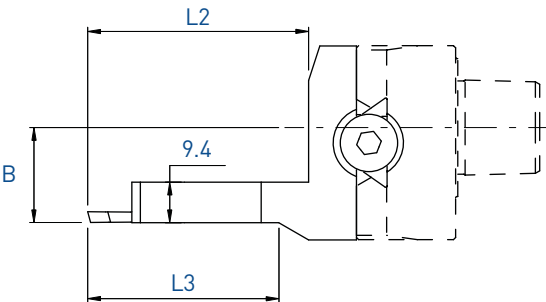
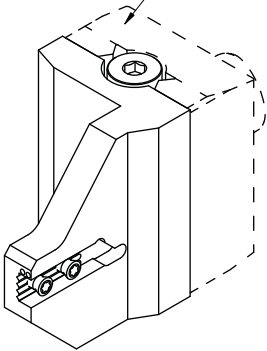
(p. 1.98 - 1.99)

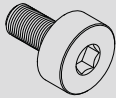


Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.



Compatibility Schütte

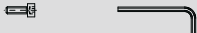


Plaquettes type WSP Typ Inserts type	Pages Seiten Pages	L1	B	L2	L3	Art. N°	Compatibility Schütte	 Art. N°
761-767	> 1.78	86	22	51	44	DT20-760-JET	C3-75870949	V-M6X0.5-Ø14-L18
		83	27.5	48	-	DT30-760-JET	C4-75836783	

Vis et clés de rechange

Ersatzschrauben und Schlüssel

Spare screws and keys

	Porte-outils Halter Holders	Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) 	Serrage type B Spannsystem Typ B Clamping system type B 		
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
	730-10 - 730-20				
	730-DECO10			-	-
	730R-DECO10				
	730RC	V-M3X5.5-T8			
740	740-7 / -JET / -NOVIBRA	V-M3X7-T8	C-T8	-	-
	740-8 / -NOVIBRA - 740-12 / -NOVIBRA			V-M2.5X7.8-T8	C-T8
	740-16 - 740-20				
	740/730-D				
	740-C	V-M3X5.5-T8			
	740-DECO10	V-M3X7-T8		-	-
	740L-DECO10				
	740-Z	V-M3X9-T8			
	Porte-outils Halter Holders	Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) 	Serrage type B Spannsystem Typ B Clamping system type B 		
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	
	750-12.7 - 750-14			V-M3X10-BN11	C-6P-2.5
	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	
	760-12.7 - 760-14			V-M3X10-BN11	C-6P-2.5
	760-16			V-M3X12-BN11	
	760-20			V-M3X16-BN11	
	760LC	V-M4X7.3-T15			
	760L-DECO10	V-M4X5.6-T15			
	760-Z	V-M4X12-T15		-	-

Vis et clés de rechange

Ersatzschrauben und Schlüsseln

Spare screws and keys

	Porte-outils Halter Holders	Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A) 		Serrage type B Spannsystem Typ B Clamping system type B 	
770	770 / -JET 770R	V-M4X9-T15 V-M4X7.3-T15	C-T15	-	-
780	780 / -JET	V-M4X9-T15	C-T15	-	-
7050	7050	V-M4X9-T15	C-T15	-	-
7060	7060	V-M4X9-T15	C-T15	-	-
W	W750 / W760 /-JET	V-M4X11.5-T15	C-T15	-	-
C3	C3-740 C3-760	V-M3X7-T8 V-M4X9-T15	C-T8 C-T15	-	-
C4	C4-750 C4-760	V-M4X9-T15	C-T15	-	-
HSK	HSK-T40-740 HSK-T40-760	V-M3X7-T8 V-M4X9-T15	C-T8 C-T15	-	-
MultiSwiss	730R-MULTISWISS 750R-MULTISWISS	V-M3X5.5-T8 V-M4X7.3-T15	C-T8 C-T15	-	-
Schütte	DT20-760-JET DT30-760-JET	V-M4X9-T15	C-T15	-	-

JET-LINE



DISCOVER JET-LINE IN A BRAND NEW BROCHURE !

Nouveautés présentées dans ce catalogue
Neuheiten dieses Kataloges
New products introduced in this catalogue



		page
711-ESF	711-ESF-XN / XTC / XTAF	2.09
742SF	742SF-15/0-2°-30°-HTAF-RE	2.13
	742SF-15/0-2°-30°-XTAF-RE	2.13
743SF (ébauche) (Schruppen) (roughing)	743SF-120/0-12°-HN / HTAF / HTC	2.14
	743SF-140/0-12°-HN / HTAF / HTC	2.14
	743SF-160/0-12°-HN / HTAF / HTC	2.14
	743SF-180/0-12°-HN / HTAF / HTC	2.14
743SF (finition) (Schlichten) (finishing)	743SF-5/5-30°-0.8-HTAF-RE	2.14
	743SF-5/5-30°-1.0-HTAF-RE	2.14
	743SF-8/0-2°-30°-1.0-HTAF-RE / XTAF-RE	2.15
	743SF-15/0-2°-30°-1.2-HTAF-RE / XTAF-RE	2.15
736SFX3	736SFX3-A60-S0.50-AR-HN / HTAF	2.16
	736SFX3-A60-S0.60-AR-HN / HTAF	2.16
	736SFX3-A60-S0.70-AR-HN / HTAF	2.16
	736SFX3-A60-S0.80-AR-HN / HTAF	2.16
	736SFX3-A60-S0.90-AR-HN / HTAF	2.16
	736SFX3-A60-S1.00-AR-HN / HTAF	2.16
748SF	748SF-E03-A45°-L20-HTAF-RE	2.17
749SF	749SF-E03-A45°-L20-B100-HTAF-RE	2.17
731-ESF	731-ESF-HTC / HTAF / HTAXF / HTiN / HN / XTC / XTAF / XN	2.18
741-ESF	741-ESF-HTC / XTC	2.18
731RDSF 751RDSF	731RDSF-0.8-25°-HN / HTAF	2.20
	751RDSF-0.8-25°-HN / HTAF	2.20

Nuances micro-grain à dureté élevée
Verschleissfeste Feinkornsorten
Wear resistant micro-grain grades

> **2.02**

Pièces de rechange
Ersatzteile
Spare parts

> **2.05**

pour machines à cames
für kurvengesteuerte Maschinen
for cam driven machines

L

pour machines CNC
für CNC-Maschinen
for CNC driven machines

L**R**

 **710**
710SF
710-NOVIBRA > **2.06**

730
730-NOVIBRA **740**
740SF > **2.10**
740-NOVIBRA

 **711SF** > **2.08**

741SF > **2.12**

 **712SF** > **2.08**

742SF > **2.12**

 **713SF** > **2.09**

743SF > **2.14**

736SF **746SF** > **2.16**

748SF > **2.17**

749SF > **2.17**

 **711-ESF** > **2.09**

731-ESF **741-ESF** > **2.18**

Coupe à droite déportée / Versetztes Rechtsschneiden / Right cut off line

 **730RC**
750RC > **2.19**

ML12 > **2.19**

 **731R**
751R > **2.20**

Porte-outils pour Swissnano - MODU-Line

Nuances micro-grain à dureté élevée

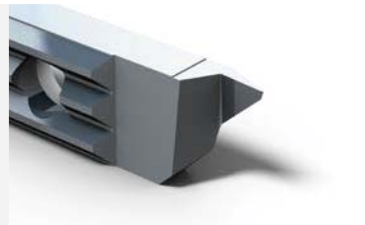
Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

HN (μ K10)

non revêtu
unbeschichtet
uncoated

- nuance micro-grain, bonne résistance à l'usure, recommandée 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



HTC

μ K10 + revêtement PVD
 μ K10 + PVD Beschichtung
 μ K10 + PVD coating

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

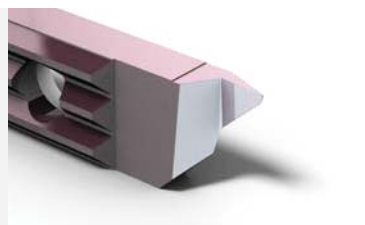


conseillée pour l'usinage de la matière 20AP
für Bearbeitung von 20AP geeignet
suitable for machining of 20AP material

HTC-RE

μ K10 + revêtement PVD
 μ K10 + PVD Beschichtung
 μ K10 + PVD coating

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



conseillée pour l'usinage de la matière 20AP
für Bearbeitung von 20AP geeignet
suitable for machining of 20AP material

HTAF

μ K10 + revêtement PVD
 μ K10 + PVD Beschichtung
 μ K10 + PVD coating

- nuance résistante à l'usure, recommandée pour des opérations d'ébauche et de finition
- verschleissfeste Sorte, für Schruppen und Schlichtbearbeitung empfohlen
- wear resistant grade, recommended for roughing and finishing



conseillée pour l'usinage des matières Finemac et inox 4c27a
für Bearbeitung von Finemac und 4c27a-Rostfreier Stahl geeignet
suitable for machining of Finemac and 4c27a stainless steel

Nuances micro-grain à dureté élevée

Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

HTAF-RE

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

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



recommandée pour les matières Finemac et inox 4c27a
für Bearbeitung von Finemac und 4c27a-Rostfreier Stahl geeignet
suitable for machining of Finemac and 4c27a stainless steel

HTAXF

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

- 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 Schrappen und Schlichtbearbeitung von Materialien Inox 304, 316L, 317L, 904, Phynox
Legierter Stahl enthaltend Chrom-Nickel, Vanadium, Molybdän...
- complementary grade, wear and temperature resistant for roughing and finishing of following materials: Inox 304, 316L, 317L, 904, Phynox
Alloy steel containing Chrome-nickel, Vanadium, Molybdenum...



HTAXF-RE

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

- 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



HTiN

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

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



Nuances micro-grain à dureté élevée

Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

XN (μ K01)

non revêtu
unbeschichtet
uncoated

- nuance micro-grain très résistante à l'usure, recommandée pour des opérations d'ébauche et de finition pour des matières ou usinages nécessitant aucun revêtement
- sehr verschleissfeste Sorte, für Schrappen 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



XTC

μ K01 + revêtement PVD
 μ K01 + PVD Beschichtung
 μ K01 + PVD coating

- 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, low friction ratio, recommended for finishing



XTAF

μ K01 + revêtement PVD
 μ K01 + PVD Beschichtung
 μ K01 + PVD coating

- 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



XTAF-RE

μ K01 + revêtement PVD
 μ K01 + PVD Beschichtung
 μ K01 + PVD coating

- nuance identique à XTAF 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



Nuances micro-grain à dureté élevée

Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

XTAXF

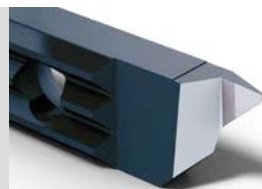
μK01 + revêtement PVD
μK01 + PVD Beschichtung
μK01 + PVD coating

- 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 verschleissfest 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...

**XTAXF-RE**

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

- nuance identique à XTAXF 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



Pièces de rechange

Ersatzteile

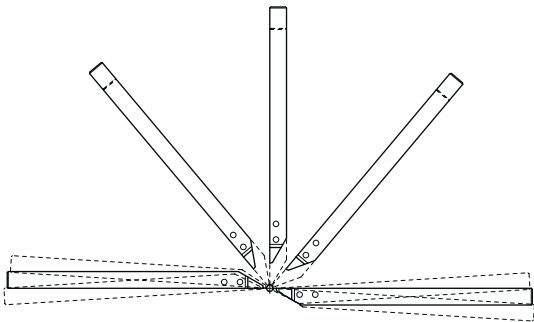
Spare parts

	Porte-outils Halter Holders	Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A)		Serrage type B Spannsystem Typ B Clamping system type B	
					
710	710-6 / - NOVIBRA	V-M2.5X5.8-T8	C-T8	-	-
	710-7 / - NOVIBRA / - SF	V-M2.5X6.5-T8			
	710-8 / - NOVIBRA / -SF	V-M2.5X7.8-T8			
	710-10 - 710-12				
730	730-7 / - NOVIBRA	V-M3X7-T8	C-T8	-	-
	730-8 / - NOVIBRA			V-M2.5X7.8-T8	C-T8
	730-10 - 730-12			-	-
740	740-7 /-NOVIBRA /-SF	V-M3X7-T8	C-T8	-	-
	740-8 /-NOVIBRA /-SF - 740-12 / -NOVIBRA / - SF			V-M2.5X7.8-T8	C-T8

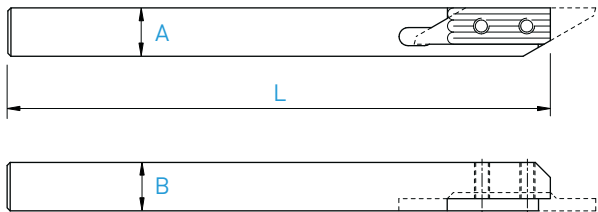
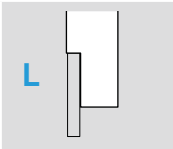
Porte-outils
Halter
Holders

L

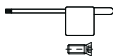
710



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



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

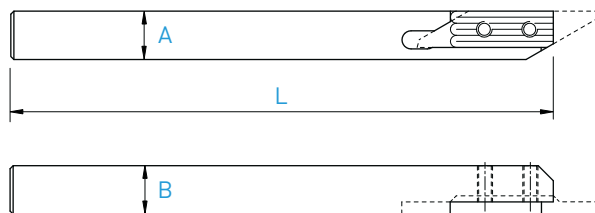
Porte-outils

Halter

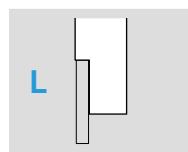
Holders

L

710-SF



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

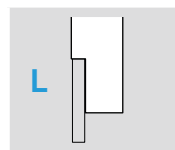
Porte-outils en métal lourd anti-vibratoire

Schwingungsdämpfender Schwermetallhalter

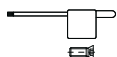
Low vibration heavy metal holders

L

710-NOVIBRA



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

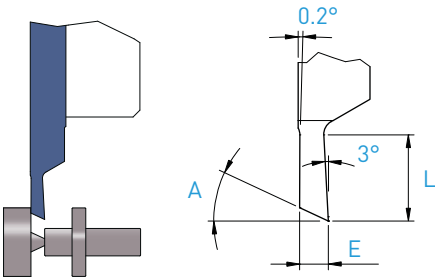


Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Plaquettes d'horlogerie pour machines à cames
Uhrenindustrie-WSP für kurvengesteuerte Maschinen
Watch industry inserts for cam driven machines

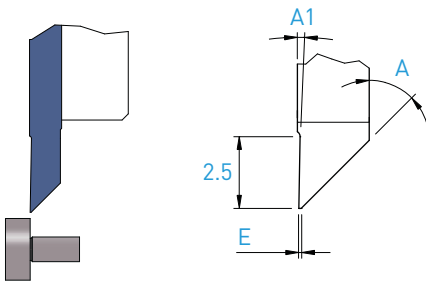
L

711SF / 712SF



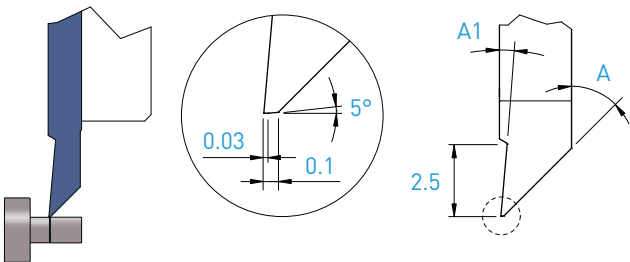
Tronçonnage
Abstechen
Parting off

E	L	A	Art. N°	HTC	HTC-RE	HTAF	HTiN	HN (µK10)
0.8	3.0	25°	711SF-0.8-25°	■	■	■	■	■
1.0	3.0	25°	711SF-1.0-25°	■	□	■	□	■



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

E	A	A1	Art. N°	HTC	HTC-RE	HTAF	HTiN	HN (µK10)
0.03	45°	3°	712SF-3/3-45°	■	□	■	□	■
0.08	45°	1°	712SF-8/8-45°	■	■	■	□	■



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

A	A1	Art. N°	HTC	HTC-RE	HTAF	HTiN	HN (µK10)
45°	3°	712SF-10/3	■	□	■	■	■

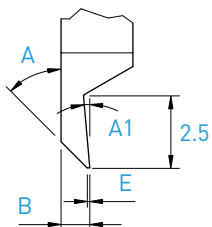
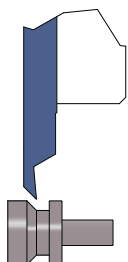
Plaquettes d'horlogerie pour machines à cames

Uhrenindustrie-WSP für kurvengesteuerte Maschinen

Watch industry inserts for cam driven machines

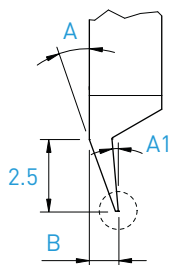
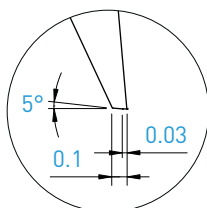
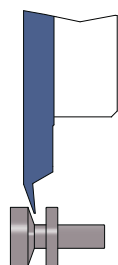
L

713SF



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

E	B	A	A1	Art. N°	HTC	HTC-RE	HTAF	HTiN	HN (μK10)
0.03	1.0	45°	5°	713SF-3/3-45°-1.0	■	□	■	□	■
0.1	1.0	45°	5°	713SF-10/10-45°-1.0	■	□	■	□	■



Tournage arrière finition
Rückwärts drehen schlichten
Back turning for finishing

B	A	A1	Art. N°	HTC	HTC-RE	HTAF	HTiN	HN (μK10)
1.0	20°	5°	713SF-10/3	■	□	■	■	■

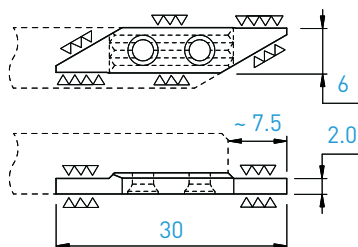
Plaquettes ébauches

WSP-Rohlinge

Blank inserts

L

711-ESF

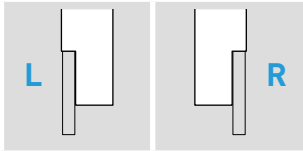
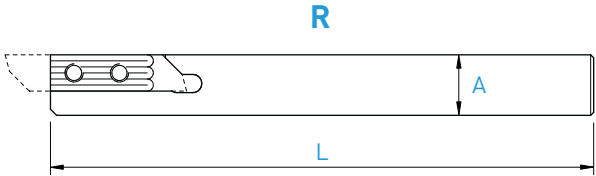
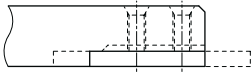
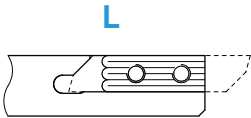


Art. N°	HTC	HTAF	HTiN	HN (μK10)	XN (μK01)	XTC	XTAF
711-ESF	■	■	□	■	■	■	■

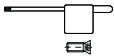
Porte-outils
Halter
Holders

L/R

730 / 740



A x B	L	Serrage Spannsystem Clamping	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	-
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 vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

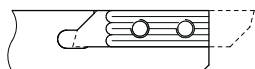
Halter

Holders

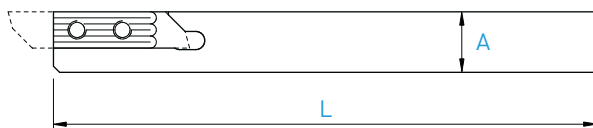
R

740-SF

L



R



Super finition des 4 faces
4 seitig feinstgeschliffen
4 sides superfinish



R

A x B	L	Serrage Spannsystem Clamping	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

Porte-outils en métal lourd anti-vibratoire

Schwingungsdämpfender Schwermetallhalter

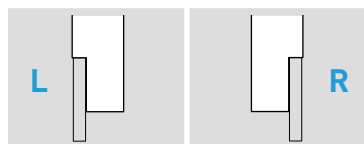
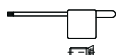
Low vibration heavy metal holders

L/R

730 / 740-NOVIBRA



Chaque support est livré
avec vis et clé.
Jeder Halter wird mit
Spannschraube(n) und
Schlüssel geliefert.
Screw(s) and key are included
with each tool holder.

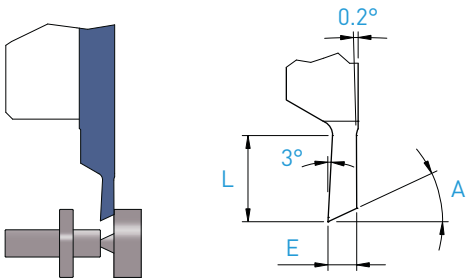


A x B	L	Serrage Spannsystem Clamping	Art. N°	Art. N°
7 x 7	115	A	730-7-NOVIBRA	740-7-NOVIBRA
8 x 8	115	A + B	730-8-NOVIBRA	740-8-NOVIBRA
8 x 8	80	A + B	-	740-8-80-NOVIBRA
10 x 10	115	A + B	-	740-10-NOVIBRA
12 x 12	130	A + B	-	740-12-NOVIBRA

Plaquettes d'horlogerie pour machines CNC
Uhrenindustrie-WSP für CNC-Maschinen
Watch industry inserts for CNC machines

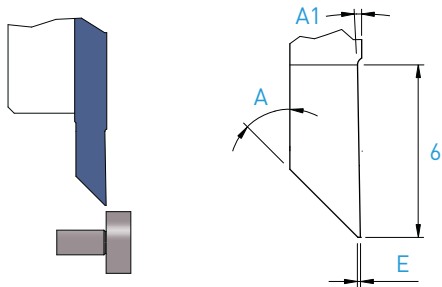
R

741SF / 742SF



Tronçonnage
Abstechen
Parting off

E	L	A	Art. N°	HTC	HTC-RE	HTAF	HTAF-RE	HTAXF	HTAXF-RE	HTIN	HN (μK10)	XTAF	XTAXF	XTAXF-RE	XN (μK01)
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°	■	□	■	□	■	□	□	■	■	■	□	□



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

E	A	A1	Art. N°	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°	■	■	■	■	■	■	□	■	■	■	□	■
0.08	45°	1°	742SF-8/8-45°	■	■	■	■	■	■	□	■	■	■	□	■

7XX-XX-B



Sur demande pour serrage type B, voir page 2.21
Wahlweise für B-Spannsystem, siehe Seite 2.21
On request for B clamping system, see page 2.21

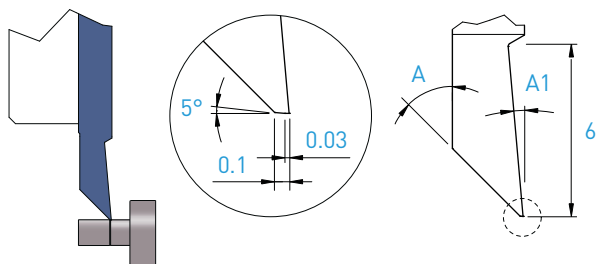
Plaquettes d'horlogerie pour machines CNC

Uhrenindustrie-WSP für CNC-Maschinen

Watch industry inserts for CNC machines

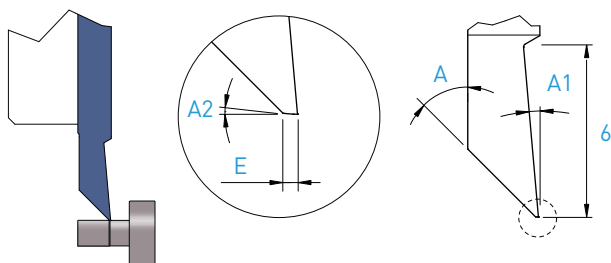
R

742SF



Tournage avant finition
Vorwärts drehen schlichten
Front turning for finishing

A	A1	Art. N°	HTC	HTC-RE	HTAF	HTAF-RE	HTAXF	HTAXF-RE	HTIN	HN (μK10)	XTAF	XTAXF	XTAXF-RE	XN (μK01)
45°	5°	742SF-10/3	■	■	■	□	□	■	■	■	■	■	□	□



Tournage avant finition
Vorwärts drehen schlichten
Front turning for finishing

E	A	A1	A2	Art. N°	HTAF-RE	XTAF-RE
0.1	45°	5°	5°	742SF-10/0-5°-45°	■	■
0.15	30°	3°	2°	742SF-15/0-2°-30°	■	■

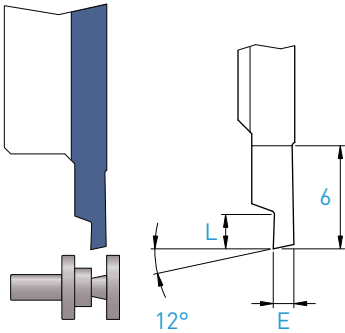
7XX-XX-B



Sur demande pour serrage type B, voir page 2.21
Wahlweise für B-Spannsystem, siehe Seite 2.21
On request for B clamping system, see page 2.21

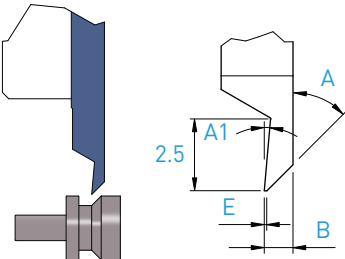
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



Tournage arrière ébauche
Rückwärts drehen schrappen
Back turning for roughing

E	L	Art. N°	HTC	HTAF	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°	■	■	■



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

E	B	A	A1	Art. N°	HTC	HTC-RE	HTAF	HTAF-RE	HTAXF	HTAXF-RE	HTiN	HN (µK10)	XTAF	XTAXF	XTAXF-RE	XN (µK01)
0.03	1.0	45°	5°	743SF-3/3-45°-1.0	■	■	■	■	■	■	□	■	■	■	■	■
0.03	1.2	45°	5°	743SF-3/3-45°-1.2	■	■	■	■	■	■	□	■	■	■	■	■
0.1	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				■								



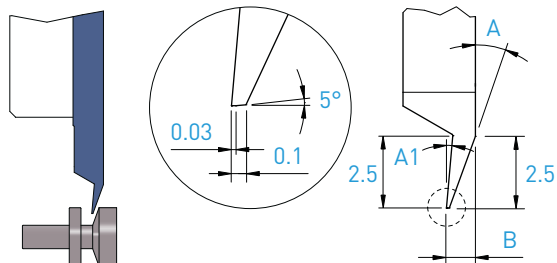
Plaquettes d'horlogerie pour machines CNC

Uhrenindustrie-WSP für CNC-Maschinen

Watch industry inserts for CNC machines

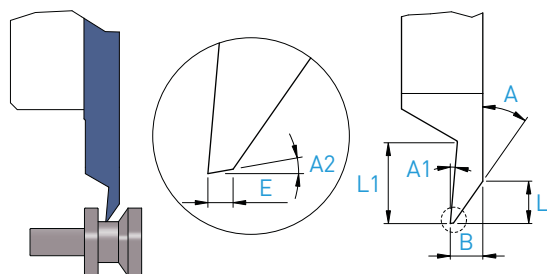
R

743SF



Tournage arrière finition
Rückwärts drehen schlichten
Back turning for finishing

B	A	A1	Art. N°	HTC	HTC-RE	HTAF	HTAF-RE	HTAXF	HTAXF-RE	HTIN	HN (μK10)	XTAF	XTAXF	XTAXF-RE	XN (μK01)
1.0	20°	5°	743SF-10/3	■	■	■	■	■	■	□	■	■	■	□	□



Tournage arrière finition
Rückwärts drehen schlichten
Back turning for finishing

E	B	L	L1	A	A1	A2	Art. N°	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	■	■
0.1	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 2.21
Wahlweise für B-Spannsystem, siehe Seite 2.21
On request for B clamping system, see page 2.21

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

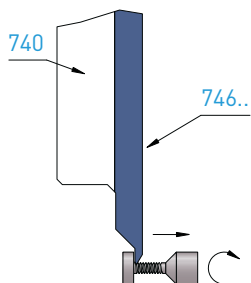
Filetage à profil partiel – norme NIHS

Gewinde drehen mit Teilprofil – Norm NIHS

Threading with partial profile – norm NIHS

R/L

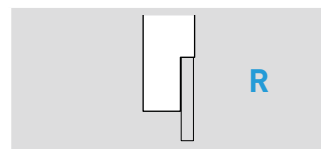
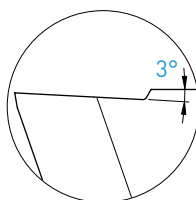
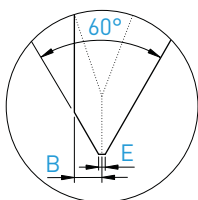
746SF / 736SF



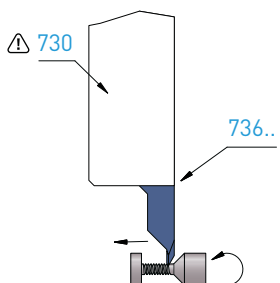
Filetage à droite
sens rotation machine M3

Rechtgewinde Drehrichtung
der Maschine M3

Right-hand thread rotating
machinery M3



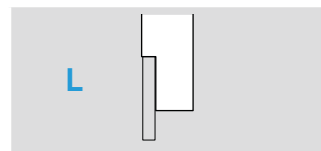
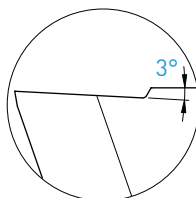
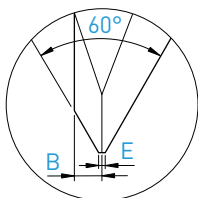
Filetage Gewinde drehen Threading	Pas Steigung Pitch P	B	E 0/-0.01	Art. N°	HTAF HN (μK10)
S0.50	0.125	0.07	0.015	746SFX3-A60-S0.50-AR	■ ■
S0.60	0.150	0.09	0.020	746SFX3-A60-S0.60-AR	■ ■
S0.70	0.175	0.10	0.020	746SFX3-A60-S0.70-AR	■ ■
S0.80	0.200	0.12	0.025	746SFX3-A60-S0.80-AR	■ ■
S0.90	0.225	0.13	0.030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



Filetage à droite
sens rotation machine M4

Rechtgewinde Drehrichtung
der Maschine M4

Right-hand thread rotating
machinery M4



Filetage Gewinde drehen Threading	Pas Steigung Pitch P	B	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 2.21
Wahlweise für B-Spannsystem, siehe Seite 2.21
On request for B clamping system, see page 2.21

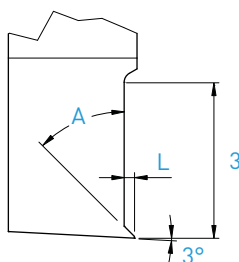
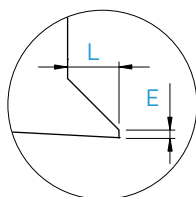
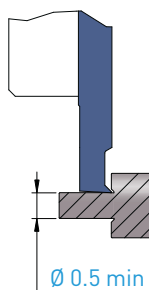
Plaquettes piqure avant

Fronteinstich WSP

Front grooving inserts

R

748SF



E 0/-0.01	A	L	Art. N°	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	■	■	■		□	■

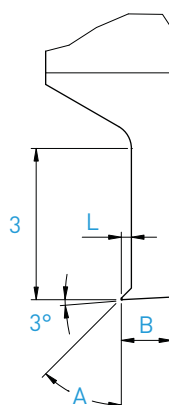
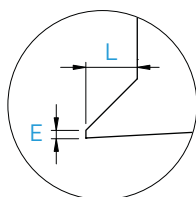
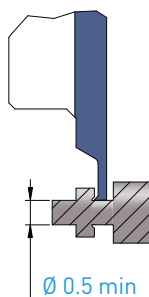
Plaquettes piqure arrière

Rückeinstich WSP

Back grooving inserts

R

749SF



E 0/-0.01	A	L	B	Art. N°	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 2.21

Wahlweise für B-Spannsystem, siehe Seite 2.21

On request for B clamping system, see page 2.21

■ = disponible / verfügbar / available

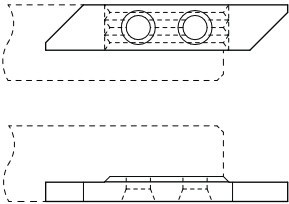
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Plaquettes ébauches
WSP-Rohlinge
Blank inserts

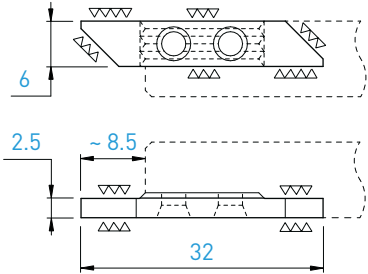
L/R

731-ESF / 741-ESF

L



R



L

R

Art. N°	HTC	HTAF	HTAXF	HTIN	HN (μK10)	XTC	XTAF	XN (μK01)
731-ESF	■	■	■	■	■	■	■	■

Art. N°	HTC	HTAF	HTAXF	HTIN	HN (μK10)	XTC	XTAF	XN (μK01)
741-ESF	■	■	■	■	■	■	■	■

7XX-XX-B



Sur demande pour serrage type B, voir page 2.21
Wahlweise für B-Spannsystem, siehe Seite 2.21
On request for B clamping system, see page 2.21

Porte-outils

Halter

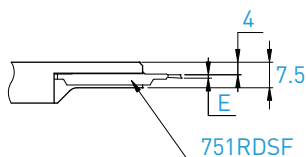
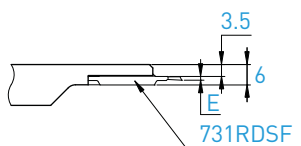
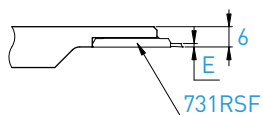
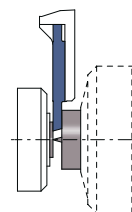
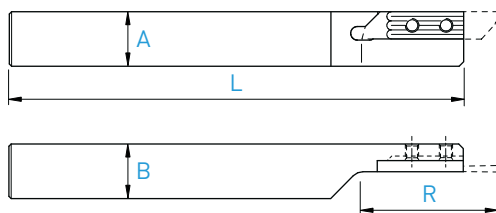
Holders

Coupe à droite déportée

Versetztes Rechtsschneiden

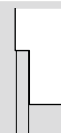
Right cut off line

730RC / 750RC



L (R)

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line



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

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

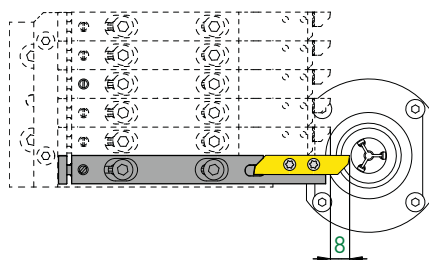
Porte-outils spéciaux de tronçonnage

Sonder Abstechwerkzeughalter

Special parting off tool holders

MODU-LINE

ML12



Voir documentation MODU-Line
Siehe MODU-Line Dokumentation
See MODU-Line documentation

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

Tronçonnage

Abstechen

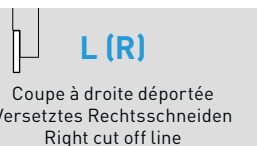
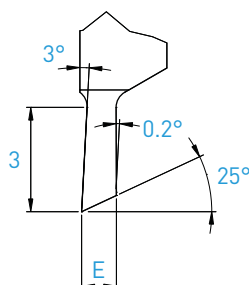
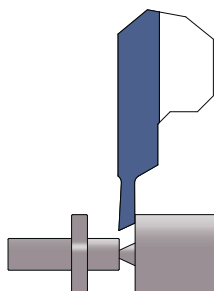
Parting off

Coupe à droite déportée

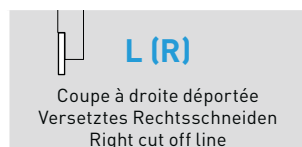
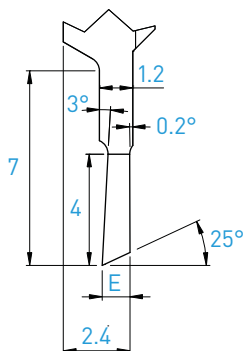
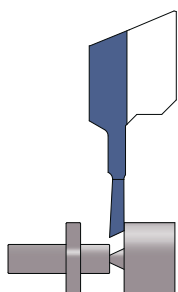
Versetztes Rechtsschneiden

Right cut off line

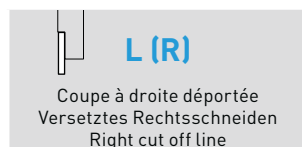
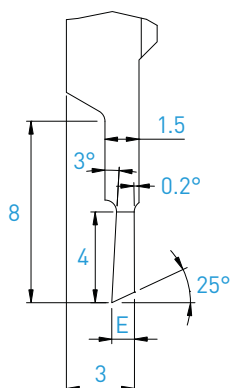
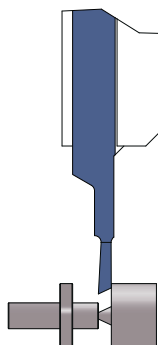
731R / 751R



E	Art. N°	HTAF	HTIN	HN (μK10)
1.0	731RSF-1.0-25°	■	■	■



E	Art. N°	HTAF	HTIN	HN (μK10)
0.8	731RDSF-0.8-25°	■	■	■
1.0	731RDSF-1.0-25°	■	□	■



E	Art. N°	HTAF	HTIN	HN (μK10)
0.8	751RDSF-0.8-25°	■	■	■
1.0	751RDSF-1.0-25°	■	□	■

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

L'outil de référence pour le décolletage

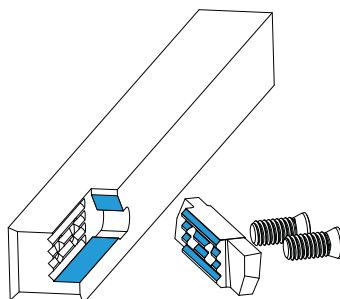
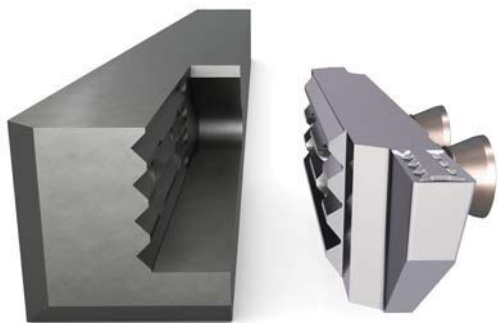
Hochwertiges Wendeplattensystem für Langdrehautomaten

Top class turning tool for automatic lathes

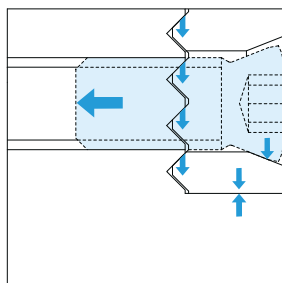
700 Series

100% rigid!

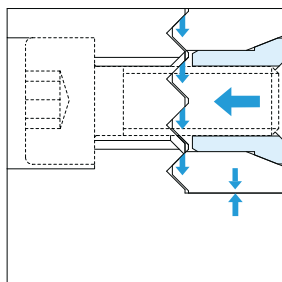
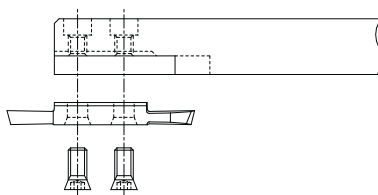
Système de serrage Applitec à denture décalée
Applitec-Spannsystem mit verschobener Verzahnung
Applitec clamping system with shifted teeth



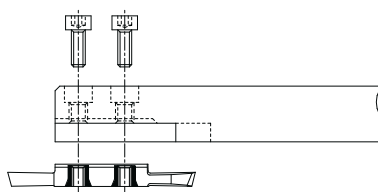
Patented



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

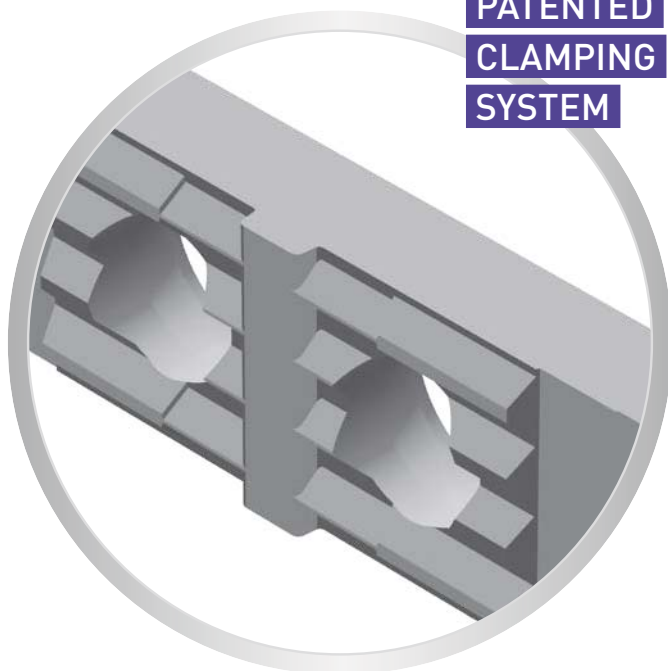
Changement de la plaquette possible dans la machine, sans démontage du porte-outil
WSP-Austauschmöglichkeit in der Maschine ohne Halterausbau
The insert can be changed in the machine without removing the tool holder

Nouveautés présentées dans ce catalogue
 Neuheiten dieses Kataloges
 New products introduced in this catalogue



New carbide HN(μ10)		
Type Typ Type	Ref.	Page Seite Page
631	631-EP	3.30
641	641-EP	3.30
642	642	3.08
	642X	3.09
	642S	3.10
643	643S	3.11
	643	3.12
	643X	3.13
	643XS	3.14
	643VX8	3.15
	643VX15	3.16
	643VUX	3.17

New carbide HN(μ10)		
Type Typ Type	Ref.	Page Seite Page
644	644	3.19
	644X5	3.20
	644X10	3.21
647	647	3.28
651	651-EP	3.44
651R	651R	3.39
	651RXF	3.40
	651RX12	3.41
661	661	3.34
	661XF	3.35
	661X12	3.36
	661-EP	3.44



PATENTED
 CLAMPING
 SYSTEM

INFO

Codification
Bezeichnungsschlüssel
Designation key

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

Nuances
Sorten
Grades

> **3.02**

SERIES 630 / 640

Tournage
et gorge

Drehen und
Einsteichen

Turning and
grooving

Porte-outils
Halter
Holders



630 / 640

> **3.06**

Tournage avant
Vorwärts drehen
Front turning

632 / 642



> **3.08**

Tournage arrière
Rückwärts drehen
Back turning

633 / 643



> **3.11**

Fonçage-tournage
Einsteichen und drehen
Grooving and turning

634 / 644



> **3.19**

Chanfreinage
Anfasen
Chamfering

635 / 645



> **3.24**

Filetage
Gewinde drehen
Threading

636 / 646



> **3.26**

Plaquettes à rayon
Radius Wendeplatten
Radius inserts

637 / 647



> **3.28**

Plaquettes ébauches
WSP-Rohlinge
Blank inserts

631-EP / 641-EP



> **3.30**

SERIES 650 / 660

Tronçonnage

Abstechen

Parting off

Porte-outils
Halter
Holders



650 / 660

> **3.31**

Tronçonnage
Abstechen
Parting off

651 / 661



> **3.34**

Tronçonnage - coupe déportée
Abstechen - versetztes Schneiden
Parting off - cut off line

651R



> **3.39**

Plaquettes ébauches
WSP-Rohlinge
Blank inserts

651-EP / 661-EP

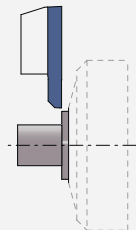


> **3.44**

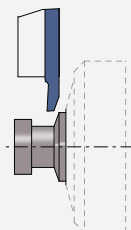
Pièces de rechange et accessoires
Ersatzteile und Zubehör
Spare parts and accessories

> **3.45**

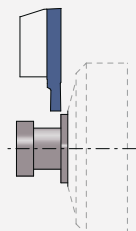
642



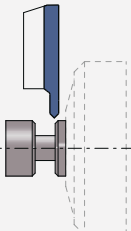
643



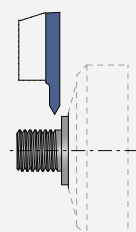
644



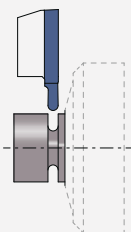
645



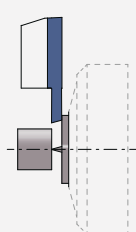
646



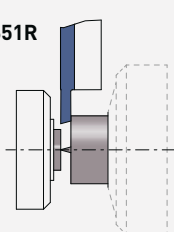
647



661



651R



Codification des plaquettes PRO-Line série 600

WSP-Bezeichnungssystem für PRO-Line 600 Serie

Inserts designation key for PRO-Line 600 series

INFO

6	4	4	X	-	2.0	-	R15	-	TiAlN
---	---	---	---	---	-----	---	-----	---	-------

Dimension
Abmessung
Dimension

Rayon
Radius
Radius

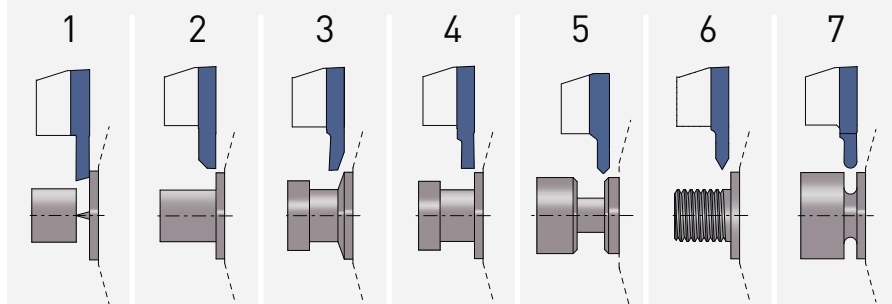
Nuance
Sorte
Grade

Géométrie de coupe
Schneidgeometrie
Cutting geometry

brise-copeau
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-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

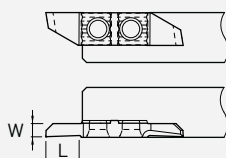
Tournage
et gorge

Drehen und
Einstechen
Turning and
grooving

W max = 3 mm
L max = 8 mm

L
630

R
640



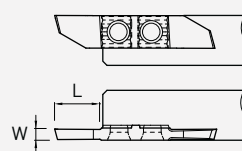
SERIES

Tronçonnage
Abstechen
Parting off

W max = 2.5 mm
L max = 11 mm

L
650

R
660



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

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

Standard machining data

		Tournage Drehen Turning			Tronçonnage Abstechen Parting off		
		630/640			650/660		
Matière Werkstoff Material		VC	Prof. de passe Schnitttiefe Depth of cut	Avance Vorschub Feed	VC	Largeur de coupe Abstechbreite Cutting width	Avance Vorschub Feed
		(m/min)	(mm)	(mm/U)	(m/min)	(mm)	(mm/U)
Acier de décolletage Automatenstahl Free-cutting steel	P	120 - 200	0.05 - 1.0 1.0 - 4.0	0.01 - 0.15 0.05 - 0.25	80 - 150	0.50 - 1.50 1.50 - 2.50	0.01 - 0.08 0.03 - 0.15
Acier Stahl Steel	< 600 N/mm² P	80 - 160	0.05 - 1.0 1.0 - 4.0	0.01 - 0.15 0.05 - 0.25	70 - 120	0.50 - 1.50 1.50 - 2.50	0.01 - 0.06 0.03 - 0.12
Acier Stahl Steel	< 800 N/mm² P	60 - 120	0.05 - 1.0 1.0 - 4.0	0.01 - 0.10 0.05 - 0.20	60 - 100	0.50 - 1.50 1.50 - 2.50	0.01 - 0.05 0.03 - 0.10
Acier Stahl Steel	> 800 N/mm² P	50 - 100	0.05 - 1.0 1.0 - 3.0	0.01 - 0.08 0.05 - 0.15	40 - 80	0.50 - 1.50 1.50 - 2.50	0.01 - 0.04 0.03 - 0.08
Acier inoxydable Rostfreistahl Stainless steel	M	60 - 120	0.05 - 1.0 1.0 - 3.0	0.01 - 0.08 0.05 - 0.15	60 - 100	0.50 - 1.50 1.50 - 2.50	0.01 - 0.04 0.03 - 0.08
Aluminium Si <12%	N	200 - 1000	0.05 - 1.0 1.0 - 4.0	0.01 - 0.20 0.05 - 0.40	180 - 400	0.50 - 1.50 1.50 - 2.50	0.01 - 0.10 0.03 - 0.20
Aluminium Si >12%	N	180 - 800	0.05 - 1.0 1.0 - 4.0	0.01 - 0.20 0.05 - 0.40	150 - 300	0.50 - 1.50 1.50 - 2.50	0.01 - 0.10 0.03 - 0.20
Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze	N	100 - 500	0.05 - 1.0 1.0 - 4.0	0.01 - 0.20 0.05 - 0.35	100 - 300	0.50 - 1.50 1.50 - 2.50	0.01 - 0.10 0.03 - 0.20
Titane Titan Titanium	S	30 - 70	0.05 - 1.0 1.0 - 4.0	0.01 - 0.08 0.05 - 0.15	30 - 50	0.50 - 1.50 1.50 - 2.50	0.01 - 0.03 0.03 - 0.06

Nuances

Sorten

Grades

TiAlN

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

- excellente nuance universelle
- 1^{er} 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

N (μK20)

non revêtu
unbeschichtet
uncoated

- nuance micro-grain tenace
- supporte les coupes interrompues et autres conditions d'usinage défavorables
- zähe Feinkornsorte
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen geeignet
- tough micro-grain grade
- suitable for interrupted cut and other unfavourable machining conditions

HTA

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

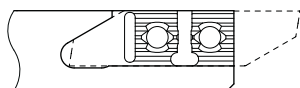
- nuance très résistante à l'usure
- pour l'usinage en finition dans des conditions favorables des aciers, aciers inoxydables et alliages de titane
- sehr verschleissfeste Sorte
- für die Feinbearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bei guten Bearbeitungsbedingungen
- very wear resistant grade
- for light machining of steel, stainless steel and titanium alloys under favourable machining conditions

HN (μK10)

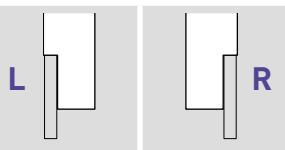
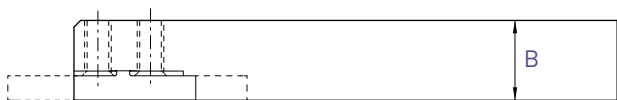
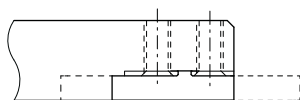
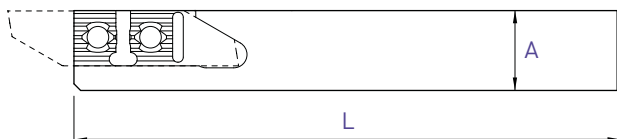
non revêtu
unbeschichtet
uncoated

- 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

L



R

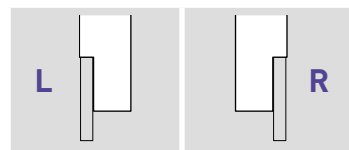
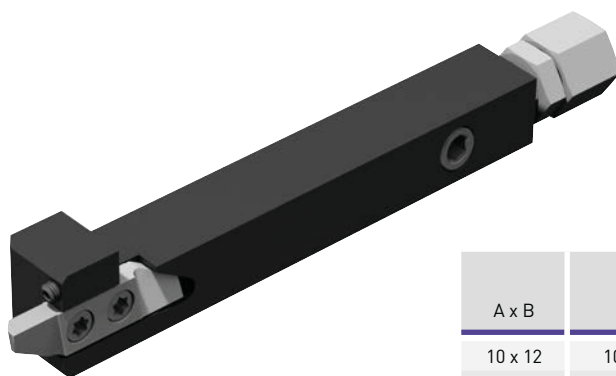
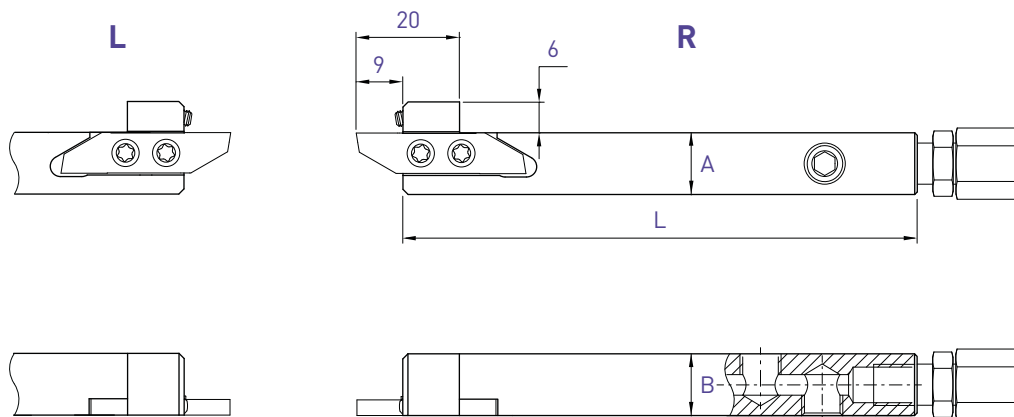


A x B	L	Art. N°	Art. N°
8 x 8	115	630-8	640-8
10 x 10	115	630-10	640-10
10 x 10	50	630-10-50	640-10-50
12 x 12	130	630-12	640-12
12 x 12	90	630-12-90	640-12-90
12.7 x 12.7	130	630-12.7	640-12.7
16 x 16	130	630-16	640-16
16 x 16	75	630-16-75	640-16-75
20 x 20	120	630-20	640-20

Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
 Halter mit integrierter Kühlmittelzufuhr
 Holders with integrated coolant supply

630-JET / 640-JET



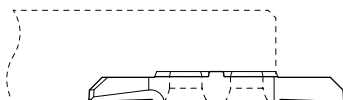
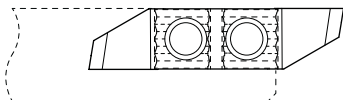
A x B	L	Art. N°	Art. N°
10 x 12	100	630-1012-JET	640-1012-JET
12 x 12	100	630-12-JET	640-12-JET
12.7 x 12.7	100	630-12.7-JET	640-12.7-JET
16 x 16	100	630-16-JET	640-16-JET
20 x 20	100	630-20-JET	640-20-JET

Chaque support est livré avec vis, clé, raccord droit et buse d'arrosage Ø 1.5 mm.

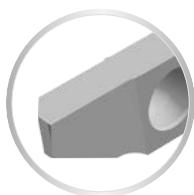
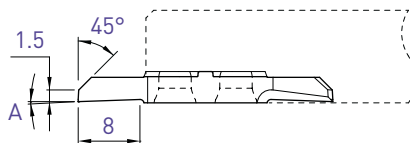
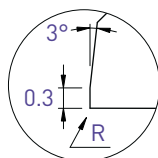
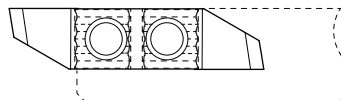
Jeder Halter wird mit Spannschraube(n), Schlüssel, gerader Kühlmittelanschluss und Kühlmitteldüse Ø 1.5 mm geliefert.

Screw(s), key, straight connector and coolant nozzle Ø 1.5 mm are included with each tool holder.

L



R



L



R

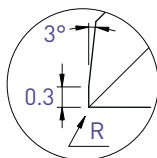
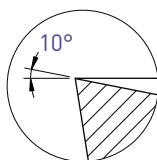
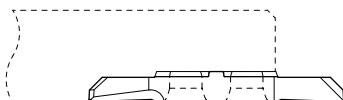
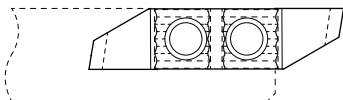


A	R	Art. N°	TiAlN N [µk20]	HTA HN [µk10]	Art. N°	TiAlN N [µk20]	HTA HN [µk10]
0°	0	632	■ ■		642	■ ■	□ □
0°	0.08	-			642-R08	■ ■	□ □
0°	0.15	-			642-R15	■ ■	□ □
2°	0	632-2°	■ ■		642-2°	■ ■	□ □
2°	0.08	-			642-2°-R08	■ ■	□ □
2°	0.15	-			642-2°-R15	■ ■	□ □

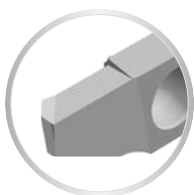
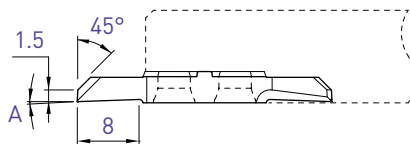
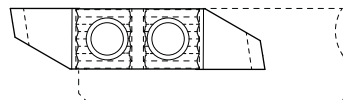
Tournage avant
Vorwärts drehen
Front turning

632X / 642X

L



R



L



R

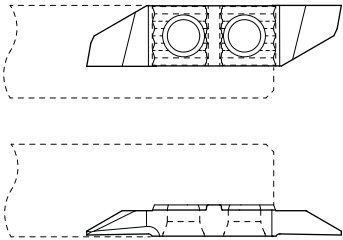


A	R	Art. N°	TiAlN N [µk20]	HTA HN [µk10]	Art. N°	TiAlN N [µk20]	HTA HN [µk10]
0°	0	632X10	■ ■		642X10	■ ■	□ □
0°	0.08	-			642X10-R08	■ ■	□ □
0°	0.15	-			642X10-R15	■ ■	□ □
2°	0	632X10-2°	■ ■		642X10-2°	■ ■	□ □
2°	0.08	-			642X10-2°-R08	■ ■	□ □
2°	0.15	-			642X10-2°-R15	■ ■	□ □

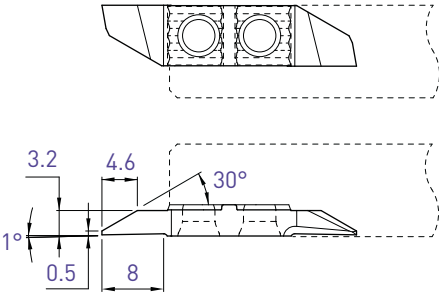
Tournage multifonction
Mehrweck drehen
Multifunction turning

632S / 642S

L



R



Tournage avant
Vorwärts drehen
Front turning

									
L					R				
Art. N°		TiAlN	N [µk20]	HTA	Art. N°		TiAlN	N [µk20]	HTA
632S05		■	■		642S05		■	■	□ □

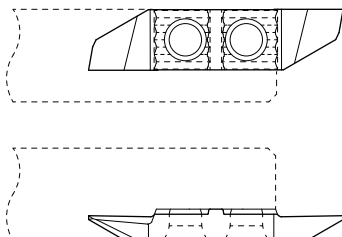
Tournage multifonction

Mehrweck drehen

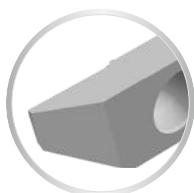
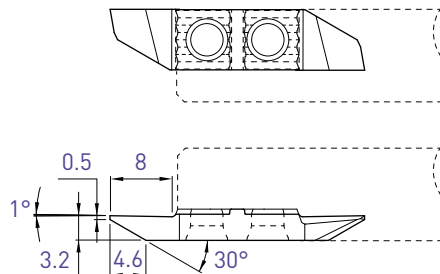
Multifunction turning

633S / 643S

L

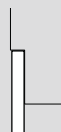


R



Tournage arrière
Rückwärts drehen
Back turning

L

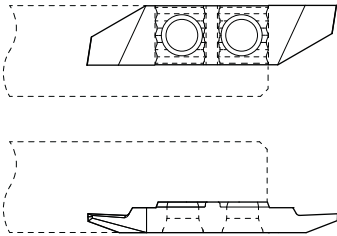


R

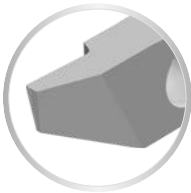
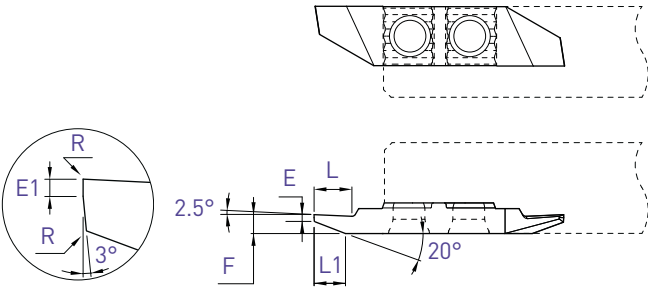


Art. N°	TiAlN	N [μk20]	HTA	HN [μk10]	Art. N°	TiAlN	N [μk20]	HTA	HN [μk10]
633S05	■	■			643S05	■	■	□	□

L



R



L

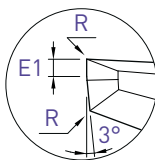
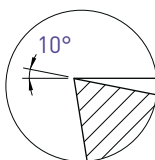
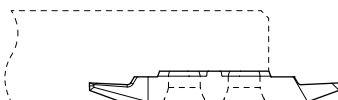
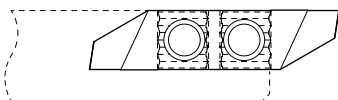
R

E	E1	L	L1	F	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	■ ■	□ □

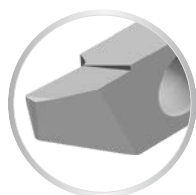
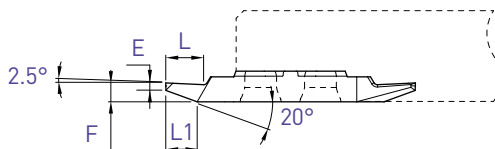
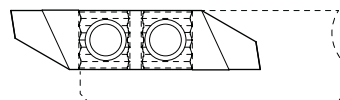
Tournage arrière
Rückwärts drehen
Back turning

633X / 643X

L



R



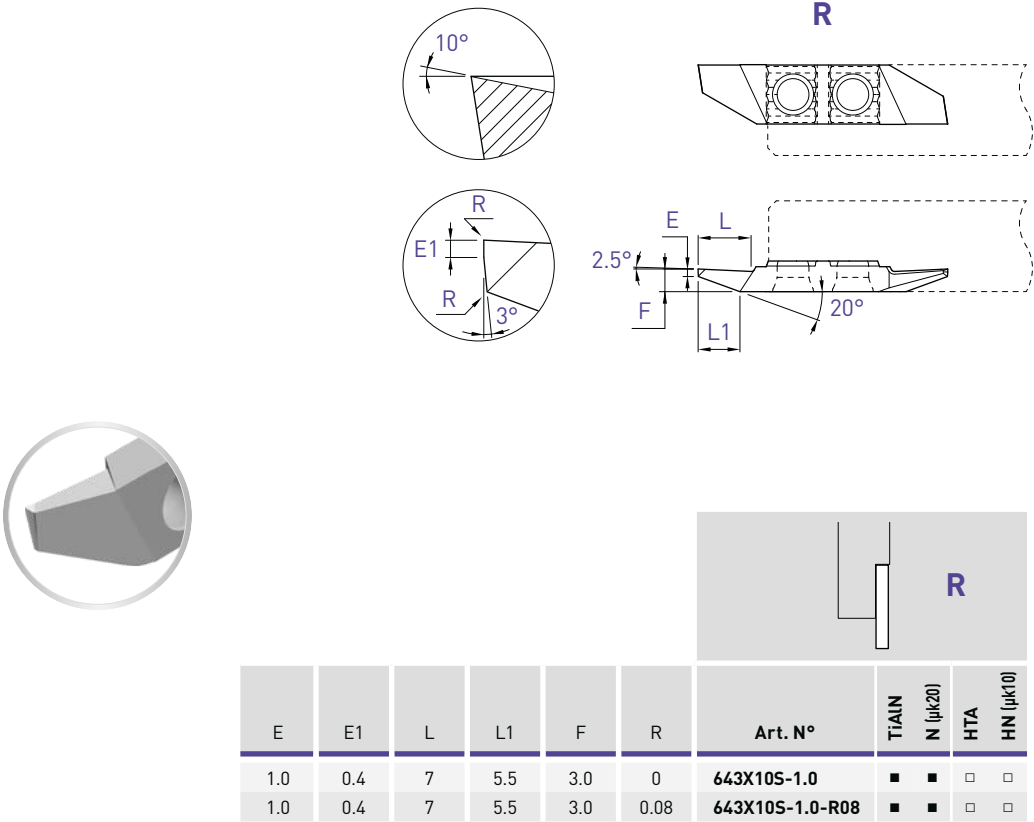
L



R

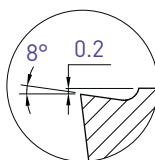


E	E1	L	L1	F	R	Art. N°	TiAlN N [µk20]	HTA HN [µk10]	Art. N°	TiAlN N [µk20]	HTA HN [µk10]
0.5	0.25	3	2.8	1.5	0	633X10-0.5	■ ■		643X10-0.5	■ ■	□ □
0.5	0.25	3	2.8	1.5	0.08	-			643X10-0.5-R08	■ ■	□ □
0.8	0.40	4.5	3.3	2.0	0	-			643X10-0.8	■ ■	□ □
0.8	0.40	4.5	3.3	2.0	0.08	-			643X10-0.8-R08	■ ■	□ □
1.0	0.40	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	■ ■	□ □

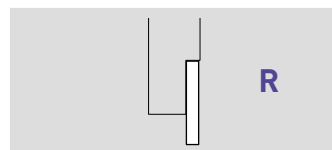
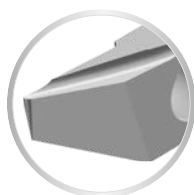
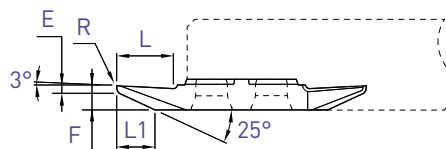
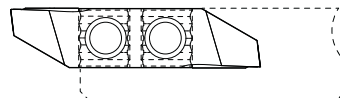


Tournage arrière
Rückwärts drehen
Back turning

643VX8



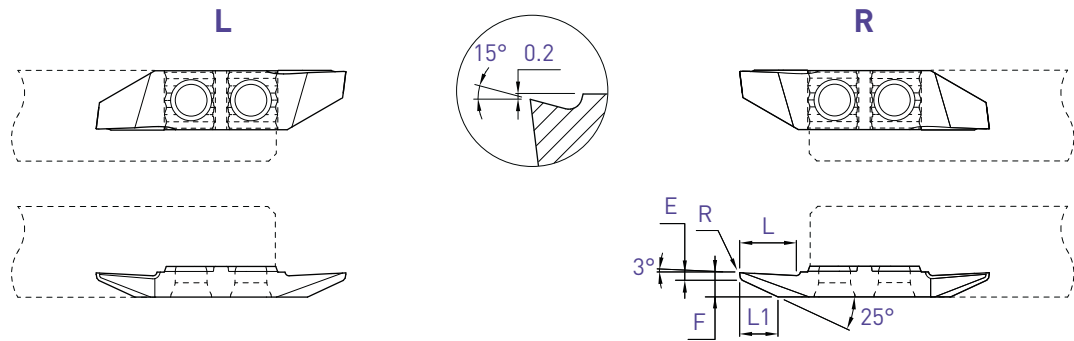
R



E	L	L1	F	R	Art. N°	TiAlN N [μk20]	HTA	HN [μk10]
~1	7.5	5.0	3.2	0	643VX8	■ ■	□ □	
~1	7.5	5.0	3.2	0.08	643VX8-R08	■ ■	□ □	

Tournage arrière
Rückwärts drehen
Back turning

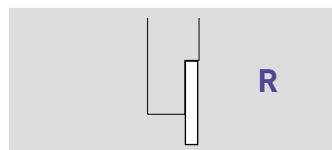
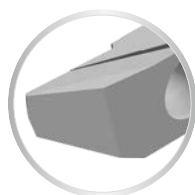
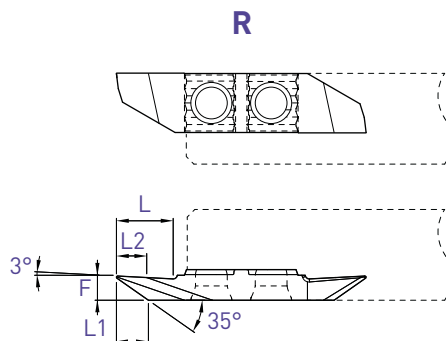
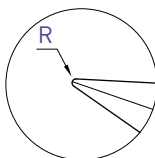
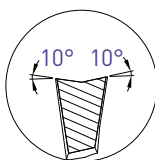
633VX15 / 643VX15



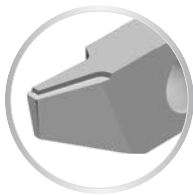
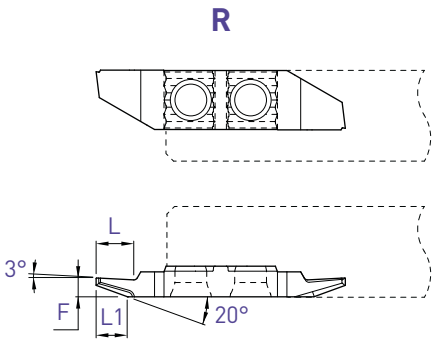
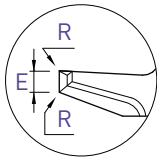
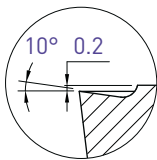
					L				R			
					Art. N°				Art. N°			
					TiAlN				TiAlN			
					N [µk20]				N [µk20]			
					HTA				HTA			
					HN [µk10]				HN [µk10]			
E	L	L1	F	R	633VX15				643VX15			
0.5	7.5	5.2	3.2	0	■ ■				■ ■ □ □			
0.5	7.5	5.2	3.2	0.08	-				643VX15-R08 ■ ■ □ □			

Tournage arrière
Rückwärts drehen
Back turning

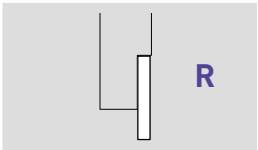
643VUX



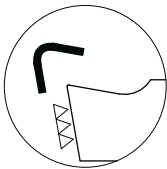
L	L1	L2	F	R	Art. N°	TiAlN N [μk20]	HTA	HN [μk10]
7.5	4.2	4.0	3.2	0.15	643VUX10-R15	■ ■	□ □	
7.5	3.8	3.8	3.2	0.35	643VUX10-R35	■ ■	□ □	



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



E	L	L1	F	R	Art. N°	TiAlN 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: 0.02 mm/U

Fonçage-tournage

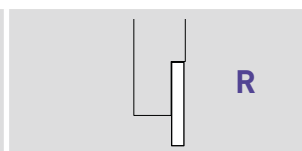
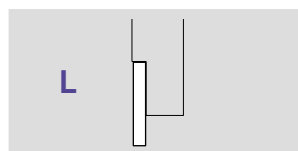
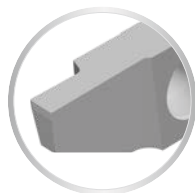
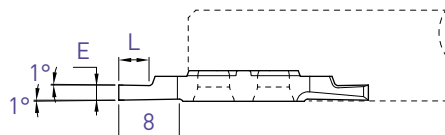
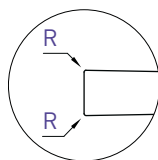
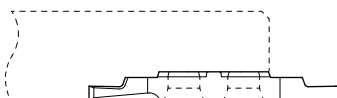
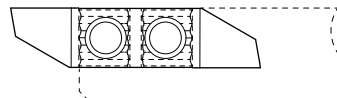
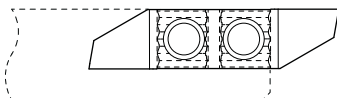
Einstecken und drehen

Grooving and turning

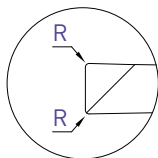
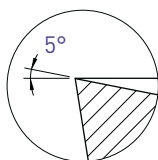
634 / 644

L

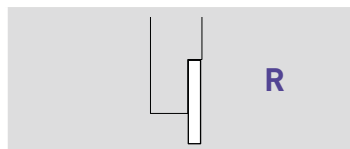
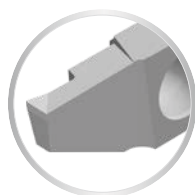
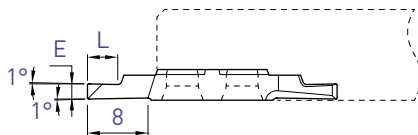
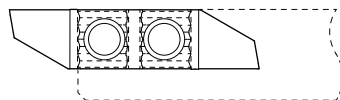
R



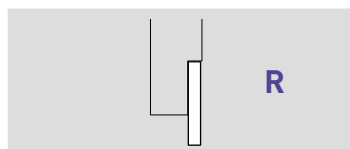
E	L	R	Art. N°	TiAlN N (µk20)	HTA HN (µk10)	Art. N°	TiAlN N (µk20)	HTA HN (µk10)
0.5	1.5	0	634-0.5	■ ■		644-0.5	■ ■	□ □
0.6	1.8	0	-			644-0.6	■ ■	□ □
0.75	2	0	-			644-0.75	■ ■	□ □
0.8	2	0	634-0.8	■ ■		644-0.8	■ ■	□ □
0.9	2.5	0	-			644-0.9	■ ■	□ □
0.95	3	0	-			644-0.95	■ ■	□ □
1.0	2.5	0	634-1.0	■ ■		644-1.0	■ ■	□ □
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	■ ■	□ □



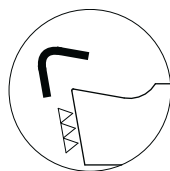
R



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	■	■	□



E	L	R	Art. N°	TiAlN N (µk20)	HTA	HN (µk10)
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	■	■	



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

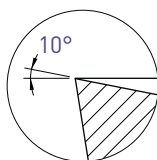
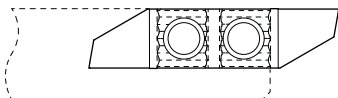
Fonçage-tournage

Einstechen und drehen

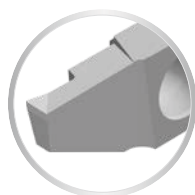
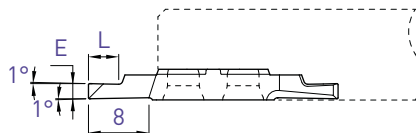
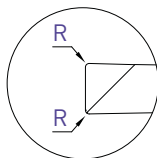
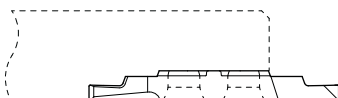
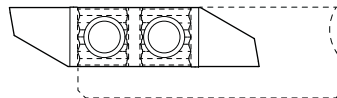
Grooving and turning

634X10 / 644X10

L



R



L



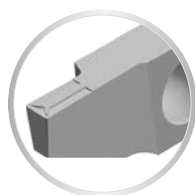
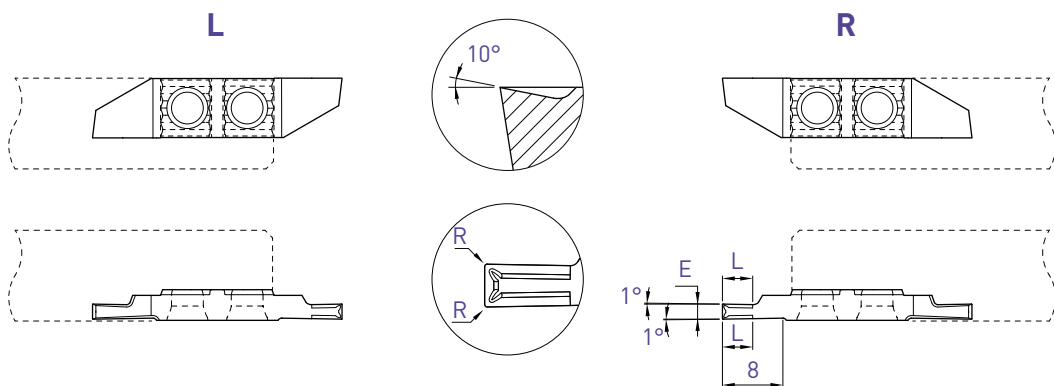
R



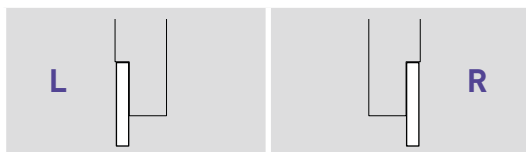
E	L	R	Art. N°	TiAlN N (µk20)	HTA HN (µk10)	Art. N°	TiAlN N (µk20)	HTA HN (µk10)
0.8	2	0	634X10-0.8	■ ■		644X10-0.8	■ ■ □ □	
1.0	2.5	0	634X10-1.0	■ ■		644X10-1.0	■ ■ □ □	
1.0	2.5	0.08	634X10-1.0-R08	■ ■		644X10-1.0-R08	■ ■ □ □	
1.2	3	0	-			644X10-1.2	■ ■ □ □	
1.2	3	0.08	-			644X10-1.2-R08	■ ■ □ □	
1.5	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	■ ■ □ □	

■ = disponible / verfügbar / available

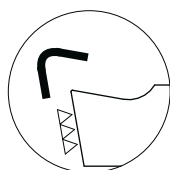
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



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



E	L	R	Art. N°	TiAlN N (µk20)	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: 0.02 mm/U

Fonçage-tournage

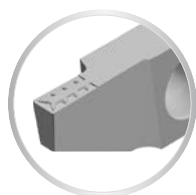
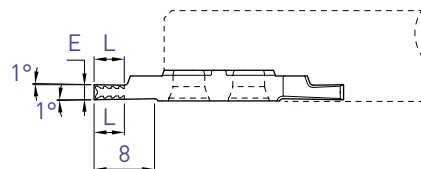
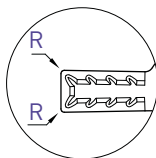
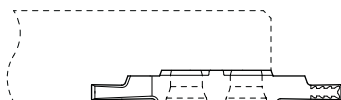
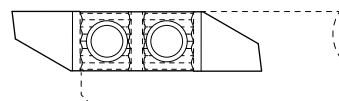
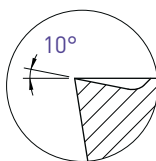
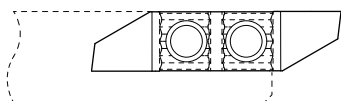
Einstechen und drehen

Grooving and turning

634ZXT / 644ZXT

L

R

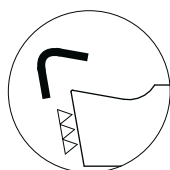


Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip-control

L

R

E	L	R	Art. N°	TiAlN N (µk20)	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	■



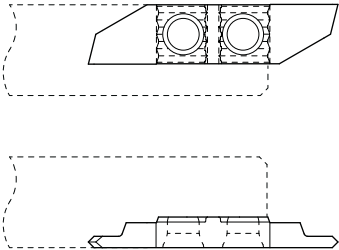
Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

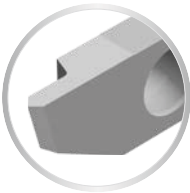
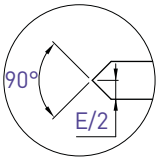
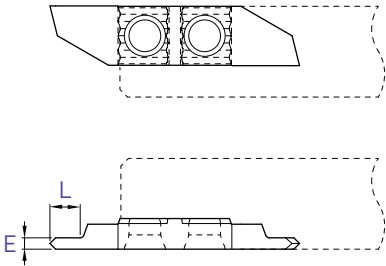
Chanfreinage
Anfasen
Chamfering

635-90 / 645-90

L



R



L

R

		L		R	
E	L	Art. N°	TiAlN N (µk20)	Art. N°	TiAlN N (µk20)
1.5	4	635-90-1.5	■ ■	645-90-1.5	■ ■

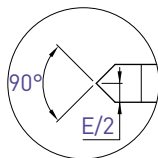
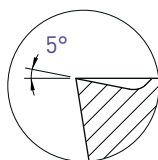
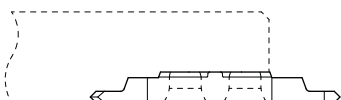
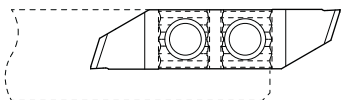
Chanfreinage

Anfasen

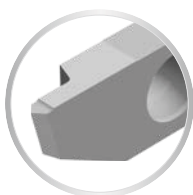
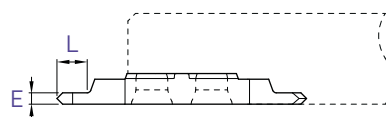
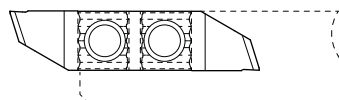
Chamfering

635X-90 / 645X-90

L



R



L

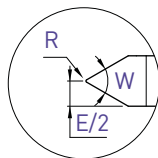
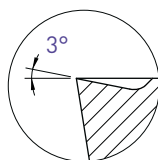
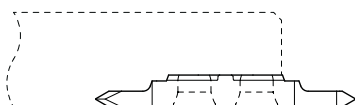
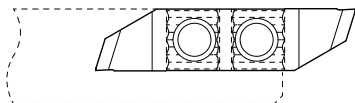


R

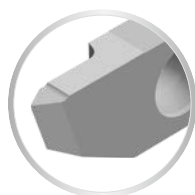
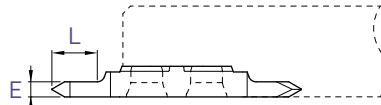
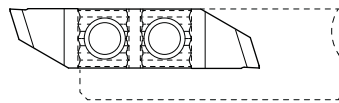


E	L	Art. N°	TiAlN N (µk20)	Art. N°	TiAlN N (µk20)
1.5	4	635X5-90-1.5	■ ■	645X5-90-1.5	■ ■

L

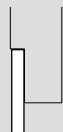


R



Profil partiel
Teilprofil
Partial profile

L



R



W	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	■ ■

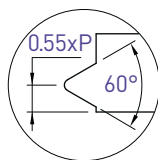
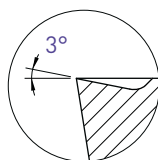
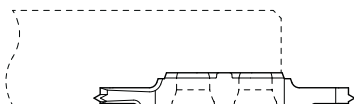
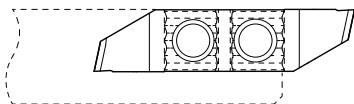
Filetage

Gewinde drehen

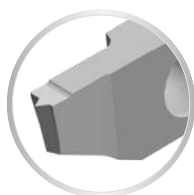
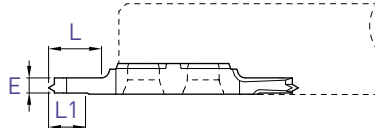
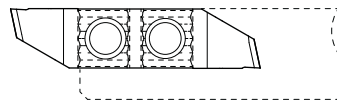
Threading

636X-M / 646X-M

L

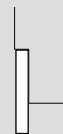


R



Profil complet métrique
Metrisches Vollprofil
Metric full profile

L

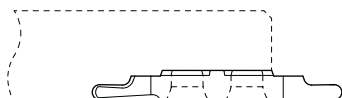
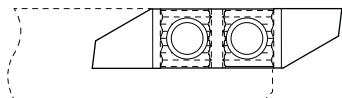


R

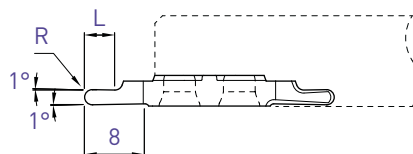
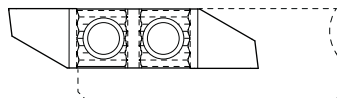


E	L	L1	Pas Steigung Pitch P	Art. N°	TiAlN N (µk20)	Art. N°	TiAlN N (µk20)
1.0	3	3	0.25	636X3-M-0.25	■ ■	646X3-M-0.25	■ ■
1.0	3	3	0.30	636X3-M-0.30	■ ■	646X3-M-0.30	■ ■
1.0	3	3	0.35	636X3-M-0.35	■ ■	646X3-M-0.35	■ ■
1.0	3	3	0.40	636X3-M-0.40	■ ■	646X3-M-0.40	■ ■
1.0	3	3	0.45	636X3-M-0.45	■ ■	646X3-M-0.45	■ ■
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	■ ■

L



R



L



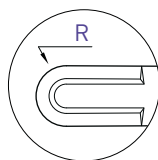
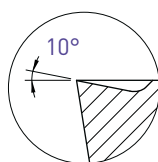
R



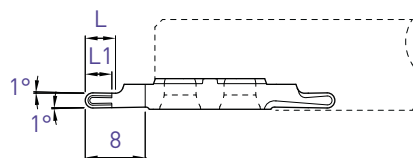
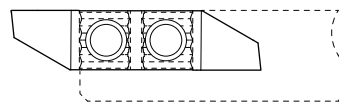
R	L	Art. N°	TiAlN N (µk20)	HTA HN (µk10)	Art. N°	TiAlN N (µk20)	HTA HN (µk10)
0.25	1.5	-			647-R0.25	■ ■	
0.40	2	-			647-R0.4	■ ■	
0.5	2.5	637-R0.5	■ ■		647-R0.5	■ ■ □ □	
0.6	2.5	-			647-R0.6	■ ■	
0.75	3	-			647-R0.75	■ ■	
0.8	3	-			647-R0.8	■ ■	
1.0	4	637-R1.0	■ ■		647-R1.0	■ ■	
1.5	6	-			647-R1.5	■ ■	

Plaquettes à rayon
Radius Wendeplatten
Radius inserts

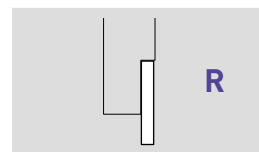
647ZX10



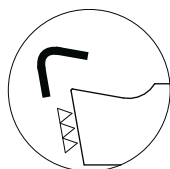
R



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

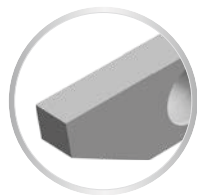
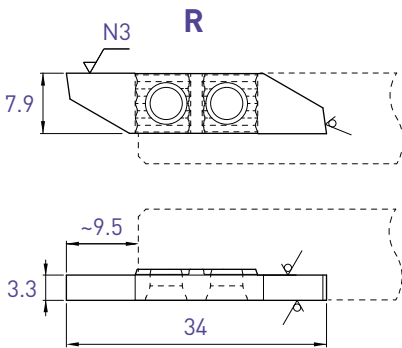
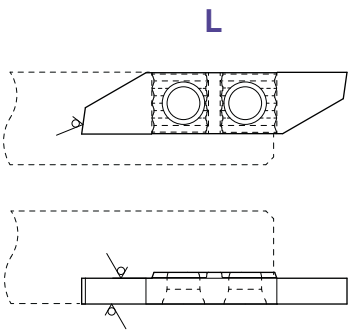


R	L	L1	Art. N°	TiAlN N (µk20)
1.0	4	3.5	647ZX10-R1.0	■
1.5	6	4	647ZX10-R1.5	■



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U



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		■	■

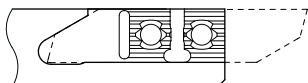
Porte-outils

Halter

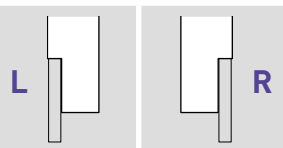
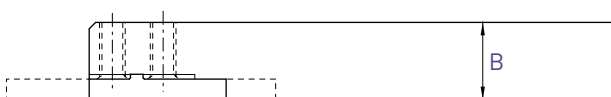
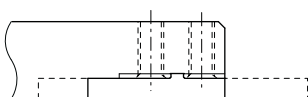
Holders

650 / 660

L



R



A x B	L	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 vis et clé.

Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.

Screw(s) and key are included with each tool holder.

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

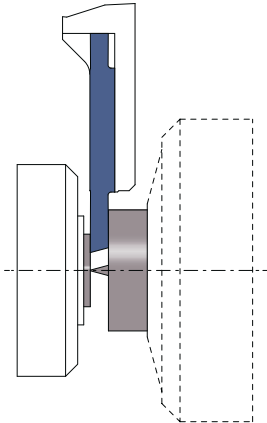
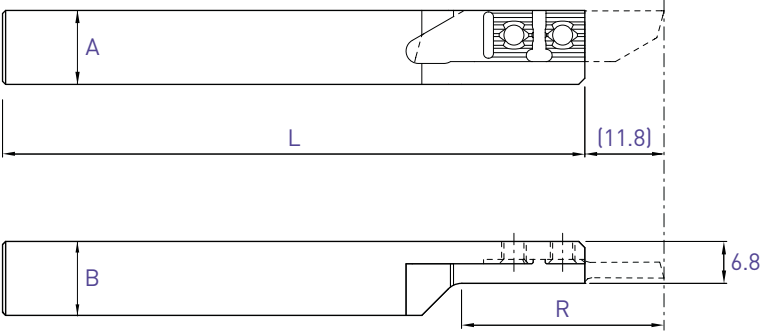
Porte-outils
Halter
Holders

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

650-RC

Utiliser des plaquettes type 651R
WSP Typ 651R verwenden
Use inserts type 651R

Voir dès page 3.39
Siehe ab Seite 3.39
See from page 3.39

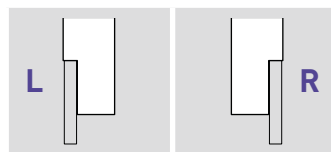
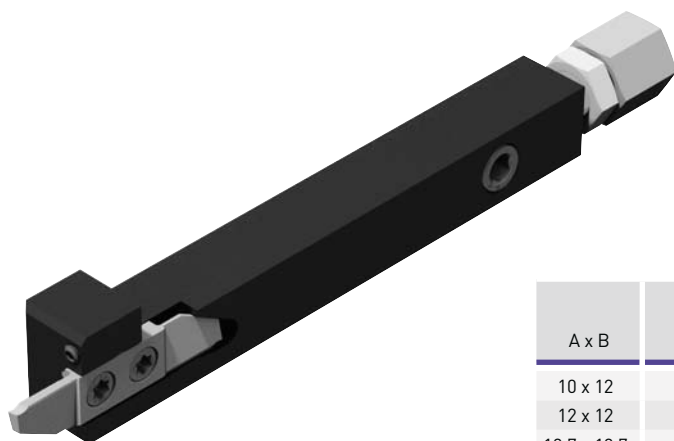
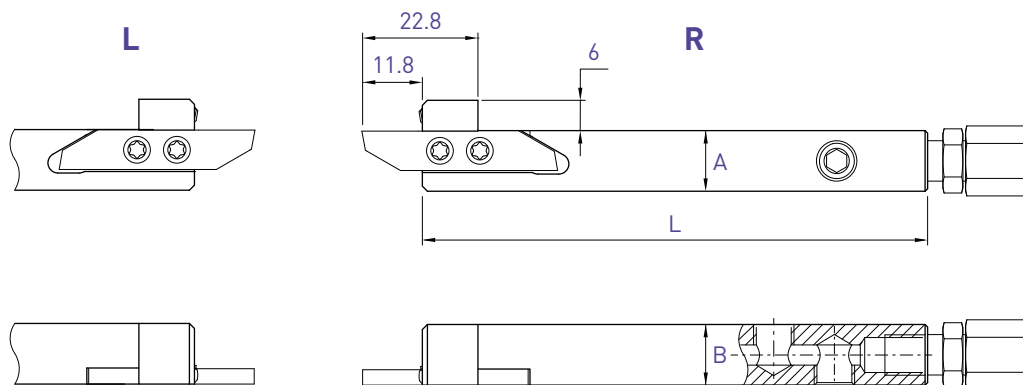


 L (R) Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line			
A x B	R	L	Art. N°
10 x 10	32	115	650RC-10
12 x 12	32	130	650RC-12
16 x 16	42	130	650RC-16

Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
 Halter mit integrierter Kühlmittelzufuhr
 Holders with integrated coolant supply

650-JET / 660-JET



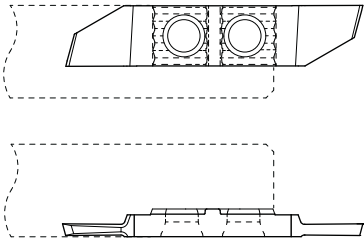
A x B	L	Art. N°	Art. N°
10 x 12	100	650-1012-JET	660-1012-JET
12 x 12	100	650-12-JET	660-12-JET
12.7 x 12.7	100	650-12.7-JET	660-12.7-JET
16 x 16	100	650-16-JET	660-16-JET
20 x 20	100	650-20-JET	660-20-JET

Chaque support est livré avec vis, clé, raccord droit et buse d'arrosage Ø 1.5 mm.

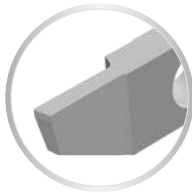
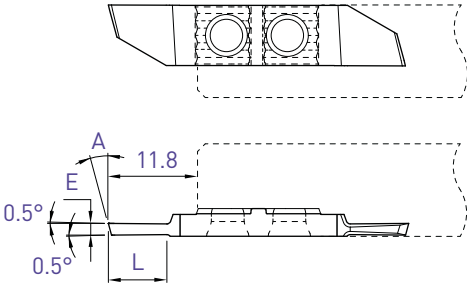
Jeder Halter wird mit Spannschraube(n), Schlüssel, gerader Kühlmittelanschluss und Kühlmitteldüse Ø 1.5 mm geliefert.

Screw(s), key, straight connector and coolant nozzle Ø 1.5 mm are included with each tool holder.

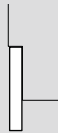
L



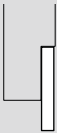
R



L



R



E	A	L	Art. N°	TiAlN N [µk20]	HTA HN [µk10]	Art. N°	TiAlN N [µk20]	HTA HN [µk10]
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°	■ ■ □ □	

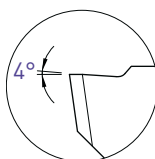
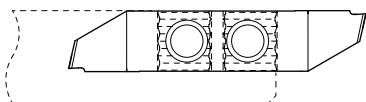
Tronçonnage

Abstechen

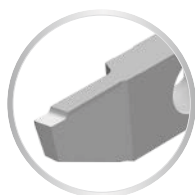
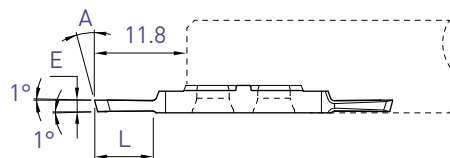
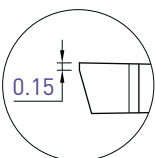
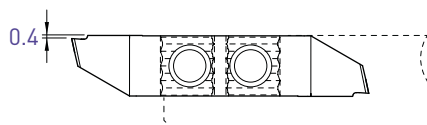
Parting off

651XF / 661XF

L



R



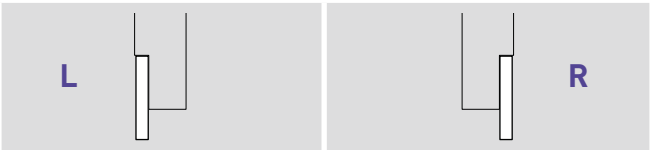
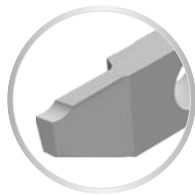
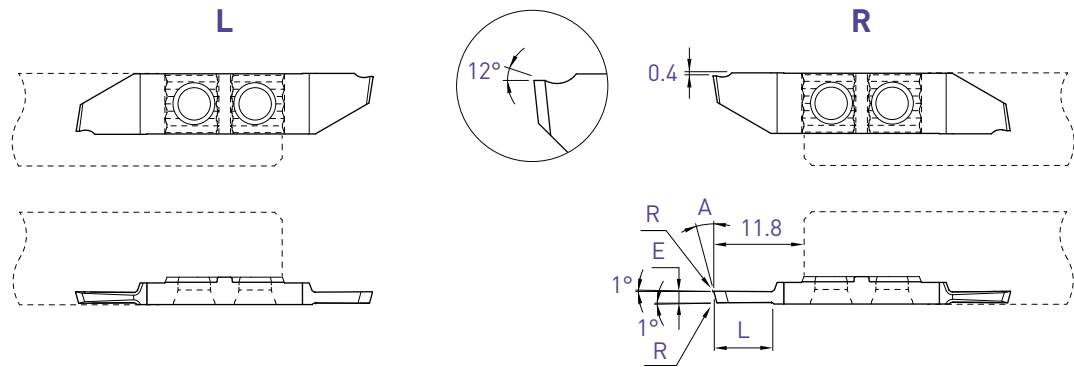
L

R

E	A	L	Art. N°	TiAlN N [µk20]	HTA HN [µk10]	Art. N°	TiAlN N [µk20]	HTA HN [µk10]
1.5	15°	7.5	651XF-1.5	■ ■		661XF-1.5	■ ■ □ □	
2.0	15°	11	651XF-2.0	■ ■		661XF-2.0	■ ■ □ □	

Tronçonnage
Abstechen
Parting off

651X12 / 661X12



E	A	L	R	Art. N°	TiAlN N [µk20]	HTA HN [µk10]	Art. N°	TiAlN N [µk20]	HTA 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	■ ■	□ □

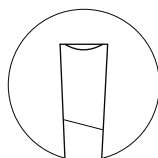
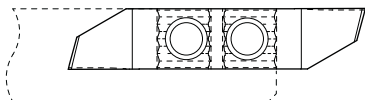
Tronçonnage

Abstechen

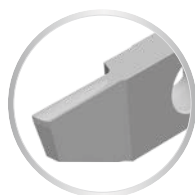
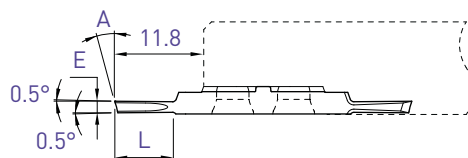
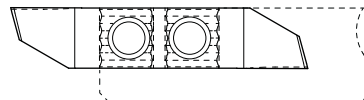
Parting off

651U / 661U

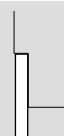
L



R



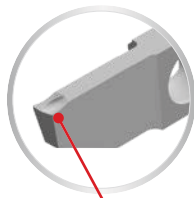
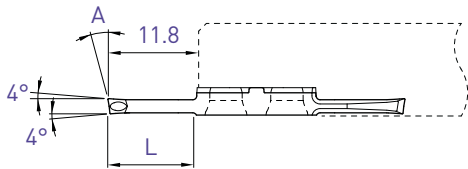
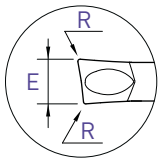
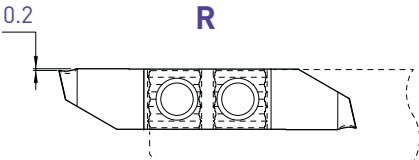
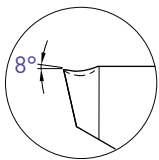
L



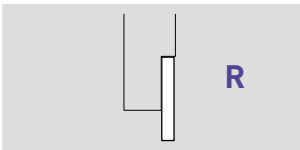
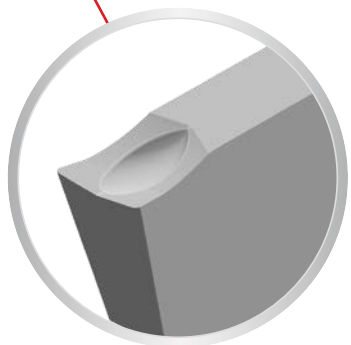
R



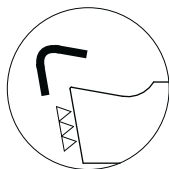
E	A	L	Art. N°	TiAlN N [µk20]	Art. N°	TiAlN N [µk20]
1.5	15°	7.5	651U-1.5	■ ■	661U-1.5	■ ■
2.0	15°	11	651U-2.0	■ ■	661U-2.0	■ ■



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



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: 0.02 mm/U

Tronçonnage

Abstechen

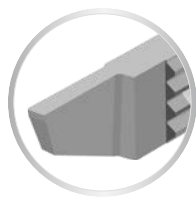
Parting off

Coupe déportée

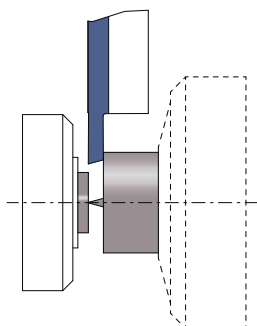
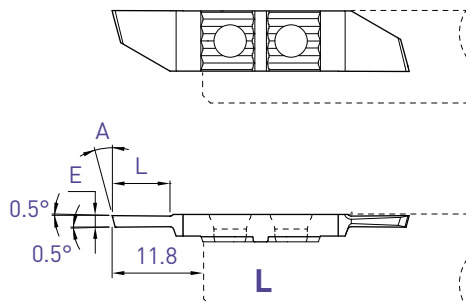
Versetztes Schneiden

Cut off line

651R



Cut R



L (R)

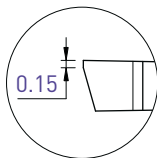
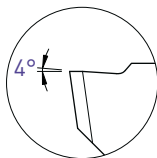
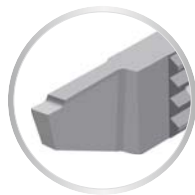
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

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°	■	■	□

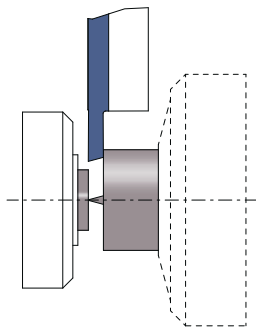
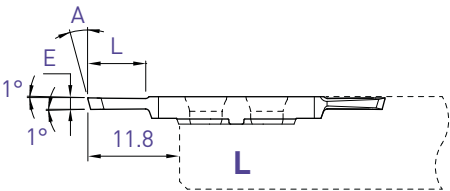
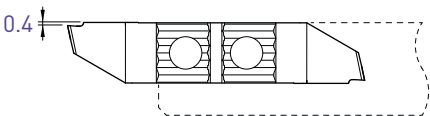
Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetzttes Schneiden
Cut off line

651RXF



Cut R



L (R)

Coupe à droite déportée
Versetzttes 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	■ ■	□ □	

Tronçonnage

Abstechen

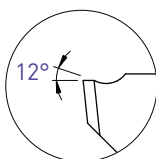
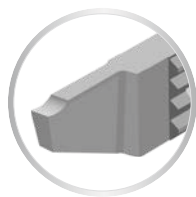
Parting off

Coupe déportée

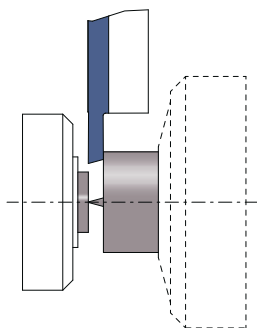
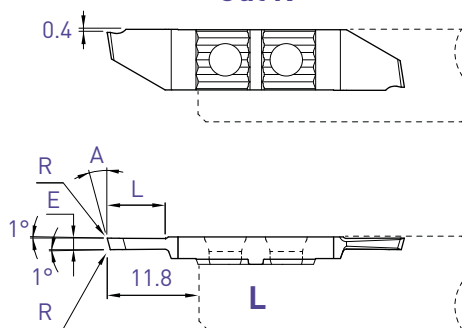
Versetztes Schneiden

Cut off line

651RX12



Cut R



L (R)

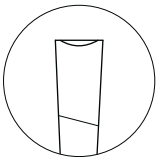
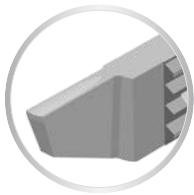
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

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	■ ■	□ □	

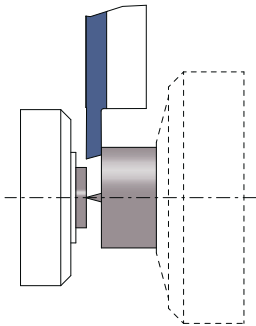
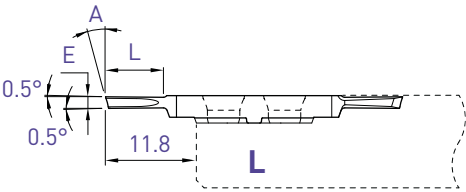
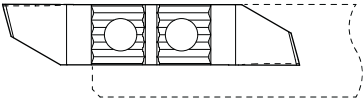
Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetzttes Schneiden
Cut off line

651RU



Cut R



L (R)

Coupe à droite déportée
Versetzttes 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	■ ■

Tronçonnage

Abstechen

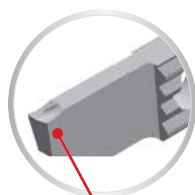
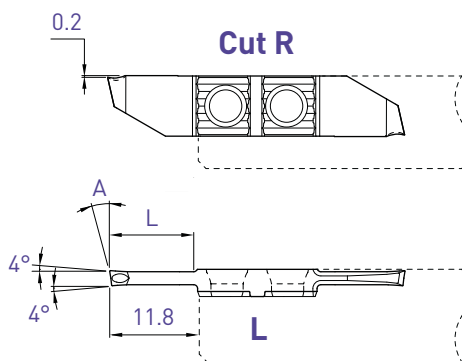
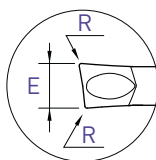
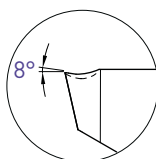
Parting off

Coupe déportée

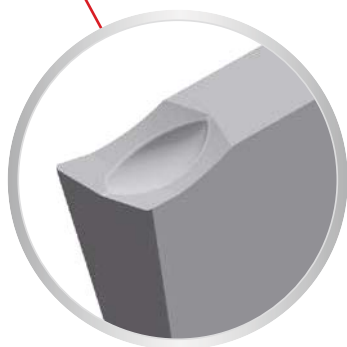
Versetztes Schneiden

Cut off line

651RZU



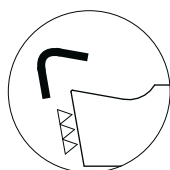
Pour un meilleur contrôle des copeaux
Für eine bessere Spankontrolle
For a better chip control



L (R)

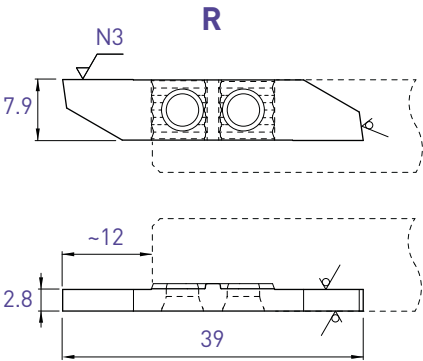
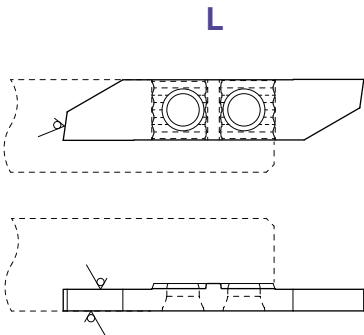
Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

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: 0.02 mm/U



Face de coupe polie
Polierte Schneidfläche
Polished cutting face

L



Art. N°	TiAlN	N [µk20]	HTA	HN [µk10]
651-EP	■	■	■	■

R

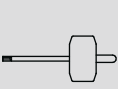
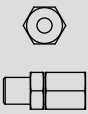


Art. N°	TiAlN	N [µk20]	HTA	HN [µk10]
661-EP	■	■	■	■

Pièces de rechange et accessoires

Ersatzteile und Zubehöre

Spare parts and accessories

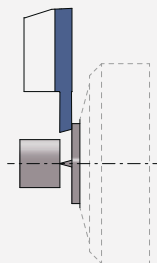
Pièces de rechange Ersatzteile Spare parts						Accessoires Zubehöre Accessories	
Porte-outils Halter Holders						Option Art. N°	Recommandation de serrage Drehmoment Empfehlung Clamping recommendation
630 640	V-M4X9-T15	C-T15	-	-	-	SET-NM-TX15	3 Nm
630-JET 640-JET			J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5		
650 660			-	-	-		
650-RC			-	-	-		
650-JET 660-JET			J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5		



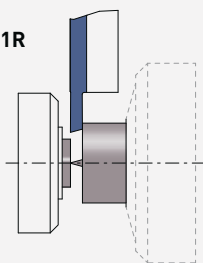
SET-NM-TX15



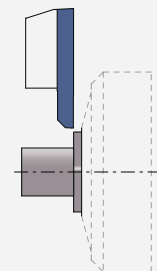
261



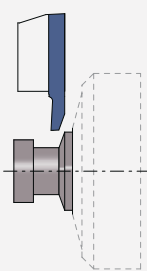
251R



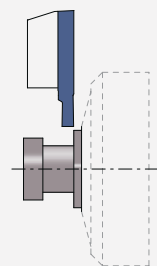
262



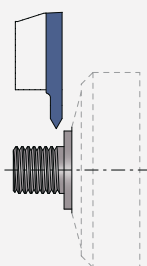
263



264



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Index

Nuances
Sorten
Grades **> 4.02**

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data
Accessoires
Zubehör
Accessories **> 4.03**

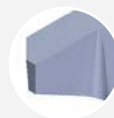
Porte-outils
Halter
Holders **> 4.04**



Tronçonnage
Abstechen
Parting off **Type 251 / 261** **> 4.08**



Tournage avant
Vorwärts drehen
Front turning **Type 252 / 262** **> 4.10**



Tournage arrière
Rückwärts drehen
Back turning **Type 253 / 263** **> 4.11**



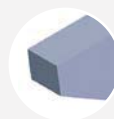
Fonçage-tournage
Einstechen und drehen
Grooving and turning **Type 254 / 264** **> 4.14**



Filetage
Gewinde drehen
Threading **Type 256 / 266** **> 4.16**



Plaquettes ébauches
WSP-Rohlinge
Blank inserts **Type 251E / 261E** **> 4.17**



AP302

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

- excellente nuance universelle
- 1^{er} 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

AP202

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

- nuance particulièrement adaptée aux faibles vitesses de coupe

- besonders geeignete Sorte für niedrige Schnittgeschwindigkeiten

- grade particularly suitable for low cutting speeds

N (μK20)

non revêtu
unbeschichtet
uncoated

- nuance micro-grain tenace
- supporte les coupes interrompues et autres conditions d'usinage défavorables

- zähe Feinkornsorte
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen geeignet

- tough micro-grain grade
- suitable for interrupted cut and other unfavourable machining conditions

AH302

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

- 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

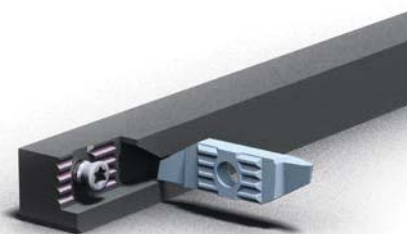
HN (μK10)

non revêtu
unbeschichtet
uncoated

- 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



Patented rigid clamping system

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

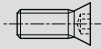
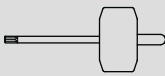
Standard machining data

Matière Werkstoff Material		Tournage Drehen Turning		Tronçonnage Abstechen Parting off	
		VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)
Acier de décolletage Automatenstahl Free-cutting steel	P	120 - 200	0.01 - 0.20	80 - 150	0.01 - 0.15
Acier Stahl Steel	P	< 600 N/mm ²	0.01 - 0.18	70 - 120	0.01 - 0.12
Acier Stahl Steel	P	< 800 N/mm ²	0.01 - 0.15	60 - 100	0.01 - 0.10
Acier Stahl Steel	P	> 800 N/mm ²	0.01 - 0.12	40 - 80	0.01 - 0.08
Acier inoxydable Rostfreistahl 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 Kupfer, Messing, Bronze Copper, brass, bronze	N	100 - 500	0.01 - 0.30	100 - 300	0.01 - 0.20
Titane Titan Titanium	S	30 - 70	0.01 - 0.12	30 - 50	0.01 - 0.06

Accessoires

Zubehöre

Accessories

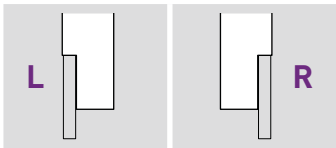
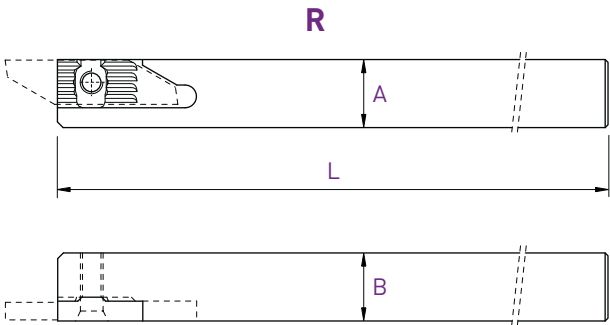
Porte-outils Halter Holders			Option Art. N°
250-8 / 260-8	V-M3.5X7.3-T15	C-T15	SET-NM-TX15
250-... / 260-...	V-M4X9-T15		
250RC / 260-C	V-M4X7.3-T15		

Recommandation de serrage
Drehmoment Empfehlung
Clamping recommendation

3.0 Nm



SET-NM-TX15



A x B	L	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

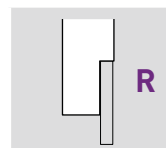
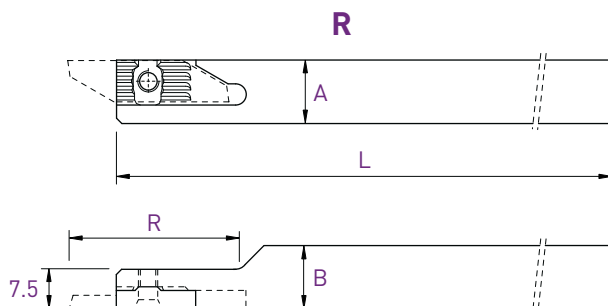
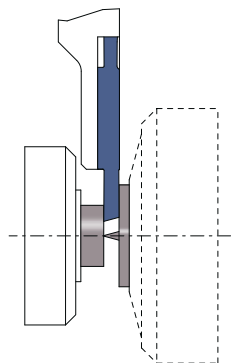
Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils

Halter

Holders

260-C



A x B	L	R	Art. N°
12 x 12	130	30	260-C-12

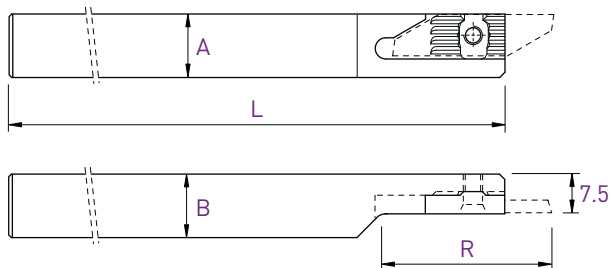
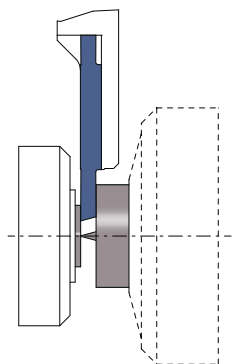
Porte-outils

Halter

Holders

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

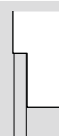
250RC



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

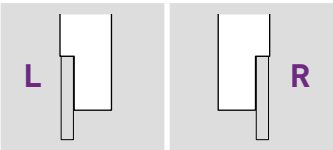
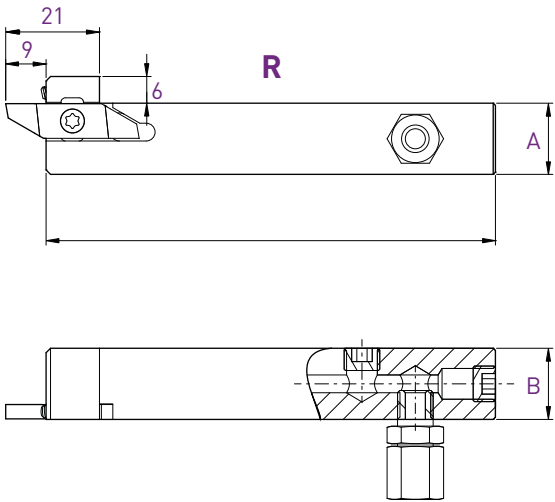


A x B	L	R	Art. N°
12 x 12	130	30	250RC-12
16 x 16	130	40	250RC-16

Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

250-JET / 260-JET



A x B	L	Art. N°	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 vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

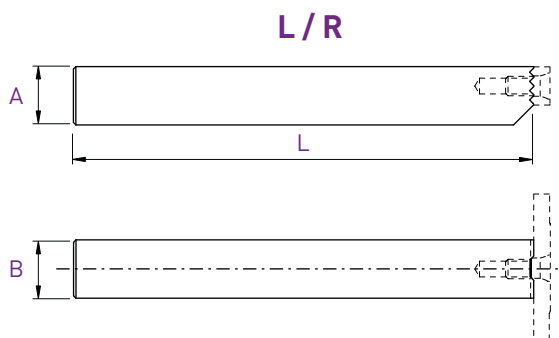
Pièces de rechange Ersatzteile Spare parts			Buse Düse Nozzle 
	Art. N°	Art. N°	Art. N°
250-JET / 260-JET	J-M8X1-D6	JB-M8X1	JJ-M3X6-D1.5

Porte-outils

Halter

Holders

260/250F



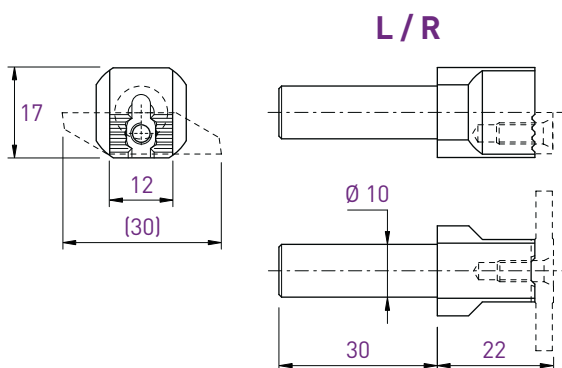
A x B	L	Art. N°
10 x 12	120	260/250F-1012
12 x 12	120	260/250F-1212

Porte-outils

Halter

Holders

260/250-D



Art. N°
260/250-D10

Chaque support est livré avec vis et clé.

Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.

Screw(s) and key are included with each tool holder.

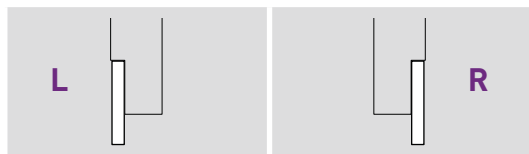
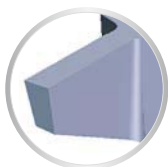
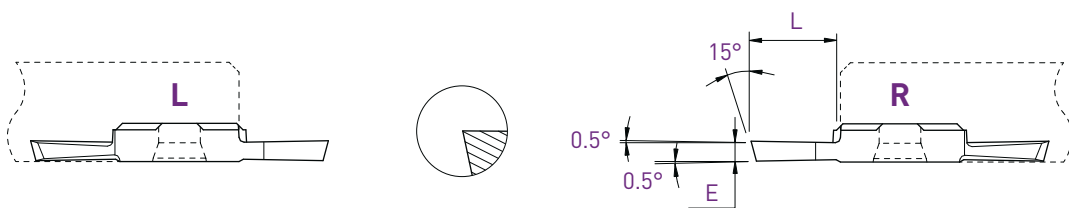
ECO-LINE

Tronçonnage

Abstechen

Parting off

251 / 261



E	L	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
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	■	□	■

Tronçonnage

Abstechen

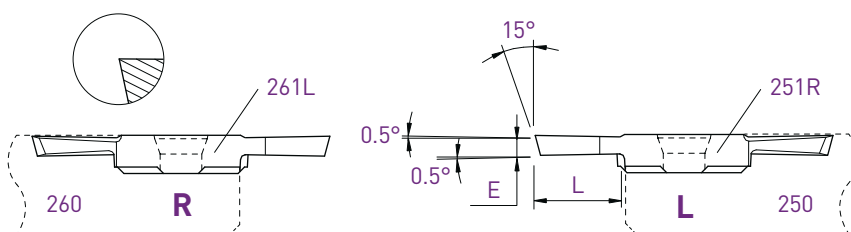
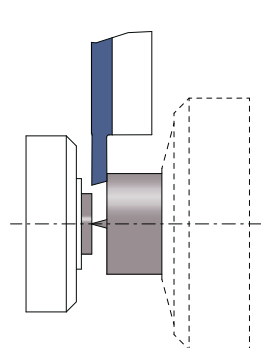
Parting off

Coupe déportée

Versetztes Schneiden

Cut off line

261L / 251R



R (L)					L (R)				
Coupe à gauche déportée Versetztes Linksschneiden Left cut off line					Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line				
E	L	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z

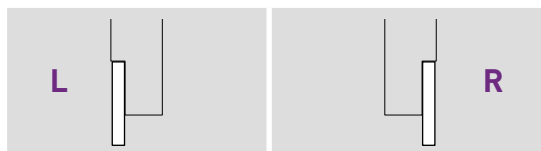
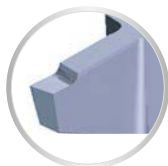
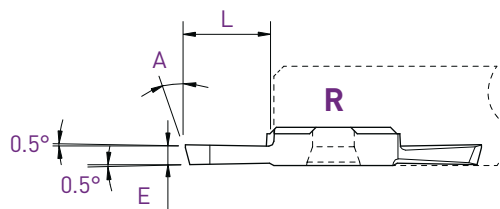
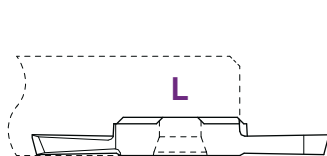
E	L	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
1.0	5	-				251R-1.0	■	□	■
1.5	7	-				251R-1.5	■	□	■
2.0	8.5	261L-2.0	■	□	■	251R-2.0	■	□	■

Tronçonnage

Abstechen

Parting off

251XF / 261XF



a	E	L	A	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
4°	1.0	4	15°	-				261XF-1.0	■	■	NEW
6°	1.0	4	8°	-				261XF6°-1.0-8°	■	■	NEW
4°	1.5	7	15°	251XF-1.5	■	□	■	261XF-1.5	■	□	■
4°	2.0	8.5	15°	251XF-2.0	■	□	■	261XF-2.0	■	□	■

Tronçonnage

Abstechen

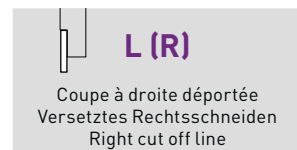
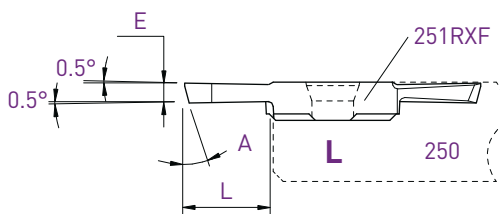
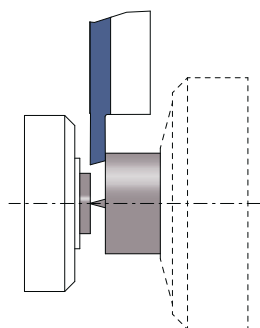
Parting off

Coupe déportée

Versetztes Schneiden

Cut off line

251RXF



a	E	L	A	Art. N°	AP302	AP202	z
6°	1.0	4	8°	251RXF6°-1.0-8°	■	■	NEW
4°	1.5	7	15°	251RXF-1.5	■	□	■
4°	2.0	8.5	15°	251RXF-2.0	■	□	■

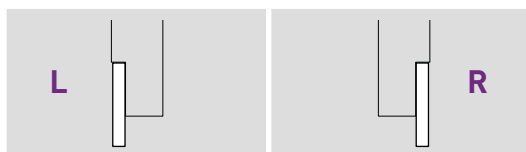
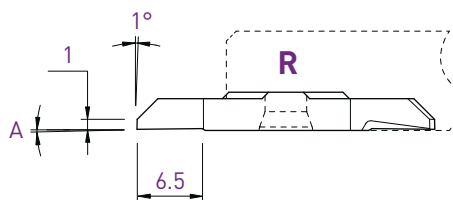
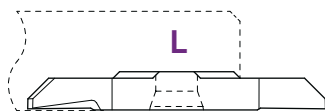
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

ECO-LINE

Tournage avant
Vorwärts drehen
Front turning

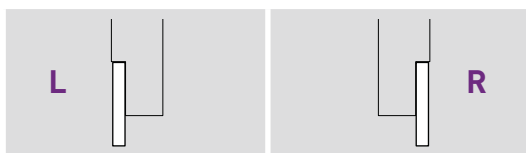
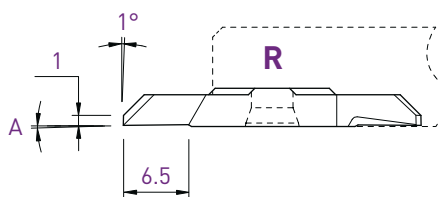
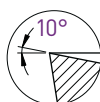
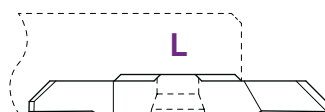
252 / 262



A	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
0°	252	■	□	■	262	■	□	■
2°	252-2°	■	□	■	262-2°	■	□	■

Tournage avant
Vorwärts drehen
Front turning

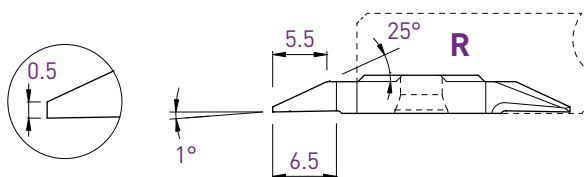
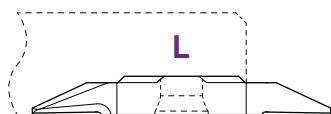
252X / 262X



A	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
0°	252X	■	□	■	262X	■	□	■
2°	252X-2°	■	□	■	262X-2°	■	□	■

Tournage avant
Vorwärts drehen
Front turning

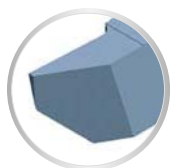
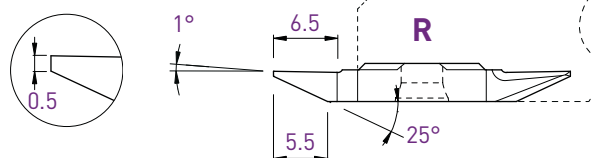
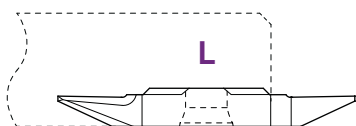
252S / 262S



L				R			
Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
252S05	■	□	■	262S05	■	□	■

Tournage arrière
Rückwärts drehen
Back turning

253S / 263S

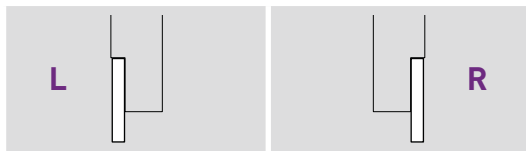
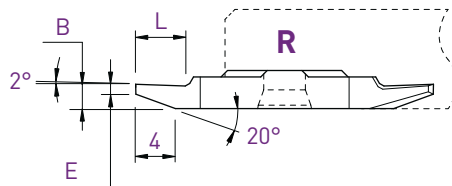
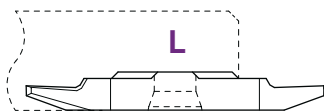


L				R			
Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
253S05	■	□	■	263S05	■	□	■

ECO-LINE

Tournage arrière
Rückwärts drehen
Back turning

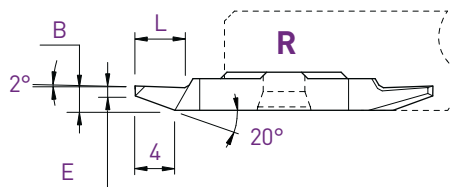
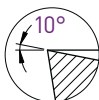
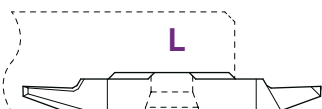
253 / 263



B	E	L	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
2.0	0.5	4	253-0.5	■	□	■	263-0.5	■	□	■
2.5	1.0	5	253-1.0	■	□	■	263-1.0	■	□	■

Tournage arrière
Rückwärts drehen
Back turning

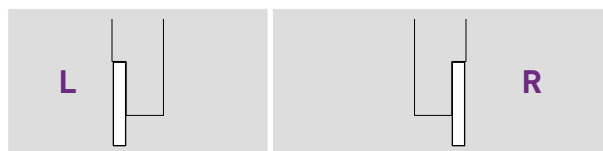
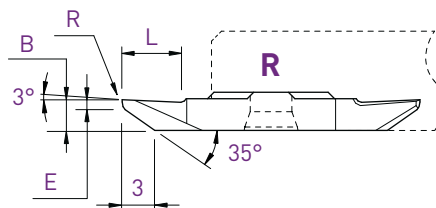
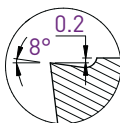
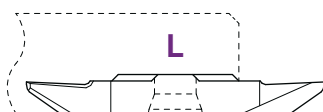
253X / 263X



B	E	L	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
2.0	0.5	5	253X-0.5	■	□	■	263X-0.5	■	□	■
2.5	1.0	5	253X-1.0	■	□	■	263X-1.0	■	□	■

Tournage arrière
Rückwärts drehen
Back turning

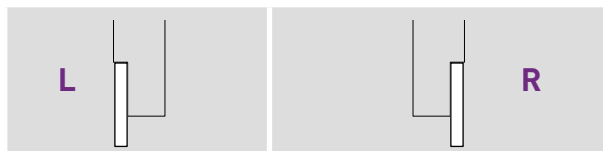
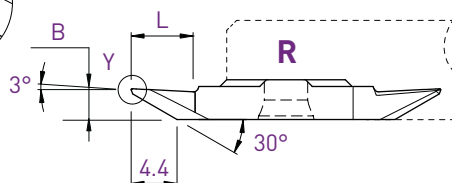
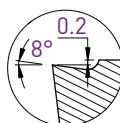
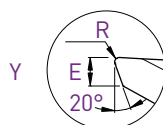
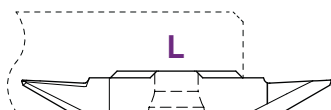
253VX-8° / 263VX-8°



B	E	L	R	Art. N°	AP302	AP202	Σ	Art. N°	AP302	AP202	Σ	AH302	HN
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	■	□	■	■	■

Tournage arrière
Rückwärts drehen
Back turning

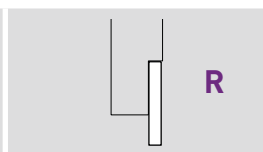
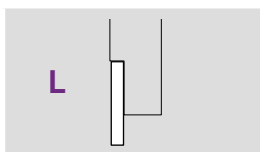
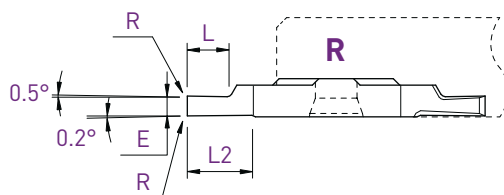
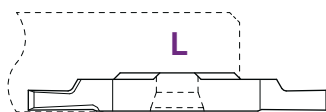
253VX-805 / 263VX-805



B	E	L	R	Art. N°	AP302	AP202	Σ	Art. N°	AP302	AP202	Σ	AH302	HN
3.0	0.5	6	0.08	253VX-805-R08	■	□	■	263VX-805-R08	■	□	■	■	■

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability



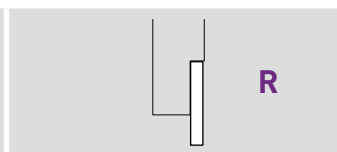
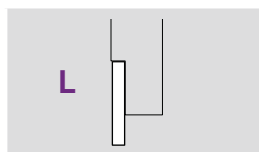
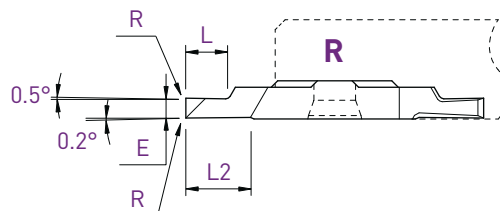
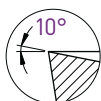
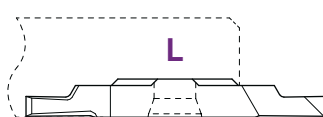
E	L	L2	R	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
0.8	2	4	0	254-0.8	■	□	■	264-0.8	■	□	■
1.0	2.5	4	0	254-1.0	■	□	■	264-1.0	■	□	■
1.2	3	4	0	254-1.2	■	□	■	264-1.2	■	□	■
1.5	3	4	0	254-1.5	■	□	■	264-1.5	■	□	■
1.8	4	6.5	0	-				264-1.8	■	□	■
2.0	4	6.5	0	254-2.0	■	□	■	264-2.0	■	□	■
2.5	6	6.5	0	254-2.5	■	□	■	264-2.5	■	□	■
3.0	6.5	6.5	0	254-3.0	■	□	■	264-3.0	■	□	■

Fonçage-tournage

Einstechen und drehen

Grooving and turning

254X / 264X

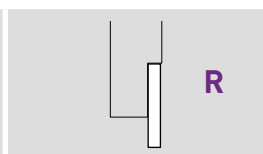
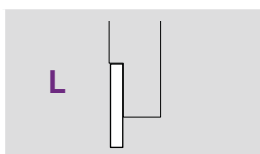
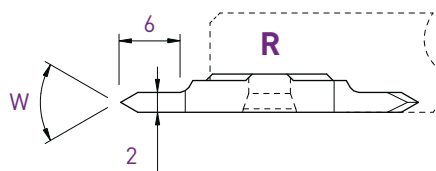
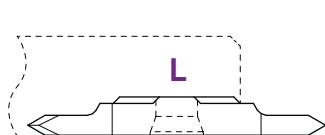


E	L	L2	R	Art. N°	AP302	AP202	Σ	Art. N°	AP302	AP202	Σ	AH302	HN
0.8	2	4	0	254X-0.8	■	□	■	264X-0.8	■	□	■		
1.0	2.5	4	0	254X-1.0	■	□	■	264X-1.0	■	□	■		
1.0	2.5	4	0.08	-				264X-1.0-R08	■	□	■	■	■
1.2	3	4	0	254X-1.2	■	□	■	264X-1.2	■	□	■		
1.5	3	4	0	254X-1.5	■	□	■	264X-1.5	■	□	■		
1.5	3	4	0.08	-				264X-1.5-R08	■	□	■	■	■
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	■	□	■	■	■

Filetage
Gewinde drehen
Threading

Partial profile 60°

256-60 / 266-60

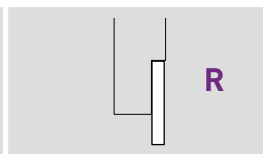
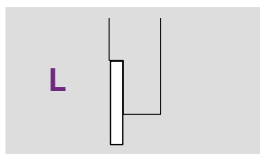
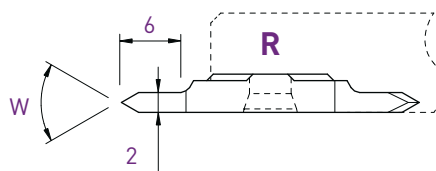
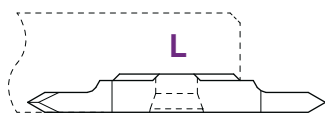


W	R	a	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
60°	0	0°	256-60-2.0	■	□	■	266-60-2.0	■	□	■
60°	0.06	3°	256-AG60°	■	□	■	266-AG60°	■	□	■

Filetage
Gewinde drehen
Threading

Partial profile 55°

256-55 / 266-55



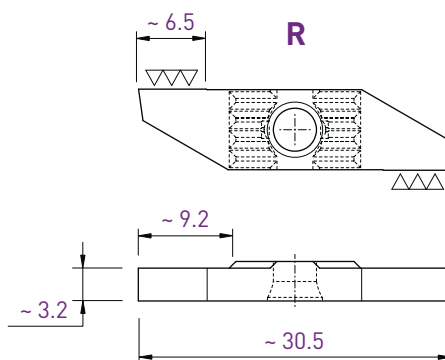
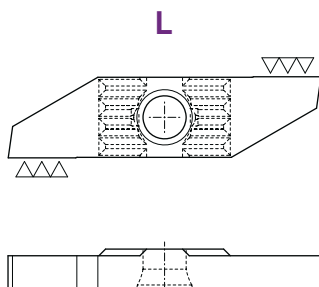
W	R	a	Art. N°	AP302	AP202	z	Art. N°	AP302	AP202	z
55°	0	0°	256-55-2.0	■	□	■	266-55-2.0	■	□	■
55°	0.06	3°	256-AG55°	■	□	■	266-AG55°	■	□	■

Plaquettes ébauches

WSP-Rohlinge

Blank inserts

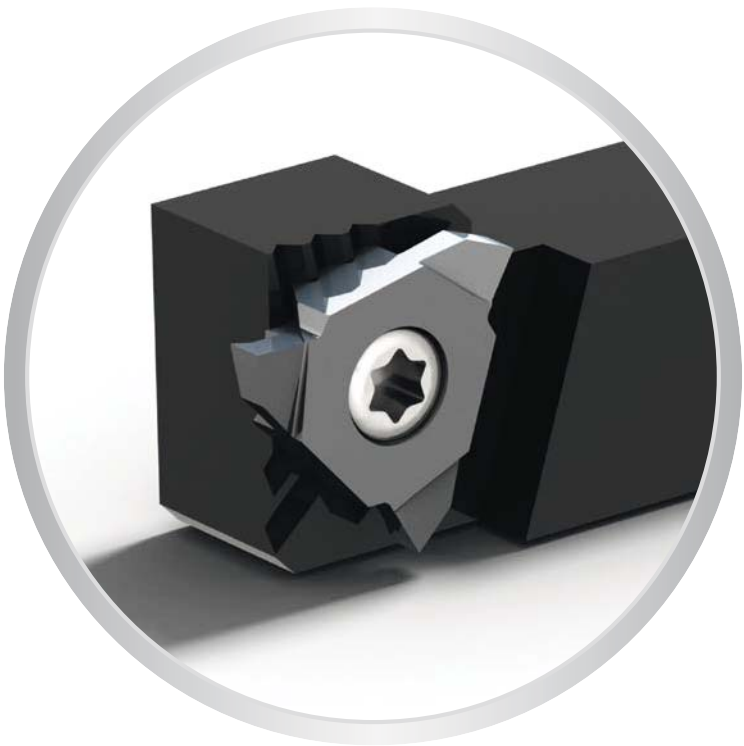
251-E / 261-E



L

R

Art. N°	AP302	AP202	N	AH302	HN	Art. N°	AP302	AP202	N	AH302	HN
251-E	■	□	■	■	■	261-E	■	□	■	■	■



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Nuances
Sorten
Grades

> 5.02

Conseils d'utilisation - Accessoires
Anwendungsempfehlungen - Zubehör
Application recommendations - Accessories



> 5.03

Porte-outils
Halter
Holders



> 5.04

GX

Gorge de précision
Präzisionseinstechen
High precision grooving

DIN6799
& DIN471



> 5.05

FT

Tournage finition
Schlicht drehen
Fine turning



> 5.06

GT

Fonçage-tournage
Einstechen und drehen
Grooving and turning



> 5.07

GTX

Fonçage-tournage avec coupe positive
Einstechen und drehen mit positivem Spanwinkel
Grooving and turning with positive cut



> 5.08

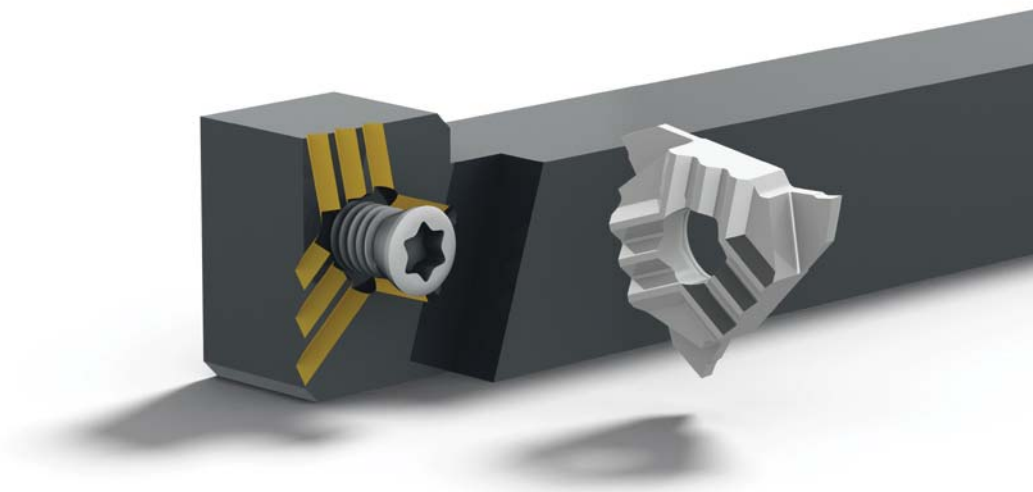
EP

Plaquettes ébauches
WSP-Rohlinge
Blank inserts



> 5.09

Rigid clamping system with the famous Applitec teeth clamping



Nuances micro-grain à dureté élevée

Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

HTA

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

- 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

HN (μK10)

non revêtu
unbeschichtet
uncoated

- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du laiton, de l'aluminium et du titane faiblement allié

- sehr verschleissfeste Feinkornsorte
- für die Bearbeitung von Messing und niedrig legiertem Aluminium und Titan empfehlenswert

- very wear resistant micro-grain grade
- suitable for the machining of brass and low alloyed aluminium and titanium

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

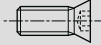
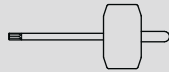
Standard machining data

Matière Werkstoff Material		Tournage Drehen Turning		Foncer Einstechen Grooving	
		VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)
Acier de décolletage Automatenstahl Free-cutting steel	(P)	120 - 200	0.01 - 0.20	80 - 150	0.01 - 0.15
Acier Stahl Steel	< 600 N/mm ² (P)	80 - 160	0.01 - 0.18	70 - 120	0.01 - 0.12
Acier Stahl Steel	< 800 N/mm ² (P)	60 - 120	0.01 - 0.15	60 - 100	0.01 - 0.10
Acier Stahl Steel	> 800 N/mm ² (P)	50 - 100	0.01 - 0.12	40 - 80	0.01 - 0.08
Acier inoxydable Rostfreistahl 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 Kupfer, Messing, Bronze Copper, brass, bronze	(N)	100 - 500	0.01 - 0.30	100 - 300	0.01 - 0.20
Titane Titan Titanium	(S)	30 - 70	0.01 - 0.12	30 - 50	0.01 - 0.06

Accessoires

Zubehöre

Accessories

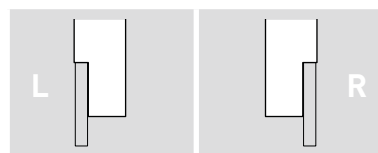
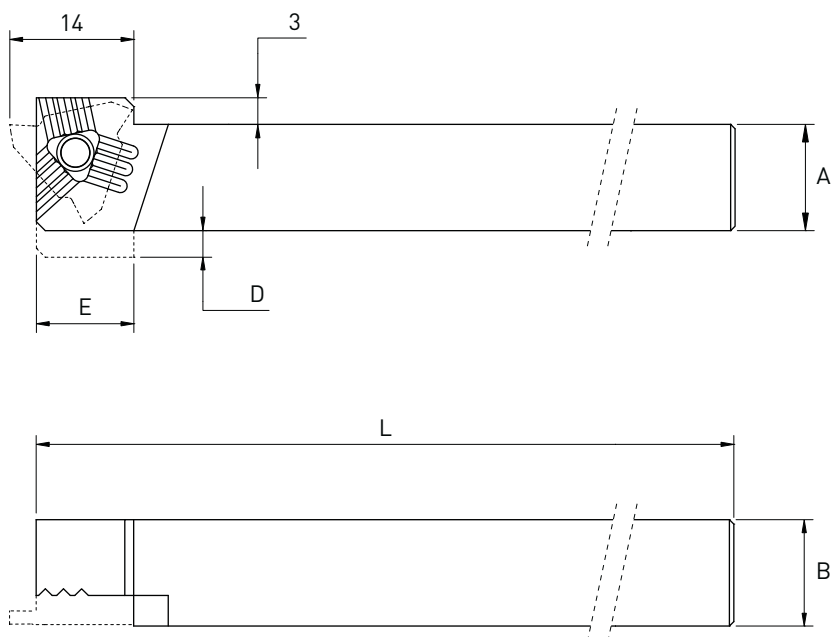
Porte-outils Halter Holders			Option Art. N°
T216-H...	V-M4X9-T15	C-T15	SET-NM-TX15

Recommandation de serrage
Drehmoment Empfehlung
Clamping recommendation

3.0 Nm



SET-NM-TX15



Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n)
und Schlüssel geliefert.
Screw(s) and key are included with each
tool holder.

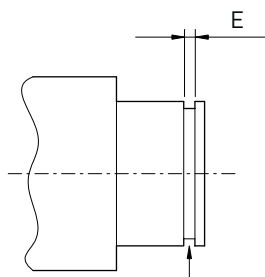
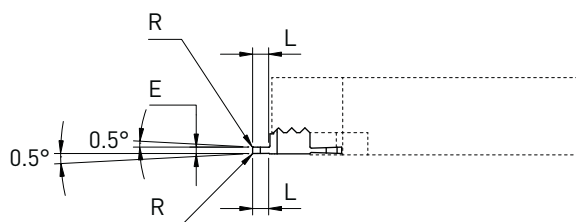
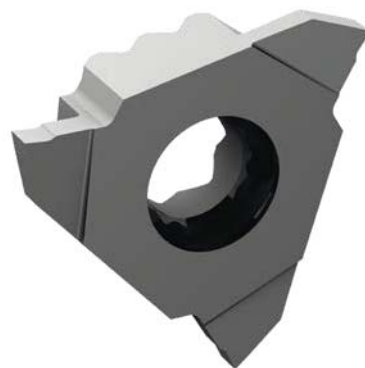
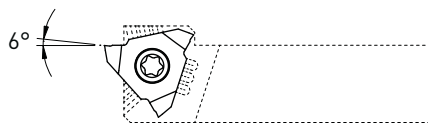
A	B	D	E	L	Art. N°	Art. N°
8	10	4	11	115	T216-H0810L	T216-H0810R
10	10	2	8	130	T216-H1010L	T216-H1010R
12	12	-	-	130	T216-H1212L	T216-H1212R
12	12	-	-	90	T216-H1212L-90	T216-H1212R-90
16	16	-	-	120	T216-H1616L	T216-H1616R
20	20	-	-	130	T216-H2020L	T216-H2020R

Plaquettes de gorge pour circlips

Einstechwendeplatte für Seegerring

Grooving inserts for retaining ring

GX



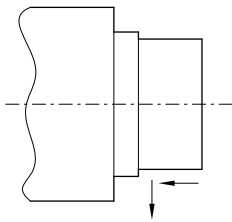
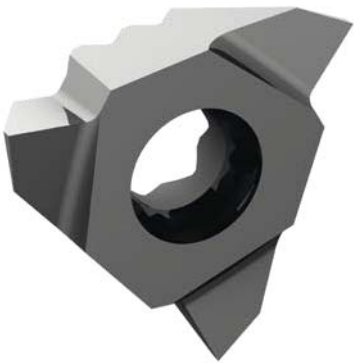
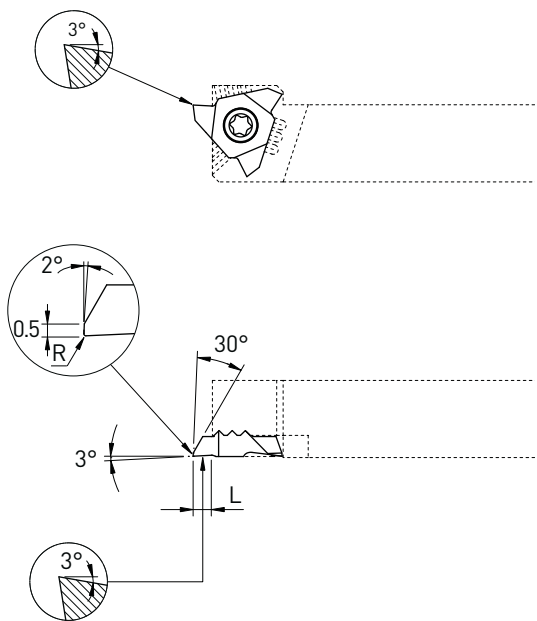
Selon DIN6799 et DIN471
Gemäss DIN6799 und DIN471
According to DIN6799 and DIN471



E ±0,01	L	R	Art. N°	L		Art. N°	R	
				HTA	HN		HTA	HN
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	■	■

Tournage avant
Vorwärts drehen
Front turning

FT



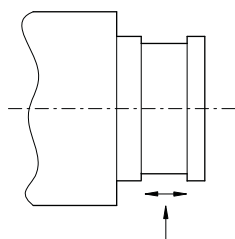
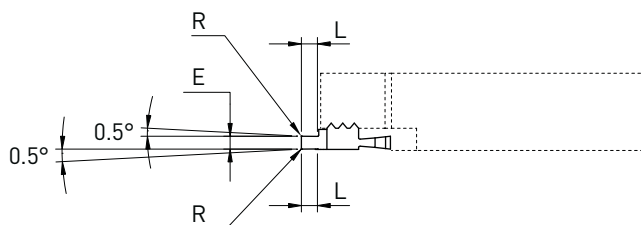
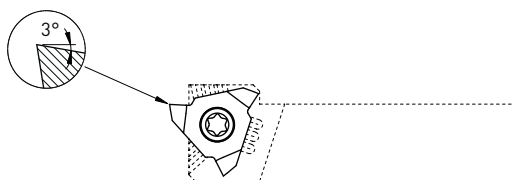
		L		R	
		Art. N°		Art. N°	
L	R	HTA	HN	HTA	HN
3.0	0.03	■	■	■	■
3.0	0.08	■	■	■	■

Fonçage-tournage

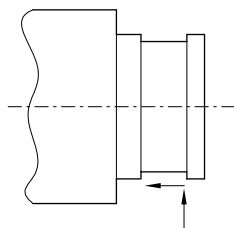
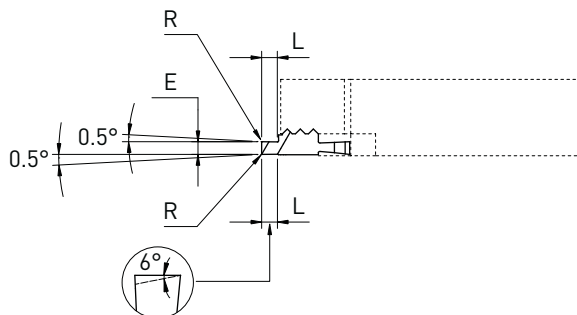
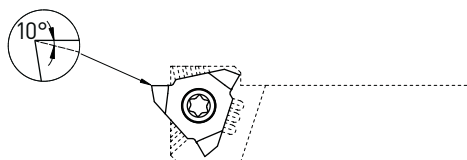
Einstechen und drehen

Grooving and turning

GT



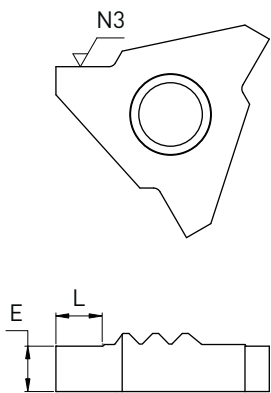
			L		R	
E	L	R	Art. N°	HTA HN	Art. N°	HTA HN
0.5	1.5	0.03	T216L-GT050	■ ■	T216R-GT050	■ ■
1.0	2.5	0.03	T216L-GT100	■ ■	T216R-GT100	■ ■
1.0	2.5	0.08	T216L-GT100-R08	■ ■	T216R-GT100-R08	■ ■
1.5	2.5	0.03	T216L-GT150	■ ■	T216R-GT150	■ ■
1.5	2.5	0.08	T216L-GT150-R08	■ ■	T216R-GT150-R08	■ ■
1.5	2.5	0.15	T216L-GT150-R15	■ ■	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	Art. N°	HTA HN
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	■ ■

- Plaquettes ébauches
- WSP-Rohlinge
- Blank inserts

EP

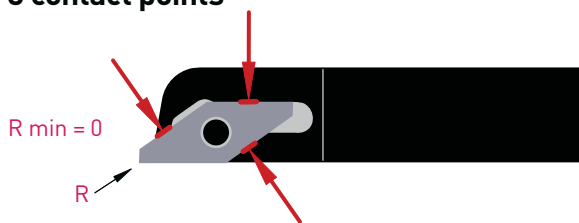


		L		R	
E	L	Art. N°	HTA HN	Art. N°	HTA HN
~3	3	T216L-EP	■	T216R-EP	■

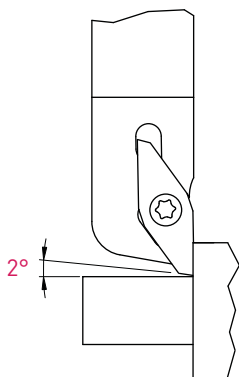


300 Series

3 contact points



rigid clamping system



“wiper effect”

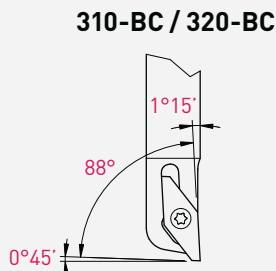
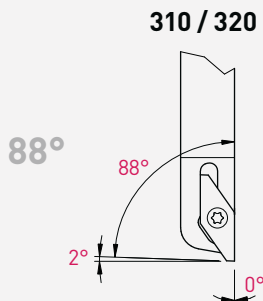
Pour un meilleur état de surface
Für eine bessere Oberflächengüte
For a better surface finish



Conseils d'utilisation et paramètres de coupe indicatifs
 Anwendungsempfehlungen und empfohlene Schnittwerte
 Application recommendations and standard machining data

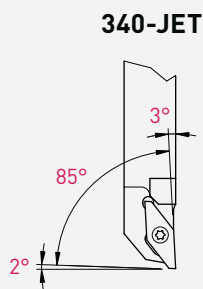
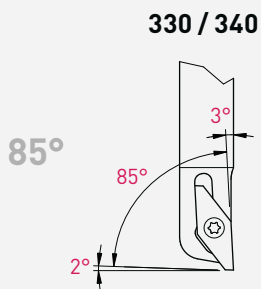
> 6.02

Tournage avant
 Vorwärts drehen
 Front turning



> 6.06

Tournage avant
 Vorwärts drehen
 Front turning



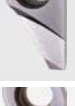
> 6.10

TURN-LINE

Conseils d'utilisation

Anwendungsempfehlungen

Application recommendations

Géométries de coupe Spanformgeometrien Cutting geometry		(P) Acier de décolletage Automatenstahl Free-cutting steel	(P) Acier Stahl Steel	(M) Acier inoxydable Rostfreistahl Stainless steel	(N) Aluminium	(N) Laiton, bronze Messing, Bronze Brass, bronze	(N) Cuivre Kupfer Copper	(S) Titane Titane Titanium	★ 1 ^{er} choix 1. Wahl 1 st choice	☆ Recommandé Empfohlen Recommended	☑ Pour pièces fragiles de très petits diamètres Für empfindliche und sehr kleine Werkstücke For fragile and very small work pieces
	3_7	★	★	★	★		★	☆	Géométrie universelle, très bonne maîtrise du copeau Allgemeine Geometrie, sehr gute Spankontrolle All-round insert with efficient chip control		
	3_7-EN	☆	★	☆					Arête renforcée (augmente l'effort de coupe) Verstärkte Schneidkante (Schneidkraftehöhung) Reinforced cutting edge (increases cutting force) f min: 0.02 mm/U		
	3_8	☑	☑	☑		★			Géométrie plate classique Standard flache Geometrie Standard flat geometry		
	3_8VS	☆		☆	☑		☑	☑	Brise-copeau pour usinage léger en finition Spanbrecher für leichte Schlichtbearbeitung Chip-breaker for light finishing operation		
	3_8VX	★	★	★	★		★	★	Très bonne maîtrise du copeau Sehr gute Spankontrolle Very efficient chip control		
	3_8X	★	★	★	☆		☆	★	Coupe positive traditionnelle Standard positive Geometrie Standard positive geometry		
	3_9	☆	☆	☆		☆			Témoin plat sur la coupe pour réduire les vibrations Vibrationsreduzierung durch einer Flachfase und der Schneidkante Vibration reduction through flat ended cutting edge		

Nuances micro-grain à dureté élevée

Verschleissfeste Feinkornsorten

Wear resistant micro-grain grades

P M N S TiAlN μK20 + revêtement PVD μK20 + PVD Beschichtung μK20 + PVD coating - excellente nuance universelle 1^{er} 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	P M N TiN μK20 + revêtement PVD μK20 + PVD Beschichtung μK20 + PVD coating - 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	P M S TiAlX μK20 + revêtement PVD μK20 + PVD Beschichtung μK20 + PVD coating - 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, ...	P S N (μK20) non revêtu unbeschichtet uncoated - 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
P M N S HTA μK10 + revêtement PVD μK10 + PVD Beschichtung μK10 + PVD coating - 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	P M N HTiN μK10 + revêtement PVD μK10 + PVD Beschichtung μK10 + PVD coating - 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	P M S HTAX μK10 + revêtement PVD μK10 + PVD Beschichtung μK10 + PVD coating - 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: Chrome-nickel, Vanadium, Molybdenum, ...	P S HN (μK10) non revêtu unbeschichtet uncoated - 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

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

		Tournage Drehen Turning		
Matière Werkstoff Material		VC	Prof. de passe Schnitttiefe Depth of cut	Avance Vorschub Feed
		(m/min)	(mm)	(mm/U)
Acier de décolletage Automatenstahl Free-cutting steel		120 - 200	0.05 - 1.0 1.0 - 4.0	0.01 - 0.15 0.05 - 0.25
Acier Stahl Steel	< 600 N/mm²	80 - 160	0.05 - 1.0 1.0 - 4.0	0.01 - 0.15 0.05 - 0.25
Acier Stahl Steel	< 800 N/mm²	60 - 120	0.05 - 1.0 1.0 - 4.0	0.01 - 0.10 0.05 - 0.20
Acier Stahl Steel	> 800 N/mm²	50 - 100	0.05 - 1.0 1.0 - 3.0	0.01 - 0.08 0.05 - 0.15
Acier inoxydable Rostfreistahl Stainless steel		60 - 120	0.05 - 1.0 1.0 - 3.0	0.01 - 0.08 0.05 - 0.15
Aluminium Si <12%		200 - 1000	0.05 - 1.0 1.0 - 4.0	0.01 - 0.20 0.05 - 0.40
Aluminium Si >12%		180 - 800	0.05 - 1.0 1.0 - 4.0	0.01 - 0.20 0.05 - 0.40
Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze		100 - 500	0.05 - 1.0 1.0 - 4.0	0.01 - 0.20 0.05 - 0.35
Titane Titan Titanium		30 - 70	0.05 - 1.0 1.0 - 4.0	0.01 - 0.08 0.05 - 0.15

Indications pour premier réglage**Hinweise für die erste Einrichtung****Indications for first setting**

Ébauche Schruppen Roughing	Finition Schlichten Finishing
• vitesse de coupe moyenne • avance élevée	• vitesse de coupe élevée • avance faible
• durchschnittliche Schnittgeschwindigkeit • hohe Schnittgeschwindigkeit	• hohe Schnittgeschwindigkeit • niedriger Vorschub
• average cutting speed • high cutting speed	• high cutting speed • 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 Schnittbedingungen leistungsfähig zu sein
- die in der nebenstehenden Tabelle nicht erwähnten Anwendungsfälle können sich auch effizient erweisen

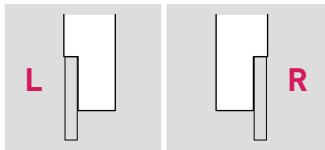
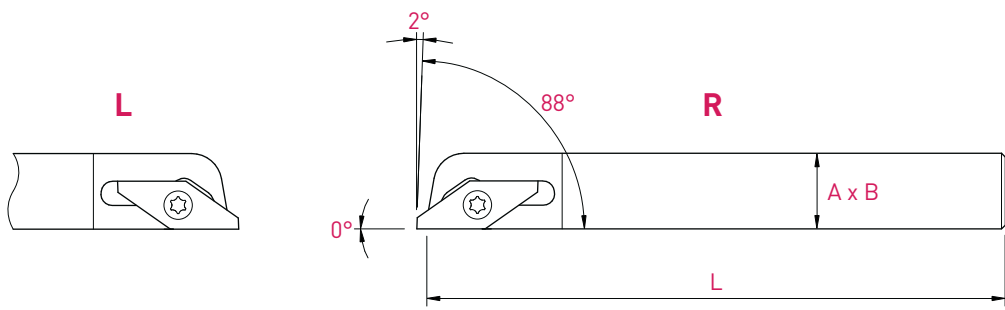
- in many cases, it is impossible to reach the recommended cutting speed, due to the machine limits
- Applitec tools are especially designed to be efficient even in bad cutting conditions
- applications not mentioned in the opposite table can also be efficient

TURN-LINE

Porte-outils
Halter
Holders

88°

310 / 320



A x B	L	Art. N°	Art. N°
7 x 7	115	311	321
8 x 8	115	312	322
10 x 10	115	313	323
10 x 10	140	-	323-140
12 x 12	115	314	324
12 x 12	90	314-90	324-90
12 x 12	140	314-140	324-140
12.7 x 12.7	140	314-12.7	324-12.7
16 x 16	100	315	325
16 x 16	140	315-140	325-140
20 x 20	120	316	326

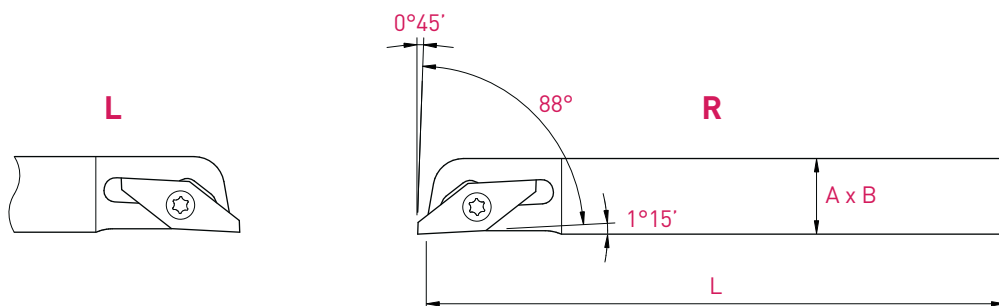
Porte-outils

Halter

Holders

88°

310-BC / 320-BC



L

R

A x B	L	Art. N°	Art. N°
7 x 7	115	311-BC	321-BC
8 x 8	115	312-BC	322-BC
10 x 10	115	313-BC	323-BC
10 x 10	140	-	323-140-BC
12 x 12	115	314-BC	324-BC
12 x 12	90	314-90-BC	324-90-BC
12 x 12	140	314-140-BC	324-140-BC
12.7 x 12.7	140	314-12.7-BC	324-12.7-BC
16 x 16	100	315-BC	325-BC
16 x 16	140	315-140-BC	325-140-BC
20 x 20	120	316-BC	326-BC

 Porte-outils
Halter
Holders

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


311 / 321

312 - 316

322 - 326

V-M2.5X6.5-T8

V-M2.5X7.8-T8

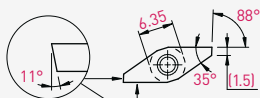
C-T8

Chaque support est livré avec vis et clé.
Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
Screw(s) and key are included with each tool holder.

TURN-LINE

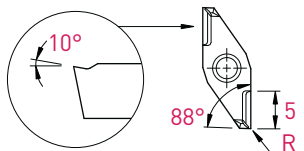
Tournage avant
Vorwärts drehen
Front turning

88°



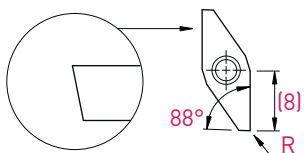
310 / 320

317 / 327



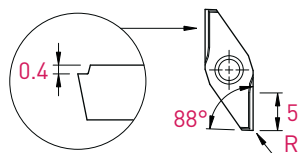
R	Art. N°	L						Art. N°	R					
		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)		TiAlN	TiN	N (µk20)	HTA	HTiN	HN (µk10)
0	317	■	■	■	■	■	■	327	■	■	■	■	■	■
0.03	317-R03	■	■	■	■	■	■	327-R03	■	■	■	■	■	■
0.08	317-R08	■	■	■	■	■	■	327-R08	■	■	■	■	■	■
0.10	317-R10	■	■	■	■	■	■	327-R10	■	■	■	■	■	■
0.20	317-R20	■	■	■	■	■	■	327-R20	■	■	■	■	■	■

318 / 328



R	Art. N°	L			Art. N°	R		
		HTA	HTiN	HN (µk10)		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	■	■	■

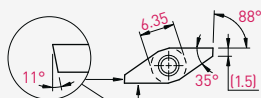
318VS / 328VS



R	Art. N°	L			Art. N°	R		
		HTA	HTiN	HN (µk10)		HTA	HTiN	HN (µk10)
0	318VS	■	■	■	328VS	■	■	■
0.10	318VS-R10	■	■	■	328VS-R10	■	■	■

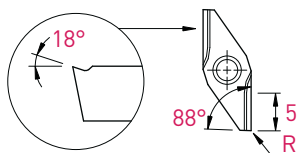
Tournage avant
Vorwärts drehen
Front turning

88°



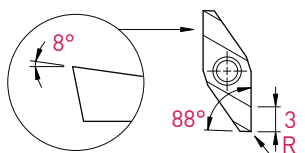
310 / 320

318VX / 328VX



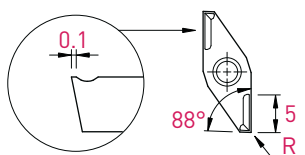
	L	P	P	P		R	P	P	P
		M	M	N			M	M	N
		N	N	N			N	N	N
		S		S			S		S
R	Art. N°	HTA	HTiN	HN (µk10)		Art. N°	HTA	HTiN	HN (µk10)
0	318VX	■	■	■		328VX	■	■	■
0.05	318VX-R05	■	■	■		328VX-R05	■	■	■
0.10	318VX-R10	■	■	■		328VX-R10	■	■	■
0.20	-					328VX-R20	■	■	■
0.40	-					328VX-R40	■	□	■ NEW

318X / 328X



	L	P	P	P		R	P	P	P
		M	M	N			M	M	N
		N	N	N			N	N	N
		S		S			S		S
R	Art. N°	HTA	HTiN	HN (µk10)		Art. N°	HTA	HTiN	HN (µk10)
0	318X	■	■	■		328X	■	■	■
0.10	318X-R10	■	■	■		328X-R10	■	■	■

319 / 329



	L	P	P	P		R	P	P	P
		M	M	N			M	M	N
		N		N			N		N
R	Art. N°	HTA	HTiN	HN (µk10)		Art. N°	HTA	HTiN	HN (µk10)
0	319	■	■	■		329	■	■	■
0.10	319-R10	■	■	■		329-R10	■	■	■
0.20	319-R20	■	■	■		329-R20	■	■	■

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

TURN-LINE

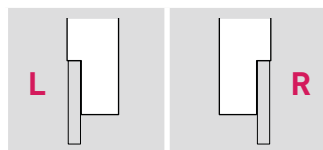
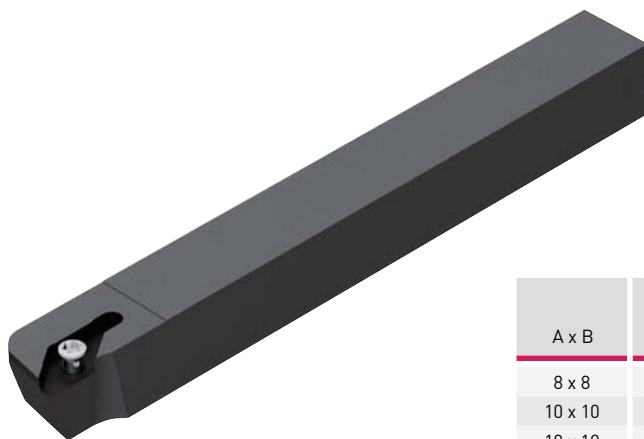
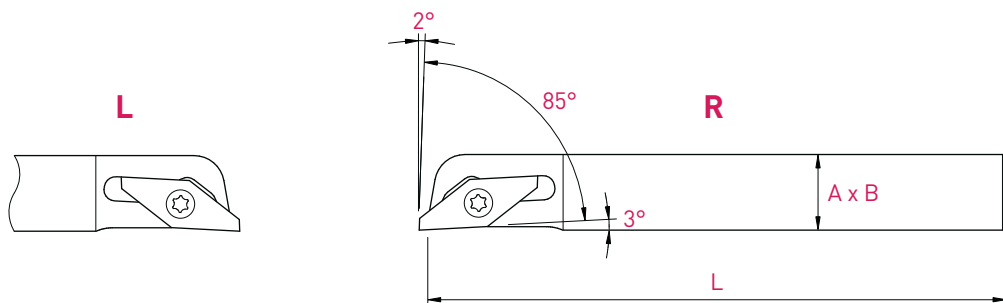
Porte-outils

Halter

Holders

85°

330 / 340



A x B	L	Art. N°	Art. N°
8 x 8	115	332	342
10 x 10	115	333	343
10 x 10	140	-	343-140
12 x 12	115	334	344
12 x 12	90	334-90	344-90
12 x 12	140	334-140	344-140
12.7 x 12.7	140	334-12.7	344-12.7
16 x 16	100	335	345
16 x 16	140	335-140	345-140
20 x 20	120	336	346

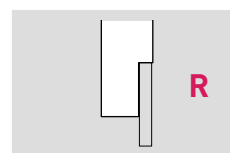
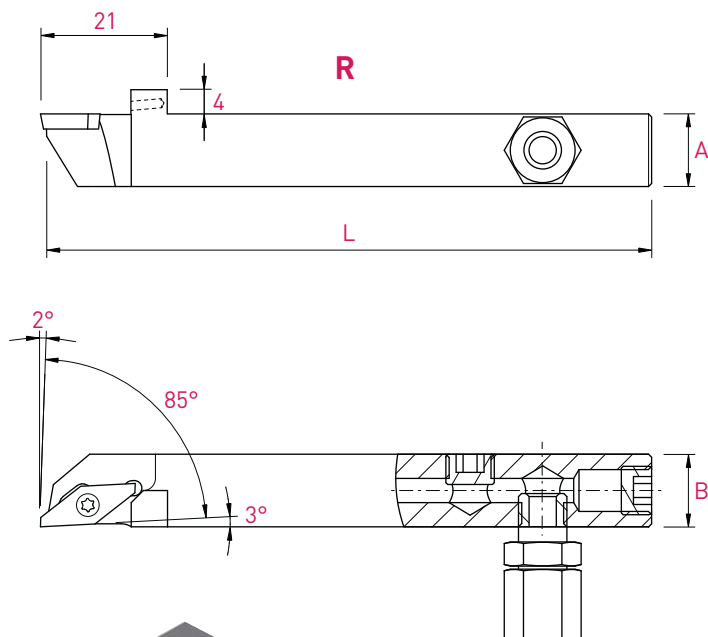
Porte-outils Halter Holders	Serrage standard (A) Standard Spannsystem (A) Standard clamping system (A)	
332 - 336 342 - 346	V-M2.5X7.8-T8	C-T8

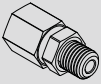
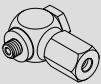
Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
 Screw(s) and key are included with each tool holder.

Porte-outils avec arrosage intégré
 Halter mit integrierter Kühlmittelzufuhr
 Holders with integrated coolant supply

85°

340-JET



Pièces de rechange Ersatzteile 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

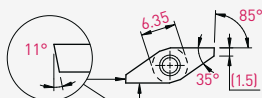
A x B	L	Art. N°
8 x 10	100	340-0810-JET NEW
10 x 12	100	340-1012-JET
12 x 12	100	340-12-JET
12.7 x 12.7	100	340-12.7-JET
16 x 16	100	340-16-JET
20 x 20	100	340-20-JET

Chaque support est livré avec vis et clé.
 Jeder Halter wird mit Spannschraube(n) und Schlüssel geliefert.
 Screw(s) and key are included with each tool holder.

TURN-LINE

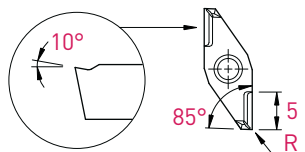
Tournage avant
Vorwärts drehen
Front turning

85°



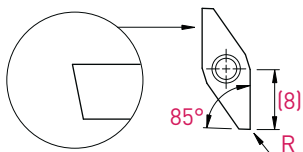
330 / 340

337 / 347



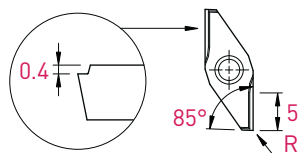
R	Art. N°	L							Art. N°	R						
		TiAlN	TiAlX	TiN	N [μk20]	HTA	HTAX	HTiN		TiAlN	TiAlX	TiN	N [μk20]	HTA	HTAX	HTiN
0	337	■	■	■	■	■	■	■	347	■	■	■	■	■	■	■
0.03	337-R03	■	■	■	■	■	■	■	347-R03	■	■	■	■	■	■	■
0.08	337-R08	■	■	■	■	■	■	■	347-R08	■	■	■	■	■	■	■
0.10	337-R10	■	■	■	■	■	■	■	347-R10	■	■	■	■	■	■	■
0.20	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	Art. N°	L			Art. N°	R		
		HTA	HTiN	HN [μk10]		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	■	■	■

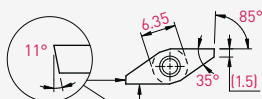
338VS / 348VS



R	Art. N°	L			Art. N°	R		
		HTA	HTiN	HN [μk10]		HTA	HTiN	HN [μk10]
0	338VS	■	■	■	348VS	■	■	■
0.10	338VS-R10	■	■	■	348VS-R10	■	■	■

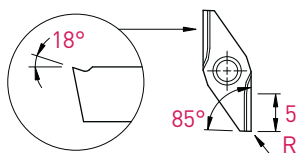
Tournage avant
Vorwärts drehen
Front turning

85°



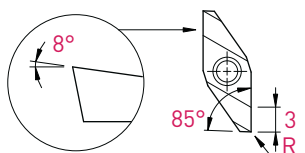
330 / 340

338VX / 348VX



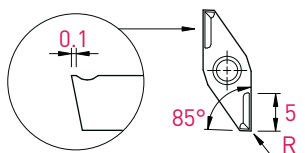
		L			R		
		P	M	N	P	M	N
		S			S		
		HTA	HTiN	HN (µk10)			
R	Art. N°				Art. N°	HTA	HTiN
0	338VX	■	■	■	348VX	■	■
0.05	338VX-R05	■	■	■	348VX-R05	■	■
0.10	338VX-R10	■	■	■	348VX-R10	■	■

338X / 348X



		L			R		
		P	M	N	P	M	N
		S			S		
		HTA	HTiN	HN (µk10)			
R	Art. N°				Art. N°	HTA	HTiN
0	338X	■	■	■	348X	■	■
0.10	338X-R10	■	■	■	348X-R10	■	■

339 / 349



		L			R		
		P	M	N	P	M	N
		S			S		
		HTA	HTiN	HN (µk10)			
R	Art. N°				Art. N°	HTA	HTiN
0	339	■	■	■	349	■	■
0.10	339-R10	■	■	■	349-R10	■	■
0.20	339-R20	■	■	■	349-R20	■	■

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Neuheiten dieses Kataloges
New products introduced in this catalogue



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		EN-HF3	7.07
		FN-X8	7.09
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		EN-KM	7.09
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		R = 0.15	7.30-7.31
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		R = 0.15	7.46-7.47
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	Carbide + PVD	ZTA	7.10
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		HTAX	7.10
	Métal dur + CVD	Ti5	7.11
	VHM + CVD	HTi5	7.11
	Carbide + CVD	Ti6	7.11
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		HCT7	7.11
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	SV...-JET	SV...-JET	7.41
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	SD...12.7...	SD...12.7...	7.24-7.28
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	DATA	DATA	7.54-7.57
	DATA	DATA	7.54-7.57

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Codification des outils ISO-Line
ISO-Line Bezeichnungssystem
ISO-Line designation system

S	D	J	C	R	-	12	12	G	-	11
D	C	G	T	-	11	T3	04	-	FN	-

> 7.02

Géométries de coupe
Spanformgeometrien
Cutting geometries



> 7.04

Nuances
Sorten
Grades

PVD	CVD	CERMET
-----	-----	--------

> 7.10

Porte-outils et plaquettes 80°
Halter und WSP 80°
Holders and inserts 80°



SCM



SCA



SCL

80° > 7.12

Porte-outils et plaquettes 55°
Halter und WSP 55°
Holders and inserts 55°



SDN



SDA



SDJ



SDH



SDU

55° > 7.24

Porte-outils et plaquettes 35°
Halter und WSP 35°
Holders and inserts 35°



SVV



SVA



SVJ



SVX



SV-CL/R

35° > 7.38

Pièces de rechange et accessoires
Ersatzteile und Zubehör
Spare parts and accessories



> 7.53

Paramètres de coupe
Schnittwerte
Machining data

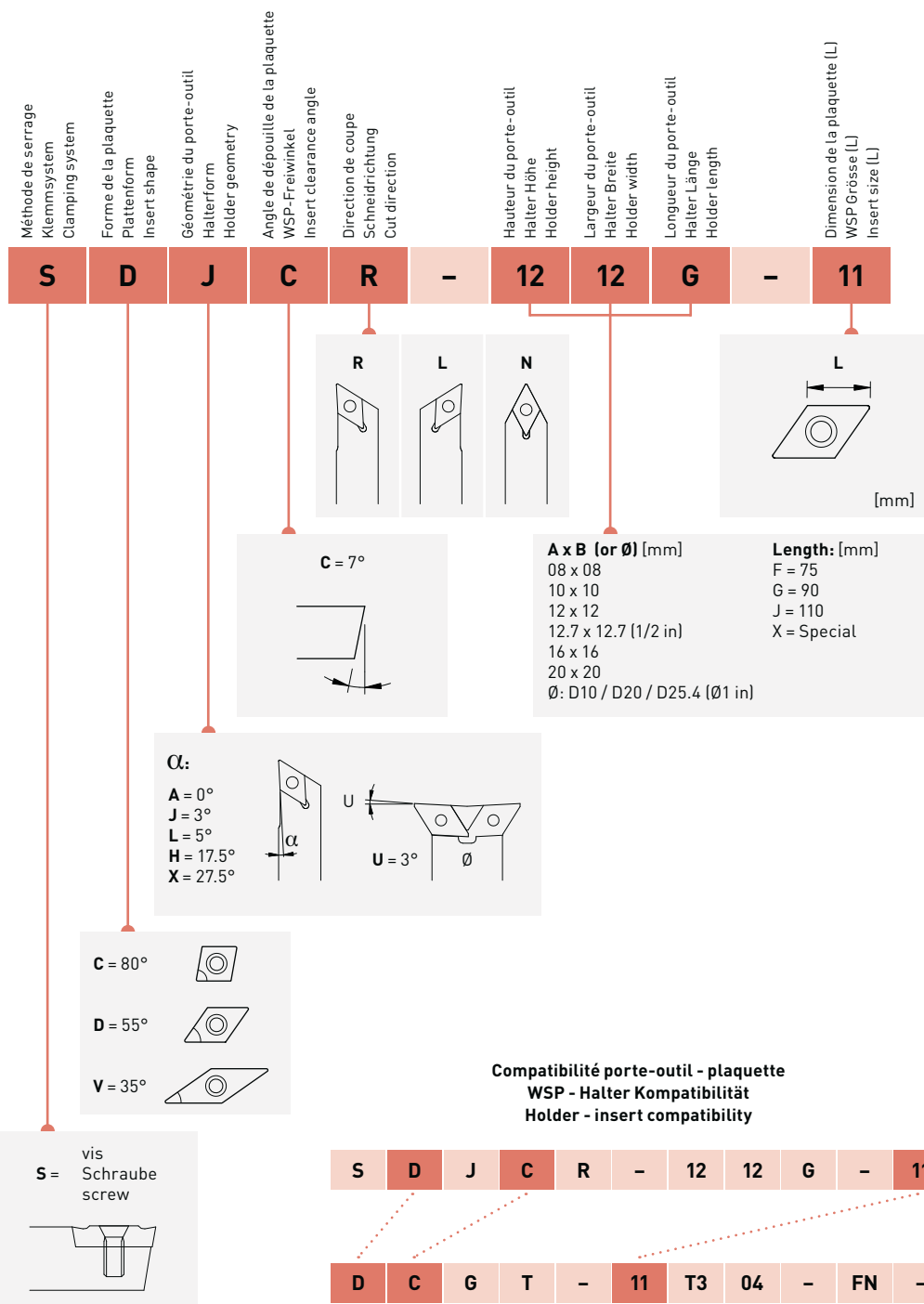
P	M	N	S
VC (m/min)	F (mm/U)		

> 7.54

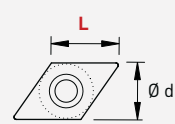
Codification des porte-outils ISO-Line

ISO-Line Bezeichnungssystem für Halter

ISO-Line designation system for holders



Codification des plaquettes ISO-Line
ISO-Line Bezeichnungssystem für WSP
ISO-Line designation system for inserts

Forme de la plaque Plattenform Insert shape	Angle de déviation de la plaque WSP-Freiwinkel Insert clearance angle	Classe de tolérance Toleranz Klasse Tolerance class	Brise-copeau Spanbrecher Chip breaker		Dimension de la plaque (L) WSP Grösse (L) Insert size (L)	Épaisseur de la plaque (E) WSP Dicke (E) Insert thickness (E)	Rayon de pointe de la plaque 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  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° 																							
C = 80°  D = 55°  V = 35° 																							
L  [mm] <table border="1"> <thead> <tr> <th>L</th> <th>Ø d [mm]</th> </tr> </thead> <tbody> <tr> <td>CC...06</td> <td rowspan="3">6,350</td> </tr> <tr> <td>DC...07</td> </tr> <tr> <td>VC... 11</td> </tr> <tr> <td>VC... 13</td> <td>7,940</td> </tr> <tr> <td>CC...09</td> <td rowspan="3">9,525</td> </tr> <tr> <td>DC...11</td> </tr> <tr> <td>VC... 16</td> </tr> </tbody> </table>												L	Ø d [mm]	CC... 06	6,350	DC... 07	VC... 11	VC... 13	7,940	CC... 09	9,525	DC... 11	VC... 16
L	Ø d [mm]																						
CC... 06	6,350																						
DC... 07																							
VC... 11																							
VC... 13	7,940																						
CC... 09	9,525																						
DC... 11																							
VC... 16																							

Géométries de coupe
Spanformgeometrien
Cutting geometries

G
tolerance class

Plaquettes en métal dur rectifiées
VHM geschliffene WSP
Carbide ground inserts

Finishing

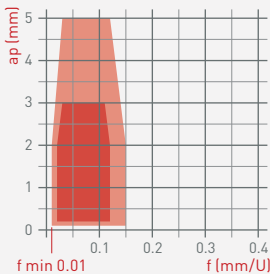
FN-X8



8°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished



ap (mm)

f min 0.01 f (mm/U)

P	★★★★★
M	★★★★
N	★★★★
S	★★★

CCGT DCGT VCGT

p. 7.16 p. 7.30 p. 7.46

Semi-finishing

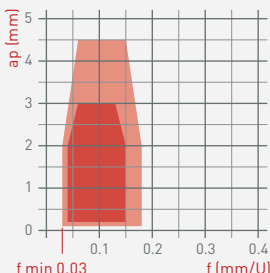
ENP-X8



8°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished



ap (mm)

f min 0.03 f (mm/U)

P	★★★★★
M	★★★
N	★★★
S	★★★

CCGT DCGT VCGT

p. 7.16 p. 7.30 p. 7.46

Finishing

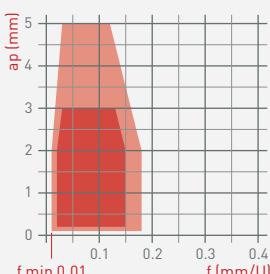
FN-X17



17°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished



ap (mm)

f min 0.01 f (mm/U)

P	★★★
M	★★★★★
N	★★★★★
S	★★★★★

CCGT DCGT VCGT

p. 7.17 p. 7.31 p. 7.47

Semi-finishing

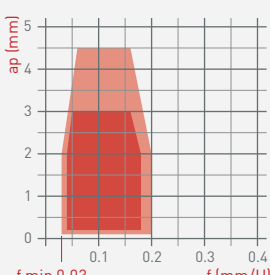
ENP-X17



17°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished



ap (mm)

f min 0.03 f (mm/U)

P	★★★
M	★★★★★
N	★★★
S	★★★★★

CCGT DCGT VCGT

p. 7.17 p. 7.31 p. 7.47

Géométries de coupe

Spanformgeometrien

Cutting geometries

G

tolerance class

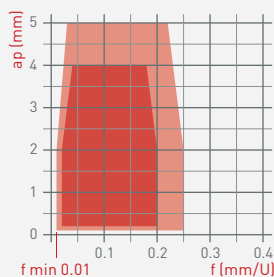
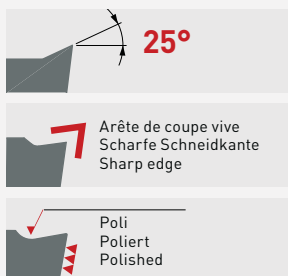
Plaquettes en métal dur rectifiées

VHM geschliffene WSP

Carbide ground inserts

Finishing

FN-X25

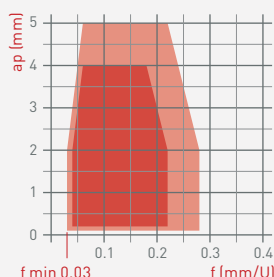
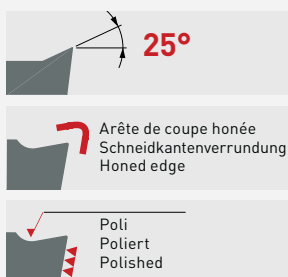
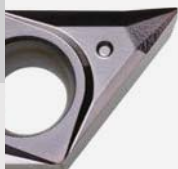


P	
M	★★★
N	★★★★★
S	★★★★★

CCGT	DCGT	VCGT
p. 7.18	p. 7.32	p. 7.48

Semi-finishing

ENP-X25

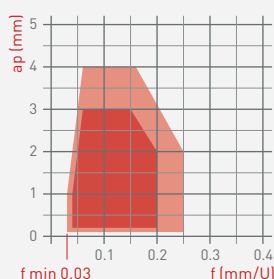
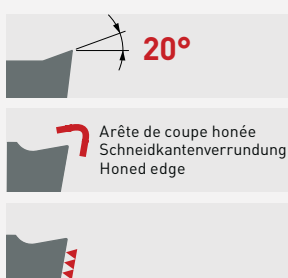


P	
M	★★★
N	★★★★★
S	★★★★★

CCGT	DCGT	VCGT
p. 7.18	p. 7.32	p. 7.48

Semi-finishing

ENP-X20



P	
M	★★★★★
N	★★★★★
S	★★★★★

CCGT	DCGT	VCGT
p. 7.19	p. 7.33	p. 7.49

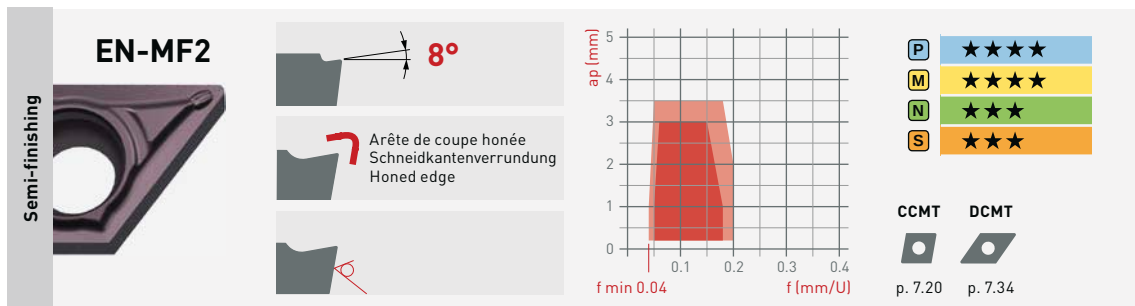
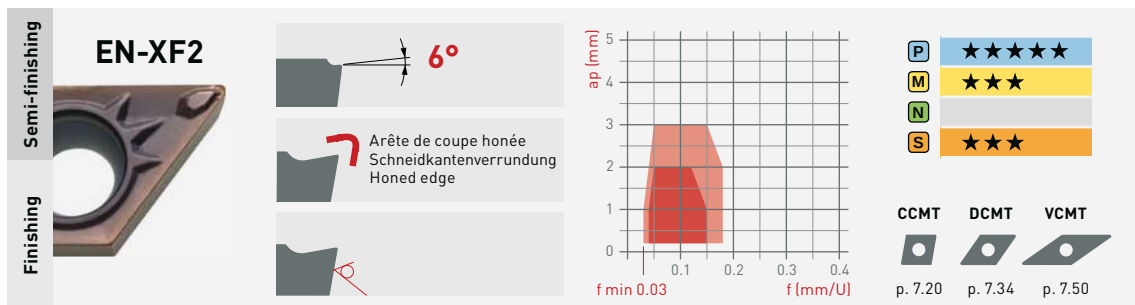
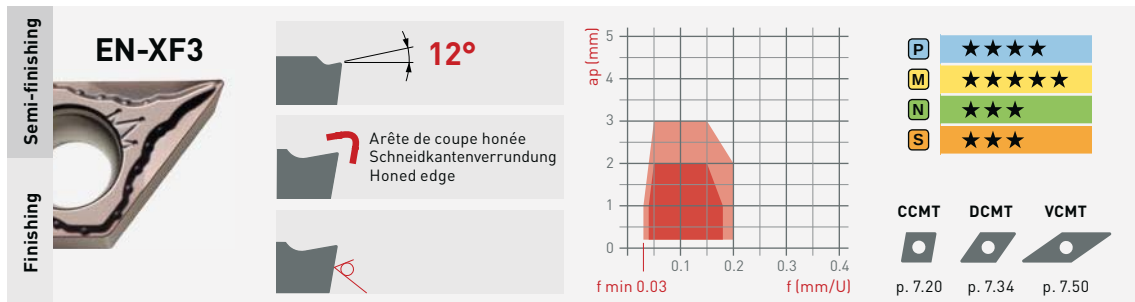
Finishing

ISO-LINE

Géométries de coupe
Spanformgeometrien
Cutting geometries

M
tolerance class

Plaquettes en métal dur
VHM-Wendeplatten
Carbide inserts



Géométries de coupe

Spanformgeometrien

Cutting geometries

M

tolerance class

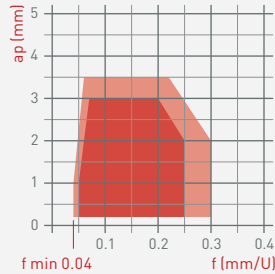
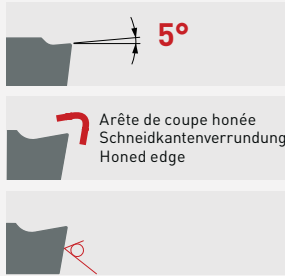
Plaquettes en métal dur

VHM-Wendeplatten

Carbide inserts

Semi-finishing

EN-MF

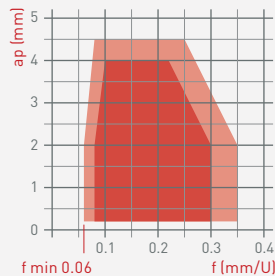
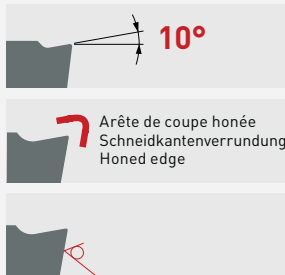


P	★★★★★
M	★★★
N	
S	

CCMT	DCMT	VCMT
p. 7.21	p. 7.35	p. 7.51

Roughing

EN-HF3

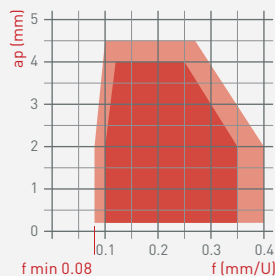
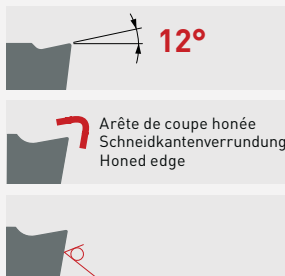


P	★★★★★
M	★★★★★
N	
S	★★★

CCMT	DCMT
p. 7.21	p. 7.35

Roughing

EN-HF



P	★★★★★
M	★★★★★
N	
S	

CCMT	DCMT	VCMT
p. 7.21	p. 7.35	p. 7.51

Semi-finishing

Géométries de coupe
Spanformgeometrien
Cutting geometries

G
tolerance class

Plaquettes en métal dur rectifiées
VHM geschliffene WSP
Carbide ground inserts

FL/FR-X10

Super-finishing

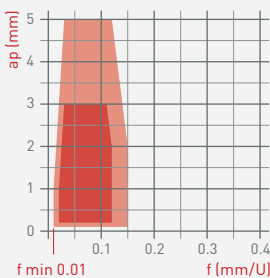
Finishing



10°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished



ap (mm)

f min 0.01

f (mm/U)

P	★★★★★
M	★★★★★
N	★★★★★
S	★★★★★

VC6T



p. 7.44

ELP/ERP-X10

Semi-finishing

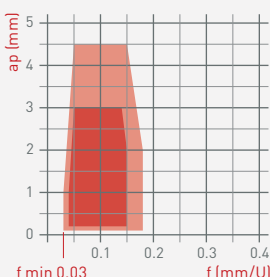
Finishing



10°

Arête de coupe honée
Schneidkantenverrundung
Honed edge

Poli
Poliert
Polished



ap (mm)

f min 0.03

f (mm/U)

P	★★★★★
M	★★★★★
N	★★★
S	★★★

VC6T



p. 7.44

FN-K18

Super-finishing

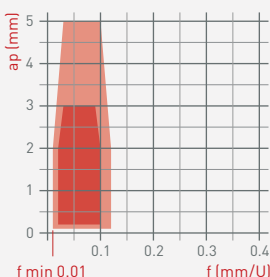
Finishing



18°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished



ap (mm)

f min 0.01

f (mm/U)

P	★★★★★
M	★★★★★
N	★★★★★
S	★★★★★

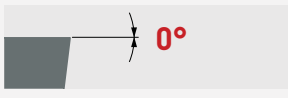
VC6T



p. 7.45

FN-0

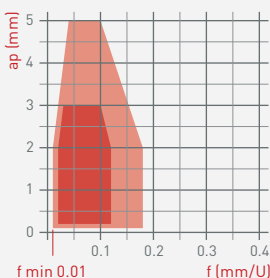
Finishing



0°

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

Poli
Poliert
Polished



ap (mm)

f min 0.01

f (mm/U)

P	★★★
M	
N	★★★
S	

VC6W



p. 7.45

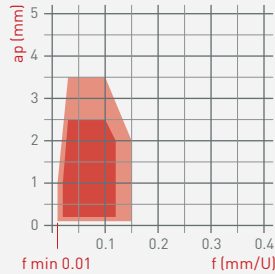
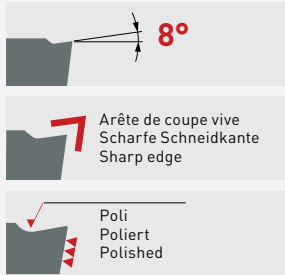
Géométries de coupe
Spanformgeometrien
Cutting geometries

G/M
tolerance class

CERMET

Finishing

FN-X8
CERMET

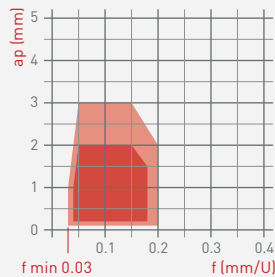
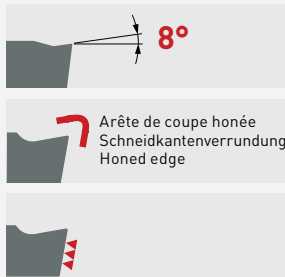


P	★★★★★
M	★★★
N	
S	

CCGT	DCGT	VCGT
p. 7.22	p. 7.36	p. 7.52

Semi-finishing

ENP-KX
CERMET



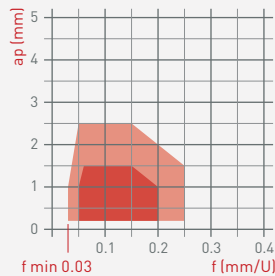
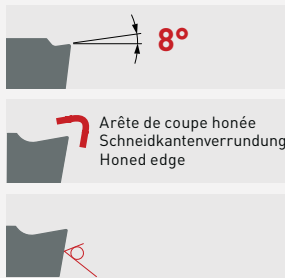
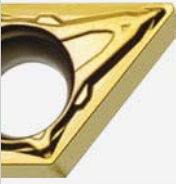
P	★★★★★
M	★★★
N	
S	

CCGT	DCGT
p. 7.22	p. 7.36

Finishing

Semi-finishing

EN-KM
CERMET



P	★★★★★
M	★★★
N	
S	

CCMT	DCMT
p. 7.23	p. 7.37

Nuances

Sorten

Grades

Nuances Sorten Grades	Domaine d'application Anwendungsbereich Application area	Finishing / light machining	Semi-finishing / medium cut	Roughing / heavy machining	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	★★★★ ★★★★ ★★★★★	■	■		R-X10	■■■■■□	■■■■■□	■■■■■□	PVD	perfect for titanium alloys & superalloys
HTAX	★★★★ ★★★★ ★★★★★	■			R-X10	■■■■■□	■■■■■□	■■■■■□	PVD	perfect for titanium alloys & superalloys

Nuances

Sorten

Grades

Nuances Sorten Grades	Domaine d'application Anwendungsbereich Application area	Finishing / light machining	Semi-finishing / medium cut	Roughing / heavy machining	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	
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

Outils de tournage 80°

80°-Drehwerkzeuge

Turning tools 80°

80°



SCM



SCA



SCL

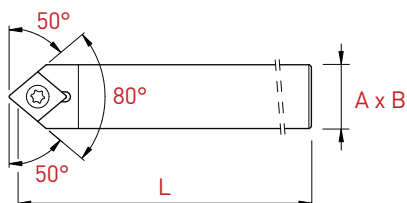
Porte-outils

Halter

Holders

80°

SCM



Plaquettes WSP Inserts	A x B x L	Art. N°
CC...-0602..	8 x 8 x 115	SCMCN-0808X-06
	10 x 10 x 115	SCMCN-1010X-06
	12 x 12 x 130	SCMCN-1212X-06
	12 x 12 x 90	SCMCN-1212G-06
	12.7 x 12.7 x 130	SCMCN-12.7-X-06
	16 x 16 x 130	SCMCN-1616X-06
	16 x 16 x 75	SCMCN-1616F-06
CC...-09T3..	12 x 12 x 130	SCMCN-1212X-09
	12 x 12 x 90	SCMCN-1212G-09
	12.7 x 12.7 x 130	SCMCN-12.7-X-09
	16 x 16 x 130	SCMCN-1616X-09
	16 x 16 x 75	SCMCN-1616F-09
	20 x 20 x 120	SCMCN-2020X-09

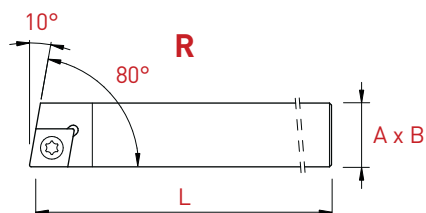
Porte-outils

Halter

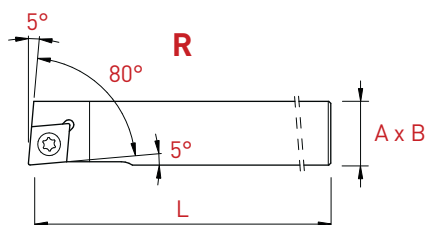
Holders

80°

SCA



Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
CC..-0602..	8 x 8 x 115	SCACL-0808X-06	SCACR-0808X-06
	10 x 10 x 115	SCACL-1010X-06	SCACR-1010X-06
	12 x 12 x 130	SCACL-1212X-06	SCACR-1212X-06
	12 x 12 x 90	SCACL-1212G-06	SCACR-1212G-06
	12.7 x 12.7 x 130	SCACL-12.7-X-06	SCACR-12.7-X-06
	16 x 16 x 130	SCACL-1616X-06	SCACR-1616X-06
	16 x 16 x 75	SCACL-1616F-06	SCACR-1616F-06
CC..-09T3..	12 x 12 x 130	SCACL-1212X-09	SCACR-1212X-09
	12 x 12 x 90	SCACL-1212G-09	SCACR-1212G-09
	12.7 x 12.7 x 130	SCACL-12.7-X-09	SCACR-12.7-X-09
	16 x 16 x 130	SCACL-1616X-09	SCACR-1616X-09
	16 x 16 x 75	SCACL-1616F-09	SCACR-1616F-09
	20 x 20 x 120	SCACL-2020X-09	SCACR-2020X-09



Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
CC..-0602..	8 x 8 x 115	SCLCL-0808X-06	SCLCR-0808X-06
	10 x 10 x 115	SCLCL-1010X-06	SCLCR-1010X-06
	12 x 12 x 130	SCLCL-1212X-06	SCLCR-1212X-06
	12 x 12 x 90	SCLCL-1212G-06	SCLCR-1212G-06
	12.7 x 12.7 x 130	SCLCL-12.7-X-06	SCLCR-12.7-X-06
	16 x 16 x 130	SCLCL-1616X-06	SCLCR-1616X-06
	16 x 16 x 75	SCLCL-1616F-06	SCLCR-1616F-06
CC..-09T3..	12 x 12 x 130	SCLCL-1212X-09	SCLCR-1212X-09
	12 x 12 x 90	SCLCL-1212G-09	SCLCR-1212G-09
	12.7 x 12.7 x 130	SCLCL-12.7-X-09	SCLCR-12.7-X-09
	16 x 16 x 130	SCLCL-1616X-09	SCLCR-1616X-09
	16 x 16 x 75	SCLCL-1616F-09	SCLCR-1616F-09
	20 x 20 x 120	SCLCL-2020X-09	SCLCR-2020X-09

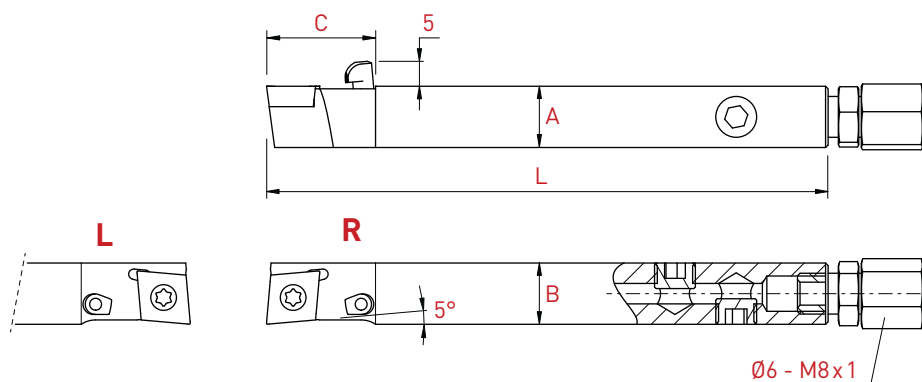
Porte-outils avec arrosage intégré

Halter mit integrierter Kühlmittelzufuhr

Holders with integrated coolant supply

80°

SCL-JET



			L R 	
Plaquettes WSP Inserts	A x B x L	C	Art. N°	Art. N°
CC...-0602..	10 x 10 x 110	21	SCLCL-1010J-06-JET	SCLCR-1010J-06-JET
	12 x 12 x 110	21	SCLCL-1212J-06-JET	SCLCR-1212J-06-JET
	12.7 x 12.7 x 110	21	SCLCL-12.7-J-06-JET	SCLCR-12.7-J-06-JET
	16 x 16 x 110	21	SCLCL-1616J-06-JET	SCLCR-1616J-06-JET
CC...-09T3..	12 x 12 x 110	21	SCLCL-1212J-09-JET	SCLCR-1212J-09-JET
	12.7 x 12.7 x 110	21	SCLCL-12.7-J-09-JET	SCLCR-12.7-J-09-JET
	16 x 16 x 110	21	SCLCL-1616J-09-JET	SCLCR-1616J-09-JET
	20 x 20 x 110	21	SCLCL-2020J-09-JET	SCLCR-2020J-09-JET


**CCGT
FN-X8**

R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
~6 R	0.05	■	■	■	■	■
	0.1	■	■	■	■	■
	0.2	■	■	■	■	■
	0.4	■	■	■	■	■
~9 R	0.05	■	■	■	■	■
	0.1	■	■	■	■	■
	0.2	■	■	■	■	■
	0.4	■	■	■	■	■


**CCGT
ENP-X8**

R	Art. N°	PVD		non revêtu unbeschichtet uncoated
		TiAlN	TiN	K20
~6 R	0.05	■	■	■
	0.1	■	■	■
	0.2	■	■	■
	0.4	■	■	■
~9 R	0.05	■	■	■
	0.1	■	■	■
	0.2	■	■	■
	0.4	■	■	■



Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

80°

CCGT-X17

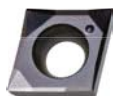
CCGT
FN-X17

R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
		P M N S	P M N S	P M N	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
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

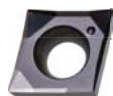
R	Art. N°	PVD		non revêtu unbeschichtet uncoated
		TiAlN	TiN	K20
		P M N S	P M N	☐ ☐ ☐ ☐
0.05	CCGT-0602005-ENP-X17	■	■	■
0.1	CCGT-060201-ENP-X17	■	■	■
0.2	CCGT-060202-ENP-X17	■	■	■
0.4	CCGT-060204-ENP-X17	■	■	■
0.05	CCGT-09T3005-ENP-X17	■	■	■
0.1	CCGT-09T301-ENP-X17	■	■	■
0.2	CCGT-09T302-ENP-X17	■	■	■
0.4	CCGT-09T304-ENP-X17	■	■	■
0.8	CCGT-09T308-ENP-X17	■	■	■





CCGT FN-X25

R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
		P M N S	P M N S	P M 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		non revêtu unbeschichtet uncoated
		TiAlN	TiN	K20
		P M N S	P M 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	■	■	■



Plaquettes en métal dur

VHM-Wendeplatten

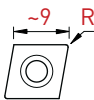
Solid carbide inserts

80°

CCGT-X20



CCGT
ENP-X20



R	Art. N°	PVD	
		ZTA	HTX
0.1	CCGT-060201-ENP-X20	■	
0.2	CCGT-060202-ENP-X20	■	■
0.4	CCGT-060204-ENP-X20	■	■
0.1	CCGT-09T301-ENP-X20	■	
0.2	CCGT-09T302-ENP-X20	■	■
0.4	CCGT-09T304-ENP-X20	■	■
0.8	CCGT-09T308-ENP-X20	■	■

PVD	
M	M
N	N
S	S

Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

80°

CCMT-XF3

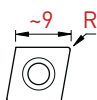
CCMT-XF2

CCMT-MF2



**CCMT
EN-XF3**

R	Art. N°	PVD	
		TAC	HTAC
0.2	CCMT-060202-EN-XF3	■	■
0.4	CCMT-060204-EN-XF3	■	■
0.2	CCMT-09T302-EN-XF3	■	■
0.4	CCMT-09T304-EN-XF3	■	■



**CCMT
EN-XF2**

R	Art. N°	PVD		CVD
		TAC	HTAC	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		CVD	
		TAC	HTAC	Ti5	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	■	■	■	■



Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

80°

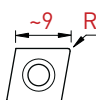
CCMT-MF

CCMT-HF3

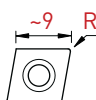
CCMT-HF

CCMT
EN-MF

R	Art. N°	PVD		CVD	
		☐ P ☐ M ☐	☐ P ☐ M ☐	☐ P ☐ M ☐	☐ P ☐ M ☐
		Tmax		Ti4	
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		CVD	
		☐ P ☐ M ☐	☐ P ☐ M ☐	☐ P ☐ M ☐ S	☐ P ☐ M ☐ S
		TiX	HTiX	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		CVD		
		☐ P ☐ M ☐	☐ P ☐ M ☐	☐ P ☐ M ☐	☐ P ☐ M ☐	☐ P ☐ M ☐
		Tmax	TAC	Ti4	Ti5	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**

CERMET			
PVD		non revêtu unbeschichtet uncoated	
☒ P	☒ M	☒ P	☐
☐	☐	☐	☐
☐	☐	☐	☐
CTA		CN6	
☐		☐	

R	Art. N°
0.05	CCGT-0602005-FN-X8
0.1	CCGT-060201-FN-X8
0.2	CCGT-060202-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-KX**

CERMET			
PVD		non revêtu unbeschichtet uncoated	
☒ P	☒ M	☒ P	☐
☐	☐	☐	☐
☐	☐	☐	☐
CT7	HCT7	CN6	
☐	☐	☐	

R	Art. N°
0.1	CCGT-060201-ENP-KX
0.2	CCGT-060202-ENP-KX
0.4	CCGT-060204-ENP-KX
0.1	CCGT-09T301-ENP-KX
0.2	CCGT-09T302-ENP-KX
0.4	CCGT-09T304-ENP-KX



Plaquettes CERMET
CERMET-Wendeplatten
CERMET inserts

80°

CCMT-KM



CCMT
EN-KM

CERMET			
PVD		non revêtu unbeschichtet uncoated	
☒ P ☒ M ☐	☒ P ☒ M ☐	☒ P ☐ ☐	
CT7	HCT7	CN6	

R	Art. N°			
0.2	CCMT-060202-EN-KM	■	■	■
0.4	CCMT-060204-EN-KM	■	■	■
0.2	CCMT-09T302-EN-KM	■	■	■
0.4	CCMT-09T304-EN-KM	■	■	■
0.8	CCMT-09T308-EN-KM	■	■	■



ISO - LINE

Outils de tournage 55°

55°-Drehwerkzeuge

Turning tools 55°

55°



SDN



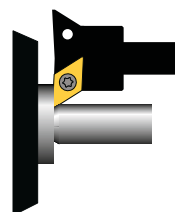
SDA



SDJ



SDH



SDU

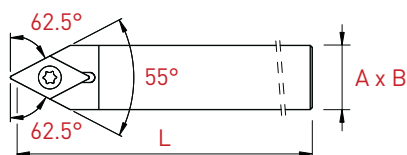
Porte-outils

Halter

Holder

55°

SDN



Plaquettes WSP Inserts	A x B x L	Art. N°
DC...-0702..	8 x 8 x 115	SDNCN-0808X-07
	10 x 10 x 115	SDNCN-1010X-07
	12 x 12 x 130	SDNCN-1212X-07
	12 x 12 x 90	SDNCN-1212G-07
	12.7 x 12.7 x 130	SDNCN-12.7-X-07
	16 x 16 x 130	SDNCN-1616X-07
	16 x 16 x 75	SDNCN-1616F-07
DC...-11T3..	12 x 12 x 130	SDNCN-1212X-11
	12 x 12 x 90	SDNCN-1212G-11
	12.7 x 12.7 x 130	SDNCN-12.7-X-11
	16 x 16 x 130	SDNCN-1616X-11
	16 x 16 x 75	SDNCN-1616F-11
	20 x 20 x 120	SDNCN-2020X-11

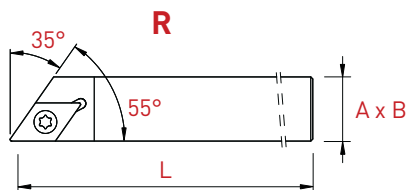
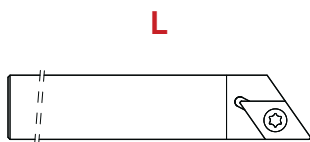
Porte-outils

Halter

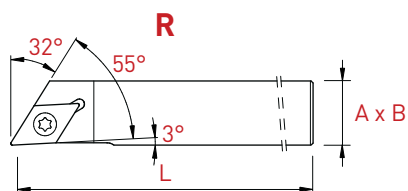
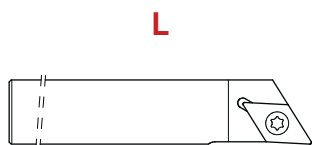
Holders

55°

SDA



		L	R
Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
DC...-0702..	8 x 8 x 115	SDACL-0808X-07	SDACR-0808X-07
	10 x 10 x 115	SDACL-1010X-07	SDACR-1010X-07
	12 x 12 x 130	SDACL-1212X-07	SDACR-1212X-07
	12 x 12 x 90	SDACL-1212G-07	SDACR-1212G-07
	12.7 x 12.7 x 130	SDACL-12.7-X-07	SDACR-12.7-X-07
	16 x 16 x 130	SDACL-1616X-07	SDACR-1616X-07
	16 x 16 x 75	SDACL-1616F-07	SDACR-1616F-07
DC...-11T3..	12 x 12 x 130	SDACL-1212X-11	SDACR-1212X-11
	12 x 12 x 90	SDACL-1212G-11	SDACR-1212G-11
	12.7 x 12.7 x 130	SDACL-12.7-X-11	SDACR-12.7-X-11
	16 x 16 x 130	SDACL-1616X-11	SDACR-1616X-11
	16 x 16 x 75	SDACL-1616F-11	SDACR-1616F-11
	20 x 20 x 120	SDACL-2020X-11	SDACR-2020X-11

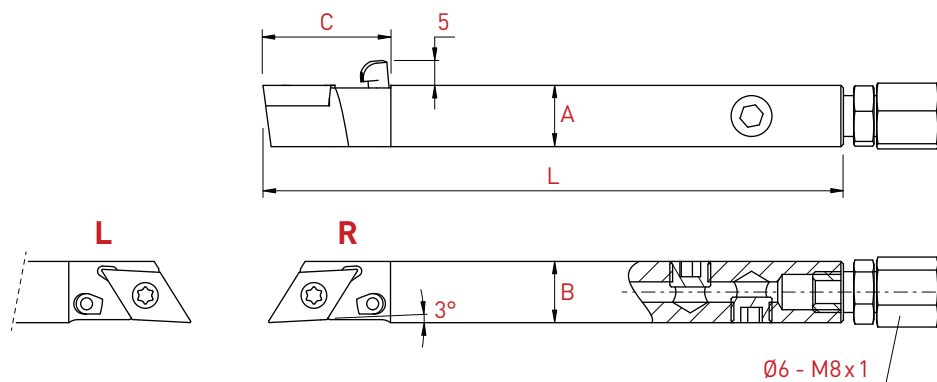


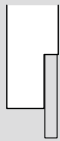
Plaquettes WSP Inserts	A x B x L	L R	
		Art. N°	Art. N°
DC...0702..	8 x 8 x 115	SDJCL-0808X-07	SDJCR-0808X-07
	10 x 10 x 115	SDJCL-1010X-07	SDJCR-1010X-07
	12 x 12 x 130	SDJCL-1212X-07	SDJCR-1212X-07
	12 x 12 x 90	SDJCL-1212G-07	SDJCR-1212G-07
	12.7 x 12.7 x 130	SDJCL-12.7-X-07	SDJCR-12.7-X-07
	16 x 16 x 130	SDJCL-1616X-07	SDJCR-1616X-07
	16 x 16 x 75	SDJCL-1616F-07	SDJCR-1616F-07
	20 x 20 x 120	SDJCL-2020X-07	SDJCR-2020X-07
DC...11T3..	12 x 12 x 130	SDJCL-1212X-11	SDJCR-1212X-11
	12 x 12 x 90	SDJCL-1212G-11	SDJCR-1212G-11
	12.7 x 12.7 x 130	SDJCL-12.7-X-11	SDJCR-12.7-X-11
	16 x 16 x 130	SDJCL-1616X-11	SDJCR-1616X-11
	16 x 16 x 75	SDJCL-1616F-11	SDJCR-1616F-11
	20 x 20 x 120	SDJCL-2020X-11	SDJCR-2020X-11

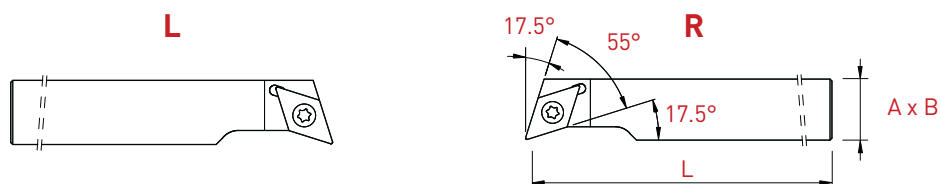
Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

55°

SDJ-JET



			L  R 	
Plaquettes WSP Inserts	A x B x L	C	Art. N°	Art. N°
DC...-0702..	10 x 10 x 110	20	SDJCL-1010J-07-JET	SDJCR-1010J-07-JET
	12 x 12 x 110	20	SDJCL-1212J-07-JET	SDJCR-1212J-07-JET
	12.7 x 12.7 x 110	20	SDJCL-12.7-J-07-JET	SDJCR-12.7-J-07-JET
	16 x 16 x 110	20	SDJCL-1616J-07-JET	SDJCR-1616J-07-JET
	20 x 20 x 110	20	SDJCL-2020J-07-JET	SDJCR-2020J-07-JET
DC...-11T3..	12 x 12 x 110	23	SDJCL-1212J-11-JET	SDJCR-1212J-11-JET
	12.7 x 12.7 x 110	23	SDJCL-12.7-J-11-JET	SDJCR-12.7-J-11-JET
	16 x 16 x 110	23	SDJCL-1616J-11-JET	SDJCR-1616J-11-JET
	20 x 20 x 110	23	SDJCL-2020J-11-JET	SDJCR-2020J-11-JET



Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
DC...-0702..	10 x 10 x 115	SDHCL-1010X-07	SDHCR-1010X-07
	12 x 12 x 130	SDHCL-1212X-07	SDHCR-1212X-07
	12 x 12 x 90	SDHCL-1212G-07	SDHCR-1212G-07
	12.7 x 12.7 x 130	SDHCL-12.7-X-07	SDHCR-12.7-X-07
	16 x 16 x 130	SDHCL-1616X-07	SDHCR-1616X-07
	16 x 16 x 75	SDHCL-1616F-07	SDHCR-1616F-07
DC...-11T3..	16 x 16 x 130	SDHCL-1616X-11	SDHCR-1616X-11
	16 x 16 x 75	SDHCL-1616F-11	SDHCR-1616F-11
	20 x 20 x 120	SDHCL-2020X-11	SDHCR-2020X-11

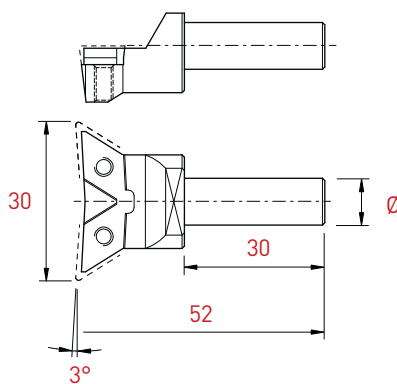
Porte-outils

Halter

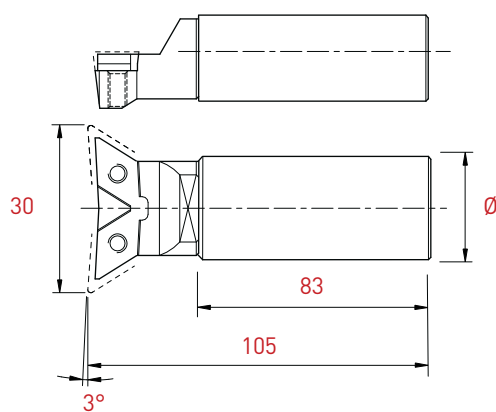
Holders

55°

SDU



Plaquettes WSP Inserts	Ø	Art. N°
DC...-11T3..	10	SDUC-D10X-11



Plaquettes WSP Inserts	Ø	Art. N°
DC...-11T3..	20	SDUC-D20X-11
	25.4	SDUC-D25.4X-11



**DCGT
FN-X8**

		PVD			non revêtu unbeschichtet uncoated	
		P M N S	P M N S	P M N	N S	N S
R	Art. N°	TiAlN	HTA	TiN	K10	K20
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	■	■	■	■	■



**DCGT
ENP-X8**

 DCGT ENP-X8		PVD		non revêtu unbeschichtet uncoated
R	Art. N°	P M N S TiAlN	P M N TiN	N 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	■	■	■

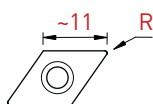
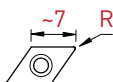
Plaquettes en métal dur

VHM-Wendeplatten

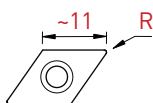
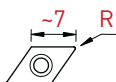
Solid carbide inserts

55°

DCGT-X17

DCGT
FN-X17

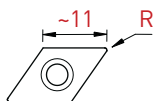
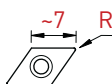
R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
0.05	DCGT-0702005-FN-X17	■	■	■	■	■
0.08	DCGT-0702008-FN-X17	■	■	■	■	■
0.1	DCGT-070201-FN-X17	■	■	■	■	■
0.15	DCGT-0702015-FN-X17	■	■	■	■	■
0.2	DCGT-070202-FN-X17	■	■	■	■	■
0.4	DCGT-070204-FN-X17	■	■	■	■	■
0.05	DCGT-11T3005-FN-X17	■	■	■	■	■
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		non revêtu unbeschichtet uncoated
		TiAlN	TiN	
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	■	■	■



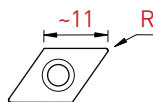
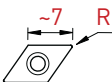
**DCGT
FN-X25**



R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
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		non revêtu unbeschichtet uncoated
		TiAlN	TiN	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	☒	☒	☒

Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

55°

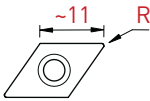
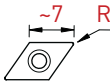
DCGT-X20

DCGT
ENP-X20

PVD



ZTA HTX



R	Art. N°	PVD	
		M	M
		N	N
		S	S
		ZTA	HTX
0.1	DCGT-070201-ENP-X20	■	
0.2	DCGT-070202-ENP-X20	■	■
0.4	DCGT-070204-ENP-X20	■	■
0.1	DCGT-11T301-ENP-X20	■	
0.2	DCGT-11T302-ENP-X20	■	■
0.4	DCGT-11T304-ENP-X20	■	■
0.8	DCGT-11T308-ENP-X20	■	■

Plaquettes en métal dur

VHM-Wendeplatten

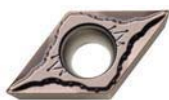
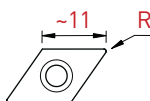
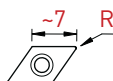
Solid carbide inserts

55°

DCMT-XF3

DCMT-XF2

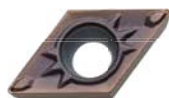
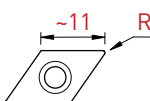
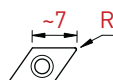
DCMT-MF2



**DCMT
EN-XF3**

R	Art. N°	PVD	
		TAC	HTAC
0.2	DCMT-070202-EN-XF3	■	■
0.4	DCMT-070204-EN-XF3	■	■
0.2	DCMT-11T302-EN-XF3	■	■
0.4	DCMT-11T304-EN-XF3	■	■

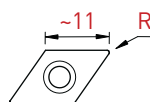
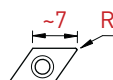
PVD	
P	P
M	M
N	N
S	S



**DCMT
EN-XF2**

R	Art. N°	PVD		CVD
		TAC	HTAC	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	■	■	■

PVD		CVD
P	P	P
M	M	M
N	N	
S	S	



**DCMT
EN-MF2**

R	Art. N°	PVD		CVD	
		TAC	HTAC	Ti5	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	■	■	■	■

PVD		CVD	
P	P	P	P
M	M	M	M
N	N		
S	S		

Plaquettes en métal dur

VHM-Wendeplatten

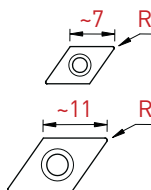
Solid carbide inserts

55°

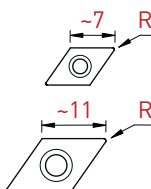
DCMT-MF

DCMT-HF3

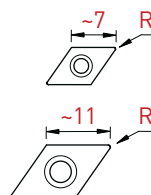
DCMT-HF

DCMT
EN-MF

R	Art. N°	PVD Tmax	CVD Ti4
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	■	■	■

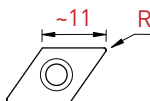
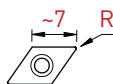
DCMT
EN-HF

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

CERMET			
PVD		non revêtu unbeschichtet uncoated	
☒ P	☒ M	☒ P	☐
☐	☐	☐	☐
CTA		CN6	
0.05	DCGT-0702005-FN-X8	☒	☒
0.1	DCGT-070201-FN-X8	☒	☒
0.2	DCGT-070202-FN-X8	☒	☒

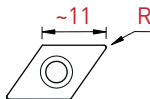
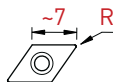


R	Art. N°		
0.05	DCGT-0702005-FN-X8	☒	☒
0.1	DCGT-070201-FN-X8	☒	☒
0.2	DCGT-070202-FN-X8	☒	☒



DCGT
ENP-KX

CERMET			
PVD		non revêtu unbeschichtet uncoated	
☒ P	☒ M	☒ P	☐
☐	☐	☐	☐
CT7		CN6	
0.1	DCGT-070201-ENP-KX	☒	☒
0.2	DCGT-070202-ENP-KX	☒	☒
0.4	DCGT-070204-ENP-KX	☒	☒



R	Art. N°		
0.1	DCGT-070201-ENP-KX	☒	☒
0.2	DCGT-070202-ENP-KX	☒	☒
0.4	DCGT-070204-ENP-KX	☒	☒

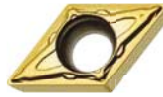
Plaquettes CERMET

CERMET-Wendeplatten

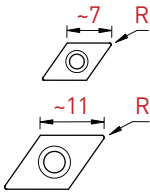
CERMET inserts

55°

DCMT-KM

DCMT
EN-KM

CERMET			
PVD		non revêtu unbeschichtet uncoated	
☒ P	☒ P	☒ P	
☒ M	☒ M	☐	
☐	☐	☐	
☐	☐	☐	
CT7	HCT7	CN6	
☒	☒	☒	
☒	☒	☒	
☒	☒	☒	



R	Art. N°			
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	☒	☒	☒

ISO - LINE

Outils de tournage 35°

35°-Drehwerkzeuge

Turning tools 35°

35°



SVV



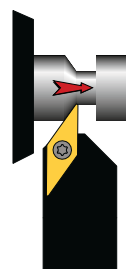
SVA



SVJ



SVX



SV-CL/R

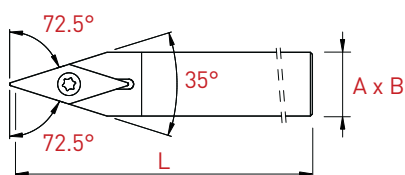
Porte-outils

Halter

Holder

35°

SVV



Plaquettes WSP Inserts	A x B x L	Art. N°
VC...-1103..	8 x 8 x 115	SVVCN-08108X-11
	10 x 10 x 115	SVVCN-1010X-11
	12 x 12 x 130	SVVCN-1212X-11
	12 x 12 x 90	SVVCN-1212G-11
	12.7 x 12.7 x 130	SVVCN-12.7-X-11
	16 x 16 x 130	SVVCN-1616X-11
	16 x 16 x 75	SVVCN-1616F-11
	20 x 20 x 120	SVVCN-2020X-11
VC...-1303..	8 x 10 x 115	SVVCN-0810X-13
	10 x 10 x 115	SVVCN-1010X-13
	12 x 12 x 130	SVVCN-1212X-13
	12 x 12 x 90	SVVCN-1212G-13
	12.7 x 12.7 x 130	SVVCN-12.7-X-13
	16 x 16 x 130	SVVCN-1616X-13
	16 x 16 x 75	SVVCN-1616F-13
	20 x 20 x 120	SVVCN-2020X-13
VC...-1604..	12 x 12 x 130	SVVCN-1212X-16
	12 x 12 x 90	SVVCN-1212G-16
	12.7 x 12.7 x 130	SVVCN-12.7-X-16
	16 x 16 x 130	SVVCN-1616X-16
	16 x 16 x 75	SVVCN-1616F-16
	20 x 20 x 120	SVVCN-2020X-16

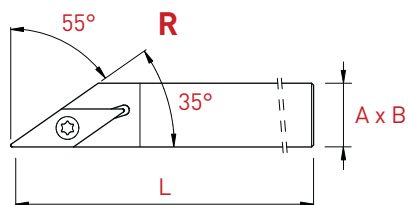
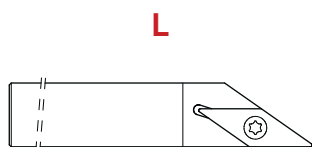
Porte-outils

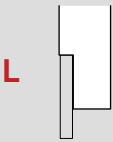
Halter

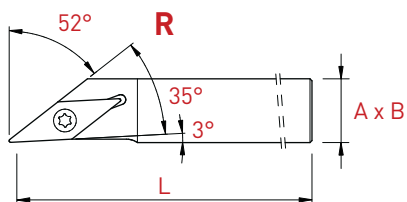
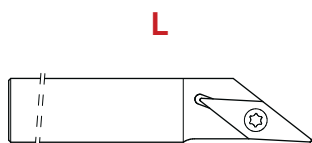
Holders

35°

SVA



			
Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
VC...-1103..	8 x 8 x 115	SVACL-0808X-11	SVACR-0808X-11
	10 x 10 x 115	SVACL-1010X-11	SVACR-1010X-11
	12 x 12 x 130	SVACL-1212X-11	SVACR-1212X-11
	12 x 12 x 90	SVACL-1212G-11	SVACR-1212G-11
	12.7 x 12.7 x 130	SVACL-12.7-X-11	SVACR-12.7-X-11
	16 x 16 x 130	SVACL-1616X-11	SVACR-1616X-11
	16 x 16 x 75	SVACL-1616F-11	SVACR-1616F-11
	20 x 20 x 120	SVACL-2020X-11	SVACR-2020X-11
VC...-1604..	12 x 12 x 130	SVACL-1212X-16	SVACR-1212X-16
	12 x 12 x 90	SVACL-1212G-16	SVACR-1212G-16
	12.7 x 12.7 x 130	SVACL-12.7-X-16	SVACR-12.7-X-16
	16 x 16 x 130	SVACL-1616X-16	SVACR-1616X-16
	16 x 16 x 75	SVACL-1616F-16	SVACR-1616F-16
	20 x 20 x 120	SVACL-2020X-16	SVACR-2020X-16



Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
VC...-1103..	8 x 8 x 115	SVJCL-0808X-11	SVJCR-0808X-11
	10 x 10 x 115	SVJCL-1010X-11	SVJCR-1010X-11
	12 x 12 x 130	SVJCL-1212X-11	SVJCR-1212X-11
	12 x 12 x 90	SVJCL-1212G-11	SVJCR-1212G-11
	12.7 x 12.7 x 130	SVJCL-12.7-X-11	SVJCR-12.7-X-11
	16 x 16 x 130	SVJCL-1616X-11	SVJCR-1616X-11
	16 x 16 x 75	SVJCL-1616F-11	SVJCR-1616F-11
	20 x 20 x 120	SVJCL-2020X-11	SVJCR-2020X-11
VC...-1303..	8 x 10 x 115	SVJCL-0810X-13	SVJCR-0810X-13
	10 x 10 x 115	SVJCL-1010X-13	SVJCR-1010X-13
	12 x 12 x 130	SVJCL-1212X-13	SVJCR-1212X-13
	12 x 12 x 90	SVJCL-1212G-13	SVJCR-1212G-13
	12.7 x 12.7 x 130	SVJCL-12.7-X-13	SVJCR-12.7-X-13
	16 x 16 x 130	SVJCL-1616X-13	SVJCR-1616X-13
	16 x 16 x 75	SVJCL-1616F-13	SVJCR-1616F-13
	20 x 20 x 120	SVJCL-2020X-13	SVJCR-2020X-13
VC...-1604..	12 x 12 x 130	SVJCL-1212X-16	SVJCR-1212X-16
	12 x 12 x 90	SVJCL-1212G-16	SVJCR-1212G-16
	12.7 x 12.7 x 130	SVJCL-12.7-X-16	SVJCR-12.7-X-16
	16 x 16 x 130	SVJCL-1616X-16	SVJCR-1616X-16
	16 x 16 x 75	SVJCL-1616F-16	SVJCR-1616F-16
	20 x 20 x 120	SVJCL-2020X-16	SVJCR-2020X-16

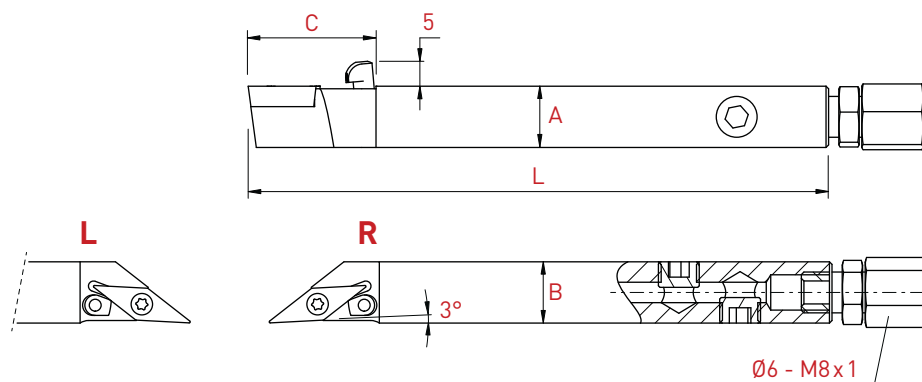
Porte-outils avec arrosage intégré

Halter mit integrierter Kühlmittelzufuhr

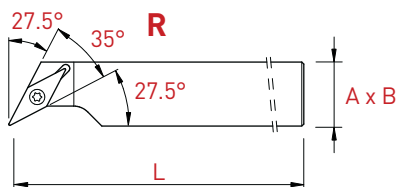
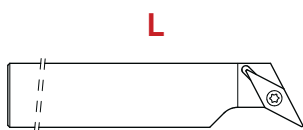
Holders with integrated coolant supply

35°

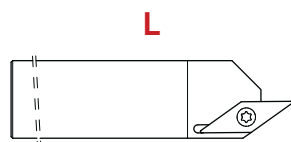
SVJ-JET



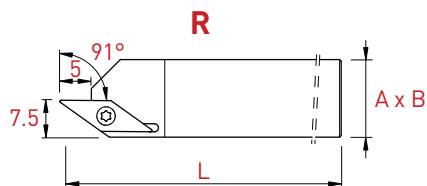
Plaquettes WSP Inserts	A x B x L	C	L R	
			Art. N°	Art. N°
VC...-1103..	10 x 10 x 110	21	SVJCL-1010J-11-JET	SVJCR-1010J-11-JET
	12 x 12 x 110	21	SVJCL-1212J-11-JET	SVJCR-1212J-11-JET
	12.7 x 12.7 x 110	21	SVJCL-12.7-J-11-JET	SVJCR-12.7-J-11-JET
	16 x 16 x 110	21	SVJCL-1616J-11-JET	SVJCR-1616J-11-JET
	20 x 20 x 120	21	SVJCL-2020J-11-JET	SVJCR-2020J-11-JET
VC...-1303..	10 x 10 x 110	26	SVJCL-1010J-13-JET	SVJCR-1010J-13-JET
	12 x 12 x 110	26	SVJCL-1212J-13-JET	SVJCR-1212J-13-JET
	12.7 x 12.7 x 110	26	SVJCL-12.7-J-13-JET	SVJCR-12.7-J-13-JET
	16 x 16 x 110	26	SVJCL-1616J-13-JET	SVJCR-1616J-13-JET
	20 x 20 x 110	26	SVJCL-2020J-13-JET	SVJCR-2020J-13-JET
VC...-1604..	12 x 12 x 130	30	SVJCL-1212J-16-JET	SVJCR-1212J-16-JET
	12.7 x 12.7 x 130	30	SVJCL-12.7-J-16-JET	SVJCR-12.7-J-16-JET
	16 x 16 x 130	30	SVJCL-1616J-16-JET	SVJCR-1616J-16-JET
	20 x 20 x 120	30	SVJCL-2020J-16-JET	SVJCR-2020J-16-JET



Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
VC..-1103..	16 x 16 x 130	SVXCL-1616X-11	SVXCR-1616X-11
	16 x 16 x 75	SVXCL-1616F-11	SVXCR-1616F-11
	20 x 20 x 120	SVXCL-2020X-11	SVXCR-2020X-11



tournage arrière
rückwärts drehen
back turning



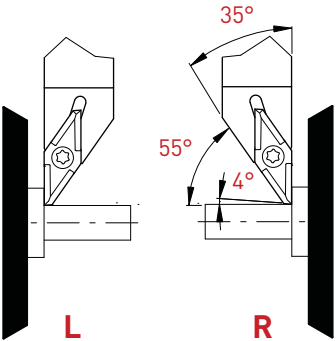
Plaquettes WSP Inserts	A x B x L	Art. N°	Art. N°
VC6..-1103..	12 x 12 x 130	SV-CL-1212X-11	SV-CR-1212X-11
	12 x 12 x 90	SV-CL-1212G-11	SV-CR-1212G-11
	12.7 x 12.7 x 130	SV-CL-12.7-X-11	SV-CR-12.7-X-11
	16 x 16 x 130	SV-CL-1616X-11	SV-CR-1616X-11
	16 x 16 x 75	SV-CL-1616F-11	SV-CR-1616F-11
	20 x 20 x 120	SV-CL-2020X-11	SV-CR-2020X-11

Porte-outils compatibles avec plaquettes VCGT FL/FR-X10°

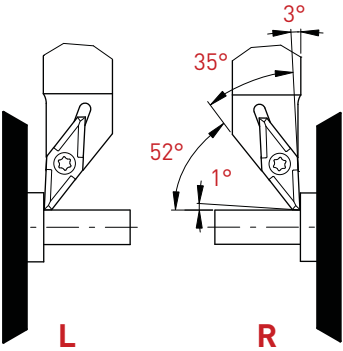
Passende Halter zu den Wendepplatten VCGT FL/FR-X10°

Holders compatible with inserts VCGT FL/FR-X10°

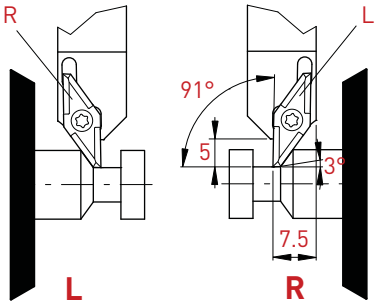
35°



	Art. N°
R	SVACR-...-11
L	SVACL-...-11



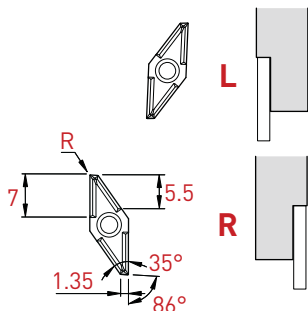
	Art. N°
R	SVJCR-...-11
L	SVJCL-...-11



	Art. N°
R	SV-CR-...-11
L	SV-CL-...-11



**VC GT
FL / FR-X10**

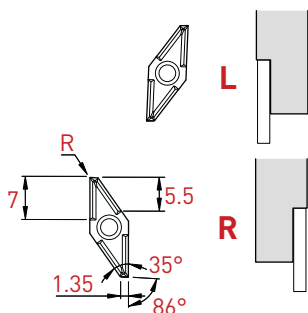


R	Art. N°
0.03	VC GT-1103003-FL-X10
0.08	VC GT-1103008-FL-X10
0.1	VC GT-110301-FL-X10
0.2	VC GT-110302-FL-X10
0.03	VC GT-1103003-FR-X10
0.08	VC GT-1103008-FR-X10
0.1	VC GT-110301-FR-X10
0.2	VC GT-110302-FR-X10

PVD					non revêtu unbeschichtet uncoated	
P	P	P	P	P		
M	M	M	M	M		
N	N	N	N	N		
S	S	S	S	S		
TiAlN	HTA	TiAlX	HTAX	TiN	K10	K20
■	■			■	■	■
■	■			■	■	■
■	■			■	■	■
■	■			■	■	■
■	■	■	■	■	■	■
■	■	■	■	■	■	■
■	■	■	■	■	■	■
■	■	■	■	■	■	■



**VC GT
ELP/ERP-X10**



R	Art. N°
0.03	VC GT-1103003-ELP-X10
0.08	VC GT-1103008-ELP-X10
0.1	VC GT-110301-ELP-X10
0.2	VC GT-110302-ELP-X10
0.03	VC GT-1103003-ERP-X10
0.08	VC GT-1103008-ERP-X10
0.1	VC GT-110301-ERP-X10
0.2	VC GT-110302-ERP-X10

PVD					non revêtu unbeschichtet uncoated	
P	P	P	P	P		
M	M	M	M	M		
N	N	N	N	N		
S	S	S	S	S		
TiAlN	HTA	TiAlX	HTAX	TiN	K10	K20
■	■			■	■	■
■	■			■	■	■
■	■			■	■	■
■	■			■	■	■
■	■	■	■	■	■	■
■	■	■	■	■	■	■
■	■	■	■	■	■	■
■	■	■	■	■	■	■

Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

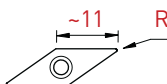
35°

VCGT-K18

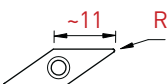
VCGW-0

VCGT
FN-K18

R	Art. N°	PVD		non revêtu unbeschichtet uncoated
		HTA	HTiN	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	■	■	■

VCGW
FN-0

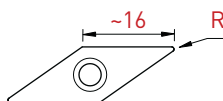
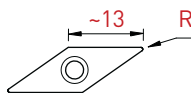
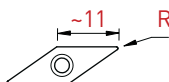
R	Art. N°	PVD		non revêtu unbeschichtet uncoated
		HTA	HTiN	K10
0.05	VCGW-1103005-FN-0	■	■	■
0.1	VCGW-110301-FN-0	■	■	■
0.2	VCGW-110302-FN-0	■	■	■
0.4	VCGW-110304-FN-0	■	■	■





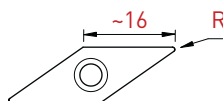
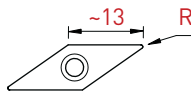
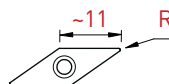
**VC GT
FN-X8**

R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
0.05	VC GT-1103005-FN-X8	■	■	■	■	■
0.08	VC GT-1103008-FN-X8	■	■	■	■	■
0.1	VC GT-110301-FN-X8	■	■	■	■	■
0.15	VC GT-1103015-FN-X8	■	■	■	■	■
0.2	VC GT-110302-FN-X8	■	■	■	■	■
0.4	VC GT-110304-FN-X8	■	■	■	■	■
0.05	VC GT-1303005-FN-X8	■	■	■	■	■
0.1	VC GT-130301-FN-X8	■	■	■	■	■
0.2	VC GT-130302-FN-X8	■	■	■	■	■
0.4	VC GT-130304-FN-X8	■	■	■	■	■
0.05	VC GT-1604005-FN-X8	■	■	■	■	■
0.1	VC GT-160401-FN-X8	■	■	■	■	■
0.2	VC GT-160402-FN-X8	■	■	■	■	■
0.4	VC GT-160404-FN-X8	■	■	■	■	■



**VC GT
ENP-X8**

R	Art. N°	PVD		non revêtu unbeschichtet uncoated
		TiAlN	TiN	
0.05	VC GT-1103005-ENP-X8	■	■	■
0.08	VC GT-1103008-ENP-X8	■	■	■
0.1	VC GT-110301-ENP-X8	■	■	■
0.15	VC GT-1103015-ENP-X8	■	■	■
0.2	VC GT-110302-ENP-X8	■	■	■
0.4	VC GT-110304-ENP-X8	■	■	■
0.05	VC GT-1303005-ENP-X8	■	■	■
0.1	VC GT-130301-ENP-X8	■	■	■
0.2	VC GT-130302-ENP-X8	■	■	■
0.4	VC GT-130304-ENP-X8	■	■	■
0.05	VC GT-1604005-ENP-X8	■	■	■
0.1	VC GT-160401-ENP-X8	■	■	■
0.2	VC GT-160402-ENP-X8	■	■	■
0.4	VC GT-160404-ENP-X8	■	■	■



Plaquettes en métal dur

VHM-Wendeplatten

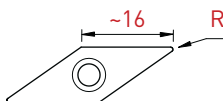
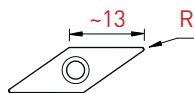
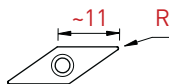
Solid carbide inserts

35°

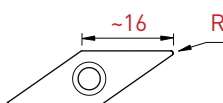
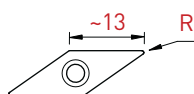
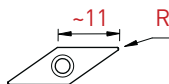
VCGT-X17

VCGT
FN-X17

R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		P M N S TiAlN	P M N S HTA	P M N TiN	N S K10	N S K20
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

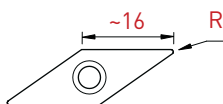
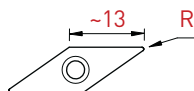
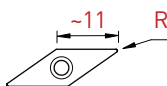
R	Art. N°	PVD		non revêtu unbeschichtet uncoated
		P M N S TiAlN	P M N TiN	
0.05	VCGT-1103005-ENP-X17	■	■	■
0.08	VCGT-1103008-ENP-X17	■		■
0.1	VCGT-110301-ENP-X17	■	■	■
0.15	VCGT-1103015-ENP-X17	■		■
0.2	VCGT-110302-ENP-X17	■	■	■
0.4	VCGT-110304-ENP-X17	■	■	■
0.05	VCGT-1303005-ENP-X17	■		■
0.1	VCGT-130301-ENP-X17	■		■
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	■	■	■





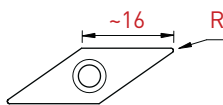
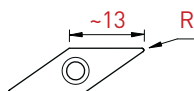
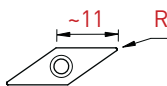
**VCGT
FN-X25**

R	Art. N°	PVD			non revêtu unbeschichtet uncoated	
		TiAlN	HTA	TiN	K10	K20
		P M N S	P M N S	P M 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		non revêtu unbeschichtet uncoated	
		TiAlN	TiN	K20	
		P M N S	P M 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	■	■	■	■



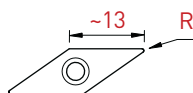
Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

35°

VCGT-X20

VCGT
ENP-X20

R	Art. N°	PVD	
		ZTA	HTX
0.2	VCGT-130302-ENP-X20	■	■
0.4	VCGT-130304-ENP-X20	■	■
0.8	VCGT-130308-ENP-X20	■	■

PVD	
M	M
N	N
S	S

Plaquettes en métal dur

VHM-Wendeplatten

Solid carbide inserts

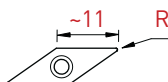
35°

VCMT-XF3

VCMT-XF2



VCMT
EN-XF3

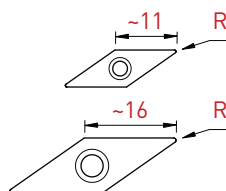


R	Art. N°	PVD	
		TAC	HTAC
0.2	VCMT-110302-EN-XF3	■	■
0.4	VCMT-110304-EN-XF3	■	■

PVD	
P	P
M	M
N	N
S	S



VCMT
EN-XF2



R	Art. N°	PVD		CVD
		TAC	HTAC	HTi5
0.2	VCMT-110302-EN-XF2	■	■	■
0.4	VCMT-110304-EN-XF2	■	■	■
0.4	VCMT-160404-EN-XF2	■	■	■

PVD		CVD
P	P	P
M	M	M
N	N	
S	S	

Plaquettes en métal dur

VHM-Wendeplatten

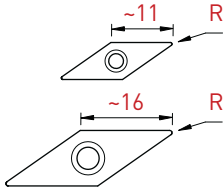
Solid carbide inserts

35°

VCMT-MF
VCMT-HFVCMT
EN-MF

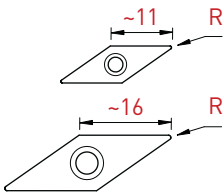
	PVD	CVD
	☒ P ☒ M ☐ ☐	☒ P ☒ M ☐ ☐
Tmax		
Ti4		

R	Art. N°		
0.2	VCMT-110302-EN-MF	■	■
0.4	VCMT-110304-EN-MF	■	■
0.4	VCMT-160404-EN-MF	■	■

VCMT
EN-HF

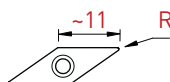
	PVD	CVD
	☒ P ☒ M ☐ ☐	☒ P ☒ M ☐ ☐
Tmax		
Ti4		

R	Art. N°		
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

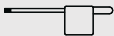
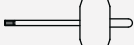


R	Art. N°	CERMET	
		PVD	non revêtu unbeschichtet uncoated
		☒ P ☒ M ☐ ☐	☒ P ☐ ☐ ☐
		CTA	CN6
0.05	VCGT-1103005-FN-X8	■	■
0.1	VCGT-110301-FN-X8	■	■
0.2	VCGT-110302-FN-X8	■	■
0.4	VCGT-110304-FN-X8	■	■

Pièces de rechange et accessoires

Ersatzteile und Zubehör

Spare parts and accessories

Vis et clés de rechange Ersatzschrauben und Schlüssel Spare screws and keys	Porte-outils Halter Holders	Vis Schrauben Screw	Clé Schlüssel Key		
				Option	Serrage Drehmoment Torque
	Series SC...-06 Series SD...-07 Series SV...-11	V-M2.5X7.8-T8 	C-T8 	SET-NM-TX8	1.3 Nm
	Series SV...-13	V-M3X7.3-T8-ISO 	C-T8 	SET-NM-TX8	2.0 Nm
	Series SC...-09 Series SD...-11 Series SV...-16	V-M4X9-T15-ISO 	C-T15 	SET-NM-TX15	3.0 Nm

Pièces de rechange JET Ersatzteile JET Spare parts JET	L Pour réf. For ref. Für Ref	 *	 *	 *
		Art. N°	Art. N°	Art. N°
	S...L-10...-JET	JJL-4X12-D1.5	J-M8X1-D6	JB-M8X1
	S...L-12...-JET S...L-12.7...-JET	JJL-4X14-D1.5	J-M8X1-D6	JB-M8X1
	S...L-16...-JET S...L-20...-JET	JJL-4X17-D1.5	J-M8X1-D6	JB-M8X1
	R Pour réf. For ref. Für Ref	 *	 *	 *
		Art. N°	Art. N°	Art. N°
	S...R-10...-JET	JJR-4X12-D1.5	J-M8X1-D6	JB-M8X1
	S...R-12...-JET S...R-12.7...-JET	JJR-4X14-D1.5	J-M8X1-D6	JB-M8X1
	S...R-16...-JET S...R-20...-JET	JJR-4X17-D1.5	J-M8X1-D6	JB-M8X1

* livré avec chaque porte-outil
mit jedem Halter geliefert
delivered with each holder

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

ISO-Line G tolerance class	Tough grade, for normal to difficult machining conditions	Wear resistant grade, for finishing and light machining	Acier Stahl Steel						Inox Rostfreistahl Stainless steel			
			Acier de décolletage Automatenstahl Free-cutting steel		Acier faiblement allié Leicht legierter Stahl Low alloyed steel		Acier fortement allié Hochlegierter Stahl High alloyed steel		Austénitique Austenitisch Austenitic		Martensitique Martensitisch Martensitic	
			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	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
	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
	N	HN										
ENP-X8	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
	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
	N	HN										
FN-X17	TiAlN	HTA	80-180	0.01-0.12	60-150	0.01-0.10			60-140	0.01-0.15	60-140	0.01-0.15
	TiN		80-170	0.01-0.12					60-120	0.01-0.15	60-120	0.01-0.15
	N	HN										
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
	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
	N	HN										
FN-X25	TiAlN	HTA							60-140	0.01-0.12		
	TiN								60-120	0.01-0.12		
	N	HN										
ENP-X25	TiAlN	HTA							60-140	0.03-0.12	60-140	0.03-0.15
	TiN								60-120	0.03-0.12	60-120	0.03-0.15
	N	HN										
ENP-X20	ZTA								60-140	0.03-0.18	60-140	0.03-0.18
	HTiX								60-140	0.03-0.18	60-140	0.03-0.18

G tolerance class 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
	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
	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
	N	HN										
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
	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
	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
	N	HN										
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
		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
		HN										
FN-0		HTA	80-150	0.01-0.10								
		HTiN	80-140	0.01-0.10								
		HN										

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[N]
Alliages d'aluminium et non ferreux
Aluminium- und Nichteisenlegierungen
Aluminium and non-ferrous alloys

Aluminium		Al-Si		Cuivre Kupfer Copper		Laiton & bronze Messing & Bronze Brass & bronze	
VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)
		150-1600	0.01-0.15	80-300	0.01-0.12	100-400	0.01-0.15
120-2200	0.01-0.18	150-1600	0.01-0.15	80-300	0.01-0.12	100-400	0.01-0.15
120-2000	0.01-0.18	150-1500	0.01-0.15	80-250	0.01-0.12	100-300	0.01-0.15
		150-800	0.03-0.18	80-300	0.03-0.15		
		150-800	0.03-0.18	80-300	0.03-0.15		
		150-800	0.03-0.18	80-250	0.03-0.15		
		150-1600	0.01-0.18	80-300	0.01-0.15	100-400	0.01-0.18
120-2200	0.01-0.25	150-1600	0.01-0.18	80-300	0.01-0.15	100-400	0.01-0.18
120-2000	0.01-0.25	150-1500	0.01-0.18	80-250	0.01-0.15	100-300	0.01-0.18
		150-800	0.03-0.20	80-300	0.03-0.18		
		150-800	0.03-0.20	80-300	0.03-0.18		
		150-800	0.03-0.20	80-250	0.03-0.18		
		150-1600	0.01-0.22	80-300	0.01-0.18		
120-2200	0.01-0.30	150-1600	0.01-0.22	80-300	0.01-0.18		
120-2000	0.01-0.30	150-1500	0.01-0.22	80-250	0.01-0.18		
		150-800	0.03-0.25	80-300	0.03-0.20		
		150-800	0.03-0.25	80-300	0.03-0.20		
		150-800	0.03-0.25	80-250	0.03-0.20		
		150-800	0.03-0.25	80-300	0.03-0.20		
		150-800	0.03-0.25	80-300	0.03-0.20		

[S]
Titane et superalliages
Titan und Superlegierungen
Titanium and superalloys

Ti grade 1 - 3		Ti grade 4 - 6		Superalliages Superlegierungen Superalloys	
VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)	VC (m/min)	F (mm/U)
		30-60	0.01-0.12	40-70	0.01-0.10
		30-60	0.03-0.12	40-70	0.03-0.10
		30-70	0.01-0.12		
		30-70	0.01-0.15	40-80	0.01-0.12
		40-80	0.01-0.15		
				30-70	0.03-0.15
				40-80	0.03-0.12
				30-60	0.01-0.12
				40-70	0.01-0.10
		30-70	0.01-0.12		
				30-60	0.03-0.12
				40-70	0.03-0.10
				40-90	0.03-0.15
				40-80	0.03-0.15

			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
									30-70	0.01-0.12	30-60	0.01-0.12	40-70	0.01-0.10
120-2200	0.01-0.20	150-1600	0.01-0.18	80-300	0.01-0.15	100-400	0.01-0.18							
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				
		150-1600	0.03-0.20	80-300	0.03-0.18						30-60	0.03-0.12	40-70	0.03-0.10
											30-60	0.03-0.12	40-70	0.03-0.10
		150-1600	0.03-0.20	80-300	0.01-0.18									
		150-1500	0.03-0.20	80-250	0.01-0.18									
		150-1600	0.01-0.12	80-300	0.01-0.10						30-70	0.01-0.10	40-80	0.01-0.10
120-2200	0.01-0.15	150-1600	0.01-0.12	80-300	0.01-0.10									
120-2000	0.01-0.15	150-1500	0.01-0.12	80-250	0.01-0.10				40-80	0.01-0.10				
							100-400	0.01-0.18						
							100-400	0.01-0.18						
							100-300	0.01-0.18						

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

Standard machining data

ISO-Line	Tough grade, for normal to difficult machining conditions	Wear resistant grade, for finishing and light machining	Acier Stahl Steel						Inox Rostfreistahl Stainless steel			
			Acier de décolletage Automatenstahl Free-cutting steel		Acier faiblement allié Leicht legierter Stahl Low alloyed steel		Acier fortement allié Hochlegierter Stahl High alloyed steel		Austénitique Austenitisch Austenitic		Martensitique Martensitisch Martensitic	
			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
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
		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
		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
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
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 CERMET													
FN-X8 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 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 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					

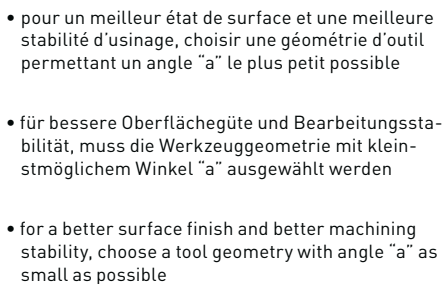
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1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Discussion**
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 190. **Figure 182**
 191. **Figure 183**
 192. **Figure 184**
 193. **Figure 185**
 194. **Figure 186**
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 210. **Figure 202**
 211. **Figure 203**
 212. **Figure 204**
 213. **Figure 205**
 214. **Figure 206**
 215. **Figure 207**
 216. **Figure 208**
 217. **Figure 209**

188



7.57

H

Système de serrage monobloc
Einteiliges Klemmsystem
Monobloc top clamp system

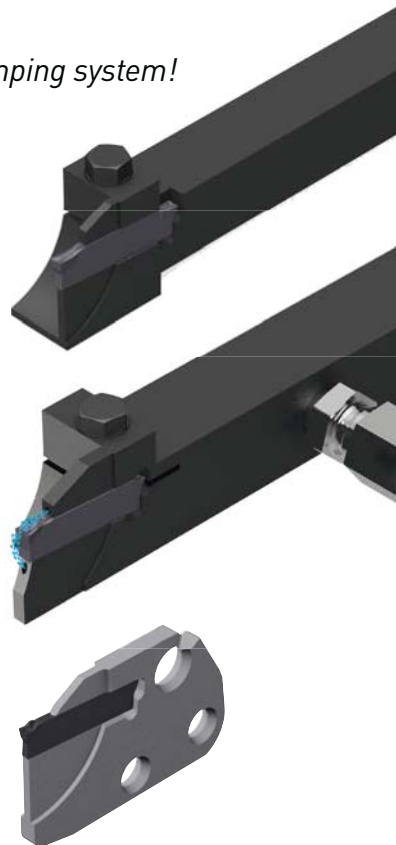
H JET

Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

**HK
HUK
HM**

Lames
Stechklinge
Parting-off blades

Very rigid clamping system!



ET 15

= 1.5 mm

Ø max 32 mm

ET 20

= 2.0 mm

ET 25

= 2.5 mm

ET 30

= 3.0 mm

Ø max 44 mm



U



J



T



A

Index

Informations techniques Technisches Informationen Technical information	> 8.02
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Géométries de coupe Spanformgeometrie Cutting geometries	> 8.04
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Nuances Sorten Grades	> 8.05
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	H Series	sans arrosage ohne Kühlung without coolant	> 8.06
--	-----------------	--	--------

Porte-outils Halter Holders	H JET Series	avec arrosage mit Kühlung with coolant	> 8.07
-----------------------------------	---------------------	--	--------

	HK-HUK-HM Series		> 8.08
--	-------------------------	--	--------

	UN Series		> 8.12
--	------------------	--	--------

	UL-UR Series		> 8.13
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	JN Series		> 8.14
--	------------------	--	--------

Plaquettes de tronçonnage Abstechwendeplatten Cut off inserts	JR Series		> 8.15
---	------------------	--	--------

	TN Series		> 8.16
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	TR Series		> 8.17
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	AN Series		> 8.18
--	------------------	--	--------

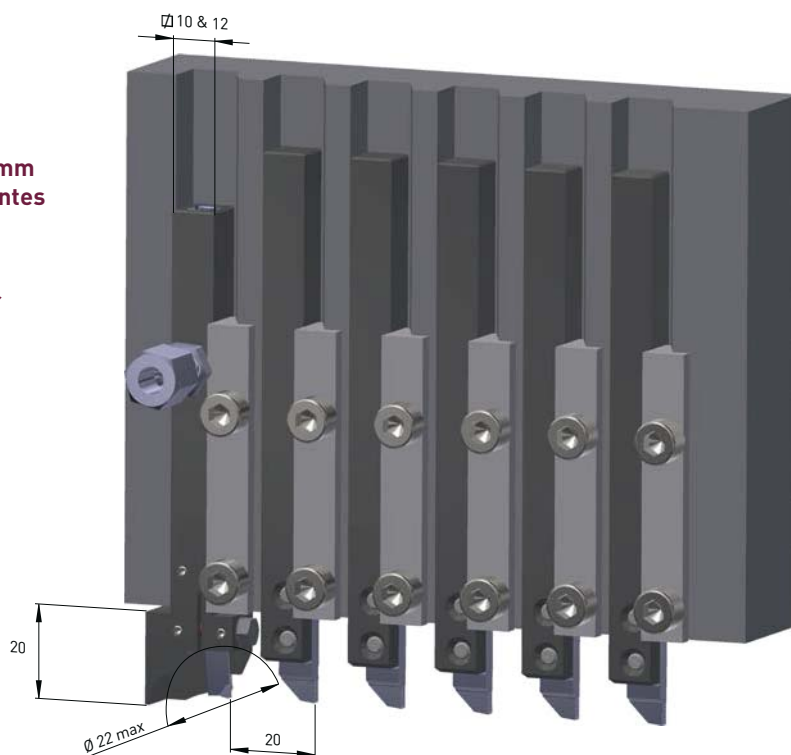
	AR Series		> 8.19
--	------------------	--	--------

Paramètres de coupe indicatifs Empfohlene Schnittwerte Standard machining data			> 8.20
--	--	--	--------

**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



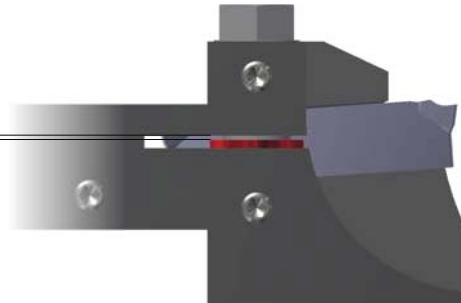
**Changement de la plaque
sans démontage**

**Veränderung der Platte
ohne Zerlegung**

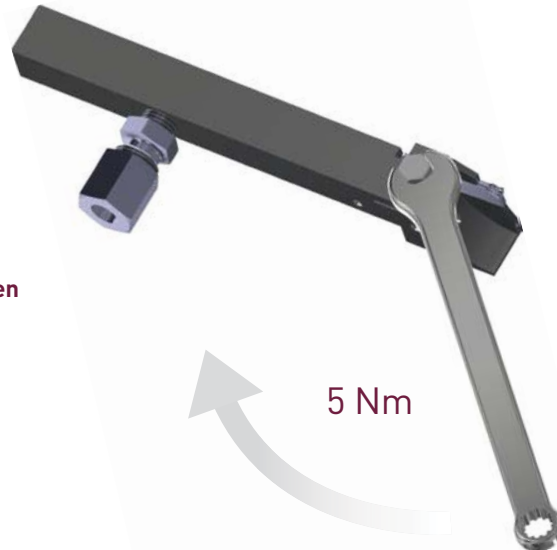
**Change of insert
without disassembly**

Butée de serrage
Spannungs-Anschlag
Clamping stop

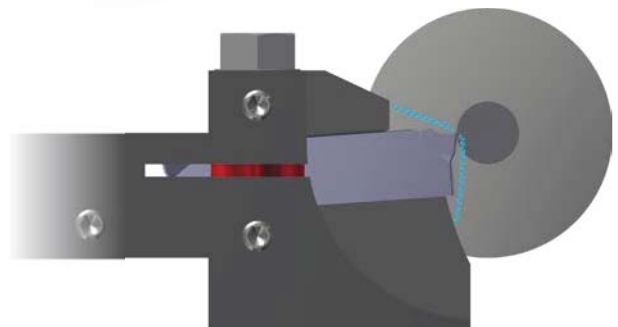
Distance de serrage
 Anschlagabstand
 Distance clamping



Recommendations 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 lubrication



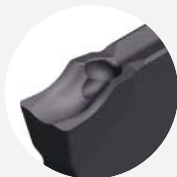
Géométries de coupe

Spanformgeometrie

Cutting geometries

UN

UL
UR



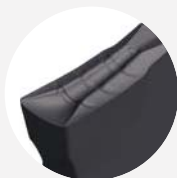
- géométrie positive universelle, faibles efforts de coupe
- bonne maîtrise du copeau
- 1^{er} choix pour l'inox

- 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



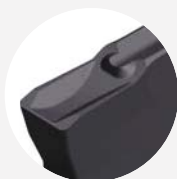
- géométrie universelle
- excellent rétrécissement du copeau pour un meilleur contrôle
- conseillé pour le tronçonnage de pièces à parois minces
- pour acier et inox

- allgemeine Geometrie
- ausgezeichnete Spanversmalerung 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

TN

TR



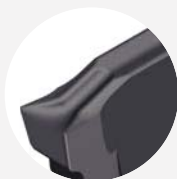
- géométrie négative
- utilisation dans des conditions de rigidité optimale
- pour les matières à haute ténacité
- universel pour les aciers et inox

- 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

AN

AR



- géométrie fortement positive
- roule-copeau poli avec arêtes de coupe vives
- 1^{er} 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

Nuances

Sorten

Grades

P

M

N

S

TiAlN

revêtement PVD
PVD Beschichtung
PVD coating

- pour l'usinage des aciers, aciers inoxydables et alliages de titane
- 1^{er} choix pour les avances faibles à modérées

- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen
- beste Wahl für niedrige bis mittlere Vorschübe

- for machining of steel, stainless steel and titanium alloys
- first choice for low to average cutting speed

P

M

☐☐**Tmax**

revêtement PVD
PVD Beschichtung
PVD coating

- nuance pour usinage moyen à lourd des aciers, aciers alliés et inoxydables
- bonne résistance aux températures d'usinage élevées
- 1^{er} choix pour le tronçonnage des aciers au carbone et des aciers fortement alliés

- Sorte für mittlere bis hohe Belastung in Stahl und legierter Stahlbearbeitung
- gute Bearbeitungswarmfestigkeit
- für die Bearbeitung von legiertem Kohlenstahl und hoch legiertem Stahl bestens geeignet

- 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

P

M

☐☐**Zmax**

revêtement PVD
PVD Beschichtung
PVD coating

- pour l'usinage des aciers, aciers inoxydables et alliages de titane en conditions défavorables
- bonne résistance aux chocs à des vitesses de coupe moyenne à faible
- 1^{er} choix pour le tronçonnage en coupe interrompue

- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen in schwierige Bearbeitungsfälle
- gute Bruchfestigkeit mit durchschnittliche bis niedrige Schnittgeschwindigkeit
- für die Bearbeitung in unterbrochenen Schnitte bestens geeignet

- 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

P

M

☐☐**ZTi6**

revêtement CVD
CVD Beschichtung
CVD coating

- nuance très tenace
- grande résistance à la température
- 1^{er} choix pour les aciers «haute température»
- secondairement pour les aciers inox

- sehr zähe Sorte
- hohe Bearbeitungswarmfestigkeit
- 1. Wahl für „hohe Temperatur“ Stähle
- sekundär für rostfreie Stähle

- very strong grade
- good wear resistance
- 1st choice for "high temperature" steels
- secondarily for stainless steels

☐☐

N

S

AS

revêtement PVD
PVD Beschichtung
PVD coating

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

- Sorte für Nichteisenmetalle
- sehr geringer Reibwert
- für die Bearbeitung von Aluminium bis 5% Si, Kupfer und niedriglegiertem Titan bestens geeignet

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

☐☐

N

S

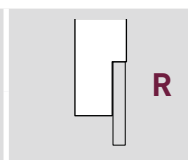
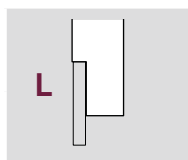
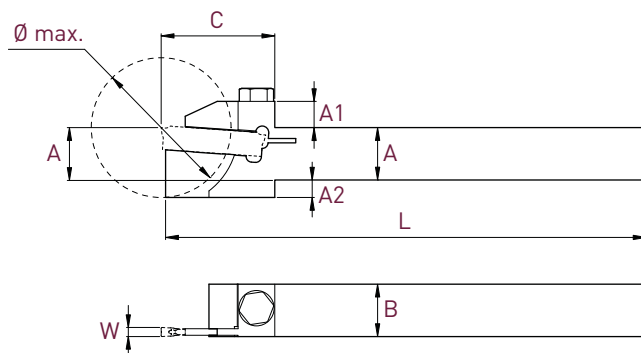
N

non-revêtu
unbeschichtet
uncoated

- nuance non revêtu
- 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, Kunststoff

- uncoated grade
- recommended for machining of non-ferrous materials
- titanium, brass, bronze, aluminium without silicium, plastic



Pièces de rechange
Ersatzteile
Spare parts



Plaquettes WSP Inserts	A x B x L	Ø max.	C	A1	A2	Art. N°	Art. N°	Art. N°	Art. N°
W 1.5 Type ET15	10x12x110	22	20	5	6	ET15-H1012L-D22	ET15-H1012R-D22	V-M5X20-6P6	C-6PEX-6.0
	12x12x110	22	20	5	4	ET15-H1212L-D22	ET15-H1212R-D22		
	12.7x12.7x110	22	20	5	3	ET15-H12.7L-D22	ET15-H12.7R-D22		
	12x12x110	32	26	6	4	ET15-H1212L-D32	ET15-H1212R-D32	V-M5X21-6P7	C-6PEX-7.0
	12.7x12.7x110	32	26	6	3	ET15-H12.7L-D32	ET15-H12.7R-D32		
	16x16x110	32	26	6	-	ET15-H1616L-D32	ET15-H1616R-D32		
W 2.0 Type ET20	10x12x110	22	20	5	6	ET20-H1012L-D22	ET20-H1012R-D22	V-M5X20-6P6	C-6PEX-6.0
	12x12x110	22	20	5	4	ET20-H1212L-D22	ET20-H1212R-D22		
	12.7x12.7x110	22	20	5	3	ET20-H12.7L-D22	ET20-H12.7R-D22		
	12x12x110	32	26	6	4	ET20-H1212L-D32	ET20-H1212R-D32	V-M5X21-6P7	C-6PEX-7.0
	12.7x12.7x110	32	26	6	3	ET20-H12.7L-D32	ET20-H12.7R-D32		
	16x16x110	32	26	6	-	ET20-H1616L-D32	ET20-H1616R-D32		
W 2.5 Type ET25	10x12x110	22	20	5	6	ET25-H1012L-D22	ET25-H1012R-D22	V-M5X20-6P6	C-6PEX-6.0
	12x12x110	22	20	5	4	ET25-H1212L-D22	ET25-H1212R-D22		
	12.7x12.7x110	22	20	5	3	ET25-H12.7L-D22	ET25-H12.7R-D22		
	12x12x110	32	26	6	4	ET25-H1212L-D32	ET25-H1212R-D32	V-M5X21-6P7	C-6PEX-7.0
	12.7x12.7x110	32	26	6	3	ET25-H12.7L-D32	ET25-H12.7R-D32		
	16x16x110	32	26	6	-	ET25-H1616L-D32	ET25-H1616R-D32		
W 3.0 Type ET30	16x16x130	44	35	8	4	ET25-H1616L-D44	ET25-H1616R-D44	V-M5X27-6P7	C-6PEX-7.0
	20x20x130	44	35	8	-	ET25-H2020L-D44	ET25-H2020R-D44		
	16x16x110	32	26	6	-	ET30-H1616L-D32	ET30-H1616R-D32	V-M5X21-6P7	C-6PEX-7.0
	16x16x130	44	35	8	4	ET30-H1616L-D44	ET30-H1616R-D44		
	20x20x130	44	35	8	-	ET30-H2020L-D44	ET30-H2020R-D44		
	16x16x110	32	26	6	-	ET30-H1616L-D32	ET30-H1616R-D32	V-M5X27-6P7	C-6PEX-7.0

* livré avec chaque porte-outil
mit jedem Halter geliefert
delivered with each holder

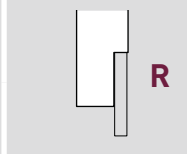
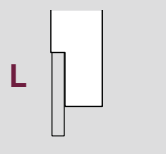
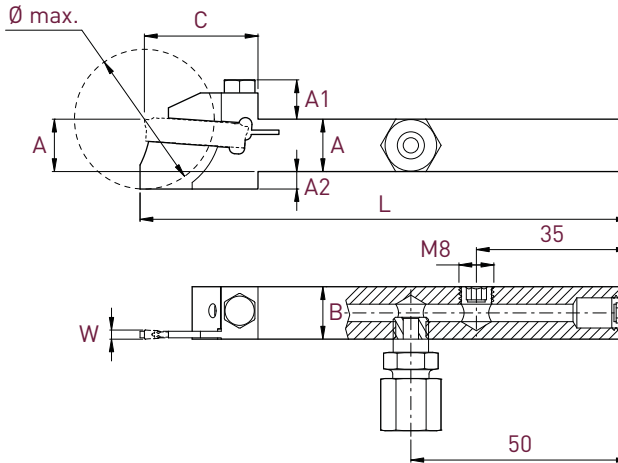
Porte-outils avec arrosage intégré

Halter mit integrierter Kühlmittelzufuhr

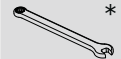
Holders with integrated coolant supply

Ø max 44 mm

H JET Series



Pièces de rechange
Ersatzteile
Spare parts



Plaquettes WSP Inserts	A x B x L	Ø max.	A1	C	A2	Art. N°	Art. N°
W 2.0 Type ET20	10x12x110	22	5	20	6	ET20-H1012L-JET22	ET20-H1012R-JET22
	12x12x110	22	5	20	4	ET20-H1212L-JET22	ET20-H1212R-JET22
	12.7x12.7x110	22	20	5	3	ET20-H12.7L-JET22	ET20-H12.7R-JET22
	12x12x110	32	6	26	4	ET20-H1212L-JET32	ET20-H1212R-JET32
	12.7x12.7x110	32	26	6	3	ET20-H12.7L-JET32	ET20-H12.7R-JET32
	16x16x110	32	6	26	-	ET20-H1616L-JET32	ET20-H1616R-JET32
	16x16x130	44	8	35	4	ET20-H1616L-JET44	ET20-H1616R-JET44
	20x20x130	44	8	35	-	ET20-H2020L-JET44	ET20-H2020R-JET44
W 2.5 Type ET25	10x12x110	22	5	20	6	ET25-H1012L-JET22	ET25-H1012R-JET22
	12x12x110	22	5	20	4	ET25-H1212L-JET22	ET25-H1212R-JET22
	12.7x12.7x110	22	20	5	3	ET25-H12.7L-JET22	ET25-H12.7R-JET22
	12x12x110	32	6	26	4	ET25-H1212L-JET32	ET25-H1212R-JET32
	12.7x12.7x110	32	26	6	3	ET25-H12.7L-JET32	ET25-H12.7R-JET32
	16x16x110	32	6	26	-	ET25-H1616L-JET32	ET25-H1616R-JET32
	16x16x130	44	8	35	4	ET25-H1616L-JET44	ET25-H1616R-JET44
	20x20x130	44	8	35	-	ET25-H2020L-JET44	ET25-H2020R-JET44
W 3.0 Type ET30	16x16x110	32	6	26	-	ET30-H1616L-JET32	ET30-H1616R-JET32
	16x16x130	44	8	35	4	ET30-H1616L-JET44	ET30-H1616R-JET44
	20x20x130	44	8	35	-	ET30-H2020L-JET44	ET30-H2020R-JET44

Art. N°	Art. N°
V-M5X20-6P6-J	C-6PEX-6.0
V-M5X21-6P7-J	C-6PEX-7.0
V-M5X27-6P7-J	C-6PEX-7.0
V-M5X20-6P6-J	C-6PEX-6.0
V-M5X21-6P7-J	C-6PEX-7.0
V-M5X27-6P7-J	C-6PEX-7.0
V-M5X21-6P7-J	C-6PEX-7.0
V-M5X27-6P7-J	C-6PEX-7.0

Pièces de rechange
Ersatzteile
Spare parts



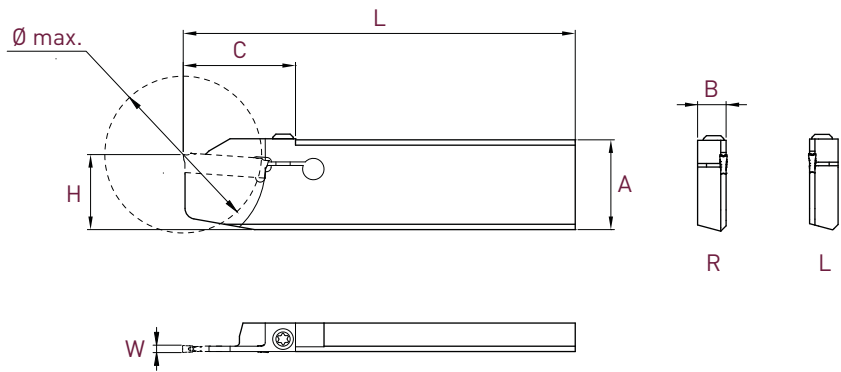
Art. N°

Art. N°

J-M8X1-D6

JB-M8X1

* livré avec chaque porte-outil
mit jedem Halter geliefert
delivered with each holder



					L	R
Plaquettes WSP Inserts	A x B x L	Ø max.	C	H	Art. N°	Art. N°
W 1.5 Type ET15	26x8x110	20	19.5	21	ET15-HK-2608L-110-D20	ET15-HK-2608R-110-D20
	26x8x110	32	25.5	21	ET15-HK-2608L-110-D32	ET15-HK-2608R-110-D32
W 2.0 Type ET20	26x8x110	32	25.5	21	ET20-HK-2608L-110-D32	ET20-HK-2608R-110-D32
	26x8x110	44	31.5	21	ET20-HK-2608L-110-D44	ET20-HK-2608R-110-D44

Pièces de rechange Ersatzteile Spare parts		*
	Art. N°	Art. N°
	V-M4X14.5-T15-EVOCUT	C-T15

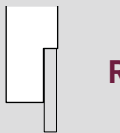
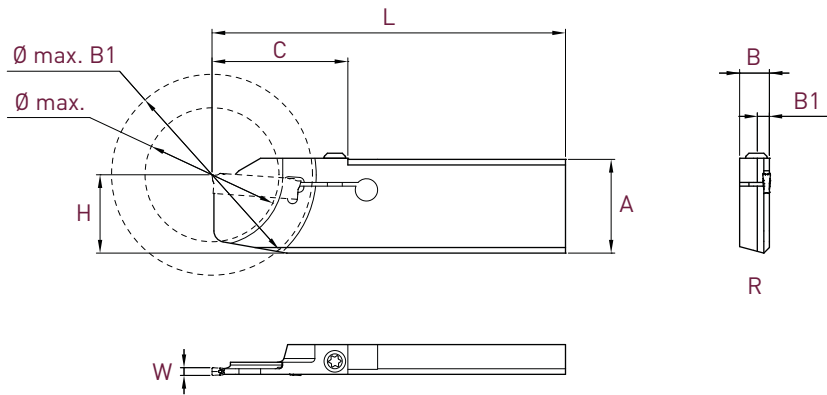
* livré avec chaque lame
mit jedem Stechkling geliefert
delivered with each blade

Lames de tronçonnage avec dégagement pour accès contre-broche

Stecklinge mit Aussparung für Gegenspindel Zugriff

Parting-off blades with recess for subspindle access

HK-RS Series



Plaquettes WSP Inserts	A x B x L	Ø max.	Ø max B1	B1	C	H	Art. N°
W 1.5 Type ET15	26x8x95	36	54	3.25	36.5	21	ET15-HK-2608RS-95-D36
W 2.0 Type ET20	26x8x95	36	54	3.25	36.5	21	ET20-HK-2608RS-95-D36

Pièces de rechange
Ersatzteile
Spare parts



*

Art. N°

V-M4X14.5-T15-EVOCUT



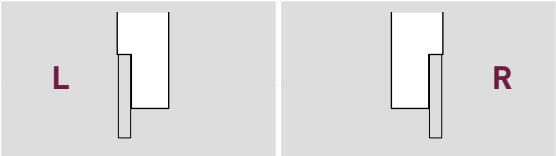
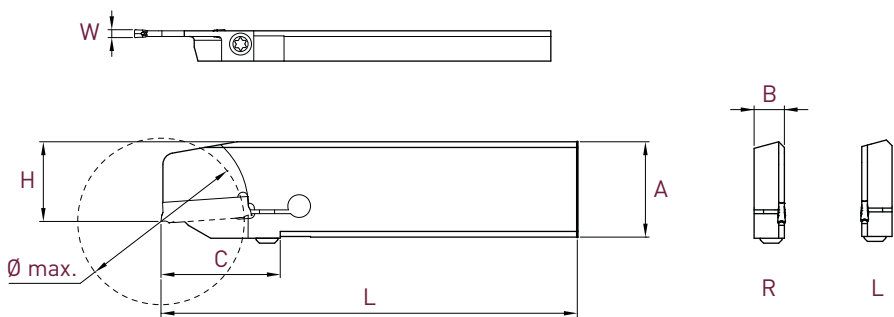
*

Art. N°

C-T15

* livré avec chaque lame
mit jedem Steckling geliefert
delivered with each blade

Lames de tronçonnage inversées
Überkopf Stechklinge
Upside down parting-off blades



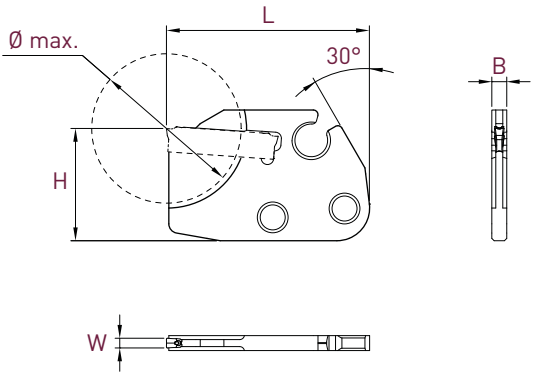
Plaquettes WSP Inserts	A x B x L	Ø max.	C	H	Art. N°	Art. N°
W 1.5	26x8x110	20	19.5	21	ET15-HUK-2608L-110-D20	ET15-HUK-2608R-110-D20
Type ET15	26x8x110	32	25.5	21	ET15-HUK-2608L-110-D32	ET15-HUK-2608R-110-D32
W 2.0	26x8x110	32	25.5	21	ET20-HUK-2608L-110-D32	ET20-HUK-2608R-110-D32
Type ET20	26x8x110	44	31.5	21	ET20-HUK-2608L-110-D44	ET20-HUK-2608R-110-D44

Pièces de rechange Ersatzteile Spare parts		*
	Art. N°	Art. N°
	V-M4X14.5-T15-EVOCUT	C-T15

* livré avec chaque lame
mit jedem Steckling geliefert
delivered with each blade

Lames pour système modulaire
Stechklinge für modulares System
Parting-off blades for modular system

HM Series



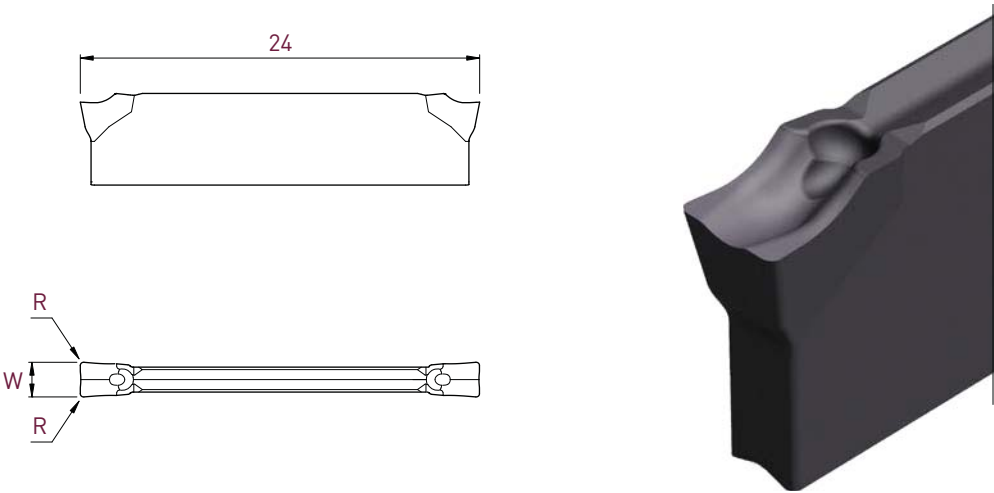
N

Plaquettes WSP Inserts	Ø max.	B	L	H	Art. N°
W 1.5 Type ET15	20	3.2	43.5	24	ET15-HM-IN-43-D20
	32	3.2	43.5	24	ET15-HM-IN-43-D32
W 2.0 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
W 3.0 Type ET20	32	3.2	43.5	24	ET30-HM-IN-43-D32

EVO CUT-LINE

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

UN Series



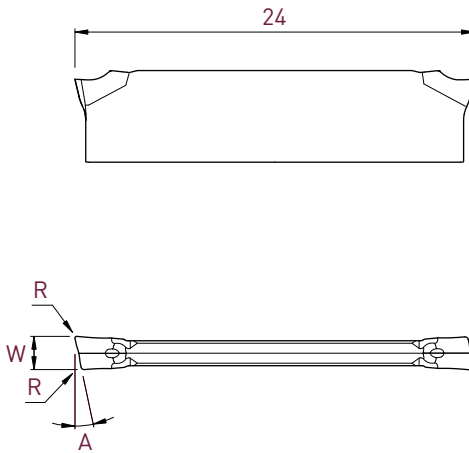
UN							
Type	W ±0,05	R	Art. N°	   	 	 	 
				TIALN	Tmax	Zmax	ZT16
ET15	1.5	0	ET15-UN-000F	■			
	1.5	0.2	ET15-UN-002	■	■	■	
ET20	2.0	0	ET20-UN-000F	■			
	2.0	0.2	ET20-UN-002	■	■	■	■
ET25	2.5	0	ET25-UN-000F	■			
	2.5	0.3	ET25-UN-003	■	■	■	■
ET30	3.0	0	ET30-UN-000F	■			
	3.0	0.3	ET30-UN-003	■	■	■	■

Plaquettes de tronçonnage

Abstechwendeplatten

Cut off inserts

UL-UR Series

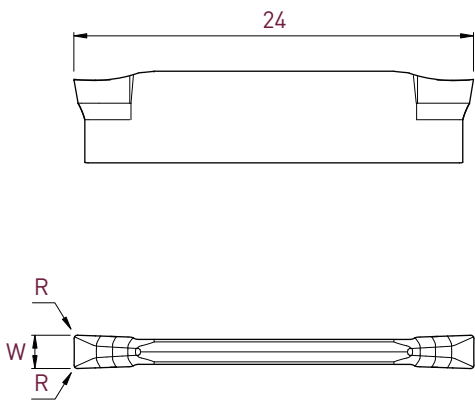


				UL		UR					
Type	W $\pm 0,05$	A	R	Art. N°	P M N S TiAlN	P M Tmax	P M Zmax	Art. N°	P M N S TiAlN	P M Tmax	P M Zmax
ET15	1.5	6°	0.2	-				ET15-UR-602	■	■	■
	1.5	8°	0	-				ET15-UR-800F	■		
	1.5	12°	0.1	-				ET15-UR-1201	■	■	■
	1.5	15°	0	ET15-UL-1500F	■			ET15-UR-1500F	■		
ET20	2.0	6°	0.2	-				ET20-UR-602	■	■	■
	2.0	8°	0	-				ET20-UR-800F	■		
	2.0	12°	0.1	-				ET20-UR-1201	■	■	■
	2.0	15°	0	ET20-UL-1500F	■			ET20-UR-1500F	■		
ET25	2.5	6°	0.2	-				ET25-UR-602	■	■	■
	2.5	8°	0	-				ET25-UR-800F	■		
	2.5	12°	0.1	-				ET25-UR-1201	■	■	■
	2.5	15°	0	ET25-UL-1500F	■			ET25-UR-1500F	■		
ET30	3.0	6°	0.3	-				ET30-UR-603	■	■	■
	3.0	8°	0	-				ET30-UR-800F	■		
	3.0	12°	0.2	-				ET30-UR-1202	■	■	■
	3.0	15°	0	ET30-UL-1500F	■			ET30-UR-1500F	■		

EVOCUT-LINE

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

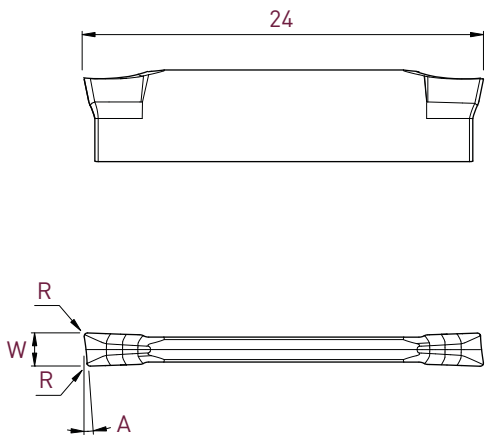
JN Series



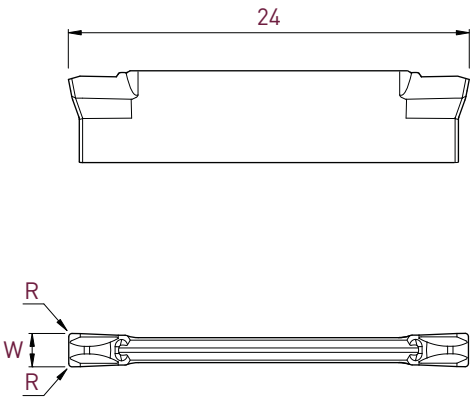
JN							
Type	W $\pm 0,05$	R	Art. N°	TIALN 	Tmax 	Zmax 	ZTi6 
ET15	1.5	0.2	ET15-JN-002				
ET20	2.0	0.2	ET20-JN-002				
ET25	2.5	0.3	ET25-JN-003				
ET30	3.0	0.3	ET30-JN-003				

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

JR Series



JR							
Type	W $\pm 0,05$	A	R	Art. N°	TiAlN	Tmax	Zmax
ET15	1.5	6°	0.2	ET15-JR-602	P M N S	P M	P M
ET20	2.0	6°	0.2	ET20-JR-602	P M N S	P M	P M
ET25	2.5	6°	0.2	ET25-JR-602	P M N S	P M	P M
ET30	3.0	6°	0.3	ET30-JR-603	P M N S	P M	P M

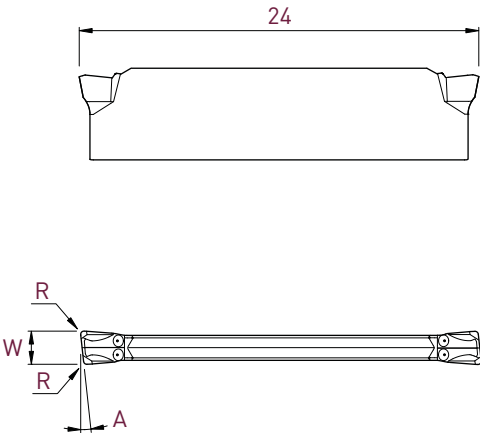


TN							
Type	W $\pm 0,05$	R	Art. N°	   TIALN	  T _{max}	  Z _{max}	  ZTi6
ET20	2.0	0.2	ET20-TN-002	■	■	■	■
ET25	2.5	0.3	ET25-TN-003	■	■	■	■
ET30	3.0	0.3	ET30-TN-003	■	■	■	■

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

Negative geometry

TR Series

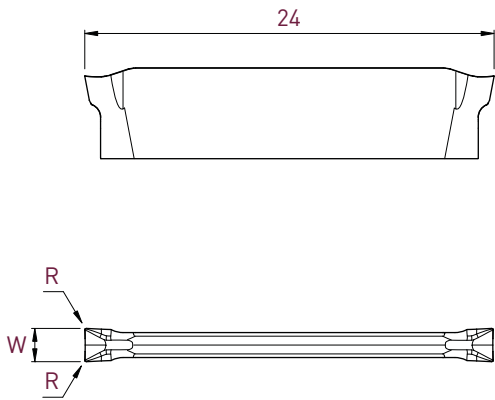


				TR	
Type	W $\pm 0,05$	A	R	Art. N°	P M N P M P M P M TIALN Tmax Zmax ZTi6
ET20	2.0	6°	0.2	ET20-TR-602	■ ■ ■
ET25	2.5	6°	0.2	ET25-TR-602	■ ■ ■
ET30	3.0	6°	0.3	ET30-TR-603	■ ■ ■ ■

EVOCUT-LINE

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

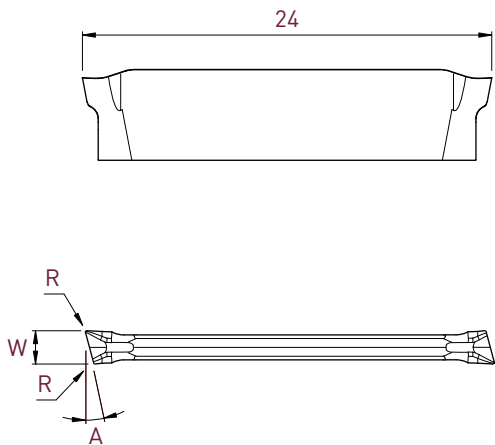
AN Series



AN						
Type	W $\pm 0,05$	R	Art. N°	TiAlN	AS	N
ET20	2.0	0.2	ET20-AN-002F	☒	☒	☒
ET30	3.0	0.3	ET30-AN-003F	☒	☒	☒

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

AR Series



				AR			
Type	W $\pm 0,05$	A	R	Art. N°	TiAIN	AS	N
ET20	2.0	15°	0.1	ET20-AR-1501F	■	■	■
ET30	3.0	15°	0.2	ET30-AR-1502F	■	■	■

EVOCUT-LINE

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

Standard machining data

			ET15	ET20	ET25	ET30	Acier Stahl Steel						Inox Rostfreistahl Stainless steel	
							Acier de décolletage Automatenstahl Free-cutting steel		Acier faiblement allié Leicht legierter Stahl Low alloyed steel		Acier fortement allié Legierter Stahl High alloyed steel		Austénitique et martensitique Austenitisch und martensitisch Austenitic and martensitic	
							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
			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
			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
		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
			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
			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
		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
			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
			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
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
			Tmax	■	■	■	100-170	0.02-0.05	70-150	0.02-0.05	60-120	0.02-0.05	60-150	0.02-0.05
		UR/UL	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
			Tmax	■	■	■	100-170	0.02-0.05	70-150	0.02-0.05	60-120	0.02-0.05	60-150	0.02-0.05
		AN	N	■	■	■								
			TiAlN	■	■	■							40-80	0.02-0.05
		AR	AS	■	■	■								
			Tmax	■	■	■								
		AR	N	■	■	■								
			TiAlN	■	■	■							40-80	0.02-0.05
		AR	AS	■	■	■								
			Tmax	■	■	■								

* premier choix en cas
de coupe interrompue
** arête de coupe vive

* beste Basis für
unterbrochene Schnitte
** scharfe Schneidkante

* first choice
for interrupted cut
** sharp cutting edge

NAlliages d'aluminium et non ferreux Aluminium- und Nichteisenlegierungen Aluminium and non-ferrous alloys								STitane Titan Titanium			
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)
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
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
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
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
						150-300	0.05-0.20				
						150-300	0.05-0.20				
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
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
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
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
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
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
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
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

★★★★★

★★★★

★★★

Porte-outils / Halter / Holders

H

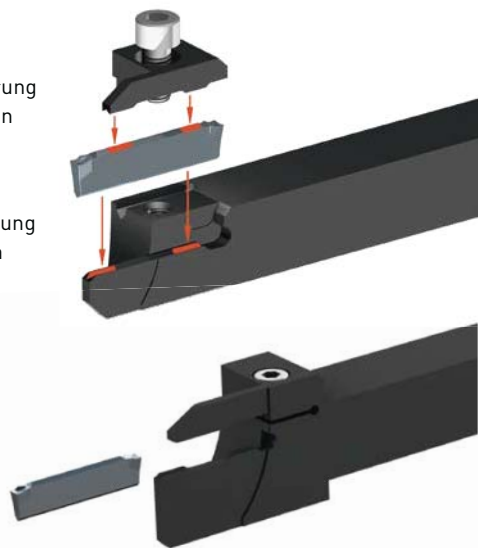
Système de serrage à bride, version courte
Spannbrücke Klemmsystem, kurze Ausführung
Independent top clamp system, short version

HX

Système de serrage à bride, version longue
Spannbrücke Klemmsystem, lange Ausführung
Independent top clamp system, long version

HZ

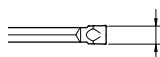
Porte-outils de grande capacité
Klemmhalter für grössere Durchmesser
High capacity tool holders

Very rigid clamping system!

Plaquettes / WSP / Inserts

CUT 16

=

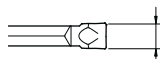


1.6 mm

Ø max 20 mm

CUT 22

=

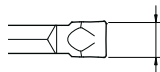


2.2 mm

Ø max 42 mm

CUT 31

=



3.1 mm

Ø max 65 mm

**U****P****T****G**

Index

Nuances et géométries
Sorten und Geometrien
Grades and types of geometries

> **9.02**

CUT 16 Ø max 20 mm > **9.04**

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Empfohlene Schnittwerte
Standard machining data

CUT 22 Ø max 42 mm > **9.06**

CUT 31 Ø max 65 mm > **9.08**

H Series > **9.10**

Porte-outils
Halter
Holders

HX Series > **9.11**

HZ Series > **9.12**

Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

HZ-JET Series > **9.13**

U Series > **9.14**

Plaquettes de tronçonnage
Abstechwendeplatten
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P Series > **9.16**

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WSP zum einstecken, drehen und abstechen
Inserts for grooving, turning and cut off

G Series > **9.21**

Nuances

Sorten

Grades

TiAlN

revêtement PVD
PVD Beschichtung
PVD coating

- pour l'usinage des aciers, aciers inoxydables et alliages de titane
- 1^{er} choix pour les avances faibles à modérées

- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen
- beste 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

- nuance pour usinage moyen à lourd des aciers, aciers alliés et inoxydables
- bonne résistance aux températures d'usinage élevées
- 1^{er} choix pour le tronçonnage des aciers au carbone et des aciers fortement alliés

- Sorte für mittlere bis hohe Belastung in Stahl und legierter Stahlbearbeitung
- gute Bearbeitungswarmfestigkeit
- für die Bearbeitung von legiertem Kohlenstahl und hoch legiertem Stahl bestens geeignet

- 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

- pour l'usinage des aciers, aciers inoxydables et alliages de titane en conditions défavorables
- bonne résistance aux chocs à des vitesses de coupe moyenne à faible
- 1^{er} choix pour le tronçonnage en coupe interrompue

- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen in schwierige Bearbeitungsfälle
- gute Bruchfestigkeit mit durchschnittliche bis niedrige Schnittgeschwindigkeit
- für die Bearbeitung in unterbrochenen Schnitte bestens geeignet

- 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

- 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 bestens geeignet
- für unterbrochene Schnitte ungeeignet

- very good wear resistance
- first choice for steel, stainless steel and titanium alloys machining
- not suitable for interrupted cut

AS

revêtement PVD
PVD Beschichtung
PVD coating

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

- Sorte für Nichteisenmetalle
- sehr geringer Reibwert
- für die Bearbeitung von Aluminium bis 5% Si, Kupfer und niedriglegiertem Titan bestens geeignet

- grade for non-ferrous materials
- very low friction ratio
- first choice for Aluminium up to 5% Si, copper and low alloyed titanium

N

non revêtu
unbeschichtet
uncoated

- nuance pour les laitons, pour la géométrie PNW et PRW

- Sorte für Messing, für PNW und PRW Geometrie

- grade for brass, for PNW and PRW geometry

Géométries de coupe

Spanformgeometrie

Cutting geometries

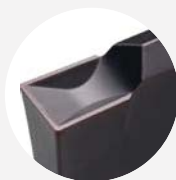
UN

UR
UL

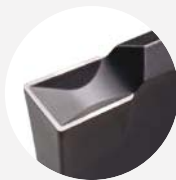
- géométrie positive universelle, bonne maîtrise du copeau
- allgemeine Geometrie, sehr gute Spankontrolle
- all-round insert with efficient chip control

PN

PR



- géométrie légèrement positive pour les aciers, aciers au carbone, aciers alliés
- leicht positive Geometrie für Stahl, Kohlenstoffstahl, legiertem Stahl
- slightly positive geometry for steel, carbon steel, alloyed steel

PNW
PRW

- géométrie neutre pour les laiton
- neutrale Geometrie für Messing
- neutral geometry for brasses

TN



- géométrie négative pour de fortes avances dans des conditions de rigidité favorable
- negative Geometrie für hohe Vorschübe in guten Stabilitätsfällen
- negative geometry for high feed rate in case of good stability

GN



- géométrie universelle pour fonçage-tournage, peut également être utilisée en tronçonnage
- allgemeine Geometrie zum einstecken-langdrehen, kann auch zum abstechen verwendet werden
- all-round insert for grooving and turning, can also be used for parting off

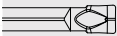
CUT-LINE

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

Standard machining data

CUT 16

			P Acier Stahl Steel						M Inox Rostfreistahl Stainless steel	
			Acier de décolletage Automatenstahl Free-cutting steel		Acier faiblement allié Leicht legierter Stahl Low alloyed steel		Acier fortement allié Legierter Stahl High alloyed steel		Austénitique et martensitique Austenitisch und martensitisch Austenitic and martensitic	
			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
		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
		AS								
	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
		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							
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
		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
		AS								
	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
		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
		AS								
	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
		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
		AS								

** arête de coupe vive

** scharfe Schneidkante

** sharp cutting edge

[N] Alliages d'aluminium et non ferreux Aluminium- und Nichteisenlegierungen Aluminium and non-ferrous alloys								[S] Titane Titan Titanium			
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)
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
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
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
						150-300	0.03-0.10				
						100-500	0.02-0.10				
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
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
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
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
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
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
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
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
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

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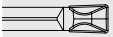
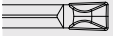
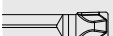
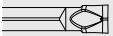
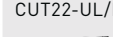
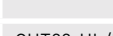
CUT-LINE

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

Standard machining data

CUT 22

			P Acier Stahl Steel						M Inox Rostfreistahl Stainless steel	
			Acier de décolletage Automatenstahl Free-cutting steel		Acier faiblement allié Leicht legierter Stahl Low alloyed steel		Acier fortement allié Legierter Stahl High alloyed steel		Austénitique et martensitique Austenitisch und martensitisch Austenitic and martensitic	
			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 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
		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
		AS								
	CUT22-PN-002 	TiAlN	90-140	0.04-0.10	60-120	0.04-0.08	50-100	0.04-0.08		
		Tmax	100-170	0.04-0.10	70-150	0.04-0.10	60-120	0.04-0.10		
	CUT22-PNW-002 	N								
	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
		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								
	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
		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
		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
		AS								
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
		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
		AS								
	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
		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
		AS								
	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
		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
		AS								
	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
		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
		AS								

* premier choix en cas de coupe interrompue

** arête de coupe vive

*** géométrie fonçage-tournage (évent. troncçonnage)

* beste Basis für unterbrochene Schnitte

** scharfe Schneidkante

*** Geometrie zum einstechen und drehen (event. abstechen)

* first choice for interrupted cut

** sharp cutting edge

*** geometry for grooving and turning (event. parting off)

[N] Alliages d'aluminium et non ferreux Aluminium- und Nichteisenlegierungen Aluminium and non-ferrous alloys								[S] Titane Titan Titanium			
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)
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
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
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
						150-300	0.03-0.10				
						100-500	0.02-0.10				
						150-300	0.03-0.10				
						100-500	0.02-0.10				
						150-300	0.05-0.2				
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
						100-300	0.03-0.12				
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
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
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
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
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
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
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
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
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
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
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
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
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

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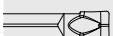
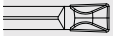
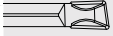
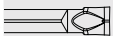
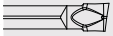
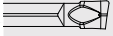
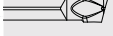
CUT-LINE

Paramètres de coupe indicatifs

Empfohlene Schnittwerte

Standard machining data

CUT 31

CUT 31			P						M		
			Acier Stahl Steel						Inox Rostfreistahl Stainless steel		
			Acier de décolletage Automatenstahl Free-cutting steel		Acier faiblement allié Leicht legierter Stahl Low alloyed steel		Acier fortement allié Legierter Stahl High alloyed steel		Austénitique et martensitique Austenitisch und martensitisch Austenitic and martensitic		
			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
			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
			AS								
		CUT31-PN-002	TiAlN	90-140	0.04-0.10	60-120	0.04-0.08	50-100	0.04-0.08		
			Tmax	100-170	0.04-0.10	70-150	0.04-0.10	60-120	0.04-0.10		
		CUT31-PNW-002	N								
		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
			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								
		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
			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
			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
			AS								
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
			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
			AS								
		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
			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
			AS								
		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
			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
			AS								
		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
			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
			AS								

* premier choix en cas de coupe interrompue

** arête de coupe vive

*** géométrie fonçage-tournage (évent. troncçonnage)

* beste Basis für unterbrochene Schnitte

** scharfe Schneidkante

*** Geometrie zum einstechen und drehen (event. abstechen)

* first choice for interrupted cut

** sharp cutting edge

*** geometry for grooving and turning (event. parting off)

[N] Alliages d'aluminium et non ferreux Aluminium- und Nichteisenlegierungen Aluminium and non-ferrous alloys								[S] Titane Titan Titanium			
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)
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
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
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
						150-300	0.03-0.10				
						100-500	0.02-0.15				
						150-300	0.03-0.10				
						100-500	0.02-0.15				
						150-300	0.05-0.20				
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
						100-300	0.04-0.15				
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
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
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
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
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
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
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
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
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
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
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
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
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

★★★★★

★★★★

★★★

CUT-LINE

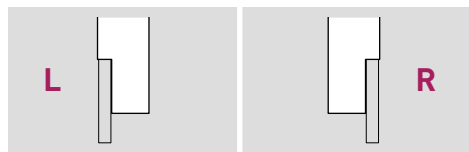
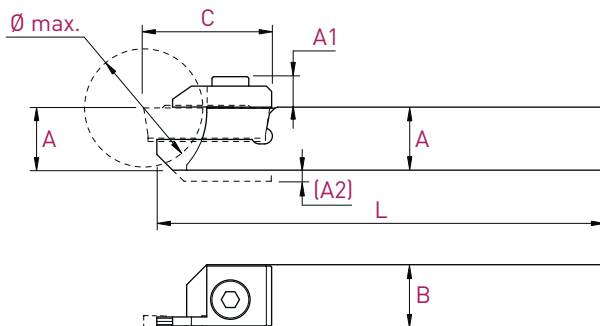
Porte-outils

Halter

Holders

Ø max 34 mm

H Series



Plaquettes WSP Inserts	A x B x L	Ø max.	A1	C	Art. N°	Art. N°
W 1.6 mm Type CUT16	8 x 10 x 115 [A2=2]	16	6.2	19.5	CUT16-H0810L	CUT16-H0810R
	10 x 10 x 115	16	6.2	19.5	CUT16-H1010L	CUT16-H1010R
	12 x 12 x 130	16	6.2	19.5	CUT16-H1212L	CUT16-H1212R
	12 x 12 x 90	16	6.2	19.5	CUT16-H1212L-90	CUT16-H1212R-90
	12.7 x 12.7 x 130	16	6.2	19.5	CUT16-H127127L	CUT16-H127127R
	16 x 16 x 130	16	6.2	19.5	CUT16-H1616L	CUT16-H1616R
	20 x 20 x 120	16	6.2	19.5	CUT16-H2020L	CUT16-H2020R
W 2.2 mm Type CUT22	10 x 12 x 115	20	6.4	24	CUT22-H1012L	CUT22-H1012R
	12 x 12 x 130	20	6.4	24	CUT22-H1212L	CUT22-H1212R
	12 x 12 x 90	20	6.4	24	CUT22-H1212L-90	CUT22-H1212R-90
	12.7 x 12.7 x 130	20	6.4	24	CUT22-H127127L	CUT22-H127127R
	16 x 16 x 130	20	6.4	24	CUT22-H1616L	CUT22-H1616R
	20 x 20 x 120	20	6.4	24	CUT22-H2020L	CUT22-H2020R
W 3.1 mm Type CUT31	16 x 16 x 130	34	7.8	35	CUT31-H1616L	CUT31-H1616R
	20 x 20 x 120	34	7.8	35	CUT31-H2020L	CUT31-H2020R
	25 x 25 x 140	34	7.8	35	CUT31-H2525L	CUT31-H2525R

Pièces de rechange Ersatzteile Spare parts	L	R		Serrage Anzug Torque
	Art. N°	Art. N°	Art. N°	
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

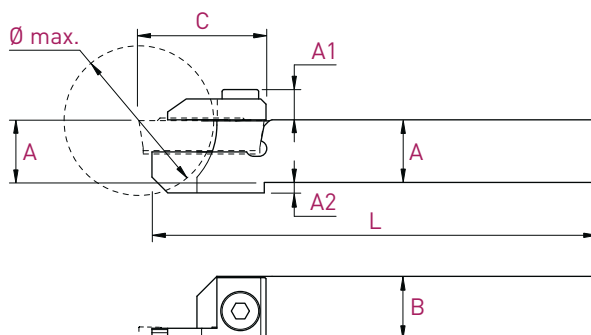
Porte-outils

Halter

Holders

Ø max 42 mm

HX Series



Plaquettes WSP Inserts	A x B x L	Ø max.	A1	C	A2	Art. N°	Art. N°
W 1.6 mm Type CUT16	10 x 12 x 115	20	6.2	21	2	CUT16-H1012LX	CUT16-H1012RX
	12 x 12 x 130	20	6.2	21	-	CUT16-H1212LX	CUT16-H1212RX
	12 x 12 x 90	20	6.2	21	-	CUT16-H1212LX-90	CUT16-H1212RX-90
	12.7 x 12.7 x 130	20	6.2	21	-	CUT16-H127127LX	CUT16-H127127RX
	16 x 16 x 130	20	6.2	21	-	CUT16-H1616LX	CUT16-H1616RX
	20 x 20 x 120	20	6.2	21	-	CUT16-H2020LX	CUT16-H2020RX
W 2.2 mm Type CUT22	10 x 12 x 115	26	6.4	25	4	CUT22-H1012LX	CUT22-H1012RX
	12 x 12 x 130	26	6.4	25	2	CUT22-H1212LX	CUT22-H1212RX
	12 x 12 x 90	26	6.4	25	2	CUT22-H1212LX-90	CUT22-H1212RX-90
	12.7 x 12.7 x 130	26	6.4	25	-	CUT22-H127127LX	CUT22-H127127RX
	16 x 16 x 130	26	6.4	25	-	CUT22-H1616LX	CUT22-H1616RX
	20 x 20 x 120	26	6.4	25	-	CUT22-H2020LX	CUT22-H2020RX
W 3.1 mm Type CUT31	16 x 16 x 120	42	7.8	37	4	CUT31-H1616LX	CUT31-H1616RX
	20 x 20 x 120	42	7.8	37	-	CUT31-H2020LX	CUT31-H2020RX
	25 x 25 x 140	42	7.8	37	-	CUT31-H2525LX	CUT31-H2525RX

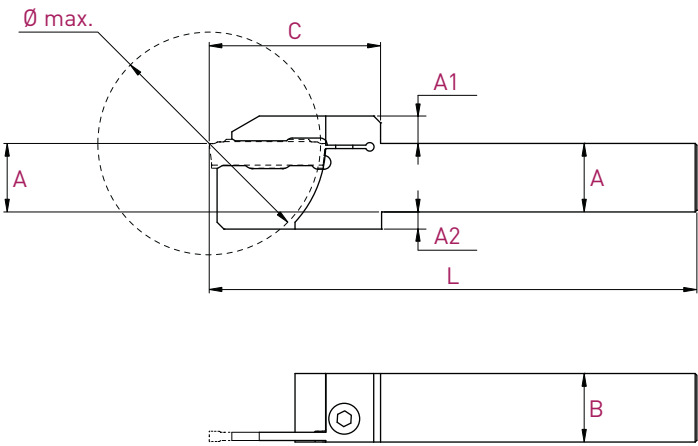
Pièces de rechange Ersatzteile Spare parts	L	R	Serrage Anzug Torque
CUT 16	CUT16LX-SET	CUT16RX-SET	V-M4X10-BN7
CUT 22	CUT22LX-SET	CUT22RX-SET	V-M4X10-BN7
CUT 31	CUT31LX-SET	CUT31RX-SET	V-M5X10-BN7

CUT-LINE

Porte-outils
Halter
Holders

Ø max 65 mm

HZ Series



L

R

Plaquettes WSP Inserts	A x B x L	Ø max.	A1	C	A2	Art. N°	Art. N°
W 2.2 mm Type CUT22	16 x 16 x 130	32	7	30	-	CUT22-H1616LZ-D32	CUT22-H1616RZ-D32
	20 x 20 x 130	32	7	30	-	CUT22-H2020LZ-D32	CUT22-H2020RZ-D32
	16 x 16 x 130	42	7	35	4	CUT22-H1616LZ-D42	CUT22-H1616RZ-D42
	20 x 20 x 130	42	7	35	-	CUT22-H2020LZ-D42	CUT22-H2020RZ-D42
W 3.1 mm Type CUT31	20 x 20 x 140	52	8	44	5	CUT31-H2020LZ-D52	CUT31-H2020RZ-D52
	25 x 25 x 140	52	8	44	-	CUT31-H2525LZ-D52	CUT31-H2525RZ-D52
	20 x 20 x 140	65	8	50	5	CUT31-H2020LZ-D65	CUT31-H2020RZ-D65
	25 x 25 x 140	65	8	50	-	CUT31-H2525LZ-D65	CUT31-H2525RZ-D65

Pièces de rechange
Ersatzteile
Spare parts



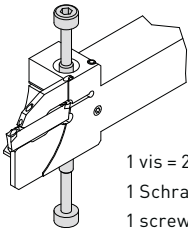
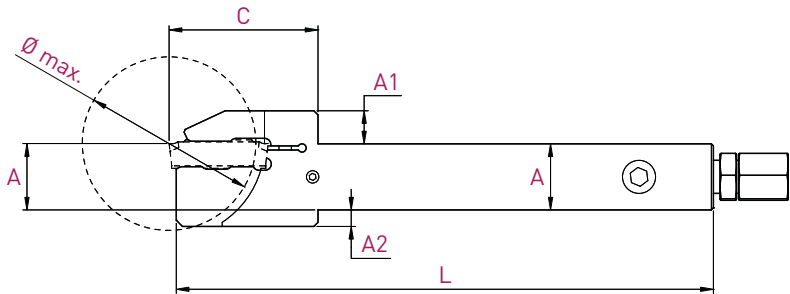
Art. N°

Serrage
Anzug
Torque

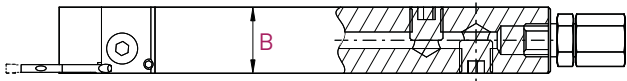
CUT 22	V-M4X10-BN7	3.5 Nm
CUT 31	V-M5X10-BN7	4.5 Nm

Porte-outils avec arrosage intégré
Halter mit integrierter Kühlmittelzufuhr
Holders with integrated coolant supply

HZ-JET Series



1 vis = 2 possibilités de serrage
1 Schraube = 2 Spannmöglichkeiten
1 screw = 2 clamp possibilities



L

R

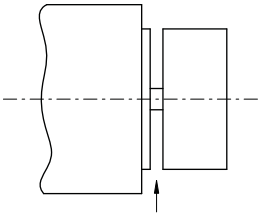
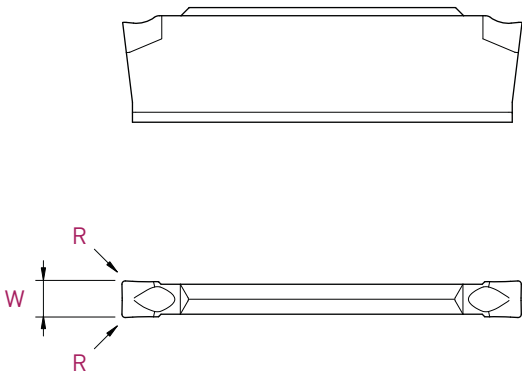
Plaquettes WSP Inserts	A x B x L	Ø max.	A1	C	A2	Art. N°	Art. N°
Type CUT22	16 x 16 x 130	42	8	36	4	CUT22-H1616LZ-JET42	CUT22-H1616RZ-JET42
	20 x 20 x 130	42	8	36	-	CUT22-H2020LZ-JET42	CUT22-H2020RZ-JET42
Type CUT31	16 x 16 x 140	65	9	49	9	CUT31-H1616LZ-JET65	CUT31-H1616RZ-JET65
	20 x 20 x 140	65	9	51	5	CUT31-H2020LZ-JET65	CUT31-H2020RZ-JET65
	25 x 25 x 140	65	9	51	-	CUT31-H2525LZ-JET65	CUT31-H2525RZ-JET65

Pièces de rechange Ersatzteile Spare parts		Serrage Anzug Torque		
	Art. N°		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

CUT-LINE

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

UN Series



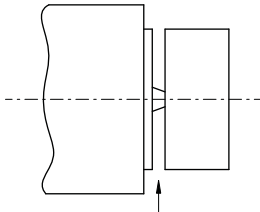
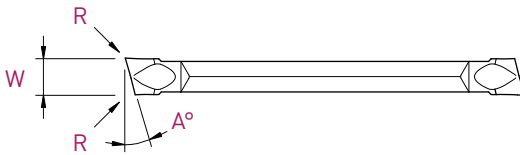
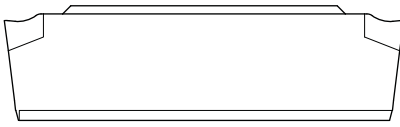
Type	W ± 0.05	R	Art. N°	TiAlN	Tmax	Zmax	HTA	AS
CUT16	1.6	0.02	CUT16-UN-000F	■			■	■
	1.6	0.10	CUT16-UN-001	■	■	■	■	■
CUT22	2.2	0.02	CUT22-UN-000F	■			■	■
	2.2	0.20	CUT22-UN-002	■	■	■	■	■
CUT31	3.1	0.02	CUT31-UN-000F	■			■	■
	3.1	0.20	CUT31-UN-002	■	■	■	■	■

Plaquettes de tronçonnage

Abstechwendeplatten

Cut off inserts

UL-UR Series



UL



UR

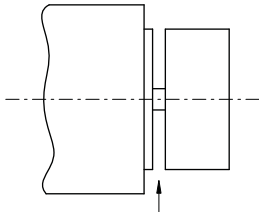
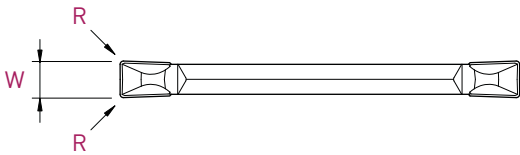
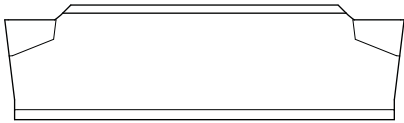


Type	W ± 0.05	A	R	Art. N°	TiAlN	HTA	AS	Art. N°	TiAlN	Tmax	Zmax	HTA	AS
CUT16	1.6	8°	0.02	CUT16-UL-800F	■	■	■	CUT16-UR-800F	■			■	■
	1.6	15°	0.02	CUT16-UL-1500F	■	■	■	CUT16-UR-1500F	■			■	■
CUT22	2.2	8°	0.02	CUT22-UL-800F	■	■	■	CUT22-UR-800F	■			■	■
	2.2	8°	0.20	-				CUT22-UR-802		■	■		NEW
	2.2	8°	0.20	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	■			■	■

CUT-LINE

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

PN Series



PN



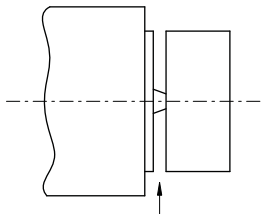
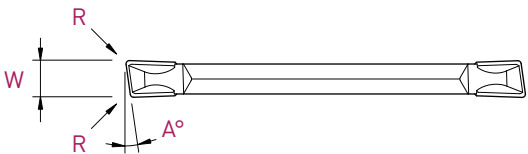
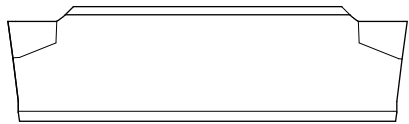
Type	W ± 0.05	R	Art. N°	TiAlN	Tmax
CUT22	2.2	0.20	CUT22-PN-002	■	■
CUT31	3.1	0.20	CUT31-PN-002	■	■

Plaquettes de tronçonnage

Abstechwendeplatten

Cut off inserts

PR Series



PR



Type	W ± 0.05	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	■	■

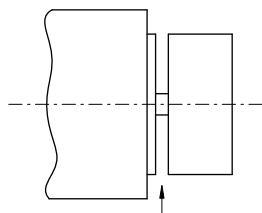
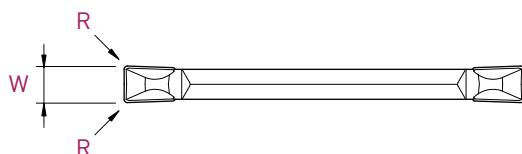
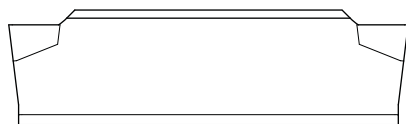
CUT-LINE

Plaquettes de tronçonnage

Abstechwendeplatten

Cut off inserts

PNW Series



NEW

PNW



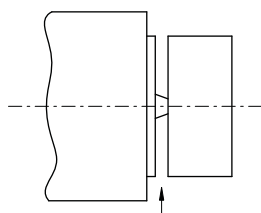
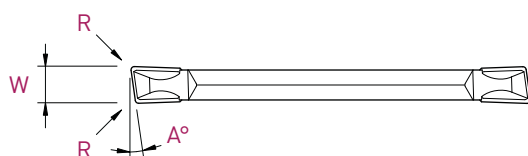
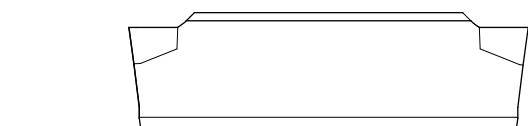
Type	W ± 0.05	R	Art. N°	z
CUT22	2.2	0.20	CUT22-PNW-002	■
CUT31	3.1	0.20	CUT31-PNW-002	■

Plaquettes de tronçonnage

Abstechwendeplatten

Cut off inserts

PRW Series



NEW

PRW



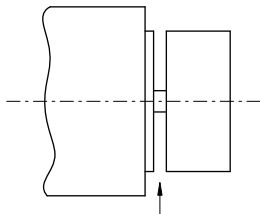
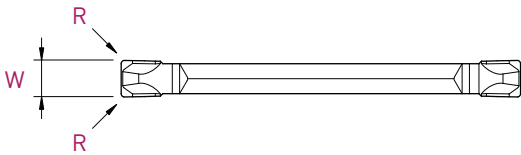
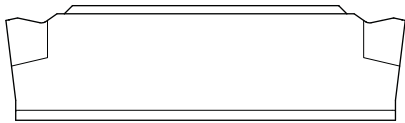
Type	W ± 0.05	A	R	Art. N°	z
CUT16	1.6	8°	0.10	CUT16-PRW-801	■
CUT22	2.2	8°	0.20	CUT22-PRW-802	■
CUT31	3.1	8°	0.20	CUT31-PRW-802	■

CUT-LINE

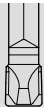
Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

Negative geometry

TN Series



TN



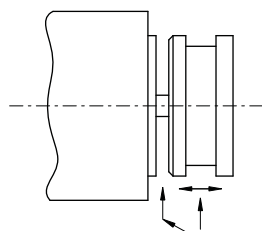
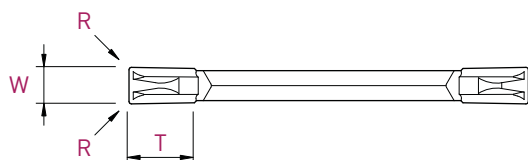
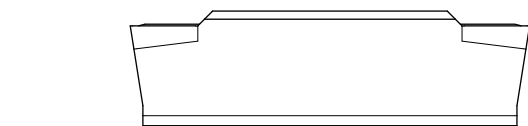
Type	W ± 0.05	R	Art. N°	TiAlN	Tmax	Zmax
CUT22	2.2	0.20	CUT22-TN-002	■	■	■
CUT31	3.1	0.20	CUT31-TN-002	■	■	■

Plaquettes de fonçage, tournage et tronçonnage

WSP zum einstecken, drehen und abstechen

Solid carbide inserts for grooving, turning and cut off

GN Series



GN

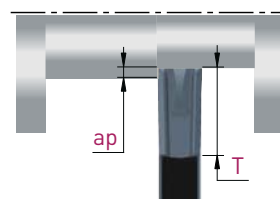
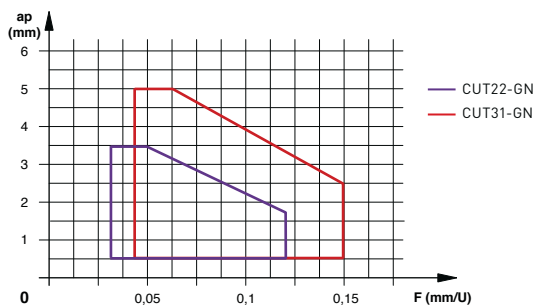


Type	W ± 0.05	T	R	Art. N°	TiAlN	Tmax	AS
CUT22	2.2	3.5	0.15	CUT22-GN-002	■	■	■
CUT31	3.1	5.0	0.15	CUT31-GN-002	■	■	■

Conseils d'utilisation pour plaquettes type GN

Anwendungsempfehlungen für GN-Wendepplatten

Application recommendations for GN inserts



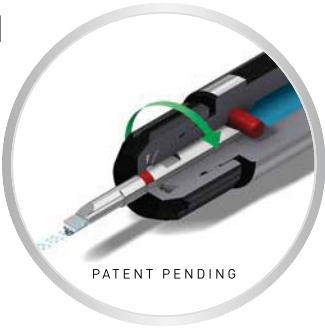
ap max = T dans matière à bonne usinabilité
 ap max = T in Werkstoffe mit gute Zerspanbarkeit
 ap max = T in material with good machinability

Nouveautés présentées dans ce catalogue
Neuheiten dieses Kataloges
New products introduced in this catalogue

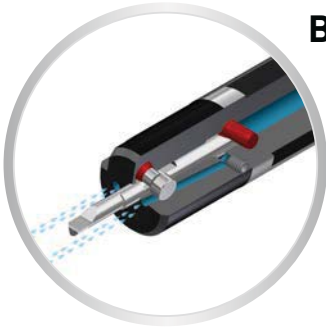


New references		
Type Typ Type	Ref.	Page Seite Page
BH	BHS4-D16-110-F4	10.10
BB-C45	BB4R/L-0612-C45-E03	10.24
	BB4R/L-0714-C45-E03	
	BB4R/L-0918-C45-E05	
	BB4R/L-2575-C45-E05	
	BB4R/L-35105-C45-E05	
BF-C45	BF4R/L-0612-C45-E03	10.25
	BF4R/L-0714-C45-E03	
	BF4R/L-0918-C45-E05	
	BF4R/L-2575-C45-E05	
	BF4R/L-35105-C45-E05	

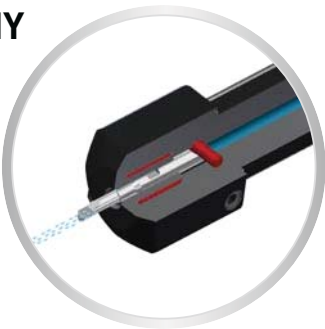
BH



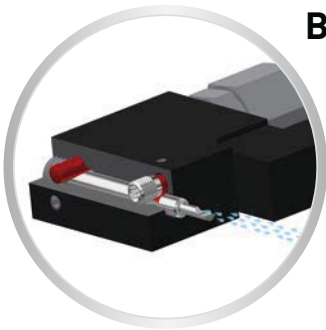
BHS



BHY



BHK



Index

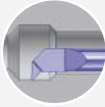
Système de désignation Bezeichnungssystem Designation system	Info	> 10.02
--	-------------	---------

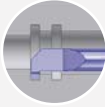
Nuances & paramètres de coupe Sorten & Schnittwerte Grades & machining data		> 10.08
---	--	---------

Porte-outils Halter Holders	BH / BHS / BHY / BHK	> 10.10
-----------------------------------	-----------------------------	---------

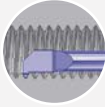
Alésage Ausbohren Boring	BA / BAX	 > 10.18
--------------------------------	-----------------	--

Alésage-copiage Ausbohren-kopieren Boring chambering	BCX	 > 10.22
--	------------	--

Copiage Kopieren Chambering	C45 / C45X	 > 10.24
-----------------------------------	-------------------	---

Gorge Einstechen Grooving	GX	 > 10.28
---------------------------------	-----------	--

Fonçage-tournage Einstechen und drehen Grooving and turning	GTX	 > 10.30
---	------------	--

Filetage Gewindedrehen Threading	TP60° / TP55° / TM	 > 10.32
--	---------------------------	--

Gorge frontale Axiales Stechen Axial grooving	FEG / FIG	  > 10.38
---	------------------	--

Ébauches / Jauges d'alignement / Adaptations machines / Accessoires Rohlinge / Richtplatten / Maschinenanpassungen / Zubehöre Blanks / Adjusting tools / Machines adapters / Accessories		> 10.40
--	--	---------



H

HS

HY

B

H

4

-

D

20

-

100

Ligne produit d'alésage
Innendrehen Produktlinie
Boring product line

Porte-outils
Halter
Holders

Ø alésage
Bohrung Ø
Bore Ø

Queue cylindrique
Zylindrischer Schaft
Cylindrical shank

Ø queue
Schaft Ø
Shank Ø

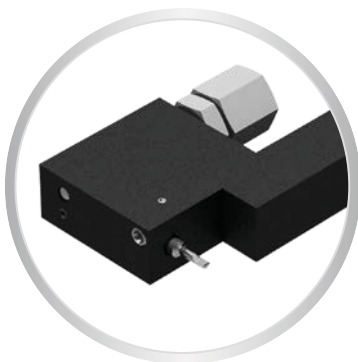
Longueur
Länge
Length

Système de désignation des porte-outils

Halter Bezeichnungssystem

Holders designation system

BHK



HK

B	HK	4	N	-	20	-	32R
---	----	---	---	---	----	---	-----

Barres d'alésages compatibles (longueur L3)
Kompatible Bohrstangen (Länge L3)
Compatible boring bars (length L3)

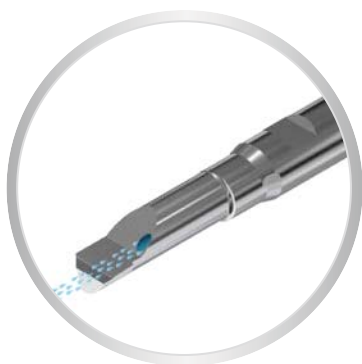
∅ queue
Schaft ∅
Shank ∅

Géométrie du porte-outil
Haltergeometrie
Tool holder geometry

∅ alésage
Bohrung ∅
Bore ∅

Porte-outils
Halter
Holders

Ligne produit d'alésage
Innendrehen Produktlinie
Boring product line



B

F

B

B

4

R

-

25

-

75

-

BAX

-

R05

-

ZN

Longueur utile
Effective Nutzlänge
Length

Ø minimum
Minimal Ø
Minimum Ø

Nuance
Sorte
Grade

Indication complémentaire
Zusätzliche Angabe
Additional indication

R = rayon / Radius / radius

Exécution R/L
Ausführung R/L
Execution R/L

Géométries de coupe
Schneidgeometrien
Cutting geometries

Ø queue
Schaft Ø
Shank Ø

B = arrosage intégré
B = integrierter Kühlmittelzufuhr
B = integrated coolant supply

F = sans arrosage
F = ohne Kühlung
F = without coolant

Ligne produit d'alésage
Innendrehen Produktlinie
Boring product line

Porte-outils avec écrou de serrage

Halter mit Spannmutter

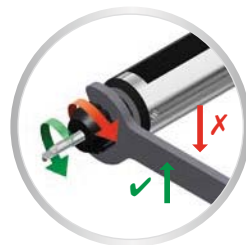
Tool holders with clamping nut

BH

Arrosage par la barre d'alésage

Kühlung durch die Bohrstange

Cooling through the boring bar



Porte-outils avec arrosage multiple

Halter mit mehrfaches Kühlungssystem

Tool holders with multiple coolant system

BHS

Système de serrage à vis transversale

Querverschraubungsspannsystem

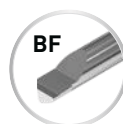
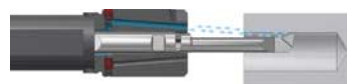
Clamping system with transverse screw



Arrosage sur l'arête de coupe

Kühlung auf der Schneidkante

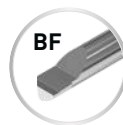
Cooling on the cutting edge



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



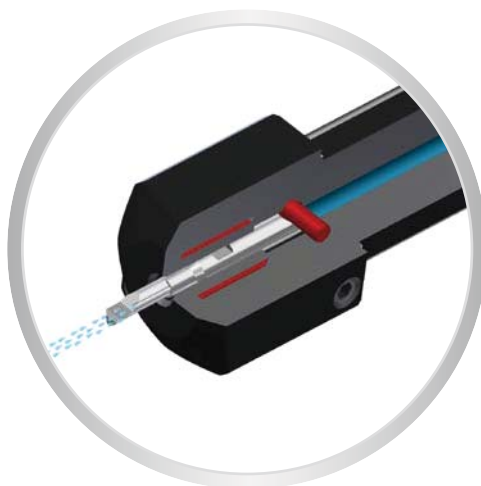
Porte-outils à serrage hydraulique
Halter mit Hydro-Dehnspann-System
Tool holders with hydraulic clamping system

BHY



Excellente absorption des vibrations!
 Ausgezeichnete Schwingungsdämpfung!
 Excellent vibration absorbtion!

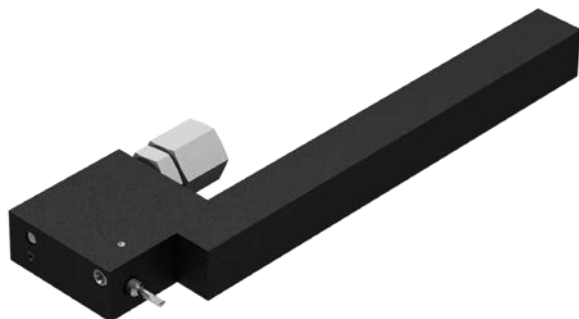
Arrosage par la barre d'alésage
 Kühlung durch die Bohrstange
 Cooling through the boring bar



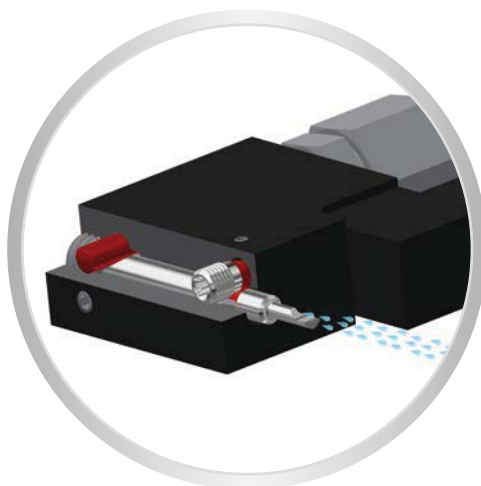
Porte-outils coudés
Gekröpfte Halter
Cranked tool holders

BHK

Système de serrage à vis transversale
 Querverschraubungssystem
 Clamping system with transverse screw



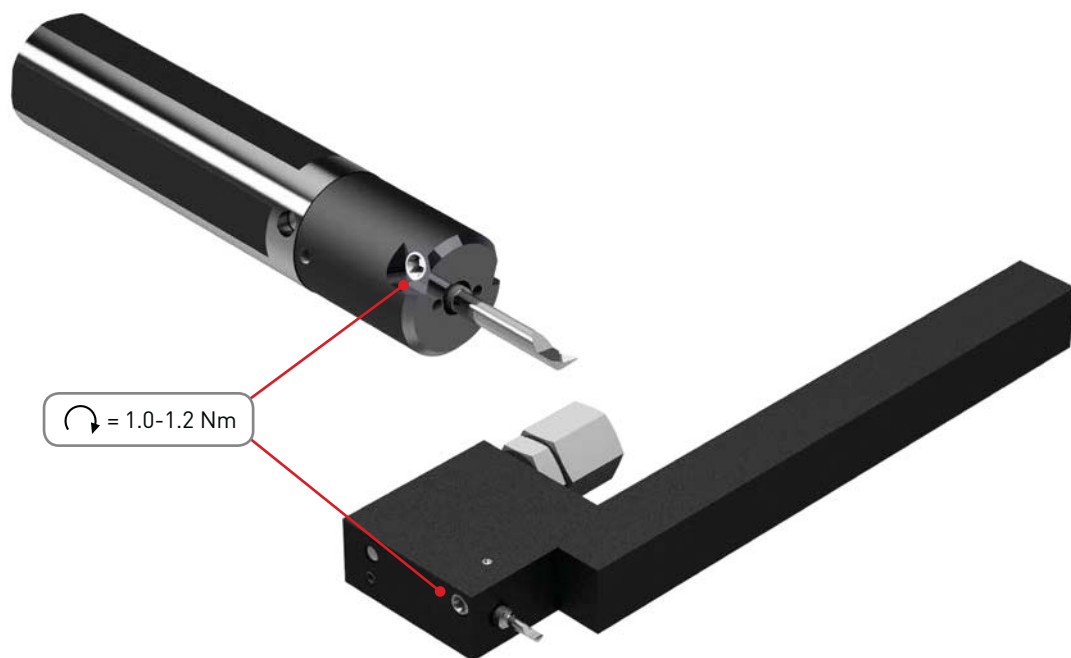
Arrosage par la barre d'alésage
 Kühlung durch die Bohrstange
 Cooling through the boring bar



Accessoires de serrage

Spannzubehöre

Clamping accessories



Nous recommandons le serrage des porte-outils types 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

ZTAF

ZN + revêtement PVD
ZN + PVD Beschichtung
ZN + PVD coating

- nuance universelle pour l'usinage des aciers, aciers inoxydables, aciers alliés, alliage de titane
- bonne résistance à la température

- Universalsorte für die Bearbeitung von Stahl, rostfreiem Stahl, Stahllegierung, Titanlegierung
- gute Warmfestigkeit

- universal grade for steel, stainless steel, alloyed steel, titanium alloys
- good heat resistance

ZTAXF

ZN + revêtement PVD
ZN + PVD Beschichtung
ZN + PVD coating

- 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, ...

ZN

non revêtu
unbeschichtet
uncoated

- nuance de base micro-grain tenace
- 1^{er} choix pour l'usinage des métaux non ferreux

- zähe Basis Feinkornsorte
- beste Wahl für die Bearbeitung von Nichteisenmetalle

- tough base micro-grain grade
- first choice for non-ferrous materials

Paramètres de coupe

Schnittwerte

Machining data

Matière Werkstoff Material	VC (m/min)	Ø barre d'alésage Bohrstange Ø boring bar Ø		
		Ø1.0 - Ø2.0 (mm/U)	Ø2.5 - Ø4.0 (mm/U)	Ø4.5 - Ø5.5 (mm/U)
Acier de décolletage Automatenstahl Free-cutting steel (P)	60-100	0.02-0.03	0.02-0.08	0.03-0.10
Acier faiblement allié Leicht legierter Stahl Low alloyed steel (P)	50-80	0.01-0.03	0.02-0.05	0.03-0.06
Acier fortement allié Legierter Stahl High alloyed steel (P)	40-60	0.01-0.02	0.02-0.04	0.02-0.06
Acier inoxydable Rostfreistahl 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 Kupfer, Messing, Bronze Copper, brass, bronze (N)	60-150	0.01-0.03	0.02-0.05	0.03-0.08
Titane Titan Titanium (S)	30-70	0.01-0.03	0.02-0.05	0.03-0.10

Porte-outils avec écrou de serrage

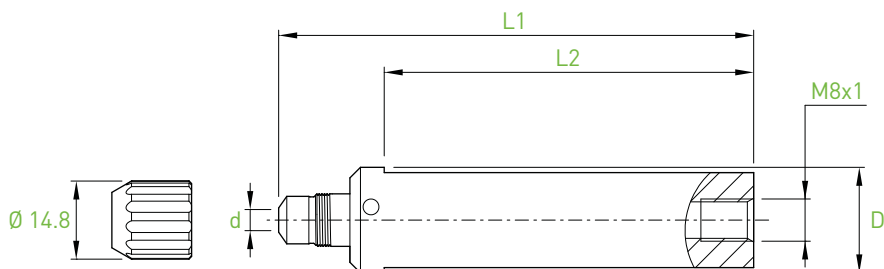
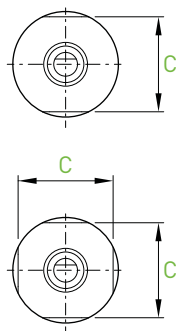
Halter mit Spannmutter

Tool holders with clamping nut

BH4...



> page 10.05

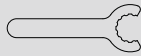


d	Bars	D	L1	L2	C	2 flats	4 flats	Art. N°
4	BH4... BF4...	10	75	55	8.8	■		BH4-D10-75
		12	75	55	11.2	■		BH4-D12-75
		12.7	75	55	11.2	■		BH4-D12.7-75
		15.87	75	55	14	■		BH4-D15.87-75
		16	75	55	14	■		BH4-D16-75
		16	75	55	14		■	BH4-D16-75-F4
		19.05	90	70	17	■		BH4-D19.05-90
		20	90	70	18	■		BH4-D20-90
		20	90	70	18		■	BH4-D20-90-F4
		20	160	140	18		■	BH4-D20-160-F4
		22	90	70	20	■		BH4-D22-90
		22	90	70	20		■	BH4-D22-90-F4
		22	130	110	20		■	BH4-D22-130-F4
		25	100	80	23	■		BH4-D25-100
		25	100	80	23		■	BH4-D25-100-F4
		25	170	150	23		■	BH4-D25-170-F4
		25.4	100	80	23.4	■		BH4-D25.4-100
		28	100	80	26	■		BH4-D28-100

Pièces de rechange
Ersatzteile
Spare parts

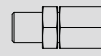


Art. N°



Art. N°

Option



Art. N°

BH4...

BH4-M10

C-BH4-M10

BH4...

J-M8x1-D6

Porte-outils avec écrou de serrage

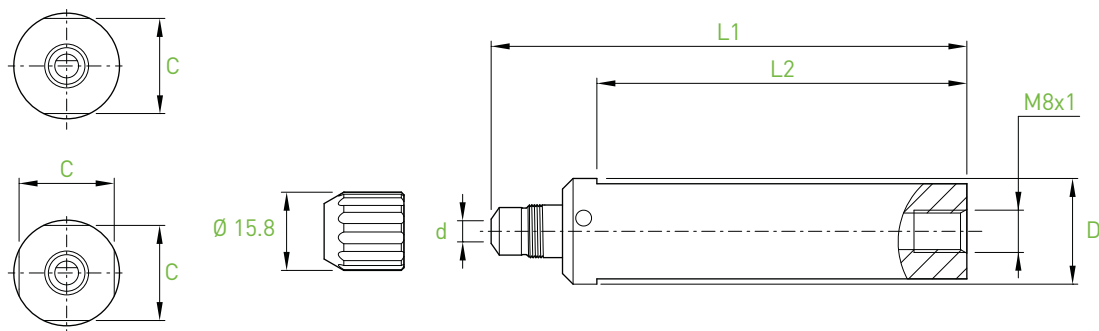
Halter mit Spannmutter

Tool holders with clamping nut

BH6...



> page 10.05



d	Bars	D	L1	L2	C	2 flats	4 flats	Art. N°
6	BH6... BF6...	12	75	55	11.2	■		BH6-D12-75
		12.7	75	55	11.2	■		BH6-D12.7-75
		15.87	75	55	14	■		BH6-D15.87-75
		16	75	55	14	■		BH6-D16-75
		19.05	90	70	17	■		BH6-D19.05-90
		20	90	70	18	■		BH6-D20-90
		20	90	70	18		■	BH6-D20-90-F4
		20	160	140	18		■	BH6-D20-160-F4
		22	90	70	20	■		BH6-D22-90
		22	90	70	20		■	BH6-D22-90-F4
		22	130	110	20		■	BH6-D22-130-F4
		25	100	80	23	■		BH6-D25-100
		25	100	80	23		■	BH6-D25-100-F4
		25	170	150	23		■	BH6-D25-170-F4
		25.4	100	80	23.4	■		BH6-D25.4-100
		28	100	80	26	■		BH6-D28-100

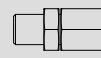
Pièces de rechange
Ersatzteile
Spare parts

Art. N°



Art. N°

Option



Art. N°

BH6...

BH6-M12

C-BH6-M12

BH6...

J-M8x1-D6

■ = disponible / verfügbar / available

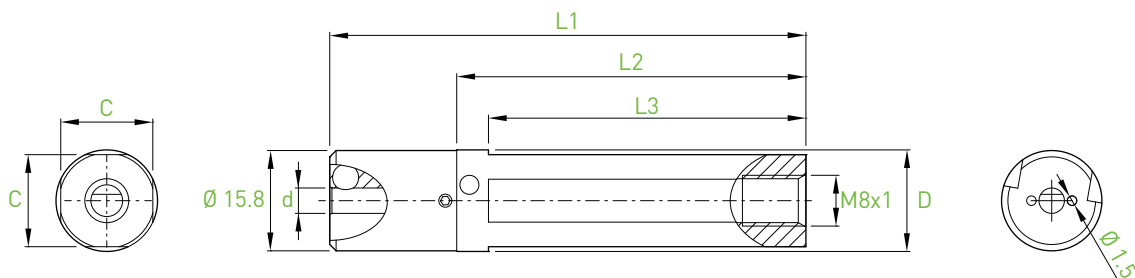
□ = selon disponibilité du stock / je nach Lagerverfügbarkeit / depending the stock availability

Porte-outils avec arrosage multiple
 Halter mit mehrfaches Kühlungssystem
 Tool holders with multiple coolant system

BHS4...

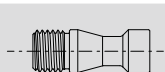


> page 10.05/10.07



d	Bars	D	L1	L2	L3	C	Art. N°
4	BB4... BF4...	10	75	55	50	9.2	BHS4-D10-75-F4
		12	75	55	50	11	BHS4-D12-75-F4
		12.7	75	55	50	11.7	BHS4-D12.7-75-F4
		15.87	75	55	50	14.5	BHS4-D15.87-75-F4
		16	75	55	50	14.5	BHS4-D16-75-F4
		16	110	90	85	14.5	BHS4-D16-110-F4
		19.05	90	70	65	17	BHS4-D19.05-90-F4
		20	90	70	65	18	BHS4-D20-90-F4
		20	160	140	135	18	BHS4-D20-160-F4
		22	90	70	65	20	BHS4-D22-90-F4
		22	130	110	105	20	BHS4-D22-130-F4
		25	100	80	75	23	BHS4-D25-100-F4
		25	170	150	145	23	BHS4-D25-170-F4
		25.4	100	80	75	23	BHS4-D25.4-100-F4
		28	100	80	75	26	BHS4-D28-100-F4

Pièces de rechange
 Ersatzteile
 Spare parts



Art. N°



Art. N°

BHS4...

V-BHS-M4x0.5-T8

C-T8

Option



Art. N°



Art. N°

BHS4...

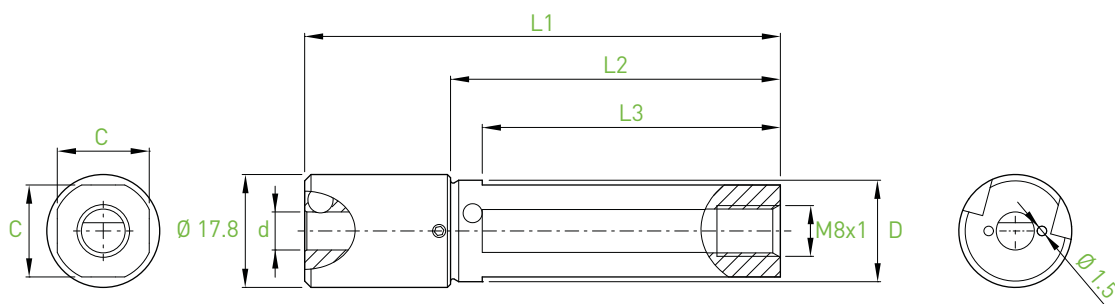
J-M8x1-D6

SET-NM1.2-TX8

Porte-outils avec arrosage multiple
 Halter mit mehrfaches Kühlungssystem
 Tool holders with multiple coolant system

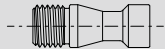
BHS6...

> page 10.05/10.07



d	Bars	D	L1	L2	L3	C	Art. N°
6	BB6... BF6...	12	75	52	47	11	BHS6-D12-75-F4
		12.7	75	52	47	11.7	BHS6-D12.7-75-F4
		15.87	75	52	47	14.5	BHS6-D15.87-75-F4
		16	75	52	47	14.5	BHS6-D16-75-F4
		16	110	87	82	14.5	BHS6-D16-110-F4
		19.05	90	67	62	17	BHS6-D19.05-90-F4
		20	90	67	62	18	BHS6-D20-90-F4
		20	160	137	132	18	BHS6-D20-160-F4
		22	90	67	62	20	BHS6-D22-90-F4
		22	130	107	102	20	BHS6-D22-130-F4
		25	100	77	72	23	BHS6-D25-100-F4
		25	170	147	142	23	BHS6-D25-170-F4
		25.4	100	77	72	23	BHS6-D25.4-100-F4
		28	100	77	72	26	BHS6-D28-100-F4

Pièces de rechange
 Ersatzteile
 Spare parts



Art. N°



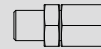
Art. N°

BHS6...

V-BHS-M4x0.5-T8

C-T8

Option



Art. N°



Art. N°

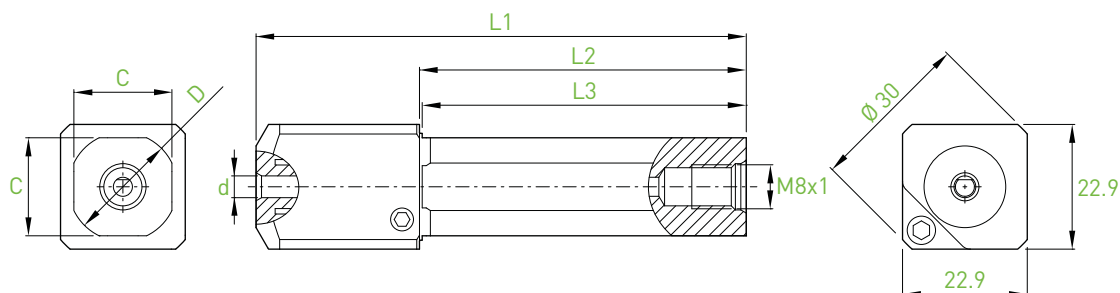
BHS6...

J-M8x1-D6

SET-NM1.2-TX8



> page 10.06



d	Bars	D	L1	L2	L3	C	Art. N°
4	BB4... BF4...	12	90	60	59.5	11.2	BHY4-D12-90-F4
		16	90	60	59.5	14.5	BHY4-D16-90-F4
		19.05	90	60	59.5	17	BHY4-D19.05-90-F4
		20	90	60	59.5	18	BHY4-D20-90-F4
		22	90	60	59.5	20	BHY4-D22-90-F4
		25	100	70	70	23	BHY4-D25-100-F4

Pièces de rechange
Ersatzteile
Spare parts



Art. N°

BHY4...

J-M8x1-D6



Art. N°

C-6P-3.0

Porte-outils à serrage hydraulique

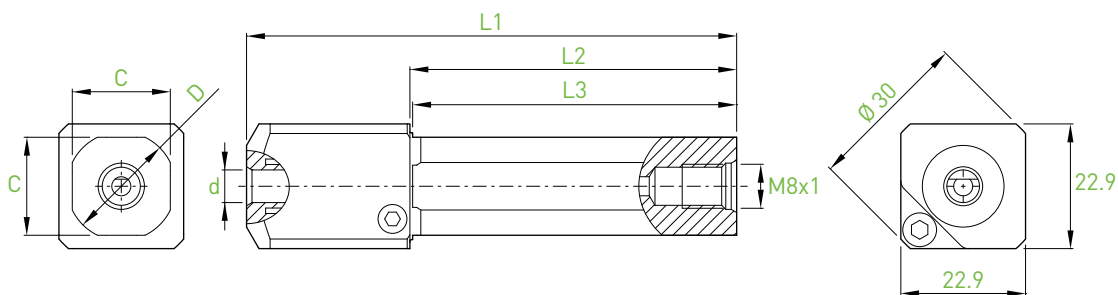
Halter mit Hydro-Dehnspann-System

Tool holders with hydraulic clamping system

BHY6...



> page 10.06



d	Bars	D	L1	L2	L3	C	Art. N°
6	BB6... BF6...	12	90	60	59.5	11.2	BHY6-D12-90-F4
		16	90	60	59.5	14.5	BHY6-D16-90-F4
		19.05	90	60	59.5	17	BHY6-D19.05-90-F4
		20	90	60	59.5	18	BHY6-D20-90-F4
		22	90	60	59.5	20	BHY6-D22-90-F4
		25	100	70	70	23	BHY6-D25-100-F4

Pièces de rechange
Ersatzteile
Spare parts



Art. N°

J-M8x1-D6

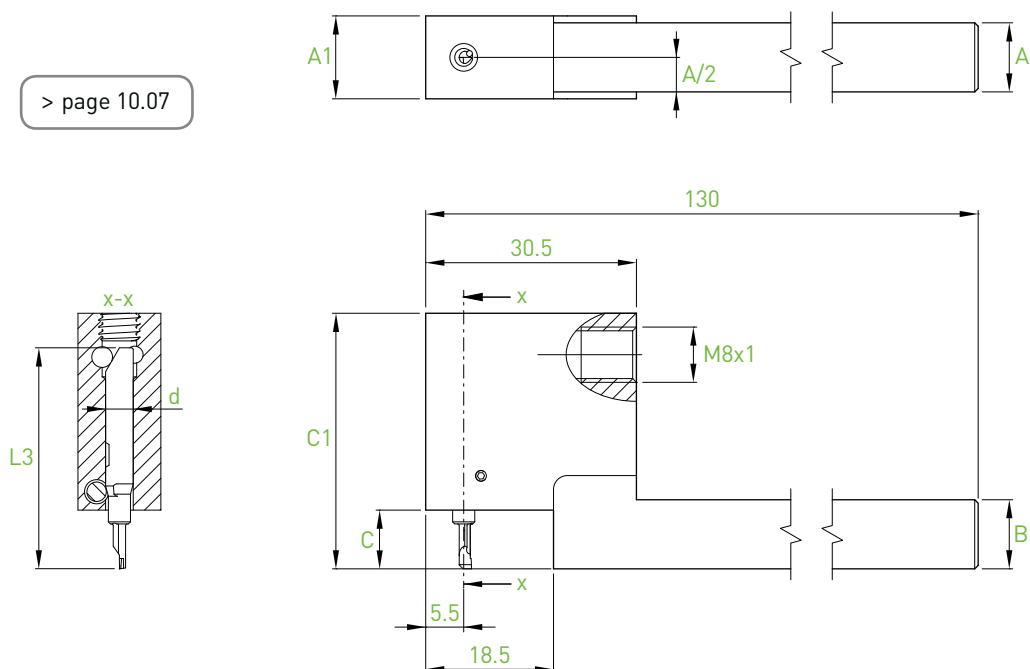


Art. N°

C-6P-3.0

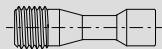
BHY6...

> page 10.07

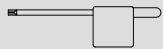


d	Compatible bars L3		A	B	C	C1	A1	Art. N°
4	BB4R... BF4R...	32	8	8	8.5	37	12	BHK4N-0808X-32R
			10	10	8.5	37	12	BHK4N-1010X-32R
			12	12	8.5	37	12	BHK4N-1212X-32R
			16	16	8.5	37	16	BHK4N-1616X-32R
		37	8	8	13.5	42	12	BHK4N-0808X-37R
			10	10	13.5	42	12	BHK4N-1010X-37R
			12	12	13.5	42	12	BHK4N-1212X-37R
			16	16	13.5	42	16	BHK4N-1616X-37R
		42	10	10	18.5	47	12	BHK4N-1010X-42R
			12	12	18.5	47	12	BHK4N-1212X-42R
			16	16	18.5	47	16	BHK4N-1616X-42R

Pièces de rechange
Ersatzteile
Spare parts



Art. N°



Art. N°

BHK4N...

V-BHK-M4x0.5-T8

C-T8

Option



Art. N°



Art. N°

BHK4N...

J-M8x1-D6

SET-NM1.2-TX8

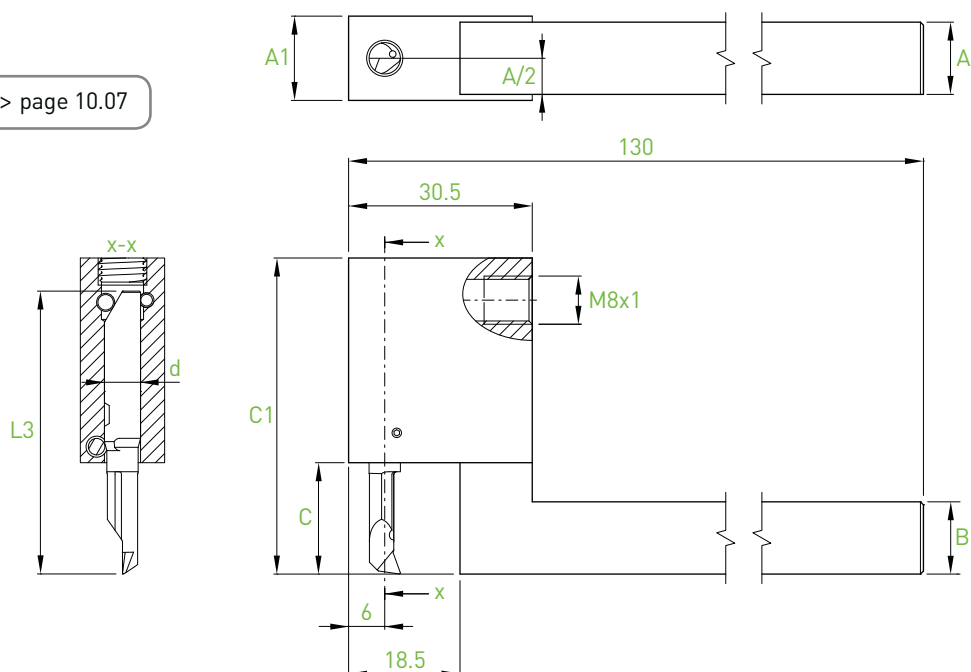
Porte-outils coudés

Kröpfhalter

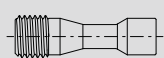
Cranked tool holders

BHK6N...

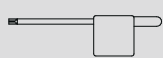
> page 10.07



d	Compatible bars L3		A	B	C	C1	A1	Art. N°
6	BB6R... BF6R...	47	10	10	18.5	52.5	12	BHK6N-1010X-47R
			12	12	18.5	52.5	12	BHK6N-1212X-47R
			16	16	18.5	52.5	16	BHK6N-1616X-47R
	57		10	10	28.5	62.5	12	BHK6N-1010X-57R
			12	12	28.5	62.5	12	BHK6N-1212X-57R
			16	16	28.5	62.5	16	BHK6N-1616X-57R

Pièces de rechange
Ersatzteile
Spare parts

Art. N°



Art. N°

BHK6N...

V-BHK-M4x0.5-T8

C-T8

Option



Art. N°



Art. N°

BHK6N...

J-M8x1-D6

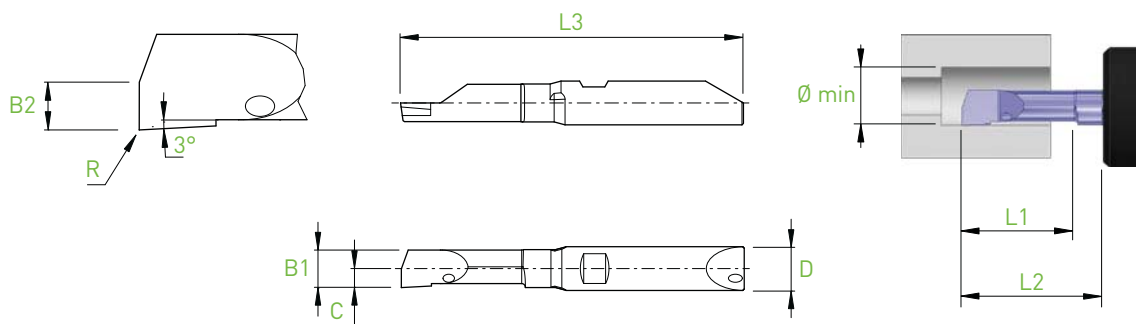
SET-NM1.2-TX8

Alésage
Ausbohren
Boring



BB4...

BA



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	B1	B2	C	R	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	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	■	■	■	□	□
		1.0	3.0	10	8.5	0.90	0.45	0.60	0.02	32	BB4R/L-1030-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	■	■	■	□	□

Alésage

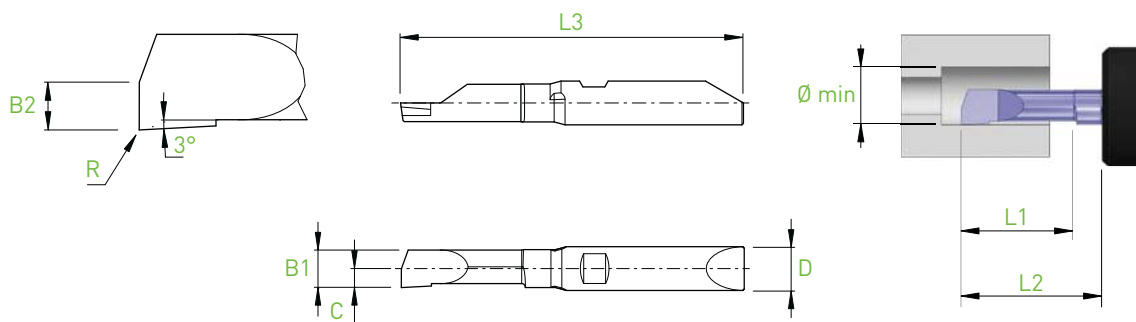
Ausbohren

Boring



BF4...

BA



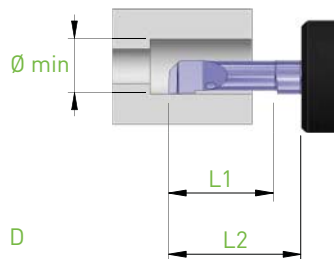
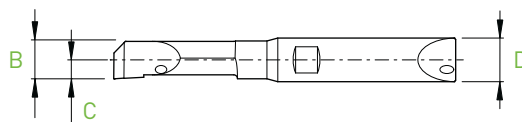
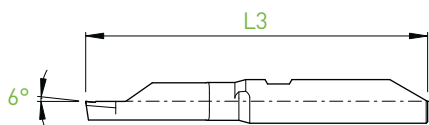
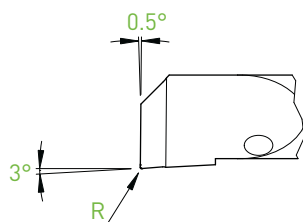
												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	B1	B2	C	R	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	ZN
4	BH4... BHS4... BHY4... BHK4...	0.3	0.9	10	8.5	0.27	0.13	0.15	0	32	BF4R/L-0309-BA	■	■	■	□	□
		0.4	1.2	10	8.5	0.36	0.18	0.20	0	32	BF4R/L-0412-BA	■	■	■	□	□
		0.5	1.5	10	8.5	0.45	0.22	0.25	0	32	BF4R/L-0515-BA	■	■	■	□	□
		1.0	3.0	10	8.5	0.90	0.45	0.60	0.02	32	BF4R/L-1030-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	■	■	■	□	□

Alésage
Ausbohren
Boring



BB4... / BB6...

BAX



											R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	B	C	R	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	B	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	■	■	■	□	□

Alésage

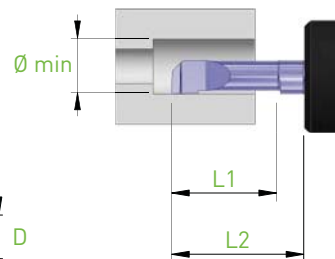
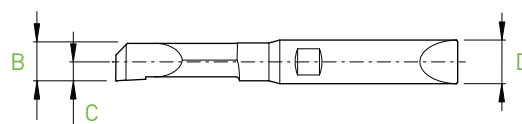
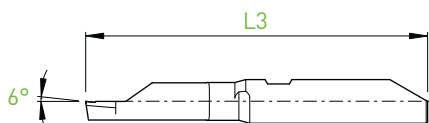
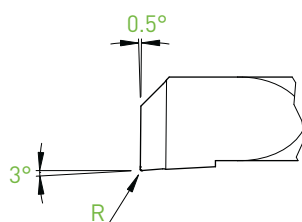
Ausbohren

Boring



BF4... / BF6...

BAX



											R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	B	C	R	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	B	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	■	■	■	□	□

■ = disponible / verfügbar / available

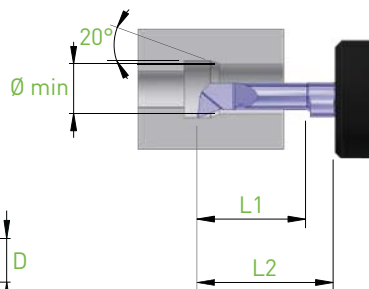
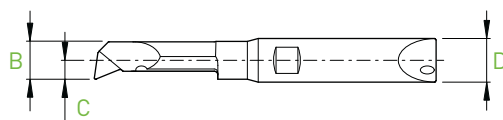
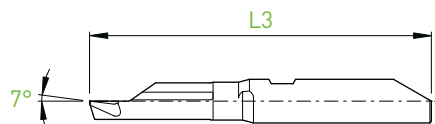
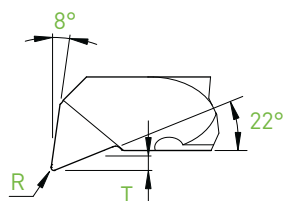
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Alésage-copiage
Ausbohren-kopieren
Boring chambering



BB4... / BB6...

BCX



												R	L			
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	T	B	C	R	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B	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	■	■	■	□	□

Alésage-copiage

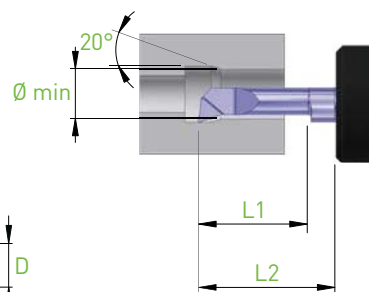
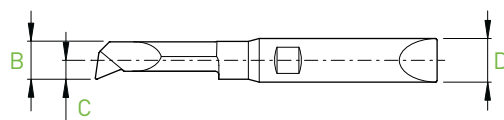
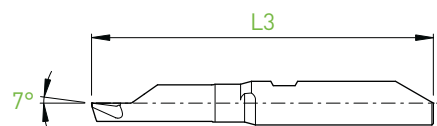
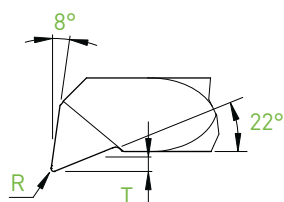
Ausbohren-kopieren

Boring chamfering



BF4... / BF6...

BCX



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	T	B	C	R	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B	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	■	■	■	□	□

■ = disponible / verfügbar / available

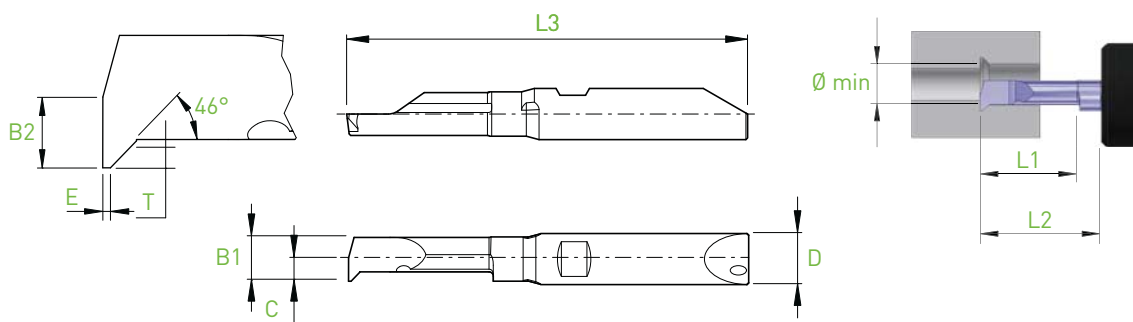
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Copiage
Kopieren
Chamfering



BB4... / BB6...

C45



													R	L
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	T	B1	B2	C	E	L3	Art. N°	ZTAF ZTAXF ZN	ZTAF 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	■ ■ ■	□ □
		1.5	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B1	B2	C	E	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	■ ■ ■	□ □

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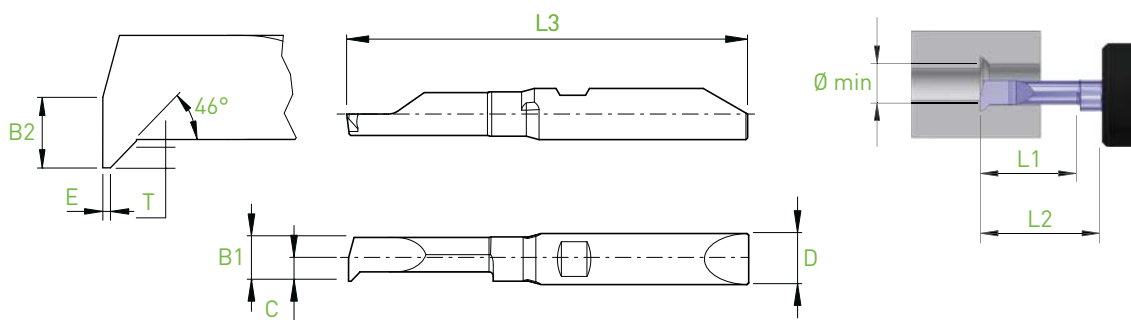
Kopieren

Chambering



BF4... / BF6...

C45



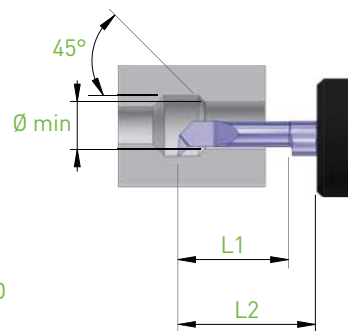
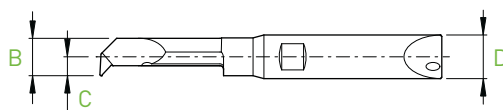
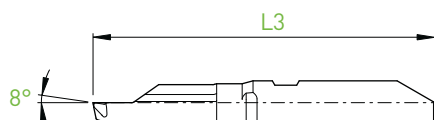
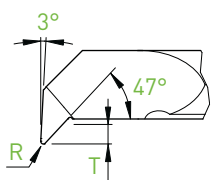
													R	L
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	T	B1	B2	C	E	L3	Art. N°	ZTAF ZTAXF ZN	ZTAF ZN
4	BH4... BHS4... BHY4... BHK4...	0.3	0.6	10	8.5	0.05	0.27	0.13	0.15	0.03	32	BF4R/L-0306-C45-E03	■ ■ ■	□ □
		0.4	0.8	10	8.5	0.07	0.36	0.18	0.20	0.03	32	BF4R/L-0408-C45-E03	■ ■ ■	□ □
		0.5	1.0	10	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	1.2	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	■ ■ ■	□ □
		1.5	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	■ ■ ■	□ □
6	BH6... BHS6... BHY6... BHK6...	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B1	B2	C	E	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	■ ■ ■	□ □

Copiage
Kopieren
Chamfering



BB4... / BB6...

C45X



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	T	B	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B	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	■	■	■	□	□

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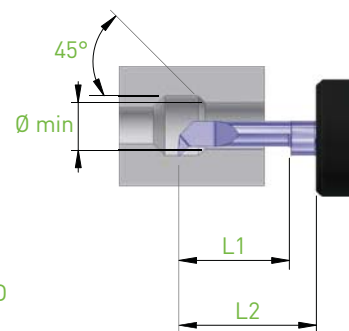
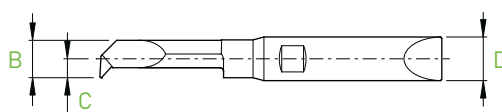
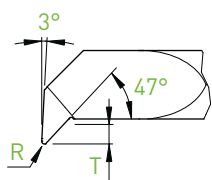
Kopieren

Chamfering



BF4... / BF6...

C45X



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	T	B	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B	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	■	■	■	□	□

■ = disponible / verfügbar / available

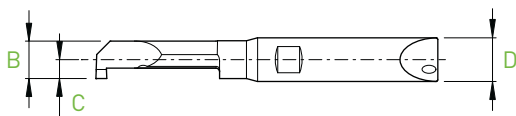
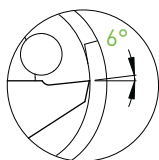
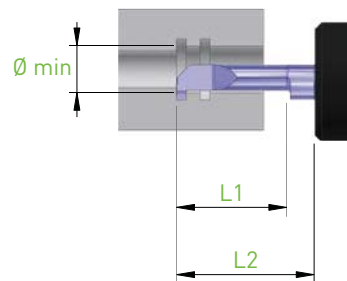
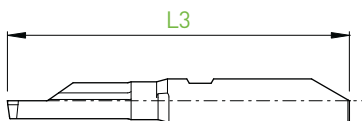
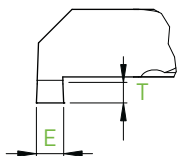
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Gorge
Einstecken
Grooving



BB4... / BB6...

GX



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	E	T	B	C	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	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	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	E	T	B	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	■	■	■	□	□

Gorge

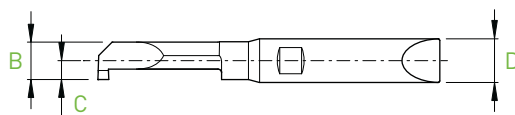
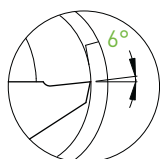
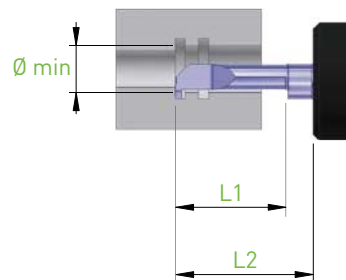
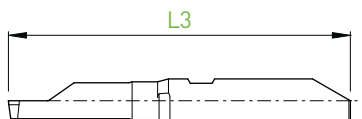
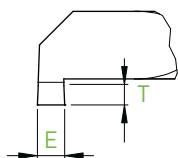
Einsteichen

Grooving



BF4... / BF6...

GX



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	E	T	B	C	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	ZN
4	BH4... BHS4... BHY4... BHK4...	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	■	■	■	□	□

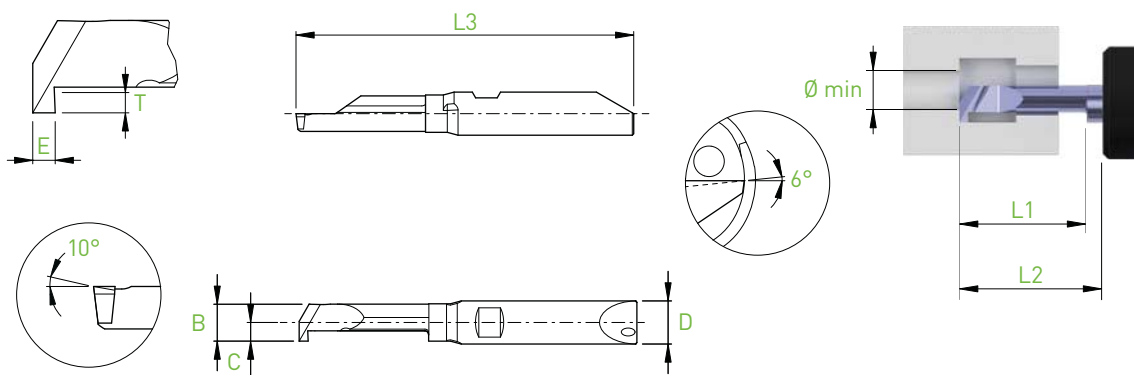
D h5	Holder	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	E	T	B	C	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	ZN
6	BH6... BHS6... BHY6... BHK6...	4.0	12.0	20	18.5	1.00	0.80	3.80	2.20	47	BF6R/L-40120-G100X	■	■	■	□	□
			20.0	30	28.5	1.00	0.80	3.80	2.20	57	BF6R/L-40200-G100X	■	■	■	□	□
		4.5	13.5	20	18.5	1.00	0.90	4.28	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	■	■	■	□	□
			27.5	30	28.5	2.00	1.10	5.15	2.60	57	BF6R/L-55165-G200X	■	■	■	□	□
						1.00					BF6R/L-55275-G100X	■	■	■	□	□
						1.50					BF6R/L-55275-G150X	■	■	■	□	□
						2.00					BF6R/L-55275-G200X	■	■	■	□	□

Fonçage-tournage
Einstecken und drehen
Grooving and turning



BB4... / BB6...

GTx



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	E	T	B	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	■	■	■	□	□
D h5	Holder	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	E	T	B	C	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	ZN
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	■	■	■	□	□

Fonçage-tournage

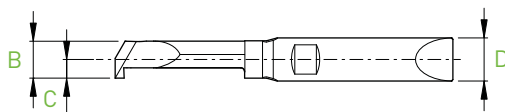
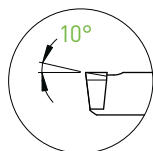
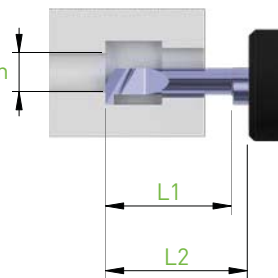
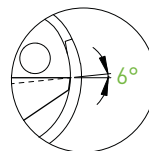
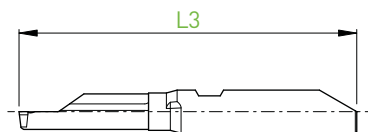
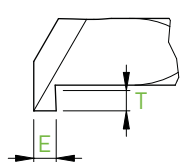
Einstecken und drehen

Grooving and turning



BF4... / BF6...

GTX



												R			L	
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	E	T	B	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	■	■	■	□	□
D h5	Holder	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	E	T	B	C	L3	Art. N°	ZTAF	ZTAXF	ZN	ZTAF	ZN
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	■	■	■	□	□

■ = disponible / verfügbar / available

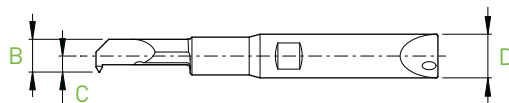
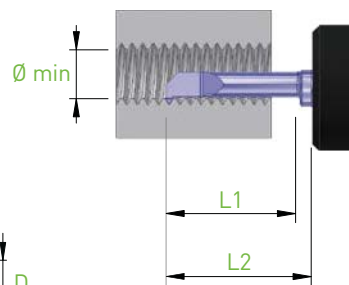
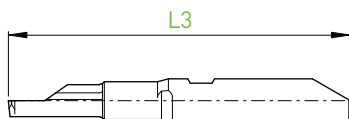
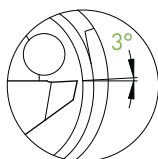
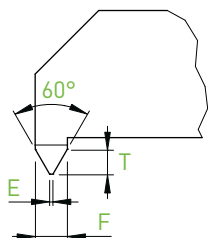
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Filetage
Gewindedrehen
Threading



BB4... / BB6...

TP60



D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	P (mm)	P (TPI)	F	E (0/-0.01)	T	B	C	L3	Art. N°	R		L	
															ZTAF	ZN	ZTAF	ZN
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)	F	E (0/-0.01)	T	B	C	L3	Art. N°	R		L	
															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	■	■	□	□

Filetage

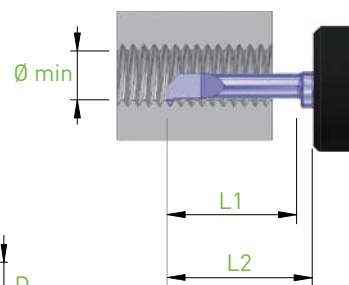
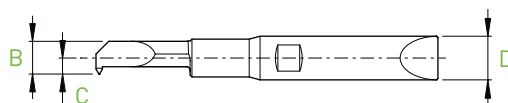
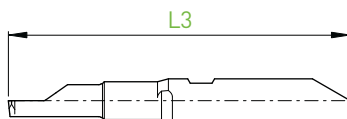
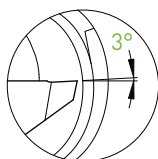
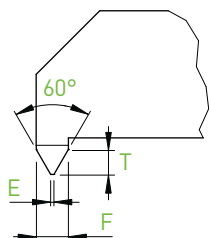
Gewindedrehen

Threading



BF4... / BF6...

TP60



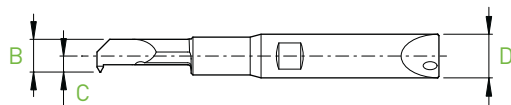
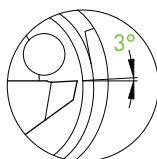
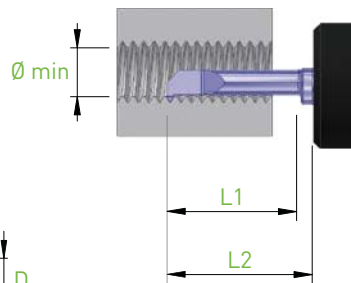
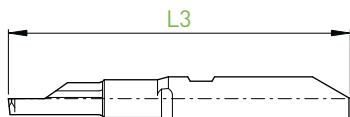
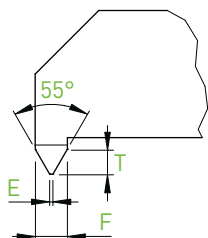
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	P (mm)	P (TPI)	F	E (0/-0.01)	T	B	C	L3	Art. N°	R		L	
															ZTAF	ZN	ZTAF	ZN
4	BH4... BHS4... BHY4... BHK4...	1.25	3.2	10	8.5	0.20-0.35	80	0.30	0.02	0.25	1.10	0.80	32	BF4R/L-1232-TP60	■	■	□	□
		1.6	4.0	10	8.5	0.25-0.40	72-64	0.35	0.03	0.28	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)	F	E (0/-0.01)	T	B	C	L3	Art. N°	R		L	
															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	■	■	□	□

Filetage
Gewindedrehen
Threading



BB4... / BB6...

TP55



														R	L
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	P (TPI)	F	E [0/-0.02]	T	B	C	L3	Art. N°	ZTAF ZN	ZTAF ZN
4	BH4... BHS4... BHY4... BHK4...	1.85	4.5	10	8.5	48	0.54	0.09	0.44	1.67	0.97	32	BB4R/L-1845-TP55	■ ■	□ □
		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)	F	E [0/-0.02]	T	B	C	L3	Art. N°	ZTAF ZN	ZTAF ZN
6	BH6... BHS6... BHY6... BHK6...	3.70	11.0	20	18.5	32-24	1.08	0.13	0.91	3.33	1.83	47	BB6R/L-37110-TP55	■ ■	□ □
		5.10	15.0	20	18.5	26-20	1.30	0.16	1.09	4.60	2.05	47	BB6R/L-51150-TP55	■ ■	□ □
		5.50	16.0	20	18.5	22-16	1.48	0.19	1.24	5.15	2.60	47	BB6R/L-55160-TP55	■ ■	□ □

Filetage

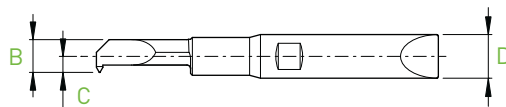
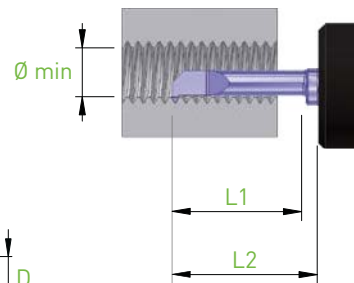
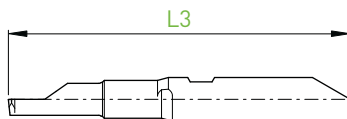
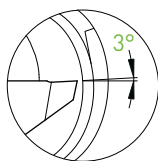
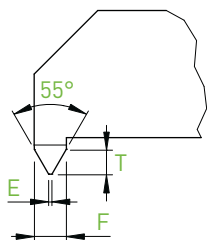
Gewindedrehen

Threading



BF4... / BF6...

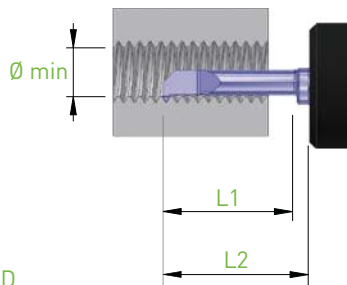
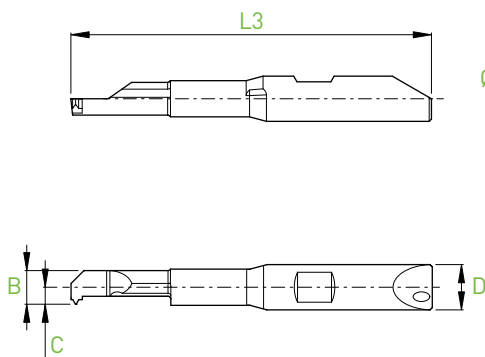
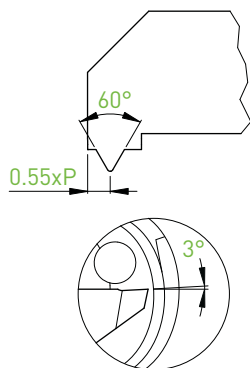
TP55



														R	L
D h5	Holder	Ø min	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	P (TPI)	F	E [0/-0.02]	T	B	C	L3	Art. N°	ZTAF ZN	ZTAF ZN
4	BH4... BHS4... BHY4... BHK4...	1.85	4.5	10	8.5	48	0.54	0.09	0.44	1.67	0.97	32	BF4R/L-1845-TP55	■ ■	□ □
		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)	F	E [0/-0.02]	T	B	C	L3	Art. N°	ZTAF ZN	ZTAF ZN
6	BH6... BHS6... BHY6... BHK6...	3.70	11.0	20	18.5	32-24	1.08	0.13	0.91	3.33	1.83	47	BF6R/L-37110-TP55	■ ■	□ □
		5.10	15.0	20	18.5	26-20	1.30	0.16	1.09	4.60	2.05	47	BF6R/L-51150-TP55	■ ■	□ □
		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]	Ø min	P [mm]	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	B	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]	Ø min	P [mm]	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	B	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	■ ■

Filetage

Gewindedrehen

Threading



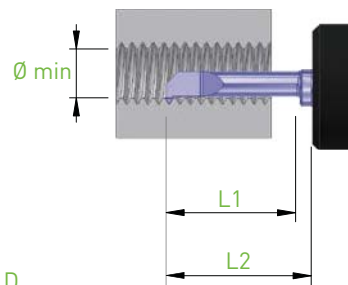
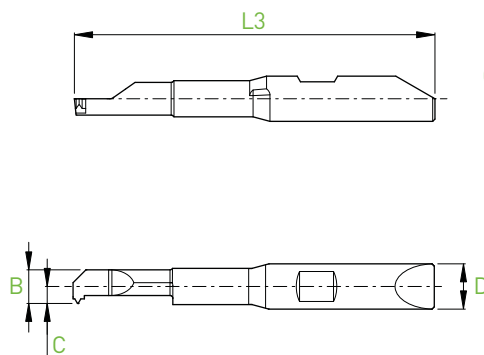
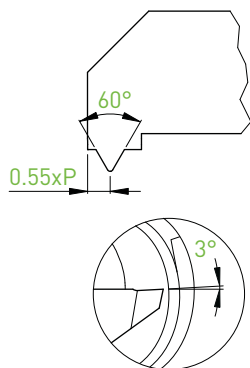
BF4... / BF6...

TM

Profil complet métrique

Metrisches Vollprofil

Metric full profile



R

D h5	Holder	M [min]	Ø min	P [mm]	L1	L2 BH4... BHY4...	L2 BHS4... BHK4...	B	C	L3	Art. N°	ZTAF ZN
4	BH4...	M3x0.5	2.50	0.50	6.0	10	8.5	2.25	1.35	32	BF4R-2560-TM-0.50	■ ■
	BHS4...											
	BHY4... BHK4...	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]	Ø min	P [mm]	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	B	C	L3	Art. N°	ZTAF ZN
6	BH6...	M5x0.8	4.20	0.80	10.0	20	18.5	3.78	2.10	47	BF6R-42100-TM-0.80	■ ■
	BHS6...											
	BHY6... BHK6...	M6x1.0	5.00	1.00	12.0	20	18.5	4.50	2.20	47	BF6R-50120-TM-1.00	■ ■

IN-LINE

Gorge frontale extérieure

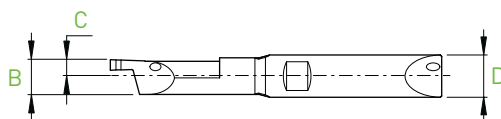
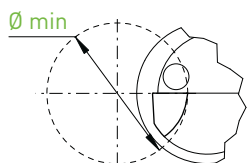
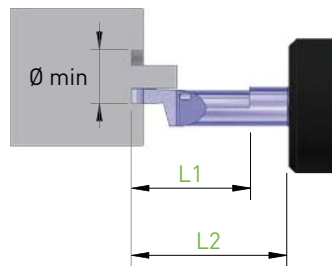
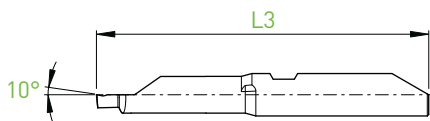
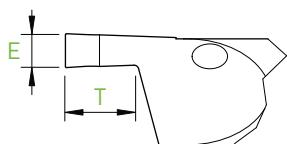
Aussen axiales stechen

External axial grooving



BB6...

FEG



R

D h5	Holder	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B	C	E	L3	Art. N°	ZTAF	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	■	■

Gorge frontale intérieure

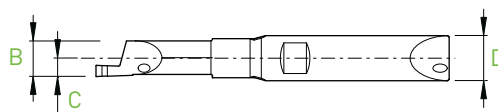
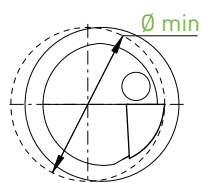
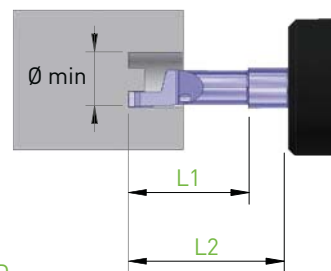
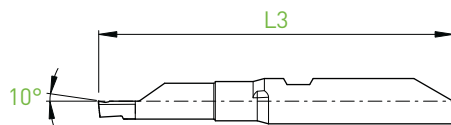
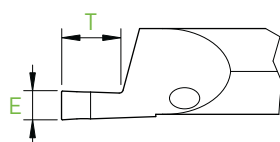
Innen axiales stechen

Internal axial grooving



BB6...

FIG



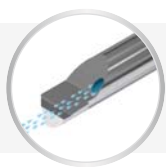
R

D h5	Holder	Ø min	L1	L2 BH6... BHY6...	L2 BHS6... BHK6...	T	B	C	E	L3	Art. N°	ZTAF	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	■	■

Ébauches avec arrosage

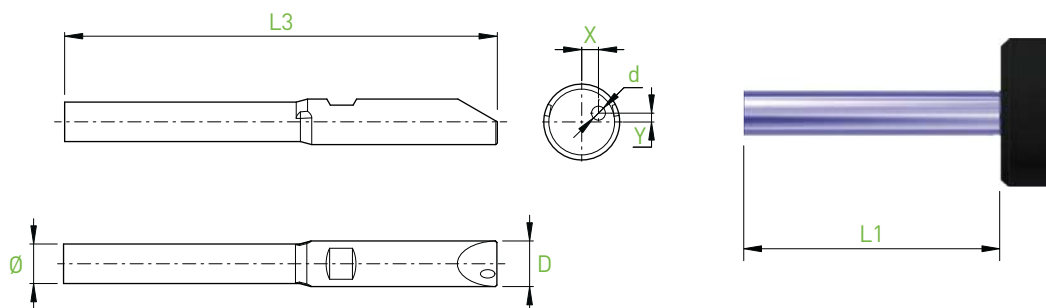
Rohlinge mit Kühlung

Blanks with coolant



BB4... / BB6...

BB_E



D h5	Holder	L1 BH4... BHY4...	L1 BHS4... BHK4...	Ø	X	Y	d	L3	Art. N°	NZ
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...	Ø	X	Y	d	L3	Art. N°	NZ
6	BH6... BHS6... BHY6... BHK6...	30.0	28.5	5.20	1.33	0.70	1.10	57	BB6R-E57	■

Ébauches

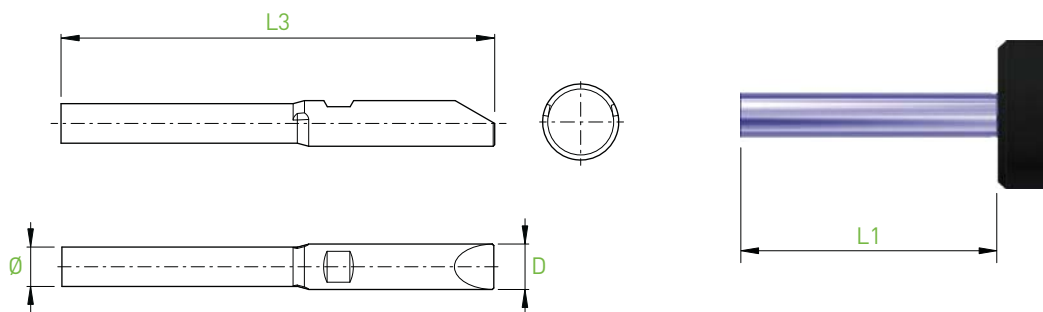
Rohlinge

Blanks

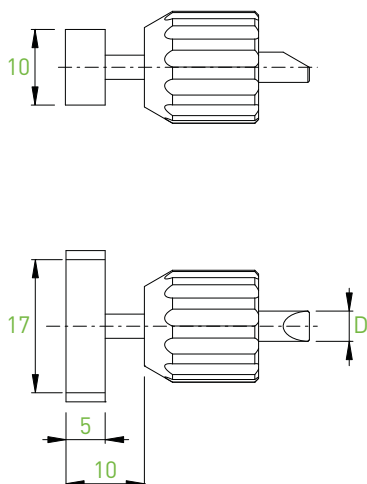


BF4... / BF6...

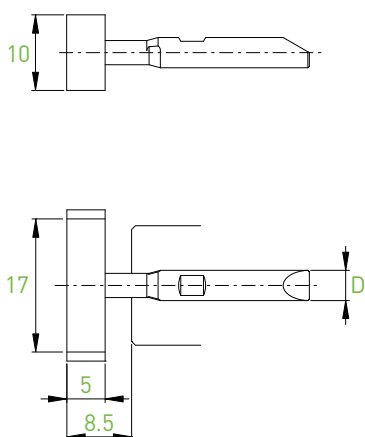
BF_E



D _{h5}	Holder	L1 BH4... BHY4...	L1 BHS4... BHK4...	Ø	L3	Art. N°	NZ
4	BH4... BHS4... BHY4... BHK4...	20.0	18.5	3.20	42	BF4-E42	■
D _{h5}	Holder	L1 BH6... BHY6...	L1 BHS6... BHK6...	Ø	L3	Art. N°	NZ
6	BH6... BHS6... BHY6... BHK6...	30.0	28.5	5.20	57	BF6-E57	■



D h5	Art. N°	
4	BH4-MASTER	■
6	BH6-MASTER	■



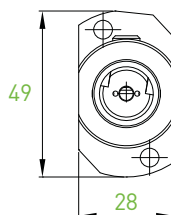
D h5	Art. N°	
4	BHSY4-MASTER	■
6	BHSY6-MASTER	■

Porte-outils avec arrosage pour contre-opération - Machines STAR

Halter mit Kühlungssystem zur Gegenbearbeitung – STAR-Maschinen

Backworking holders with through coolant – STAR-Machines

BH4 / BH6
BHS4 / BHS6



Art. N°

BWD1-2022-STAR-SRR

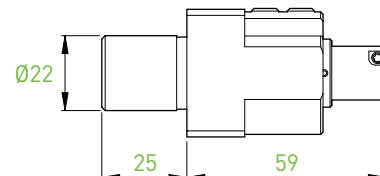
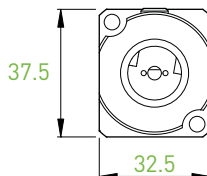
Art. N°

BHS4-D20-55-BWD1

BHS6-D20-55-BWD1

Types of STAR machines

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)
SW12R II (T21-T24)
SV20R (T21-T24)
ECAS12/20 (T21-T24)
SW20 (T21-T23)



Art. N°

BWD1-2022-STAR-SW

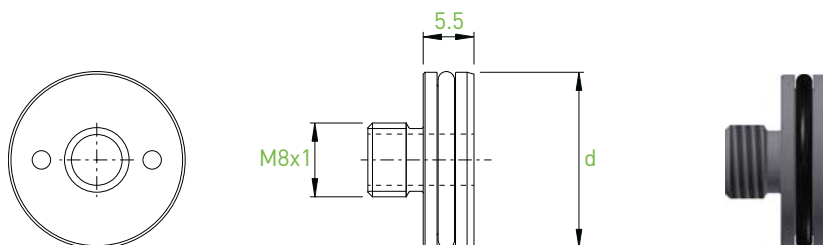
Art. N°

BHS4-D20-55-BWD1

BHS6-D20-55-BWD1

Types of STAR machines

SW12R II (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	■

JET-LINE



NEW



DISCOVER JET-LINE IN A BRAND NEW BROCHURE !

Nouveautés présentées dans ce catalogue
Neuheiten dieses Kataloges
New products introduced in this catalogue



Support de base
Grundhalter
Base holder

Fabricant Hersteller Manufacturer	Machine Maschine Machine	Type Typ Type	Page Seite Page
Citizen	L12	ML12	11.07-11.15
	R04		
	R07		
	L20E	ML16	
Metafil	D10	ML12	11.19
Star	SB12RG	ML12	11.20-11.32
	SW12RII		
	SR20RIV	ML16	
	SR32J		
	SW20R		
Tornos	SWISS-NANO 7	ML12	11.37-11.44
	DT13		
	CT20		
	GT13		
	DT26	ML16	
	GT26		
	GT32		
Tsugami	B074	ML12	11.51
	B075		11.52
	P034		11.53-11.54

Porte-outils
Halter
Holders

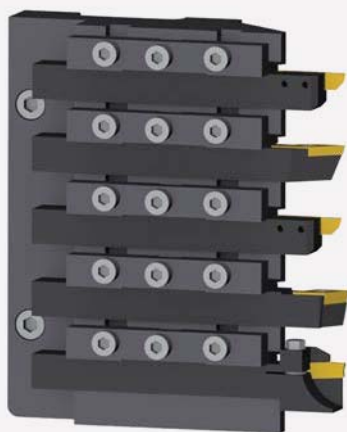
TOP-Line	> 11.60	TOP-Line	> 11.71
TURN-Line	> 11.61		
ISO-Line	> 11.62		
EVOCUT-Line	> 11.64	EVOCUT-Line	> 11.74
CUT-Line	> 11.65		
PRO-Line	> 11.66		
ECO-Line	> 11.66		

Système d'outils modulaires

Modulares Werkzeugsystem

Modular tooling system

Original system



MODU-Line system



Système d'outils modulaires
pour tours automatiques

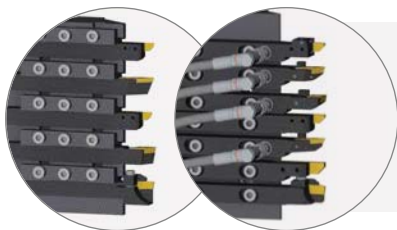
Modulares Werkzeugsystem
für Langdrehautomaten

Modular tooling system for
sliding headstock automatic lathes

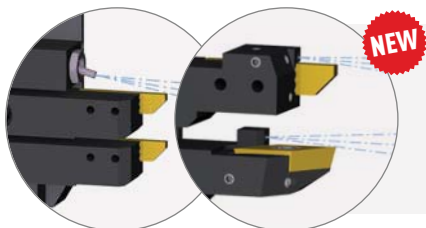
Les avantages

Die Vorteile

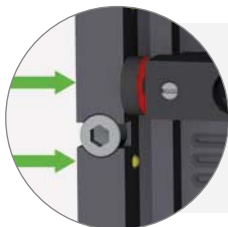
The advantages



Plus d'outils disponibles
Höhere Werkzeuganzahl
More available tools



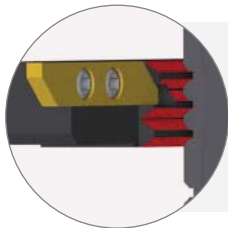
Système d'arrosage efficace
Effizientes Kühlmittelzufuhrsystem
Efficient coolant supply system



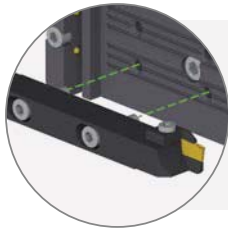
Repositionnement précis, poussée axiale automatique
Präzise Nachpositionierung, automatischer Axialschub
Precise repositionning, automatic axial thrust



Possibilité de pré réglage 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

Index

Adaptations disponibles pour les machines suivantes:
Verfügbare Anpassungen für folgende Maschinen:
Available adapters for the following machines:

Citizen - Hanwha -
Manurhin - Metafil - **> 11.06**
Star - Tornos - Tsugami

Porte-outils
Halter
Holders

INFO > 11.56

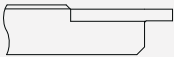
ML12



ML16

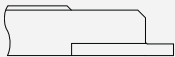


Right cut



TOP-Line	11.60
TURN-Line	11.61
ISO-Line	11.62
EVOCUT-Line	11.64
CUT-Line	11.65
PRO-Line	11.66
ECO-Line	11.66
IN-Line	11.67
TOOLING-Line	11.69

Cut off line



TOP-Line	11.70
TURN-Line	11.72
ISO-Line	11.73
EVOCUT-Line	11.74
CUT-Line	11.75
PRO-Line	11.76
ECO-Line	11.77

Modules d'arrosage et de serrage
Kühlmittelzufuhr- und Spannelemente
Coolant and clamping supply unit



> 11.78

Banc de préréglage
Voreinstellgerät
Presetting device



> 11.80

Pièces de rechange
Ersatzteile
Spare parts



> 11.82

Adaptations disponibles pour les machines suivantes

Verfügbare Anpassungen für folgende Maschinen

Available adapters for the following machines

Fabricant Hersteller Manufacturer	Machine Maschine Machine	Adaptations Anpassungen Adapters	Type Typ Type	Page Seite Page
Citizen	C12/C16	ML12-CITIZEN-C16	ML12	11.06
	L12	ML12-CITIZEN-L12		11.07
	R04	ML12-CITIZEN-R04-QTF3101-3T		11.10
		ML12-CITIZEN-R04-QTF5008-4T		11.08
		ML12-CITIZEN-R04-QTF5108-4T		
	R07	ML12-CITIZEN-R07-QTF4008-5T		11.11
		ML12-CITIZEN-R07-QTF4108-6T		
		ML12-CITIZEN-R07-QTF4208-3T		11.12
		ML12-CITIZEN-R07-QTF4608-4T		
	K16	ML16-CITIZEN-K16	ML16	11.13
	L20	ML16-CITIZEN-L20		11.14
	L20E	ML16-CITIZEN-L20E		11.15
Hanwha	XD20M	ML12-HANWHA-XD20M	ML12	11.16
	SL12/16	ML16-HANWHA-SL12/16	ML16	11.17
Manuhrin	KMX 426/526/626	ML16-KMX26-DUO	ML16	11.18
		ML16-KMX26-JET		
Metafil	D10	ML12-D10-3T	ML12	11.19
Star	SB12RG	ML12-STAR-SB-12RG	ML12	11.20
	SR10-J	ML12-STAR-SR-10J		11.21
	SW12RII	ML12-STAR-SW-12RII-2T		11.22
		ML12-STAR-SW-12RII-8T		
	SA-12/SA16/SA16R	ML16-STAR-SA-16	ML16	11.23
	SB16	ML16-STAR-SB-16		11.24
	SB16/20RG	ML16-STAR-SB-16/20RG		11.25
	SB20C/E	ML16-STAR-SB-20		11.26
	SR20J	ML16-STAR-SR-20J		11.28
	SR-16R/SR20R/SR20RII	ML16-STAR-SR-20R		11.27
	SR20RIII	ML16-STAR-SR-20RIII		11.28
	SR20RIV	ML16-STAR-SR-20RIV-2T		11.29
		ML16-STAR-SR-20RIV-6T		
	SR32J	ML16-STAR-SR-32J		11.30
	SV12/20	ML16-STAR-SV-12/20		11.31
	SW20R	ML16-STAR-SW-20R-2T		11.32
		ML16-STAR-SW-20R-6T		
Tornos	DECO7/10 - EvoDECO 10	ML12-DECO10-DUO	ML12	11.33
		ML12-DECO10-JET		
		ML12-SWISS-NANO-2T		11.36
	SWISS-NANO /SWISS-NANO 7	ML12-SWISS-NANO-3T		
		ML12-SWISS-NANO-6T		11.34

Adaptations disponibles pour les machines suivantes

Verfügbare Anpassungen für folgende Maschinen

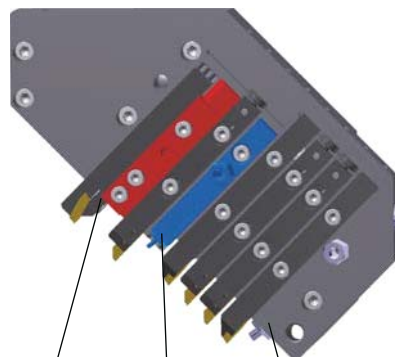
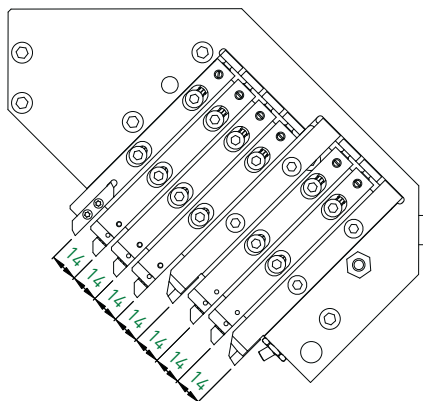
Available adapters for the following machines

Fabricant Hersteller Manufacturer	Machine Maschine Machine	Adaptations Anpassungen Adapters	Type Typ Type	Page Seite Page	
Tornos	SWISS-NANO 7	ML12-SWISS-NANO-4T	ML12	11.37	
	DT13	ML12-DT13-2020206-9T		11.38	
	CT20	ML12-CT20-2020019-7T		11.39	
	GT13	ML12-GT13-390224-5T		11.40	
		ML12-GT13-390223-7T			
	DEC013- EvoDEC016	ML16-DEC013-DUO	ML16	11.46	
	DEC020/26 - EvoDEC020/32	ML16-DEC013-JET		11.47	
		ML16-DEC020-DUO			
		ML16-DEC020-JET			
	SIGMA20/32	ML16-S20-DUO		11.48	
		ML16-S20-JET			
	ST26	ML16-SWISS-ST26-DUO		11.49	
		ML16-SWISS-ST26-JET			
	DT26	ML16-DT26-2020206-7T		11.50	
	GT26	ML16-GT26-386210-5T		11.42	
		ML16-GT26-386209-6T			
	GT32	ML16-GT32-389210-4T		11.44	
		ML16-GT32-389209-5T			
Tsugami	B074	ML12-B074-1-6T	ML12	11.51	
	B075	ML12-B075-1-8T		11.52	
	P034	ML12-P034-1-5T		11.53	
		ML12-P034-1-7T		11.54	
		ML12-P034-2-4T		11.53	
		ML12-P034-2-10T		11.54	

Citizen C12 / C16

+ 2 outils (max 8)
+ 2 Werkzeuge (max 8)
+ 2 tools (max 8)

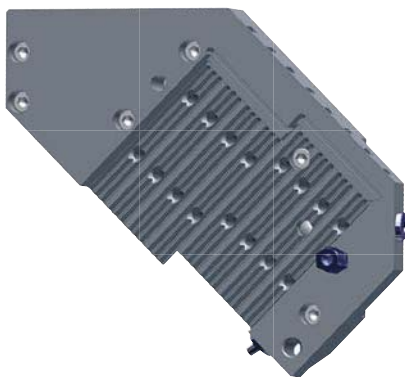
ML12



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

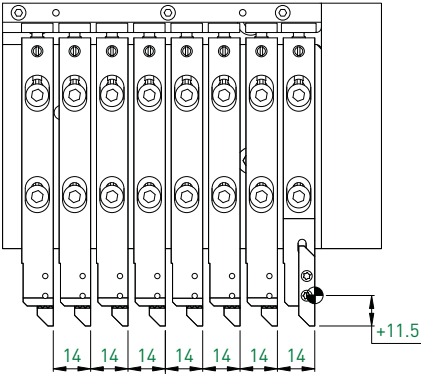


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Citizen C12 / C16					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-CITIZEN-C16	ML12	> 11.60	ML12-FIX-12/14	ML12-JET-5/16	11.78

Citizen L12

- + 2 outils (max 8)
- + 2 Werkzeuge (max 8)
- + 2 tools (max 8)

ML12

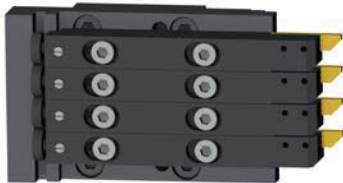
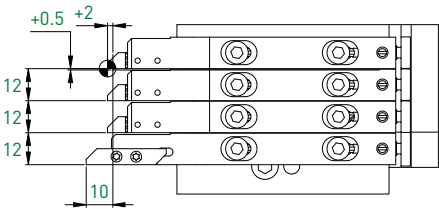
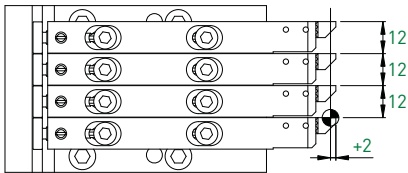


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Citizen L12					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-CITIZEN-L12	ML12	> 11.60	-	ML12-JET-5/16	11.78

Citizen R04

- + 1 outil (max 8)
- + 1 Werkzeug (max 8)
- + 1 tool (max 8)

ML12



ML12-CITIZEN-R04-QTF5008-4T

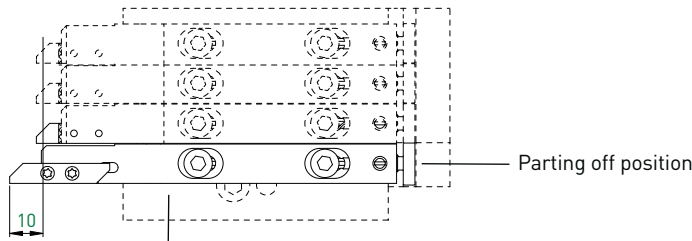
ML12-CITIZEN-R04-QTF5108-4T

Support de base Grundhalter Base holder				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
4T	ML12-CITIZEN-R04-QTF5008-4T ML12-CITIZEN-R04-QTF5108-4T	ML12	> 11.60	-	ML12-JET-5/16	11.78

Citizen R04

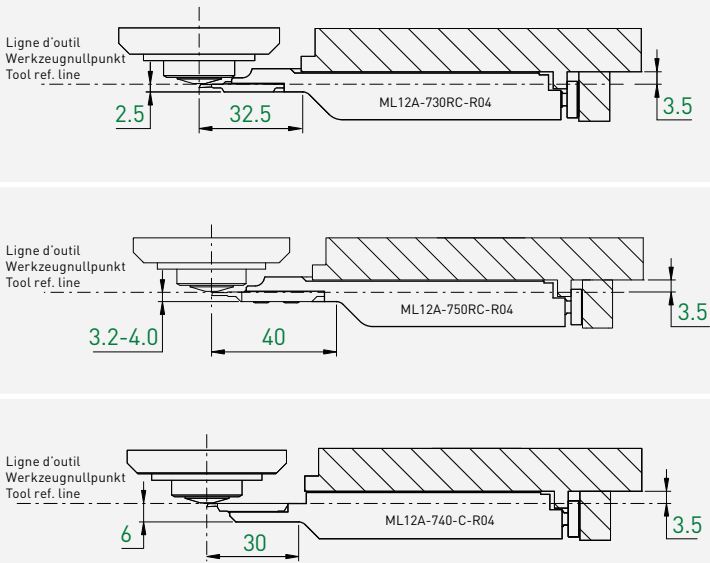
Porte-outils spéciaux de tronçonnage
Spezial Abstechwerkzeughalter
Special parting off tool holders

ML12



ML12-CITIZEN-R04-QTF5108-4T

avec canon
mit Führungsbuchse
with guide bush

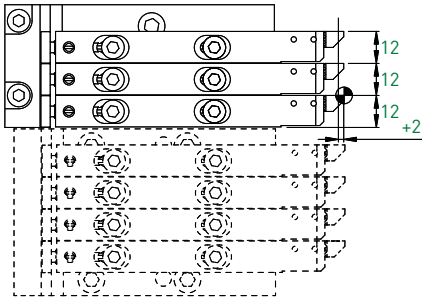


Type de machine Maschinen-Typ Type of machine	Porte-outils Halter Holders	Art. N°	Plaquettes Wendeplatten Inserts	Pages Seiten Pages
Citizen R04	ML12	ML12A-730RC-R04	731R... / 731RSF	1.39-45 / 2.20
		ML12A-750RC-R04	751R... / 751RDSF	1.88-97 / 2.20
		ML12A-740-C-R04	741 / 741SF	1.32-38 / 2.12

Citizen R04

- + 3 outils (max 3)
- + 3 Werkzeuge (max 3)
- + 3 tools (max 3)

ML12

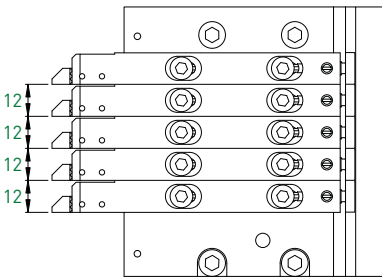
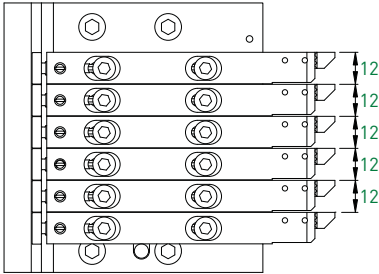


Support de base Grundhalter Base holder		Citizen R04		Accessoires Zubehöre Accessories	
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-CITIZEN-R04-QTF3101-3T	ML12	> 11.60	-	ML12-JET-5/16	11.78

Citizen R07

- + 1 outil (max 11)
- + 1 Werkzeug (max 11)
- + 1 tool (max 11)

ML12



ML12-CITIZEN-R07-QTF4108-6T

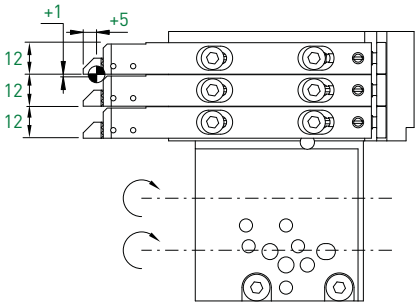
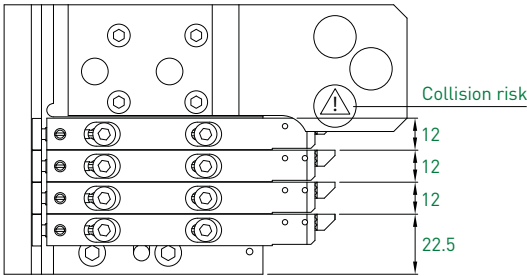
ML12-CITIZEN-R07-QTF4008-5T

Support de base Grundhalter Base holder				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
5T	ML12-CITIZEN-R07-QTF4008-5T	ML12	> 11.60	-	ML12-JET-5/16	11.78
6T	ML12-CITIZEN-R07-QTF4108-6T					

Citizen R07

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML12



ML12-CITIZEN-R07-QTF4608-4T

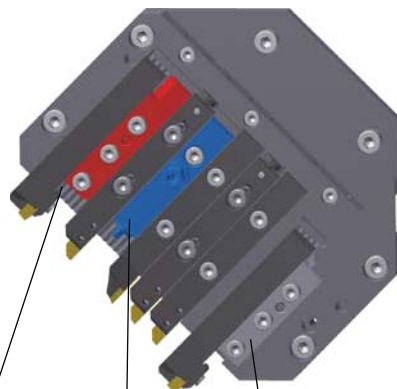
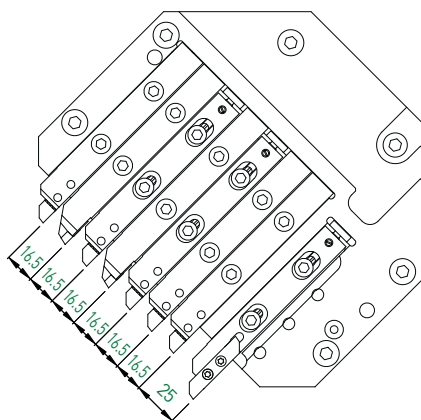
ML12-CITIZEN-R07-QTF4208-3T

Support de base Grundhalter Base holder		Citizen R07		Accessoires Zubehöre Accessories		
Type Type Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
3T	ML12-CITIZEN-R07-QTF4208-3T	ML12	> 11.60	-	ML12-JET-5/16	11.78
4T	ML12-CITIZEN-R07-QTF4608-4T					

Citizen K12 / K16

ML16

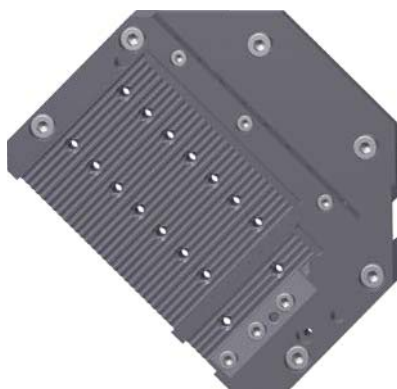
- + 2 outils (max 8)
- + 2 Werkzeuge (max 8)
- + 2 tools (max 8)



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

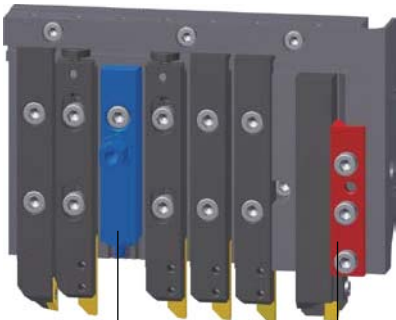
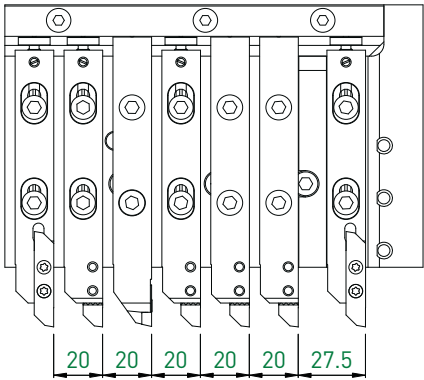


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Citizen K12 / K16					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-CITIZEN-K16	ML16	> 11.60	ML16-FIX-16/16.5	ML16-JET-7/16	11.78

Citizen L16 / L20

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML16



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

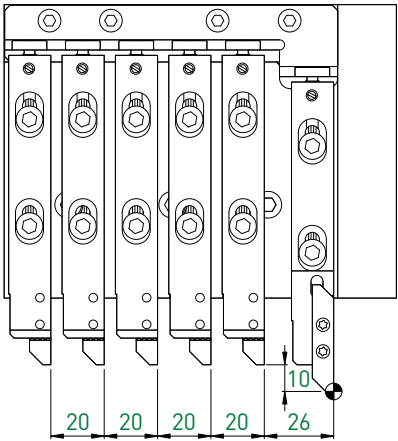


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Citizen L16 / L20					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-CITIZEN-L20	ML16	> 11.60	-	ML16-JET-7/16	11.78

Citizen L20E

- + 1 outil (max 6)
- + 1 Werkzeug (max 6)
- + 1 tool (max 6)

ML16

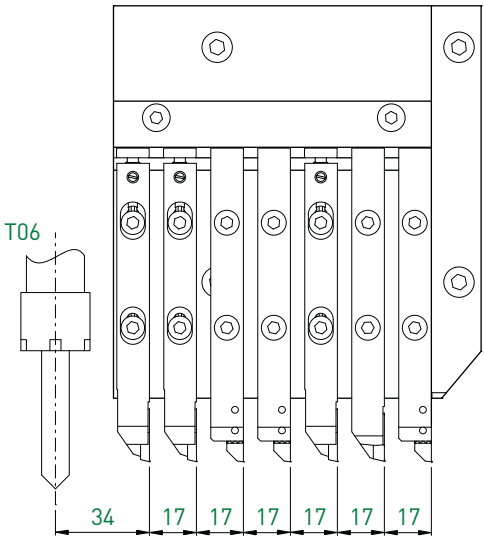


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-CITIZEN-L20E	ML16	> 11.60	-	ML16-JET-7/16	11.78

Hanwha XD20M

- + 2 outils (max 7)
- + 2 Werkzeuge (max 7)
- + 2 tools (max 7)

ML12

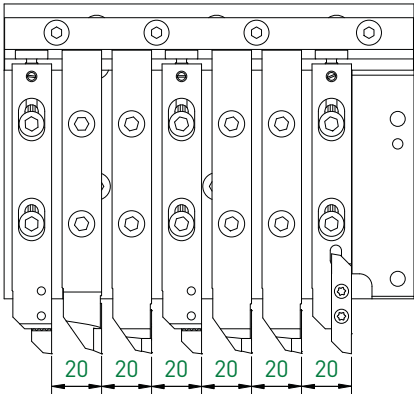


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Hanwha XD20M					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-HANWHA-XD20M	ML12	> 11.60	-	ML12-JET-5/16	11.78

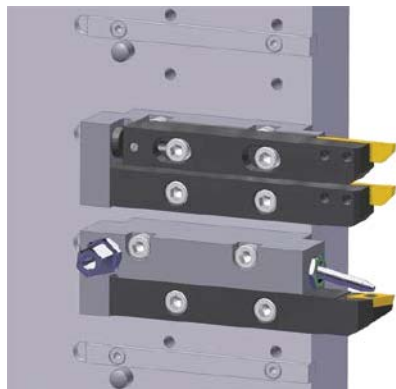
Hanwha SL12 / 16

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML16



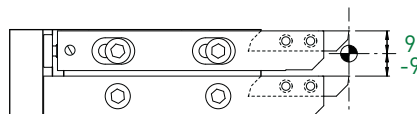
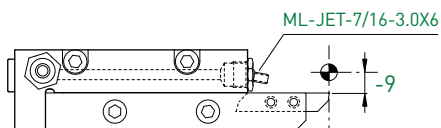
Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Hanwha SL12 / 16					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-HANWHA-SL12/16	ML16	> 11.60	-	ML16-JET-7/16	11.78



Jet



Duo



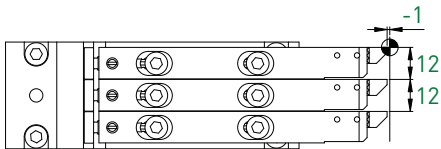
Jet



Duo

Support de base Grundhalter Base holder		Manurhin KMX 426/526/626 Swing 20-26 mm		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
Jet	ML16-KMX26-JET	ML16	> 11.60	-	ML-JET-7/16...	11.78
Duo	ML16-KMX26-DUO			-	ML16-JET-7/16	

	D3	+ 1 outil (max 3)	
	Metafil D10	+ 1 Werkzeug (max 3)	ML12
	D13	+ 1 tool (max 3)	

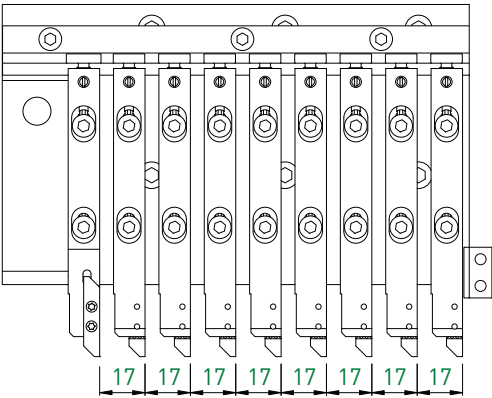


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Metafil D3 / D10 / D13					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-D10-3T	ML12	> 11.60	-	ML12-JET-5/16	11.78

Star SB-12RG

- + 2 outils (max 9)
- + 2 Werkzeuge (max 9)
- + 2 tools (max 9)

ML12

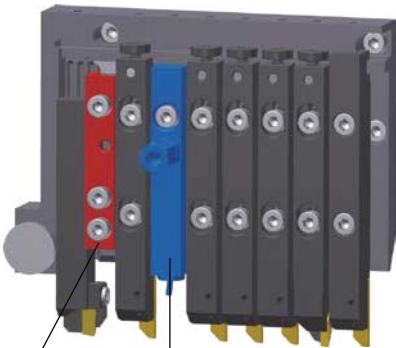
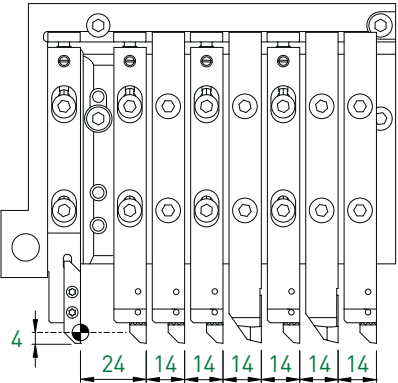


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SB-12RG					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-STAR-SB-12RG	ML12	> 11.60	-	ML12-JET-5/16	11.78

Star SR-10J

- + 2 outils (max 8)
- + 2 Werkzeuge (max 8)
- + 2 tools (max 8)

ML12



- 1 serrage ML12-FIX-12 pour outil 12 mm inclus
- 1 Spannung ML12-FIX-12 für Werkzeug 12 mm inbegriffen
- 1 clamping ML12-FIX-12 for 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)

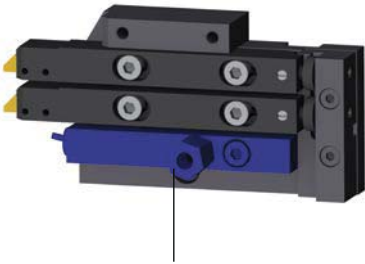
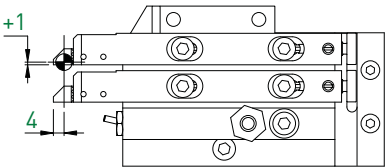
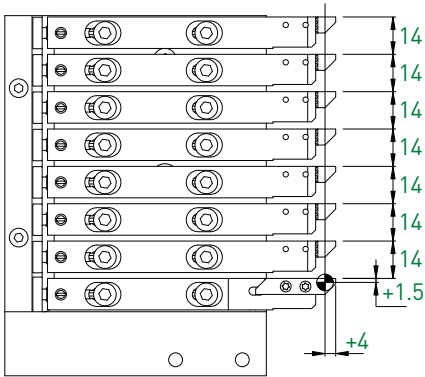


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SR-10J					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML12-STAR-SR-10J	ML12	> 11.60	ML12-FIX-12/14	ML12-JET-5/16	11.78

Star SW-12RII

- + 2 outils (max 10)
- + 2 Werkzeuge (max 10)
- + 2 tools (max 10)

ML12



Position uniquement utilisable avec module d'arrosage, en option
Position nur mit Kühlmittelzufuhrelement verwendbar, optional
Position only with coolant supply unit usable, optional



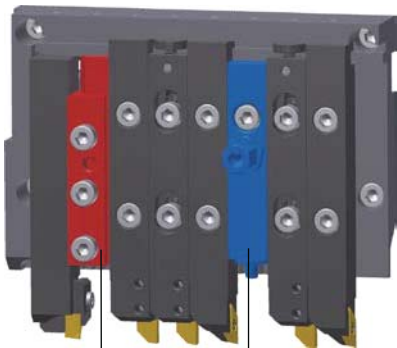
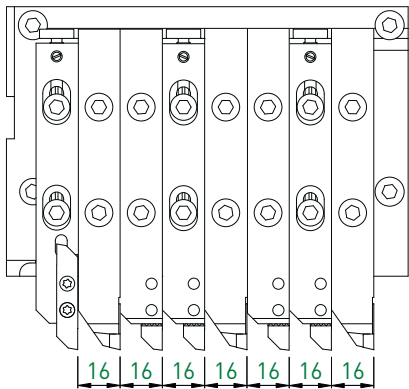
ML12-STAR-SW-12RII-8T



ML12-STAR-SW-12RII-2T

Support de base Grundhalter Base holder				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	ML12-STAR-SW-12RII-2T	ML12	> 11.60	-	ML12-JET-5/16	11.78
8T	ML12-STAR-SW-12RII-8T					

	SA-12	+ 2 outils (max 8)	
Star	SA-16	+ 2 Werkzeuge (max 8)	ML16
	SA-16R	+ 2 tools (max 8)	



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)

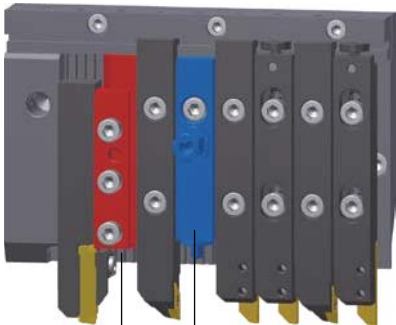
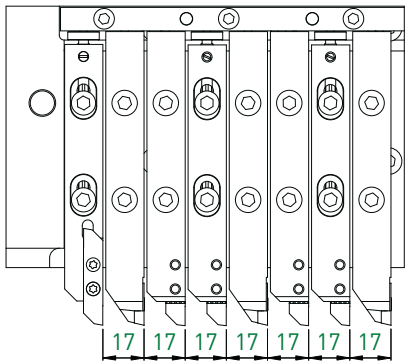


Support de base Grundhalter Base holder		Star SA-12/SA-16/SA-16R		Accessoires Zubehöre Accessories	
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SA-16	ML16	> 11.60	ML16-FIX-16/16	ML16-JET-7/16	11.78

Star SB-16

- + 3 outils (max 8)
- + 3 Werkzeuge (max 8)
- + 3 tools (max 8)

ML16



Outil 17 mm possible avec module de serrage
Werkzeug 17 mm mit Spannelement möglich
Tool 17 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)

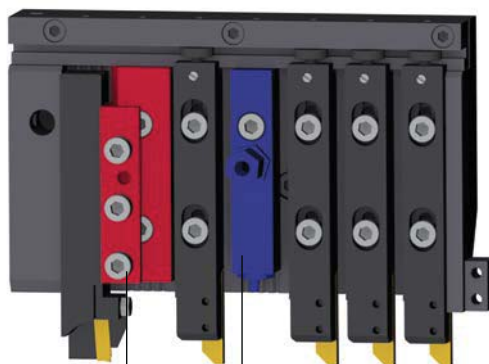
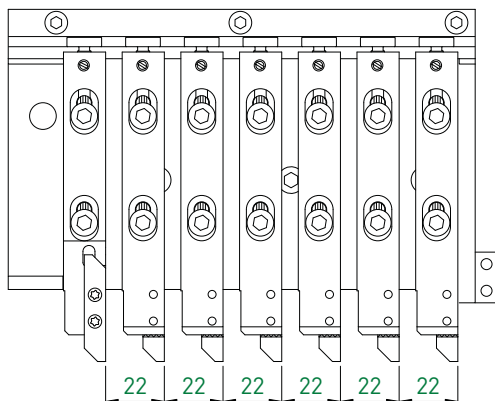


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SB-16					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SB-16	ML16	> 11.60	ML16-FIX-16/17	ML16-JET-7/16	11.78

Star SB-16/20RG

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML16



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)

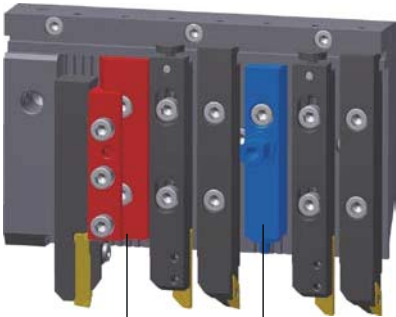
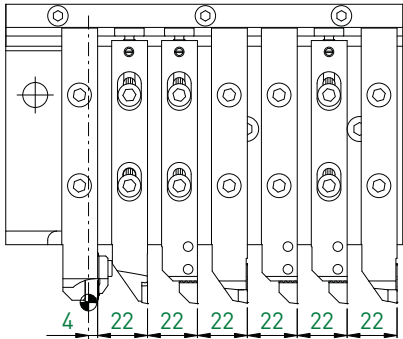


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SB-16/20RG					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SB-16/20RG	ML16	> 11.60	ML16-FIX-16/22	ML16-JET-7/16	11.78

Star SB-20C/E

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML16



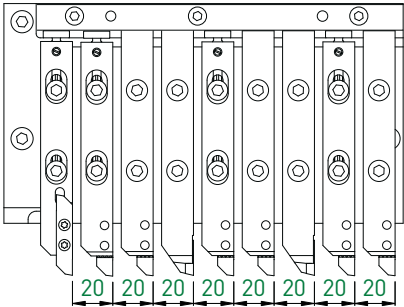
Outil 16 mm possible avec module de serrage
Werkzeug 16 mm mit Spannelement möglich
Tool 16 mm possible with clamping unit

Module d'arrosage (prend la place d'un outil)
Kühlmittelzufuhrelement (nimmt den Platz eines Werkzeuges)
Coolant supply unit (takes the place of one tool)



Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SB-20C/E					
Art. N°	Porte-outils Holder Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SB20C/E	ML16	> 11.60	ML16-FIX-16/22	ML16-JET-7/16	11.78

	SR-16R	+ 3 outils (max 9)	
Star	SR-20R	+ 3 Werkzeuge (max 9)	ML16
	SR-20RII	+ 3 tools (max 9)	



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)

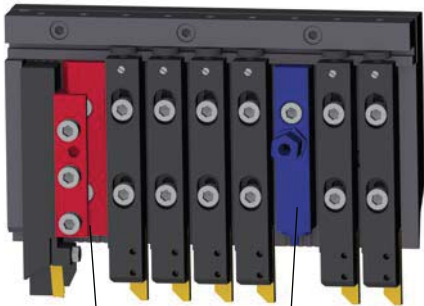
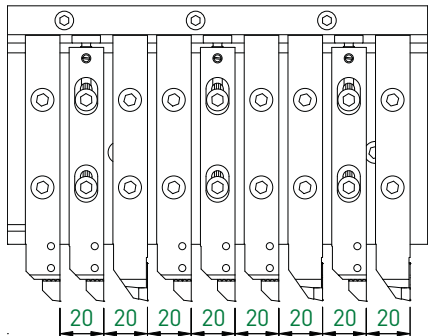


Support de base Grundhalter Base holder		Star SR-16R/SR-20R/SR-20RII		Accessoires Zubehöre Accessories	
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SR-20R	ML16	> 11.60	ML16-FIX-16/20	ML16-JET-7/16	11.78

Star **SR-20RIII**
SR-20J

- + 3 outils (max 9)
- + 3 Werkzeuge (max 9)
- + 3 tools (max 9)

ML16



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)

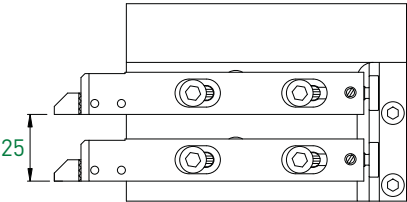
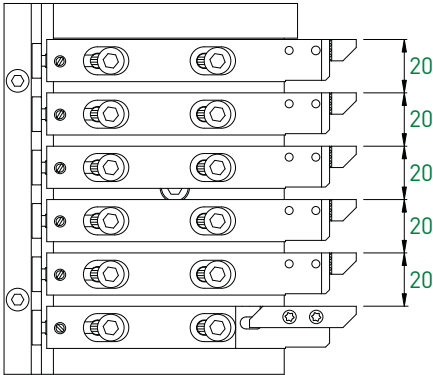


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SR-20RIII / SR-20J					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SR-20RIII	ML16	> 11.60	ML16-FIX-16/20	ML16-JET-7/16	11.78
ML16-STAR-SR-20J	ML16				

Star SR-20RIV

- + 1 outil (max 8)
- + 1 Werkzeug (max 8)
- + 1 tool (max 8)

ML16



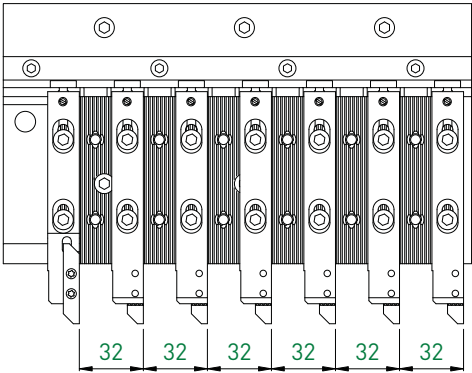
ML16-STAR-SR-20RIV-6T

ML16-STAR-SR-20RIV-2T

Support de base Grundhalter Base holder		Star SR-20RIV		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-SR-20RIV-2T	ML16	> 11.60	-	ML16-JET-7/16	11.78
6T	ML16-STAR-SR-20RIV-6T					

Star SR-32J **Ø max 32 mm**
+ 1 outil (max 7)
+ 1 Werkzeug (max 7)
+ 1 tool (max 7)

Ø max 16 mm + 7 outils (max 13)
+ 7 Werkzeuge (max 13) **ML16**
+ 7 tools (max 13)



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)

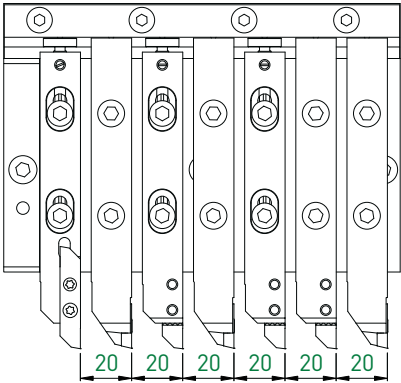


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SR-32J					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SR-32J	ML16	> 11.60	ML16-FIX-16/16	ML16-JET-7/16	11.78

Star SV-12 / 20

- + 2 outils (max 7)
- + 2 Werkzeuge (max 7)
- + 2 tools (max 7)

ML16



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)

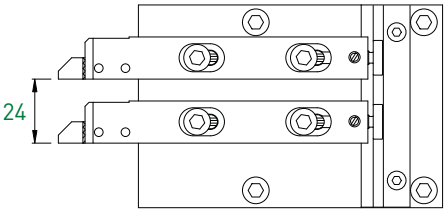
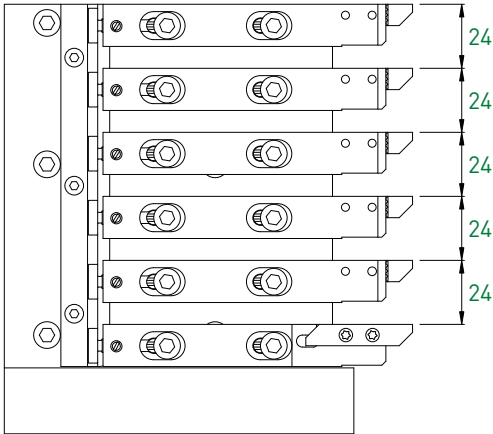


Support de base Grundhalter Base holder			Accessoires Zubehöre Accessories		
Star SV-12 / 20					
Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
ML16-STAR-SV-12/20	ML16	> 11.60	ML16-FIX-16/20	ML16-JET-7/16	11.78

Star SW-20R

- + 1 outil (max 8)
- + 1 Werkzeug (max 8)
- + 1 tool (max 8)

ML16



ML16-STAR-SW-20R-6T

ML16-STAR-SW-20R-2T

Support de base Grundhalter Base holder		Star SW-20R		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
2T	ML16-STAR-SW-20R-2T	ML16	> 11.60	-	ML16-JET-7/16	11.78
6T	ML16-STAR-SW-20R-6T			ML16-FIX-16/24		

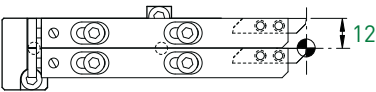
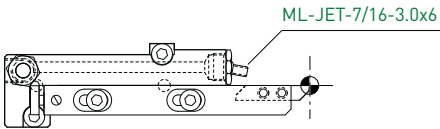
Tornos
DECO 7 / 10
EvoDECO 10

ML12

Jet



Duo



Jet



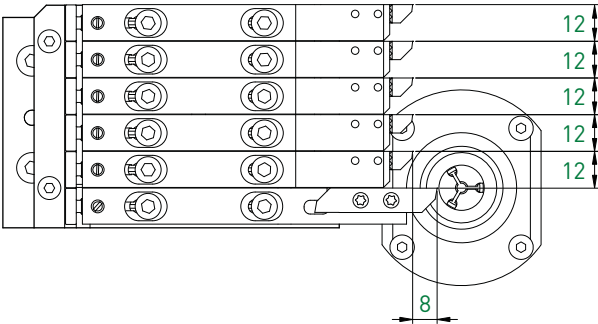
Duo

Support de base Grundhalter Base holder		Tornos DECO 7 / 10 EvoDECO 10		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
Jet	ML12-DECO10-JET	ML12	> 11.60	-	ML-JET-7/16...	11.79
Duo	ML12-DECO10-DUO				ML12-JET-5/16	11.78

Tornos **SwissNano**
SwissNano 7

- + 2 outils (max 6)
- + 2 Werkzeuge (max 6)
- + 2 tools (max 6)

ML12



6T

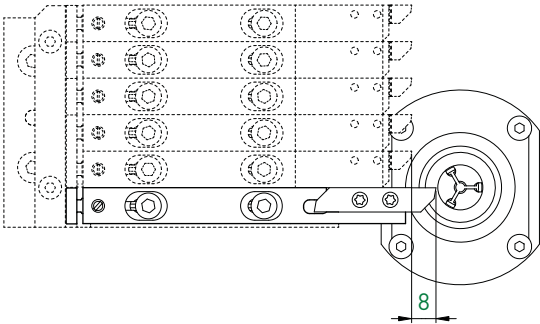


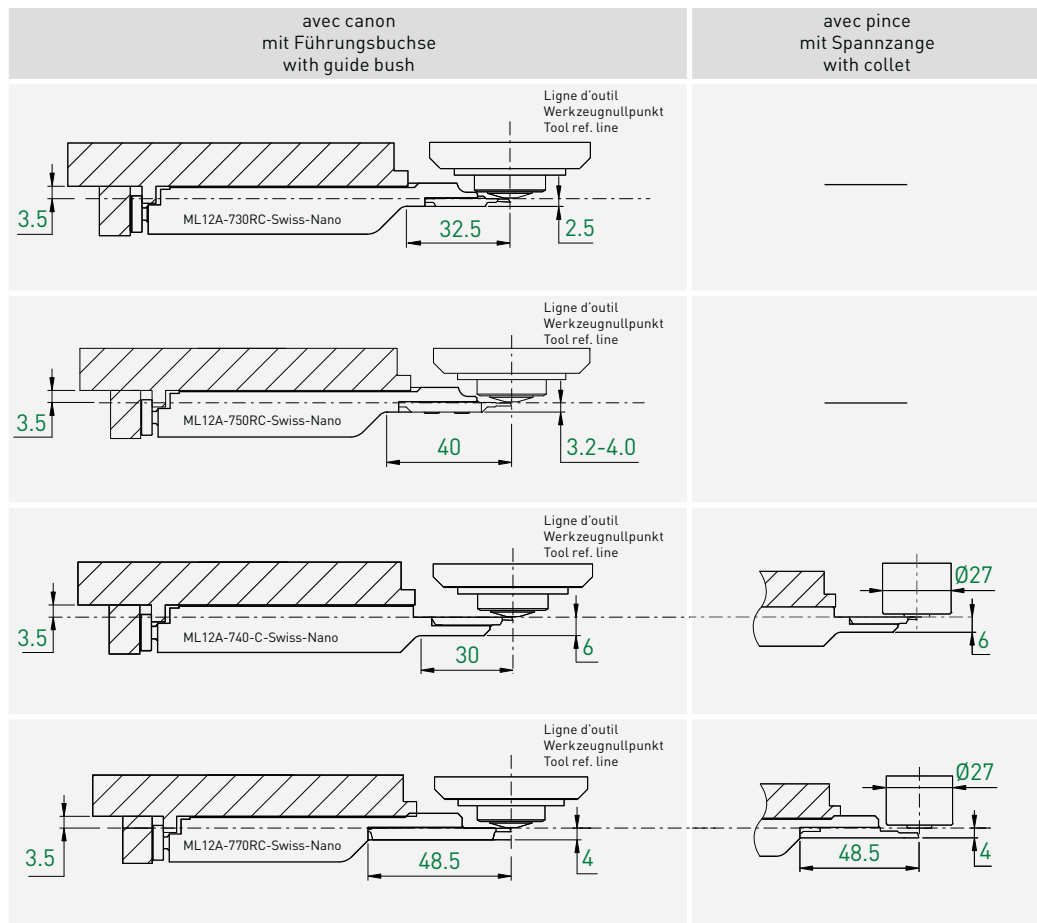
6T

Support de base Grundhalter Base holder		Tornos SwissNano SwissNano 7		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
6T	ML12-SWISS-NANO-6T	ML12	> 11.60	-	ML12-JET-5/16	11.78

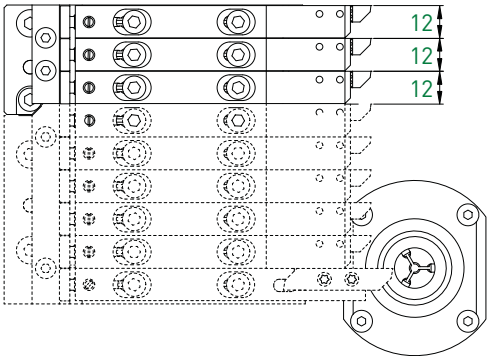
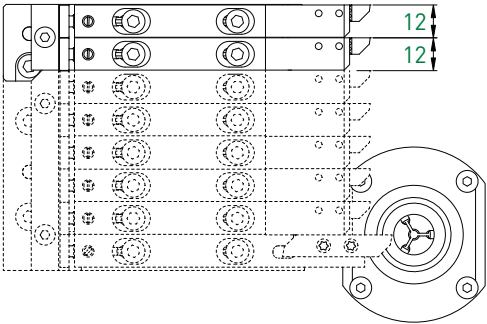
Tornos **SwissNano**
SwissNano 7

ML12





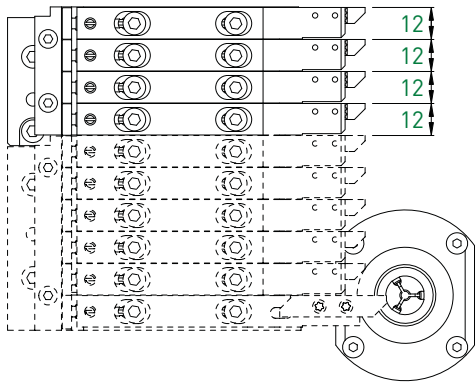
Type de machine Maschinen-Typ Type of machine	Porte-outils Halter Holders	Art. N°	Plaquettes Wendeplatten Inserts	Pages Seiten Pages
SwissNano	ML12	ML12A-730RC-SWISS-NANO	731R... / 731RSF	1.39-45 / 2.20
		ML12A-750RC-SWISS-NANO	751R... / 751RDSF	1.88-97 / 2.20
		ML12A-740-C-SWISS-NANO	741... / 741SF	1.32-38 / 2.12
		ML12A-770RC-SWISS-NANO	771R...	1.137-140



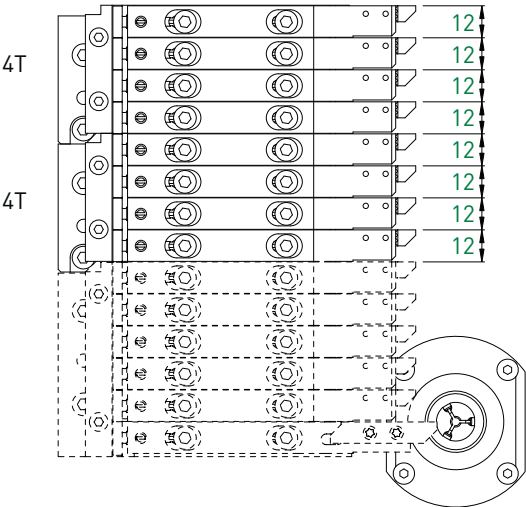
Support de base Grundhalter Base holder		Tornos SwissNano SwissNano 7		Accessoires Zubehöre Accessories		
Type Typ	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
2T	ML12-SWISS-NANO-2T	ML12	> 11.60	-	ML12-JET-5/16	11.78
3T	ML12-SWISS-NANO-3T					

Tornos SwissNano 7

ML12



Support de base Grundhalter Base holder				Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
4T	ML12-SWISS-NANO-7-4T	ML12	> 11.60	-	ML12-JET-5/16	11.78

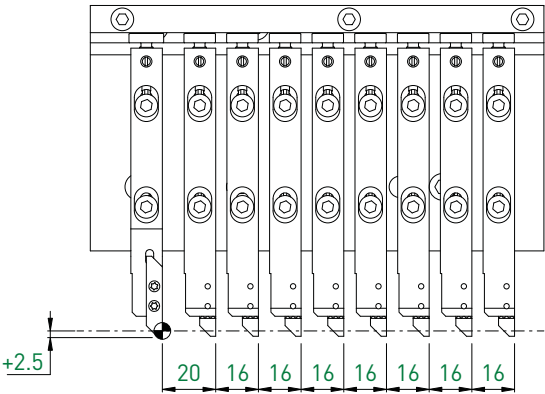


Possibilité de coupler 2 modules 4T
2 Module 4T können gekoppelt werden
Possibility to couple 2 modules 4T

Tornos DT 13

+ 3 outils (max 9)
+ 3 Werkzeuge (max 9)
+ 3 tools (max 9)

ML12

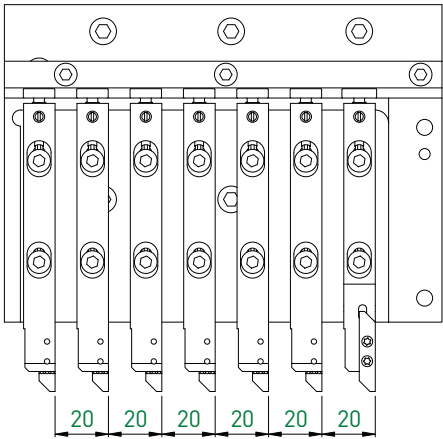


Support de base Grundhalter Base holder		Tornos DT 13		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
9T	ML12-DT13-2020206-9T	ML12	> 11.60	-	ML12-JET-5/16	11.78

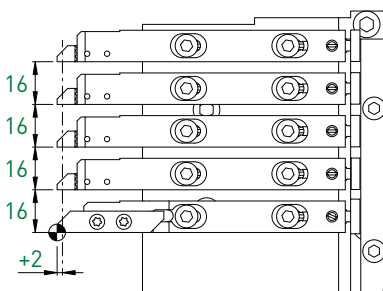
Tornos CT 20

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML12



Support de base Grundhalter Base holder				Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfuhrelement Coolant supply unit	Page Seite Page
7T	ML12-CT20-2020019-7T	ML12	> 11.60	-	ML12-JET-5/16	11.78



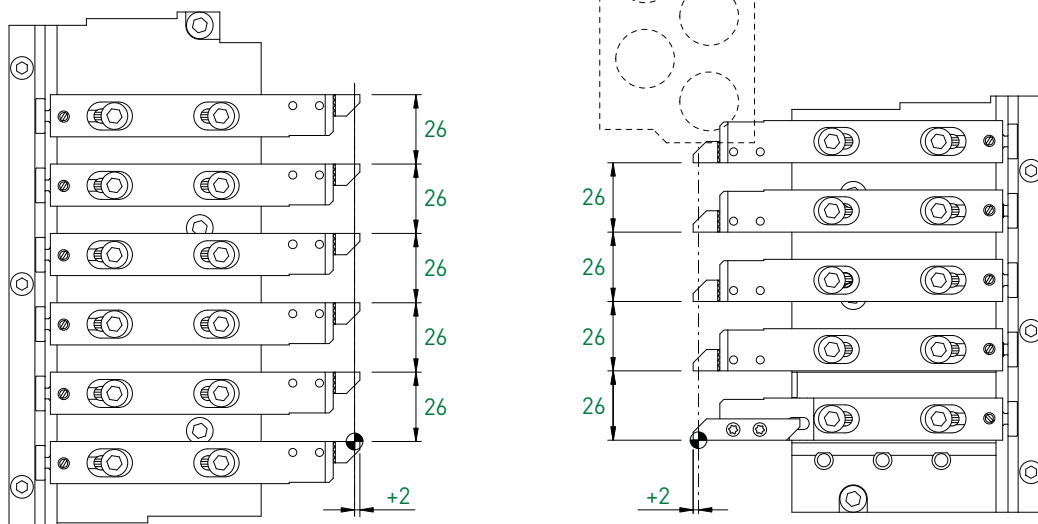


ML12-GT13-390223-7T



ML12-GT13-390224-5T

Support de base Grundhalter Base holder				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
5T	ML12-GT13-390224-5T	ML12	> 11.60	-	ML12-JET-5/16	11.78
7T	ML12-GT13-390223-7T					



1 serrage ML16-FIX-16 pour outil $\square$ 16 mm inclus
1 Spannung ML16-FIX-16 für Werkzeug $\square$ 16 mm inbegriffen
1 clamping ML16-FIX-16 for tool $\square$ 16 mm included



ML16-GT26-386209-6T



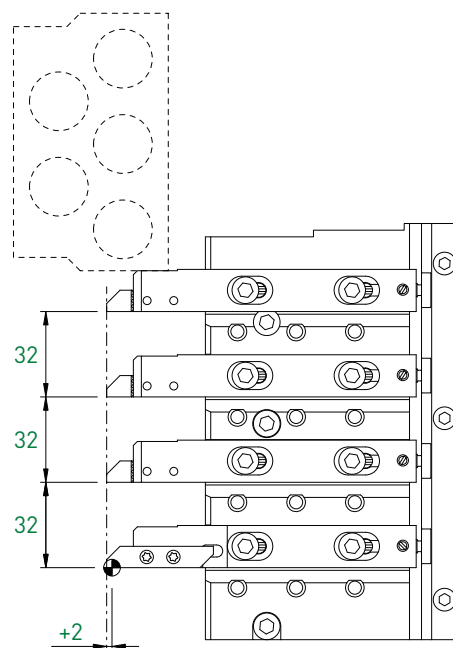
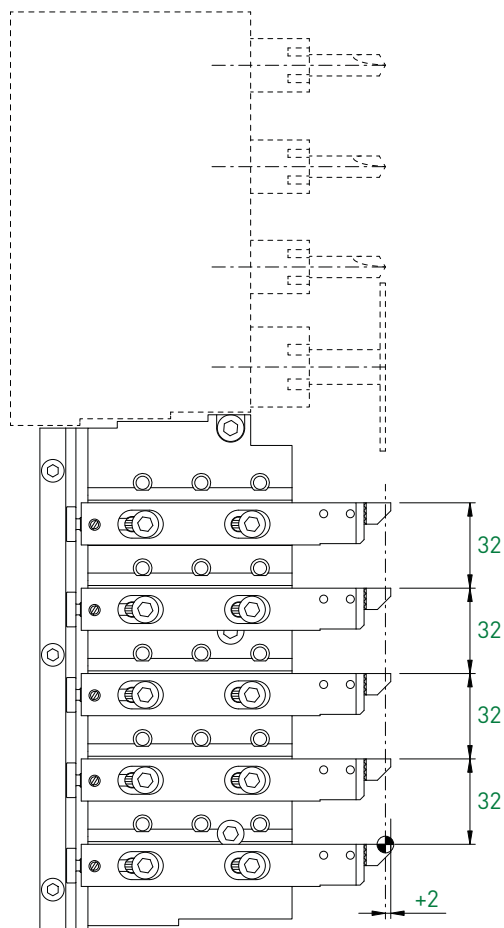
ML16-GT26-386210-5T

Support de base Grundhalter Base holder		Tornos GT 26		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
5T	ML16-GT26-386210-5T	ML16	> 11.60	-	ML16-JET-7/16	11.78
6T	ML16-GT26-386209-6T					

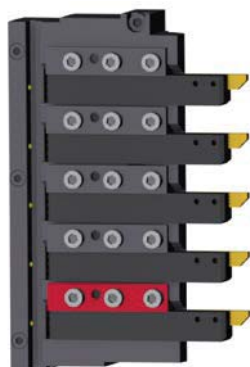
Tornos GT 32

max + 9 outils
+ 9 Werkzeuge
+ 9 tools

ML16



Holder ML16



Holder □16



Holder ML16



Holder □16

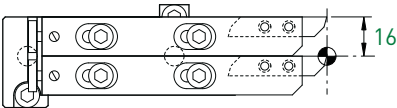
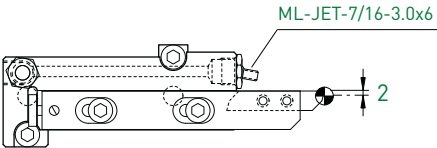


ML16-GT32-386209-5T



ML16-GT32-386210-4T

Support de base Grundhalter Base holder				Accessoires Zubehöre Accessories			
Tornos GT 32							
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	> 11.60	1x inclus 1x inbegriffen 1x included	Option ML16-FIX-16	ML16-JET-7/16	11.78
5T	ML16-GT32-386209-5T						



Jet



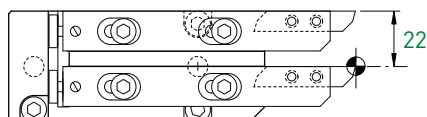
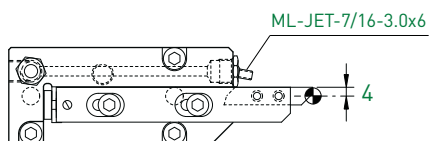
Duo

Support de base Grundhalter Base holder		Tornos DECO 13 / EvoDECO 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 Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
Jet	ML16-DECO13-JET	ML16	> 11.60	-	ML-JET-7/16...	11.79
Duo	ML16-DECO13-DUO				ML16-JET-7/16	11.78

Jet



Duo

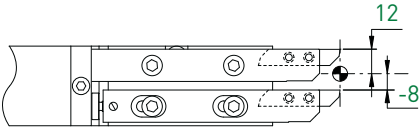
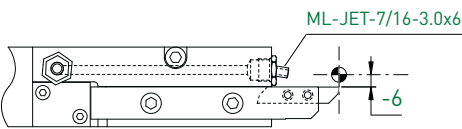


Jet



Duo

Support de base Grundhalter Base holder		Tornos DECO 20 / 26 EvoDECO 20 / 32		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
Jet	ML16-DECO20-JET	ML16	> 11.60	-	ML-JET-7/16...	11.79
Duo	ML16-DECO20-DUO				ML16-JET-7/16	11.78

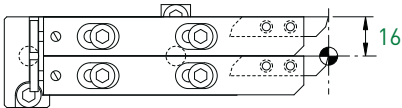
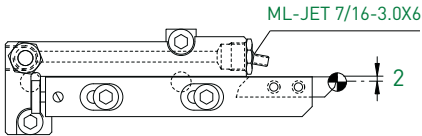


Jet



Duo

Support de base Grundhalter Base holder				Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
Jet	ML16-S20-JET	ML16	> 11.60	-	ML-JET-7/16...	11.79
Duo	ML16-S20-DUO				ML16-JET-7/16	11.78



Jet



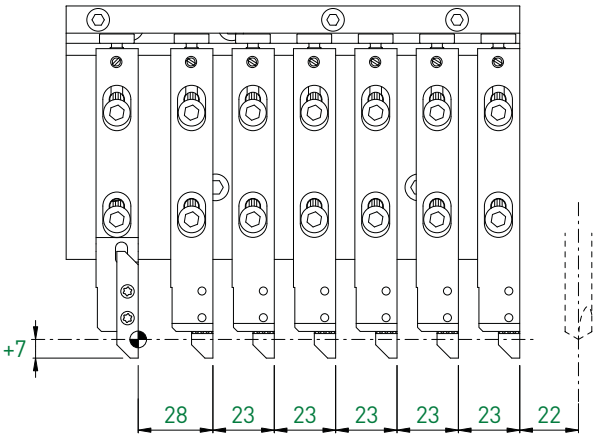
Duo

Support de base Grundhalter Base holder				Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelfzufuhrelement Coolant supply unit	Page Seite Page
Jet	ML16-SWISS-ST26-JET	ML16	> 11.60	-	ML-JET-7/16...	11.79
Duo	ML16-SWISS-ST26-DUO				ML16-JET-7/16	11.78

Tornos DT 26

- + 1 outil (max 7)
- + 1 Werkzeug (max 7)
- + 1 tool (max 7)

ML16

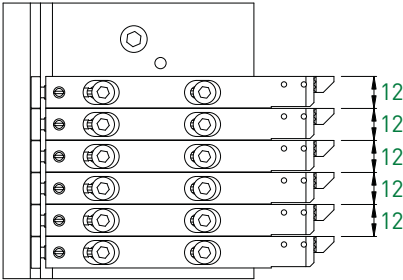


Support de base Grundhalter Base holder				Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
7T	ML16-DT26-2020206-7T	ML16	> 11.60	-	ML16-JET-7/16	11.78

Tsugami B074

- + 3 outils (max 6)
- + 3 Werkzeuge (max 6)
- + 3 tools (max 6)

ML12

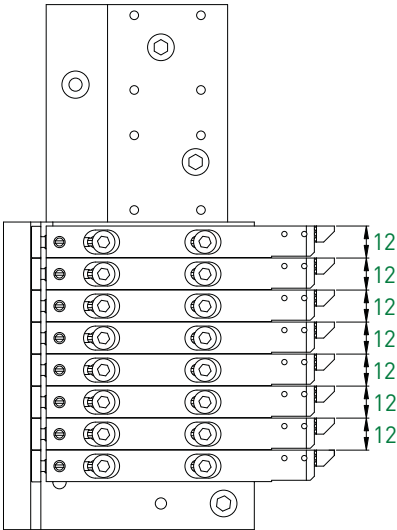


Support de base Grundhalter Base holder		Tsugami B074		Accessoires Zubehöre Accessories		
Type Type Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
6T	ML12-B074-1-6T	ML12	> 11.60	-	ML12-JET-5/16	11.78

Tsugami B075

- + 5 outils (max 8)
- + 5 Werkzeuge (max 8)
- + 5 tools (max 8)

ML12

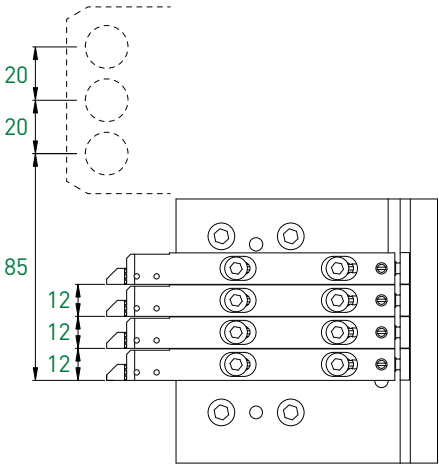
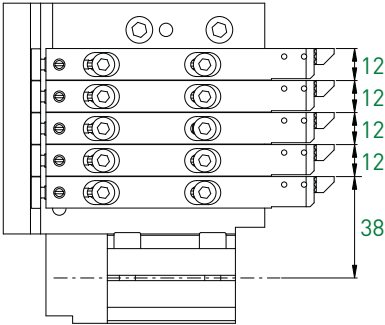


Support de base Grundhalter Base holder		Tsugami B075		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelezufuhrelement Coolant supply unit	Page Seite Page
8T	ML12-B075-1-8T	ML12	> 11.60	-	ML12-JET-5/16	11.78

Tsugami P034

- + 3 outils (max 9)
- + 3 Werkzeuge (max 9)
- + 3 tools (max 9)

ML12



ML12-P034-1-5T

ML12-P034-2-4T

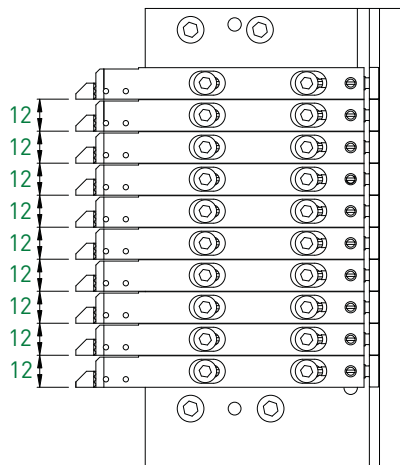
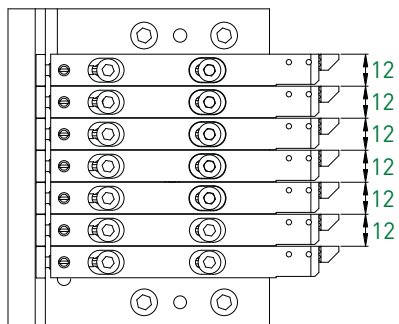
Support de base Grundhalter Base holder		Tsugami P034		Accessoires Zubehöre Accessories		
Type Typ Type	Art. N°	Porte-outils Halter Holders	Pages Seiten Pages	Module de serrage Spannelement Clamping unit	Module d'arrosage Kühlmittelzufuhrelement Coolant supply unit	Page Seite Page
4T	ML12-P034-2-4T	ML12	> 11.60	-	ML12-JET-5/16	11.78
5T	ML12-P034-1-5T					

Tsugami P034

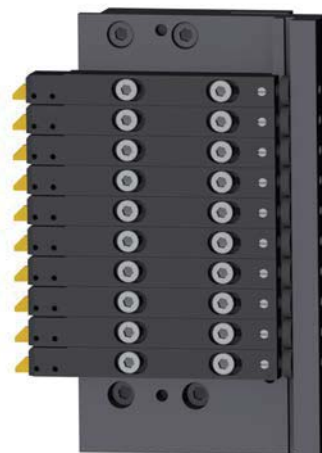
max

+ 17 outils
+ 17 Werkzeuge
+ 17 tools

ML12



ML12-P034-1-7T



ML12-P034-2-10T



ML12-P034-1-7T



ML12-P034-2-10T

Support de base Grundhalter Base holder		Tsugami P034		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	> 11.60	-	ML12-JET-5/16	11.78
10T	ML12-P034-2-10T					

Les différents types de porte-outils
Die verschiedenen Haltertypen
The various types of holders

Type Standard

ML12A-740



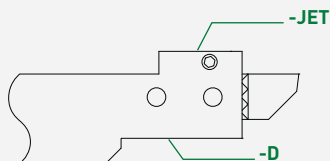
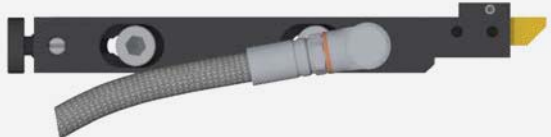
Type -D

ML12A-740-D



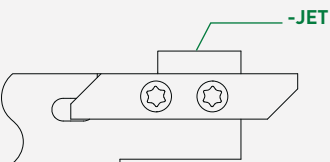
Type -JET-D

ML12A-740-JET-D



Type -JET

ML12A-740-JET

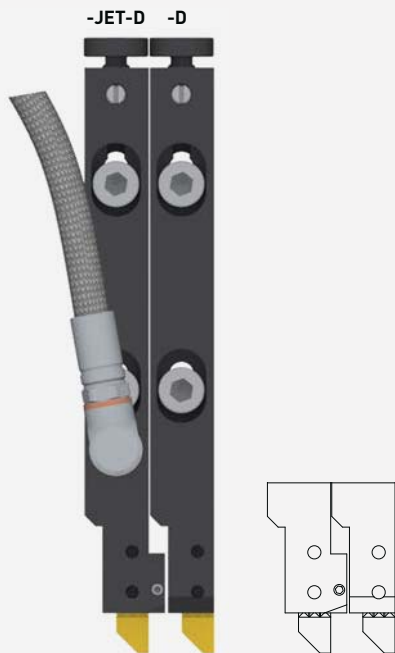


Informations techniques
Technische Informationen
Technical information

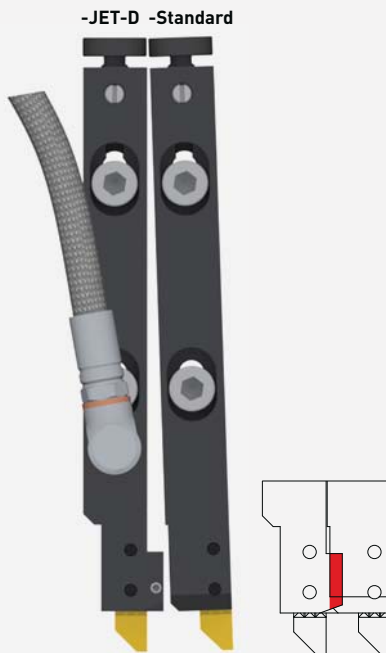
Porte-outils
Halter
Holders

Compatibilité
Kompatibilität
Compatibility

OK



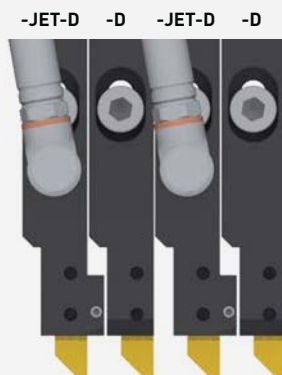
KO



MIX



TYPE D



Exceptions Ausnahmen Exceptions	
Exception ML12	Exception ML16
 ≥ 15 mm = Total compatibility	 ≥ 20 mm = Total compatibility

Brochure JET-Line:

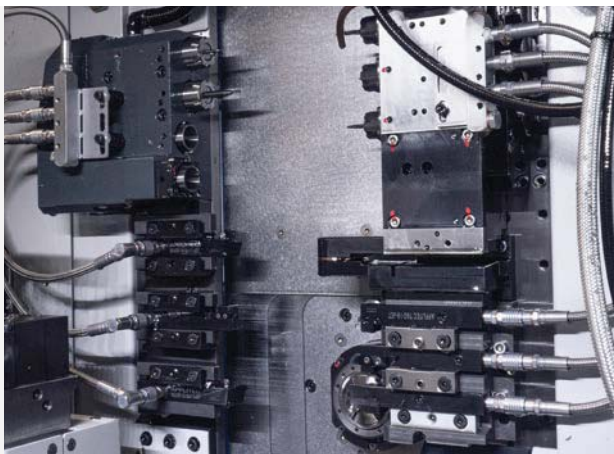
Système de distribution du liquide de refroidissement pour haute pression

JET-Line Broschüre:

Kühlmittelverteilungssystem für hohen Druck

JET-Line brochure:

Coolant distribution system for high pressure



Porte-outils

Halter

Holders

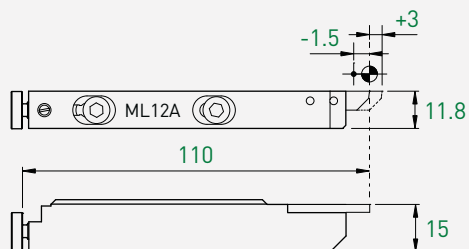
ML12 / ML16

Système de fixation
Befestigungssystem
Clamping system

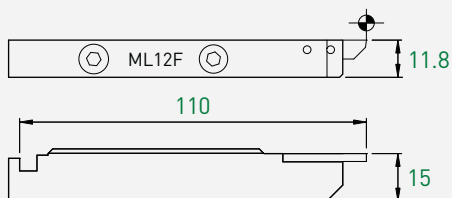
A = réglable
einstellbar
adjustable

F = longueur fixe
fixlänge
fixed length

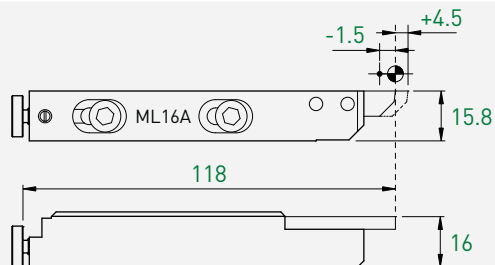
ML12A



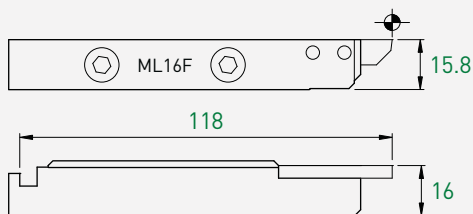
ML12F

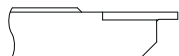


ML16A



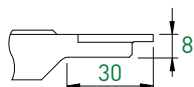
ML16F





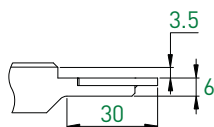
TOP-Line
741-747

> 1.32



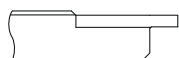
TOP-Line
741-747

> 1.32



TOP-Line
741

> 1.32-1.38



TOP-Line
761-767

> 1.78

Standard	-D	-JET-D
Art. N°	Art. N°	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	-	-

ML12	ML12	ML12
ML12A-740-C	ML12A-740-C-D	ML12A-740-C-JET-D
ML12F-740-C	ML12F-740-C-D	-

ML12	ML12	ML12
ML12A-740-C-R04	-	-
ML12A-740-C-SWISS-NANO	-	-

ML12	ML12	ML12
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	-	-

Porte-plaquettes

WSP-Halter

Insert holders

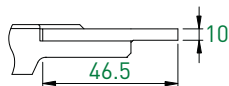
TOP-Line



TOP-Line
761-767

> 1.78

Standard	-D	-JET-D
Art. N°	Art. N°	Art. N°
ML16	ML16	ML16
ML16A-760-C	ML16A-760-C-D	-
ML16F-760-C	-	-



TOP-Line
781

> 1.135

ML16	ML16	ML16
-	ML16A-780-C-D	-

Porte-plaquettes

WSP-Halter

Insert holders

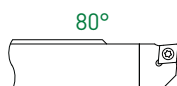
TURN-Line



TURN-Line
347-349

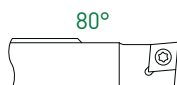
> 6.12

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	-	-



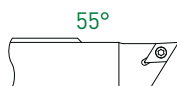
ISO-Line
CC...-0602..

> 7.16



ISO-Line
CC...-09T3..

> 7.16



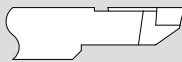
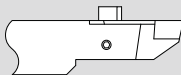
ISO-Line
DC...-0702..

> 7.30



ISO-Line
DC...-11T3..

> 7.30

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	-

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	-

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	-

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	-

Porte-plaquettes
WSP-Halter
Insert holders

ISO-Line

55°



ISO-Line
DC..-11T3..

> 7.30

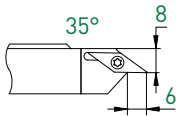
35°



ISO-Line
VC..-1103..

> 7.44

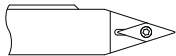
35°



ISO-Line
VC..-1103..

> 7.44

35°



ISO-Line
VC..-1103..

> 7.44

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	-

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	-

-	ML12	ML12
ML12A-SV-CR11	ML12A-SV-CR11-D	-
ML16	ML16	ML16
ML16A-SV-CR11	ML16A-SV-CR11-D	-

ML12	ML12	ML12
ML12A-SVVCN11	ML12A-SVVCN11-D	-
ML12F-SVVCN11	ML12F-SVVCN11-D	-
ML16	ML16	ML16
ML16A-SVVCN11	ML16A-SVVCN11-D	-
ML16F-SVVCN11	ML16F-SVVCN11-D	-

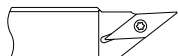
MODU-LINE

Porte-plaquettes

WSP-Halter

Insert holders

ISO-Line



ISO-Line
VC...-1303..

> 7.46

Standard



Art. N°

ML12

-

ML16

-

-D



Art. N°

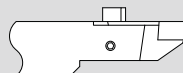
ML12

ML12A-SVJCR13-D

ML16

ML16A-SVJCR13-D

-JET-D



Art. N°

ML12

-

ML16

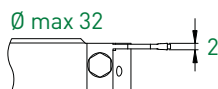
ML16A-SVJCR13-JET-D

Porte-plaquettes

WSP-Halter

Insert holders

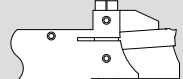
EVOCUT-Line



EVOCUT-Line
ET20..

> 8.12

-JET



Art. N°

ML16

-

Art. N°

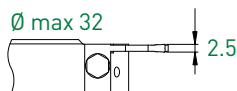
ML16

-

Art. N°

ML16

ML16A-ET20-JET32



EVOCUT-Line
ET25..

> 8.12

ML16

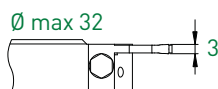
-

ML16

-

ML16

ML16A-ET25-JET32



EVOCUT-Line
ET30..

> 8.12

ML16

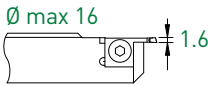
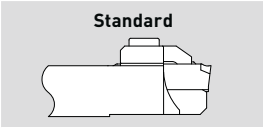
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ML16

-

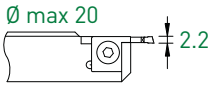
ML16

ML16A-ET30-JET32



CUT-Line CUT16..	> 9.14
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Art. N°	Art. N°	Art. N°
ML12	ML12	ML12
ML12A-CUT16	-	-
ML12F-CUT16	-	-
ML16	ML16	ML16
ML16A-CUT16	-	-
ML16F-CUT16	-	-



CUT-Line CUT22..	> 9.14
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ML12	ML12	ML12
ML12A-CUT22	-	-
ML12F-CUT22	-	-
ML16	ML16	ML16
ML16A-CUT22	-	-
ML16F-CUT22	-	-

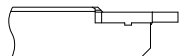
MODU-LINE

Porte-plaquettes

WSP-Halter

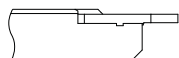
Insert holders

PRO-Line



PRO-Line
642-647

> 3.08



PRO-Line
661

> 3.34

-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

ML12

ML12

ML12

-

ML12A-660-D

ML12A-660-JET-D

ML16

ML16

ML16

-

ML16A-660-D

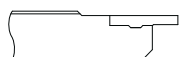
ML16A-660-JET-D

Porte-plaquettes

WSP-Halter

Insert holders

ECO-Line



ECO-Line
261-266

> 4.08

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

-

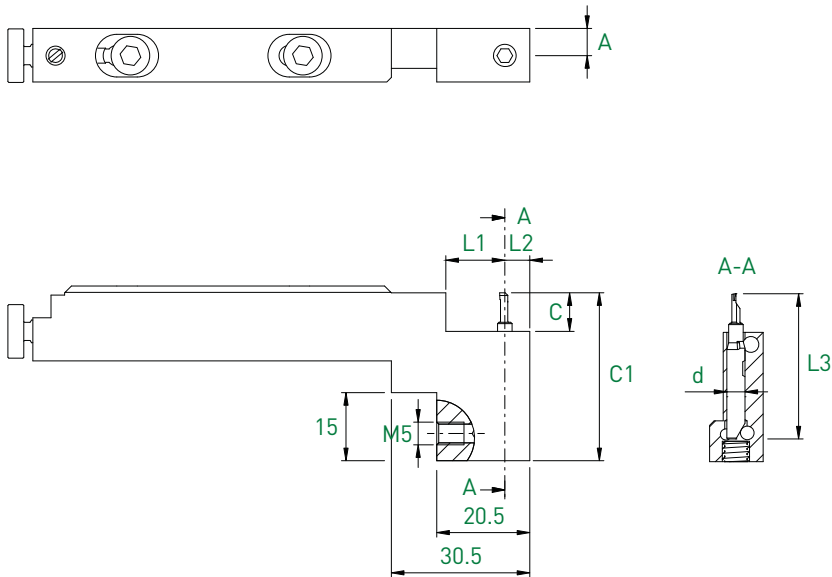
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Porte-outils

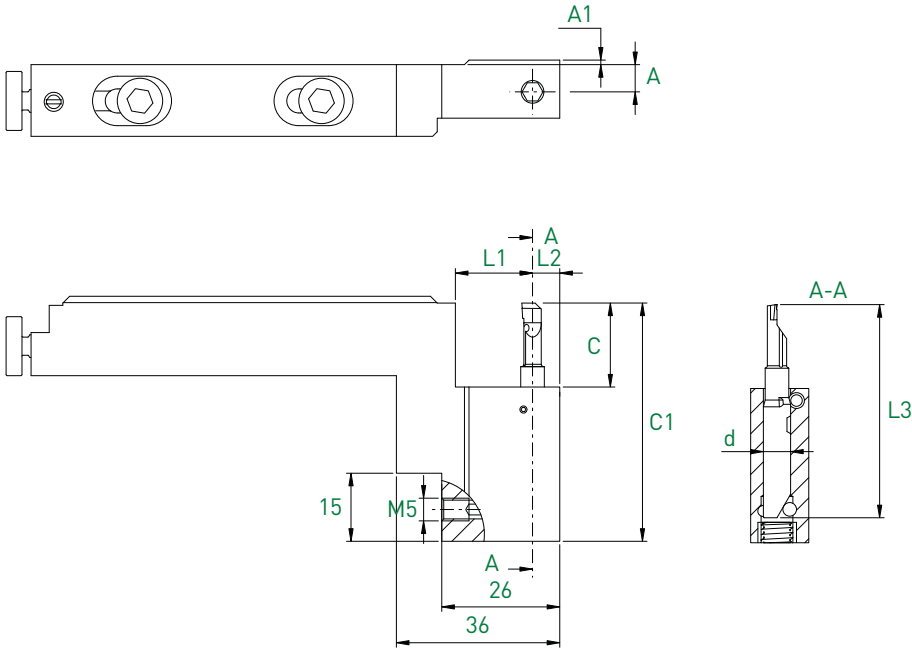
Halter

Holders

IN-Line



								ML12
d	Compatible bars L3		C	C1	A	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

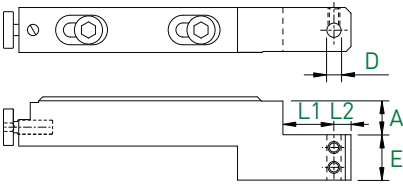


									ML16
d	Compatible bars L3		C	C1	A	A1	L1	L2	Art. N°
4	BB4R... BF4R...	32	8.5	37	6	-	17.5	5.5	ML16A-BHK4N-32R-D
		37	13.5	42	6	-	17.5	5.5	ML16A-BHK4N-37R-D
		42	18.5	47	6	-	17.5	5.5	ML16A-BHK4N-42R-D

									ML16
d	Compatible bars L3		C	C1	A	A1	L1	L2	Art. N°
6	BB4R...	47	18.5	52.5	6	1	17	6	ML16A-BHK6N-47R-D
	BF4R...	57	28.5	62.5	6	1	17	6	ML16A-BHK6N-57R-D

Porte-outils
Halter
Holders

TOOLING-Line

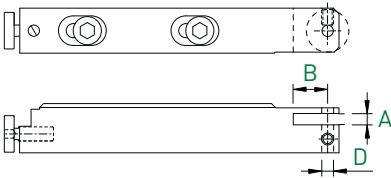


					ML12
A	D	E	L1	L2	Art. N°
8	3	12	13	6	ML12A-2440-8-3
8	4	12	13	6	ML12A-2440-8-4
8	5	12	13	6	ML12A-2440-8-5
12	6	12	13	6	ML12A-2440-12-6

					ML16
A	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

Porte-molettes
Rändelhalter
Knurl holders

TOOLING-Line



			ML12
A	D	B	Art. N°
4	4	8	ML12A-2402-44

			ML16
A	D	B	Art. N°
4	4	11	ML16A-2402-44

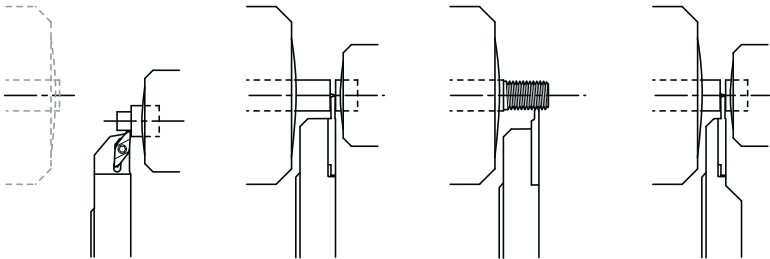
MODU-LINE

Porte-plaquettes – Coupe déportée & contre-opération	
WSP-Halter – Versetztes Schneiden & Gegenspindel	
Insert holders – Cut off line & cut on subspindle	

Coupe à droite déportée ou usinage
à gauche sur contre-broche

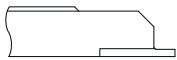
Rechtsschneidend versetzt oder
linksschneidend auf Gegenspindel

Right hand cut off line or left hand
cut on subspindle



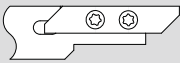
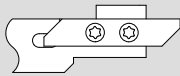
TURN-Line	TOP-Line	TOP-Line	TOP-Line
ISO-Line	EVOCUT-Line	EVOCUT-Line	PRO-Line
	CUT-Line	CUT-Line	ECO-Line
	PRO-Line	PRO-Line	
	ECO-Line	ECO-Line	

Porte-plaquettes – Coupe déportée & contre-opération	
WSP-Halter – Versetztes Schneiden & Gegenspindel	TOP-Line
Insert holders – Cut off line & cut on subspindle	



TOP-Line
731-737

> 1.32

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

Porte-plaquettes – Coupe déportée & contre-opération

WSP-Halter – Versetztes Schneiden & Gegenspindel

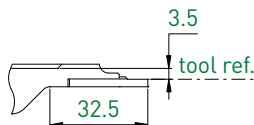
Insert holders – Cut off line & cut on subspindle

TOP-Line



TOP-Line
731R

> 1.39



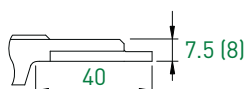
TOP-Line
731R

> 1.39



TOP-Line
751-757

> 1.78



TOP-Line
751R

> 1.88

Standard



Art. N°

ML12

ML12A-730RC

-D

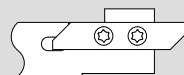


Art. N°

ML12

-

-JET

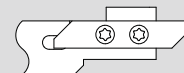


Art. N°

ML12

ML12A-730RC-JET

-JET-D



ML16

ML16A-730RC

ML16

ML16A-730RC-D

ML16

ML16A-730RC-JET-D

ML12

ML12A-730RC-R04

ML12A-730RC-SWISS-NANO

ML12

-

-

ML12

-

-

ML12

ML12A-750-V

ML12

ML12A-750-V-D

ML12

ML12A-750-V-JET-D

ML16

ML16A-750-V

ML16

ML16A-750-V-D

ML16

ML16A-750-V-JET-D

ML12

ML12A-750RC

ML12

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ML12

-

ML16

ML16A-750RC

ML16

ML16A-750RC-D

ML16

ML16A-750RC-JET-D

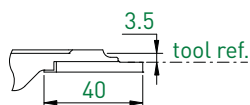
MODU-LINE

Porte-plaquettes – Coupe déportée & contre-opération

WSP-Halter – Versetztes Schneiden & Gegenspindel

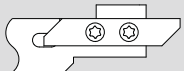
Insert holders – Cut off line & cut on subspindle

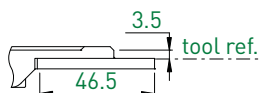
TOP-Line



TOP-Line
751R

> 1.88

Standard	-D	-JET-D
		
Art. N°	Art. N°	Art. N°
ML12	ML12	ML12
ML12A-750RC-R04	-	-
ML12A-750RC-SWISS-NANO	-	-



TOP-Line
771R

> 1.137

ML12	ML12	ML12
ML12A-770RC-SWISS-NANO	-	-

Porte-plaquettes – Contre-opération

WSP-Halter – Gegenspindel

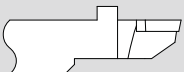
Insert holders – Cut on subspindle

TURN-Line



TURN-Line
337-339

> 6.12

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



ISO-Line
CC...0602..

> 7.16

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..

> 7.16

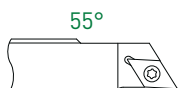
ML12	ML12	ML12
-	ML12A-SCLCL09-V-D	ML12A-SCLCL09-V-JET-D
ML16	ML16	ML16
-	ML16A-SCLCL09-V-D	ML16A-SCLCL09-V-JET-D



ISO-Line
CC...0702..

> 7.16

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..

> 7.30

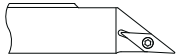
ML12	ML12	ML12
ML12A-SDJCL11-V	ML12A-SDJCL11-V-D	ML12A-SDJCL11-V-JET-D
ML16	ML16	ML16
ML16A-SDJCL11-V	ML16A-SDJCL11-V-D	ML16A-SDJCL11-V-JET-D

MODU-LINE

Porte-plaquettes – Contre-opération
WSP-Halter – Gegenspindel
Insert holders – Cut on subspindle

ISO-Line

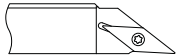
35°



ISO-Line
VC..-1103..

> 7.44

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..

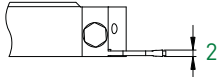
> 7.46

ML12	ML12	ML12
-	ML12A-SVJCL13-V-D	-
ML16	ML16	ML16
-	ML16A-SVJCL13-V-D	ML16A-SVJCL13-V-JET-D

Porte-plaquettes – Coupe déportée
WSP-Halter – Versetztes Schneiden
Insert holders – Cut off line

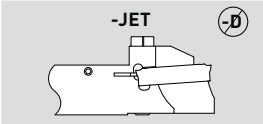
EVOCUT-Line

Ø max 32



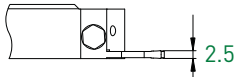
EVOCUT-Line
ET20

> 8.12



Art. N°	Art. N°	Art. N°
ML16	ML16	ML16
-	-	ML16A-ET20-V-JET-32

Ø max 32



EVOCUT-Line
ET25

> 8.12

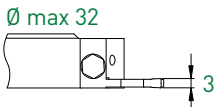
ML16	ML16	ML16
-	-	ML16A-ET25-V-JET-32

Porte-plaquettes – Coupe déportée

WSP-Halter – Versetztes Schneiden

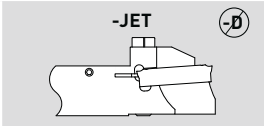
Insert holders – Cut off line

EVO CUT-Line



EVO CUT-Line ET30	> 8.12
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ML16	ML16	ML16
-	-	ML16A-ET30-V-JET-32

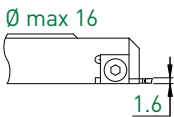


Porte-plaquettes – Coupe déportée

WSP-Halter – Versetztes Schneiden

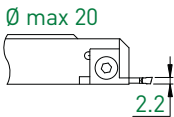
Insert holders – Cut off line

CUT-Line



CUT-Line CUT16	> 9.14
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Standard		
Art. N°	Art. N°	Art. N°
ML12	ML12	ML12
ML12A-CUT16-V	-	-
ML12F-CUT16-V	-	-
ML16	ML16	ML16
ML16A-CUT16-V	-	-
ML16F-CUT16-V	-	-

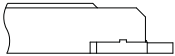


CUT-Line CUT22	> 9.14
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ML12	ML12	ML12
ML12A-CUT22-V	-	-
ML12F-CUT22-V	-	-
ML16	ML16	ML16
ML16A-CUT22-V	-	-
ML16F-CUT22-V	-	-

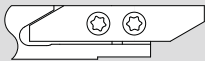
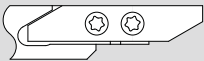
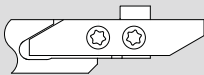
Porte-plaquettes – Coupe déportée & contre-opération
WSP-Halter – Versetztes Schneiden & Gegenspindel
Insert holders – Cut off line & cut on subspindle

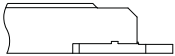
PRO-Line



PRO-Line
632-636

> 3.08

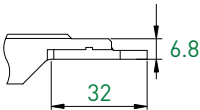
Standard	-D	-JET-D
		
Art. N°	Art. N°	Art. N°
ML12	ML12	ML12
-	ML12A-630-V-D	ML12A-630-V-JET-D
ML16	ML16	ML16
-	ML16A-630-V-D	ML16A-630-V-JET-D



PRO-Line
651R

> 3.39

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

> 3.39

ML12	ML12	ML12
ML12A-650RC	ML12A-650RC-D	-
ML16	ML16	ML16
-	ML16A-650RC-D	ML16A-650RC-JET-D

Porte-plaquettes – Coupe déportée & contre-opération

WSP-Halter – Versetztes Schneiden & Gegenspindel

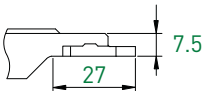
Insert holders – Cut off line & cut on subspindle

ECO-Line



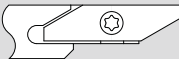
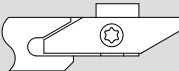
ECO-Line
251-261

> 4.08



ECO-Line
251R

> 4.08

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

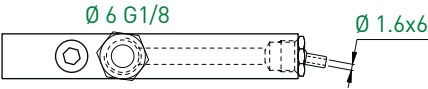
ML12	ML12	ML12
-	ML12A-250RC-D	-
ML16	ML16	ML16
-	ML16A-250RC-D	-

MODU-LINE

Modules d'arrosage
Kühlmittelzufuhrelemente
Coolant supply units

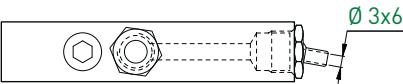
ML12 / ML16

ML12



Raccord Anschluss Connection	Buses d'arrosage Kühlmitteldüse Coolant nozzles	ML12 Art. N°
Ø 6 G 1/8	5/16"	ML12-JET-5/16

ML16

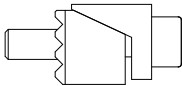
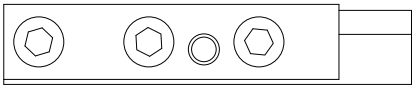


Raccord Anschluss Connection	Buses d'arrosage Kühlmitteldüse Coolant nozzles	ML16 Art. N°
Ø 6 G 1/8	7/16"	ML16-JET-7/16

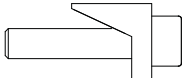
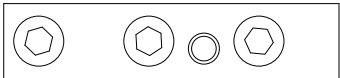
buses optionnelles voir page 11.79
zusätzliche Düsen siehe Seite 11.79
optional nozzles see page 11.79

Modules de serrage
Spannelemente
Clamping units

ML12 / ML16



ML12 Art. N°	ML16 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 Art. N°	ML16 Art. N°
ML12-FIX-12	ML16-FIX-16

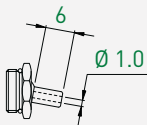
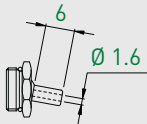
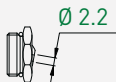
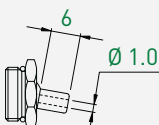
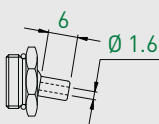
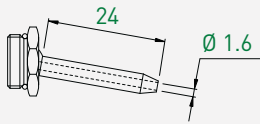
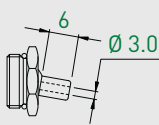
Buses d'arrosage

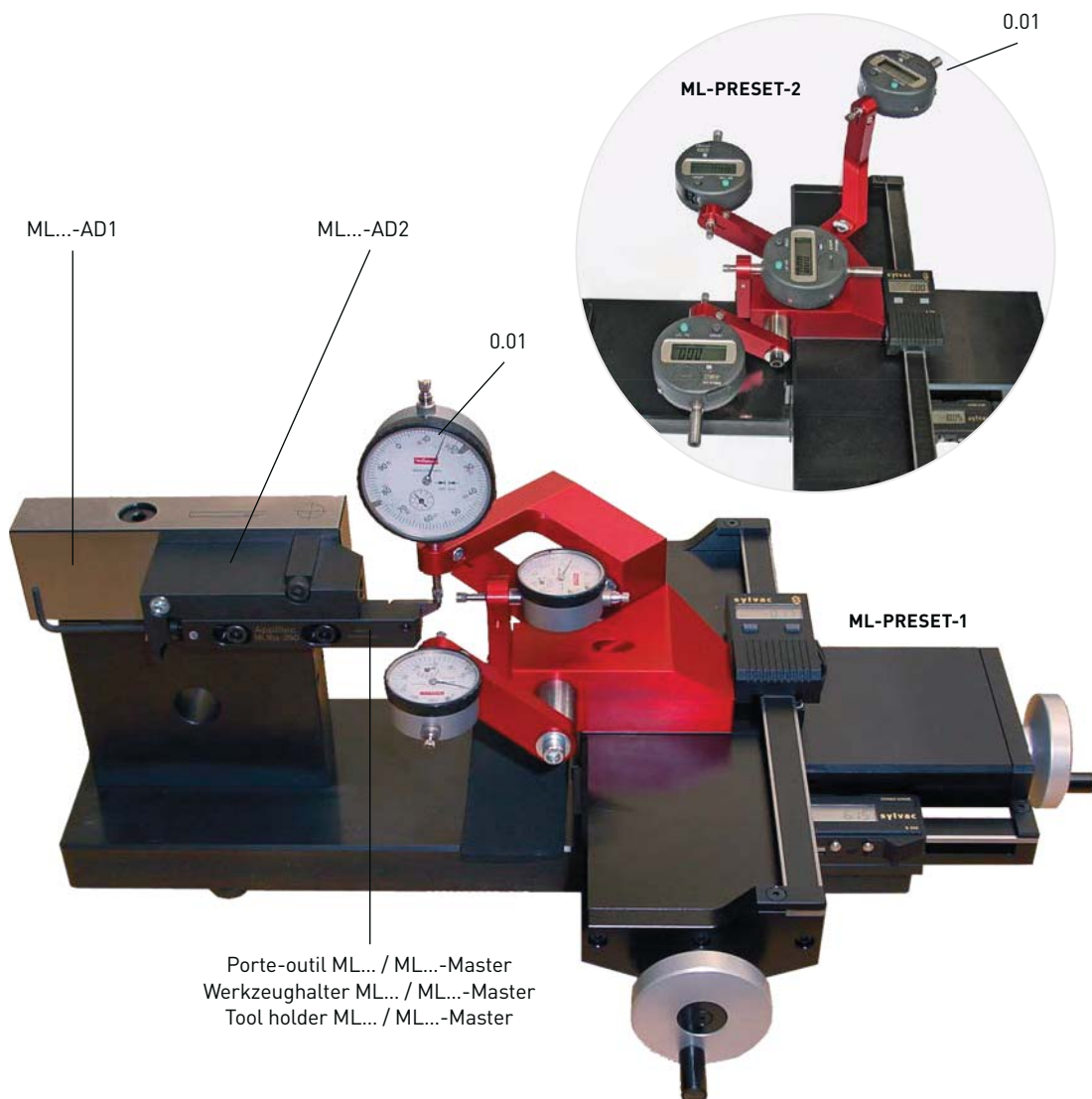
Kühlmitteldüsen

Coolant nozzles

5/16" / 7/16"

JET

5/16"	Art. N°	Références compatibles Kompatible Artikeln Compatible items
	ML-JET 5/16-1.0x6	ML12-JET-5/1
	ML-JET 5/16-1.6x6	une buse ML-JET-5/16-1.6x6 est comprise eine Düse ML-JET-5/16-1.6x6 ist inbegriffen a nozzle ML-JET-5/16-1.6 x6 is included
	ML-JET 5/16-2.2x0	
7/16"	Art. N°	Références compatibles Kompatible Artikeln Compatible items
	ML-JET 7/16-1.0x6	
	ML-JET 7/16-1.6x6	ML16-KMX26-JET ML16-JET-7/16 ML12-DEC010-JET ML16-DEC013-JET ML16-DEC020-JET ML16-S20-JET ML16-SWISS-ST26-JET
	ML-JET-7/16-1.6x24	une buse ML-JET-7/16-3.0x6 est comprise avec chaque article ci-dessus eine Düse ML-JET 7/16-3.0x6 ist mit jedem vorstehenden Artikel inbegriffen
	ML-JET-7/16-3.0x6	a nozzle ML-JET 7/16-3.0x6 is included with each above item



Art. N°

ML-PRESET-1

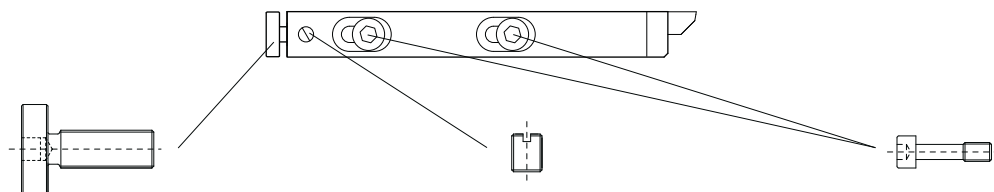
ML-PRESET-2

Banc de pré réglage
Voreinstellgerät
Presetting device

ML12 / ML16

Type Typ Type	Machines Maschinen Machines	Adaptation Anpassungen Adapter	Adaptateurs et jauges d'étalonnage Adapter und Einstelllehre Adaptators and master gauges		
ML12	CITIZEN	C12/C16		ML12-AD1	ML12-AD2
		L12			
		R04			
		R07			
	HANWHA	XD20M			
	METAFIL	D10			
	STAR	SB12RG			
		SR10-J			
		SW12RII			
	TORNOS	DECO7/10 - EvoDECO 10			
		SWISS-NANO			
		SWISS-NANO 7			
		DT13			
		CT20			
		GT13			
	TSUGAMI	B074			
		B075			
		P034			
ML16	CITIZEN	K16		ML16/20-AD1	ML16-AD2
		L20			
		L20E			
	HANWHA	SL12/16			
	MANUHRIN	KMX 426/526/626			
		SA-12/SA16/SA16R			
	STAR	SB16			
		SB16/20RG			
		SB20			
		SR20J			
		SR20R			
		SR20RIII			
		SR20RIV			
		SR32J			
		SV12/20			
		SW20R			
	TORNOS	DECO20/26 - EvoDECO20/32			
		SIGMA20/32			
		DT26			
		GT26			
		GT32			
ML16	TORNOS	DECO13- EvoDECO16		ML16-DEC013-AD1	ML16-DEC013-AD2
		ST26			

ML12



Vis de réglage
Einstellungsschraube
Setting screw

Art. N°

ML12A-M5X0.5

Vis de blocage
Blockierschraube
Locking screw

Art. N°

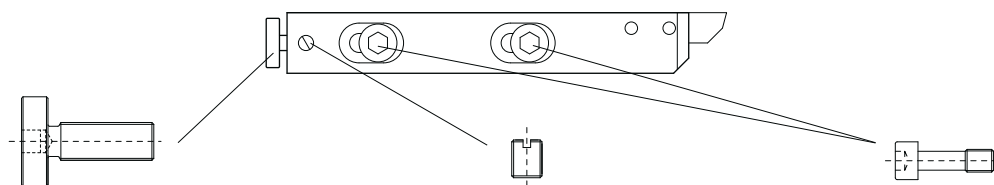
ML-M4X4-T

Vis de fixation
Befestigungsschraube
Fixing screw

Art. N°

ML12-M5XL20

ML16



Vis de réglage
Einstellungsschraube
Setting screw

Art. N°

ML16A-M5X0.5

Vis de blocage
Blockierschraube
Locking screw

Art. N°

ML-M4X4-T

Vis de fixation
Befestigungsschraube
Fixing screw

Art. N°

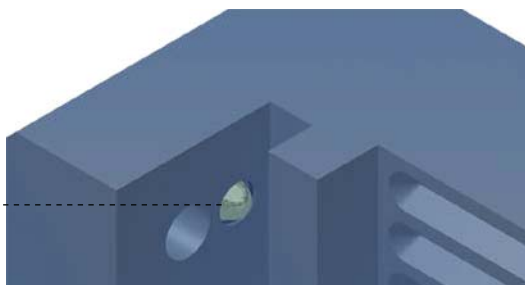
ML16/20-M6XL20

Art. N°

ML-205004



Butée à ressort
Federnde Schraube
Spring bumper



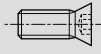
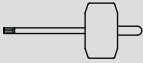
Pièces de rechange

Ersatzteile

Spare parts

ML12 / ML16

Vis et clés pour le serrage des plaquettes
Schrauben und Schlüssel für WSP-Befestigung
Screws and keys for insert clamping

Porte-outils Halter Holders					
ML...250	V-M4X9-T15	C-T15	-	-	-
ML...260					
ML...330	V-M2.5X7.8-T8	C-T8	-	-	-
ML...340					
ML...630					
ML...640	V-M4X9-T15	C-T15	-	-	-
ML...650					
ML...650RC	V-M4X6.5-T15				
ML...660	V-M4X9-T15				
ML...730	V-M3X7-T8				
ML...730RC	V-M3X5.5-T8				
ML...730RC-R04	V-M3X4.5-T8		-	-	-
	V-M3X7-T8				
ML...730RC-SWISS-NANO	V-M3X4.5-T8				
	V-M3X7-T8				
	V-M3X7-T8				
	V-M3X7-T8				
ML...740	V-M3X7-T8				
ML...750	V-M4X9-T15				
ML...750RC	V-M4X7.3-T15				
ML...750RC-R04	V-M4X5.6-T15				
	V-M4X7.3-T15				
	V-M4X7.3-T15				
ML...750RC-SWISS-NANO	V-M4X5.6-T15	C-T15	-	-	-
	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					
ML16...-SD...11	V-M4X9-T15-ISO				
ML...-SV...11	V-M2.5X7.8-T8	C-T8	-	-	-
ML...-SV...13	V-M3X7.3-T8-ISO				
ML...-CUT16	-	-			
ML...-CUT16-V	-	-			
ML...-CUT22	-	-			
ML...-CUT16-V	-	-			
ML16...-ET... JET32	-	-			
ML16...-ET... V-JET32	-	-			
				V-M5X21-6P7-J	C-6PEX-7.0

Outils et porte-outils traditionnels pour le décolletage et la mécanique de précision

- Porte-outils
- Forets à centrer
- Burins intérieurs
- Porte-molettes
- Molettes MD

Übliche Werkzeuge und Halter für Decolletage und Präzisionsmechanik

- Werkzeughalter
- Zentrierbohrer
- Innendrehwerkzeuge
- Rändelhalter
- Rändelrädchen

Usual tools and tool holders for automatic lathes and precision mechanics

- Tool holders
- Centring drills
- Internal turning tools
- Knurl holders
- Knurling wheels



Index

Porte-outils
Werkzeughalter
Tool holders

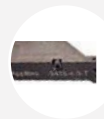
Type 14xx / 24xx



> 12.02

Porte-outils monoblocs pour machines Tornos
Monoblockwerkzeughalter für Tornos Maschinen
Monobloc tool holders for Tornos machines

Type 2435 / 2436



> 12.12

Forets à centrer plats
Zentrierflachbohrer
Centering flat drills

Type 1200 / 2200



> 12.14

Forets à centrer hélicoïdaux
Zentrierspiralbohrer
Centering twist drills

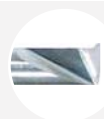
Type 15xx / 25xx



> 12.15

Burins intérieurs en métal dur
Vollhartmetall Innendrehwerkzeuge
Solid carbide internal turning tools

Type 16xx / 26xx



> 12.16

Porte-molettes
Rändelhalter
Knurl holders

Type 1402 / 2402



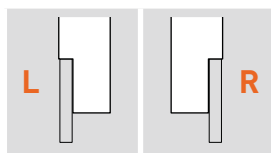
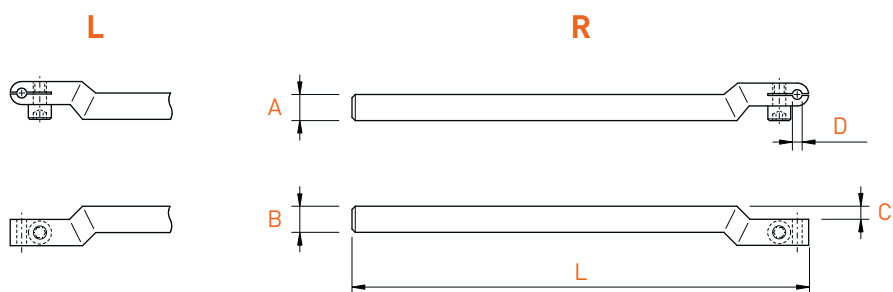
> 12.18

Molettes en métal dur
Vollhartmetall Rändelrädchen
Solid carbide knurling wheels

Type 1107



> 12.19



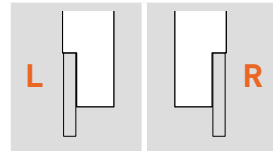
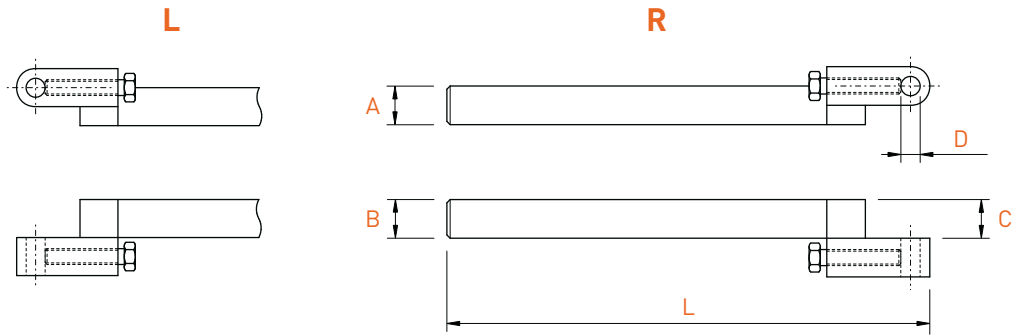
A x B	L	C	D	Art. N°	Art. N°
6 x 6	132	3	1.5	1400-J-615	2400-J-615
6 x 6	132	3	2.0	1400-J-620	2400-J-620
6 x 6	132	3	3.0	1400-J-630	2400-J-630
7 x 7	140	3	1.5	1400-J-715	2400-J-715
7 x 7	140	3	2.0	1400-J-720	2400-J-720
7 x 7	140	3	3.0	1400-J-730	2400-J-730
8 x 8	140	4	1.5	1400-J-815	2400-J-815
8 x 8	140	4	2.0	1400-J-820	2400-J-820
8 x 8	140	4	3.0	1400-J-830	2400-J-830

Porte-outils

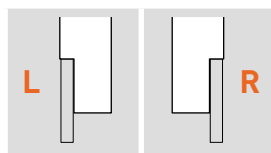
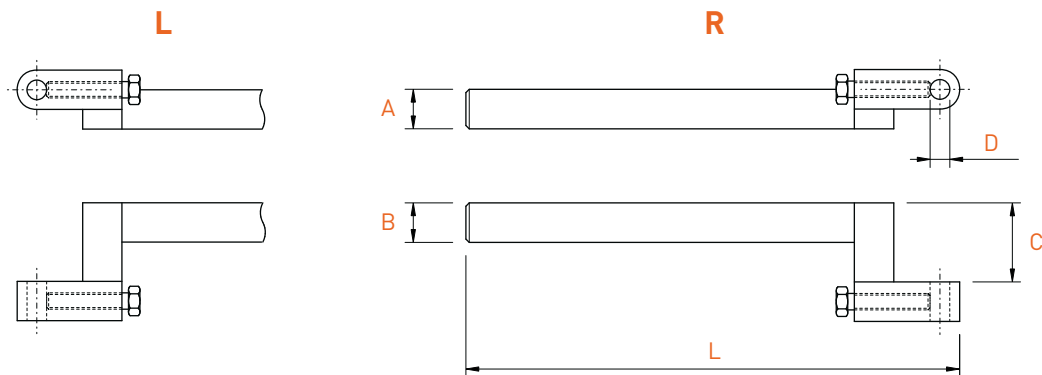
Werkzeughalter

Tool holders

1401-K / 2401-K



A x B	L	C	D	Art. N°	Art. N°
7 x 7	146	7	2.0	1401-K-720	-
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
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
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

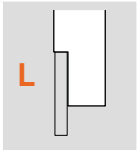
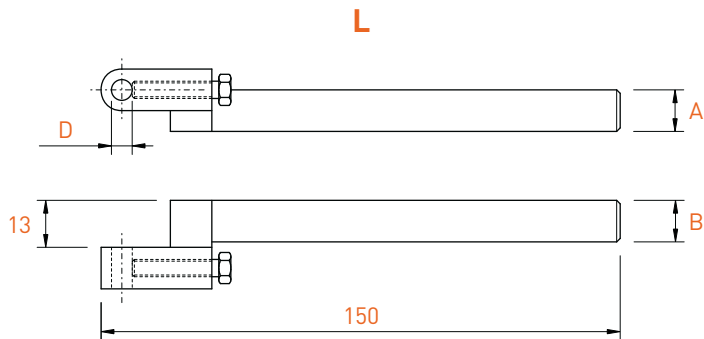


A x B	L	C	D	Art. N°	Art. N°
7 x 7	146	12	4.0	1420-7124	2420-7124
8 x 8	146	12	4.0	1420-8124	2420-8124
8 x 8	146	14	3.0	1420-8143	2420-8143
8 x 8	146	15	5.0	1420-8155	2420-8155
8 x 8	146	20	5.0	1420-8205	2420-8205
10 x 10	150	20	6.0	1420-10206	2420-10206
12 x 12	150	18	6.0	1420-12186	2420-12186
12 x 12	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

Porte-outils
Werkzeughalter
Tool holders

12 x 12

1460



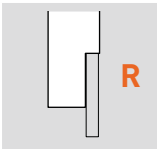
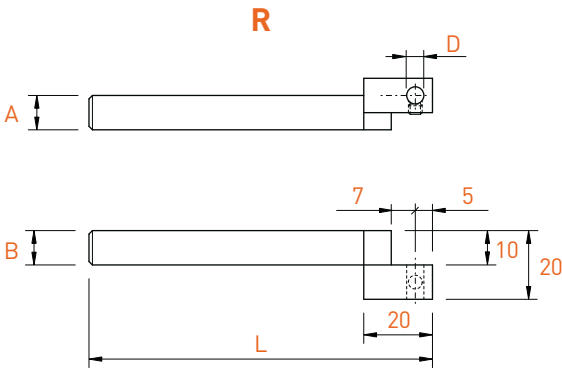
A x B	D	Art. N°
12 x 12	4.0	1460-4
12 x 12	5.0	1460-5
12 x 12	6.0	1460-6
12 x 12	8.0	1460-8

TOOLING-LINE

Porte-outils
Werkzeughalter
Tool holders

Ø 10 x 10

2450-SP

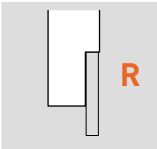
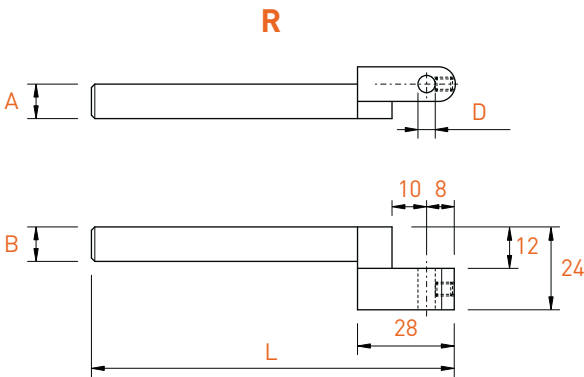


A x B	L	D	Art. N°
10 x 10	100	3.0	2450-SP-3
10 x 10	100	4.0	2450-SP-4
10 x 10	100	5.0	2450-SP-5
10 x 10	100	6.0	2450-SP-6
10 x 10	120	3.0	2450-SP-3-120
10 x 10	120	4.0	2450-SP-4-120
10 x 10	120	5.0	2450-SP-5-120
10 x 10	120	6.0	2450-SP-6-120

Porte-outils
Werkzeughalter
Tool holders

Ø 10 x 10

2470

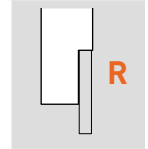
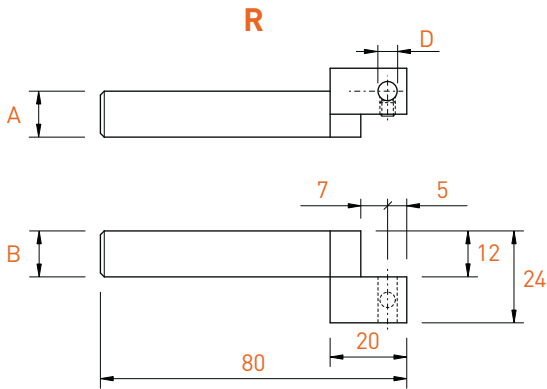


A x B	L	D	Art. N°
10 x 10	105	3.0	2470-3
10 x 10	105	4.0	2470-4
10 x 10	105	5.0	2470-5
10 x 10	105	6.0	2470-6
10 x 10	105	7.0	2470-7

Porte-outils
Werkzeughalter
Tool holders

Ø 12 x 12

2450

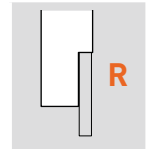
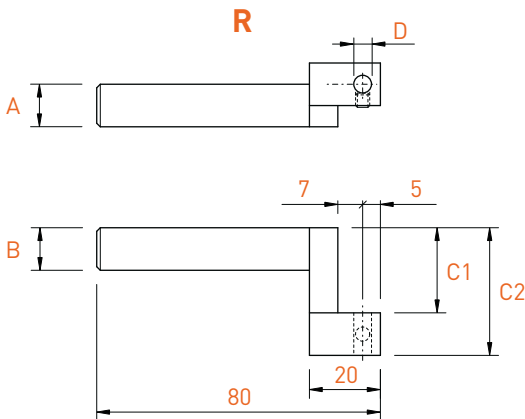


A x B	D	Art. N°
12 x 12	3.0	2450-3
12 x 12	4.0	2450-4
12 x 12	5.0	2450-5
12 x 12	6.0	2450-6
12 x 12	8.0	2450-8

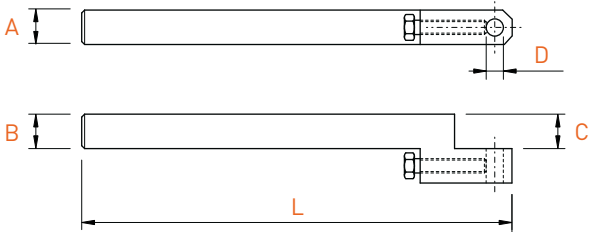
Porte-outils
Werkzeughalter
Tool holders

Ø 12 x 12

2460



A x B	C1	C2	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



A x B	L	C	D	Art. N°
8 x 8	120	8	3.0	2405-K-830
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
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
12 x 12	150	12	6.0	2405-K-1260
12 x 12	150	12	8.0	2405-K-1280

Porte-outils

Werkzeughalter

Tool holders

2425



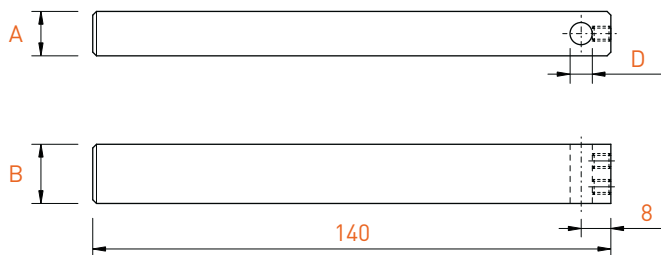
A x B	L	C	D	Art. N°
8 x 8	120	12	4.0	2425-8124
8 x 8	120	15	5.0	2425-8155
8 x 8	120	20	5.0	2425-8205
10 x 10	100	15	6.0	2425-10156
10 x 10	100	20	6.0	2425-10206
12 x 12	150	18	6.0	2425-12186
12 x 12	150	24	8.0	2425-12248

TOOLING-LINE

Porte-outils
Werkzeughalter
Tool holders

□ 12 x 16

2441



A x B	D	Art. N°
12 x 16	3.0	2441-0-3
12 x 16	4.0	2441-0-4
12 x 16	5.0	2441-0-5
12 x 16	6.0	2441-0-6

Porte-outils
Werkzeughalter
Tool holders

□ 16 x 16

2440-0



A x B	D	Art. N°
16 x 16	3.0	2440-0-3
16 x 16	4.0	2440-0-4
16 x 16	5.0	2440-0-5
16 x 16	6.0	2440-0-6

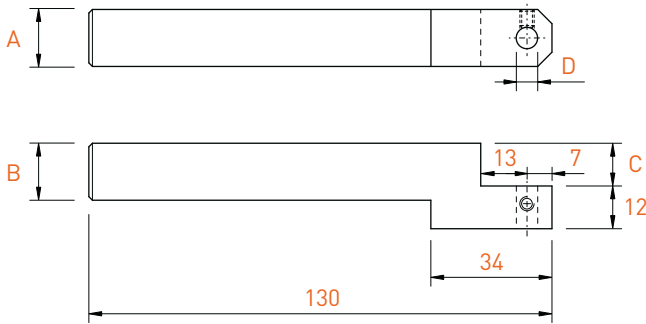
Porte-outils

Werkzeughalter

Tool holders

Ø 16 x 16

2440-8 / 2440-12



A x B	C	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

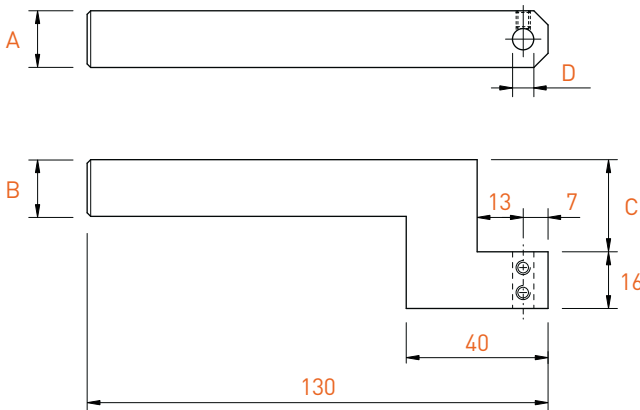
Porte-outils

Werkzeughalter

Tool holders

Ø 16 x 16

2440-18 / 2440-26

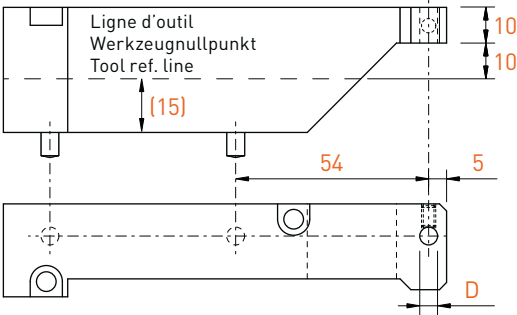


A x B	C	D	Art. N°
16 x 16	18	4.0	2440-18-4
16 x 16	18	5.0	2440-18-5
16 x 16	18	6.0	2440-18-6
16 x 16	18	8.0	2440-18-8
16 x 16	26	4.0	2440-26-4
16 x 16	26	5.0	2440-26-5
16 x 16	26	6.0	2440-26-6
16 x 16	26	8.0	2440-26-8

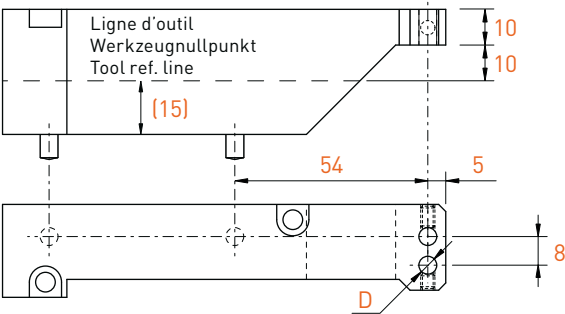
TOOLING-LINE

Porte-outils pour machines Tornos DECO 7/10 / EvoDECO 10
Werkzeughalter für Tornos DECO 7/10 / EvoDECO 10 Maschinen
Tool holders for Tornos DECO 7/10 / EvoDECO 10 machines

2435 / 2435-T



D	Art. N°
3.0	2435-3
4.0	2435-4
5.0	2435-5
6.0	2435-6



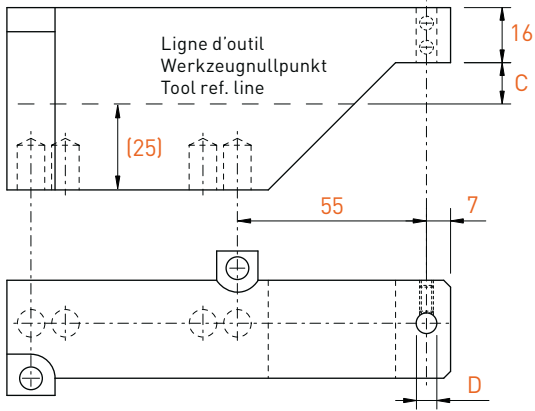
D (2x)	Art. N°
3.0	2435-3-T
4.0	2435-4-T
5.0	2435-5-T
6.0	2435-6-T

Porte-outils pour machines Tornos DECO 13 / EvoDECO 16

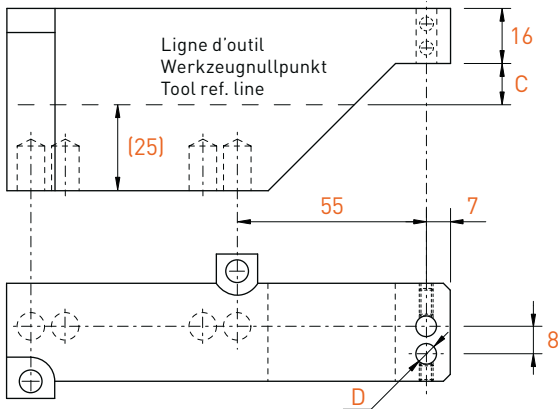
Werkzeughalter für Tornos DECO 13 / EvoDECO 16 Maschinen

Tool holders for Tornos DECO 13 / EvoDECO 16 machines

2436 / 2436T



C	D	Art. N°
12	3.0	2436-12-3
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



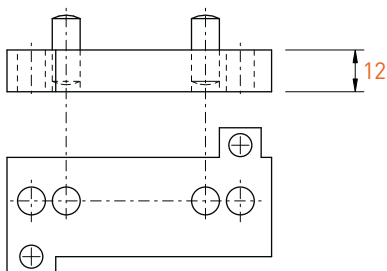
C	D (2x)	Art. N°
12	3.0	2436T-12-3
12	4.0	2436T-12-4
12	5.0	2436T-12-5
12	6.0	2436T-12-6
18	3.0	2436T-18-3
18	4.0	2436T-18-4
18	5.0	2436T-18-5
18	6.0	2436T-18-6

Entretoise

Erhöhungplatte

Spacer

2436-S12



Art. N°

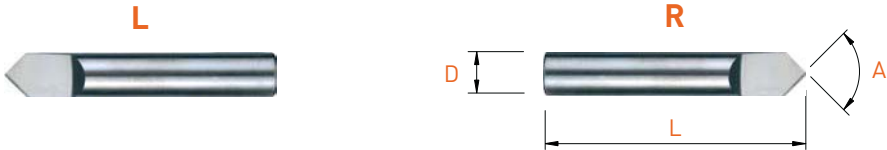
2436-S12

TOOLING-LINE

Forets à centrer plats
Zentrierflachbohrer
Centering flat drills

90°

1200 / 2200



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

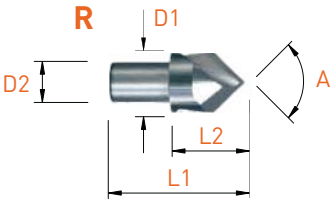
Forets à centrer hélicoïdaux

Zentrierspiralbohrer

Centering twist 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

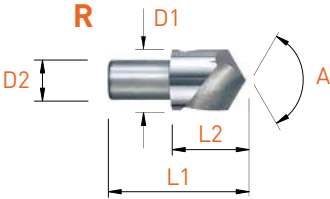
Forets à centrer hélicoïdaux

Zentrierspiralbohrer

Centering twist drills

120°

1510 / 2530



					MD VHM HM		L	R
A	D1	D2	L1	L2	Art. N°	Art. N°	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		

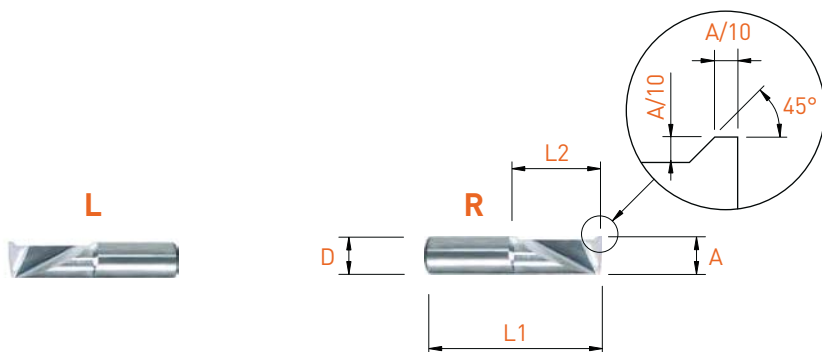
TOOLING-LINE

Burins intérieurs en métal dur

Vollhartmetall Innendrehwerkzeuge

Solid carbide internal turning tools

1600 / 2620



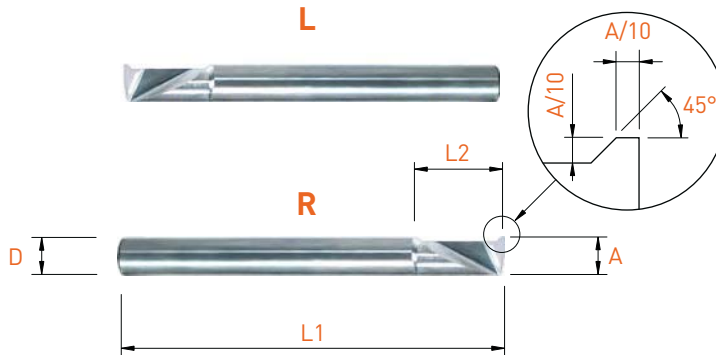
MD VHM HM					L	R
	A -0.05	D	L1	L2	Art. N°	Art. N°
	2	3	13	4	1600-2-4	2620-2-4
	3	3	15	6	1600-3-6	2620-3-6
	4	4	17	8	1600-4-8	2620-4-8
	4	4	21	12	1600-4-12	2620-4-12
	5	5	21	10	1600-5-10	2620-5-10
	5	5	26	15	1600-5-15	2620-5-15
	6	6	25	12	1600-6-12	2620-6-12
	6	6	31	18	1600-6-18	2620-6-18
	8	8	32	16	1600-8-16	2620-8-16
	8	8	40	24	1600-8-24	2620-8-24

Burins intérieurs en métal dur

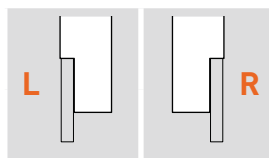
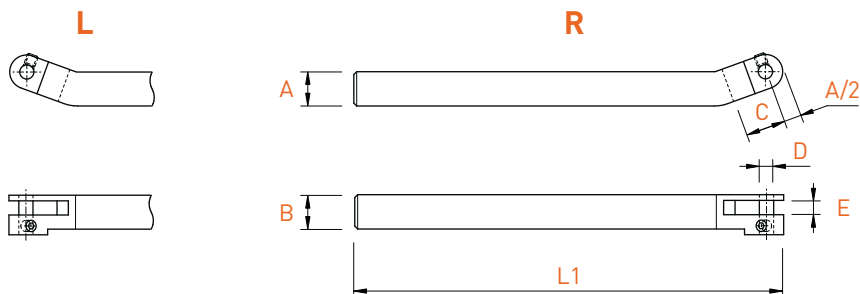
Vollhartmetall Innendrehwerkzeuge

Solid carbide internal turning tools

1610 / 2630



MD VHM HM				L	R
A -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



Pièces de rechange
Ersatzteile
Spare parts



*

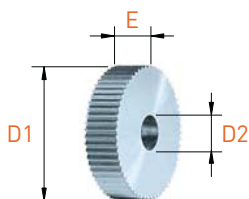
A x B	L	E	D	C	A/2	Art. N°	Art. N°	Art. N°
6 x 6	132	2	3	10	3	1402-623	2402-623	GP-Ø3X10-A6H2.5
6 x 6	132	3	3	10	3	1402-633	2402-633	GP-Ø3X10-A6H2.5
7 x 7	140	2	3	10	3.5	1402-723	2402-723	GP-Ø3X12-A6H2.5
7 x 7	140	3	3	10	3.5	1402-733	2402-733	GP-Ø3X12-A6H2.5
7 x 7	140	4	3	10	3.5	1402-743	2402-743	GP-Ø3X12-A6H2.5
7 x 7	140	2	4	10	3.5	1402-724	2402-724	GP-Ø4X12-A6H3.5
7 x 7	140	3	4	10	3.5	1402-734	2402-734	GP-Ø4X12-A6H3.5
7 x 7	140	4	4	10	3.5	1402-744	2402-744	GP-Ø4X12-A6H3.5
8 x 8	140	2	3	10	4	1402-823	2402-823	GP-Ø3X12-A6H2.5
8 x 8	140	3	3	10	4	1402-833	2402-833	GP-Ø3X12-A6H2.5
8 x 8	140	4	3	10	4	1402-843	2402-843	GP-Ø3X12-A6H2.5
8 x 8	140	2	4	10	4	1402-824	2402-824	GP-Ø4X12-A6H3.5
8 x 8	140	3	4	10	4	1402-834	2402-834	GP-Ø4X12-A6H3.5
8 x 8	140	4	4	10	4	1402-844	2402-844	GP-Ø4X12-A6H3.5
10 x 10	150	3	3	10	5	1402-1033	2402-1033	GP-Ø3X14-A8H2.5
10 x 10	150	4	3	10	5	1402-1043	2402-1043	GP-Ø3X14-A8H2.5
10 x 10	150	3	4	10	5	1402-1034	2402-1034	GP-Ø4X14-A8H3.5
10 x 10	150	4	4	10	5	1402-1044	2402-1044	GP-Ø4X14-A8H3.5
10 x 10	150	5	4	10	5	1402-1054	-	GP-Ø4X14-A8H3.5
12 x 12	150	4	4	12	6	1402-1244	2402-1244	GP-Ø4X14-A8H3.5
12 x 12	150	5	4	12	6	1402-1254	2402-1254	GP-Ø4X14-A8H3.5
12 x 12	150	4	5	12	6	1402-1245	2402-1245	GP-Ø5X14-A8H4.5
12 x 12	150	5	5	12	6	1402-1255	2402-1255	GP-Ø5X14-A8H4.5
16 x 16	150	4	4	12	8	1402-1644	2402-1644	GP-Ø4X16-A8H3.5
16 x 16	150	4	5	12	8	-	2402-1645	GP-Ø5X16-A9H4.5
16 x 16	150	5	5	12	8	-	2402-1655	GP-Ø5X16-A9H4.5
16 x 16	150	6	4	12	8	-	2402-1664	GP-Ø4X16-A8H3.5
16 x 16	150	6	6	12	8	-	2402-1666	GP-Ø6X16-A9H5.5
16 x 16	150	8	6	12	8	-	2402-1686	GP-Ø6X16-A9H5.5

Molettes en métal dur

Vollhartmetall Rändelrädchen

Solid carbide knurling wheels

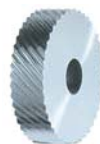
1107



AA



BL



BR



GE

Molettes standards Standard Rändelrädchen Standard knurls	D1	E	D2	Pas (tous les 0.1 mm) Teilung (alle 0.1 mm) Pitch (every 0.1 mm)
AA [0°] BL 15° / BR 15° BL 30° / BR 30° BL 45° / BR 45° GE 30° GE 45°	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
	10	3	3	0.2 - 0.8
	10	3	4	0.2 - 0.8
	10	4	3	0.2 - 0.8
	10	4	4	0.2 - 0.8
	12	4	4	0.3 - 1.0
	15	4	4	0.4 - 1.0
	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

Molettes "Quick" "Quick"-Rändelrädchen "Quick"-knurling wheels	D1	E	D2	Pas (tous les 0.1 mm) Teilung (alle 0.1 mm) Pitch (every 0.1 mm)
AA [0°]	8.9	2.5	4	0.2 - 0.8
BL 15° / BR 15°	14.5	3	5	0.4 - 1.0
BL 30° / BR 30°	21.5	5	8	0.5 - 1.2

Exécutions spéciales sur demande
Sonderausführungen auf Anfrage
Special executions on request

Nouveautés présentées dans ce catalogue
Neuheiten dieses Kataloges
New products introduced in this catalogue



Outil Werkzeug Tool	Type Typ Type	Page Seite Page
Micro-fraises Mikropräzisionsfräser Micro end mills	3271-1	13.10
	3278-1	13.31
Fraises ébauches Schruppfräser Roughing mills	E-DHP3300	13.35
	E-DHP3400	
Fraises en bout de finition Schlicht Schaftfräser Finishing end mills	701S3371	13.56

Dimensions supplémentaires Zusätzliche Abmessungen Additional dimensions		
Outil Werkzeug Tool	Ø	Page Seite Page
3170-2	2.10	13.05
	2.20	
	2.30	
	2.40	
	2.60	
	2.70	
	2.80	
	2.90	
3170R-3	0.20	13.07
3271-3	0.35	13.13
	0.65	
	0.95	
	1.05	
	1.15	
	1.35	
	1.45	
	1.55	
	1.65	
	1.75	
	1.85	
3271-5	1.95	13.14
	0.35	
	0.55	
	0.65	
	0.75	
3371-1.3	0.85	13.16
	0.95	
	0.35	
3371-2	2.05	13.17
	0.35	
	0.45	
	0.95	

3371-3	0.45	13.18
	0.55	
	0.65	
	0.85	
	0.95	
	1.05	
	1.15	
	1.25	
	1.35	
	1.45	
3371-8	1.65	13.21
	1.85	
	1.95	
	1.30	
3471-3	0.55	13.26
	0.75	
	0.85	
	0.95	
3278-0.75	0.70	13.30
	0.90	
	1.50	
	2.00	
	2.50	
3278-1.50	0.85	13.32
	1.15	
	1.70	
	1.90	
	2.10	
	2.20	
	2.30	
	2.40	
	2.60	
	2.70	
	2.80	
3278-3	2.90	13.33
	1.30	
	1.55	
	2.60	
	2.70	

Outil Werkzeug Tool	Type Typ Type	Page Seite Page
E300-P	E320P	13.61
E300-R	E320R	13.62
E900-P	E920-P	13.63

Index

Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills



> 13.03

Fraises ébauches
Schruppfräser
Roughing mills



> 13.34

Fraises en bout de finition
Schlicht Schaftfräser
Finishing end mills



> 13.36

Fraises à graver
Gravierfräser
Engraving mills



> 13.60

Micro-forets et centreurs
Mikrobohrer und Zentrierbohrer
Micro drills and centering drills



> 13.64

Nuances

Sorten

Grades

N

Non revêtu
Unbeschichtet
Uncoated

- acuité d'arête maximale grâce à une finition super polie de l'outil
- premier choix pour les outils de très petits diamètres (< Ø 0.5 mm)
- premier choix pour l'usinage du laiton et de l'aluminium faiblement allié

- maximale Schärfe der Schneidkante durch hochpolierte Fertigung
- für Werkzeuge mit sehr kleiner Durchmesser (< Ø 0.5 mm) bestens geeignet
- für die Bearbeitung von Messing und niedrig legiertes Aluminium bestens geeignet

- highest sharpness of the cutting edge through high polished finishing
- first choice for tools with very small diameter (< Ø 0.5 mm)
- first choice for brass and low alloyed aluminium machining

TiAlN

Revêtement PVD à couche mince
Dünnschicht PVD Beschichtung
Thin PVD coating

- excellente nuance universelle
- très bonne résistance à la température
- premier choix pour l'usinage des aciers, aciers inoxydables et titane fortement allié

- beste Universalsorte
- sehr gute Warmfestigkeit
- für die Bearbeitung von Stahl, rostfreiem Stahl und hochlegiertem Titan bestens geeignet

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

TiCN

Revêtement PVD à couche mince
Dünnschicht PVD Beschichtung
Thin PVD coating

- excellente nuance pour les outils de petits diamètres
- très faible coefficient de frottement
- premier choix pour l'usinage des matières qui créent des arêtes rapportées

- sehr gute Sorte für Werkzeuge mit sehr kleiner Durchmesser
- sehr geringer Reibwert
- beste Sorte für die Bearbeitung von Werkstoffen mit Tendenz zur Bildung von Aufbauschneide

- very good grade for tools with very small diameter
- very low friction ratio
- first choice for the machining of materials which causes edge build-up

DLC53

Revêtement DLC à couche mince
Dünnschicht DLC Beschichtung
Thin DLC coating

- excellente nuance pour l'usinage des métaux non ferreux tels que des alliages d'aluminium et de cuivre, laiton sans plomb, des métaux précieux, ainsi que des graphites et polymères
- très faible coefficient de frottement
- très haute résistance à l'usure grâce à une dureté de revêtement très élevée

- sehr gute Sorte für die Bearbeitung von Nichteisenmetalle wie Aluminium und Kupfer Legierungen, bleifrees Messing, sowie für Graphit und Polymer
- sehr geringer Reibwert
- sehr Verschleissfest durch sehr hohe Beschichtungshärte

- very good grade for the machining of non-ferrous materials like aluminium and copper alloys, lead-free brass, precious metals, as well as graphite and polymer
- very low friction ratio through extremely hard coating

Micro-fraises de précision
Mikropräzisionsfräser
Precision micro end mills

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

Matière Werkstoff Material			Lubrifiant Kühlung Coolant	VC (m/min)	fz								Non revêtu Unbeschichtet Uncoated	Revêtu Beschichtet Coated
					Ø1.0	Ø2.0	Ø3.0	Ø4.0	Ø5.0	Ø6.0	Ø8.0	Ø10.0		
Acier Stahl Steel	< 700 N/mm²		O/E	120	0.015	0.02	0.02	0.03	0.03	0.04	0.04	0.045	-	++
Acier Stahl Steel	> 700 N/mm²		O/E	100	0.01	0.015	0.015	0.02	0.025	0.03	0.035	0.04	-	++
Fonte Gusseisen Cast iron			O/E	130	0.015	0.02	0.025	0.035	0.035	0.045	0.05	0.06	-	++
Acier inoxydable Rostfreistahl Stainless steel			O/E	100	0.004	0.008	0.01	0.015	0.02	0.025	0.03	0.04	-	++
Aluminium			O/E	300	0.02	0.03	0.03	0.045	0.05	0.06	0.075	0.09	+	++
Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze			O/E	160	0.008	0.015	0.025	0.03	0.03	0.04	0.06	0.07	+	++
Métaux précieux Edelmetalle Precious metals			O/E	180	0.008	0.015	0.025	0.03	0.03	0.04	0.06	0.07	+	++
Titane Titan Titanium			O/E	60	0.007	0.01	0.015	0.015	0.02	0.025	0.03	0.04	++	+

	Micro-fraises avec angles vifs Mikropräzisionsfräser mit scharfkantigen Ecken Micro end mills with sharp corners						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 1	0°	2 x D1	Ø 0.20 - 3.00	Ø 3h4 (Ø4)	3170-2	13.05
			2 x D1	Ø 0.20 - 3.00	Ø 3h4 (Ø4)	3170R-2	13.06
			3 x D1	Ø 0.20 - 3.00	Ø 3h4 (Ø4)	3170R-3	13.07
			4 x D1	Ø 0.20 - 3.00	Ø 3h4 (Ø4)	3170R-4	13.08
	Z = 2	30°	0.75 x D1	Ø 0.20 - 2.00	Ø 3h4	3271-0.75	13.09
			1 x D1	Ø 0.10 - 2.00	Ø 3h4	3271-1	13.10
			1.5 x D1	Ø 0.10 - 2.00	Ø 3h4	3271-1.5	13.11
			2 x D1	Ø 0.10 - 2.00	Ø 3h4	3271-2	13.12
			3 x D1	Ø 0.10 - 2.90	Ø 3h4	3271-3	13.13
			5 x D1	Ø 0.30 - 2.50	Ø 3h4	3271-5	13.14
			8 x D1	Ø 0.40 - 2.50	Ø 3h4 (Ø4)	3271-8	13.15
			1.3 x D1	Ø 0.30 - 2.90	Ø 3h4	3371-1.3	13.16
	Z = 3	30°	2 x D1	Ø 0.30 - 2.90	Ø 3h4	3371-2	13.17
			3 x D1	Ø 0.30 - 2.90	Ø 3h4	3371-3	13.18
			4 x D1	Ø 0.30 - 2.90	Ø 3h4	3371-4	13.19
			5 x D1	Ø 0.50 - 2.50	Ø 3h4	3371-5	13.20
			8 x D1	Ø 0.50 - 2.50	Ø 3h4 (Ø4)	3371-8	13.21
			1.5 x D1	Ø 0.30 - 2.50	Ø 3h4	DHD3371-1.5	13.22
			3 x D1	Ø 0.30 - 2.50	Ø 3h4	DHD3371-3	13.23
		45°	2.5 x D1	Ø 0.30 - 2.90	Ø 3h4	3375-2.5	13.24
	Z = 4	30°	1.5 x D1	Ø 0.30 - 2.90	Ø 3h4	3471-1.5	13.25
			3 x D1	Ø 0.30 - 2.90	Ø 3h4	3471-3	13.26
		35° - 38°	3 x D1	Ø 0.50 - 2.50	Ø 3h4	DHP3471-3	13.27
			2 x D1	Ø 0.30 - 2.90	Ø 3h4	3472-2	13.28
		40°	4 x D1	Ø 0.40 - 2.90	Ø 3h4	3472-4	13.29

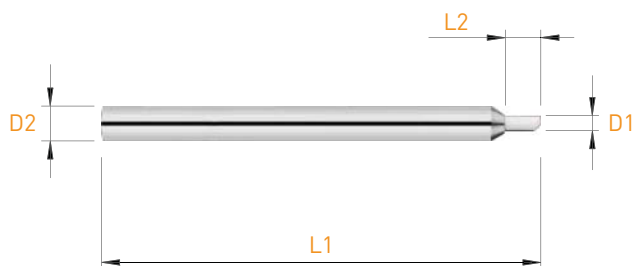
	Micro-fraises hémisphériques Vollradius Mikropräzisionsfräser Ball nose micro end mills						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 2	30°	0.75 x D1	Ø 0.20 - 1.00	Ø 3h4	3278-0.75	13.30
			1 x D1	Ø 0.20 - 2.50	Ø 3h4	3278-1	13.31
			1.5 x D1	Ø 0.20 - 2.50	Ø 3h4	3278-1.5	13.32
			3 x D1	Ø 0.20 - 2.90	Ø 3h4	3278-3	13.33

Micro-fraises de précision

Mikropräzisionsfräser

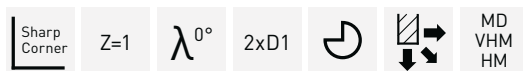
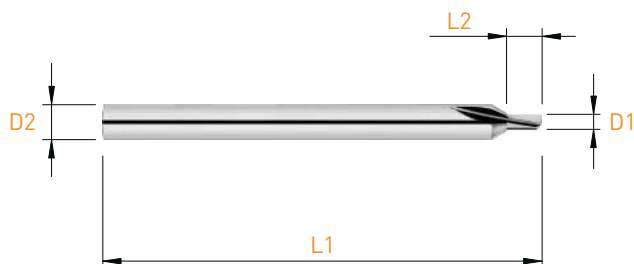
Precision micro end mills

3170-2



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	□	□	■

* = h6



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	□	□	■

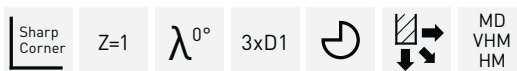
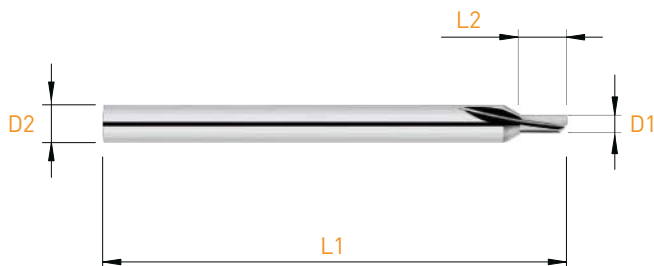
* = h6

Micro-fraises de précision

Mikropräzisionsfräser

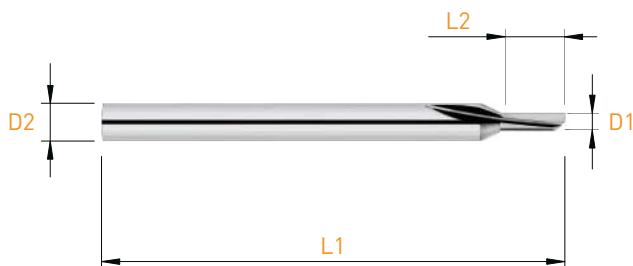
Precision micro end mills

3170R-3



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	□	□	■

* = h6



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	□	□	■

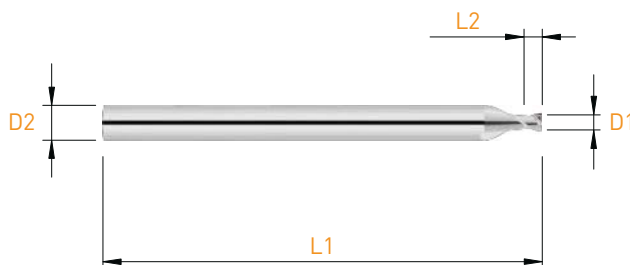
* = h6

Micro-fraises de précision

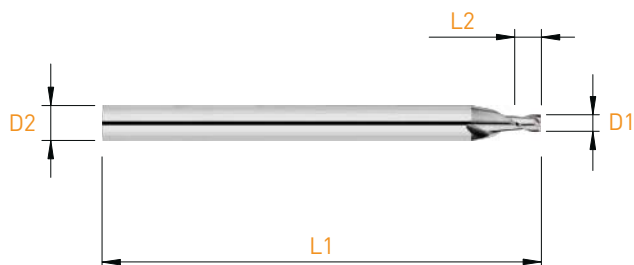
Mikropräzisionsfräser

Precision micro end mills

3271-0.75



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAIN	TiCN	DLC53
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	■	■	■	■



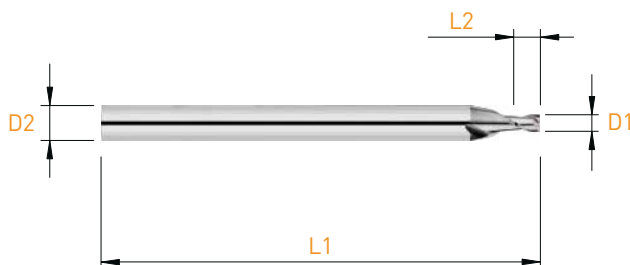
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.30	3.00	39	3271-1-0.30	■	■	■	■
0.40	0.40	3.00	39	3271-1-0.40	■	■	■	■
0.50	0.50	3.00	39	3271-1-0.50	■	■	■	■
0.60	0.60	3.00	39	3271-1-0.60	■	■	■	■
0.70	0.70	3.00	39	3271-1-0.70	■	■	■	■
0.80	0.80	3.00	39	3271-1-0.80	■	■	■	■
0.90	0.90	3.00	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

3271-1.5



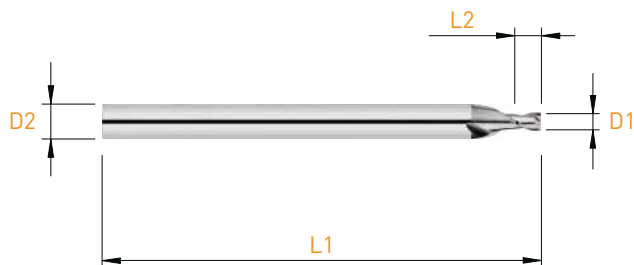
Z=2

 λ^{30°

1.5xD1

MD
VHM
HM

D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



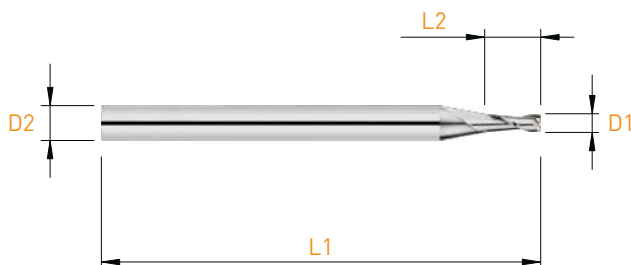
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.10	0.20	3.00	39	3271-2-0.10	■			
0.15	0.30	3.00	39	3271-2-0.15	■			
0.20	0.40	3.00	39	3271-2-0.20	■			
0.25	0.50	3.00	39	3271-2-0.25	■			
0.30	0.60	3.00	39	3271-2-0.30	■	■	■	■
0.40	0.80	3.00	39	3271-2-0.40	■	■	■	■
0.50	1.00	3.00	39	3271-2-0.50	■	■	■	■
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

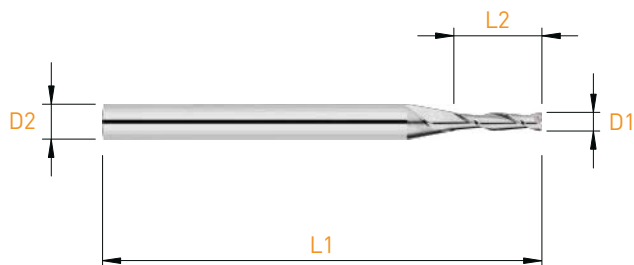
Precision micro end mills

3271-3



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



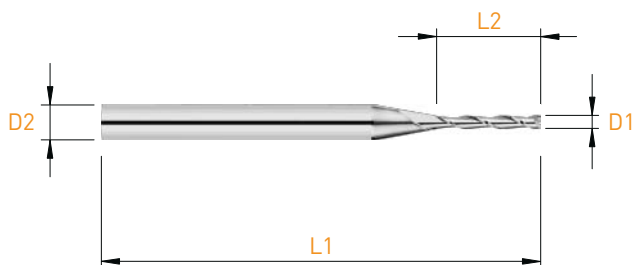
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	1.50	3.00	39	3271-5-0.30	■	■	■	■
0.35	1.80	3.00	39	3271-5-0.35	■	■	■	■
0.40	2.00	3.00	39	3271-5-0.40	■	■	■	■
0.50	2.50	3.00	39	3271-5-0.50	■	■	■	■
0.55	2.80	3.00	39	3271-5-0.55	■	■	■	■
0.60	3.00	3.00	39	3271-5-0.60	■	■	■	■
0.65	3.30	3.00	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	■	■	■	■

Micro-fraises de précision

Mikropräzisionsfräser

Precision micro end mills

3271-8



Z=2

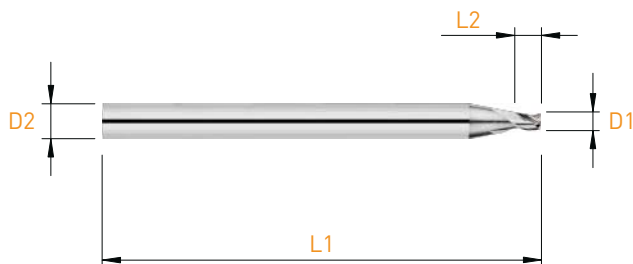
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8xD1

MD
VHM
HM

D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAIN	TiCN	DLC53
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	■	■	■	■

* = h6



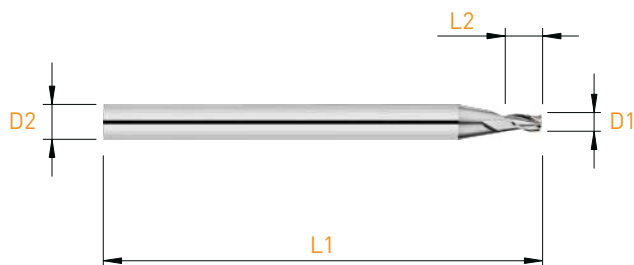
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.40	3.00	39	3371-1.3-0.30	■	■	■	■
0.35	0.50	3.00	39	3371-1.3-0.35	■	■	■	■
0.40	0.50	3.00	39	3371-1.3-0.40	■	■	■	■
0.45	0.60	3.00	39	3371-1.3-0.45	■	■	■	■
0.50	0.70	3.00	39	3371-1.3-0.50	■	■	■	■
0.60	0.80	3.00	39	3371-1.3-0.60	■	■	■	■
0.70	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

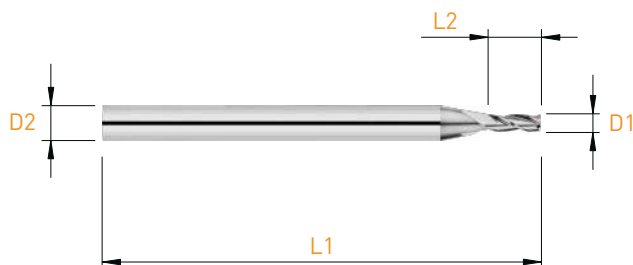
Mikropräzisionsfräser

Precision micro end mills

3371-2



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■

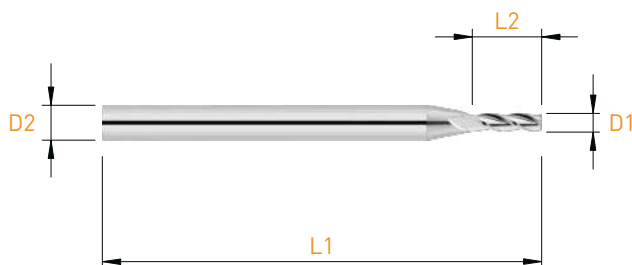
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
2.00	6.00	3.00	39	3371-3-2.00	■	■	■	■
2.10	6.00	3.00	39	3371-3-2.10	■	■	■	■
2.20	6.50	3.00	39	3371-3-2.20	■	■	■	■
2.30	7.00	3.00	39	3371-3-2.30	■	■	■	■
2.40	7.00	3.00	39	3371-3-2.40	■	■	■	■
2.50	7.50	3.00	39	3371-3-2.50	■	■	■	■
2.60	7.50	3.00	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

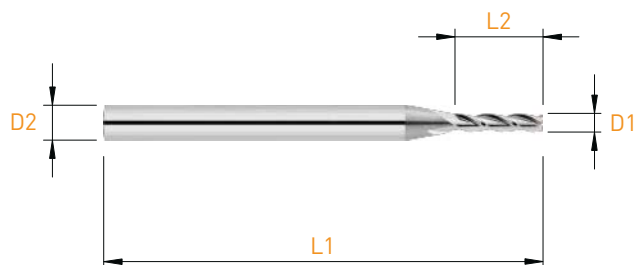
Mikropräzisionsfräser

Precision micro end mills

3371-4



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



Z=3

 λ^{30°

5xD1

MD
VHM
HM

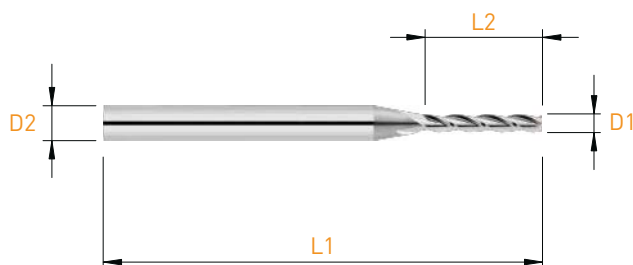
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.50	2.50	3.00	39	3371-5-0.50	■	■	■	■
0.60	3.00	3.00	39	3371-5-0.60	■	■	■	■
0.70	3.50	3.00	39	3371-5-0.70	■	■	■	■
0.80	4.00	3.00	39	3371-5-0.80	■	■	■	■
0.90	4.50	3.00	39	3371-5-0.90	■	■	■	■
1.00	5.00	3.00	39	3371-5-1.00	■	■	■	■
1.10	5.50	3.00	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	■	■	■	■

Micro-fraises de précision

Mikropräzisionsfräser

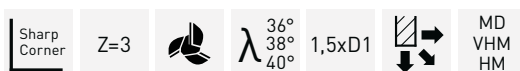
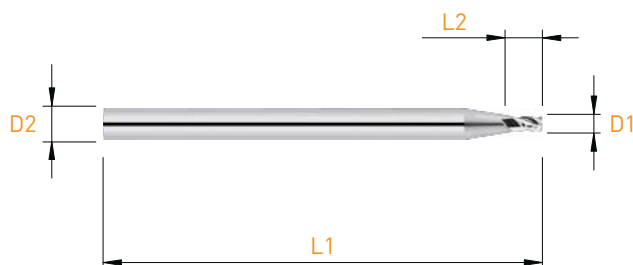
Precision micro end mills

3371-8



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■

* = h6



DHD

Denture à pas irrégulier, angle d'hélice différent pour chaque dent
Ungleiche Teilung, unterschiedlicher Drallwinkel
Uneven tooth pitch, different helix angle per tooth

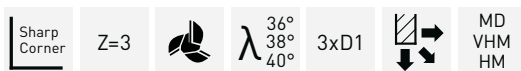
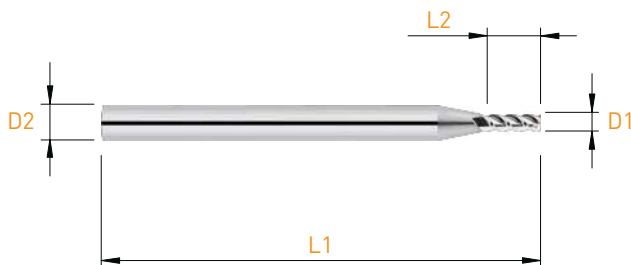
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.45	3.00	39	DHD3371-1.5-0.30	■	■	■	■
0.40	0.60	3.00	39	DHD3371-1.5-0.40	■	■	■	■
0.50	0.75	3.00	39	DHD3371-1.5-0.50	■	■	■	■
0.60	0.90	3.00	39	DHD3371-1.5-0.60	■	■	■	■
0.70	1.05	3.00	39	DHD3371-1.5-0.70	■	■	■	■
0.80	1.20	3.00	39	DHD3371-1.5-0.80	■	■	■	■
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	■	■	■	■

Micro-fraises de précision

Mikropräzisionsfräser

Precision micro end mills

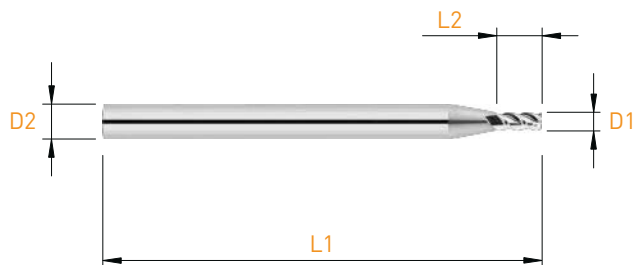
DHD3371-3



DHD

Denture à pas irrégulier, angle d'hélice différent pour chaque dent
 Ungleiche Teilung, unterschiedlicher Drallwinkel
 Uneven tooth pitch, different helix angle per tooth

D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



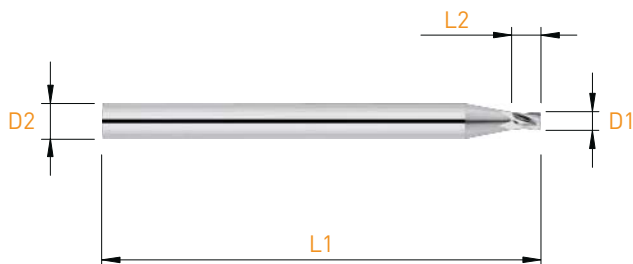
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.80	3.00	39	3375-2.5-0.30	■	■	■	■
0.40	1.00	3.00	39	3375-2.5-0.40	■	■	■	■
0.50	1.30	3.00	39	3375-2.5-0.50	■	■	■	■
0.60	1.50	3.00	39	3375-2.5-0.60	■	■	■	■
0.70	1.70	3.00	39	3375-2.5-0.70	■	■	■	■
0.80	2.00	3.00	39	3375-2.5-0.80	■	■	■	■
0.90	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	■	■	■	■

Micro-fraises de précision

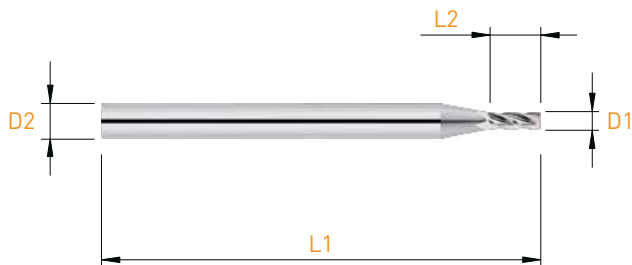
Mikropräzisionsfräser

Precision micro end mills

3471-1.5



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



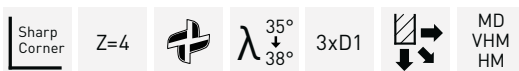
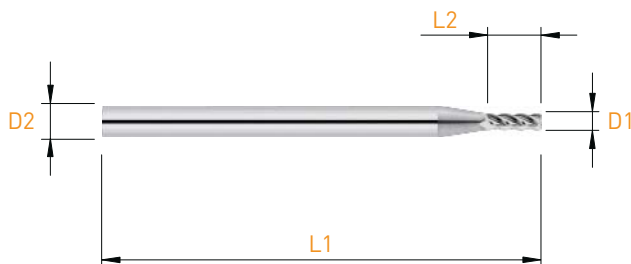
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.90	3.00	39	3471-3-0.30	■	■	■	■
0.40	1.20	3.00	39	3471-3-0.40	■	■	■	■
0.50	1.50	3.00	39	3471-3-0.50	■	■	■	■
0.55	1.70	3.00	39	3471-3-0.55	■	■	■	■
0.60	1.80	3.00	39	3471-3-0.60	■	■	■	■
0.70	2.10	3.00	39	3471-3-0.70	■	■	■	■
0.75	2.30	3.00	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

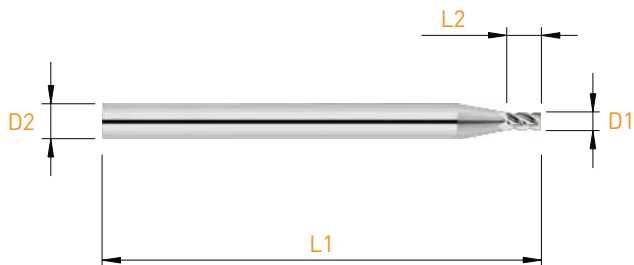
DHP3471-3



DHP

Denture à pas irrégulier, angle d'hélice progressive
 Ungleiche Teilung, progressive Drallwinkel
 Uneven tooth pitch, progressive helix angle

D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	z	TiAlN	TiCN	DLC53
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	■	■	■	■



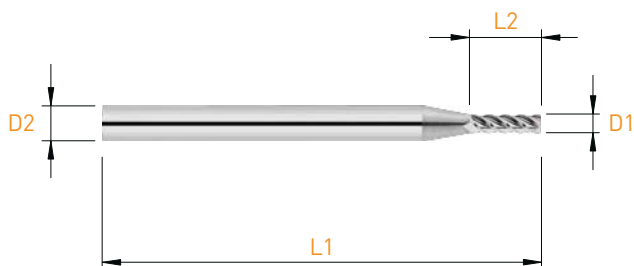
D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.60	3.00	39	3472-2-0.30	■	■	■	■
0.40	0.80	3.00	39	3472-2-0.40	■	■	■	■
0.50	1.00	3.00	39	3472-2-0.50	■	■	■	■
0.60	1.20	3.00	39	3472-2-0.60	■	■	■	■
0.70	1.40	3.00	39	3472-2-0.70	■	■	■	■
0.80	1.60	3.00	39	3472-2-0.80	■	■	■	■
0.90	1.80	3.00	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	■	■	■	■

Micro-fraises de précision

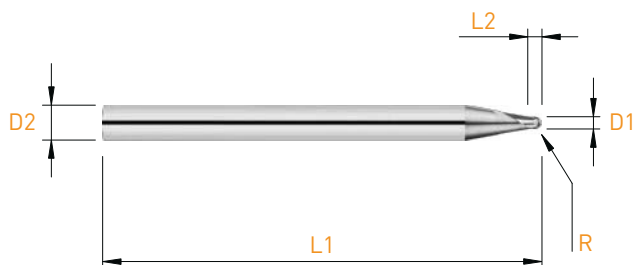
Mikropräzisionsfräser

Precision micro end mills

3472-4



D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■



Z=2

 λ^{30°

0.75xD1

MD
VHM
HM

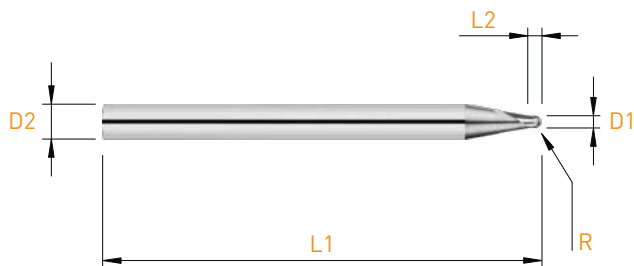
D1 +0.005 / -0.010	R	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.20	0.10	0.15	3.00	39	3278-0.75-0.20	■			
0.30	0.15	0.20	3.00	39	3278-0.75-0.30	■	■	■	■
0.40	0.20	0.30	3.00	39	3278-0.75-0.40	■	■	■	■
0.50	0.25	0.35	3.00	39	3278-0.75-0.50	■	■	■	■
0.60	0.30	0.45	3.00	39	3278-0.75-0.60	■	■	■	■
0.70	0.35	0.55	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	■	■	■	■

Micro-fraises de précision

Mikropräzisionsfräser

Precision micro end mills

3278-1



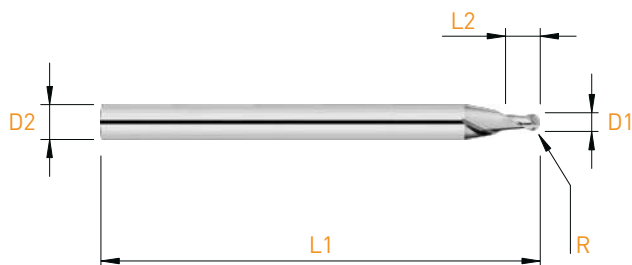
Z=2

 λ^{30°

1xD1

MD
VHM
HM

D1 +0.005 / -0.010	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.20	0.20	3.00	39	3278-1-0.20	■			
0.30	0.30	3.00	39	3278-1-0.30	■	■	■	■
0.40	0.40	3.00	39	3278-1-0.40	■	■	■	■
0.50	0.50	3.00	39	3278-1-0.50	■	■	■	■
0.60	0.60	3.00	39	3278-1-0.60	■	■	■	■
0.70	0.70	3.00	39	3278-1-0.70	■	■	■	■
0.80	0.80	3.00	39	3278-1-0.80	■	■	■	■
0.90	0.90	3.00	39	3278-1-0.90	■	■	■	■
1.00	1.00	3.00	39	3278-1-1.00	■	■	■	■
1.10	1.10	3.00	39	3278-1-1.10	■	■	■	■
1.20	1.20	3.00	39	3278-1-1.20	■	■	■	■
1.30	1.30	3.00	39	3278-1-1.30	■	■	■	■
1.40	1.40	3.00	39	3278-1-1.40	■	■	■	■
1.50	1.50	3.00	39	3278-1-1.50	■	■	■	■
1.60	1.60	3.00	39	3278-1-1.60	■	■	■	■
1.70	1.70	3.00	39	3278-1-1.70	■	■	■	■
1.80	1.80	3.00	39	3278-1-1.80	■	■	■	■
1.90	1.90	3.00	39	3278-1-1.90	■	■	■	■
2.00	2.00	3.00	39	3278-1-2.00	■	■	■	■
2.10	2.10	3.00	39	3278-1-2.10	■	■	■	■
2.20	2.20	3.00	39	3278-1-2.20	■	■	■	■
2.30	2.30	3.00	39	3278-1-2.30	■	■	■	■
2.40	2.40	3.00	39	3278-1-2.40	■	■	■	■
2.50	2.50	3.00	39	3278-1-2.50	■	■	■	■
2.60	2.60	3.00	39	3278-1-2.60	■	■	■	■
2.70	2.70	3.00	39	3278-1-2.70	■	■	■	■
2.80	2.80	3.00	39	3278-1-2.80	■	■	■	■
2.90	2.90	3.00	39	3278-1-2.90	■	■	■	■



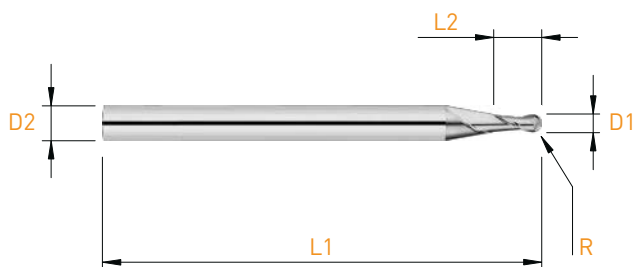
D1 +0.005 / -0.010	R	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.20	0.10	0.30	3.00	39	3278-1.5-0.20	■			
0.25	0.125	0.35	3.00	39	3278-1.5-0.25	■			
0.30	0.15	0.45	3.00	39	3278-1.5-0.30	■	■	■	■
0.40	0.20	0.60	3.00	39	3278-1.5-0.40	■	■	■	■
0.50	0.25	0.75	3.00	39	3278-1.5-0.50	■	■	■	■
0.60	0.30	0.90	3.00	39	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	■	■	■	■

Micro-fraises de précision

Mikropräzisionsfräser

Precision micro end mills

3278-3



Z=2

 λ^{30°

3xD1

MD
VHM
HM

D1 +0.005 / -0.010	R	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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	■	■	■	■

Fraises ébauches
Schruppfräser
Roughing mills

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

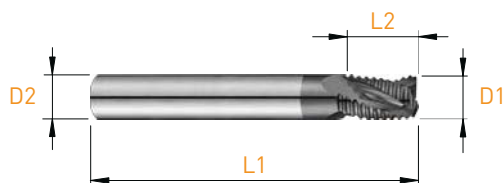
Matière Werkstoff Material			Lubrifiant Kühlung Coolant	VC (m/min)	fz Ø							Non revêtu Unbeschichtet Uncoated	Revêtu Beschichtet Coated	
					1.0	2.0	3.0	4.0	5.0	6.0	8.0			10.0
Acier Stahl Steel	< 700 N/mm²		O/E	120	0.015	0.02	0.02	0.03	0.03	0.04	0.04	0.045	-	++
Acier Stahl Steel	> 700 N/mm²		O/E	100	0.01	0.015	0.015	0.02	0.025	0.03	0.035	0.04	-	++
Fonte Gusseisen Cast iron			O/E	130	0.015	0.02	0.025	0.035	0.035	0.045	0.05	0.06	-	++
Acier inoxydable Rostfreistahl Stainless steel			O/E	100	0.004	0.008	0.01	0.015	0.02	0.025	0.03	0.04	-	++
Aluminium			O/E	300	0.02	0.03	0.03	0.045	0.05	0.06	0.075	0.09	+	++
Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze			O/E	160	0.008	0.015	0.025	0.03	0.03	0.04	0.06	0.07	+	++
Métaux précieux Edelmetalle Precious metals			O/E	180	0.008	0.015	0.025	0.03	0.03	0.04	0.06	0.07	+	++
Titane Titan Titanium			O/E	60	0.007	0.01	0.015	0.015	0.02	0.025	0.03	0.04	-	++

Fraises ébauches

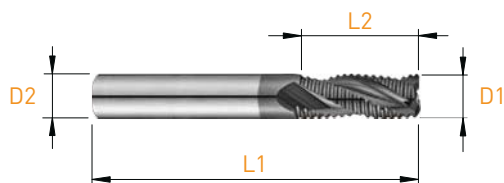
Schrupfräser

Roughing mills

E-DHP3300 / 3400



	Z	E	λ	D1	L2	D2 h6	L1	Art. N°	Z	TiAlN
	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	51	E-DHP3300-1.5-2.50	□	■
	3	0.20	26°/33°	3.00	4.25	6.00	51	E-DHP3300-1.5-3.00	□	■
	3	0.30	26°/33°	4.00	6.00	6.00	51	E-DHP3300-1.5-4.00	□	■
	3	0.30	26°/33°	5.00	7.50	6.00	51	E-DHP3300-1.5-5.00	□	■
	3	0.40	26°/33°	6.00	9.00	6.00	51	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	□	■



	Z	E	λ	D1	L2	D2 h6	L1	Art. N°	Z	TiAlN
	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	58	E-DHP3300-2.5-2.50	□	■
	3	0.20	26°/33°	3.00	7.50	6.00	58	E-DHP3300-2.5-3.00	□	■
	3	0.30	26°/33°	4.00	10.00	6.00	58	E-DHP3300-2.5-4.00	□	■
	3	0.30	26°/33°	5.00	12.50	6.00	58	E-DHP3300-2.5-5.00	□	■
	3	0.40	26°/33°	6.00	15.00	6.00	58	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	□	■

Fraises en bout de finition
Schlicht Schaftfräser
Finishing end mills

Dimensions disponibles
Verfügbare Abmessungen
Available dimensions

	Z = 2		Z = 3						Z = 4						
	30°						38°	45°	60°	30°		38°	45°		
Ø D1	3230	3231	3330-S	3336-HA	3337-HA	3330	3331	DHP3336	3341	3361	3430	3431	DHP3436	3440-S	3441
1.00	■		■					■					■	■	
1.50	■		■	■	■			■					■	■	
1.80				■	■										
2.00	■	■	■	■	■		■	■	■	■		■	■	■	■
2.50	■	■	■	■	■		■	■	■	■		■	■	■	■
2.80				■	■										
3.00	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.50		■	■	■	■		■	■	■	■		■	■	■	■
3.80				■	■										
4.00	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.50		■	■	■	■		■		■	■		■		■	■
4.80				■	■										
5.00	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
5.50				■	■									■	
5.80				■	■										
6.00	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
8.00						■									
10.00						■									
12.00						■									

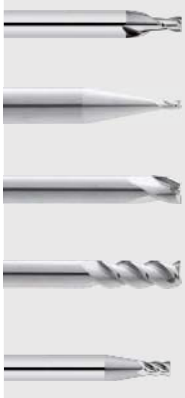
Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

Matière Werkstoff Material	VC (m/min)	fz [mm/z]	
		Ø 2 - 4	Ø 4 - 6
Acier Stahl Steel < 700 N/mm²	P 60 - 100	0.010 - 0.030	0.015 - 0.040
Acier Stahl Steel > 700 N/mm²	P 40 - 70	0.008 - 0.020	0.010 - 0.030
Acier inoxydable Rostfreistahl Stainless steel	M 40 - 80	0.010 - 0.030	0.015 - 0.040
Aluminium	N 100 - 250	0.015 - 0.050	0.020 - 0.060
Cuivre Kupfer Copper	N 80 - 160	0.010 - 0.040	0.020 - 0.060
Laiton Messing Brass	N 100 - 200	0.015 - 0.040	0.030 - 0.070
Titane Titan Titanium	S 25 - 50	0.010 - 0.030	0.015 - 0.040

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

	Fraises en bout avec angles vifs Schaftfräser mit scharfkantiger Ecken End mills with sharp corners						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 2	30°	1 x D1	Ø 1.00 - 6.00	Ø 6.0	3230	13.38
			~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3231	13.39
	Z = 3	30°	1 x D1	Ø 3.00 - 12.00	D1 = D2	3330	13.40
			~ 1.2-2 x D1	Ø 1.00 - 6.00	Ø 6.0	3330-S	13.41
			~ 1.2-2 x D1	Ø 1.50 - 6.00	Ø 6.0	3336-HA	13.42
			~ 2-4 x D1	Ø 1.50 - 6.00	Ø 6.0	3337-HA	13.42
			~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3331	13.43
			4.0 - 8.0	Ø 1.00 - 6.00	Ø 6.0	DHP3336	13.44
		45°	~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3341	13.45
		60°	~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3361	13.46
	Z = 4	30°	1 x D1	Ø 3.00 - 6.00	D1 = D2	3430	13.47
			~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3431	13.48
		35° - 38°	4.0 - 8.0	Ø 1.00 - 6.00	Ø 6.0	DHP3436	13.49
			2 x D1	Ø 1.00 - 6.00	Ø 6.0	3440-S	13.50
		45°	~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3441	13.51

	Fraises en bout hémisphériques Vollradius Schaftfräser Ball nose end mills						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 2	30°	~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3238	13.52
	Z = 3		~ 3-4 x D1	Ø 2.00 - 6.00	D1 = D2	3338	13.53

	Fraises en bout avec queue réduite Schaftfräser mit reduziertem Schaft End mills with reduced shank						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 3	30°	1 x D1	Ø 8.00 - 12.00	Ø 6.0	3383	13.54
	Z = 10		15.0	Ø 16.3 / 20.3	Ø 10.0	3831 / 3833	13.55

	Fraises en bout de finition pour machine WM 701S Schaftfräser für Machine WM 701S End mills for machine WM 701S						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 3	30°	0.30-10.50	Ø 0.30 - 3.50	Ø 6.0	701S3371	13.56

	Fraises à angler Kegelsenker Chamfering tools						
	Z	Helix	L2	Range	Shank	Type	page
	Z = 3	0°	-	Ø 0.50 - 3.00	Ø 3.0 h4	3911	13.58
	Z = 4		-	Ø 3.00 - 8.00	D1 = D2	1901 / 3901	13.59



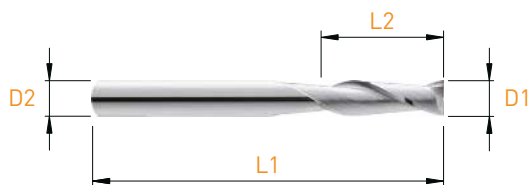
D1 h10	L2	D2 h6	L1	Art. N°	Z TiAlN	
1.00	1.00	6.00	51	3230-1.0	■	■
1.50	1.50	6.00	51	3230-1.5	■	■
2.00	2.00	6.00	51	3230-2.0	■	■
2.50	2.50	6.00	51	3230-2.5	■	■
3.00	3.00	6.00	51	3230-3.0	■	■
4.00	4.00	6.00	51	3230-4.0	■	■
5.00	5.00	6.00	51	3230-5.0	■	■
6.00	6.00	6.00	51	3230-6.0	■	■

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

3231



Z=2

 λ^{30° MD
VHM
HM

D1 e9	L2	D2 h6	L1	Art. N°	Z	TiAIN
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	51	3231-6.0	■	■



D1 e9	L2	D2 h6	L1	Art. N°	Z TiAIN	
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	51	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	■	

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

3330-S



Z=3

 $\lambda 30^\circ$ MD
VHM
HM

D1 h10	L2	D2 h6	L1	Art. N°	Z	TiAIN
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	■	■

MICRO-LINE

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

3336-HA / 3337-HA



Sharp Corner	Z=3		$\lambda 30^\circ$		MD VHM HM	DIN 6527K
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D1 h10	L2	D2 h6	L1	Art. N°	Z	TiAlN
1.50	3.00	6.00	51	3336-HA-1.5	■	■
1.80	3.00	6.00	51	3336-HA-1.8	■	■
2.00	3.00	6.00	51	3336-HA-2.0	■	■
2.50	3.00	6.00	51	3336-HA-2.5	■	■
2.80	4.00	6.00	51	3336-HA-2.8	■	■
3.00	4.00	6.00	51	3336-HA-3.0	■	■
3.50	4.00	6.00	51	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	■	■

Sharp Corner	Z=3		$\lambda 30^\circ$		MD VHM HM	DIN 6527L
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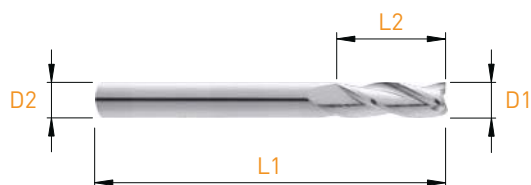
D1 h10	L2	D2 h6	L1	Art. N°	Z	TiAlN
1.50	6.00	6.00	57	3337-HA-1.5	■	■
1.80	6.00	6.00	57	3337-HA-1.8	■	■
2.00	6.00	6.00	57	3337-HA-2.0	■	■
2.50	6.00	6.00	57	3337-HA-2.5	■	■
2.80	7.00	6.00	57	3337-HA-2.8	■	■
3.00	7.00	6.00	57	3337-HA-3.0	■	■
3.50	7.00	6.00	57	3337-HA-3.5	■	■
3.80	8.00	6.00	57	3337-HA-3.8	■	■
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	■	■

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

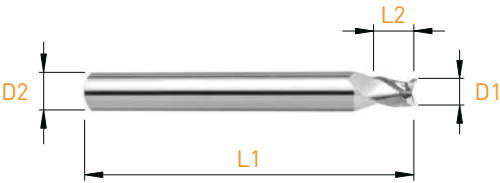
3331



Z=3

 $\lambda 30^\circ$ MD
VHM
HM

D1 e9	L2	D2 h6	L1	Art. N°	Z TiAlN	
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	51	3331-6.0	■	■



DHP Denture à pas irrégulier, angle d'hélice progressif
Ungleiche Teilung, progressive Drallwinkel
Uneven tooth pitch, progressive helix angle

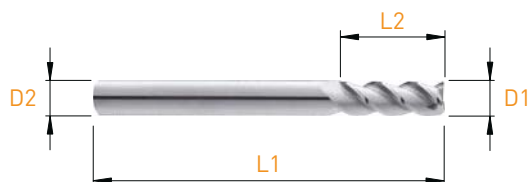
D1 h10	L2	D2 h6	L1	Art. N°	z	TiAIN
1.00	4.00	6.00	40	DHP3336-1.0	■	■
1.50	4.00	6.00	40	DHP3336-1.5	■	■
2.00	4.00	6.00	40	DHP3336-2.0	■	■
2.50	4.00	6.00	40	DHP3336-2.5	■	■
3.00	5.00	6.00	40	DHP3336-3.0	■	■
3.50	5.00	6.00	40	DHP3336-3.5	■	■
4.00	6.00	6.00	40	DHP3336-4.0	■	■
5.00	7.00	6.00	40	DHP3336-5.0	■	■
6.00	8.00	6.00	40	DHP3336-6.0	■	■

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

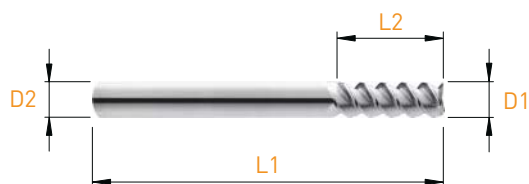
3341



Z=3

 $\lambda 45^\circ$ MD
VHM
HM

D1 e9	L2	D2 h6	L1	Art. N°	Z	TiAIN
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	51	3341-6.0	■	■



Z=3

 λ^{60° MD
VHM
HM

D1 _{e9}	L2	D2 _{h6}	L1	Art. N°	Z TiAlN	
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	51	3361-6.0	■	■

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

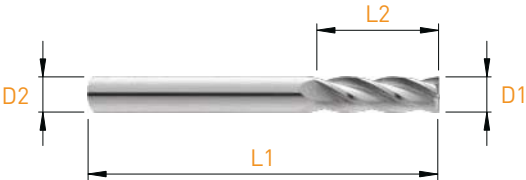
3430



Z=4

 $\lambda 30^\circ$ MD
VHM
HM

D1 e9	L2	D2 h6	L1	Art. N°	Z	TiAIN
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	51	3430-6.0	■	■



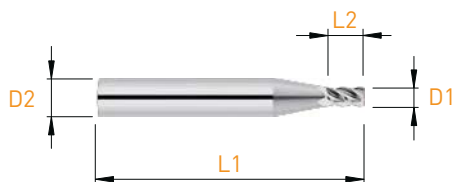
D1 _{e9}	L2	D2 _{h6}	L1	Art. N°	Z	TiAIN
2.00	8.00	2.00	32	3431-2.0	■	■
2.50	8.00	2.50	32	3431-2.5	■	■
3.00	12.00	3.00	32	3431-3.0	■	■
3.50	12.00	3.50	32	3431-3.5	■	■
4.00	12.00	4.00	40	3431-4.0	■	■
4.50	14.00	4.50	50	3431-4.5	■	■
5.00	14.00	5.00	50	3431-5.0	■	■
6.00	16.00	6.00	51	3431-6.0	■	■

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

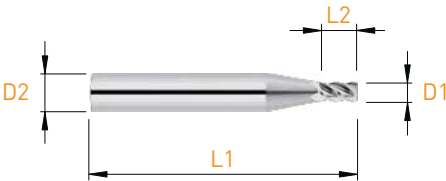
DHP3436



DHP

Denture à pas irrégulier, angle d'hélice progressive
 Ungleiche Teilung, progressive Drallwinkel
 Uneven tooth pitch, progressive helix angle

D1 h10	L2	D2 h6	L1	Art. N°	z	TiAlN
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	■	■



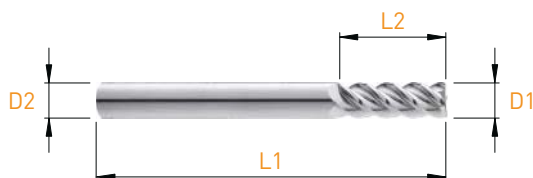
D1 h10	L2	D2 h6	L1	Art. N°	Z	TiAIN
1.00	2.00	6.00	40	3440-S-1.0	■	■
1.50	3.00	6.00	40	3440-S-1.5	■	■
2.00	4.00	6.00	40	3440-S-2.0	■	■
2.50	5.00	6.00	40	3440-S-2.5	■	■
3.00	6.00	6.00	40	3440-S-3.0	■	■
3.50	7.00	6.00	40	3440-S-3.5	■	■
4.00	8.00	6.00	40	3440-S-4.0	■	■
4.50	9.00	6.00	40	3440-S-4.5	■	■
5.00	10.00	6.00	40	3440-S-5.0	■	■
5.50	11.00	6.00	40	3440-S-5.5	■	■
6.00	12.00	6.00	40	3440-S-6.0	■	■

Fraises en bout de finition

Schlicht Schaftfräser

Finishing end mills

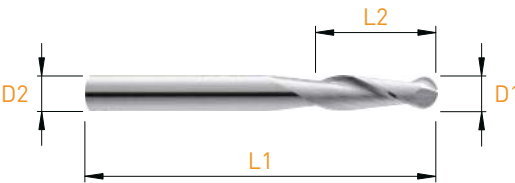
3441



Z=4

 $\lambda 45^\circ$ MD
VHM
HM

D1 e9	L2	D2 h6	L1	Art. N°	Z	TiAIN
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	51	3441-6.0	■	■



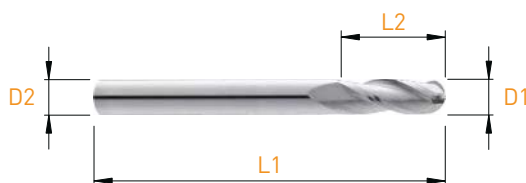
D1 _{e9}	L2	D2 _{h6}	L1	Art. N°	Z TiAIN	
2.00	8.00	2.00	32	3238-2.0	■	■
2.50	8.00	2.50	32	3238-2.5	■	■
3.00	12.00	3.00	32	3238-3.0	■	■
3.50	12.00	3.50	32	3238-3.5	■	■
4.00	12.00	4.00	40	3238-4.0	■	■
4.50	14.00	4.50	50	3238-4.5	■	■
5.00	14.00	5.00	50	3238-5.0	■	■
6.00	16.00	6.00	51	3238-6.0	■	■

Fraises en bout hémisphériques

Kugelschaftfräser

Ball nose end mills

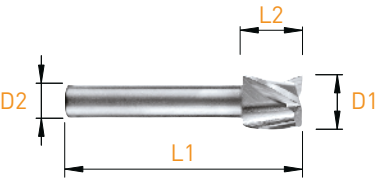
3338



D1 _{e9}	L2	D2 _{h6}	L1	Art. N°	Z	TiAIN
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	51	3338-6.0	■	■

Fraises en bout pour usinage en bout plat
Schaftfräser für flache Frontbearbeitung
End mills for flat front machining

3383



Sharp
Corner

Z=3

λ 30°

MD
VHM
HM

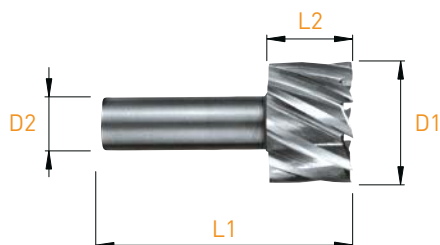
D1 h10	L2	D2 h6	L1	Art. N°	z
8.00	8.00	6.00	40	3383-8.0	■
10.00	10.00	6.00	40	3383-10.0	■
12.00	12.00	6.00	40	3383-12.0	■

Fraises en bout avec queue réduite

Schaftfräser mit reduziertem Schaft

End mills with reduced shank

3831 / 3833



D1 _{h10}	L2	D2 _{h6}	L1	Art. N°	z
16.30	15.00	10.00	45	3831	■
20.30	15.00	10.00	45	3833	■



	Z=3		1xD1	Disponible tous les 0.1 mm Verfügbar jede 0.1 mm Available each 0.1 mm
--	-----	--	------	--

D1	L2	D2 h5	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.30	6.00	33	701S3371-1-0.30	■	□	□	□
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
3.50	3.50	6.00	33	701S3371-1-3.50	■	□	□	□

	Z=3		2xD1	Disponible tous les 0.1 mm Verfügbar jede 0.1 mm Available each 0.1 mm
--	-----	--	------	--

D1	L2	D2 h5	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.60	6.00	33	701S3371-2-0.30	■	□	□	□
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
3.50	7.00	6.00	33	701S3371-2-3.50	■	□	□	□

	Z=3		3xD1	Disponible tous les 0.1 mm Verfügbar jede 0.1 mm Available each 0.1 mm
--	-----	--	------	--

D1	L2	D2 h5	L1	Art. N°	Z	TiAlN	TiCN	DLC53
0.30	0.90	6.00	33	701S3371-3-0.30	■	□	□	□
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
3.00	9.00	6.00	33	701S3371-3-3.00	■	□	□	□

Autres outils pour machine WM 701S

Andere Werkzeuge für Maschine WM 701S

Other executions for machine WM 701S



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.



Z=3

λ^{90°

MD
VHM
HM

D1	L2	D2 _{h4}	L1	d	Art. N°	z	TiAlN
0.50	3.00	3.00	39	0.10	3911-0.5	■	
0.60	3.00	3.00	39	0.10	3911-0.6	■	
0.70	3.00	3.00	39	0.10	3911-0.7	■	
0.80	3.00	3.00	39	0.10	3911-0.8	■	
0.90	3.00	3.00	39	0.10	3911-0.9	■	
1.00	3.00	3.00	39	0.10	3911-1.0	■	
1.50	4.50	3.00	39	0.10	3911-1.5	■	
2.00	6.00	3.00	39	0.10	3911-2.0	■	■
2.50	7.50	3.00	39	0.10	3911-2.5	■	■
3.00	-	3.00	39	0.10	3911-3.0	■	■

Fraises à angler

Kegelsenker

Chamfering tools

1901 / 3901



Z=4	λ^{0°		MD VHM HM	L		R	
D h6	d	L1	Art. N°	Z	Art. N°	Z	TiAlN
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	■	■

Fraises à graver
Gravierfräser
Engraving mills

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

	Angle Winkel Angle	Plat [a] / Rayon [r] Fläche [a] / Radius [r] Flat [a] / Radius [r]	Corps Schaft Shank	Type Typ Type	Page Seite Page
Fraises à graver avec plat Gravierfräser mit Fläche Engraving mills with flat	20° / 30° / 35° / 40° 45° / 50° / 55° / 60° 65° / 70° / 90°	a= 0.02-0.10 / every 0.01 0.10-0.30 / every 0.05	Ø3h4	E300-P	13.61
Fraises à graver à rayon Gravierfräser mit Radius Engraving mills with radius	20° / 30° / 35° / 40° 45° / 50° / 55° / 60° 65° / 70° / 90°	r= 0.02-0.10 / every 0.01 0.10-0.30 / every 0.05	Ø3h4	E300-R	13.62
Fraises à graver renforcées Verstärkte Gravierfräser Reinforced engraving	20° / 30° / 35° / 40° 45° / 50° / 55° / 60° 65° / 70° / 90°	a= 0.02-0.10 / every 0.01 0.10-0.30 / every 0.05	Ø3h4	E900-P	13.63

Matière Werkstoff Material		Vf [mm/min]*	Non revêtu Unbeschichtet Uncoated	Revêtu Beschichtet Coated
Acier Stahl Steel	< 700 N/mm² (P)	80 - 180	-	++
Acier Stahl Steel	> 700 N/mm² (P)	70 - 150	+	++
Acier inoxydable Rostfreistahl Stainless steel	(M)	70 - 150	-	++
Aluminium	(N)	80 - 250	++	-
Cuivre Kupfer Copper	(N)	70 - 150	+	++
Laiton Messing Brass	(N)	80 - 200	++	-
Or Gold Gold	(N)	80 - 200	++	+
Titane Titan Titanium	(S)	70 - 130	++	+

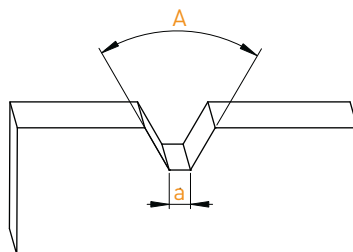
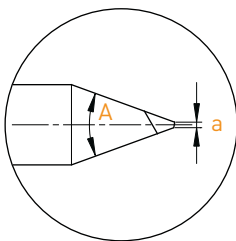
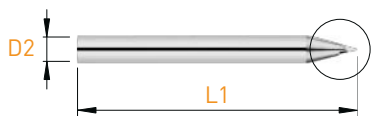
* Avance conseillée pour des vitesses de rotation entre 20'000 et 30'000 tours/min
* Empfohlener Vorschub für Drehgeschwindigkeiten zwischen 20'000 und 30'000 U/Min
* Recommended feed rate for rotation speed between 20'000 and 30'000 RPM

Fraises à graver avec plat

Gravierfräser mit Fläche

Engraving mills with flat

E300-P

MD
VHM
HM

A	a	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
20°	0.02-0.10* / 0.10-0.30**	3.00	33	E320-P-_(a)	■	■	■	□
30°	0.02-0.10* / 0.10-0.30**	3.00	33	E330-P-_(a)	■	■	■	□
35°	0.02-0.10* / 0.10-0.30**	3.00	33	E335-P-_(a)	■	■	■	□
40°	0.02-0.10* / 0.10-0.30**	3.00	33	E340-P-_(a)	■	■	■	□
45°	0.02-0.10* / 0.10-0.30**	3.00	33	E345-P-_(a)	■	■	■	□
50°	0.02-0.10* / 0.10-0.30**	3.00	33	E350-P-_(a)	■	■	■	□
55°	0.02-0.10* / 0.10-0.30**	3.00	33	E355-P-_(a)	■	■	■	□
60°	0.02-0.10* / 0.10-0.30**	3.00	33	E360-P-_(a)	■	■	■	□
65°	0.02-0.10* / 0.10-0.30**	3.00	33	E365-P-_(a)	■	■	■	□
70°	0.02-0.10* / 0.10-0.30**	3.00	33	E370-P-_(a)	■	■	■	□
90°	0.02-0.10* / 0.10-0.30**	3.00	33	E390-P-_(a)	■	■	■	□

* tous les 0.01 mm
alle 0.01 mm
every 0.01 mm

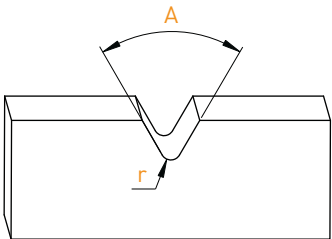
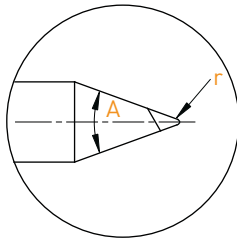
** tous les 0.05 mm
alle 0.05 mm
every 0.05 mm

Fraises à graver à rayon

Gravierfräser mit Radius

Engraving mills with radius

E300-R



MD
VHM
HM

A	r	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
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 0.01 mm
alle 0.01 mm
every 0.01 mm

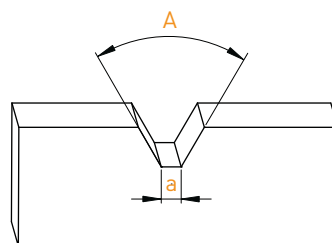
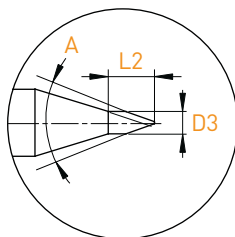
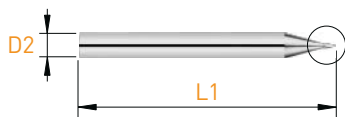
** tous les 0.05 mm
alle 0.05 mm
every 0.05 mm

Fraises à graver renforcées

Verstärkte Gravierfräser

Reinforced engraving mills

E900-P

MD
VHM
HM

A	a	D3	L2	D2 h4	L1	Art. N°	Z	TiAlN	TiCN	DLC53
20°	0.04-0.10* / 0.10-0.30**	0.60	1.80	3.00	33	E920-P-_(a)	■	■	■	□
30°	0.04-0.10* / 0.10-0.30**	0.60	1.80	3.00	33	E930-P-_(a)	■	■	■	□
35°	0.04-0.10* / 0.10-0.30**	0.60	1.80	3.00	33	E935-P-_(a)	■	■	■	□
40°	0.04-0.10* / 0.10-0.30**	0.60	1.80	3.00	33	E940-P-_(a)	■	■	■	□
45°	0.04-0.10* / 0.10-0.30**	1.00	1.80	3.00	33	E945-P-_(a)	■	■	■	□
50°	0.04-0.10* / 0.10-0.30**	1.00	2.00	3.00	33	E950-P-_(a)	■	■	■	□
55°	0.04-0.10* / 0.10-0.30**	1.00	2.00	3.00	33	E955-P-_(a)	■	■	■	□
60°	0.04-0.10* / 0.10-0.30**	1.20	2.00	3.00	33	E960-P-_(a)	■	■	■	□
65°	0.04-0.10* / 0.10-0.30**	1.20	2.00	3.00	33	E965-P-_(a)	■	■	■	□
70°	0.04-0.10* / 0.10-0.30**	1.20	2.00	3.00	33	E970-P-_(a)	■	■	■	□
90°	0.04-0.10* / 0.10-0.30**	1.20	2.00	3.00	33	E990-P-_(a)	■	■	■	□

* tous les 0.01 mm
alle 0.01 mm
every 0.01 mm

** tous les 0.05 mm
alle 0.05 mm
every 0.05 mm

Micro-forets / Centreurs NC
Mikrobohrer / NC-Zentrierbohrer
Micro drills / NC centering drills

Paramètres de coupe indicatifs
Empfohlene Schnittwerte
Standard machining data

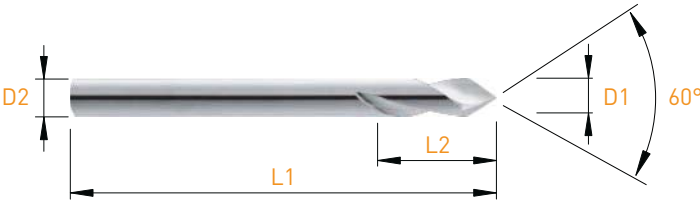
Matière Werkstoff Material	VC (m/min)	f [mm/U]			
		Ø 0.4 - 0.6	Ø 0.6 - 1.0	Ø 1.0 - 3.0	Ø 3.0 - 6.0
Acier Stahl Steel < 700 N/mm ² (P)	60 - 100	0.004 - 0.008	0.006 - 0.015	0.010 - 0.040	0.040 - 0.100
Acier Stahl Steel > 700 N/mm ² (P)	30 - 60	0.003 - 0.005	0.005 - 0.012	0.010 - 0.040	0.040 - 0.080
Acier inoxydable Rostfreistahl Stainless steel (M)	30 - 60	0.003 - 0.006	0.005 - 0.012	0.010 - 0.040	0.040 - 0.080
Aluminium (N)	60 - 150	0.004 - 0.010	0.006 - 0.030	0.020 - 0.070	0.050 - 0.150
Cuivre Kupfer Copper (N)	50 - 80	0.004 - 0.012	0.007 - 0.020	0.050 - 0.060	0.050 - 0.120
Laiton Messing Brass (N)	60 - 100	0.005 - 0.015	0.008 - 0.030	0.020 - 0.070	0.060 - 0.150
Or Gold Gold (N)	50 - 100	0.004 - 0.010	0.006 - 0.030	0.020 - 0.070	0.060 - 0.150
Titane Titan Titanium (S)	25 - 50	0.002 - 0.005	0.004 - 0.010	0.008 - 0.030	0.030 - 0.070

Micro-forets et centreurs NC**Mikrobohrer und NC-Zentrierbohrer****Micro drills and NC centering drills**

Micro-forets et centreurs Mikrobohrer und Zentrierbohrer Micro drills and centering drills							
Point angle	Helix	L2	Range	Increments	Shank	Type	page
60°	25°	-	Ø 2.00 - 6.00	1.00	D1 = D2	2680-60	13.66
90°	25°	-	Ø 0.50 - 20.00	0.10 +	Ø 2.0 - 20.0	2680-90	13.67
90°	L 25°	-	Ø 2.00 - 16.00	0.50 +	D1 = D2	1680-90	13.67
120°	25°	-	Ø 0.50 - 20.00	0.10 +	Ø 2.0 - 20.0	2680-120	13.68
120°	L 25°	-	Ø 2.00 - 12.00	0.50 +	D1 = D2	1680-120	13.68

Micro-forets de préperçage Mikro Pilotbohrer Micro pilot drill							
Point angle	Helix	L2	Range	Increments	Shank	Type	page
90°	32°	-	Ø 0.50 - 3.00	0.10	Ø 2.0 - 3.0	2690	13.69
130°	30°	2 x D1	Ø 0.10 - 2.00	0.01	Ø 3.0	2020	13.70

Micro-forets avec affûtage à facettes Mikrobohrer mit Facettenschliff Micro drills with faceted drill point							
Point angle	Helix	L2	Range	Increments	Shank	Type	page
120°	L 30°	~ 5-10 x D1	Ø 0.50 - 6.00	0.05 - 0.10	D1 = D2	1010	13.72
120°	30°	~ 5-10 x D1	Ø 0.50 - 6.00	0.05 - 0.10	D1 = D2	2010	13.73
120°	35°	~ 2 x D1	Ø 0.80 - 2.00	0.10 +	Ø 2.0	2011	13.74
120°	24°	~ 3 x D1	Ø 0.50 - 2.40	0.05 - 0.10	Ø 1.5 - 2.5	2012	13.74
120°	35°	~ 8 x D1	Ø 0.40 - 1.90	0.05 - 0.10	Ø 1.0 - 2.0	2013	13.75
120°	30°	~ 12 x D1	Ø 0.50 - 1.95	0.05	Ø 1.5 - 2.0	2014	13.75
130°	35°	6 x D1	Ø 0.10 - 3.00	0.01	Ø 3.0	2023	13.76
130°	25°	12 x D1	Ø 0.20 - 2.00	0.01	Ø 3.0	2026	13.79
140°	Z=3 35°	5 x D1	Ø 0.20 - 2.99	0.01	Ø 3.0	2030	13.81



60° λ^{25° MD
VHM
HM

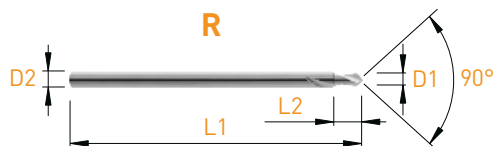
D1 h6	L2	D2 h4	L1	Art. N°	z TiAlN	
2.00	8.00	2.00	39	2680-2.00-60	■	■
3.00	10.00	3.00	39	2680-3.00-60	■	■
4.00	12.00	4.00	50	2680-4.00-60	■	■
5.00	14.00	5.00	50	2680-5.00-60	■	■
6.00	16.00	6.00	50	2680-6.00-60	■	■

Centreurs NC

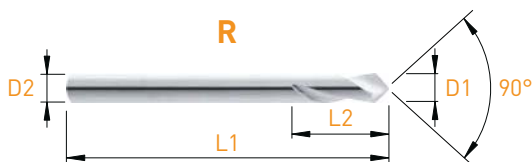
NC-Zentrierbohrer

NC centering drills

1680-90° / 2680-90°



90°	λ^{25°	MD VHM HM	R		
D1 h6	L2	D2 h6	L1	Art. N°	z
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	■



90°	λ^{25°	MD VHM HM	L		R	
D1=D2 h6	L2	L1	Art. N°	z	Art. N°	z
2.00	8.00	39	1680-2.00-90	■	2680-2.00-90	■ ■
2.50	8.00	39	1680-2.50-90	■	2680-2.50-90	■ ■
3.00	10.00	39	1680-3.00-90	■	2680-3.00-90	■ ■
4.00	12.00	50	1680-4.00-90	■	2680-4.00-90	■ ■
5.00	15.00	50	1680-5.00-90	■	2680-5.00-90	■ ■
6.00	16.00	57	1680-6.00-90	■	2680-6.00-90	■ ■
8.00	20.00	63	1680-8.00-90	■	2680-8.00-90	■
10.00	22.00	72	1680-10.00-90	□	2680-10.00-90	□
12.00	24.00	73	1680-12.00-90	□	2680-12.00-90	□
16.00	26.00	82	1680-16.00-90	□	2680-16.00-90	□
20.00	30.00	92	-		2680-20.00-90	□

HSS	R	
	Art. N°	z
	-	
	-	
	2680-3.00-90-HSS	□
	2680-4.00-90-HSS	□
	2680-5.00-90-HSS	□
	2680-6.00-90-HSS	□
	2680-8.00-90-HSS	□
	2680-10.00-90-HSS	□
	2680-12.00-90-HSS	□
	-	
	-	

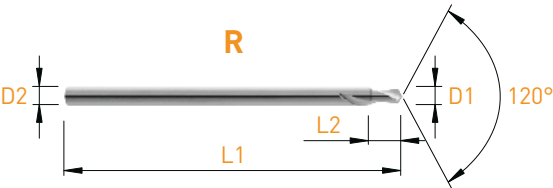
■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

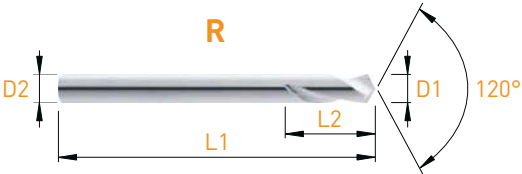
MICRO-LINE

Centreurs NC
NC-Zentrierbohrer
NC centering drills

1680-120° / 2680-120°



120°	λ^{25°	MD VHM HM	R		
D1 h6	L2	D2 h6	L1	Art. N°	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	■



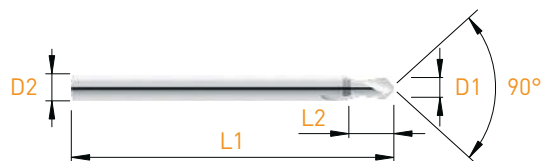
120°	λ^{25°	MD VHM HM	L		R		
D1=D2 h6	L2	L1	Art. N°	z	Art. N°	z	TiAlN
2.00	8.00	39	1680-2.00-120	■	2680-2.00-120	■	■
2.50	8.00	39	1680-2.50-120	■	2680-2.50-120	■	■
3.00	10.00	39	1680-3.00-120	■	2680-3.00-120	■	■
4.00	12.00	50	1680-4.00-120	■	2680-4.00-120	■	■
5.00	15.00	50	1680-5.00-120	■	2680-5.00-120	■	■
6.00	16.00	57	1680-6.00-120	■	2680-6.00-120	■	■
8.00	20.00	63	1680-8.00-120	■	2680-8.00-120	■	■
10.00	22.00	72	1680-10.00-120	□	2680-10.00-120	□	■
12.00	24.00	73	1680-12.00-120	□	2680-12.00-120	□	■
16.00	26.00	82	-		2680-16.00-120	□	■
20.00	30.00	92	-		2680-20.00-120	□	■

Micro-forets de préperçage

Mikro Pilotbohrer

Micro pilot drill

2690



90°

 λ^{32° MD
VHM
HM

D1 _{h6}	L2	D2 _{h4}	L1	Art. N°	z	TIALIN
0.50*	2.50	2	39	2690-0.50	■	
0.60*	2.50	2	39	2690-0.60	■	
0.70*	2.50	2	39	2690-0.70	■	
0.80*	2.50	2	39	2690-0.80	■	
0.90*	2.50	2	39	2690-0.90	■	
1.00	3.00	2	39	2690-1.00	■	
1.10	3.00	2	39	2690-1.10	■	
1.20	3.00	2	39	2690-1.20	■	
1.30	3.00	2	39	2690-1.30	■	
1.40	3.00	2	39	2690-1.40	■	
1.50	3.50	2	39	2690-1.50	■	
1.60	3.50	2	39	2690-1.60	■	
1.70	3.50	2	39	2690-1.70	■	
1.80	3.50	2	39	2690-1.80	■	
1.90	3.50	2	39	2690-1.90	■	
2.00	-	2	39	2690-2.00	■	■
2.10	4.00	3	39	2690-2.10	■	■
2.20	4.00	3	39	2690-2.20	■	■
2.30	4.00	3	39	2690-2.30	■	■
2.40	4.00	3	39	2690-2.40	■	■
2.50	4.00	3	39	2690-2.50	■	■
2.60	4.00	3	39	2690-2.60	■	■
2.70	4.00	3	39	2690-2.70	■	■
2.80	4.00	3	39	2690-2.80	■	■
2.90	4.00	3	39	2690-2.90	■	■
3.00	-	3	50	2690-3.00	■	■

*

 λ^{25°

MICRO-LINE

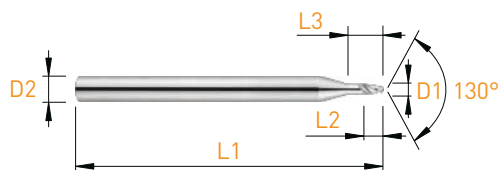
Micro-forets de préperçage

Mikro Pilotbohrer

Micro pilot drill

Ø 0.10 - Ø 0.99 mm

2020



130°

λ^{30°

Z=2

2xD1



MD
VHM
HM

D1 0 / +0.005	L2	L3	L1	D2 h6	Art. N°	z
0.10	0.35	0.55	38	3.00	2020-0.10	■
0.11	0.35	0.55	38	3.00	2020-0.11	■
0.12	0.35	0.55	38	3.00	2020-0.12	■
0.13	0.40	0.60	38	3.00	2020-0.13	■
0.14	0.40	0.60	38	3.00	2020-0.14	■
0.15	0.40	0.60	38	3.00	2020-0.15	■
0.16	0.40	0.60	38	3.00	2020-0.16	■
0.17	0.50	0.70	38	3.00	2020-0.17	■
0.18	0.50	0.70	38	3.00	2020-0.18	■
0.19	0.50	0.70	38	3.00	2020-0.19	■
0.20	0.55	0.75	38	3.00	2020-0.20	■
0.21	0.55	0.75	38	3.00	2020-0.21	■
0.22	0.60	0.80	38	3.00	2020-0.22	■
0.23	0.60	0.80	38	3.00	2020-0.23	■
0.24	0.60	0.80	38	3.00	2020-0.24	■
0.25	0.70	0.90	38	3.00	2020-0.25	■
0.26	0.70	0.90	38	3.00	2020-0.26	■
0.27	0.70	0.90	38	3.00	2020-0.27	■
0.28	0.80	1.00	38	3.00	2020-0.28	■
0.29	0.80	1.00	38	3.00	2020-0.29	■
0.30	0.90	1.20	38	3.00	2020-0.30	■
0.31	0.90	1.20	38	3.00	2020-0.31	■
0.32	0.90	1.20	38	3.00	2020-0.32	■
0.33	0.90	1.20	38	3.00	2020-0.33	■
0.34	0.90	1.35	38	3.00	2020-0.34	■
0.35	0.90	1.35	38	3.00	2020-0.35	■
0.36	0.95	1.35	38	3.00	2020-0.36	■
0.37	0.95	1.35	38	3.00	2020-0.37	■
0.38	0.95	1.50	38	3.00	2020-0.38	■
0.39	0.95	1.50	38	3.00	2020-0.39	■
0.40	0.80	1.60	38	3.00	2020-0.40	■
0.41	0.82	1.60	38	3.00	2020-0.41	■
0.42	0.84	1.60	38	3.00	2020-0.42	■
0.43	0.86	1.60	38	3.00	2020-0.43	■
0.44	0.88	1.60	38	3.00	2020-0.44	■
0.45	0.90	1.60	38	3.00	2020-0.45	■
0.46	0.92	1.70	38	3.00	2020-0.46	■
0.47	0.94	1.70	38	3.00	2020-0.47	■
0.48	0.96	1.70	38	3.00	2020-0.48	■

D1 0 / +0.005	L2	L3	L1	D2 h6	Art. N°	z
0.49	0.98	1.70	38	3.00	2020-0.49	■
0.50	1.00	1.70	38	3.00	2020-0.50	■
0.51	1.02	1.80	38	3.00	2020-0.51	■
0.52	1.04	1.80	38	3.00	2020-0.52	■
0.53	1.06	1.80	38	3.00	2020-0.53	■
0.54	1.08	1.80	38	3.00	2020-0.54	■
0.55	1.10	1.80	38	3.00	2020-0.55	■
0.56	1.12	1.90	38	3.00	2020-0.56	■
0.57	1.14	1.90	38	3.00	2020-0.57	■
0.58	1.16	1.90	38	3.00	2020-0.58	■
0.59	1.18	1.90	38	3.00	2020-0.59	■
0.60	1.20	1.90	38	3.00	2020-0.60	■
0.61	1.22	2.00	38	3.00	2020-0.61	■
0.62	1.24	2.00	38	3.00	2020-0.62	■
0.63	1.26	2.00	38	3.00	2020-0.63	■
0.64	1.28	2.00	38	3.00	2020-0.64	■
0.65	1.30	2.00	38	3.00	2020-0.65	■
0.66	1.32	2.10	38	3.00	2020-0.66	■
0.67	1.34	2.10	38	3.00	2020-0.67	■
0.68	1.36	2.10	38	3.00	2020-0.68	■
0.69	1.38	2.10	38	3.00	2020-0.69	■
0.70	1.40	2.10	38	3.00	2020-0.70	■
0.71	1.42	2.20	38	3.00	2020-0.71	■
0.72	1.44	2.20	38	3.00	2020-0.72	■
0.73	1.46	2.20	38	3.00	2020-0.73	■
0.74	1.48	2.20	38	3.00	2020-0.74	■
0.75	1.50	2.20	38	3.00	2020-0.75	■
0.76	1.52	2.30	38	3.00	2020-0.76	■
0.77	1.54	2.30	38	3.00	2020-0.77	■
0.78	1.56	2.30	38	3.00	2020-0.78	■
0.79	1.58	2.30	38	3.00	2020-0.79	■
0.80	1.60	2.30	38	3.00	2020-0.80	■
0.81	1.62	2.40	38	3.00	2020-0.81	■
0.82	1.64	2.40	38	3.00	2020-0.82	■
0.83	1.66	2.40	38	3.00	2020-0.83	■
0.84	1.68	2.40	38	3.00	2020-0.84	■
0.85	1.70	2.40	38	3.00	2020-0.85	■
0.86	1.72	2.50	38	3.00	2020-0.86	■
0.87	1.74	2.50	38	3.00	2020-0.87	■
0.88	1.76	2.50	38	3.00	2020-0.88	■
0.89	1.78	2.50	38	3.00	2020-0.89	■
0.90	1.80	2.50	38	3.00	2020-0.90	■
0.91	1.82	2.60	38	3.00	2020-0.91	■
0.92	1.84	2.60	38	3.00	2020-0.92	■
0.93	1.86	2.60	38	3.00	2020-0.93	■
0.94	1.88	2.60	38	3.00	2020-0.94	■
0.95	1.90	2.60	38	3.00	2020-0.95	■
0.96	1.92	2.70	38	3.00	2020-0.96	■
0.97	1.94	2.70	38	3.00	2020-0.97	■
0.98	1.96	2.70	38	3.00	2020-0.98	■
0.99	1.98	2.70	38	3.00	2020-0.99	■

Micro-forets de préperçage

Mikro Pilotbohrer

Micro pilot drill

Ø 1.00 - Ø 2.00 mm

2020

D1 0/+0.005	L2	L3	L1	D2 h6	Art. N°	z	D1 0/+0.005	L2	L3	L1	D2 h6	Art. N°	z
1.00	2.00	2.70	38	3.00	2020-1.00	■	1.51	3.02	5.10	38	3.00	2020-1.51	■
1.01	2.02	3.50	38	3.00	2020-1.01	■	1.52	3.04	5.10	38	3.00	2020-1.52	■
1.02	2.04	3.50	38	3.00	2020-1.02	■	1.53	3.06	5.10	38	3.00	2020-1.53	■
1.03	2.06	3.50	38	3.00	2020-1.03	■	1.54	3.08	5.10	38	3.00	2020-1.54	■
1.04	2.08	3.50	38	3.00	2020-1.04	■	1.55	3.10	5.10	38	3.00	2020-1.55	■
1.05	2.10	3.50	38	3.00	2020-1.05	■	1.56	3.12	5.20	38	3.00	2020-1.56	■
1.06	2.12	3.60	38	3.00	2020-1.06	■	1.57	3.14	5.20	38	3.00	2020-1.57	■
1.07	2.14	3.60	38	3.00	2020-1.07	■	1.58	3.16	5.20	38	3.00	2020-1.58	■
1.08	2.16	3.60	38	3.00	2020-1.08	■	1.59	3.18	5.20	38	3.00	2020-1.59	■
1.09	2.18	3.60	38	3.00	2020-1.09	■	1.60	3.20	5.20	38	3.00	2020-1.60	■
1.10	2.20	3.60	38	3.00	2020-1.10	■	1.61	3.22	5.30	38	3.00	2020-1.61	■
1.11	2.22	3.70	38	3.00	2020-1.11	■	1.62	3.24	5.30	38	3.00	2020-1.62	■
1.12	2.24	3.70	38	3.00	2020-1.12	■	1.63	3.26	5.30	38	3.00	2020-1.63	■
1.13	2.26	3.70	38	3.00	2020-1.13	■	1.64	3.28	5.30	38	3.00	2020-1.64	■
1.14	2.28	3.70	38	3.00	2020-1.14	■	1.65	3.30	5.30	38	3.00	2020-1.65	■
1.15	2.30	3.70	38	3.00	2020-1.15	■	1.66	3.32	5.40	38	3.00	2020-1.66	■
1.16	2.32	3.80	38	3.00	2020-1.16	■	1.67	3.34	5.40	38	3.00	2020-1.67	■
1.17	2.34	3.80	38	3.00	2020-1.17	■	1.68	3.36	5.40	38	3.00	2020-1.68	■
1.18	2.36	3.80	38	3.00	2020-1.18	■	1.69	3.38	5.40	38	3.00	2020-1.69	■
1.19	2.38	3.80	38	3.00	2020-1.19	■	1.70	3.40	5.40	38	3.00	2020-1.70	■
1.20	2.40	3.80	38	3.00	2020-1.20	■	1.71	3.42	5.50	38	3.00	2020-1.71	■
1.21	2.42	4.20	38	3.00	2020-1.21	■	1.72	3.44	5.50	38	3.00	2020-1.72	■
1.22	2.44	4.20	38	3.00	2020-1.22	■	1.73	3.46	5.50	38	3.00	2020-1.73	■
1.23	2.46	4.20	38	3.00	2020-1.23	■	1.74	3.48	5.50	38	3.00	2020-1.74	■
1.24	2.48	4.20	38	3.00	2020-1.24	■	1.75	3.50	5.50	38	3.00	2020-1.75	■
1.25	2.50	4.20	38	3.00	2020-1.25	■	1.76	3.52	5.60	38	3.00	2020-1.76	■
1.26	2.52	4.30	38	3.00	2020-1.26	■	1.77	3.54	5.60	38	3.00	2020-1.77	■
1.27	2.54	4.30	38	3.00	2020-1.27	■	1.78	3.56	5.60	38	3.00	2020-1.78	■
1.28	2.56	4.30	38	3.00	2020-1.28	■	1.79	3.58	5.60	38	3.00	2020-1.79	■
1.29	2.58	4.30	38	3.00	2020-1.29	■	1.80	3.60	5.60	38	3.00	2020-1.80	■
1.30	2.60	4.30	38	3.00	2020-1.30	■	1.81	3.62	5.70	38	3.00	2020-1.81	■
1.31	2.62	4.40	38	3.00	2020-1.31	■	1.82	3.64	5.70	38	3.00	2020-1.82	■
1.32	2.64	4.40	38	3.00	2020-1.32	■	1.83	3.66	5.70	38	3.00	2020-1.83	■
1.33	2.66	4.40	38	3.00	2020-1.33	■	1.84	3.68	5.70	38	3.00	2020-1.84	■
1.34	2.68	4.40	38	3.00	2020-1.34	■	1.85	3.70	5.70	38	3.00	2020-1.85	■
1.35	2.70	4.40	38	3.00	2020-1.35	■	1.86	3.72	5.80	38	3.00	2020-1.86	■
1.36	2.72	4.50	38	3.00	2020-1.36	■	1.87	3.74	5.80	38	3.00	2020-1.87	■
1.37	2.74	4.50	38	3.00	2020-1.37	■	1.88	3.76	5.80	38	3.00	2020-1.88	■
1.38	2.76	4.50	38	3.00	2020-1.38	■	1.89	3.78	5.80	38	3.00	2020-1.89	■
1.39	2.78	4.50	38	3.00	2020-1.39	■	1.90	3.80	5.80	38	3.00	2020-1.90	■
1.40	2.80	4.50	38	3.00	2020-1.40	■	1.91	3.82	5.90	38	3.00	2020-1.91	■
1.41	2.82	4.60	38	3.00	2020-1.41	■	1.92	3.84	5.90	38	3.00	2020-1.92	■
1.42	2.84	4.60	38	3.00	2020-1.42	■	1.93	3.86	5.90	38	3.00	2020-1.93	■
1.43	2.86	4.60	38	3.00	2020-1.43	■	1.94	3.88	5.90	38	3.00	2020-1.94	■
1.44	2.88	4.60	38	3.00	2020-1.44	■	1.95	3.90	5.90	38	3.00	2020-1.95	■
1.45	2.90	4.60	38	3.00	2020-1.45	■	1.96	3.92	6.00	38	3.00	2020-1.96	■
1.46	2.92	4.70	38	3.00	2020-1.46	■	1.97	3.94	6.00	38	3.00	2020-1.97	■
1.47	2.94	4.70	38	3.00	2020-1.47	■	1.98	3.96	6.00	38	3.00	2020-1.98	■
1.48	2.96	4.70	38	3.00	2020-1.48	■	1.99	3.98	6.00	38	3.00	2020-1.99	■
1.49	2.98	4.70	38	3.00	2020-1.49	■	2.00	4.00	6.00	38	3.00	2020-2.00	■
1.50	3.00	4.70	38	3.00	2020-1.50	■							

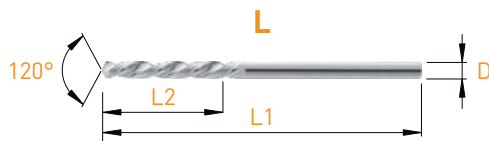
■ = disponible / verfügbar / available

Revêtement sur demande/Beschichtung auf Anfrage/Coating on request

Forets cylindriques
Zylindrische Bohrer
Cylindrical drills

Coupe à gauche
Linkschneiden
Left hand cut

1010



Z=2
MD
VHM
HM

L

L

D h6	L1	L2	Art. N°	z
0.50	30	5	1010-0.50	■
0.55	30	5	1010-0.55	■
0.60	30	5	1010-0.60	■
0.65	30	6	1010-0.65	■
0.70	30	6	1010-0.70	■
0.75	30	8	1010-0.75	■
0.80	30	8	1010-0.80	■
0.85	30	9	1010-0.85	■
0.90	30	9	1010-0.90	■
0.95	30	10	1010-0.95	■
1.00	30	10	1010-1.00	■
1.05	30	10	1010-1.05	■
1.10	30	10	1010-1.10	■
1.15	30	12	1010-1.15	■
1.20	30	12	1010-1.20	■
1.25	30	12	1010-1.25	■
1.30	30	12	1010-1.30	■
1.35	30	12	1010-1.35	■
1.40	30	12	1010-1.40	■
1.45	30	12	1010-1.45	■
1.50	30	12	1010-1.50	■
1.55	40	16	1010-1.55	■
1.60	40	16	1010-1.60	■
1.65	40	16	1010-1.65	■
1.70	40	16	1010-1.70	■
1.75	40	16	1010-1.75	■
1.80	40	16	1010-1.80	■
1.85	40	16	1010-1.85	■
1.90	40	16	1010-1.90	■
1.95	40	16	1010-1.95	■
2.00	40	16	1010-2.00	■
2.05	40	18	1010-2.05	■
2.10	40	18	1010-2.10	■
2.15	40	18	1010-2.15	■
2.20	40	18	1010-2.20	■
2.25	40	18	1010-2.25	■
2.30	40	18	1010-2.30	■
2.35	40	18	1010-2.35	■
2.40	40	18	1010-2.40	■
2.45	40	18	1010-2.45	■
2.50	40	18	1010-2.50	■

D h6	L1	L2	Art. N°	z
2.55	45	18	1010-2.55	■
2.60	45	18	1010-2.60	■
2.65	45	18	1010-2.65	■
2.70	45	18	1010-2.70	■
2.75	45	18	1010-2.75	■
2.80	45	18	1010-2.80	■
2.85	45	18	1010-2.85	■
2.90	45	18	1010-2.90	■
2.95	45	18	1010-2.95	■
3.00	45	18	1010-3.00	■
3.10	50	20	1010-3.10	■
3.20	50	20	1010-3.20	■
3.30	50	20	1010-3.30	■
3.40	50	20	1010-3.40	■
3.50	50	20	1010-3.50	■
3.60	50	20	1010-3.60	■
3.70	50	20	1010-3.70	■
3.80	50	20	1010-3.80	■
3.90	50	20	1010-3.90	■
4.00	50	20	1010-4.00	■
4.10	50	25	1010-4.10	■
4.20	50	25	1010-4.20	■
4.30	50	25	1010-4.30	■
4.40	50	25	1010-4.40	■
4.50	50	25	1010-4.50	■
4.60	50	25	1010-4.60	■
4.70	50	25	1010-4.70	■
4.80	50	25	1010-4.80	■
4.90	50	25	1010-4.90	■
5.00	50	25	1010-5.00	■
5.10	50	25	1010-5.10	■
5.20	50	25	1010-5.20	■
5.30	50	25	1010-5.30	■
5.40	50	25	1010-5.40	■
5.50	50	25	1010-5.50	■
5.60	50	25	1010-5.60	■
5.70	50	25	1010-5.70	■
5.80	50	25	1010-5.80	■
5.90	50	25	1010-5.90	■
6.00	50	25	1010-6.00	■

Forets cylindriques

Zylindrische Bohrer

Cylindrical drills

2010



120°

 λ 30°

Z=2

MD
VHM
HM

D h6	L1	L2	Art. N°	z
0.50	30	5	2010-0.50	■
0.55	30	5	2010-0.55	■
0.60	30	5	2010-0.60	■
0.65	30	6	2010-0.65	■
0.70	30	6	2010-0.70	■
0.75	30	8	2010-0.75	■
0.80	30	8	2010-0.80	■
0.85	30	9	2010-0.85	■
0.90	30	9	2010-0.90	■
0.95	30	10	2010-0.95	■
1.00	30	10	2010-1.00	■
1.05	30	10	2010-1.05	■
1.10	30	10	2010-1.10	■
1.15	30	12	2010-1.15	■
1.20	30	12	2010-1.20	■
1.25	30	12	2010-1.25	■
1.30	30	12	2010-1.30	■
1.35	30	12	2010-1.35	■
1.40	30	12	2010-1.40	■
1.45	30	12	2010-1.45	■
1.50	30	12	2010-1.50	■
1.55	40	16	2010-1.55	■
1.60	40	16	2010-1.60	■
1.65	40	16	2010-1.65	■
1.70	40	16	2010-1.70	■
1.75	40	16	2010-1.75	■
1.80	40	16	2010-1.80	■
1.85	40	16	2010-1.85	■
1.90	40	16	2010-1.90	■
1.95	40	16	2010-1.95	■
2.00	40	16	2010-2.00	■
2.05	40	18	2010-2.05	■
2.10	40	18	2010-2.10	■
2.15	40	18	2010-2.15	■
2.20	40	18	2010-2.20	■
2.25	40	18	2010-2.25	■
2.30	40	18	2010-2.30	■
2.35	40	18	2010-2.35	■
2.40	40	18	2010-2.40	■
2.45	40	18	2010-2.45	■
2.50	40	18	2010-2.50	■

D h6	L1	L2	Art. N°	z
2.55	45	18	2010-2.55	■
2.60	45	18	2010-2.60	■
2.65	45	18	2010-2.65	■
2.70	45	18	2010-2.70	■
2.75	45	18	2010-2.75	■
2.80	45	18	2010-2.80	■
2.85	45	18	2010-2.85	■
2.90	45	18	2010-2.90	■
2.95	45	18	2010-2.95	■
3.00	45	18	2010-3.00	■
3.10	50	20	2010-3.10	■
3.20	50	20	2010-3.20	■
3.30	50	20	2010-3.30	■
3.40	50	20	2010-3.40	■
3.50	50	20	2010-3.50	■
3.60	50	20	2010-3.60	■
3.70	50	20	2010-3.70	■
3.80	50	20	2010-3.80	■
3.90	50	20	2010-3.90	■
4.00	50	20	2010-4.00	■
4.10	50	25	2010-4.10	■
4.20	50	25	2010-4.20	■
4.30	50	25	2010-4.30	■
4.40	50	25	2010-4.40	■
4.50	50	25	2010-4.50	■
4.60	50	25	2010-4.60	■
4.70	50	25	2010-4.70	■
4.80	50	25	2010-4.80	■
4.90	50	25	2010-4.90	■
5.00	50	25	2010-5.00	■
5.10	50	25	2010-5.10	■
5.20	50	25	2010-5.20	■
5.30	50	25	2010-5.30	■
5.40	50	25	2010-5.40	■
5.50	50	25	2010-5.50	■
5.60	50	25	2010-5.60	■
5.70	50	25	2010-5.70	■
5.80	50	25	2010-5.80	■
5.90	50	25	2010-5.90	■
6.00	50	25	2010-6.00	■

■ = disponible / verfügbar / available

Revêtement sur demande / Beschichtung auf Anfrage / Coating on request



D1 h6	L2	D2 h6	L1	Art. N°	z
0.80	2.00	2.00	30	2011-0.80	■
0.90	2.00	2.00	30	2011-0.90	■
1.00	2.00	2.00	30	2011-1.00	■
1.10	2.00	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	4.00	2.00	30	2011-1.50	■
2.00	5.00	2.00	30	2011-2.00	■

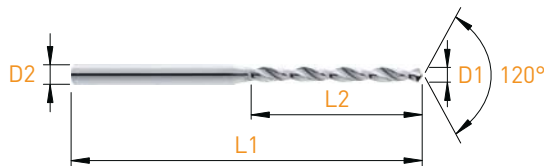
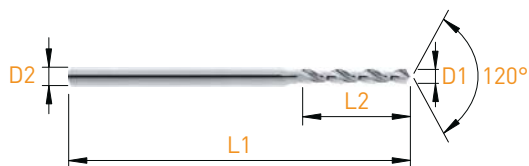
D1 h6	L2	D2 h6	L1	Art. N°	z
0.50	1.70	1.50	30	2012-0.50	■
0.55	1.90	1.50	30	2012-0.55	■
0.60	1.90	1.50	30	2012-0.60	■
0.65	1.90	1.50	30	2012-0.65	■
0.70	2.40	1.50	30	2012-0.70	■
0.75	2.40	1.50	30	2012-0.75	■
0.80	2.60	1.50	30	2012-0.80	■
0.85	2.60	1.50	30	2012-0.85	■
0.90	3.00	1.50	30	2012-0.90	■
0.95	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	■

Micro-forets

Mikrobohrer

Micro drills

2013 / 2014

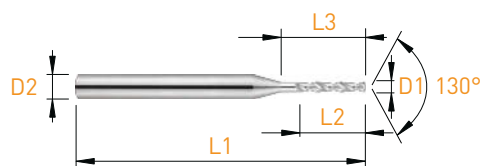


120°	λ^{35°		Z=2	MD VHM HM
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D1 h ₆	L2	D2 h ₆	L1	Art. N°	z
0.40	3.60	1.00	25	2013-0.40	■
0.45	3.60	1.00	25	2013-0.45	■
0.50	4.00	1.00	25	2013-0.50	■
0.55	4.50	1.00	25	2013-0.55	■
0.60	4.50	1.50	30	2013-0.60	■
0.65	5.00	1.50	30	2013-0.65	■
0.70	5.60	1.50	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	■

120°	λ^{30°		Z=2	MD VHM HM
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D1 h ₆	L2	D2 h ₆	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	■



130°

 λ^{35° 

Z=2

6xD1

MD
VHM
HM

D1 0 / -0.004	L2	L3	L1	D2 h6	Art. N°	z
0.10	0.50	0.70	38	3.00	2023-0.10	■
0.11	0.50	0.70	38	3.00	2023-0.11	■
0.12	0.50	0.70	38	3.00	2023-0.12	■
0.13	0.80	1.00	38	3.00	2023-0.13	■
0.14	0.80	1.00	38	3.00	2023-0.14	■
0.15	0.80	1.00	38	3.00	2023-0.15	■
0.16	1.10	1.40	38	3.00	2023-0.16	■
0.17	1.10	1.40	38	3.00	2023-0.17	■
0.18	1.10	1.40	38	3.00	2023-0.18	■
0.19	1.10	1.40	38	3.00	2023-0.19	■
0.20	1.50	1.80	38	3.00	2023-0.20	■
0.21	1.50	1.80	38	3.00	2023-0.21	■
0.22	1.50	1.80	38	3.00	2023-0.22	■
0.23	1.50	1.80	38	3.00	2023-0.23	■
0.24	1.50	1.80	38	3.00	2023-0.24	■
0.25	1.90	2.20	38	3.00	2023-0.25	■
0.26	1.90	2.20	38	3.00	2023-0.26	■
0.27	1.90	2.20	38	3.00	2023-0.27	■
0.28	1.90	2.20	38	3.00	2023-0.28	■
0.29	1.90	2.20	38	3.00	2023-0.29	■
0.30	1.80	2.40	38	3.00	2023-0.30	■
0.31	1.80	2.40	38	3.00	2023-0.31	■
0.32	1.80	2.40	38	3.00	2023-0.32	■
0.33	1.80	2.40	38	3.00	2023-0.33	■
0.34	1.80	2.40	38	3.00	2023-0.34	■
0.35	2.20	2.80	38	3.00	2023-0.35	■
0.36	2.20	2.80	38	3.00	2023-0.36	■
0.37	2.20	2.80	38	3.00	2023-0.37	■
0.38	2.20	2.80	38	3.00	2023-0.38	■
0.39	2.70	3.60	38	3.00	2023-0.39	■
0.40	2.70	3.60	38	3.00	2023-0.40	■
0.41	2.70	3.60	38	3.00	2023-0.41	■
0.42	2.70	3.60	38	3.00	2023-0.42	■
0.43	2.70	3.60	38	3.00	2023-0.43	■
0.44	2.70	3.60	38	3.00	2023-0.44	■
0.45	2.70	3.60	38	3.00	2023-0.45	■
0.46	2.70	3.60	38	3.00	2023-0.46	■
0.47	2.70	3.60	38	3.00	2023-0.47	■
0.48	2.70	3.60	38	3.00	2023-0.48	■

D1 0 / -0.004	L2	L3	L1	D2 h6	Art. N°	z
0.49	3.20	4.00	38	3.00	2023-0.49	■
0.50	3.20	4.00	38	3.00	2023-0.50	■
0.51	3.20	4.00	38	3.00	2023-0.51	■
0.52	3.20	4.00	38	3.00	2023-0.52	■
0.53	3.20	4.00	38	3.00	2023-0.53	■
0.54	3.60	4.50	38	3.00	2023-0.54	■
0.55	3.60	4.50	38	3.00	2023-0.55	■
0.56	3.60	4.50	38	3.00	2023-0.56	■
0.57	3.60	4.50	38	3.00	2023-0.57	■
0.58	3.60	4.50	38	3.00	2023-0.58	■
0.59	3.60	4.50	38	3.00	2023-0.59	■
0.60	3.60	4.50	38	3.00	2023-0.60	■
0.61	3.90	5.00	38	3.00	2023-0.61	■
0.62	3.90	5.00	38	3.00	2023-0.62	■
0.63	3.90	5.00	38	3.00	2023-0.63	■
0.64	3.90	5.00	38	3.00	2023-0.64	■
0.65	3.90	5.00	38	3.00	2023-0.65	■
0.66	3.90	5.00	38	3.00	2023-0.66	■
0.67	3.90	5.00	38	3.00	2023-0.67	■
0.68	4.50	5.60	38	3.00	2023-0.68	■
0.69	4.50	5.60	38	3.00	2023-0.69	■
0.70	4.50	5.60	38	3.00	2023-0.70	■
0.71	4.50	5.60	38	3.00	2023-0.71	■
0.72	4.50	5.60	38	3.00	2023-0.72	■
0.73	4.50	5.60	38	3.00	2023-0.73	■
0.74	4.50	5.60	38	3.00	2023-0.74	■
0.75	4.50	5.60	38	3.00	2023-0.75	■
0.76	5.00	6.30	38	3.00	2023-0.76	■
0.77	5.00	6.30	38	3.00	2023-0.77	■
0.78	5.00	6.30	38	3.00	2023-0.78	■
0.79	5.00	6.30	38	3.00	2023-0.79	■
0.80	5.00	6.30	38	3.00	2023-0.80	■
0.81	5.00	6.30	38	3.00	2023-0.81	■
0.82	5.00	6.30	38	3.00	2023-0.82	■
0.83	5.00	6.30	38	3.00	2023-0.83	■
0.84	5.00	6.30	38	3.00	2023-0.84	■
0.85	5.00	6.30	38	3.00	2023-0.85	■
0.86	5.70	7.10	38	3.00	2023-0.86	■
0.87	5.70	7.10	38	3.00	2023-0.87	■
0.88	5.70	7.10	38	3.00	2023-0.88	■
0.89	5.70	7.10	38	3.00	2023-0.89	■
0.90	5.70	7.10	38	3.00	2023-0.90	■
0.91	5.70	7.10	38	3.00	2023-0.91	■
0.92	5.70	7.10	38	3.00	2023-0.92	■
0.93	5.70	7.10	38	3.00	2023-0.93	■
0.94	5.70	7.10	38	3.00	2023-0.94	■
0.95	5.70	7.10	38	3.00	2023-0.95	■
0.96	6.50	8.00	38	3.00	2023-0.96	■
0.97	6.50	8.00	38	3.00	2023-0.97	■
0.98	6.50	8.00	38	3.00	2023-0.98	■
0.99	6.50	8.00	38	3.00	2023-0.99	■

Micro-forets

Mikrobohrer

Micro drills

Ø 1.00 - Ø 2.00 mm

2023

D1 0 / -0.004	L2	L3	L1	D2 h6	Art. N°	z
1.00	6.50	8.00	38	3.00	2023-1.00	■
1.01	6.50	8.00	38	3.00	2023-1.01	■
1.02	6.50	8.00	38	3.00	2023-1.02	■
1.03	6.50	8.00	38	3.00	2023-1.03	■
1.04	6.50	8.00	38	3.00	2023-1.04	■
1.05	6.50	8.00	38	3.00	2023-1.05	■
1.06	7.30	9.00	38	3.00	2023-1.06	■
1.07	7.30	9.00	38	3.00	2023-1.07	■
1.08	7.30	9.00	38	3.00	2023-1.08	■
1.09	7.30	9.00	38	3.00	2023-1.09	■
1.10	7.30	9.00	38	3.00	2023-1.10	■
1.11	7.30	9.00	38	3.00	2023-1.11	■
1.12	7.30	9.00	38	3.00	2023-1.12	■
1.13	7.30	9.00	38	3.00	2023-1.13	■
1.14	7.30	9.00	38	3.00	2023-1.14	■
1.15	7.30	9.00	38	3.00	2023-1.15	■
1.16	8.20	10.00	38	3.00	2023-1.16	■
1.17	8.20	10.00	38	3.00	2023-1.17	■
1.18	8.20	10.00	38	3.00	2023-1.18	■
1.19	8.20	10.00	38	3.00	2023-1.19	■
1.20	8.20	10.00	38	3.00	2023-1.20	■
1.21	8.20	10.00	38	3.00	2023-1.21	■
1.22	8.20	10.00	38	3.00	2023-1.22	■
1.23	8.20	10.00	38	3.00	2023-1.23	■
1.24	8.20	10.00	38	3.00	2023-1.24	■
1.25	8.20	10.00	38	3.00	2023-1.25	■
1.26	8.20	10.00	38	3.00	2023-1.26	■
1.27	8.20	10.00	38	3.00	2023-1.27	■
1.28	8.20	10.00	38	3.00	2023-1.28	■
1.29	8.20	10.00	38	3.00	2023-1.29	■
1.30	8.20	10.00	38	3.00	2023-1.30	■
1.31	9.20	11.20	38	3.00	2023-1.31	■
1.32	9.20	11.20	38	3.00	2023-1.32	■
1.33	9.20	11.20	38	3.00	2023-1.33	■
1.34	9.20	11.20	38	3.00	2023-1.34	■
1.35	9.20	11.20	38	3.00	2023-1.35	■
1.36	9.20	11.20	38	3.00	2023-1.36	■
1.37	9.20	11.20	38	3.00	2023-1.37	■
1.38	9.20	11.20	38	3.00	2023-1.38	■
1.39	9.20	11.20	38	3.00	2023-1.39	■
1.40	9.20	11.20	38	3.00	2023-1.40	■
1.41	9.20	11.20	38	3.00	2023-1.41	■
1.42	9.20	11.20	38	3.00	2023-1.42	■
1.43	9.20	11.20	38	3.00	2023-1.43	■
1.44	9.20	11.20	38	3.00	2023-1.44	■
1.45	9.20	11.20	38	3.00	2023-1.45	■
1.46	9.20	11.20	38	3.00	2023-1.46	■
1.47	9.20	11.20	38	3.00	2023-1.47	■
1.48	9.20	11.20	38	3.00	2023-1.48	■
1.49	9.20	11.20	38	3.00	2023-1.49	■
1.50	9.20	11.20	38	3.00	2023-1.50	■

D1 0 / -0.004	L2	L3	L1	D2 h6	Art. N°	z
1.51	11.20	13.40	38	3.00	2023-1.51	■
1.52	11.20	13.40	38	3.00	2023-1.52	■
1.53	11.20	13.40	38	3.00	2023-1.53	■
1.54	11.20	13.40	38	3.00	2023-1.54	■
1.55	11.20	13.40	38	3.00	2023-1.55	■
1.56	11.20	13.40	38	3.00	2023-1.56	■
1.57	11.20	13.40	38	3.00	2023-1.57	■
1.58	11.20	13.40	38	3.00	2023-1.58	■
1.59	11.20	13.40	38	3.00	2023-1.59	■
1.60	11.20	13.40	38	3.00	2023-1.60	■
1.61	11.20	13.40	38	3.00	2023-1.61	■
1.62	11.20	13.40	38	3.00	2023-1.62	■
1.63	11.20	13.40	38	3.00	2023-1.63	■
1.64	11.20	13.40	38	3.00	2023-1.64	■
1.65	11.20	13.40	38	3.00	2023-1.65	■
1.66	11.20	13.40	38	3.00	2023-1.66	■
1.67	11.20	13.40	38	3.00	2023-1.67	■
1.68	11.20	13.40	38	3.00	2023-1.68	■
1.69	11.20	13.40	38	3.00	2023-1.69	■
1.70	11.20	13.40	38	3.00	2023-1.70	■
1.71	11.20	13.40	38	3.00	2023-1.71	■
1.72	11.20	13.40	38	3.00	2023-1.72	■
1.73	11.20	13.40	38	3.00	2023-1.73	■
1.74	11.20	13.40	38	3.00	2023-1.74	■
1.75	11.20	13.40	38	3.00	2023-1.75	■
1.76	11.20	13.40	38	3.00	2023-1.76	■
1.77	11.20	13.40	38	3.00	2023-1.77	■
1.78	11.20	13.40	38	3.00	2023-1.78	■
1.79	11.20	13.40	38	3.00	2023-1.79	■
1.80	11.20	13.40	38	3.00	2023-1.80	■
1.81	11.20	13.40	38	3.00	2023-1.81	■
1.82	11.20	13.40	38	3.00	2023-1.82	■
1.83	11.20	13.40	38	3.00	2023-1.83	■
1.84	11.20	13.40	38	3.00	2023-1.84	■
1.85	11.20	13.40	38	3.00	2023-1.85	■
1.86	11.20	13.40	38	3.00	2023-1.86	■
1.87	11.20	13.40	38	3.00	2023-1.87	■
1.88	11.20	13.40	38	3.00	2023-1.88	■
1.89	11.20	13.40	38	3.00	2023-1.89	■
1.90	11.20	13.40	38	3.00	2023-1.90	■
1.91	11.20	13.40	38	3.00	2023-1.91	■
1.92	11.20	13.40	38	3.00	2023-1.92	■
1.93	11.20	13.40	38	3.00	2023-1.93	■
1.94	11.20	13.40	38	3.00	2023-1.94	■
1.95	11.20	13.40	38	3.00	2023-1.95	■
1.96	11.20	13.40	38	3.00	2023-1.96	■
1.97	11.20	13.40	38	3.00	2023-1.97	■
1.98	11.20	13.40	38	3.00	2023-1.98	■
1.99	11.20	13.40	38	3.00	2023-1.99	■
2.00	11.20	13.40	38	3.00	2023-2.00	■

D1 0 / -0.004	L2	L3	L1	D2 h6	Art. N°	Z	D1 0 / -0.004	L2	L3	L1	D2 h6	Art. N°	Z
2.01	12.50	14.00	38	3.00	2023-2.01	■	2.51	14.00	17.00	38	3.00	2023-2.51	■
2.02	12.50	14.00	38	3.00	2023-2.02	■	2.52	14.00	17.00	38	3.00	2023-2.52	■
2.03	12.50	14.00	38	3.00	2023-2.03	■	2.53	14.00	17.00	38	3.00	2023-2.53	■
2.04	12.50	14.00	38	3.00	2023-2.04	■	2.54	14.00	17.00	38	3.00	2023-2.54	■
2.05	12.50	14.00	38	3.00	2023-2.05	■	2.55	14.00	17.00	38	3.00	2023-2.55	■
2.06	12.50	14.00	38	3.00	2023-2.06	■	2.56	14.00	17.00	38	3.00	2023-2.56	■
2.07	12.50	14.00	38	3.00	2023-2.07	■	2.57	14.00	17.00	38	3.00	2023-2.57	■
2.08	12.50	14.00	38	3.00	2023-2.08	■	2.58	14.00	17.00	38	3.00	2023-2.58	■
2.09	12.50	14.00	38	3.00	2023-2.09	■	2.59	14.00	17.00	38	3.00	2023-2.59	■
2.10	12.50	14.00	38	3.00	2023-2.10	■	2.60	14.00	17.00	38	3.00	2023-2.60	■
2.11	12.50	14.00	38	3.00	2023-2.11	■	2.61	14.00	17.00	38	3.00	2023-2.61	■
2.12	12.50	14.00	38	3.00	2023-2.12	■	2.62	14.00	17.00	38	3.00	2023-2.62	■
2.13	12.50	14.00	38	3.00	2023-2.13	■	2.63	14.00	17.00	38	3.00	2023-2.63	■
2.14	12.50	14.00	38	3.00	2023-2.14	■	2.64	14.00	17.00	38	3.00	2023-2.64	■
2.15	12.50	14.00	38	3.00	2023-2.15	■	2.65	14.00	17.00	38	3.00	2023-2.65	■
2.16	12.50	14.00	38	3.00	2023-2.16	■	2.66	14.00	17.00	38	3.00	2023-2.66	■
2.17	12.50	14.00	38	3.00	2023-2.17	■	2.67	14.00	17.00	38	3.00	2023-2.67	■
2.18	12.50	14.00	38	3.00	2023-2.18	■	2.68	14.00	17.00	38	3.00	2023-2.68	■
2.19	12.50	14.00	38	3.00	2023-2.19	■	2.69	14.00	17.00	38	3.00	2023-2.69	■
2.20	12.50	14.00	38	3.00	2023-2.20	■	2.70	14.00	17.00	38	3.00	2023-2.70	■
2.21	12.50	14.00	38	3.00	2023-2.21	■	2.71	14.00	17.00	38	3.00	2023-2.71	■
2.22	12.50	14.00	38	3.00	2023-2.22	■	2.72	14.00	17.00	38	3.00	2023-2.72	■
2.23	12.50	14.00	38	3.00	2023-2.23	■	2.73	14.00	17.00	38	3.00	2023-2.73	■
2.24	12.50	14.00	38	3.00	2023-2.24	■	2.74	14.00	17.00	38	3.00	2023-2.74	■
2.25	12.50	14.00	38	3.00	2023-2.25	■	2.75	14.00	17.00	38	3.00	2023-2.75	■
2.26	12.50	14.00	38	3.00	2023-2.26	■	2.76	14.00	17.00	38	3.00	2023-2.76	■
2.27	12.50	14.00	38	3.00	2023-2.27	■	2.77	14.00	17.00	38	3.00	2023-2.77	■
2.28	12.50	14.00	38	3.00	2023-2.28	■	2.78	14.00	17.00	38	3.00	2023-2.78	■
2.29	12.50	14.00	38	3.00	2023-2.29	■	2.79	14.00	17.00	38	3.00	2023-2.79	■
2.30	12.50	14.00	38	3.00	2023-2.30	■	2.80	14.00	17.00	38	3.00	2023-2.80	■
2.31	12.50	14.00	38	3.00	2023-2.31	■	2.81	14.00	17.00	38	3.00	2023-2.81	■
2.32	12.50	14.00	38	3.00	2023-2.32	■	2.82	14.00	17.00	38	3.00	2023-2.82	■
2.33	12.50	14.00	38	3.00	2023-2.33	■	2.83	14.00	17.00	38	3.00	2023-2.83	■
2.34	12.50	14.00	38	3.00	2023-2.34	■	2.84	14.00	17.00	38	3.00	2023-2.84	■
2.35	12.50	14.00	38	3.00	2023-2.35	■	2.85	14.00	17.00	38	3.00	2023-2.85	■
2.36	12.50	14.00	38	3.00	2023-2.36	■	2.86	14.00	17.00	38	3.00	2023-2.86	■
2.37	12.50	14.00	38	3.00	2023-2.37	■	2.87	14.00	17.00	38	3.00	2023-2.87	■
2.38	12.50	14.00	38	3.00	2023-2.38	■	2.88	14.00	17.00	38	3.00	2023-2.88	■
2.39	12.50	14.00	38	3.00	2023-2.39	■	2.89	14.00	17.00	38	3.00	2023-2.89	■
2.40	12.50	14.00	38	3.00	2023-2.40	■	2.90	14.00	17.00	38	3.00	2023-2.90	■
2.41	12.50	14.00	38	3.00	2023-2.41	■	2.91	14.00	17.00	38	3.00	2023-2.91	■
2.42	12.50	14.00	38	3.00	2023-2.42	■	2.92	14.00	17.00	38	3.00	2023-2.92	■
2.43	12.50	14.00	38	3.00	2023-2.43	■	2.93	14.00	17.00	38	3.00	2023-2.93	■
2.44	12.50	14.00	38	3.00	2023-2.44	■	2.94	14.00	17.00	38	3.00	2023-2.94	■
2.45	12.50	14.00	38	3.00	2023-2.45	■	2.95	14.00	17.00	38	3.00	2023-2.95	■
2.46	12.50	14.00	38	3.00	2023-2.46	■	2.96	14.00	17.00	38	3.00	2023-2.96	■
2.47	12.50	14.00	38	3.00	2023-2.47	■	2.97	14.00	17.00	38	3.00	2023-2.97	■
2.48	12.50	14.00	38	3.00	2023-2.48	■	2.98	14.00	17.00	38	3.00	2023-2.98	■
2.49	12.50	14.00	38	3.00	2023-2.49	■	2.99	14.00	17.00	38	3.00	2023-2.99	■
2.50	14.00	17.00	38	3.00	2023-2.50	■	3.00	14.00	17.00	38	3.00	2023-3.00	■

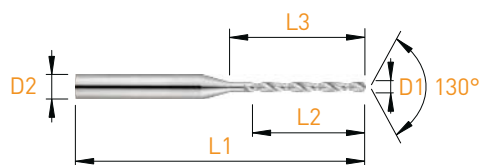
Micro-forets

Mikrobohrer

Micro drills

Ø 0.20 - Ø 1.09 mm

2026



130°

 λ^{25° 

Z=2

12xD1

MD
VHM
HM

D1 h ₆	L2	L3	L1	D2 h ₆	Art. N°	z
0.20	2.40	3.50	38	3.00	2026-0.20	■
0.21	2.50	3.50	38	3.00	2026-0.21	■
0.22	2.70	3.50	38	3.00	2026-0.22	■
0.23	2.80	3.50	38	3.00	2026-0.23	■
0.24	2.90	4.00	38	3.00	2026-0.24	■
0.25	3.00	4.00	38	3.00	2026-0.25	■
0.26	3.10	4.00	38	3.00	2026-0.26	■
0.27	3.30	4.00	38	3.00	2026-0.27	■
0.28	3.40	4.50	38	3.00	2026-0.28	■
0.29	3.50	4.50	38	3.00	2026-0.29	■
0.30	3.60	4.50	38	3.00	2026-0.30	■
0.31	3.70	4.50	38	3.00	2026-0.31	■
0.32	3.90	5.00	38	3.00	2026-0.32	■
0.33	4.00	5.00	38	3.00	2026-0.33	■
0.34	4.10	5.00	38	3.00	2026-0.34	■
0.35	4.20	5.00	38	3.00	2026-0.35	■
0.36	4.30	5.50	38	3.00	2026-0.36	■
0.37	4.50	5.50	38	3.00	2026-0.37	■
0.38	4.60	5.50	38	3.00	2026-0.38	■
0.39	4.70	5.50	38	3.00	2026-0.39	■
0.40	4.80	6.00	38	3.00	2026-0.40	■
0.41	4.90	6.00	38	3.00	2026-0.41	■
0.42	5.10	6.00	38	3.00	2026-0.42	■
0.43	5.20	6.00	38	3.00	2026-0.43	■
0.44	5.30	6.50	38	3.00	2026-0.44	■
0.45	5.40	6.50	38	3.00	2026-0.45	■
0.46	5.50	6.50	38	3.00	2026-0.46	■
0.47	5.70	6.50	38	3.00	2026-0.47	■
0.48	5.80	7.00	38	3.00	2026-0.48	■
0.49	5.90	7.00	38	3.00	2026-0.49	■
0.50	6.00	7.00	38	3.00	2026-0.50	■
0.51	6.10	7.00	38	3.00	2026-0.51	■
0.52	6.30	7.50	38	3.00	2026-0.52	■
0.53	6.40	7.50	38	3.00	2026-0.53	■
0.54	6.50	7.50	38	3.00	2026-0.54	■
0.55	6.60	7.50	38	3.00	2026-0.55	■
0.56	6.70	8.00	38	3.00	2026-0.56	■
0.57	6.90	8.00	38	3.00	2026-0.57	■
0.58	7.00	8.00	38	3.00	2026-0.58	■

D1 h ₆	L2	L3	L1	D2 h ₆	Art. N°	z
0.59	7.10	8.00	38	3.00	2026-0.59	■
0.60	7.20	9.00	38	3.00	2026-0.60	■
0.61	7.30	9.00	38	3.00	2026-0.61	■
0.62	7.50	9.00	38	3.00	2026-0.62	■
0.63	7.60	9.00	38	3.00	2026-0.63	■
0.64	7.70	9.50	38	3.00	2026-0.64	■
0.65	7.80	9.50	38	3.00	2026-0.65	■
0.66	7.90	9.50	38	3.00	2026-0.66	■
0.67	8.10	9.50	38	3.00	2026-0.67	■
0.68	8.20	10.00	38	3.00	2026-0.68	■
0.69	8.30	10.00	38	3.00	2026-0.69	■
0.70	8.40	10.00	38	3.00	2026-0.70	■
0.71	8.50	10.00	38	3.00	2026-0.71	■
0.72	8.70	10.50	38	3.00	2026-0.72	■
0.73	8.80	10.50	38	3.00	2026-0.73	■
0.74	8.90	10.50	38	3.00	2026-0.74	■
0.75	9.00	10.50	38	3.00	2026-0.75	■
0.76	9.10	11.00	38	3.00	2026-0.76	■
0.77	9.30	11.00	38	3.00	2026-0.77	■
0.78	9.40	11.00	38	3.00	2026-0.78	■
0.79	9.50	11.00	38	3.00	2026-0.79	■
0.80	9.60	11.50	38	3.00	2026-0.80	■
0.81	9.70	11.50	38	3.00	2026-0.81	■
0.82	9.90	11.50	38	3.00	2026-0.82	■
0.83	10.00	11.50	38	3.00	2026-0.83	■
0.84	10.10	12.00	38	3.00	2026-0.84	■
0.85	10.20	12.00	38	3.00	2026-0.85	■
0.86	10.30	12.00	38	3.00	2026-0.86	■
0.87	10.50	12.00	38	3.00	2026-0.87	■
0.88	10.60	12.50	38	3.00	2026-0.88	■
0.89	10.70	12.50	38	3.00	2026-0.89	■
0.90	10.80	12.50	38	3.00	2026-0.90	■
0.91	10.90	12.50	38	3.00	2026-0.91	■
0.92	11.10	13.00	38	3.00	2026-0.92	■
0.93	11.20	13.00	38	3.00	2026-0.93	■
0.94	11.30	13.00	38	3.00	2026-0.94	■
0.95	11.40	13.00	38	3.00	2026-0.95	■
0.96	11.50	13.50	38	3.00	2026-0.96	■
0.97	11.70	13.50	38	3.00	2026-0.97	■
0.98	11.80	13.50	38	3.00	2026-0.98	■
0.99	11.90	13.50	38	3.00	2026-0.99	■
1.00	12.00	14.50	38	3.00	2026-1.00	■
1.01	12.10	14.50	38	3.00	2026-1.01	■
1.02	12.30	14.50	38	3.00	2026-1.02	■
1.03	12.40	14.50	38	3.00	2026-1.03	■
1.04	12.50	15.00	38	3.00	2026-1.04	■
1.05	12.60	15.00	38	3.00	2026-1.05	■
1.06	12.70	15.00	38	3.00	2026-1.06	■
1.07	12.90	15.00	38	3.00	2026-1.07	■
1.08	13.00	15.50	38	3.00	2026-1.08	■
1.09	13.10	15.50	38	3.00	2026-1.09	■

D1 h6	L2	L3	L1	D2 h6	Art. N°	Z
1.10	13.20	15.50	38	3.00	2026-1.10	■
1.11	13.30	15.50	38	3.00	2026-1.11	■
1.12	13.50	16.00	38	3.00	2026-1.12	■
1.13	13.60	16.00	38	3.00	2026-1.13	■
1.14	13.70	16.00	38	3.00	2026-1.14	■
1.15	13.80	16.00	38	3.00	2026-1.15	■
1.16	13.90	16.50	38	3.00	2026-1.16	■
1.17	14.10	16.50	38	3.00	2026-1.17	■
1.18	14.20	16.50	38	3.00	2026-1.18	■
1.19	14.30	16.50	38	3.00	2026-1.19	■
1.20	14.40	17.00	38	3.00	2026-1.20	■
1.21	14.50	17.00	38	3.00	2026-1.21	■
1.22	14.70	17.00	38	3.00	2026-1.22	■
1.23	14.80	17.00	38	3.00	2026-1.23	■
1.24	14.90	17.50	38	3.00	2026-1.24	■
1.25	15.00	17.50	38	3.00	2026-1.25	■
1.26	15.10	17.50	50	3.00	2026-1.26	■
1.27	15.30	17.50	50	3.00	2026-1.27	■
1.28	15.40	18.00	50	3.00	2026-1.28	■
1.29	15.50	18.00	50	3.00	2026-1.29	■
1.30	15.60	18.00	50	3.00	2026-1.30	■
1.31	15.70	18.00	50	3.00	2026-1.31	■
1.32	15.90	18.50	50	3.00	2026-1.32	■
1.33	16.00	18.50	50	3.00	2026-1.33	■
1.34	16.10	18.50	50	3.00	2026-1.34	■
1.35	16.20	18.50	50	3.00	2026-1.35	■
1.36	16.30	19.00	50	3.00	2026-1.36	■
1.37	16.50	19.00	50	3.00	2026-1.37	■
1.38	16.60	19.00	50	3.00	2026-1.38	■
1.39	16.70	19.00	50	3.00	2026-1.39	■
1.40	16.80	19.50	50	3.00	2026-1.40	■
1.41	16.90	19.50	50	3.00	2026-1.41	■
1.42	17.10	19.50	50	3.00	2026-1.42	■
1.43	17.20	19.50	50	3.00	2026-1.43	■
1.44	17.30	20.00	50	3.00	2026-1.44	■
1.45	17.40	20.00	50	3.00	2026-1.45	■
1.46	17.50	20.00	50	3.00	2026-1.46	■
1.47	17.70	20.00	50	3.00	2026-1.47	■
1.48	17.80	20.50	50	3.00	2026-1.48	■
1.49	17.90	20.50	50	3.00	2026-1.49	■
1.50	18.00	21.00	50	3.00	2026-1.50	■
1.51	18.10	21.00	50	3.00	2026-1.51	■
1.52	18.30	21.00	50	3.00	2026-1.52	■
1.53	18.40	21.00	50	3.00	2026-1.53	■
1.54	18.50	21.50	50	3.00	2026-1.54	■
1.55	18.60	21.50	50	3.00	2026-1.55	■
1.56	18.70	21.50	50	3.00	2026-1.56	■
1.57	18.90	21.50	50	3.00	2026-1.57	■
1.58	19.00	22.00	50	3.00	2026-1.58	■
1.59	19.10	22.00	50	3.00	2026-1.59	■
1.60	19.20	22.00	50	3.00	2026-1.60	■

D1 h6	L2	L3	L1	D2 h6	Art. N°	Z
1.61	19.30	22.00	50	3.00	2026-1.61	■
1.62	19.40	22.50	50	3.00	2026-1.62	■
1.63	19.60	22.50	50	3.00	2026-1.63	■
1.64	19.70	22.50	50	3.00	2026-1.64	■
1.65	19.80	22.50	50	3.00	2026-1.65	■
1.66	19.90	23.00	50	3.00	2026-1.66	■
1.67	20.10	23.00	50	3.00	2026-1.67	■
1.68	20.20	23.00	50	3.00	2026-1.68	■
1.69	20.30	23.00	50	3.00	2026-1.69	■
1.70	20.40	23.50	50	3.00	2026-1.70	■
1.71	20.50	23.50	50	3.00	2026-1.71	■
1.72	20.70	23.50	50	3.00	2026-1.72	■
1.73	20.80	23.50	50	3.00	2026-1.73	■
1.74	20.90	24.00	50	3.00	2026-1.74	■
1.75	21.00	24.00	50	3.00	2026-1.75	■
1.76	21.10	24.00	50	3.00	2026-1.76	■
1.77	21.30	24.00	50	3.00	2026-1.77	■
1.78	21.40	24.50	50	3.00	2026-1.78	■
1.79	21.50	24.50	50	3.00	2026-1.79	■
1.80	21.60	25.00	50	3.00	2026-1.80	■
1.81	21.70	25.00	50	3.00	2026-1.81	■
1.82	21.90	25.00	50	3.00	2026-1.82	■
1.83	22.00	25.00	50	3.00	2026-1.83	■
1.84	22.10	25.50	50	3.00	2026-1.84	■
1.85	22.20	25.50	50	3.00	2026-1.85	■
1.86	22.30	25.50	50	3.00	2026-1.86	■
1.87	22.50	25.50	50	3.00	2026-1.87	■
1.88	22.60	26.00	50	3.00	2026-1.88	■
1.89	22.70	26.00	50	3.00	2026-1.89	■
1.90	22.80	26.00	50	3.00	2026-1.90	■
1.91	22.90	26.00	50	3.00	2026-1.91	■
1.92	23.10	26.50	50	3.00	2026-1.92	■
1.93	23.20	26.50	50	3.00	2026-1.93	■
1.94	23.30	26.50	50	3.00	2026-1.94	■
1.95	23.40	26.50	50	3.00	2026-1.95	■
1.96	23.50	27.00	50	3.00	2026-1.96	■
1.97	23.70	27.00	50	3.00	2026-1.97	■
1.98	23.80	27.00	50	3.00	2026-1.98	■
1.99	23.90	27.00	50	3.00	2026-1.99	■
2.00	24.00	27.00	50	3.00	2026-2.00	■

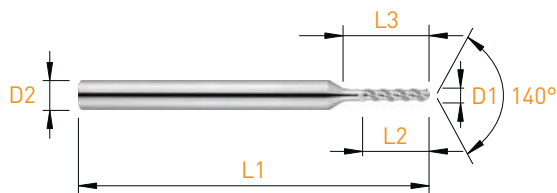
Micro-forets

Mikrobohrer

Micro drills

Ø 0.20 - Ø 1.09 mm

2030



D1 h ₆	L2	L3	L1	D2 h ₆	Art. N°	z
0.20	1.00	1.50	38	3.00	2030-0.20	■
0.21	1.05	1.50	38	3.00	2030-0.21	■
0.22	1.10	1.60	38	3.00	2030-0.22	■
0.23	1.15	1.60	38	3.00	2030-0.23	■
0.24	1.20	1.70	38	3.00	2030-0.24	■
0.25	1.25	1.70	38	3.00	2030-0.25	■
0.26	1.30	1.80	38	3.00	2030-0.26	■
0.27	1.35	1.80	38	3.00	2030-0.27	■
0.28	1.40	1.90	38	3.00	2030-0.28	■
0.29	1.45	1.90	38	3.00	2030-0.29	■
0.30	1.50	2.00	38	3.00	2030-0.30	■
0.31	1.55	2.00	38	3.00	2030-0.31	■
0.32	1.60	2.10	38	3.00	2030-0.32	■
0.33	1.65	2.10	38	3.00	2030-0.33	■
0.34	1.70	2.20	38	3.00	2030-0.34	■
0.35	1.75	2.20	38	3.00	2030-0.35	■
0.36	1.80	2.30	38	3.00	2030-0.36	■
0.37	1.85	2.30	38	3.00	2030-0.37	■
0.38	1.90	2.40	38	3.00	2030-0.38	■
0.39	1.95	2.40	38	3.00	2030-0.39	■
0.40	2.00	2.50	38	3.00	2030-0.40	■
0.41	2.05	2.50	38	3.00	2030-0.41	■
0.42	2.10	2.60	38	3.00	2030-0.42	■
0.43	2.15	2.60	38	3.00	2030-0.43	■
0.44	2.20	2.70	38	3.00	2030-0.44	■
0.45	2.25	2.70	38	3.00	2030-0.45	■
0.46	2.30	2.80	38	3.00	2030-0.46	■
0.47	2.35	2.80	38	3.00	2030-0.47	■
0.48	2.40	2.90	38	3.00	2030-0.48	■
0.49	2.45	2.90	38	3.00	2030-0.49	■
0.50	2.50	3.00	38	3.00	2030-0.50	■
0.51	2.55	3.00	38	3.00	2030-0.51	■
0.52	2.60	3.10	38	3.00	2030-0.52	■
0.53	2.65	3.10	38	3.00	2030-0.53	■
0.54	2.70	3.20	38	3.00	2030-0.54	■
0.55	2.75	3.20	38	3.00	2030-0.55	■
0.56	2.80	3.30	38	3.00	2030-0.56	■
0.57	2.85	3.30	38	3.00	2030-0.57	■
0.58	2.90	3.40	38	3.00	2030-0.58	■

D1 h ₆	L2	L3	L1	D2 h ₆	Art. N°	z
0.59	2.95	3.40	38	3.00	2030-0.59	■
0.60	3.00	3.50	38	3.00	2030-0.60	■
0.61	3.05	3.50	38	3.00	2030-0.61	■
0.62	3.10	3.60	38	3.00	2030-0.62	■
0.63	3.15	3.60	38	3.00	2030-0.63	■
0.64	3.20	3.70	38	3.00	2030-0.64	■
0.65	3.25	3.70	38	3.00	2030-0.65	■
0.66	3.30	3.80	38	3.00	2030-0.66	■
0.67	3.35	3.80	38	3.00	2030-0.67	■
0.68	3.40	3.90	38	3.00	2030-0.68	■
0.69	3.45	3.90	38	3.00	2030-0.69	■
0.70	3.50	4.00	38	3.00	2030-0.70	■
0.71	3.55	4.00	38	3.00	2030-0.71	■
0.72	3.60	4.10	38	3.00	2030-0.72	■
0.73	3.65	4.10	38	3.00	2030-0.73	■
0.74	3.70	4.20	38	3.00	2030-0.74	■
0.75	3.75	4.20	38	3.00	2030-0.75	■
0.76	3.80	4.30	38	3.00	2030-0.76	■
0.77	3.85	4.30	38	3.00	2030-0.77	■
0.78	3.90	4.40	38	3.00	2030-0.78	■
0.79	3.95	4.40	38	3.00	2030-0.79	■
0.80	4.00	4.50	38	3.00	2030-0.80	■
0.81	4.05	4.50	38	3.00	2030-0.81	■
0.82	4.10	4.60	38	3.00	2030-0.82	■
0.83	4.15	4.60	38	3.00	2030-0.83	■
0.84	4.20	4.70	38	3.00	2030-0.84	■
0.85	4.25	4.70	38	3.00	2030-0.85	■
0.86	4.30	4.80	38	3.00	2030-0.86	■
0.87	4.35	4.80	38	3.00	2030-0.87	■
0.88	4.40	4.90	38	3.00	2030-0.88	■
0.89	4.45	4.90	38	3.00	2030-0.89	■
0.90	4.50	5.00	38	3.00	2030-0.90	■
0.91	4.55	5.00	38	3.00	2030-0.91	■
0.92	4.60	5.10	38	3.00	2030-0.92	■
0.93	4.65	5.10	38	3.00	2030-0.93	■
0.94	4.70	5.20	38	3.00	2030-0.94	■
0.95	4.75	5.20	38	3.00	2030-0.95	■
0.96	4.80	5.30	38	3.00	2030-0.96	■
0.97	4.85	5.30	38	3.00	2030-0.97	■
0.98	4.90	5.40	38	3.00	2030-0.98	■
0.99	4.95	5.40	38	3.00	2030-0.99	■
1.00	5.00	6.50	38	3.00	2030-1.00	■
1.01	5.05	6.50	38	3.00	2030-1.01	■
1.02	5.10	6.50	38	3.00	2030-1.02	■
1.03	5.15	6.50	38	3.00	2030-1.03	■
1.04	5.20	6.50	38	3.00	2030-1.04	■
1.05	5.25	6.50	38	3.00	2030-1.05	■
1.06	5.30	6.50	38	3.00	2030-1.06	■
1.07	5.35	7.50	38	3.00	2030-1.07	■
1.08	5.40	7.50	38	3.00	2030-1.08	■
1.09	5.45	7.50	38	3.00	2030-1.09	■

D1 h6	L2	L3	L1	D2 h6	Art. N°	Z	D1 h6	L2	L3	L1	D2 h6	Art. N°	Z
1.10	5.50	7.50	38	3.00	2030-1.10	■	1.61	8.05	10.50	38	3.00	2030-1.61	■
1.11	5.55	7.50	38	3.00	2030-1.11	■	1.62	8.10	10.50	38	3.00	2030-1.62	■
1.12	5.60	7.50	38	3.00	2030-1.12	■	1.63	8.15	10.50	38	3.00	2030-1.63	■
1.13	5.65	7.50	38	3.00	2030-1.13	■	1.64	8.20	10.50	38	3.00	2030-1.64	■
1.14	5.70	7.50	38	3.00	2030-1.14	■	1.65	8.25	10.50	38	3.00	2030-1.65	■
1.15	5.75	7.50	38	3.00	2030-1.15	■	1.66	8.30	10.50	38	3.00	2030-1.66	■
1.16	5.80	7.50	38	3.00	2030-1.16	■	1.67	8.35	10.50	38	3.00	2030-1.67	■
1.17	5.85	7.50	38	3.00	2030-1.17	■	1.68	8.40	10.50	38	3.00	2030-1.68	■
1.18	5.90	8.50	38	3.00	2030-1.18	■	1.69	8.45	10.50	38	3.00	2030-1.69	■
1.19	5.95	8.50	38	3.00	2030-1.19	■	1.70	8.50	10.50	38	3.00	2030-1.70	■
1.20	6.00	8.50	38	3.00	2030-1.20	■	1.71	8.55	11.50	38	3.00	2030-1.71	■
1.21	6.05	8.50	38	3.00	2030-1.21	■	1.72	8.60	11.50	38	3.00	2030-1.72	■
1.22	6.10	8.50	38	3.00	2030-1.22	■	1.73	8.65	11.50	38	3.00	2030-1.73	■
1.23	6.15	8.50	38	3.00	2030-1.23	■	1.74	8.70	11.50	38	3.00	2030-1.74	■
1.24	6.20	8.50	38	3.00	2030-1.24	■	1.75	8.75	11.50	38	3.00	2030-1.75	■
1.25	6.25	8.50	38	3.00	2030-1.25	■	1.76	8.80	11.50	38	3.00	2030-1.76	■
1.26	6.30	8.50	38	3.00	2030-1.26	■	1.77	8.85	11.50	38	3.00	2030-1.77	■
1.27	6.35	8.50	38	3.00	2030-1.27	■	1.78	8.90	11.50	38	3.00	2030-1.78	■
1.28	6.40	8.50	38	3.00	2030-1.28	■	1.79	8.95	11.50	38	3.00	2030-1.79	■
1.29	6.45	8.50	38	3.00	2030-1.29	■	1.80	9.00	11.50	38	3.00	2030-1.80	■
1.30	6.50	8.50	38	3.00	2030-1.30	■	1.81	9.05	11.50	38	3.00	2030-1.81	■
1.31	6.55	8.50	38	3.00	2030-1.31	■	1.82	9.10	11.50	38	3.00	2030-1.82	■
1.32	6.60	8.50	38	3.00	2030-1.32	■	1.83	9.15	11.50	38	3.00	2030-1.83	■
1.33	6.65	9.50	38	3.00	2030-1.33	■	1.84	9.20	11.50	38	3.00	2030-1.84	■
1.34	6.70	9.50	38	3.00	2030-1.34	■	1.85	9.25	11.50	38	3.00	2030-1.85	■
1.35	6.75	9.50	38	3.00	2030-1.35	■	1.86	9.30	11.50	38	3.00	2030-1.86	■
1.36	6.80	9.50	38	3.00	2030-1.36	■	1.87	9.35	11.50	38	3.00	2030-1.87	■
1.37	6.85	9.50	38	3.00	2030-1.37	■	1.88	9.40	11.50	38	3.00	2030-1.88	■
1.38	6.90	9.50	38	3.00	2030-1.38	■	1.89	9.45	11.50	38	3.00	2030-1.89	■
1.39	6.95	9.50	38	3.00	2030-1.39	■	1.90	9.50	11.50	38	3.00	2030-1.90	■
1.40	7.00	9.50	38	3.00	2030-1.40	■	1.91	9.55	12.50	38	3.00	2030-1.91	■
1.41	7.05	9.50	38	3.00	2030-1.41	■	1.92	9.60	12.50	38	3.00	2030-1.92	■
1.42	7.10	9.50	38	3.00	2030-1.42	■	1.93	9.65	12.50	38	3.00	2030-1.93	■
1.43	7.15	9.50	38	3.00	2030-1.43	■	1.94	9.70	12.50	38	3.00	2030-1.94	■
1.44	7.20	9.50	38	3.00	2030-1.44	■	1.95	9.75	12.50	38	3.00	2030-1.95	■
1.45	7.25	9.50	38	3.00	2030-1.45	■	1.96	9.80	12.50	38	3.00	2030-1.96	■
1.46	7.30	9.50	38	3.00	2030-1.46	■	1.97	9.85	12.50	38	3.00	2030-1.97	■
1.47	7.35	9.50	38	3.00	2030-1.47	■	1.98	9.90	12.50	38	3.00	2030-1.98	■
1.48	7.40	9.50	38	3.00	2030-1.48	■	1.99	9.95	12.50	38	3.00	2030-1.99	■
1.49	7.45	9.50	38	3.00	2030-1.49	■	2.00	10.00	12.50	38	3.00	2030-2.00	■
1.50	7.50	9.50	38	3.00	2030-1.50	■	2.01	10.05	12.50	38	3.00	2030-2.01	■
1.51	7.55	10.50	38	3.00	2030-1.51	■	2.02	10.10	12.50	38	3.00	2030-2.02	■
1.52	7.60	10.50	38	3.00	2030-1.52	■	2.03	10.15	12.50	38	3.00	2030-2.03	■
1.53	7.65	10.50	38	3.00	2030-1.53	■	2.04	10.20	12.50	38	3.00	2030-2.04	■
1.54	7.70	10.50	38	3.00	2030-1.54	■	2.05	10.25	12.50	38	3.00	2030-2.05	■
1.55	7.75	10.50	38	3.00	2030-1.55	■	2.06	10.30	12.50	38	3.00	2030-2.06	■
1.56	7.80	10.50	38	3.00	2030-1.56	■	2.07	10.35	12.50	38	3.00	2030-2.07	■
1.57	7.85	10.50	38	3.00	2030-1.57	■	2.08	10.40	12.50	38	3.00	2030-2.08	■
1.58	7.90	10.50	38	3.00	2030-1.58	■	2.09	10.45	12.50	38	3.00	2030-2.09	■
1.59	7.95	10.50	38	3.00	2030-1.59	■	2.10	10.50	12.50	38	3.00	2030-2.10	■
1.60	8.00	10.50	38	3.00	2030-1.60	■	2.11	10.55	12.50	38	3.00	2030-2.11	■

Micro-forets

Mikrobohrer

Micro drills

Ø 2.12 - Ø 2.99 mm

2030

D1 h6	L2	L3	L1	D2 h6	Art. N°	z
2.12	10.60	12.50	38	3.00	2030-2.12	■
2.13	10.65	13.50	38	3.00	2030-2.13	■
2.14	10.70	13.50	38	3.00	2030-2.14	■
2.15	10.75	13.50	38	3.00	2030-2.15	■
2.16	10.80	13.50	38	3.00	2030-2.16	■
2.17	10.85	13.50	38	3.00	2030-2.17	■
2.18	10.90	13.50	38	3.00	2030-2.18	■
2.19	10.95	13.50	38	3.00	2030-2.19	■
2.20	11.00	13.50	38	3.00	2030-2.20	■
2.21	11.05	13.50	38	3.00	2030-2.21	■
2.22	11.10	13.50	38	3.00	2030-2.22	■
2.23	11.15	13.50	38	3.00	2030-2.23	■
2.24	11.20	13.50	38	3.00	2030-2.24	■
2.25	11.25	13.50	38	3.00	2030-2.25	■
2.26	11.30	13.50	38	3.00	2030-2.26	■
2.27	11.35	13.50	38	3.00	2030-2.27	■
2.28	11.40	13.50	38	3.00	2030-2.28	■
2.29	11.45	13.50	38	3.00	2030-2.29	■
2.30	11.50	13.50	38	3.00	2030-2.30	■
2.31	11.55	13.50	38	3.00	2030-2.31	■
2.32	11.60	13.50	38	3.00	2030-2.32	■
2.33	11.65	13.50	38	3.00	2030-2.33	■
2.34	11.70	13.50	38	3.00	2030-2.34	■
2.35	11.75	13.50	38	3.00	2030-2.35	■
2.36	11.80	13.50	38	3.00	2030-2.36	■
2.37	11.85	14.50	38	3.00	2030-2.37	■
2.38	11.90	14.50	38	3.00	2030-2.38	■
2.39	11.95	14.50	38	3.00	2030-2.39	■
2.40	12.00	14.50	38	3.00	2030-2.40	■
2.41	12.05	14.50	38	3.00	2030-2.41	■
2.42	12.10	14.50	38	3.00	2030-2.42	■
2.43	12.15	14.50	38	3.00	2030-2.43	■
2.44	12.20	14.50	38	3.00	2030-2.44	■
2.45	12.25	14.50	38	3.00	2030-2.45	■
2.46	12.30	14.50	38	3.00	2030-2.46	■
2.47	12.35	14.50	38	3.00	2030-2.47	■
2.48	12.40	14.50	38	3.00	2030-2.48	■
2.49	12.45	14.50	38	3.00	2030-2.49	■
2.50	12.50	14.50	38	3.00	2030-2.50	■
2.51	12.55	14.50	38	3.00	2030-2.51	■
2.52	12.60	14.50	38	3.00	2030-2.52	■
2.53	12.65	14.50	38	3.00	2030-2.53	■
2.54	12.70	14.50	38	3.00	2030-2.54	■
2.55	12.75	14.50	38	3.00	2030-2.55	■
2.56	12.80	14.50	38	3.00	2030-2.56	■
2.57	12.85	14.50	38	3.00	2030-2.57	■
2.58	12.90	14.50	38	3.00	2030-2.58	■
2.59	12.95	14.50	38	3.00	2030-2.59	■
2.60	13.00	14.50	38	3.00	2030-2.60	■
2.61	13.05	14.50	38	3.00	2030-2.61	■
2.62	13.10	14.50	38	3.00	2030-2.62	■

D1 h6	L2	L3	L1	D2 h6	Art. N°	z
2.63	13.15	14.50	38	3.00	2030-2.63	■
2.64	13.20	14.50	38	3.00	2030-2.64	■
2.65	13.25	14.50	38	3.00	2030-2.65	■
2.66	13.30	16.50	38	3.00	2030-2.66	■
2.67	13.35	16.50	38	3.00	2030-2.67	■
2.68	13.40	16.50	38	3.00	2030-2.68	■
2.69	13.45	16.50	38	3.00	2030-2.69	■
2.70	13.50	16.50	38	3.00	2030-2.70	■
2.71	13.55	16.55	38	3.00	2030-2.71	■
2.72	13.60	16.50	38	3.00	2030-2.72	■
2.73	13.65	16.50	38	3.00	2030-2.73	■
2.74	13.70	16.50	38	3.00	2030-2.74	■
2.75	13.75	16.50	38	3.00	2030-2.75	■
2.76	13.80	16.50	38	3.00	2030-2.76	■
2.77	13.85	16.50	38	3.00	2030-2.77	■
2.78	13.90	16.50	38	3.00	2030-2.78	■
2.79	13.95	16.50	38	3.00	2030-2.79	■
2.80	14.00	16.50	38	3.00	2030-2.80	■
2.81	14.05	16.50	38	3.00	2030-2.81	■
2.82	14.10	16.50	38	3.00	2030-2.82	■
2.83	14.15	16.50	38	3.00	2030-2.83	■
2.84	14.20	16.50	38	3.00	2030-2.84	■
2.85	14.25	16.50	38	3.00	2030-2.85	■
2.86	14.30	16.50	38	3.00	2030-2.86	■
2.87	14.35	16.50	38	3.00	2030-2.87	■
2.88	14.40	16.50	38	3.00	2030-2.88	■
2.89	14.45	16.50	38	3.00	2030-2.89	■
2.90	14.50	16.50	38	3.00	2030-2.90	■
2.91	14.55	16.50	38	3.00	2030-2.91	■
2.92	14.60	16.50	38	3.00	2030-2.92	■
2.93	14.65	16.50	38	3.00	2030-2.93	■
2.94	14.70	16.50	38	3.00	2030-2.94	■
2.95	14.75	16.50	38	3.00	2030-2.95	■
2.96	14.80	16.50	38	3.00	2030-2.96	■
2.97	14.85	16.50	38	3.00	2030-2.97	■
2.98	14.90	16.50	38	3.00	2030-2.98	■
2.99	14.95	16.50	38	3.00	2030-2.99	■

Informations techniques et symboles

Technische Informationen und Symbole

Technical information and symbols

MD
VHM
HM

Métal dur
Hartmetall
Hard metal

120°

Angle
Winkel
Angle

λ^{25°

Angle d'hélice
Spiralwinkel
Helix angle

Z=2

Nombre de dents
Anzahl der Zähne
Number of teeth

2xD1

Rapport longueur-diamètre
Länge-Durchmesser Verhältnis
Length to diameter ratio



2 lèvres, affûtage à facettes
2 Schneiden, Facettenschärfen
2 flutes, sharpening with facets



3 lèvres, affûtage à facettes
3 Schneiden, Facettenschärfen
3 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



Coins vifs
Scharfkantige Ecken
Sharp corners



2 dents avec coupe centrale
2 Zähne Zentrumschnitt
2 teeth center cutting



3 dents avec coupe centrale
3 Zähne Zentrumschnitt
3 teeth center cutting



4 dents avec coupe centrale
4 Zähne Zentrumschnitt
4 teeth center cutting



Denture décalée
Versetzte Verzahnung
Alterned teeth

DHD

Denture décalée hélice différente
Versetzte Verzahnung unterschiedliche Spirale
Alterned teeth different helix

DHP

Denture décalée hélice progressive
Versetzte Verzahnung progressive Spirale
Alterned teeth progressive helix

λ^{36°
 λ^{38°
 λ^{40°

Hélice différente
Verschiedene Spirale
Different propeller

$\lambda^{35^\circ/38^\circ}$

Hélice progressive
Progressive Spirale
Progressiv propeller



Fraises hémisphériques
Radiusfräser
End mills with ball nose



Usinage radial et axial
Radiale und axiale Bearbeitung
Radial and axial machining

Informations techniques et symboles

Technische Informationen und Symbole

Technical information and symbols

Matière/Material	N° 1	N° 2
Inox / Rostfreier Stahl / Stainless steel	TiAlN	TiCN
Acier / Stahl / Steel < 700	TiCN	TiAlN
Acier / Stahl / Steel > 700	TiAlN	TiCN
Titane / Titan / Titanium	TiAlN	DLC53
Aluminium	DLC53	TiAlN
Cuivre / Kupfer / Copper	DLC53	TiAlN
Laiton / Messing / Brass	N	DLC53
Laitons sans plomb / Bleifreier Messing / Lead-free brass	DLC53	N
Or & Argent / Gold & Silber / Gold & Silver	N	DLC53
Graphite	DLC53	N
Polymères / Polymere / Polymers	N	DLC53

Diamètre outil Werkzeugdurchmesser Tool diameter	D (mm)		
Nombre de dents Zähnezahl Number of teeth	Z		
Profondeur de coupe Schnitttiefe Cutting depth	ap (mm)		
Largeur de coupe Schnittbreite Cutting width	ae (mm)		
Vitesse de coupe Schnittgeschwindigkeit Cutting speed	(m/min)	Vc =	$\frac{D \times \pi \times n}{1000}$
Nombre de tours Umdrehungen Rotations	(U/min)	n =	$\frac{Vc \times 1000}{\pi \times D}$
Avance par dent Vorschub pro Zahn Cutting feed	(mm)	fz =	$\frac{Vf}{n \times Z}$
Vitesse d'avance Vorschubgeschwindigkeit Cutting speed	(mm/min)	Vf =	fz x Z x n
Débit d'enlèvement de copeaux Spanvolumen Removal of cutting up shaving	(mm³/min)	Q =	ap x ae x Vf
Avance par tour Vorschub pro Umdrehung 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.

Nouveautés présentées dans ce catalogue
Neuheiten dieses Kataloges
New products introduced in this catalogue



Denture extra-fine Extra feine Verzahnung Extra fine teeth						1103	Page Seite Page
D1 js12	8	10	12	15	D1 js12		
D2 H7	3	3	5	5	D2 H7		
Epaisseur Dicke Thickness E +/-0.005	Z = Nombre de dents Zähnezahl Number of teeth				Epaisseur Dicke Thickness E +/-0.005	14.08	
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 INOX INOX Verzahnung INOX teeth					1104	MAXINOX	Page Seite Page
D1 js12	63	80	100	D1 js12			
D2 H7	16	22	22	D2 H7			
Epaisseur Dicke Thickness E ±0.01	Z = Nombre de dents Zähnezahl Number of teeth			Epaisseur Dicke Thickness E ±0.01			
0.80	80	100	120	0.80			
1.00	80	100	120	1.00			



Index

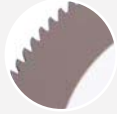
Définition du nombre de dents
Empfohlene Zähnezahl
Recommended number of teeth **> 14.02**

Conseils d'utilisation
Anwendungsempfehlungen
Application recommendations **> 14.03**

Fraises circulaires en métal dur – denture fine
VHM-Kreissägeblätter – feine Verzahnung
Solid carbide slitting saws – fine teeth **Type 1101**  **> 14.04**

Fraises circulaires en métal dur – denture grossière
VHM-Kreissägeblätter – grobe Verzahnung
Solid carbide slitting saws – large teeth **Type 1102**  **> 14.06**

Fraises circulaires en métal dur – denture extra-fine
VHM-Kreissägeblätter – extra feine Verzahnung
Solid carbide slitting saws – extra fine teeth **Type 1103**  **> 14.08**

Fraises circulaires en métal dur – denture INOX
VHM-Kreissägeblätter – INOX Verzahnung
Solid carbide slitting saws – INOX teeth **Type 1104**  **> 14.10**

Exécutions spéciales
Sonderanfertigungen
Special executions  **> 14.11**

Disques en métal dur rectifiés
Fertig geschliffene VHM-Ronden
Fully ground solid carbide discs **Type 1106**  **> 14.12**

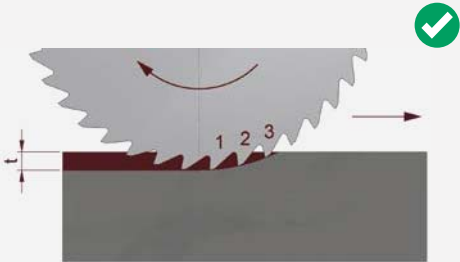
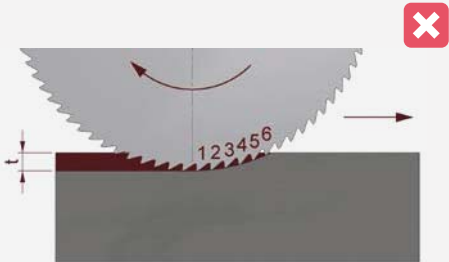
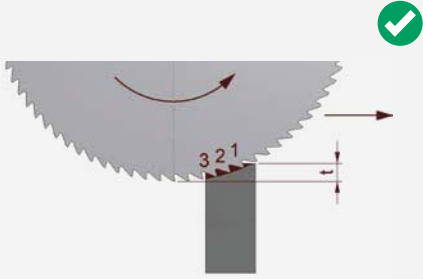
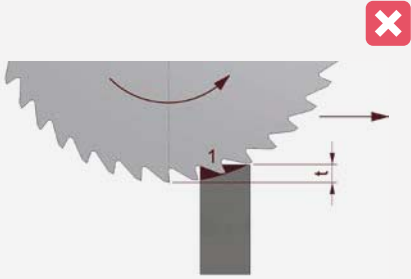
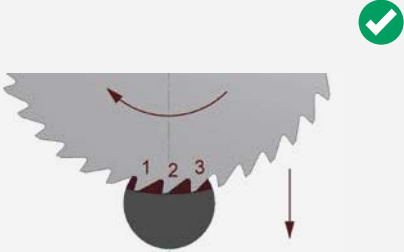
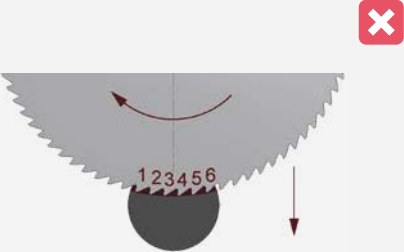
Tasseaux porte-fraise avec serrage avant
Fräsdorne mit Spannung von vorne
Milling arbors with front clamping **Type 2810 / 2811 / 2815**  **> 14.16**

Tasseaux porte-fraise avec serrage arrière
Fräsdorne mit Spannung von hinten
Milling arbors with rear clamping **Type 2820 / 1820**  **> 14.17**

Définition du nombre de dents

Empfohlene Zähnezahl

Recommended number of teeth

OK	KO
Idéalement 2-3 dents en contact Im Idealfall 2-3 Zähne im Einsatz Ideally 2-3 teeth in contact	Trop de dents = avance trop 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
	
	
	

Conseils d'utilisation

Anwendungsempfehlungen

Application recommendations

		Fraises circulaires en métal dur VHM-Kreissägeblätter Solid carbide slitting saws		
Matière Werkstoff Material		Lubrifiant* Kühlung* Coolant*	VC (m/min)	Choix de la denture / avance Verzahnungswahl / Vorschub Teeth selection / cutting feed
Acier de décolletage Automatenstahl Free-cutting steel	P	O / E	120 - 240	Type 1101 + 1104 - Pour usinage peu profond ou longueur à fendre faible. Avance par dent: 0.005 - 0.05** - Für geringe Bearbeitungstiefen oder kurze Schlitzlängen. Vorschub pro Zahn: 0.005 - 0.05** - For low machining depth or short slots. Feed per tooth: 0.005 - 0.05**
Acier Stahl Steel	< 600 N/mm ² P	O / E	100 - 200	
Acier Stahl Steel	< 800 N/mm ² P	O / E	80 - 160	
Acier Stahl Steel	< 1000 N/mm ² P	O / E	60 - 120	
Acier Stahl Steel	> 1000 N/mm ² P	O / E	40 - 80	
Fonte Gusseisen Cast iron	K	A / E	60 - 120	Type 1102 - Pour usinage profond ou grande longueur à fendre. Avance par dent: 0.01 - 0.1** - Für grosse Bearbeitungstiefen oder grosse Schlitzlängen. Vorschub pro Zahn: 0.01 - 0.1** - For deep machining or long slots. Feed per tooth: 0.01 - 0.1**
Acier inoxydable Rostfreistahl Stainless steel	M	O / E	50 - 100	
Aluminium Si < 12%	N	O / E	150 - 600	
Aluminium Si > 12%	N	O / E	80 - 300	Type 1103 - Pour usinage de pièces fragiles ou fines. Avance par dent: 0.002 - 0.02** - Für die Bearbeitung von empfindlichen oder dünnwandigen Werkstücken. Vorschub pro Zahn: 0.002 - 0.02** - For machining of fragile or thin workpieces. Feed per tooth: 0.002 - 0.02**
Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze	N	A / O / E	80 - 300	
Thermoplastique Thermoplaste Thermoplastics	N	A	200 - 700	
Duroplastique Duroplaste Duroplastics	N	A	150 - 600	
Acier réfractaire Warmfester Stahl Heat resistant steel	S	O / E	25 - 60	
Titane Titan Titanium	S	O / E	30 - 60	** selon la matière, l'épaisseur ainsi que la rigidité globale ** je nach Werkstoff, Dicke und Gesamtstarrheit ** according to material, thickness and global rigidity

* O = huile de coupe /Schneidöl / cutting oil

* E = Emulsion

* A = sec (air comprimé) / Trocken (Pressluft) / dry [air]

avec revêtement TiN / TiCN / TiAlN, augmenter les valeurs de 20%

mit TiN / TiCN / TiAlN Beschichtung, Daten um 20% erhöhen

with TiN / TiCN / TiAlN coating, increase data by 20%

Denture fine
Feine Verzahnung
Fine teeth

DIN 1837

- Pour usinage peu profond ou longueur à fendre faible
- Für geringe Bearbeitungstiefen oder kurze Schlitzlängen
- For low machining depth or short slots
- Avance par dent: 0.005 - 0.05 mm
- Vorschub pro Zahn: 0.005 - 0.05 mm
- Feed per tooth: 0.005 - 0.05 mm
- Revêtement sur demande
- Beschichtung auf Anfrage
- Coating on request



Fraises circulaires en métal dur

VHM-Kreissägeblätter

Solid carbide slitting saws

Type 1101

Denture fine Feine Verzahnung Fine teeth												DIN 1837
D1 js12	15	20	25	30	40	50	63	80	100	125	160	D1 js12
D2 H7	5	5	8	8	10	13	16	22	22	22	32	D2 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

Denture grossière
Grobe Verzahnung
Large teeth

DIN 1838

- Pour usinage profond ou grande longueur à fendre

- Avance par dent:
0.01 - 0.1 mm

- Revêtement sur demande

- Für grosse Bearbeitungstiefen oder grosse Schlitzlängen

- Vorschub pro Zahn:
0.01 - 0.1 mm

- Beschichtung auf Anfrage

- For deep machining pr long slots

- Feed per tooth:
0.01 - 0.1 mm

- Coating on request



Fraises circulaires en métal dur

VHM-Kreissägeblätter

Solid carbide slitting saws

Type 1102

Denture grossière Grobe Verzahnung Large teeth												DIN 1838
D1 js12	15	20	25	30	40	50	63	80	100	125	160	D1 js12
D2 H7	5	5	8	8	10	13	16	22	22	22	32	D2 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							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

Denture extra-fine
Extra feine Verzahnung
Extra fine teeth

- Pour usinage de pièces fragiles ou fines
 - Avance par dent: 0.002 - 0.03 mm
 - Idéal pour le décolletage
 - Revêtement sur demande
- Für die Bearbeitung von empfindlichen oder dünnwandigen Werkstücken
 - Vorschub pro Zahn: 0.002 - 0.03 mm
 - Für Langdrehautomaten besonders empfehlenswert
 - Beschichtung auf Anfrage
- For machining of fragile or thin workpieces
 - Feed per tooth: 0.002 - 0.03 mm
 - Recommended on automatic lathes
 - Coating on request



Denture extra-fine Extra feine Verzahnung Extra fine teeth					
D1 js12	8	10	12	15	D1 js12
D2 H7	3	3	5	5	D2 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

Fraises circulaires en métal dur

VHM-Kreissägeblätter

Solid carbide slitting saws

Type 1103

Denture extra-fine Extra feine Verzahnung Extra fine teeth													
D1 js12	8	10	12	15	20	20	20	25	25	25	30	32	D1 js12
D2 H7	3	3	5	5	5	5	6	5	6	8	8	8	D2 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			80	80	100	100	80	0.30
0.35	48	64	64	80	80			80	80	100	100	80	0.35
0.40	48	64	64	80	80		100	80	80	100	100	80	0.40
0.50	48	64	64	80	80		100	80	80	100	100	80	0.50
0.60	48	64	64	80	80			80	80	100	100	80	0.60
0.70	48	64	64	80	80			80	80	100	100	80	0.70
0.80	48	64	64	80	80			80	80	100	100	80	0.80
0.90	48	64	64	80	80			80	80	100	100	80	0.90
1.00	48	64	64	80	80			80	80	100	100	80	1.00
1.20				80	80			80	80	100	100	80	1.20
1.50				80	80			80	80	100	100	80	1.50
2.00				80	80			80	80	100	100	80	2.00
2.50				80	80			80	80	100	100	80	2.50
3.00				80	80			80	80	100	100	80	3.00

D1 js12	35	40	40	40	40	45	45	50	50	63	80	D1 js12
D2 H7	8	8	8	10	10	8	8	10	13	16	16	D2 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

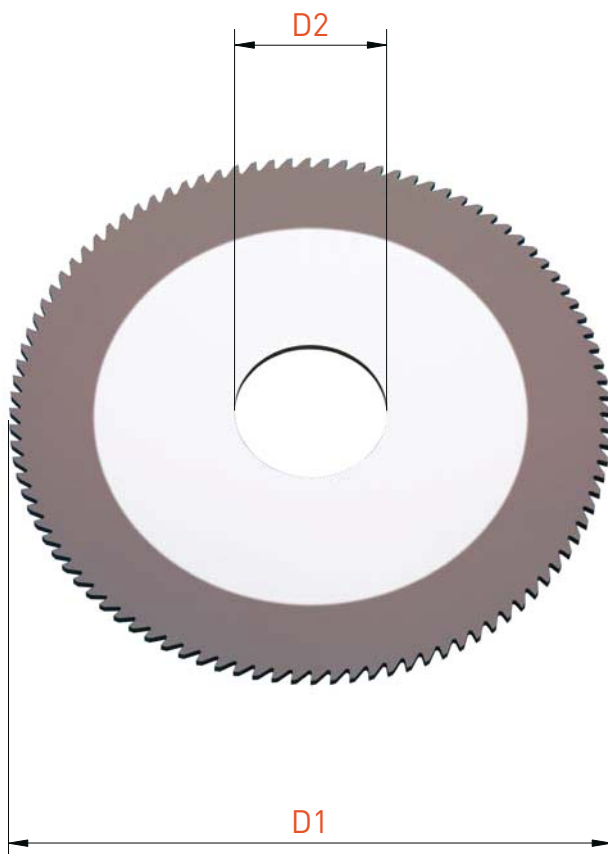
** voir page 14.08 / siehe Seite 14.08 / see page 14.08

* voir type 1101 / siehe Typ 1101 / see type 1101

Denture fine
Feine Verzahnung
Fine teeth

DIN 1837

- Pour usinage peu profond ou longueur à fendre faible
- Für geringe Bearbeitungstiefen oder kurze Schlitzlängen
- For low machining depth or short slots
- Avance par dent: 0.005 - 0.05 mm
- Vorschub pro Zahn: 0.005 - 0.05 mm
- Feed per tooth: 0.005 - 0.05 mm
- Revêtement sur demande
- Beschichtung auf Anfrage
- Coating on request



Fraises circulaires en métal dur

VHM-Kreissägeblätter

Solid carbide slitting saws

Type 1104

Denture INOX INOX Verzahnung INOX teeth				DIN 1837	
D1 js12	63	80	100	D1 js12	MAXINOX
D2 H7	16	22	22	D2 H7	
Epaisseur Dicke Thickness E ±0.01	Z = Nombre de dents Zähnezahl Number of teeth			Epaisseur Dicke Thickness E ±0.01	
0.80	80	100	120	0.80	■
1.00	80	100	120	1.00	■

Exécutions spéciales

Sonderanfertigungen

Special executions

- Denture forme B
- Denture forme W
- Train de fraises
- Alésage avec entrée de clavette
- Autres exécutions spéciales sur demande
- Revêtement sur demande

- B Zahnform
- W Zahnform
- Spezielle Kreissägeblätter im Satz
- Bohrung mit Keilnute
- Andere Sonderanfertigungen auf Anfrage
- Beschichtung auf Anfrage

- Tooth form B
- Tooth form W
- Special slitting saws in set
- Bore with keyway
- Other special executions on request
- Coating on request

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

- Hochglanz Seiten mit Hohlchliff
- 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



Disques en métal dur rectifiés

Fertig geschliffene VHM-Ronden

Fully ground solid carbide discs

Ø 8-35 mm

Type 1106

Prêt pour le taillage de la denture Bereit zum Verzahnen Ready for teeth grinding													
D1 ~ +0.15	8	10	12	15	20	20	25	25	25	30	32	35	D1 ~ +0.15
D2 H7	3	3	5	5	5	6	5	6	8	8	8	8	D2 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

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / je nach Lagerverfügbarkeit / depending on stock availability

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

- Hochglanz Seiten mit Hohlchliff
- 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



Disques en métal dur rectifiés

Fertig geschliffene VHM-Ronden

Fully ground solid carbide discs

Ø 40-160 mm

Type 1106

Prêt pour le taillage de la denture Bereit zum Verzahnen Ready for teeth grinding													
D1 ~ +0.15	40	40	45	50	50	63	80	80	100	125	160	160	D1 ~ +0.15
D2 H7	8	10	8	10	13	16	16	22	22	22	22	32	D2 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

■ = disponible / verfügbar / available

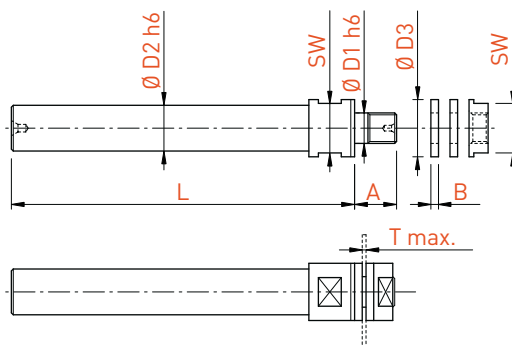
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending on stock availability

Tasseaux porte-fraise avec serrage avant

Fräsdorne mit Spannung von vorne

Milling arbors with front clamping

Type 2810 / 2811 / 2815



Type 2810	Rotation à droite (filet à droite) Drehrichtung rechts (Rechtsgewinde) Right hand rotation (right hand thread)							
D1 h6	D2 h6	D3	L	A	B	SW	T 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) Drehrichtung rechts (Rechtsgewinde) Right hand rotation (right hand thread)							
D1 h6	D2 h6	D3	L	A	B	SW	T max.	Art. N°
16.0	10.0	22.0	80	8.0	2.0	19.0	3.0	2811-16-10

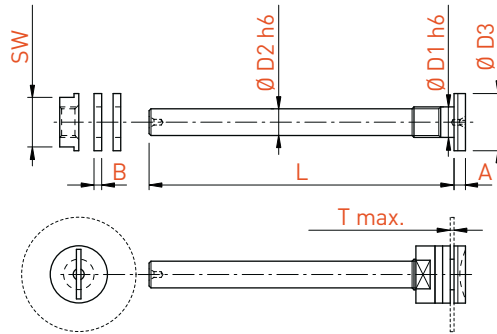
Type 2815	Pour petites fraises circulaires (filet à droite) Für kleine Kreissägeblätter (Rechtsgewinde) For small slitting saws (right hand thread)							
D1 h6	D2 h6	D3	L	A	B	SW	T max.	Art. N°
3.0	5.0	5.0	60	7.0	1.0	4.0	3.0	2815-3-5
5.0	6.0	7.5	70	7.0	1.0	6.0	3.0	2815-5-6

Tasseaux porte-fraise avec serrage arrière

Fräsdorne mit Spannung von hinten

Milling arbors with rear clamping

Type 2820 / 1820



Type 2820	Rotation à droite (filet à gauche) Drehrichtung rechts (Linksgewinde) Right hand rotation (left hand thread)							
	D1 h6	D2 h6	D3	L	A	B	SW	Art. N°
	5.0	4.0	10.0	50	3.0	2.0	8.0	2820-5-4
	6.0	5.0	12.0	60	3.0	2.0	10.0	2820-6-5
	8.0	6.0	15.0	80	3.0	2.0	13.0	2820-8-6
	8.0	7.0	15.0	80	3.0	2.0	13.0	2820-8-7
	10.0	6.0	18.0	70	3.5	2.0	15.0	2820-10-6
	10.0	8.0	18.0	90	3.5	2.0	15.0	2820-10-8
	13.0	10.0	22.0	110	3.5	2.0	19.0	2820-13-10
	16.0	12.0	26.0	120	3.5	2.0	22.0	2820-16-12

Type 1820	Rotation à gauche (filet à droite) Drehrichtung links (Rechtsgewinde) Left hand rotation (right hand thread)							
	D1 h6	D2 h6	D3	L	A	B	SW	Art. N°
	5.0	4.0	10.0	50	3.0	2.0	8.0	1820-5-4
	6.0	5.0	12.0	60	3.0	2.0	10.0	1820-6-5
	8.0	6.0	15.0	70	3.0	2.0	13.0	1820-8-6
	10.0	6.0	18.0	70	3.5	2.0	15.0	1820-10-6

Chaque tasseau est livré avec 2 entretoises et 1 écrou

Jeder Fräsdorn wird mit 2 Abstandsrings und 1 Mutter geliefert

2 distance rings and 1 nut are included with each arbor

Pièces de rechange Ersatzteile Spare parts	E	Art. N°	Art. N°
	2	1820-D1*-A	1820-D1*-B
	2	2810-D1*-A	2810-D1*-B
	2	2811-D1*-A	2811-D1*-B
	1	2815-D1*-A	2815-D1*-B
	2	2820-D1*-A	2820-D1*-B

* Diamètre D1 à spécifier * Durchmesser D1 angeben * Diameter D1 to be specified

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