

TURNING-TOOLS



Alfa **tool**

SWISS  MADE





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ALFA-ISO



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Holders and inserts 80°



SCA



SCL



SCM

80°

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Holders and inserts 55°



SDA



SDJ



SDN



SDH

55°

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SVA



SVJ



SVV



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35°

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Nuances Sorten Grades

TiALN

revêtement PVD
PVD Beschichtung
PVD coating

- nuance universelle
- bonne résistance à la température
- 1^{er} choix pour l'usinage finition des aciers, aciers inoxydables et alliages de titane

- Universal-Sorte
- sehr gute Warmfestigkeit
- für die Bearbeitung von Stahl, rostfreiem Stahl und Titanlegierungen bestens geeignet

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

TiN

revêtement PVD
PVD Beschichtung
PVD coating

- nuance universelle pour travaux légers
- très faible coefficient de frottement
- 1^{er} choix pour l'usinage des matières peu résistantes qui créent des arêtes rapportées
- à éviter pour l'usinage du titane

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

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

K20

non revêtu
unbeschichtet
uncoated

- nuance micro-grain tenace
- 1^{er} choix comme base pour un revêtement
- supporte les coupes interrompues

- zähe Feinkornsorte
- beste Basis für eine Beschichtung
- für unterbrochene Schnitte geeignet

- tough micro-grain grade
- first choice as base for coating
- suitable for interrupted cut

HTA

revêtement PVD
PVD Beschichtung
PVD coating

- nuance très résistante à l'usure
- très bonne résistance à la température
- déconseillé en cas de coupe interrompue et autres conditions d'usinage défavorables

- sehr verschleissfeste Sorte
- sehr gute Warmfestigkeit
- für unterbrochene Schnitte und andere ungünstige Bearbeitungsbedingungen nicht geeignet

- very wear resistant grade
- very good heat resistance
- not suitable for interrupted cut and other unfavourable machining conditions

HTiN

revêtement PVD
PVD Beschichtung
PVD coating

- nuance pour l'usinage den finition des matières peu résistantes qui créent des arêtes rapportées
- à éviter pour l'usinage du titane
- µK10 + revêtement PVD

- Sorte für die Feinbearbeitung von weichen Werkstoffen mit Tendenz zur Bildung von Aufbauschneiden
- für die Bearbeitung von Titan nicht geeignet
- µK10 + PVD Beschichtung

- grade for light machining of low resistance materials which causes edge build-up
- not suitable for titanium machining
- µK10 + PVD coating

K10

non revêtu
unbeschichtet
uncoated

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

- verschleissfeste Feinkorn-Sorte
- empfehlenswert für Titanbearbeitung
- für unterbrochene Schnitte nicht geeignet

- wear resistant micro-grain grade
- suitable for titanium machining
- not suitable for interrupted cut

Nuances Sorten Grades

Tmax

revêtement PVD
PVD Beschichtung
PVD coating

- nuance pour l'usinage ébauche et semi-finition des aciers inoxydables
- très faible coefficient de frottement
- résiste aux températures d'usinage élevées

- Sorte für die Bearbeitung von mittlere bis hohe Belastung in rostfreier Stahl
- sehr geringer Reibwert
- hohe Bearbeitungswarmfestigkeit

- grade for medium to heavy machining of stainless steel
- very low friction ratio
- high machining heat resistance

TAC

revêtement PVD
PVD Beschichtung
PVD coating

- nuance résistante à l'usure pour finition et semi-finition
- 1^{er} choix pour les aciers inoxydables et superalliages
- supporte les coupes interrompues

- verschleissfeste Sorte für mittlere bis Schlichtbearbeitung
- für Rostfreier Stahl und Superlegierung bestens geeignet
- für unterbrochene Schnitte geeignet

- wear resistant for finishing and semi-finishing
- first choice for stainless steel and superalloy
- suitable for interrupted cut

HTAC

revêtement PVD
PVD Beschichtung
PVD coating

- nuance très résistante à l'usure pour finition et semi-finition
- 1^{er} choix pour les aciers inoxydables et superalliages
- déconseillé en cas de coupe interrompue défavorable

- sehr verschleissfeste Sorte für mittlere bis Schlichtbearbeitung
- für Rostfreier Stahl und Superlegierung bestens geeignet
- für unterbrochene Schnitte nicht geeignet

- very wear resistant for finishing and semi-finishing
- first choice for stainless steel and superalloy
- not suitable for interrupted cut

Ti4

revêtement CVD
CVD Beschichtung
CVD coating

- nuance tenace très polyvalente pour usinage moyen à lourd des aciers et aciers alliés
- résiste aux températures d'usinage élevées

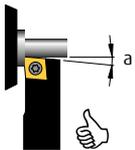
- zähe und vielseitige Sorte für mittlere bis hohe Belastung in Stahl und Stahllegierung
- hohe Bearbeitungswarmfestigkeit

- strong and very versatile grade for medium to heavy machining of steel and alloyed steel
- high machining heat resistance

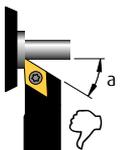
Paramètres de coupe indicatifs Empfohlene Schnittwerte Standard machining data

| VC (m/min) | Nuances / Sorten / Grades | | | | | | |
|--|---------------------------|-------------|-----------|-------------|-----------|---|------------|
| Matière Werkstoff Material | PVD | | | | CVD | non revêtu unbeschichtet uncoated | |
| | TiAlN HTA | TiN HTiN | Tmax | TAC HTAC | Ti4 | K10 | K20 |
| Acier de décolletage Automatenstahl Free-cutting steel | 120 - 200 | 120 - 180 | 120 - 220 | 120 - 200 | 120 - 250 | | |
| Acier Stahl Steel < 600 N/mm ² | 80 - 170 | 80 - 150 | 80 - 200 | 80 - 180 | 100 - 220 | | |
| Acier Stahl Steel < 800 N/mm ² | 60 - 150 | 60 - 120 | 60 - 180 | 60 - 150 | 100 - 200 | | |
| Acier Stahl Steel > 800 N/mm ² | 50 - 120 | | 60 - 150 | 50 - 120 | 80 - 180 | | |
| Acier inoxydable Rostfreistahl Stainless steel | 60 - 140 | 80 - 120 | 80 - 160 | 60 - 150 | 100 - 200 | | |
| Aluminium Si < 12% | | 250 - 2000 | | | | 250 - 2000 | 250 - 1500 |
| Aluminium Si > 12% | | 250 - 1500 | | 150 - 400 | | 200 - 1500 | 200 - 1000 |
| Titane Titan Titanium | 30 - 80 | | | 30 - 70 | | 30 - 70 | 30 - 60 |
| Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze | | 100 - 500 | | 100 - 300 | | 100 - 500 | 100 - 300 |

Conseils d'utilisation Anwendungsempfehlungen Application recommendations



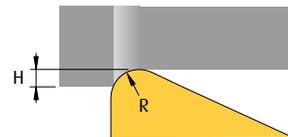
- pour un meilleur état de surface et une meilleure stabilité d'usinage, choisir une géométrie d'outil permettant un angle "a" le plus petit possible



- für bessere Oberflächegüte und Bearbeitungsstabilität, muss die Werkzeuggeometrie mit kleinstmöglichem Winkel "a" ausgewählt werden

- for a better surface finish and better machining stability, choose a tool geometry with angle "a" as small as possible

rapport hauteur de passe / rayon d'outil
Verhältnis zwischen Spantiefe und Werkzeugradius
machining depth / tool radius ratio



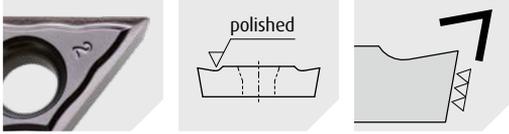
$$H \min = 0.7 \times R$$

$$R \max = 1.4 \times H$$

Géométries de coupe
Spanformgeometrien
Cutting geometries

FN-X8° / ENP-X8°

FN-X8°



Arête de coupe vive
Scharfe Schneidkante
Sharp edge

| f [mm/U] |
|-------------|
| 0.01 - 0.15 |
| 0.01 - 0.15 |
| 0.01 - 0.12 |
| 0.01 - 0.18 |

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe vive
- coupe positive 8° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

APPLICATION

- finition
- géométrie universelle pour l'usinage de toutes matières

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- scharfe Schneidkante
- 8° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

ANWENDUNG

- Schlichtbearbeitung
- allgemeine Geometrie für die Bearbeitung aller Werkstoffe

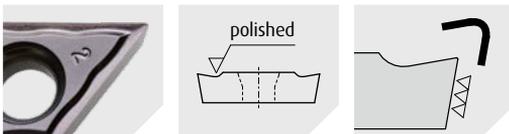
DESCRIPTION

- polished and ground insert
- sharp cutting edge
- 8° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finishing
- general purpose geometry for the machining of all materials

ENP-X8°



Arête de coupe honée
Gehonte Schneidkante
Honed edge

| f [mm/U] |
|-------------|
| 0.03 - 0.18 |
| 0.03 - 0.18 |
| - |
| 0.03 - 0.20 |

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe renforcée par polissage
- coupe positive 8° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

APPLICATION

- finition et semi-finition
- usinage des aciers et aciers inoxydables

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- verstärkte und polierte Schneidkante
- 8° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

ANWENDUNG

- mittlere bis Schlichtbearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl

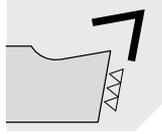
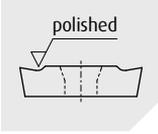
DESCRIPTION

- polished and ground insert
- reinforced and polished cutting edge
- 8° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finishing and semi-finishing
- steel and stainless steel machining

FN-X17°



DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe vive
- coupe positive 17° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- scharfe Schneidkante
- 17° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- sharp cutting edge
- 17° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

Arête de coupe vive
Scharfe Schneidkante
Sharp edge

f [mm/U]

-

0.015 - 0.18

0.015 - 0.15

0.015 - 0.20

APPLICATION

- finition
- usinage des alliages d'aluminium et de titane, des matières non-ferreuses, ainsi que des aciers inoxydables

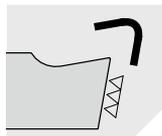
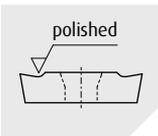
ANWENDUNG

- Schlichtbearbeitung
- Bearbeitung von Aluminium und Titan, Nichteisenmetalle und rostfreiem Stahl

APPLICATION

- finishing
- machining of aluminium alloys, non-ferrous materials and stainless steel

ENP-X17°



DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe renforcée par polissage
- coupe positive 17° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- verstärkte und polierte Schneidkante
- 17° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- reinforced and polished cutting edge
- 17° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

Arête de coupe honée
Gehönte Schneidkante
Honed edge

f [mm/U]

0.03 - 0.20

0.03 - 0.20

0.03 - 0.15

0.03 - 0.25

APPLICATION

- finition et semi-finition
- usinage des aciers et aciers inoxydables

ANWENDUNG

- mittlere bis Schlichtbearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl

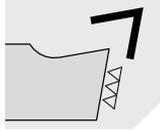
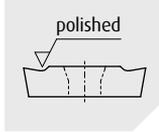
APPLICATION

- finishing and semi-finishing
- steel and stainless steel machining

Géométries de coupe
Spanformgeometrien
Cutting geometries

FN-X25° / ENP-X25°

FN-X25°



Arête de coupe vive
Scharfe Schneidkante
Sharp edge

| f [mm/U] |
|--------------|
| - |
| 0.015 - 0.15 |
| 0.015 - 0.15 |
| 0.015 - 0.30 |

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe vive
- coupe positive 25° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- scharfe Schneidkante
- 25° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- sharp cutting edge
- 25° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finition
- usinage des alliages d'aluminium et des matières non-ferreuses, ainsi que des aciers inoxydables

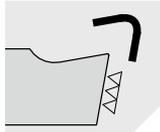
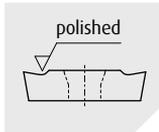
ANWENDUNG

- Schlichtbearbeitung
- Bearbeitung von Aluminium-Liegierungen, Nichteisenmetalle und rostfreiem Stahl

APPLICATION

- finishing
- machining of aluminium alloys, non-ferrous materials and stainless steel

ENP-X25°



Arête de coupe honée
Gehonte Schneidkante
Honed edge

| f [mm/U] |
|-------------|
| - |
| 0.03 - 0.15 |
| 0.03 - 0.15 |
| 0.03 - 0.30 |

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe renforcée par polissage
- coupe positive 25° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- verstärkte und polierte Schneidkante
- 25° positiver Schnitt mit kontrollierte Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- reinforced and polished cutting edge
- 25° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finition et semi-finition
- usinage des aciers et aciers inoxydables

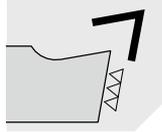
ANWENDUNG

- mittlere bis Schlichtbearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl

APPLICATION

- finishing and semi-finishing
- steel and stainless steel machining

FL/FR-X10°



Arête de coupe vive
Scharfe Schneidkante
Sharp edge

*disponible uniquement en version 35° type VCGT-1103...
nur in 35°-Ausführung Typ VCGT-1103... erhältlich
available only in 35° execution type VCGT-1103*

f [mm/U]

0.015 - 0.12

0.015 - 0.12

0.015 - 0.10

0.015 - 0.15

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe vive
- coupe positive 10° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- scharfe Schneidkante
- 10° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD - Beschichtungen

DESCRIPTION

- polished and ground insert
- sharp cutting edge
- 10° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finition
- géométrie universelle pour l'usinage de toutes matières

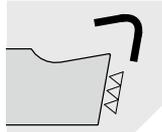
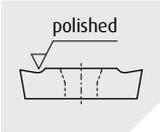
ANWENDUNG

- Schlichtbearbeitung
- allgemeine Geometrie für die Bearbeitung aller Werkstoffe

APPLICATION

- finishing
- general purpose geometry for the machining of all materials

ELP/ERP-X10°



Arête de coupe honée
Gehonte Schneidkante
Honed edge

*disponible uniquement en version 35° type VCGT-1103...
nur in 35°-Ausführung Typ VCGT-1103... erhältlich
available only in 35° execution type VCGT-1103*

f [mm/U]

0.015 - 0.12

0.015 - 0.12

0.015 - 0.10

0.015 - 0.15

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe renforcée par polissage
- coupe positive 10° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- verstärkte und polierte Schneidkante
- 10° positiver Schnitt mit kontrollierte Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- reinforced and polished cutting edge
- 10° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finition et semi-finition
- usinage des aciers et aciers inoxydables

ANWENDUNG

- mittlere bis Schlichtbearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl

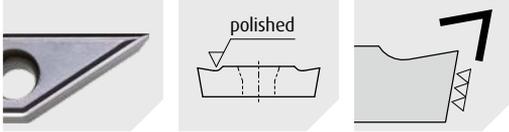
APPLICATION

- finishing and semi-finishing
- steel and stainless steel machining

Géométries de coupe
Spanformgeometrien
Cutting geometries

FN-K18° / FN-O°

FN-K18°



Arête de coupe vive
Scharfe Schneidkante
Sharp edge

*disponible uniquement en version 35° type VCGT-1103...
nur in 35°-Ausführung Typ VCGT-1103... erhältlich
available only in 35° execution type VCGT-1103*

| f [mm/U] |
|-------------|
| 0.01 - 0.10 |
| 0.01 - 0.10 |
| 0.01 - 0.08 |
| 0.01 - 0.15 |

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe vive
- coupe positive 18° avec maîtrise des copeaux
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- scharfe Schneidkante
- 18° positiver Schnitt mit kontrolliertem Spanbruch
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- sharp cutting edge
- 18° positive cut with controlled chip-breaking
- micrograin grades with PVD coatings

APPLICATION

- finition
- géométrie universelle pour l'usinage de toutes matières
- avance F = 0.01-0.10 mm / U

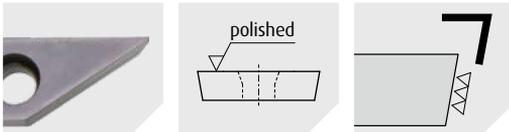
ANWENDUNG

- Schlichtbearbeitung
- allgemeine Geometrie für die Bearbeitung aller Werkstoffe
- Vorschub F = 0.01-0.10 mm / U

APPLICATION

- finishing
- general purpose geometry for the machining of all materials
- feed rat F = 0.01-0.10 mm / U

FN-O°



Arête de coupe vive
Scharfe Schneidkante
Sharp edge

*disponible uniquement en version 35° type VCGW-1103...
nur in 35°-Ausführung Typ VCGW-1103... erhältlich
available only in 35° execution type VCGW-1103*

| f [mm/U] |
|-------------|
| 0.01 - 0.10 |
| - |
| - |
| 0.01 - 0.18 |

DESCRIPTIF

- plaquette polie et rectifiée
- arête de coupe vive
- coupe neutre 0°
- nuances micro-grain avec revêtements PVD

BESCHREIBUNG

- polierte und geschliffene Wendeplatte
- scharfe Schneidkante
- 0° neutral Schnitt
- Feinkornsorten mit PVD-Beschichtungen

DESCRIPTION

- polished and ground insert
- sharp cutting edge
- neutral cut 0°
- micrograin grades with PVD coating

APPLICATION

- finition
- usinage du laiton

ANWENDUNG

- Schlichtbearbeitung
- Messingbearbeitung

APPLICATION

- finishing
- brass machining

EN-XF2



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f [mm/U]

0.03 - 0.15

0.03 - 0.15

0.03 - 0.18

0.03 - 0.18

DESCRIPTIF

- plaquette non rectifiée
- coupe positive avec maîtrise des copeaux
- traitement spécial des arêtes de coupe
- revêtements PVD

BESCHREIBUNG

- ungeschliffene Wendeplatte
- positiver Schnitt mit kontrolliertem Spanbruch
- Schneidkantenabrundung durch Sonderbehandlungsprozess
- PVD Beschichtungen

DESCRIPTION

- unground insert
- positive cut with controlled chip-breaking
- special treatment for cutting edge rounding
- PVD coatings

APPLICATION

- finition et semi-finition
- usinage des aciers et acier inoxydables
- très bonne maîtrise du copeau avec des avances faibles et peu de profondeur de passe

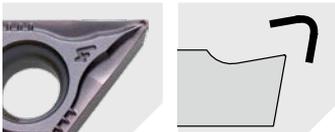
ANWENDUNG

- mittlere bis Schlichtbearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl
- sehr gute Spankontrolle

APPLICATION

- finishing and semi-finishing
- steel and stainless steel machining
- very efficient chip control with low feed rate and small cutting depth

EN-MF



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f [mm/U]

0.05 - 0.30

0.05 - 0.25

-

-

DESCRIPTIF

- plaquette non rectifiée
- coupe positive avec maîtrise des copeaux
- traitement spécial des arêtes de coupe
- revêtements PVD et CVD

BESCHREIBUNG

- ungeschliffene Wendeplatte
- positiver Schnitt mit kontrolliertem Spanbruch
- Schneidkantenabrundung durch Sonderbehandlungsprozess
- PVD und CVD Beschichtungen

DESCRIPTION

- unground insert
- positive cut with controlled chip-breaking
- special treatment for cutting edge rounding
- PVD and CVD coatings

APPLICATION

- travaux moyens
- usinage des aciers et aciers inoxydables

ANWENDUNG

- mittlere Bearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl

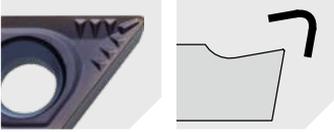
APPLICATION

- medium turning
- steel and stainless steel machining

Géométries de coupe Spanformgeometrien Cutting geometries

EN-HF

EN-HF



Arête de coupe honée
Gehonte Schneidkante
Honed edge

f [mm/U]

0.1 - 0.35

0.1 - 0.30

-

-

DESCRIPTIF

- plaquette non rectifiée
- coupe positive avec maîtrise des copeaux
- traitement spécial des arêtes de coupe
- revêtement PVD et CVD

APPLICATION

- ébauche et travaux moyens
- usinage des aciers et acier inoxydables
- excellente finition des aciers au carbone

BESCHREIBUNG

- ungeschliffene Wendeplatte
- positiver Schnitt mit kontrolliertem Spanbruch
- Schneidkantenabrundung durch Sonderbehandlungsprozess
- PVD und CVD Beschichtung

ANWENDUNG

- Schruppen bis mittlere Bearbeitung
- für die Bearbeitung von Stahl und rostfreiem Stahl
- sehr effizient für die Oberflächengüte im Kohlenstoffstahl

DESCRIPTION

- unground insert
- positive cut with controlled chip-breaking
- special treatment for cutting edge rounding
- PVD and CVD coating

APPLICATION

- roughing to semi-finishing
- steel and stainless steel machining
- very efficient surface finish in carbon steel



SCA



SCL



SCM

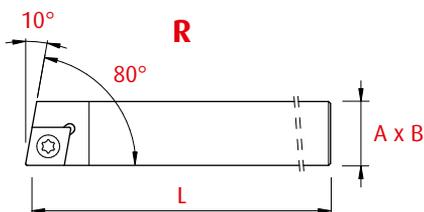
Porte-outils
Halter
Holders

80°

SCA



L



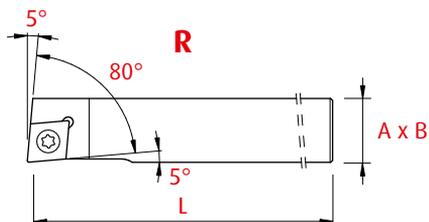
R

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

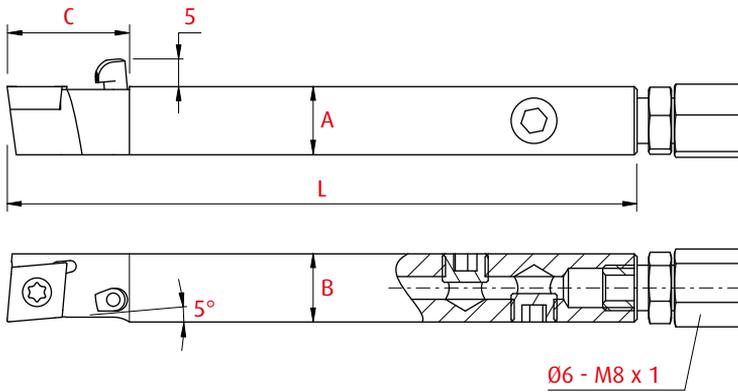
Porte-outils
Halter
Holders

80°

SCL



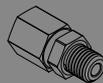
| Art. N° L | Art. N° R | Plaquette WSP Insert | A x B x L |
|------------------|------------------|----------------------------|---------------|
| SCLCL-0808X-06-N | SCLCR-0808X-06-N | CC...0602.. | 8 x 8 x 115 |
| SCLCL-1010X-06-N | SCLCR-1010X-06-N | | 10 x 10 x 115 |
| SCLCL-1212X-06-N | SCLCR-1212X-06-N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



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

Pièces de rechange
 Ersatzteile
 Spare parts

Art. N°



J-M8X1-D6

Art. N°

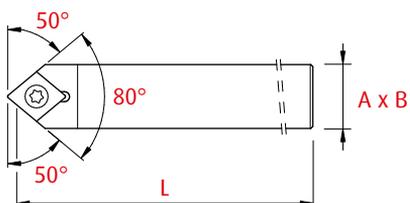


JB-M8X1

Porte-outils
Halter
Holders

80°

SCM



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



**CCGT
FN-X8°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | |
|--------------------|------|-------|-----|---|-----|-----|
| | | TiAlN | TiN | K20 | HTA | K10 |
| CCGT-0602005-FN-X8 | 0.05 | ■ | ■ | ■ | ■ | ■ |
| CCGT-060201-FN-X8 | 0.1 | ■ | ■ | ■ | ■ | ■ |
| CCGT-060202-FN-X8 | 0.2 | ■ | ■ | ■ | ■ | ■ |
| CCGT-060204-FN-X8 | 0.4 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T3005-FN-X8 | 0.05 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T301-FN-X8 | 0.1 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T302-FN-X8 | 0.2 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T304-FN-X8 | 0.4 | ■ | ■ | ■ | ■ | ■ |



**CCGT
ENP-X8°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | |
|---------------------|------|-------|-----|---|-----|-----|
| | | TiAlN | TiN | K20 | HTA | K10 |
| CCGT-0602005-ENP-X8 | 0.05 | ■ | ■ | ■ | | |
| CCGT-060201-ENP-X8 | 0.1 | ■ | ■ | ■ | | |
| CCGT-060202-ENP-X8 | 0.2 | ■ | ■ | ■ | | |
| CCGT-060204-ENP-X8 | 0.4 | ■ | ■ | ■ | | |
| CCGT-09T3005-ENP-X8 | 0.05 | ■ | ■ | ■ | | |
| CCGT-09T301-ENP-X8 | 0.1 | ■ | ■ | ■ | | |
| CCGT-09T302-ENP-X8 | 0.2 | ■ | ■ | ■ | | |
| CCGT-09T304-ENP-X8 | 0.4 | ■ | ■ | ■ | | |

Plaquettes en métal dur
VHM-Wendeplatten
Solid carbide inserts

80°

CCGT-X17°



**CCGT
FN-X17°**



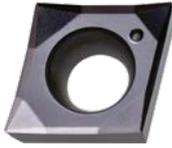
| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K2O | HTA | K10 | |
| CCGT-0602005-FN-X17 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-060201-FN-X17 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-060202-FN-X17 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-060204-FN-X17 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T3005-FN-X17 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T301-FN-X17 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T302-FN-X17 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T304-FN-X17 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T308-FN-X17 | 0.8 | ■ | ■ | ■ | ■ | ■ | ■ |



**CCGT
ENP-X17°**



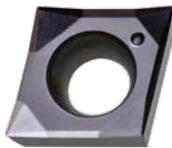
| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|----------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K2O | HTA | K10 | |
| CCGT-0602005-ENP-X17 | 0.05 | ■ | ■ | ■ | | | |
| CCGT-060201-ENP-X17 | 0.1 | ■ | ■ | ■ | | | |
| CCGT-060202-ENP-X17 | 0.2 | ■ | ■ | ■ | | | |
| CCGT-060204-ENP-X17 | 0.4 | ■ | ■ | ■ | | | |
| CCGT-09T3005-ENP-X17 | 0.05 | ■ | ■ | ■ | | | |
| CCGT-09T301-ENP-X17 | 0.1 | ■ | ■ | ■ | | | |
| CCGT-09T302-ENP-X17 | 0.2 | ■ | ■ | ■ | | | |
| CCGT-09T304-ENP-X17 | 0.4 | ■ | ■ | ■ | | | |
| CCGT-09T308-ENP-X17 | 0.8 | ■ | ■ | ■ | | | |



**CCGT
FN-X25°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | |
|---------------------|------|-------|-----|---|-----|-----|
| | | TiAlN | TiN | K20 | HTA | K10 |
| CCGT-0602005-FN-X25 | 0.05 | ■ | ■ | ■ | ■ | ■ |
| CCGT-060201-FN-X25 | 0.1 | ■ | ■ | ■ | ■ | ■ |
| CCGT-060202-FN-X25 | 0.2 | ■ | ■ | ■ | ■ | ■ |
| CCGT-060204-FN-X25 | 0.4 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T3005-FN-X25 | 0.05 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T301-FN-X25 | 0.1 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T302-FN-X25 | 0.2 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T304-FN-X25 | 0.4 | ■ | ■ | ■ | ■ | ■ |
| CCGT-09T308-FN-X25 | 0.8 | ■ | ■ | ■ | ■ | ■ |



**CCGT
ENP-X25°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | |
|----------------------|------|-------|-----|---|-----|-----|
| | | TiAlN | TiN | K20 | HTA | K10 |
| CCGT-0602005-ENP-X25 | 0.05 | ■ | ■ | ■ | | |
| CCGT-060201-ENP-X25 | 0.1 | ■ | ■ | ■ | | |
| CCGT-060202-ENP-X25 | 0.2 | ■ | ■ | ■ | | |
| CCGT-060204-ENP-X25 | 0.4 | ■ | ■ | ■ | | |
| CCGT-09T3005-ENP-X25 | 0.05 | ■ | ■ | ■ | | |
| CCGT-09T301-ENP-X25 | 0.1 | ■ | ■ | ■ | | |
| CCGT-09T302-ENP-X25 | 0.2 | ■ | ■ | ■ | | |
| CCGT-09T304-ENP-X25 | 0.4 | ■ | ■ | ■ | | |
| CCGT-09T308-ENP-X25 | 0.8 | ■ | ■ | ■ | | |

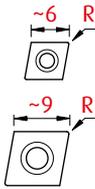
Plaquettes en métal dur
VHM-Wendplatten
Solid carbide inserts

80°

CCMT



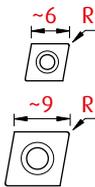
CCMT
EN-XF2



| Art. N° | R | PVD | | | CVD |
|--------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| CCMT-060202-EN-XF2 | 0.2 | ■ | ■ | | |
| CCMT-060204-EN-XF2 | 0.4 | ■ | ■ | | |
| CCMT-09T302-EN-XF2 | 0.2 | ■ | ■ | | |
| CCMT-09T304-EN-XF2 | 0.4 | ■ | ■ | | |



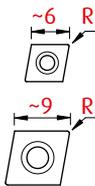
CCMT
EN-MF



| Art. N° | R | PVD | | | CVD |
|-------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| CCMT-060202-EN-MF | 0.2 | ■ | | ■ | |
| CCMT-060204-EN-MF | 0.4 | ■ | | ■ | |
| CCMT-09T302-EN-MF | 0.2 | ■ | | ■ | |
| CCMT-09T304-EN-MF | 0.4 | ■ | | ■ | |



CCMT
EN-HF



| Art. N° | R | PVD | | | CVD |
|-------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| CCMT-060204-EN-HF | 0.4 | ■ | | ■ | |
| CCMT-060208-EN-HF | 0.8 | ■ | | ■ | |
| CCMT-09T304-EN-HF | 0.4 | ■ | | ■ | |
| CCMT-09T308-EN-HF | 0.8 | ■ | | ■ | |

■ = disponible / verfügbar / available



SDA



SDJ



SDN



SDH

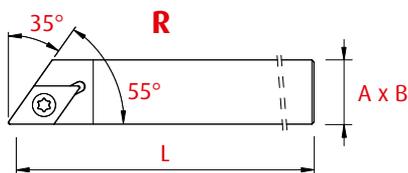
Porte-outils
Halter
Holders

55°

SDA



L



R

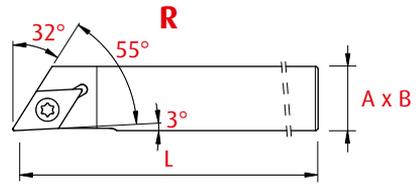
A x B

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

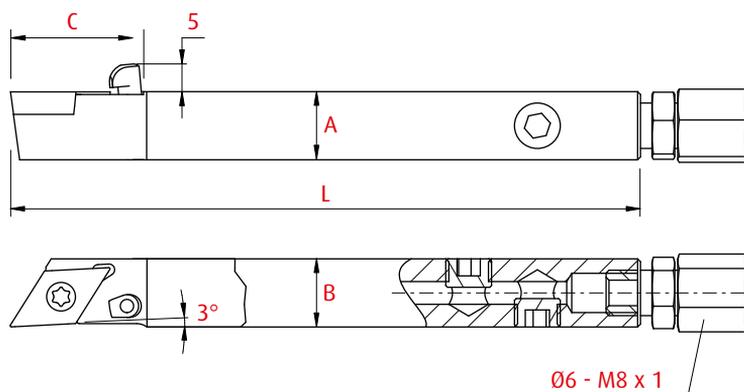
Porte-outils
Halter
Holders

55°

SDJ



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



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

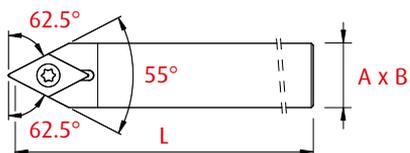
Pièces de rechange
 Ersatzteile
 Spare parts



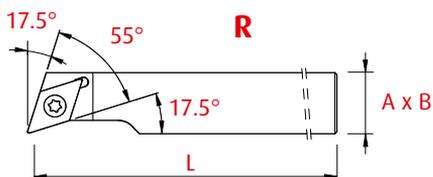
Porte-outils
Halter
Holders

55°

SDN



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

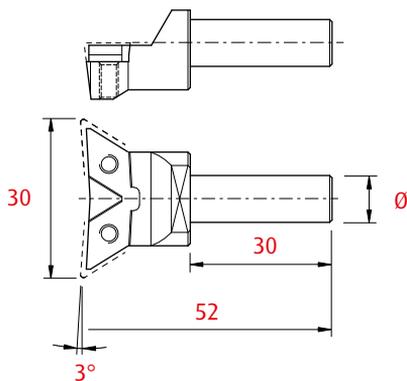


| Art. N° L | Art. N° R | Plaquette WSP Insert | A x B x L |
|------------------|------------------|----------------------------|---------------|
| SDHCL-1010X-07-N | SDHCR-1010X-07-N | DC..-0702.. | 10 x 10 x 115 |
| SDHCL-1212X-07-N | SDHCR-1212X-07-N | | 12 x 12 x 130 |
| SDHCL-1212G-07-N | SDHCR-1212G-07-N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

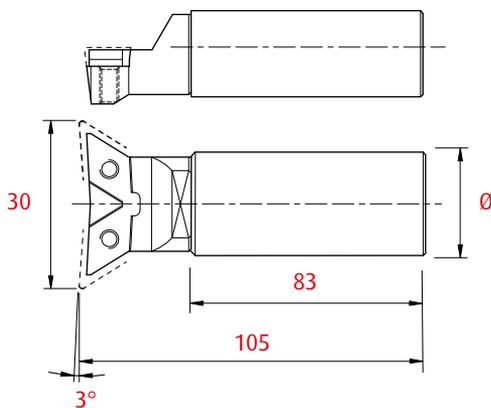
Porte-outils
Halter
Holders

55°

SDU



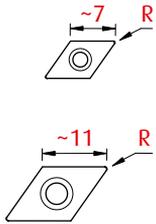
| Art. N° | Plaquette WSP Insert | ∅ |
|-----------------------|----------------------------|----|
| SDUC-D10X-11-N | DC..-11T3.. | 10 |



| Art. N° | Plaquette WSP Insert | ∅ |
|-------------------------|----------------------------|------|
| SDUC-D20X-11-N | DC..-11T3.. | 20 |
| SDUC-D25.4X-11-N | | 25.4 |



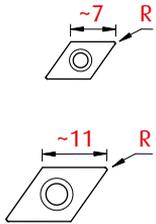
**DCGT
FN-X8°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|--------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| DCGT-0702005-FN-X8 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070201-FN-X8 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070202-FN-X8 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070204-FN-X8 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T3005-FN-X8 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T301-FN-X8 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T302-FN-X8 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T304-FN-X8 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |



**DCGT
ENP-X8°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| DCGT-0702005-ENP-X8 | 0.05 | ■ | ■ | ■ | | | |
| DCGT-070201-ENP-X8 | 0.1 | ■ | ■ | ■ | | | |
| DCGT-070202-ENP-X8 | 0.2 | ■ | ■ | ■ | | | |
| DCGT-070204-ENP-X8 | 0.4 | ■ | ■ | ■ | | | |
| DCGT-11T3005-ENP-X8 | 0.05 | ■ | ■ | ■ | | | |
| DCGT-11T301-ENP-X8 | 0.1 | ■ | ■ | ■ | | | |
| DCGT-11T302-ENP-X8 | 0.2 | ■ | ■ | ■ | | | |
| DCGT-11T304-ENP-X8 | 0.4 | ■ | ■ | ■ | | | |

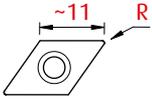
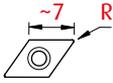
Plaquettes en métal dur
VHM-Wendplatten
Solid carbide inserts

55°

DCGT-X17°



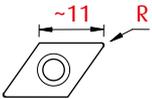
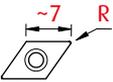
**DCGT
FN-X17°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| DCGT-0702005-FN-X17 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070201-FN-X17 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070202-FN-X17 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070204-FN-X17 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T3005-FN-X17 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T301-FN-X17 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T302-FN-X17 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T304-FN-X17 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T308-FN-X17 | 0.8 | ■ | ■ | ■ | ■ | ■ | ■ |



**DCGT
ENP-X17°**

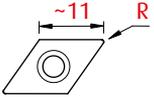
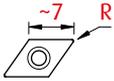


| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|----------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| DCGT-0702005-ENP-X17 | 0.05 | ■ | ■ | ■ | | | |
| DCGT-070201-ENP-X17 | 0.1 | ■ | ■ | ■ | | | |
| DCGT-070202-ENP-X17 | 0.2 | ■ | ■ | ■ | | | |
| DCGT-070204-ENP-X17 | 0.4 | ■ | ■ | ■ | | | |
| DCGT-11T3005-ENP-X17 | 0.05 | ■ | ■ | ■ | | | |
| DCGT-11T301-ENP-X17 | 0.1 | ■ | ■ | ■ | | | |
| DCGT-11T302-ENP-X17 | 0.2 | ■ | ■ | ■ | | | |
| DCGT-11T304-ENP-X17 | 0.4 | ■ | ■ | ■ | | | |
| DCGT-11T308-ENP-X17 | 0.8 | ■ | ■ | ■ | | | |



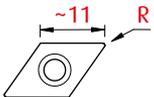
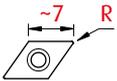
DCGT FN-X25°

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| DCGT-0702005-FN-X25 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070201-FN-X25 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070202-FN-X25 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-070204-FN-X25 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T3005-FN-X25 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T301-FN-X25 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T302-FN-X25 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T304-FN-X25 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| DCGT-11T308-FN-X25 | 0.8 | ■ | ■ | ■ | ■ | ■ | ■ |



DCGT ENP-X25°

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|----------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| DCGT-0702005-ENP-X25 | 0.05 | ■ | ■ | ■ | | | |
| DCGT-070201-ENP-X25 | 0.1 | ■ | ■ | ■ | | | |
| DCGT-070202-ENP-X25 | 0.2 | ■ | ■ | ■ | | | |
| DCGT-070204-ENP-X25 | 0.4 | ■ | ■ | ■ | | | |
| DCGT-11T3005-ENP-X25 | 0.05 | ■ | ■ | ■ | | | |
| DCGT-11T301-ENP-X25 | 0.1 | ■ | ■ | ■ | | | |
| DCGT-11T302-ENP-X25 | 0.2 | ■ | ■ | ■ | | | |
| DCGT-11T304-ENP-X25 | 0.4 | ■ | ■ | ■ | | | |
| DCGT-11T308-ENP-X25 | 0.8 | ■ | ■ | ■ | | | |



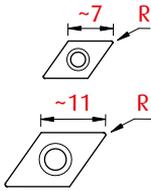
Plaquettes en métal dur
VHM-Wendplatten
Solid carbide inserts

55°

DCMT



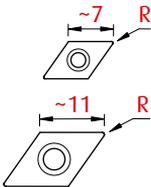
**DCMT
EN-XF2**



| Art. N° | R | PVD | | | CVD |
|--------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| DCMT-070202-EN-XF2 | 0.2 | ■ | ■ | | |
| DCMT-070204-EN-XF2 | 0.4 | ■ | ■ | | |
| DCMT-11T302-EN-XF2 | 0.2 | ■ | ■ | | |
| DCMT-11T304-EN-XF2 | 0.4 | ■ | ■ | | |



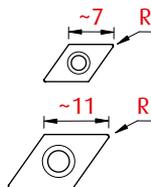
**DCMT
EN-MF**



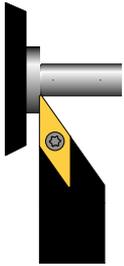
| Art. N° | R | PVD | | | CVD |
|-------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| DCMT-070202-EN-MF | 0.2 | ■ | | ■ | |
| DCMT-070204-EN-MF | 0.4 | ■ | | ■ | |
| DCMT-11T302-EN-MF | 0.2 | ■ | | ■ | |
| DCMT-11T304-EN-MF | 0.4 | ■ | | ■ | |



**DCMT
EN-HF**



| Art. N° | R | PVD | | | CVD |
|-------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| DCMT-070204-EN-HF | 0.4 | ■ | | ■ | |
| DCMT-070208-EN-HF | 0.8 | ■ | | ■ | |
| DCMT-11T304-EN-HF | 0.4 | ■ | | ■ | |
| DCMT-11T308-EN-HF | 0.8 | ■ | | ■ | |



SVA



SVJ



SVV



SVX

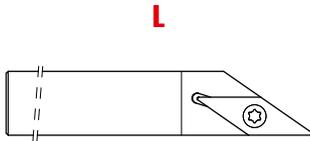


SV-CL/R

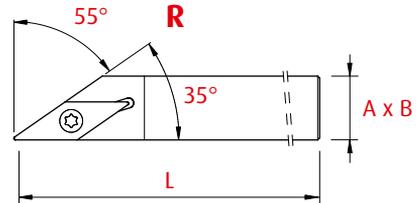
Porte-outils
Halter
Holders

35°

SVA



L



55°

R

35°

A x B

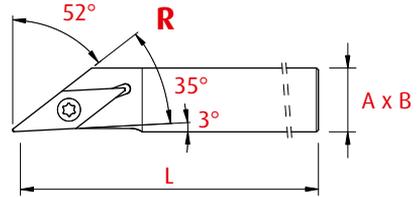
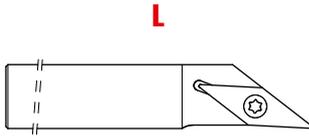
L

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

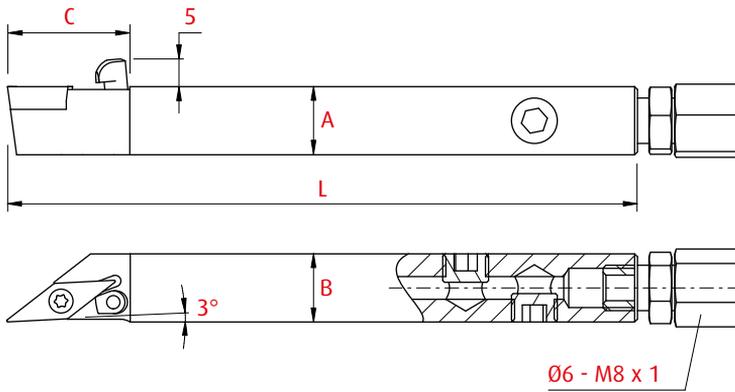
Porte-outils
Halter
Holders

35°

SVJ



| Art. N° L | Art. N° R | Plaquette WSP Insert | A x B x L |
|------------------|------------------|----------------------------|---------------|
| SVJCL-0808X-11-N | SVJCR-0808X-11-N | VC..-1103.. | 8 x 8 x 115 |
| SVJCL-1010X-11-N | SVJCR-1010X-11-N | | 10 x 10 x 115 |
| SVJCL-1212X-11-N | SVJCR-1212X-11-N | | 12 x 12 x 130 |
| SVJCL-1212G-11-N | SVJCR-1212G-11-N | | 12 x 12 x 90 |
| SVJCL-1616X-11-N | SVJCR-1616X-11-N | | 16 x 16 x 130 |
| SVJCL-1616F-11-N | SVJCR-1616F-11-N | | 16 x 16 x 75 |
| SVJCL-2020X-11-N | SVJCR-2020X-11-N | | 20 x 20 x 120 |
| SVJCL-1212X-16-N | SVJCR-1212X-16-N | VC..-1604.. | 12 x 12 x 130 |
| SVJCL-1212G-16-N | SVJCR-1212G-16-N | | 12 x 12 x 90 |
| SVJCL-1616X-16-N | SVJCR-1616X-16-N | | 16 x 16 x 130 |
| SVJCL-1616F-16-N | SVJCR-1616F-16-N | | 16 x 16 x 75 |
| SVJCL-2020X-16-N | SVJCR-2020X-16-N | | 20 x 20 x 120 |



| Art. N° R | Plaquette WSP Insert | A x B x L | C |
|----------------------|----------------------------|---------------|----|
| SVJCR-1010J-11-JET-N | VC..-1103.. | 10 x 10 x 110 | 21 |
| SVJCR-1212J-11-JET-N | | 12 x 12 x 110 | 21 |
| SVJCR-1616J-11-JET-N | | 16 x 16 x 110 | 21 |
| SVJCR-2020J-11-JET-N | | 20 x 20 x 110 | 21 |
| SVJCR-1212J-16-JET-N | VC..-1604.. | 12 x 12 x 110 | 30 |
| SVJCR-1616J-16-JET-N | | 16 x 16 x 110 | 30 |
| SVJCR-2020J-16-JET-N | | 20 x 20 x 110 | 30 |

Pièces de rechange
 Ersatzteile
 Spare parts

Art. N°



J-M8X1-D6

Art. N°

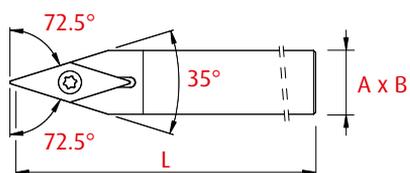


JB-M8X1

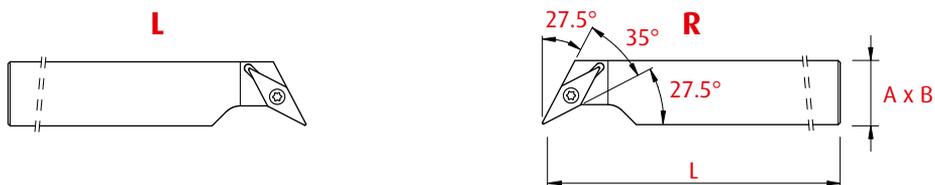
Porte-outils
 Halter
 Holders

35°

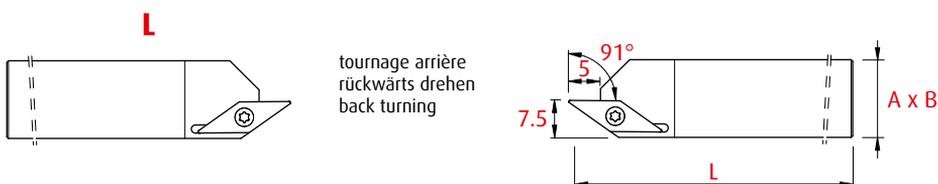
SVV



| Art. N° | Plaquette WSP Insert | A x B x L |
|------------------|----------------------------|---------------|
| SVVCN-0808X-11-N | VC...1103.. | 8 x 8 x 115 |
| SVVCN-1010X-11-N | | 10 x 10 x 115 |
| SVVCN-1212X-11-N | | 12 x 12 x 130 |
| SVVCN-1212G-11-N | | 12 x 12 x 90 |
| SVVCN-1616X-11-N | | 16 x 16 x 130 |
| SVVCN-1616F-11-N | | 16 x 16 x 75 |
| SVVCN-2020X-11-N | | 20 x 20 x 120 |
| SVVCN-1212X-16-N | VC...1604.. | 12 x 12 x 130 |
| SVVCN-1212G-16-N | | 12 x 12 x 90 |
| SVVCN-1616X-16-N | | 16 x 16 x 130 |
| SVVCN-1616F-16-N | | 16 x 16 x 75 |
| SVVCN-2020X-16-N | | 20 x 20 x 120 |



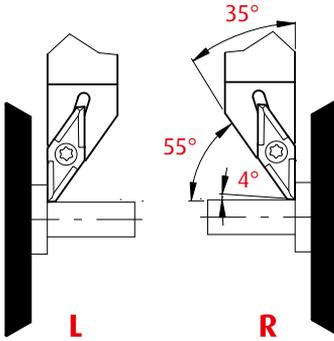
| Art. N° L | Art. N° R | Plaquette WSP Insert | A x B x L |
|------------------|------------------|----------------------------|---------------|
| SVXCL-1616X-11-N | SVXCR-1616X-11-N | | 16 x 16 x 130 |
| SVXCL-1616F-11-N | SVXCR-1616F-11-N | VC...1103.. | 16 x 16 x 75 |
| SVXCL-2020X-11-N | SVXCR-2020X-11-N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



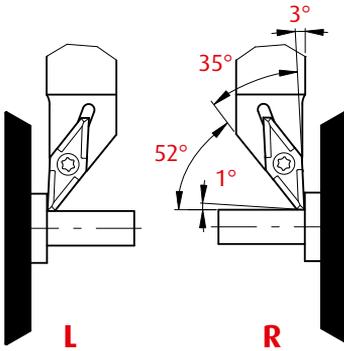
| Art. N° L | Art. N° R | Plaquette WSP Insert | A x B x L |
|------------------|------------------|----------------------------|---------------|
| SV-CL-1212X-11-N | SV-CR-1212X-11-N | | 12 x 12 x 130 |
| SV-CL-1212G-11-N | SV-CR-1212G-11-N | | 12 x 12 x 90 |
| SV-CL-1616X-11-N | SV-CR-1616X-11-N | VC...1103.. | 16 x 16 x 130 |
| SV-CL-1616F-11-N | SV-CR-1616F-11-N | | 16 x 16 x 75 |
| SV-CL-2020X-11-N | SV-CR-2020X-11-N | | 20 x 20 x 120 |

Porte-outils compatibles avec plaquettes VCGT FL/FR-X10°
Passende Halter zu den Wendepplatten VCGT FL/FR-X10°
Holder compatible with inserts VCGT FL/FR-X10°

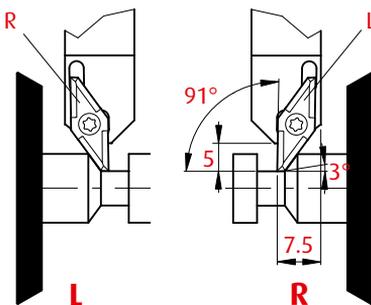
35°



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



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

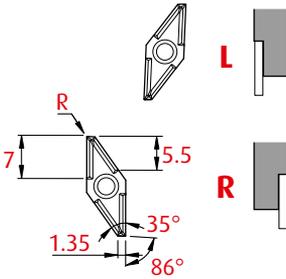


| Art. N° | |
|----------------|---|
| SV-CR-...-11-N | R |
| SV-CL-...-11-N | L |



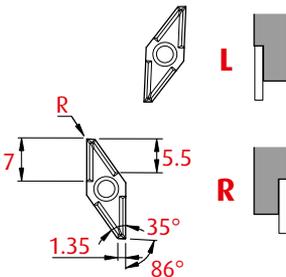
VCGT
FL / FR-X10°

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| VCGT-1103003-FL-X10 | 0.03 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1103008-FL-X10 | 0.08 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-FL-X10 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-FL-X10 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1103003-FR-X10 | 0.03 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1103008-FR-X10 | 0.08 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-FR-X10 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-FR-X10 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |



VCGT
ELP/ERP-X10°

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|----------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| VCGT-1103003-ELP-X10 | 0.03 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1103008-ELP-X10 | 0.08 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-ELP-X10 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-ELP-X10 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1103003-ERP-X10 | 0.03 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1103008-ERP-X10 | 0.08 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-ERP-X10 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-ERP-X10 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |



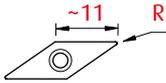
Plaquettes en métal dur
VHM-Wendeplatten
Solid carbide inserts

35°

VCGT



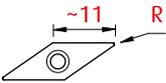
**VCGT
FN-K18°**



| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-----|------|---|
| | | HTA | HTiN | |
| VCGT-1103005-FN-K18 | 0.05 | ■ | ■ | ■ |
| VCGT-110301-FN-K18 | 0.1 | ■ | ■ | ■ |
| VCGT-110302-FN-K18 | 0.2 | ■ | ■ | ■ |
| VCGT-110304-FN-K18 | 0.4 | ■ | ■ | ■ |



VCGW-0°

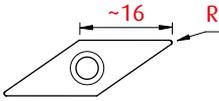
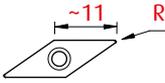


| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated |
|-------------------|------|-----|------|---|
| | | HTA | HTiN | |
| VCGW-1103005-FN-0 | 0.05 | ■ | ■ | ■ |
| VCGW-110301-FN-0 | 0.1 | ■ | ■ | ■ |
| VCGW-110302-FN-0 | 0.2 | ■ | ■ | ■ |
| VCGW-110304-FN-0 | 0.4 | ■ | ■ | ■ |



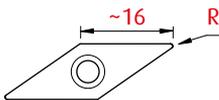
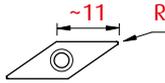
VCGT FN-X8°

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|--------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| VCGT-1103005-FN-X8 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-FN-X8 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-FN-X8 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110304-FN-X8 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1604005-FN-X8 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160401-FN-X8 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160402-FN-X8 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160404-FN-X8 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |



VCGT ENP-X8°

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| VCGT-1103005-ENP-X8 | 0.05 | ■ | ■ | ■ | | | |
| VCGT-110301-ENP-X8 | 0.1 | ■ | ■ | ■ | | | |
| VCGT-110302-ENP-X8 | 0.2 | ■ | ■ | ■ | | | |
| VCGT-110304-ENP-X8 | 0.4 | ■ | ■ | ■ | | | |
| VCGT-1604005-ENP-X8 | 0.05 | ■ | ■ | ■ | | | |
| VCGT-160401-ENP-X8 | 0.1 | ■ | ■ | ■ | | | |
| VCGT-160402-ENP-X8 | 0.2 | ■ | ■ | ■ | | | |
| VCGT-160404-ENP-X8 | 0.4 | ■ | ■ | ■ | | | |



**Plaquettes en métal dur
VHM-Wendeplatten
Solid carbide inserts**

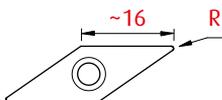
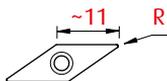
35°

VCGT-X17°



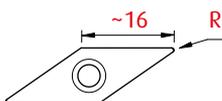
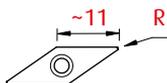
**VCGT
FN-X17°**

| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|---------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| VCGT-1103005-FN-X17 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-FN-X17 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-FN-X17 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-110304-FN-X17 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-1604005-FN-X17 | 0.05 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160401-FN-X17 | 0.1 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160402-FN-X17 | 0.2 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160404-FN-X17 | 0.4 | ■ | ■ | ■ | ■ | ■ | ■ |
| VCGT-160408-FN-X17 | 0.8 | ■ | ■ | ■ | ■ | ■ | ■ |



**VCGT
ENP-X17°**

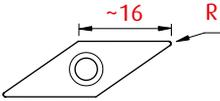
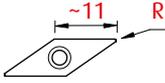
| Art. N° | R | PVD | | non revêtu unbeschichtet uncoated | PVD | | non revêtu unbeschichtet uncoated |
|----------------------|------|-------|-----|---|-----|-----|---|
| | | TiAlN | TiN | K20 | HTA | K10 | |
| VCGT-1103005-ENP-X17 | 0.05 | ■ | ■ | ■ | | | |
| VCGT-110301-ENP-X17 | 0.1 | ■ | ■ | ■ | | | |
| VCGT-110302-ENP-X17 | 0.2 | ■ | ■ | ■ | | | |
| VCGT-110304-ENP-X17 | 0.4 | ■ | ■ | ■ | | | |
| VCGT-1604005-ENP-X17 | 0.05 | ■ | ■ | ■ | | | |
| VCGT-160401-ENP-X17 | 0.1 | ■ | ■ | ■ | | | |
| VCGT-160402-ENP-X17 | 0.2 | ■ | ■ | ■ | | | |
| VCGT-160404-ENP-X17 | 0.4 | ■ | ■ | ■ | | | |
| VCGT-160408-ENP-X17 | 0.8 | ■ | ■ | ■ | | | |





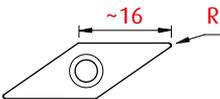
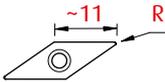
**VCGT
FN-X25°**

| Art. N° | R | PVD | | | PVD | |
|---------------------|------|-------|-----|-----|-----|-----|
| | | TiAlN | TiN | K20 | HTA | K10 |
| VCGT-1103005-FN-X25 | 0.05 | ■ | ■ | ■ | ■ | ■ |
| VCGT-110301-FN-X25 | 0.1 | ■ | ■ | ■ | ■ | ■ |
| VCGT-110302-FN-X25 | 0.2 | ■ | ■ | ■ | ■ | ■ |
| VCGT-110304-FN-X25 | 0.4 | ■ | ■ | ■ | ■ | ■ |
| VCGT-1604005-FN-X25 | 0.05 | ■ | ■ | ■ | ■ | ■ |
| VCGT-160401-FN-X25 | 0.1 | ■ | ■ | ■ | ■ | ■ |
| VCGT-160402-FN-X25 | 0.2 | ■ | ■ | ■ | ■ | ■ |
| VCGT-160404-FN-X25 | 0.4 | ■ | ■ | ■ | ■ | ■ |
| VCGT-160408-FN-X25 | 0.8 | ■ | ■ | ■ | ■ | ■ |



**VCGT
ENP-X25°**

| Art. N° | R | PVD | | | PVD | |
|----------------------|------|-------|-----|-----|-----|-----|
| | | TiAlN | TiN | K20 | HTA | K10 |
| VCGT-1103005-ENP-X25 | 0.05 | ■ | ■ | ■ | | |
| VCGT-110301-ENP-X25 | 0.1 | ■ | ■ | ■ | | |
| VCGT-110302-ENP-X25 | 0.2 | ■ | ■ | ■ | | |
| VCGT-110304-ENP-X25 | 0.4 | ■ | ■ | ■ | | |
| VCGT-1604005-ENP-X25 | 0.05 | ■ | ■ | ■ | | |
| VCGT-160401-ENP-X25 | 0.1 | ■ | ■ | ■ | | |
| VCGT-160402-ENP-X25 | 0.2 | ■ | ■ | ■ | | |
| VCGT-160404-ENP-X25 | 0.4 | ■ | ■ | ■ | | |
| VCGT-160408-ENP-X25 | 0.8 | ■ | ■ | ■ | | |



Plaquettes en métal dur
VHM-Wendplatten
Solid carbide inserts

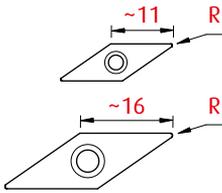
35°

VCMT



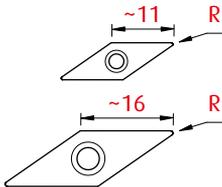
**VCMT
EN-XF2**

| Art. N° | R | PVD | | | CVD |
|--------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| VCMT-110302-EN-XF2 | 0.2 | ■ | ■ | | |
| VCMT-110304-EN-XF2 | 0.4 | ■ | ■ | | |
| VCMT-160404-EN-XF2 | 0.4 | ■ | ■ | | |



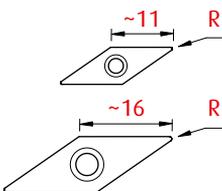
**VCMT
EN-MF**

| Art. N° | R | PVD | | | CVD |
|-------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| VCMT-110302-EN-MF | 0.2 | ■ | | | ■ |
| VCMT-110304-EN-MF | 0.4 | ■ | | | ■ |
| VCMT-160404-EN-MF | 0.4 | ■ | | | ■ |



**VCMT
EN-HF**

| Art. N° | R | PVD | | | CVD |
|-------------------|-----|------|-----|------|-----|
| | | Tmax | TAC | HTAC | Ti4 |
| VCMT-110304-EN-HF | 0.4 | ■ | | | ■ |
| VCMT-110308-EN-HF | 0.8 | ■ | | | ■ |
| VCMT-160404-EN-HF | 0.4 | ■ | | | ■ |
| VCMT-160408-EN-HF | 0.8 | ■ | | | ■ |



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

Recommandation de serrage
Drehmoment Empfehlung
Clamping recommendation



SET-NM-TX15
SET-NM-TX8



LA RÉFÉRENCE POUR VOS OUTILS DE COUPE
DIE REFERENZ FÜR IHRE SCHNEIDWERKZEUGE
THE REFERENCE FOR YOUR CUTTING TOOLS



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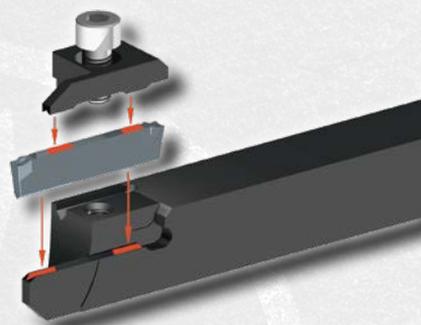
Very rigid clamping system!

H

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

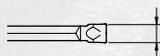
HX

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



CUT 16

=

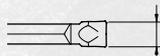


1.6 mm

Ø max 20 mm

CUT 22

=

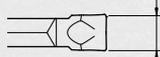


2.2 mm

Ø max 42 mm

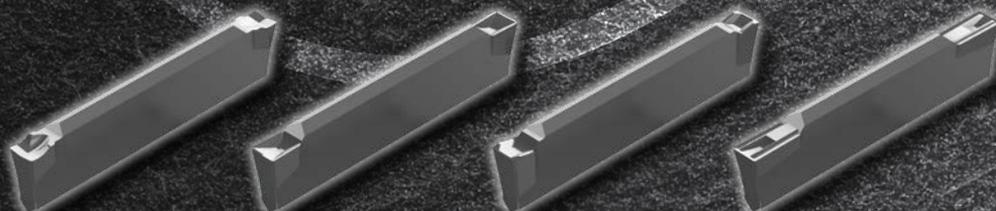
CUT 31

=



3.1 mm

Ø max 65 mm



U

P

T

G

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| | | |
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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
- bestens geeignet für die Bearbeitung von legiertem Kohlenstahl und hoch legiertem Stahl

- grade for medium to heavy machining of steel, stainless steel and alloyed steel
- high machining heat resistance
- first choice for the machining of carbon steel and high alloyed steel

Zmax

revêtement PVD
PVD Beschichtung
PVD coating

- 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

Géométries de coupe Spanformgeometrie Cutting geometries

UN

**UR
UL**

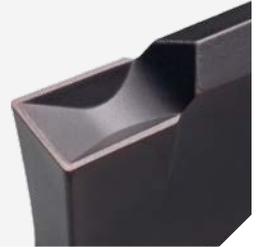
- Géométrie positive universelle, bonne maîtrise du copeau
- Allgemeine Geometrie, sehr gute Spankontrolle
- All-round insert with efficient chip control



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



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

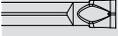
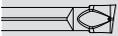


GN

- Géométrie universelle pour foncer-tourner, peut également être utilisée en tronçonnage
- Allgemeine Geometrie zum einsteckenlangdrehen, kann auch zum abstechen verwendet werden
- All-round insert for grooving and turning, can also be used for parting off



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 |
| | | 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 |
| Avance modérée Niedriger Vorschub Low feed rate | CUT16-UN-000  | 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-800  | 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-1500  | 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

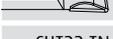
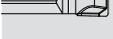
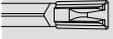
** scharfe Schneidkante

** 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 | | | | |
| 100-300 | 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 |



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) |
| | | |  | | TiALN | 90-140 | 0.04-0.08 | 60-120 | 0.04-0.08 | 50-100 |
| 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 | | | | | | | | | | |
|  | | 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 | | |
|  | | 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 |
|  | | 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 | | |
|  | | 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 | | | | | | | | |
|  | | 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 | | | | | | | | |
|  | | 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 | | | | | | | | |
|  | | 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 | | | | | | | | |
|  | | 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. tronçonnage)

* beste Basis für unterbrochene Schnitte

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

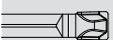
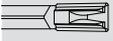
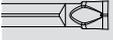
* first choice for interrupted cut

** 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 | | | | |
| | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | | | | | 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 |



Paramètres de coupe indicatifs Empfohlene Schnittwerte Standard machining data

| CUT 31 | | | 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-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-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-000  | 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-800  | 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-802  | 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-1500  | 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. tronçonnage)

* beste Basis für unterbrochene Schnitte

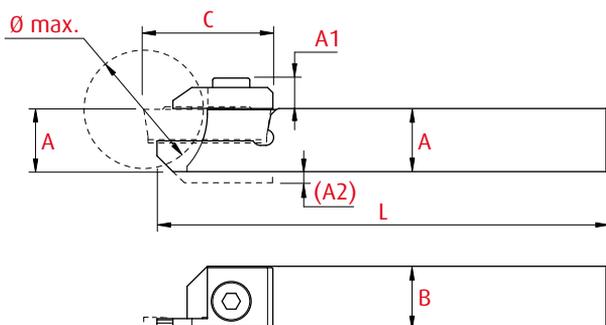
** scharfe Schneidkante
*** Geometrie zum einstechen und drehen (event. abstechen)

* first choice for interrupted cut

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

| Alliages d'aluminium et non ferreux Aluminium- und Nichteisenlegierungen Aluminium and non-ferrous alloys | | | | | | | | 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 | | | | |
| | | | | | | 150-300 | 0.03-0.10 | | | | |
| | | | | | | 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 |

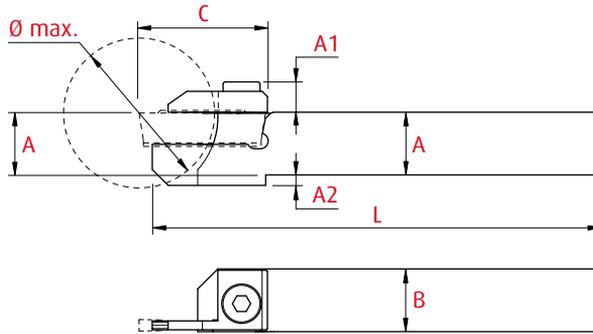




| Art. N° L | Art. N° R | Plaquette WSP Insert | A x B x L | ∅ max. | A1 | C |
|--------------------------|--------------------------|--|---------------------|-----------|------|------|
| CUT16-H0810L-N | CUT16-H0810R-N | W 1.6 mm Type CUT16 | 8 x 10 x 115 (A2=2) | 16 | 6.2 | 19.5 |
| CUT16-H1010L-N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

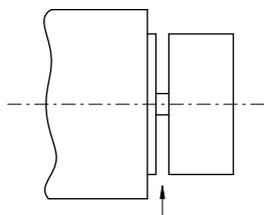
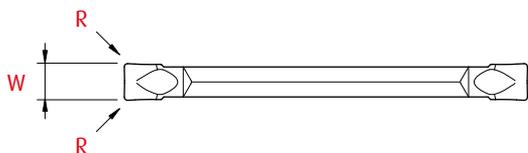
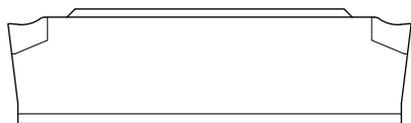
| Pièces de rechange Ersatzteile Spare parts | Art. N° L | Art. N° R | Art. N° | Serrage Anzug Torque |
|--|-------------------|-------------------|--------------------|----------------------------|
| CUT 16 | CUT16L-SET | CUT16R-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 22 | CUT22L-SET | CUT22R-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 31 | CUT31L-SET | CUT31R-SET | V-M5X10-BN7 | 4.5 Nm |

**Porte-outils
Halter
Holders**

 Ø max 42 mm – **HX Series**


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

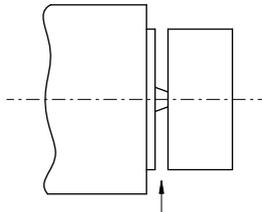
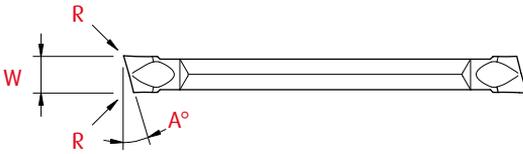
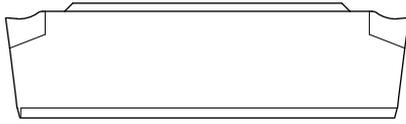
| Pièces de rechange Ersatzteile Spare parts | Art. N° L | Art. N° R | Art. N° | Serrage Anzug Torque |
|--|--------------------|--------------------|--------------------|----------------------------|
| CUT 16 | CUT16LX-SET | CUT16RX-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 22 | CUT22LX-SET | CUT22RX-SET | V-M4X10-BN7 | 3.5 Nm |
| CUT 31 | CUT31LX-SET | CUT31RX-SET | V-M5X10-BN7 | 4.5 Nm |



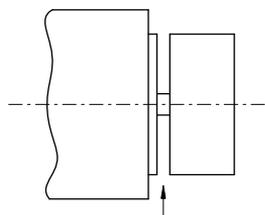
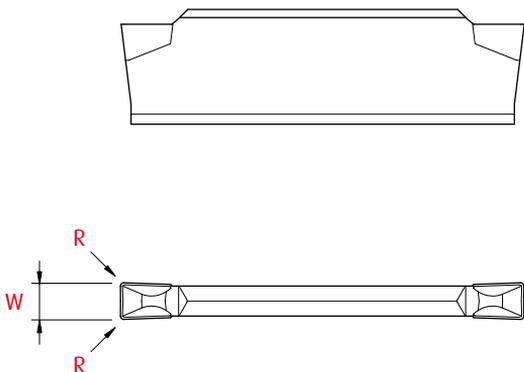
| Type | Art. N° |  | TiAlN | T _{max} | Z _{max} | HTA | AS | W ±0,05 | R |
|-------|--------------|---|-------|------------------|------------------|-----|----|---------|------|
| | UN | | | | | | | | |
| CUT16 | CUT16-UN-000 |  | ■ | | | ■ | ■ | 1.6 | 0.02 |
| | CUT16-UN-001 |  | ■ | ■ | ■ | ■ | ■ | 1.6 | 0.10 |
| CUT22 | CUT22-UN-000 |  | ■ | | | ■ | ■ | 2.2 | 0.02 |
| | CUT22-UN-002 |  | ■ | ■ | ■ | ■ | ■ | 2.2 | 0.20 |
| CUT31 | CUT31-UN-000 |  | ■ | | | ■ | ■ | 3.1 | 0.02 |
| | CUT31-UN-002 |  | ■ | ■ | ■ | ■ | ■ | 3.1 | 0.20 |

Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

UL-UR Series



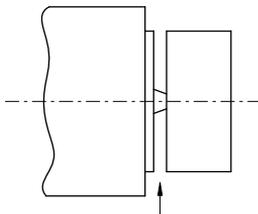
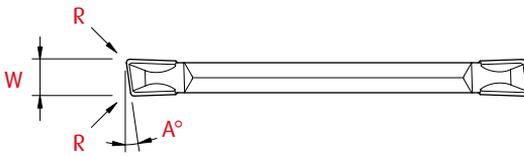
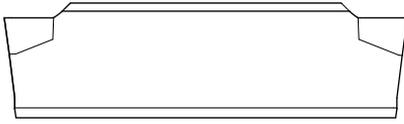
| Type | Art. N° UL | | | Art. N° UR | | | W ±0,05 | A | R | | |
|-------|---|-------|-----|---------------|---|-------|---------|---|-----|-----|------|
| |  | TIALN | HTA | AS |  | TIALN | | | | HTA | AS |
| CUT16 | CUT16-UL-800 | ■ | ■ | ■ | CUT16-UR-800 | ■ | ■ | ■ | 1.6 | 8° | 0.02 |
| | CUT16-UL-1500 | ■ | ■ | ■ | CUT16-UR-1500 | ■ | ■ | ■ | 1.6 | 15° | 0.02 |
| CUT22 | CUT22-UL-800 | ■ | ■ | ■ | CUT22-UR-800 | ■ | ■ | ■ | 2.2 | 8° | 0.02 |
| | CUT22-UL-802 | ■ | ■ | ■ | CUT22-UR-802 | ■ | ■ | ■ | 2.2 | 8° | 0.20 |
| | CUT22-UL-1500 | ■ | ■ | ■ | CUT22-UR-1500 | ■ | ■ | ■ | 2.2 | 15° | 0.02 |
| CUT31 | CUT31-UL-800 | ■ | ■ | ■ | CUT31-UR-800 | ■ | ■ | ■ | 3.1 | 8° | 0.02 |
| | CUT31-UL-802 | ■ | ■ | ■ | CUT31-UR-802 | ■ | ■ | ■ | 3.1 | 8° | 0.20 |
| | CUT31-UL-1500 | ■ | ■ | ■ | CUT31-UR-1500 | ■ | ■ | ■ | 3.1 | 15° | 0.02 |



| Type | Art. N° PN |  | Ti/AlN Tmax | W ±0.05 | R |
|-------|---------------|---|----------------|---------|------|
| CUT22 | CUT22-PN-002 | ■ ■ | ■ ■ | 2.2 | 0.20 |
| CUT31 | CUT31-PN-002 | ■ ■ | ■ ■ | 3.1 | 0.20 |

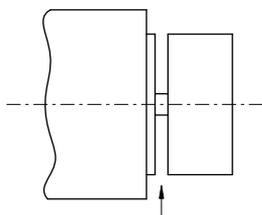
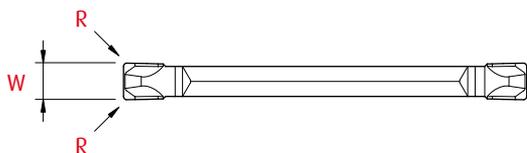
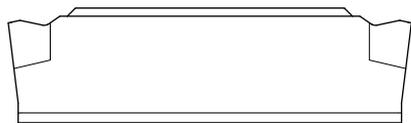
Plaquettes de tronçonnage
Abstechwendeplatten
Cut off inserts

PR Series



| Type | Art. N° PR |  | TrAlN Tmax | W ±0.05 | A | R |
|-------|---------------|---|---------------|---------|------|---|
| CUT16 | CUT16-PR-801 | ■ ■ | 1.6 | 8° | 0.10 | |
| CUT22 | CUT22-PR-802 | ■ ■ | 2.2 | 8° | 0.20 | |
| CUT31 | CUT31-PR-802 | ■ ■ | 3.1 | 8° | 0.20 | |

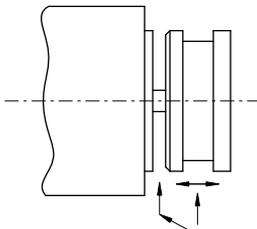
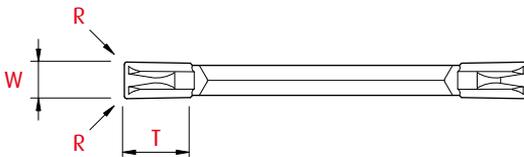
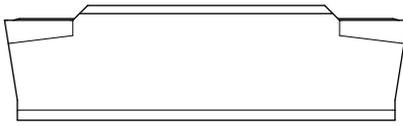
Negative cut off



| Type | Art. N° TN |  | TiAlN | T _{max} | Z _{max} | W ±0,05 | R |
|-------|---------------|---|-------|------------------|------------------|---------|------|
| | | | | | | | |
| CUT22 | CUT22-TN-002 | | ■ | ■ | ■ | 2.2 | 0.20 |
| CUT31 | CUT31-TN-002 | | ■ | ■ | ■ | 3.1 | 0.20 |

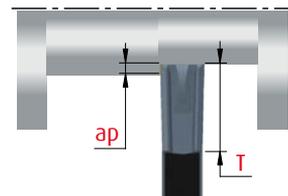
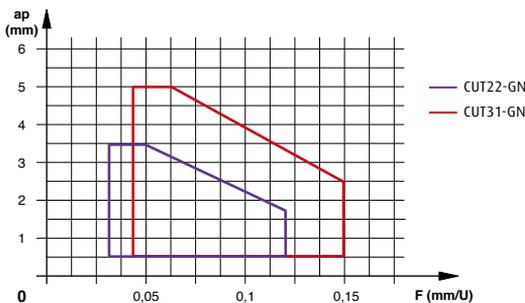
Plaquettes de fonçage, tournage et tronçonnage
WSP zum einstecken, drehen und abstechen
Solid carbide inserts for grooving, turning and cut off

GN Series



| Type | Art. N° GN |  | TIALN | Tmax | AS | W ±0,05 | T | R |
|-------|---------------|---|-------|------|-----|---------|------|---|
| CUT22 | CUT22-GN-002 | ■ | ■ | ■ | 2.2 | 3.5 | 0.15 | |
| CUT31 | CUT31-GN-002 | ■ | ■ | ■ | 3.1 | 5.0 | 0.15 | |

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

ALFA-SWISS



Index

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

Dimension
Abmessung
Dimension

Rayon
Radius
Radius

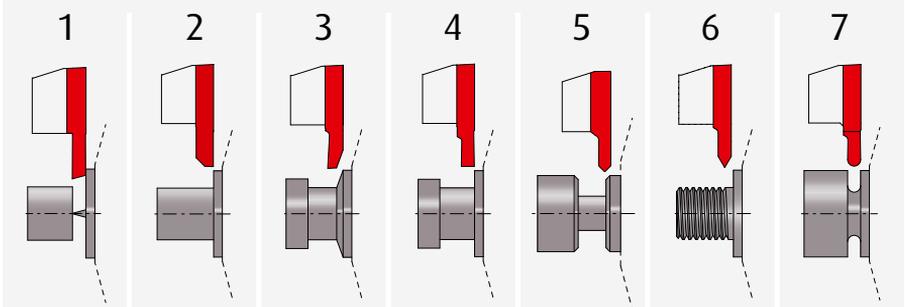
Nuance
Sorte
Grade

Géométrie de coupe
Schneidgeometrie
Cutting geometry

brise-copeaux
Spanbrecher
chip breaker

particularités
Sondereigenschaften
special features

Géométrie d'usinage
Bearbeitungsgeometrie
Machining geometry



Gamme de produit
Produktserie
Product series

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

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

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

SERIES

Tournage
et gorges

Drehen und
Einstechen
Turning and
grooving

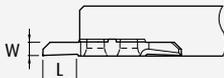
W max = 3 mm
L max = 8 mm

L

630

R

640



SERIES

Tronçonnage
Abstechen
Parting off

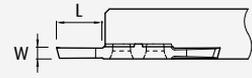
W max = 2.5 mm
L max = 11 mm

L

650

R

660



Système de serrage à denture avec 2 vis de fixation
Spannsystem mit Verzahnung und 2 Schrauben
Teeth clamping system with 2 screws

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

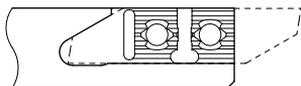
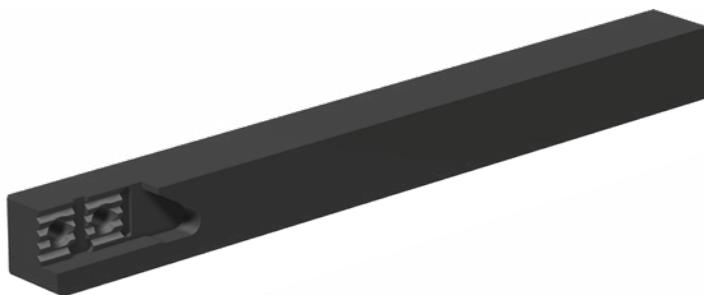
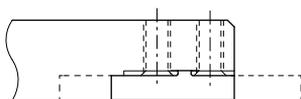
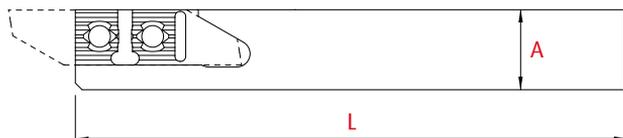
- nuance micro-grain très résistante à l'usure
- recommandé pour l'usinage du titane faiblement allié
- déconseillé en cas de coupe interrompue et autres conditions d'usinage défavorables

- verschleissfeste Feinkornsorte
- empfehlenswert für die Bearbeitung von niedrig legiertem Titan
- 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

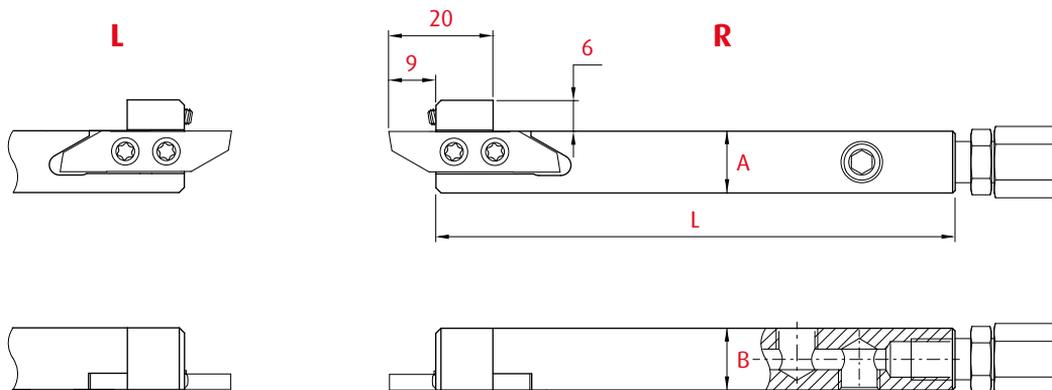
Paramètres de coupe indicatifs Empfohlene Schnittwerte Standard machining data

| Matière Werkstoff Material | Tournage Drehen Turning | | | Tronçonnage Abstechen Parting off | | |
|--|-------------------------------|--|----------------------------|---|--|----------------------------|
| | 630/640 | | | 650/660 | | |
| | 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 | 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/mm ² | 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/mm ² | 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/mm ² | 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 | 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% | 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% | 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 |
| Titane Titan Titanium | 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 |
| 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 | 100 - 300 | 0.50 - 1.50 1.50 - 2.50 | 0.01 - 0.10 0.03 - 0.20 |

**Porte-outils
Halter
Holders**
630 / 640
L

R


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

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.

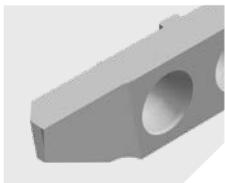
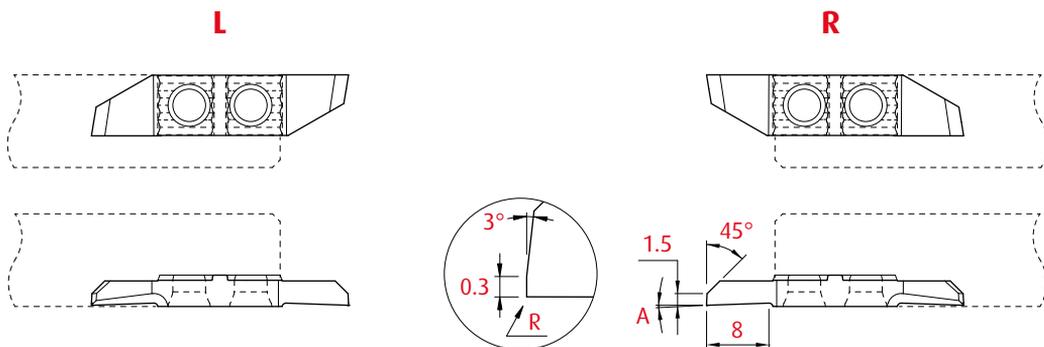


| Art. N° L | Art. N° R | A x B | L |
|----------------|----------------|-------------|-----|
| 630-1012-JET-N | 640-1012-JET-N | 10 x 12 | 100 |
| 630-12-JET-N | 640-12-JET-N | 12 x 12 | 100 |
| 630-12.7-JET-N | 640-12.7-JET-N | 12.7 x 12.7 | 100 |
| 630-16-JET-N | 640-16-JET-N | 16 x 16 | 100 |
| 630-20-JET-N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

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.

Tourneur avant
Vorwärts drehen
Front turning

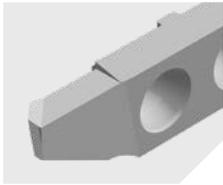
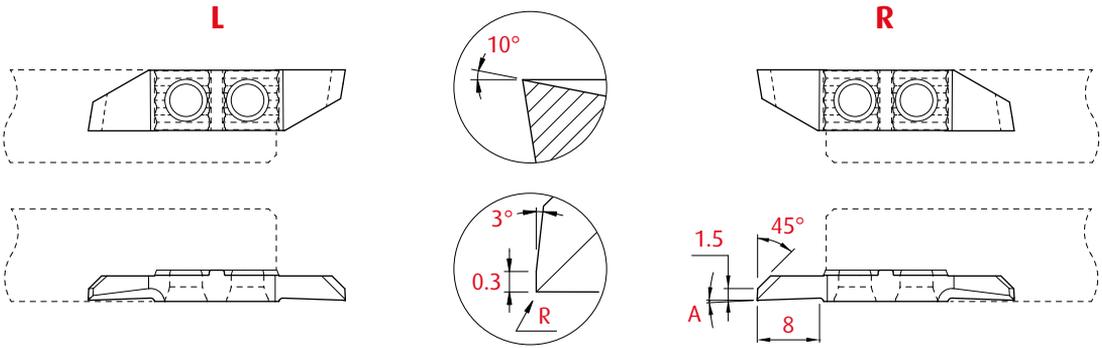
632 / 642



| Art. N° L | TiAlN | N (μK20) | HTA | HN (μK10) | Art. N° R | TiAlN | N (μK20) | HTA | HN (μK10) | A | R |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|----|------|
| 632 | ■ | ■ | □ | ■ | 642 | ■ | ■ | □ | ■ | 0° | 0 |
| - | | | | | 642-R08 | ■ | ■ | □ | ■ | 0° | 0.08 |
| - | | | | | 642-R15 | ■ | ■ | □ | ■ | 0° | 0.15 |
| 632-2° | ■ | ■ | □ | ■ | 642-2° | ■ | ■ | □ | ■ | 2° | 0 |
| - | | | | | 642-2°-R08 | ■ | ■ | □ | ■ | 2° | 0.08 |
| - | | | | | 642-2°-R15 | ■ | ■ | □ | ■ | 2° | 0.15 |

Tourneur avant
Vorwärts drehen
Front turning

632X / 642X



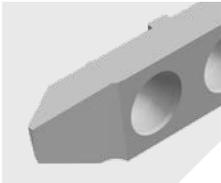
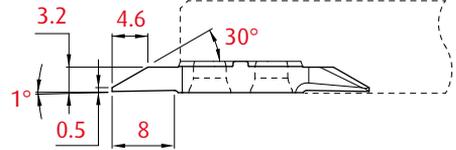
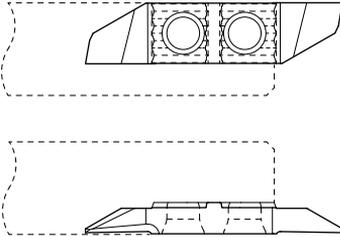
| Art. N° L | | | | | Art. N° R | | | | | A | R |
|--------------|-------|----------|-----|-----------|---------------|-------|----------|-----|-----------|----|------|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | TiAlN | N (µK20) | HTA | HN (µK10) | | |
| 632X10 | ■ | ■ | □ | ■ | 642X10 | ■ | ■ | □ | ■ | 0° | 0 |
| - | | | | | 642X10-R08 | ■ | ■ | □ | ■ | 0° | 0.08 |
| - | | | | | 642X10-R15 | ■ | ■ | □ | ■ | 0° | 0.15 |
| 632X10-2° | ■ | ■ | □ | ■ | 642X10-2° | ■ | ■ | □ | ■ | 2° | 0 |
| - | | | | | 642X10-2°-R08 | ■ | ■ | □ | ■ | 2° | 0.08 |
| - | | | | | 642X10-2°-R15 | ■ | ■ | □ | ■ | 2° | 0.15 |

Tourneur multifonction
Mehrweck drehen
Multifunction turning

632S / 642S
633S / 643S

L

R

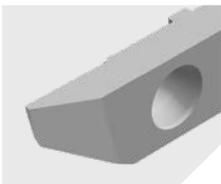
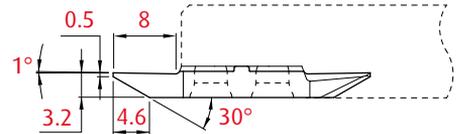
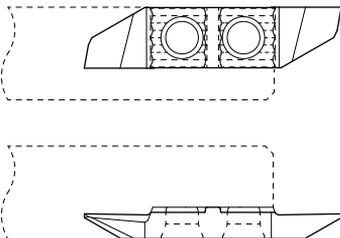


| Art. N° |  | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° |  | TiAlN | N (µK20) | HTA | HN (µK10) |
|---------------|---|-------|----------|-----|-----------|---------------|--|-------|----------|-----|-----------|
| 632S05 | | ■ | ■ | □ | ■ | 642S05 | | ■ | ■ | □ | ■ |

Tourneur avant
 Vorwärts drehen
 Front turning

L

R

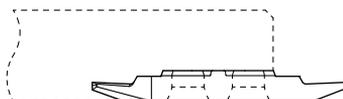
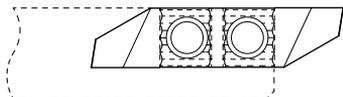


| Art. N° |  | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° |  | TiAlN | N (µK20) | HTA | HN (µK10) |
|---------------|---|-------|----------|-----|-----------|---------------|--|-------|----------|-----|-----------|
| 633S05 | | ■ | ■ | □ | ■ | 643S05 | | ■ | ■ | □ | ■ |

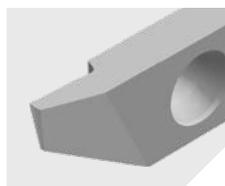
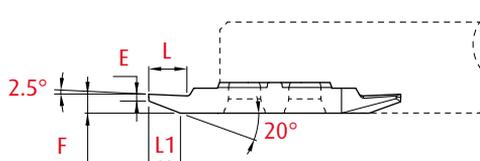
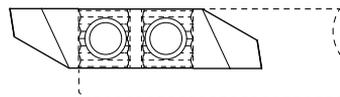
Tourneur arrière
 Rückwärts drehen
 Back turning

■ = disponible / verfügbar / available
 □ = selon disponibilité du stock / je nach Lagerverfügbarkeit / depending the stock availability

L



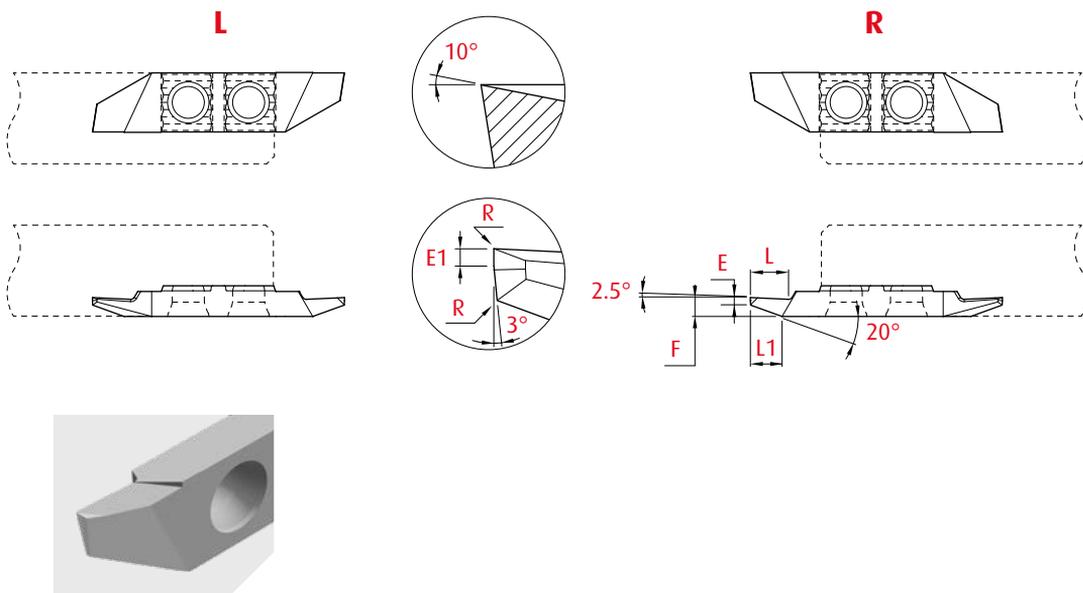
R



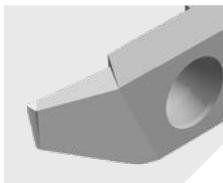
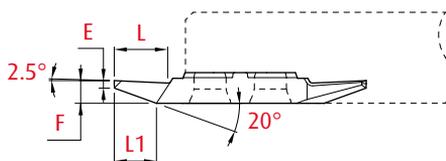
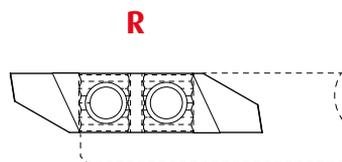
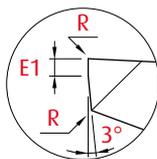
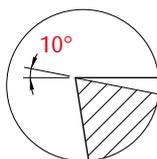
| Art. N° L | TiAlN N (µK20) HTA HN (µK10) | Art. N° R | TiAlN N (µK20) HTA HN (µK10) | E | E1 | L | L1 | F | R |
|---------------------|---------------------------------------|---------------------|---------------------------------------|-----|------|-----|-----|-----|------|
| | | | | | | | | | |
| 633-0.5 | ■ ■ □ ■ | 643-0.5 | ■ ■ □ ■ | 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0 |
| - | | 643-0.5-R08 | ■ ■ □ ■ | 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0.08 |
| - | | 643-0.8 | ■ ■ □ ■ | 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0 |
| - | | 643-0.8-R08 | ■ ■ □ ■ | 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0.08 |
| - | | 643-1.0 | ■ ■ □ ■ | 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0 |
| - | | 643-1.0-R08 | ■ ■ □ ■ | 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0.08 |
| - | | 643-1.5 | ■ ■ □ ■ | 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0 |
| - | | 643-1.5-R08 | ■ ■ □ ■ | 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0.08 |

Tourneur arrière
Rückwärts drehen
Back turning

633X / 643X



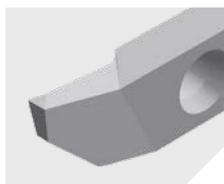
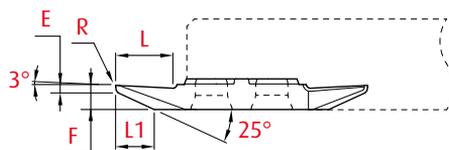
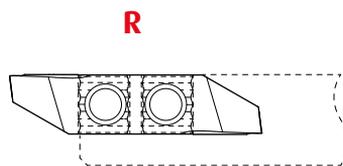
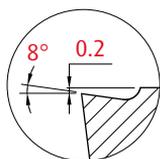
| Art. N° L | | | | | Art. N° R | | | | | E | E1 | L | L1 | F | R |
|--------------|-------|----------|-----|-----------|----------------|-------|----------|-----|-----------|-----|------|-----|-----|-----|------|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | TiAlN | N (µK20) | HTA | HN (µK10) | | | | | | |
| 633X10-0.5 | ■ | ■ | □ | ■ | 643X10-0.5 | ■ | ■ | □ | ■ | 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0 |
| - | | | | | 643X10-0.5-R08 | ■ | ■ | □ | ■ | 0.5 | 0.25 | 3 | 2.8 | 1.5 | 0.08 |
| - | | | | | 643X10-0.8 | ■ | ■ | □ | ■ | 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0 |
| - | | | | | 643X10-0.8-R08 | ■ | ■ | □ | ■ | 0.8 | 0.40 | 4.5 | 3.3 | 2.0 | 0.08 |
| - | | | | | 643X10-1.0 | ■ | ■ | □ | ■ | 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0 |
| - | | | | | 643X10-1.0-R08 | ■ | ■ | □ | ■ | 1.0 | 0.40 | 5 | 4.2 | 2.5 | 0.08 |
| - | | | | | 643X10-1.5 | ■ | ■ | □ | ■ | 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0 |
| - | | | | | 643X10-1.5-R08 | ■ | ■ | □ | ■ | 1.5 | 0.50 | 6 | 4.2 | 3.0 | 0.08 |



| Art. N° R | TiAlN | N (µK20) | HTA | HN (µK10) | E | E1 | L | L1 | F | R |
|-----------------|-------|----------|-----|-----------|-----|-----|---|-----|-----|------|
| 643X10S-1.0 | ■ | ■ | □ | ■ | 1.0 | 0.4 | 7 | 5.5 | 3.0 | 0 |
| 643X10S-1.0-R08 | ■ | ■ | □ | ■ | 1.0 | 0.4 | 7 | 5.5 | 3.0 | 0.08 |

Tourneur arrière
Rückwärts drehen
Back turning

643VX8

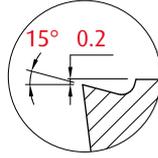
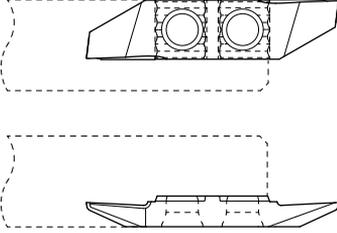


| Art. N° R |  | | | | E | L | L1 | F | R |
|---------------------|--|----------|-----|-----------|----|-----|-----|-----|------|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | | | | |
| 643VX8 | ■ | ■ | □ | ■ | ~1 | 7.5 | 5.0 | 3.2 | 0 |
| 643VX8-R08 | ■ | ■ | □ | ■ | ~1 | 7.5 | 5.0 | 3.2 | 0.08 |

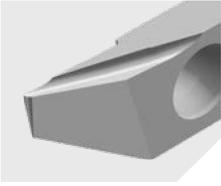
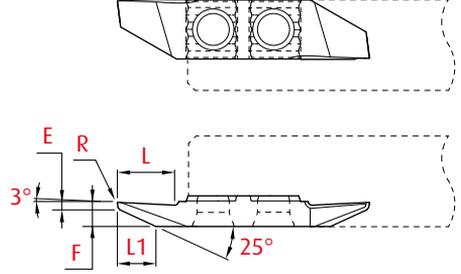
Tourneur arrière
Rückwärts drehen
Back turning

633VX15 / 643VX15

L



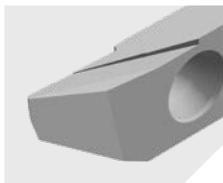
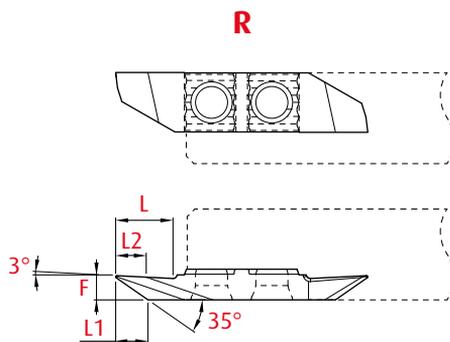
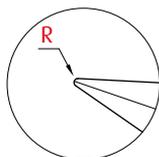
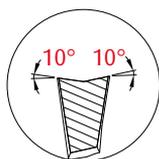
R



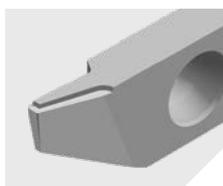
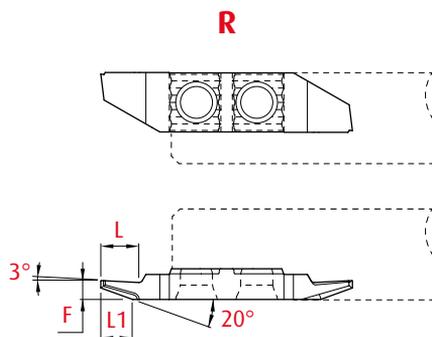
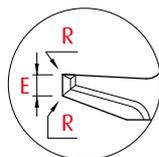
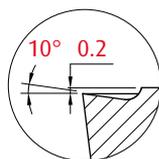
| Art. N° | | Art. N° | | | | E | L | L1 | F | R |
|---------|---------|-------------|----------|-----|-----------|-----|-----|------|---|---|
| L | | TiAlN | N (µK20) | HTA | HN (µK10) | | | | | |
| 633VX15 | ■ ■ □ ■ | 643VX15 | ■ ■ □ ■ | 0.5 | 7.5 | 5.2 | 3.2 | 0 | | |
| - | | 643VX15-R08 | ■ ■ □ ■ | 0.5 | 7.5 | 5.2 | 3.2 | 0.08 | | |

Tourneur arrière
Rückwärts drehen
Back turning

643VUX

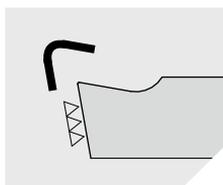


| Art. N° R |  | | | | L | L1 | L2 | F | R |
|---------------------|--|----------|-----|-----------|-----|-----|-----|-----|------|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | | | | |
| 643VUX10-R15 | ■ | ■ | □ | ■ | 7.5 | 4.2 | 4.0 | 3.2 | 0.15 |
| 643VUX10-R35 | ■ | ■ | □ | ■ | 7.5 | 3.8 | 3.8 | 3.2 | 0.35 |



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

| Art. N° R | TIALN N (µK20) | E | L | L1 | F | R |
|-----------------|-------------------|-----|---|----|-----|------|
| 643ZX10-1.0 | ■ | 1.0 | 5 | 4 | 2.5 | 0.01 |
| 643ZX10-1.0-R08 | ■ | 1.0 | 5 | 4 | 2.5 | 0.08 |

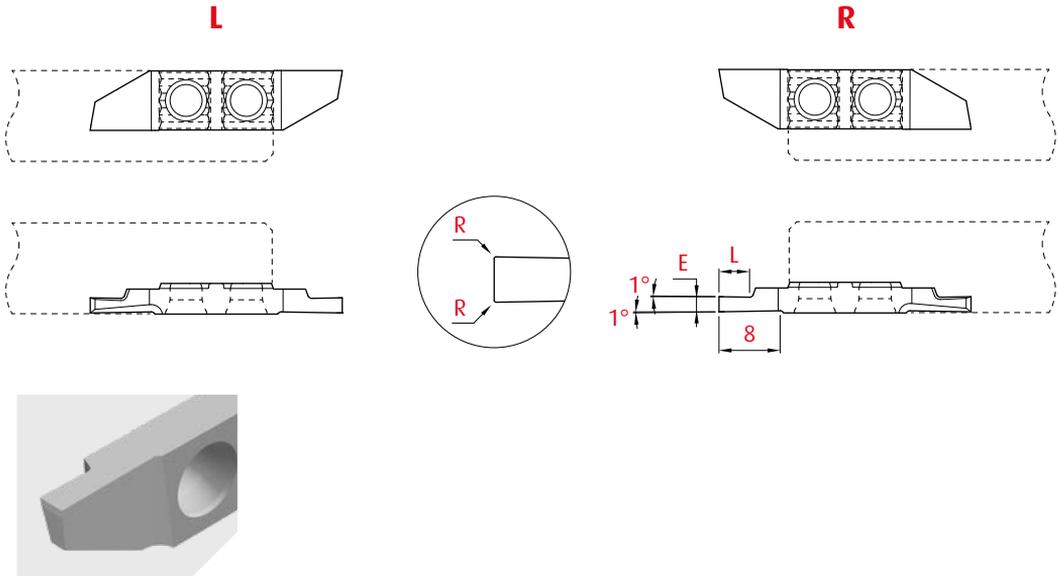


Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

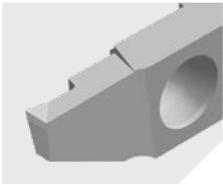
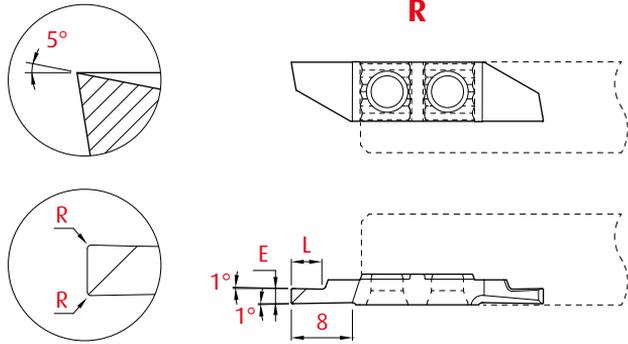
Foncer-tourner
Einstechen und drehen
Grooving and turning

634 / 644

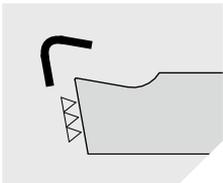


| Art. N° L | | | | | Art. N° R | | | | | E | L | R |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|------|-----|------|
| | TIALN | N (µK20) | HTA | HN (µK10) | | TIALN | N (µK20) | HTA | HN (µK10) | | | |
| 634-0.5 | ■ | ■ | □ | ■ | 644-0.5 | ■ | ■ | □ | ■ | 0.5 | 1.5 | 0 |
| - | | | | | 644-0.6 | ■ | ■ | □ | ■ | 0.6 | 1.8 | 0 |
| - | | | | | 644-0.75 | ■ | ■ | □ | ■ | 0.75 | 2 | 0 |
| 634-0.8 | ■ | ■ | □ | ■ | 644-0.8 | ■ | ■ | □ | ■ | 0.8 | 2 | 0 |
| - | | | | | 644-0.9 | ■ | ■ | □ | ■ | 0.9 | 2.5 | 0 |
| - | | | | | 644-0.95 | ■ | ■ | □ | ■ | 0.95 | 3 | 0 |
| 634-1.0 | ■ | ■ | □ | ■ | 644-1.0 | ■ | ■ | □ | ■ | 1.0 | 2.5 | 0 |
| - | | | | | 644-1.0-R08 | ■ | ■ | □ | ■ | 1.0 | 2.5 | 0.08 |
| 634-1.2 | ■ | ■ | □ | ■ | 644-1.2 | ■ | ■ | □ | ■ | 1.2 | 3 | 0 |
| - | | | | | 644-1.2-R08 | ■ | ■ | □ | ■ | 1.2 | 3 | 0.08 |
| 634-1.5 | ■ | ■ | □ | ■ | 644-1.5 | ■ | ■ | □ | ■ | 1.5 | 3 | 0 |
| - | | | | | 644-1.5-R08 | ■ | ■ | □ | ■ | 1.5 | 3 | 0.08 |
| - | | | | | 644-1.5-R15 | ■ | ■ | □ | ■ | 1.5 | 3 | 0.15 |
| - | | | | | 644-1.8 | ■ | ■ | □ | ■ | 1.8 | 4 | 0 |
| 634-2.0 | ■ | ■ | □ | ■ | 644-2.0 | ■ | ■ | □ | ■ | 2.0 | 4 | 0 |
| - | | | | | 644-2.0-R08 | ■ | ■ | □ | ■ | 2.0 | 4 | 0.08 |
| - | | | | | 644-2.0-R15 | ■ | ■ | □ | ■ | 2.0 | 4 | 0.15 |
| 634-2.5 | ■ | ■ | □ | ■ | 644-2.5 | ■ | ■ | □ | ■ | 2.5 | 6 | 0 |
| - | | | | | 644-2.5-R08 | ■ | ■ | □ | ■ | 2.5 | 6 | 0.08 |
| - | | | | | 644-2.5-R15 | ■ | ■ | □ | ■ | 2.5 | 6 | 0.15 |
| 634-3.0 | ■ | ■ | □ | ■ | 644-3.0 | ■ | ■ | □ | ■ | 3 | 6 | 0 |
| - | | | | | 644-3.0-R08 | ■ | ■ | □ | ■ | 3 | 6 | 0.08 |
| - | | | | | 644-3.0-R15 | ■ | ■ | □ | ■ | 3 | 6 | 0.15 |

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



| Art. N° R | TiAlN | N (μK20) | HTA | HN (μK10) | E | L | R |
|---------------|-------|----------|-----|-----------|-----|---|------|
| 644X5-1.5-R08 | ■ | ■ | □ | ■ | 1.5 | 3 | 0.08 |
| 644X5-2.0-R08 | ■ | ■ | □ | ■ | 2 | 4 | 0.08 |
| 644X5-2.0-R15 | ■ | ■ | □ | ■ | 2 | 4 | 0.15 |
| 644X5-2.5-R08 | ■ | ■ | □ | ■ | 2.5 | 6 | 0.08 |
| 644X5-2.5-R15 | ■ | ■ | □ | ■ | 2.5 | 6 | 0.15 |
| 644X5-3.0-R08 | ■ | ■ | □ | ■ | 3 | 6 | 0.08 |
| 644X5-3.0-R15 | ■ | ■ | □ | ■ | 3 | 6 | 0.15 |



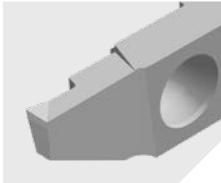
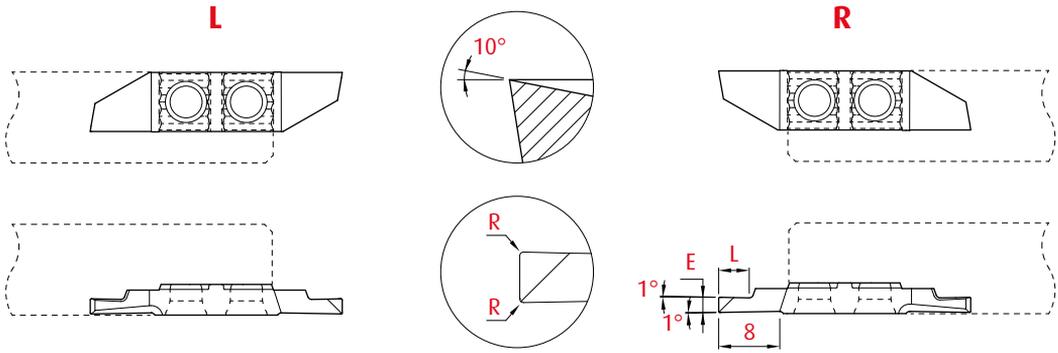
Arête de coupe honée
 Gehonte Schneidkante
 Honed edge

| Art. N° R | TiAlN | N (μK20) | HTA | HN (μK10) | E | L | R |
|------------------|-------|----------|-----|-----------|-----|---|------|
| 644X5-1.5-R08-EP | ■ | ■ | □ | ■ | 1.5 | 3 | 0.08 |
| 644X5-2.0-R08-EP | ■ | ■ | □ | ■ | 2 | 4 | 0.08 |
| 644X5-2.0-R15-EP | ■ | ■ | □ | ■ | 2 | 4 | 0.15 |
| 644X5-2.5-R08-EP | ■ | ■ | □ | ■ | 2.5 | 6 | 0.08 |
| 644X5-2.5-R15-EP | ■ | ■ | □ | ■ | 2.5 | 6 | 0.15 |
| 644X5-3.0-R08-EP | ■ | ■ | □ | ■ | 3 | 6 | 0.08 |
| 644X5-3.0-R15-EP | ■ | ■ | □ | ■ | 3 | 6 | 0.15 |

f min: 0.02 mm/U

Foncer-tourner
Einstechen und drehen
Grooving and turning

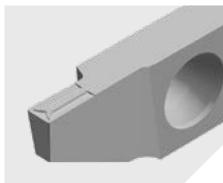
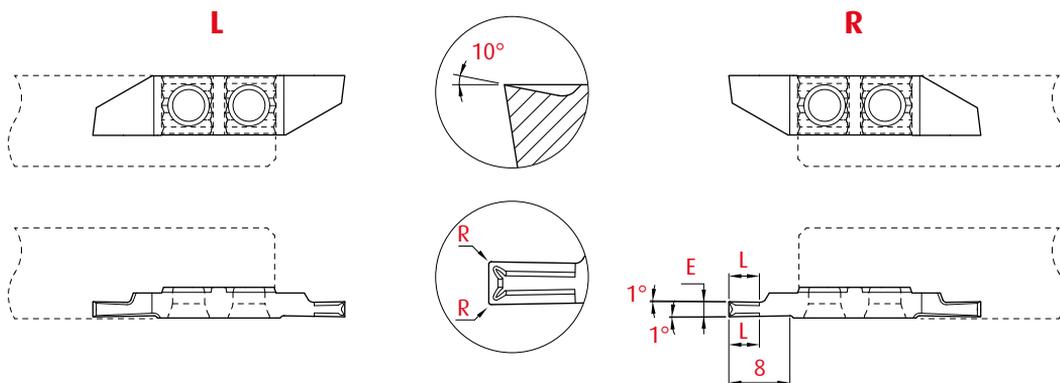
634X10 / 644X10



| Art. N° L | TiAlN N (µK20) HTA HN (µK10) | Art. N° R | TiAlN N (µK20) HTA HN (µK10) | E | L | R |
|----------------|---------------------------------------|----------------|---------------------------------------|-----|-----|------|
| | | | | | | |
| 634X10-0.8 | ■ ■ □ ■ | 644X10-0.8 | ■ ■ □ ■ | 0.8 | 2 | 0 |
| 634X10-1.0 | ■ ■ □ ■ | 644X10-1.0 | ■ ■ □ ■ | 1.0 | 2.5 | 0 |
| 634X10-1.0-R08 | ■ ■ □ ■ | 644X10-1.0-R08 | ■ ■ □ ■ | 1.0 | 2.5 | 0.08 |
| - | | 644X10-1.2 | ■ ■ □ ■ | 1.2 | 3 | 0 |
| - | | 644X10-1.2-R08 | ■ ■ □ ■ | 1.2 | 3 | 0.08 |
| 634X10-1.5 | ■ ■ □ ■ | 644X10-1.5 | ■ ■ □ ■ | 1.5 | 3 | 0 |
| 634X10-1.5-R08 | ■ ■ □ ■ | 644X10-1.5-R08 | ■ ■ □ ■ | 1.5 | 3 | 0.08 |
| 634X10-1.5-R15 | ■ ■ □ ■ | 644X10-1.5-R15 | ■ ■ □ ■ | 1.5 | 3 | 0.15 |
| - | | 644X10-1.8 | ■ ■ □ ■ | 1.8 | 4 | 0 |
| 634X10-2.0 | ■ ■ □ ■ | 644X10-2.0 | ■ ■ □ ■ | 2 | 4 | 0 |
| 634X10-2.0-R08 | ■ ■ □ ■ | 644X10-2.0-R08 | ■ ■ □ ■ | 2 | 4 | 0.08 |
| 634X10-2.0-R15 | ■ ■ □ ■ | 644X10-2.0-R15 | ■ ■ □ ■ | 2 | 4 | 0.15 |
| 634X10-2.5 | ■ ■ □ ■ | 644X10-2.5 | ■ ■ □ ■ | 2.5 | 6 | 0 |
| 634X10-2.5-R08 | ■ ■ □ ■ | 644X10-2.5-R08 | ■ ■ □ ■ | 2.5 | 6 | 0.08 |
| 634X10-2.5-R15 | ■ ■ □ ■ | 644X10-2.5-R15 | ■ ■ □ ■ | 2.5 | 6 | 0.15 |
| 634X10-3.0 | ■ ■ □ ■ | 644X10-3.0 | ■ ■ □ ■ | 3 | 6 | 0 |
| 634X10-3.0-R08 | ■ ■ □ ■ | 644X10-3.0-R08 | ■ ■ □ ■ | 3 | 6 | 0.08 |
| 634X10-3.0-R15 | ■ ■ □ ■ | 644X10-3.0-R15 | ■ ■ □ ■ | 3 | 6 | 0.15 |

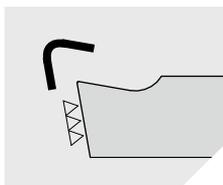
Foncer-tourner
Einstecken und drehen
Grooving and turning

634ZXB / 644ZXB



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

| Art. N° L | TiAlN N (µK20) | Art. N° R | TiAlN N (µK20) | E | L | R |
|------------------|-------------------|------------------|-------------------|-----|-----|------|
| 634ZXB10-1.0 | ■ | 644ZXB10-1.0 | ■ | 1.0 | 2.5 | 0.01 |
| 634ZXB10-1.5 | ■ | 644ZXB10-1.5 | ■ | 1.5 | 4 | 0.01 |
| 634ZXB10-1.5-R08 | ■ | 644ZXB10-1.5-R08 | ■ | 1.5 | 4 | 0.08 |
| 634ZXB10-2.0 | ■ | 644ZXB10-2.0 | ■ | 2.0 | 4 | 0.01 |
| 634ZXB10-2.0-R08 | ■ | 644ZXB10-2.0-R08 | ■ | 2.0 | 4 | 0.08 |
| 634ZXB10-2.0-R15 | ■ | 644ZXB10-2.0-R15 | ■ | 2.0 | 4 | 0.15 |
| 634ZXB10-2.5-R08 | ■ | 644ZXB10-2.5-R08 | ■ | 2.5 | 5 | 0.08 |
| 634ZXB10-2.5-R15 | ■ | 644ZXB10-2.5-R15 | ■ | 2.5 | 5 | 0.15 |
| 634ZXB10-3.0-R08 | ■ | 644ZXB10-3.0-R08 | ■ | 3.0 | 6 | 0.08 |
| 634ZXB10-3.0-R15 | ■ | 644ZXB10-3.0-R15 | ■ | 3.0 | 6 | 0.15 |
| 634ZXB10-3.0-R35 | ■ | 644ZXB10-3.0-R35 | ■ | 3.0 | 6 | 0.35 |

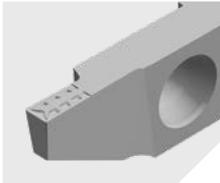
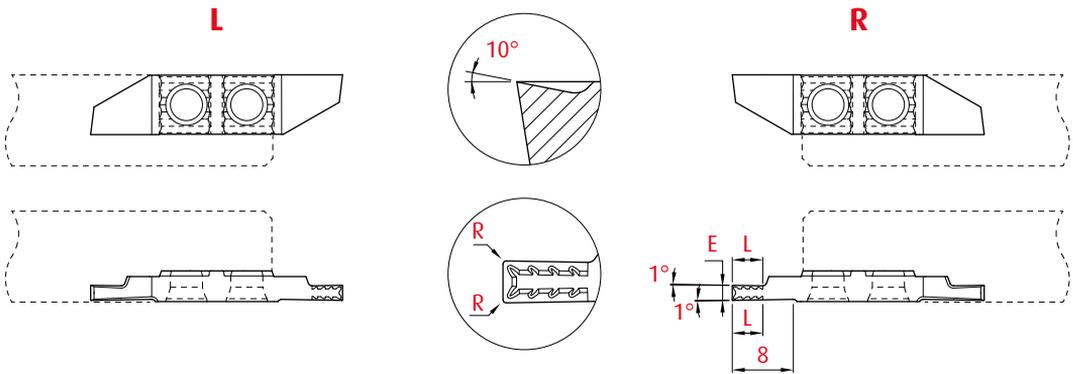


Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

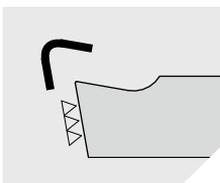
Foncer-tourner
Einstecken und drehen
Grooving and turning

634ZXT / 644ZXT



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

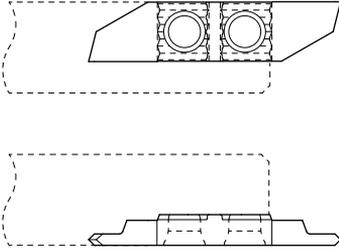
| Art. N° L | TiAlN N (µK20) | Art. N° R | TiAlN N (µK20) | E | L | R |
|------------------|-------------------|------------------|-------------------|-----|-----|------|
| 634ZXT10-1.0 | ■ | 644ZXT10-1.0 | ■ | 1.0 | 2.5 | 0.01 |
| 634ZXT10-1.5 | ■ | 644ZXT10-1.5 | ■ | 1.5 | 4 | 0.01 |
| 634ZXT10-1.5-R08 | ■ | 644ZXT10-1.5-R08 | ■ | 1.5 | 4 | 0.08 |
| 634ZXT10-2.0 | ■ | 644ZXT10-2.0 | ■ | 2.0 | 4 | 0.01 |
| 634ZXT10-2.0-R08 | ■ | 644ZXT10-2.0-R08 | ■ | 2.0 | 4 | 0.08 |
| 634ZXT10-2.0-R15 | ■ | 644ZXT10-2.0-R15 | ■ | 2.0 | 4 | 0.15 |
| 634ZXT10-2.5-R08 | ■ | 644ZXT10-2.5-R08 | ■ | 2.5 | 5 | 0.08 |
| 634ZXT10-2.5-R15 | ■ | 644ZXT10-2.5-R15 | ■ | 2.5 | 5 | 0.15 |
| 634ZXT10-3.0-R08 | ■ | 644ZXT10-3.0-R08 | ■ | 3.0 | 6 | 0.08 |
| 634ZXT10-3.0-R15 | ■ | 644ZXT10-3.0-R15 | ■ | 3.0 | 6 | 0.15 |
| - | | 644ZXT10-3.0-R35 | ■ | 3.0 | 6 | 0.35 |



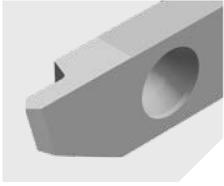
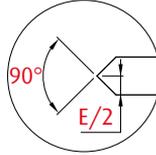
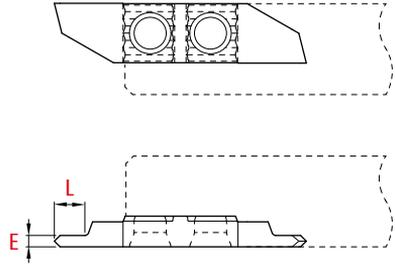
Arête de coupe honée
 Gehonte Schneidkante
 Honed edge

f min: 0.02 mm/U

L



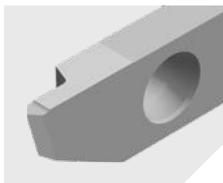
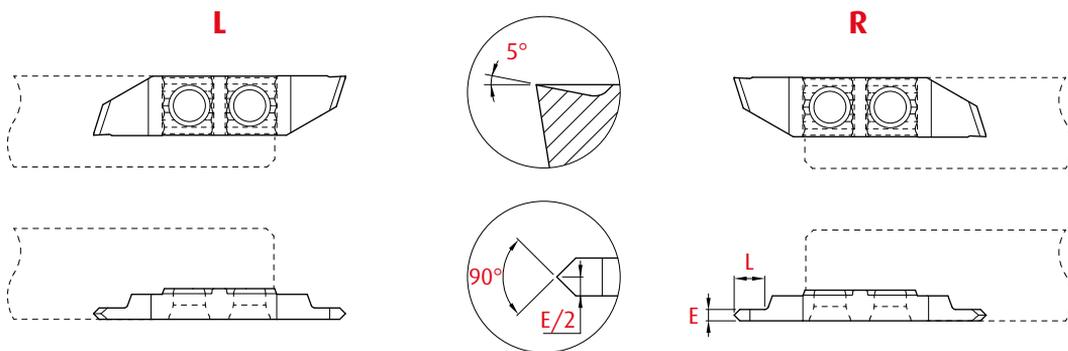
R



| Art. N° |  | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° |  | TiAlN | N (µK20) | HTA | HN (µK10) | E | L |
|------------|--|-------|----------|-----|-----------|------------|--|-------|----------|-----|-----------|-----|---|
| 635-90-1.5 | | ■ | ■ | □ | ■ | 645-90-1.5 | | ■ | ■ | □ | ■ | 1.5 | 4 |

**Chamfreiner
Anfasen
Chamfering**

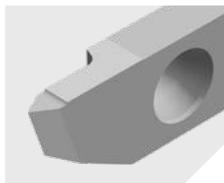
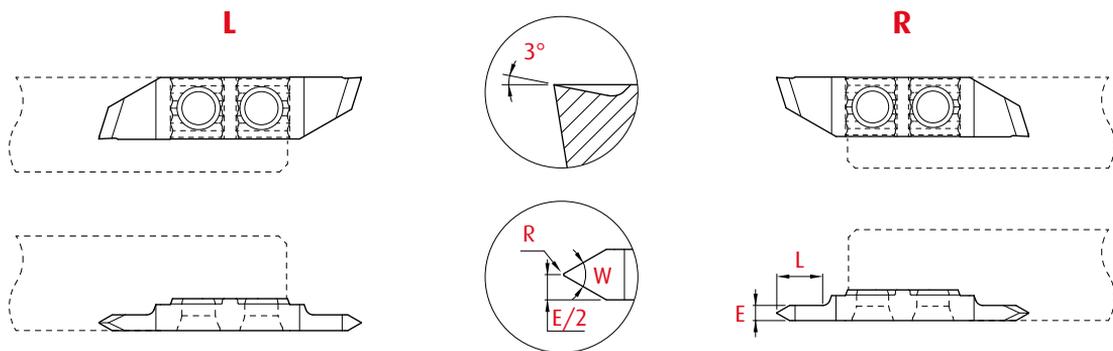
635X / 645X



| Art. N° L | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° R | TiAlN | N (µK20) | HTA | HN (µK10) | E | L |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|-----|---|
| 635X5-90-1.5 | ■ | ■ | □ | ■ | 645X5-90-1.5 | ■ | ■ | □ | ■ | 1.5 | 4 |

■ = disponible / verfügbar / available

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

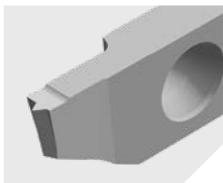
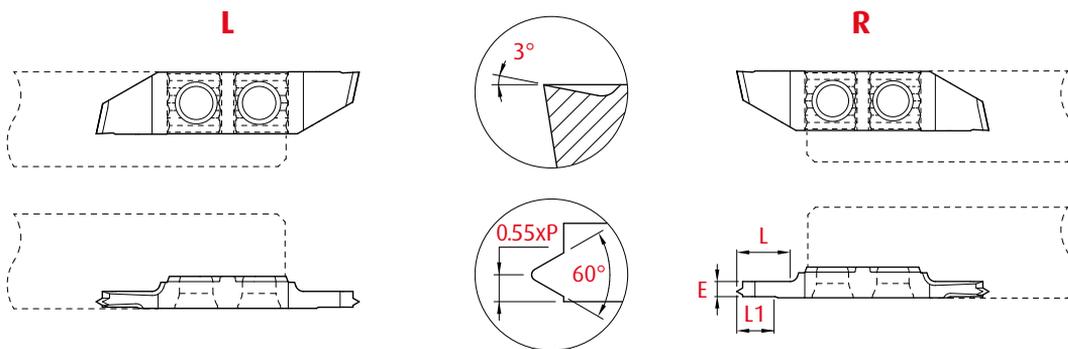


Profil partiel
Teilprofil
Partial profile

| Art. N° L | | | | | Art. N° R | | | | | W | E | L | R |
|------------------|-------|----------|-----|-----------|------------------|-------|----------|-----|-----------|-----|-----|---|------|
| | TiAlN | N (µk20) | HTA | HN (µk10) | | TiAlN | N (µk20) | HTA | HN (µk10) | | | | |
| 636X3-55-1.5 | ■ | ■ | □ | ■ | 646X3-55-1.5 | ■ | ■ | □ | ■ | 55° | 1.5 | 4 | 0 |
| 636X3-55-2.0-R03 | ■ | ■ | □ | ■ | 646X3-55-2.0-R03 | ■ | ■ | □ | ■ | 55° | 2.0 | 6 | 0.03 |
| 636X3-60-1.5 | ■ | ■ | □ | ■ | 646X3-60-1.5 | ■ | ■ | □ | ■ | 60° | 1.5 | 4 | 0 |
| 636X3-60-2.0-R03 | ■ | ■ | □ | ■ | 646X3-60-2.0-R03 | ■ | ■ | □ | ■ | 60° | 2.0 | 6 | 0.03 |
| 636X3-60-2.0-R06 | ■ | ■ | □ | ■ | 646X3-60-2.0-R06 | ■ | ■ | □ | ■ | 60° | 2.0 | 6 | 0.06 |
| 636X3-60-3.0-R06 | ■ | ■ | □ | ■ | 646X3-60-3.0-R06 | ■ | ■ | □ | ■ | 60° | 3.0 | 8 | 0.06 |
| 636X3-60-3.0-R12 | ■ | ■ | □ | ■ | 646X3-60-3.0-R12 | ■ | ■ | □ | ■ | 60° | 3.0 | 8 | 0.12 |

Fileter
Gewinde drehen
Threading

636X-M / 646X-M

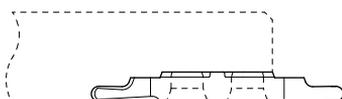
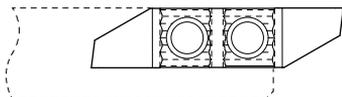


Profil complet métrique
Vollprofil metrisch
Full profile metric

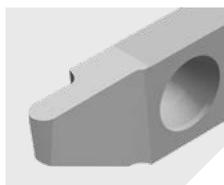
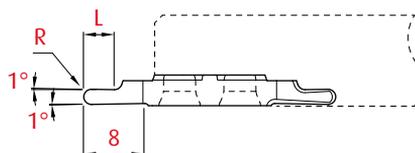
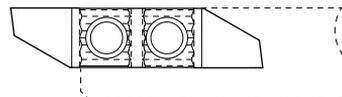
| Art. N° L | | | | | Art. N° R | | | | | E | L | L1 | Pas Steigung Pitch P |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|-----|---|----|-------------------------------|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | TiAlN | N (µK20) | HTA | HN (µK10) | | | | |
| 636X3-M-0.25 | ■ | ■ | □ | ■ | 646X3-M-0.25 | ■ | ■ | □ | ■ | 1.0 | 3 | 3 | 0.25 |
| 636X3-M-0.30 | ■ | ■ | □ | ■ | 646X3-M-0.30 | ■ | ■ | □ | ■ | 1.0 | 3 | 3 | 0.30 |
| 636X3-M-0.35 | ■ | ■ | □ | ■ | 646X3-M-0.35 | ■ | ■ | □ | ■ | 1.0 | 3 | 3 | 0.35 |
| 636X3-M-0.40 | ■ | ■ | □ | ■ | 646X3-M-0.40 | ■ | ■ | □ | ■ | 1.0 | 3 | 3 | 0.40 |
| 636X3-M-0.45 | ■ | ■ | □ | ■ | 646X3-M-0.45 | ■ | ■ | □ | ■ | 1.0 | 3 | 3 | 0.45 |
| 636X3-M-0.50 | ■ | ■ | □ | ■ | 646X3-M-0.50 | ■ | ■ | □ | ■ | 1.0 | 3 | 3 | 0.50 |
| 636X3-M-0.60 | ■ | ■ | □ | ■ | 646X3-M-0.60 | ■ | ■ | □ | ■ | 1.5 | 5 | 5 | 0.60 |
| 636X3-M-0.70 | ■ | ■ | □ | ■ | 646X3-M-0.70 | ■ | ■ | □ | ■ | 1.5 | 5 | 5 | 0.70 |
| 636X3-M-0.75 | ■ | ■ | □ | ■ | 646X3-M-0.75 | ■ | ■ | □ | ■ | 1.5 | 5 | 5 | 0.75 |
| 636X3-M-0.80 | ■ | ■ | □ | ■ | 646X3-M-0.80 | ■ | ■ | □ | ■ | 1.5 | 5 | 5 | 0.80 |
| 636X3-M-1.00 | ■ | ■ | □ | ■ | 646X3-M-1.00 | ■ | ■ | □ | ■ | 2.0 | 7 | 5 | 1.00 |
| 636X3-M-1.25 | ■ | ■ | □ | ■ | 646X3-M-1.25 | ■ | ■ | □ | ■ | 2.0 | 7 | 5 | 1.25 |
| 636X3-M-1.50 | ■ | ■ | □ | ■ | 646X3-M-1.50 | ■ | ■ | □ | ■ | 2.0 | 7 | 5 | 1.50 |

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

L



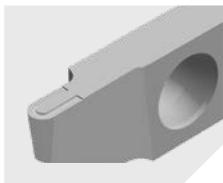
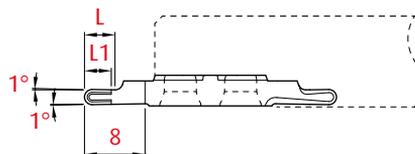
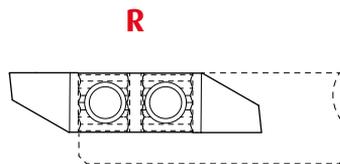
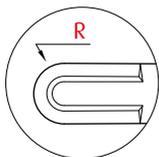
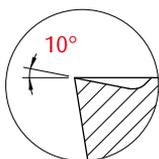
R



| Art. N° L | TiAlN N (µK20) HTA HN (µK10) | Art. N° R | TiAlN N (µK20) HTA HN (µK10) | R | L |
|---------------------|---------------------------------------|---------------------|---------------------------------------|------|-----|
| - | | 647-R0.25 | ■ ■ □ ■ | 0.25 | 1.5 |
| - | | 647-R0.4 | ■ ■ □ ■ | 0.40 | 2 |
| 637-R0.5 | ■ ■ □ ■ | 647-R0.5 | ■ ■ □ ■ | 0.5 | 2.5 |
| - | | 647-R0.6 | ■ ■ □ ■ | 0.6 | 2.5 |
| - | | 647-R0.75 | ■ ■ □ ■ | 0.75 | 3 |
| - | | 647-R0.8 | ■ ■ □ ■ | 0.8 | 3 |
| 637-R1.0 | ■ ■ □ ■ | 647-R1.0 | ■ ■ □ ■ | 1.0 | 4 |
| - | | 647-R1.5 | ■ ■ □ ■ | 1.5 | 6 |

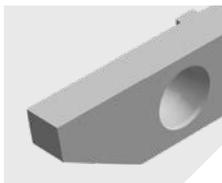
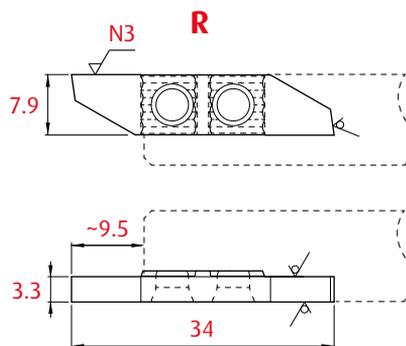
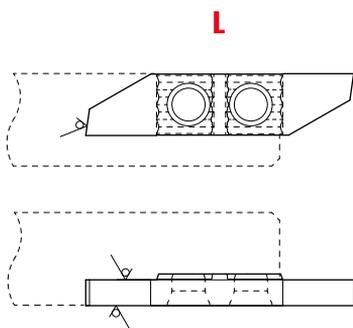
Plaquettes à rayon
Radius-Wendeplatten
Inserts with radius

647ZX10



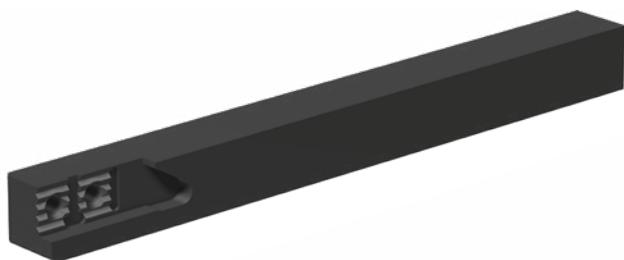
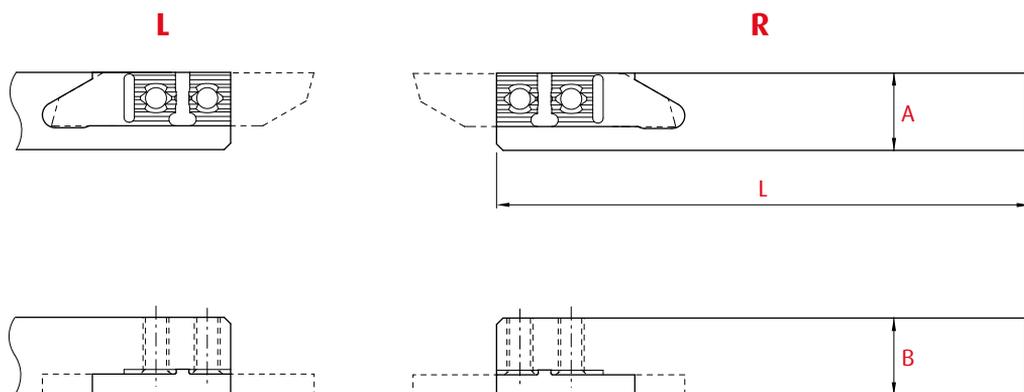
Pour un meilleur contrôle des copeaux
 Für eine bessere Spankontrolle
 For a better chip-control

| Art. N° |  | TiAlN N (µK20) | R | L | L1 |
|---------------------|--|-------------------|---|-----|----|
| 647ZX10-R1.0 | ■ | 1.0 | 4 | 3.5 | |
| 647ZX10-R1.5 | ■ | 1.5 | 6 | 4 | |



Face de coupe polie
Polierte Schneidfläche
Cutting face polished

| Art. N° L | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° R | TiAlN | N (µK20) | HTA | HN (µK10) |
|---------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|---------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 631-EP | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 641-EP | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Porte-outils
Halter
Holders**
650 / 660


| Art. N° L |  | Art. N° R |  | A x B | L |
|--------------------|---|--------------------|---|-------------|-----|
| 650-8-N | | 660-8-N | | 8 x 8 | 115 |
| 650-10-N | | 660-10-N | | 10 x 10 | 115 |
| 650-10-50-N | | 660-10-50-N | | 10 x 10 | 50 |
| 650-12-N | | 660-12-N | | 12 x 12 | 130 |
| 650-12-90-N | | 660-12-90-N | | 12 x 12 | 90 |
| 650-12.7-N | | 660-12.7-N | | 12.7 x 12.7 | 130 |
| 650-16-N | | 660-16-N | | 16 x 16 | 130 |
| 650-16-75-N | | 660-16-75-N | | 16 x 16 | 75 |
| 650-20-N | | 660-20-N | | 20 x 20 | 120 |

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.

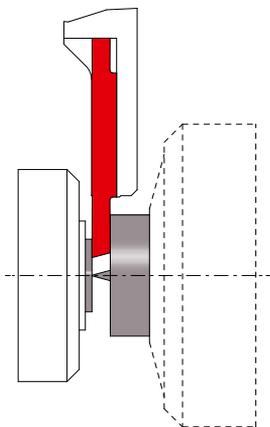
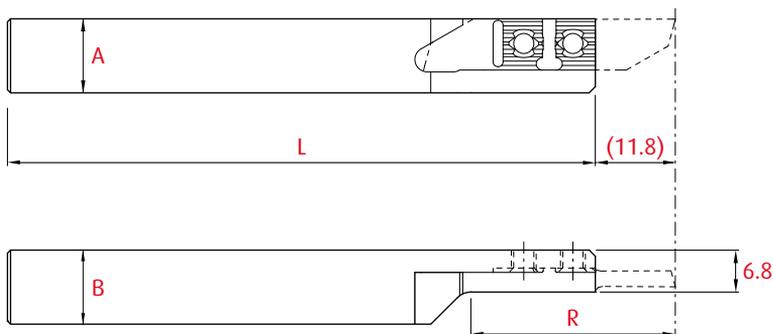
Porte-outils
Halter
Holders

Coupe à droite déportée
Versetztes Rechtsschneiden
Right cut off line

650-RC

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

Voir dès page 101
 Siehe ab Seite 101
 See from page 101

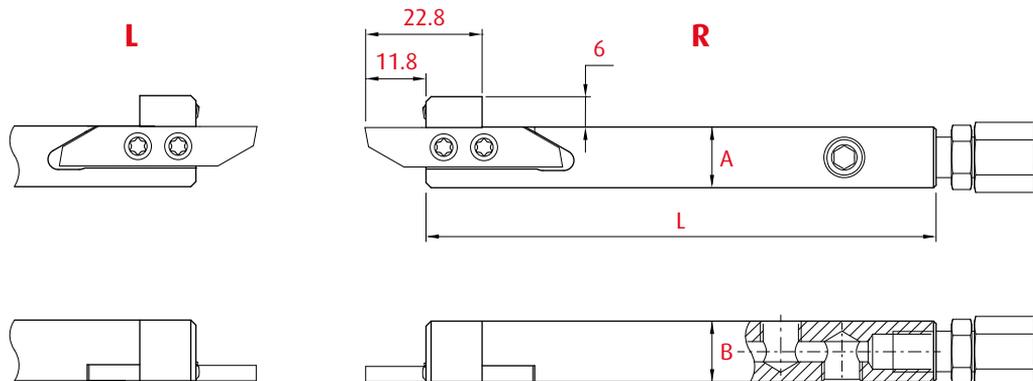


| Art. N° Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | L (R) | A x B | R | L |
|--|-------|---------|----|-----|
| 650RC-10-N | | 10 x 10 | 32 | 115 |
| 650RC-12-N | | 12 x 12 | 32 | 130 |
| 650RC-16-N | | 16 x 16 | 42 | 130 |

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

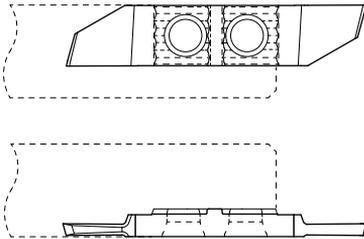
650-JET / 660-JET



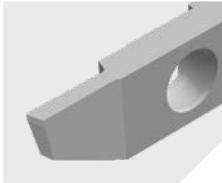
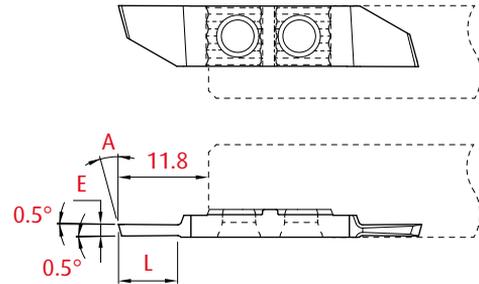
| Art. N° L |  | Art. N° R |  | A x B | L |
|----------------|---|----------------|---|-------------|-----|
| 650-1012-JET-N | | 660-1012-JET-N | | 10 x 12 | 100 |
| 650-12-JET-N | | 660-12-JET-N | | 12 x 12 | 100 |
| 650-12.7-JET-N | | 660-12.7-JET-N | | 12.7 x 12.7 | 100 |
| 650-16-JET-N | | 660-16-JET-N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

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



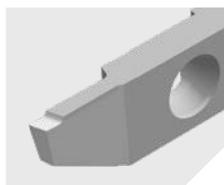
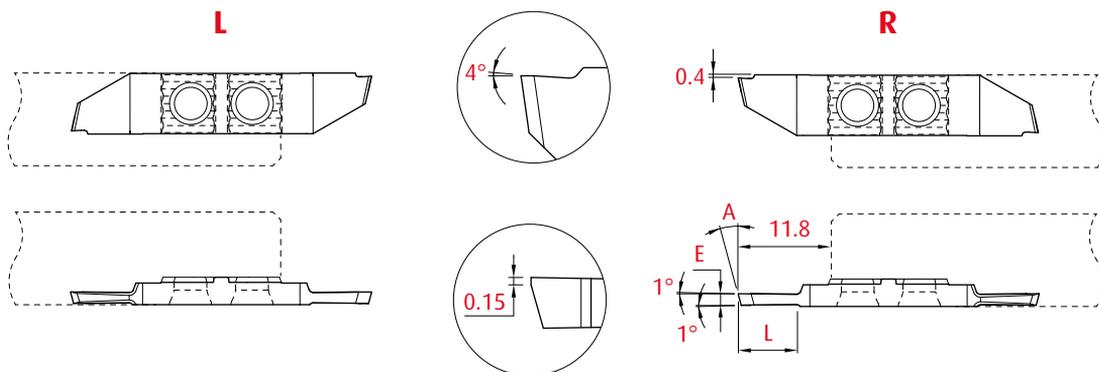
R



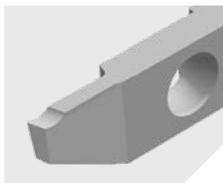
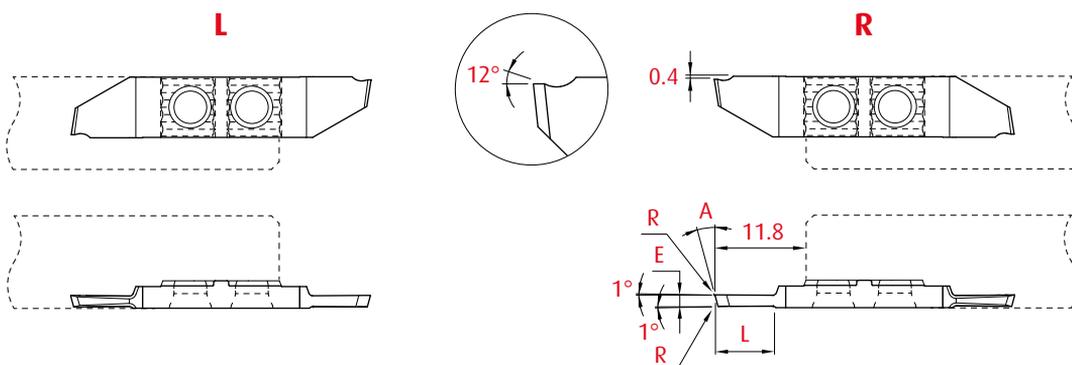
| Art. N° L | | | | | Art. N° R | | | | | E | A | L |
|---------------------|-------|----------|-----|-----------|---------------------|-------|----------|-----|-----------|-----|-----|-----|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | TiAlN | N (µK20) | HTA | HN (µK10) | | | |
| 651-0.8-20° | ■ | ■ | □ | ■ | 661-0.8-20° | ■ | ■ | □ | ■ | 0.8 | 20° | 5 |
| - | | | | | 661-1.0-15° | ■ | ■ | □ | ■ | 1.0 | 15° | 5 |
| 651-1.0-20° | ■ | ■ | □ | ■ | 661-1.0-20° | ■ | ■ | □ | ■ | 1.0 | 20° | 5 |
| - | | | | | 661-1.2-15° | ■ | ■ | □ | ■ | 1.2 | 15° | 5 |
| 651-1.2-20° | ■ | ■ | □ | ■ | 661-1.2-20° | ■ | ■ | □ | ■ | 1.2 | 20° | 5 |
| 651-1.5-15° | ■ | ■ | □ | ■ | 661-1.5-15° | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 |
| - | | | | | 661-1.5-20° | ■ | ■ | □ | ■ | 1.5 | 20° | 7.5 |
| 651-1.8-15° | ■ | ■ | □ | ■ | 661-1.8-15° | ■ | ■ | □ | ■ | 1.8 | 15° | 9 |
| 651-2.0-15° | ■ | ■ | □ | ■ | 661-2.0-15° | ■ | ■ | □ | ■ | 2.0 | 15° | 11 |
| 651-2.5-15° | ■ | ■ | □ | ■ | 661-2.5-15° | ■ | ■ | □ | ■ | 2.5 | 15° | 11 |

Tronçonnage
Abstechen
Parting off

651XF / 661XF



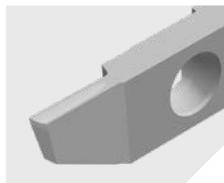
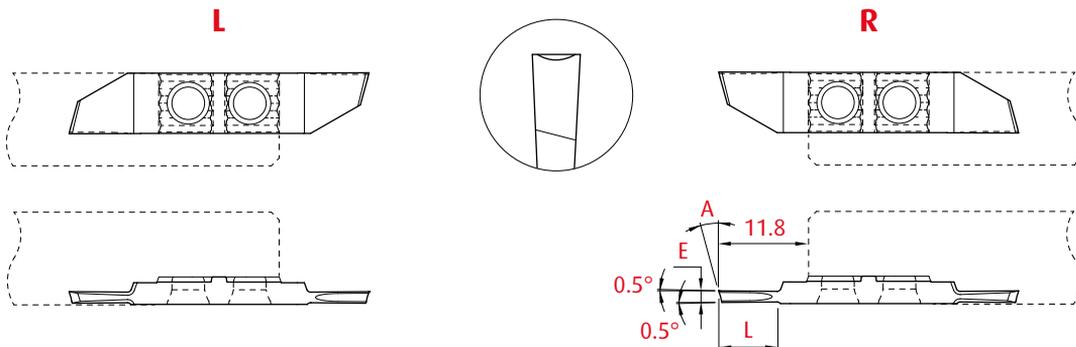
| Art. N° L | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° R | TiAlN | N (µK20) | HTA | HN (µK10) | E | A | L |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|-----|-----|-----|
| 651XF-1.5 | ■ | ■ | □ | ■ | 661XF-1.5 | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 |
| 651XF-2.0 | ■ | ■ | □ | ■ | 661XF-2.0 | ■ | ■ | □ | ■ | 2.0 | 15° | 11 |



| Art. N° L | | | | | Art. N° R | | | | | E | A | L | R |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|-----|-----|-----|------|
| | TiAlN | N (µK20) | HTA | HN (µK10) | | TiAlN | N (µK20) | HTA | HN (µK10) | | | | |
| 651X12-1.0 | ■ | ■ | □ | ■ | 661X12-1.0 | ■ | ■ | □ | ■ | 1.0 | 15° | 5 | 0.03 |
| 651X12-1.5 | ■ | ■ | □ | ■ | 661X12-1.5 | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 | 0.03 |
| 651X12-2.0 | ■ | ■ | □ | ■ | 661X12-2.0 | ■ | ■ | □ | ■ | 2.0 | 15° | 11 | 0.03 |

Tronçonnage
Abstechen
Parting off

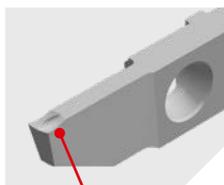
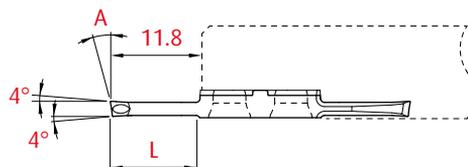
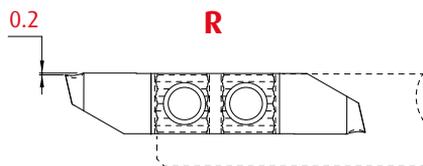
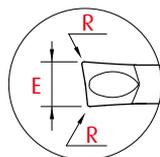
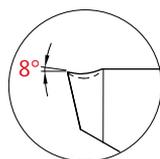
651U / 661U



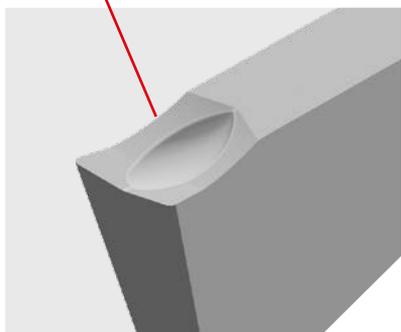
| Art. N° L | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° R | TiAlN | N (µK20) | HTA | HN (µK10) | E | A | L |
|--------------|-------|----------|-----|-----------|--------------|-------|----------|-----|-----------|-----|-----|-----|
| 651U-1.5 | ■ | ■ | □ | ■ | 661U-1.5 | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 |
| 651U-2.0 | ■ | ■ | □ | ■ | 661U-2.0 | ■ | ■ | □ | ■ | 2.0 | 15° | 11 |

■ = disponible / verfügbar / available

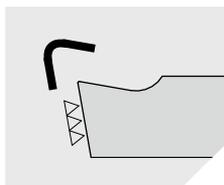
□ = selon disponibilité du stock / je nach Lagerverfügbarkeit / depending the stock availability



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



| Art. N° | | TiAlN N (µkzO) | E | A | L | R |
|--------------------------|--|-------------------|-----|----|----|------|
| R | | ■ | 2.0 | 8° | 11 | 0.10 |
| 661ZU8-2.0-8°-R10 | | | | | | |



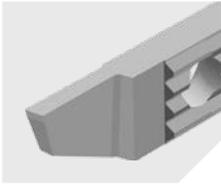
Arête de coupe honée
Gehonte Schneidkante
Honed edge

f min: 0.02 mm/U

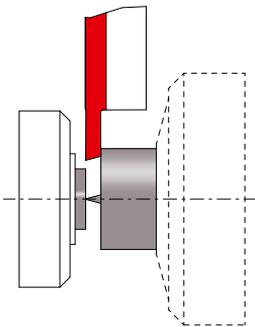
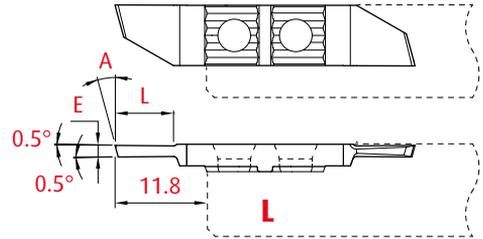
Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

651R



Cut R

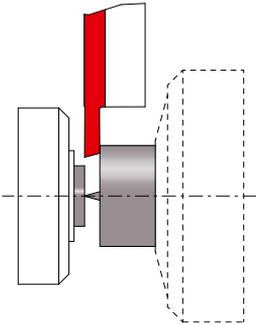
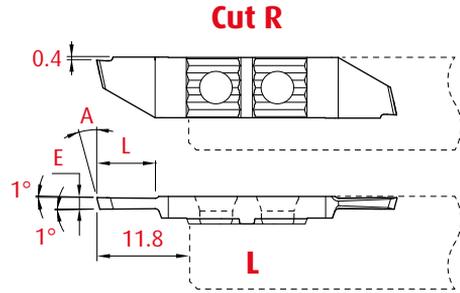
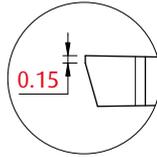
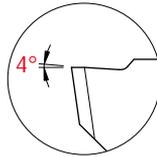
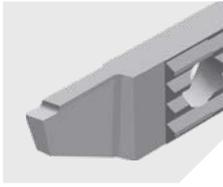


| Art. N° Coupe à droite déportée Versetztes Rechtsschneiden Right cut off line | L (R) | | | E | A | L |
|--|-------|----------|-----|-----------|-----|---------|
| | TIALN | N (µK20) | HTA | HN (µK10) | | |
| 651R-1.0-15° | ■ | ■ | □ | ■ | 1.0 | 15° 5 |
| 651R-1.2-15° | ■ | ■ | □ | ■ | 1.2 | 15° 5 |
| 651R-1.5-15° | ■ | ■ | □ | ■ | 1.5 | 15° 7.5 |
| 651R-2.0-15° | ■ | ■ | □ | ■ | 2.0 | 15° 11 |
| 651R-2.5-15° | ■ | ■ | □ | ■ | 2.5 | 15° 11 |

Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

651RXF

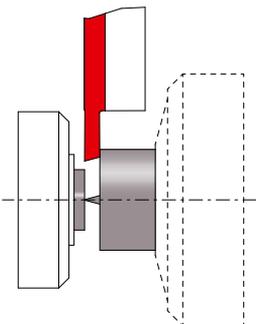
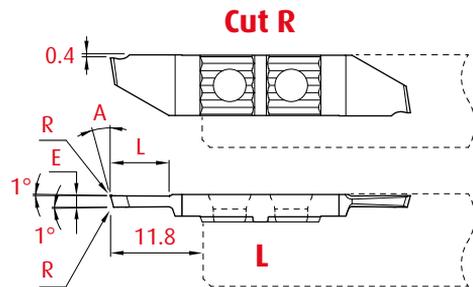
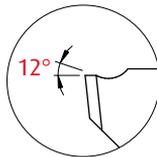
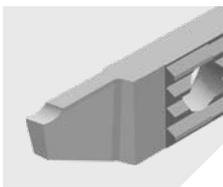


| Art. N° | L (R) | | | | TiAlN | N (μK20) | HTA | HN (μK10) | E | A | L |
|------------|-------|---|---|---|-------|----------|-----|-----------|---|---|---|
| 651RXF-1.5 | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 | | | | |
| 651RXF-2.0 | ■ | ■ | □ | ■ | 2.0 | 15° | 11 | | | | |

Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

651RX12

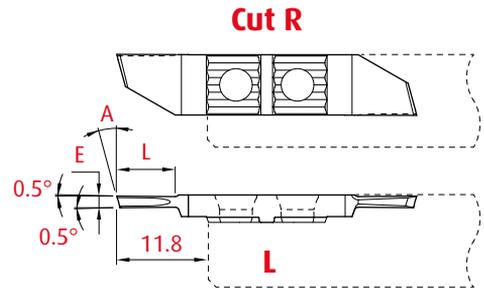
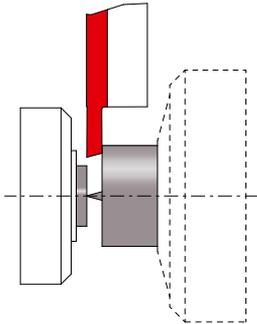
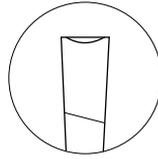
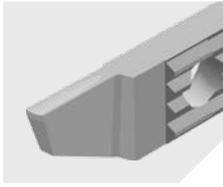


| Art. N° | L (R) | | | | TiAlN | N (μK20) | HTA | HN (μK10) | E | A | L | R |
|-------------|-------|---|---|---|-------|----------|-----|-----------|---|---|---|---|
| 651RX12-1.5 | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 | 0.03 | | | | |
| 651RX12-2.0 | ■ | ■ | □ | ■ | 2.0 | 15° | 11 | 0.03 | | | | |

Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

651RU

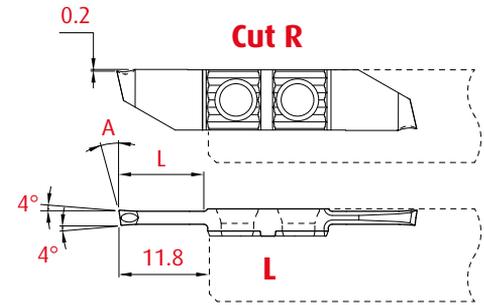
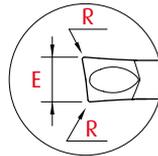
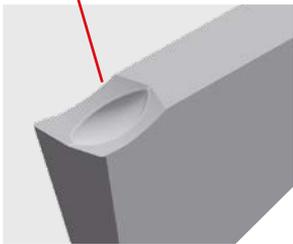
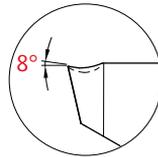
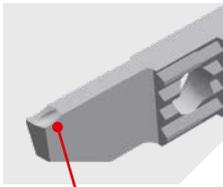


| Art. N° | L (R) | | | TIALN | N (µK20) | HTA | HN (µK10) | E | A | L |
|-----------|-------|---|---|-------|----------|-----|-----------|---|---|---|
| 651RU-1.5 | ■ | ■ | □ | ■ | 1.5 | 15° | 7.5 | | | |
| 651RU-2.0 | ■ | ■ | □ | ■ | 2.0 | 15° | 11 | | | |

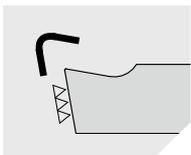
Tronçonnage
Abstechen
Parting off

Coupe déportée
Versetztes Schneiden
Cut off line

651RZU



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

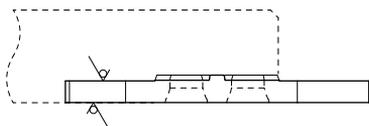
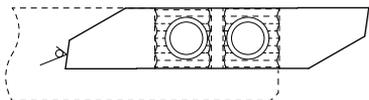


Arête de coupe honée
Gehonte Schneidkante
Honed edge

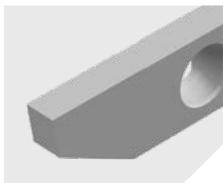
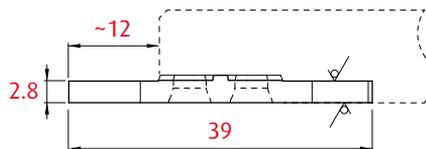
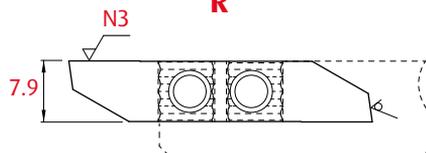
f min: 0.02 mm/U

| Art. N° | L (R) | | | | TIALN | N (µK20) | E | A | L | R |
|--------------------|-------|--|--|--|-------|----------|----|------|---|---|
| 651RZU8-2.0-8°-R10 | ■ | | | | 2.0 | 8° | 11 | 0.10 | | |

L



R



Face de coupe polie
Polierte Schneidfläche
Cutting face polished

| Art. N° L | TiAlN | N (µK20) | HTA | HN (µK10) | Art. N° R | TiAlN | N (µK20) | HTA | HN (µK10) |
|---------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|---------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 651-EP | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 661-EP | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

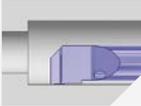
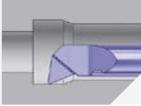
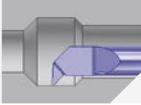
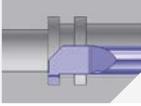
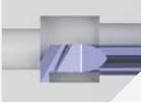
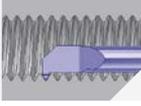
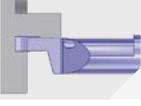
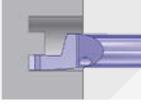
| Pièces de rechange Ersatzteile Spare parts | | | | | | Accessoires Zubehöre Accessories | |
|--|---|---|--|--|---|--|--|
| Porte-outils Halter Holders |  |  |   |   |  | Option Art. N° | Recommandation de serrage Drehmoment Empfehlung Clamping recommendation |
| 630 640 | V-M4X9-T15 | C-T15 | - | - | - | SET-NM-TX15 | 3 Nm |
| 630-JET 640-JET | V-M4X9-T15 | C-T15 | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 | SET-NM-TX15 | 3 Nm |
| 650 660 | V-M4X9-T15 | C-T15 | - | - | - | SET-NM-TX15 | 3 Nm |
| 650-RC | V-M4X6.5-T15 | C-T15 | - | - | - | SET-NM-TX15 | 3 Nm |
| 650-JET 660-JET | V-M4X9-T15 | C-T15 | J-M8X1-D6 | JB-M8X1 | JJ-M3X6-D1.5 | SET-NM-TX15 | 3 Nm |


SET-NM-TX15

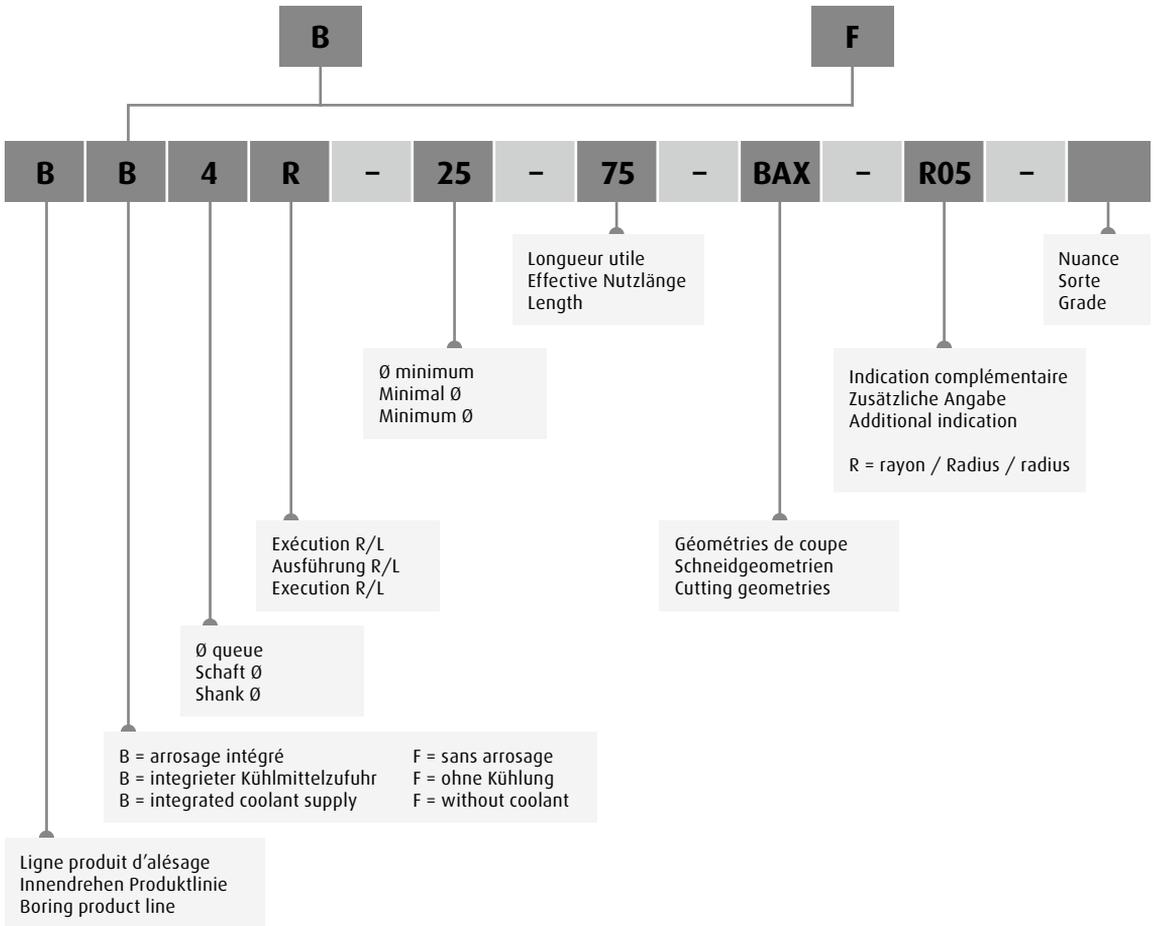
ALFA-INTERN



Index

| | | | |
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| | Nuances & paramètres de coupe Sorten & Schnittwerte Grades & machining data | | 112 |
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| Alésage Ausbohren Boring | BA / BAX |  | 120 |
| Alésage-copiage Ausbohren-kopieren Boring chambering | BCX |  | 124 |
| Copiage Kopieren Chambering | C45 / C45X |  | 126 |
| Gorge Einstechen Grooving | GX |  | 130 |
| Foncer-tourner Einstechen und drehen Grooving and turning | GTX |  | 132 |
| Filetage Gewindedrehen Threading | TP60° / TP55° / TM |  | 134 |
| Gorge frontale Axiales stechen Axial grooving | FEG / FIG |   | 140 |
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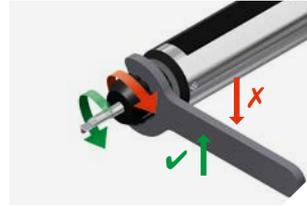
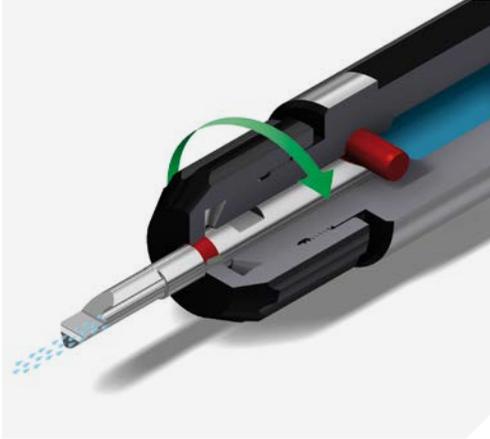
Système de désignation des barres d'alésage
Bohrstangen Bezeichnungssystem
Boring bars designation system



Porte-outils avec écrou de serrage Halter mit Spannmutter Tool holder 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
Querverschraubungssystem
Clamping system with transverse screw



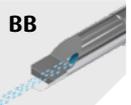
Arrosage sur l'arête de coupe
Kühlung auf der Schneidkante
Cooling on the cutting edge



Arrosage favorisant l'évacuation des copeaux
Spanabfuhr fördernde Kühlung
Cooling for better chip outflow

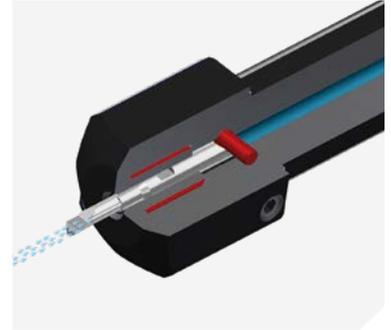
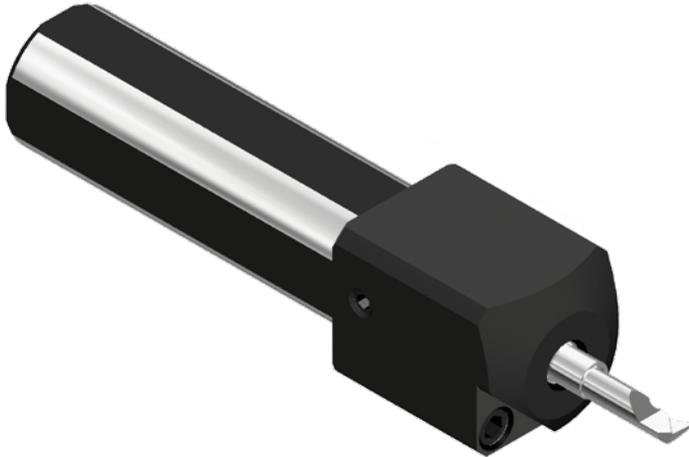


Arrosage par le centre de l'outil
Zentrale Kühlmittelzufuhr
Cooling through the center of the tool



Porte-outils à serrage hydraulique
Halter mit Hydro-Dehnspann-System
Tool holders with hydraulic clamping system

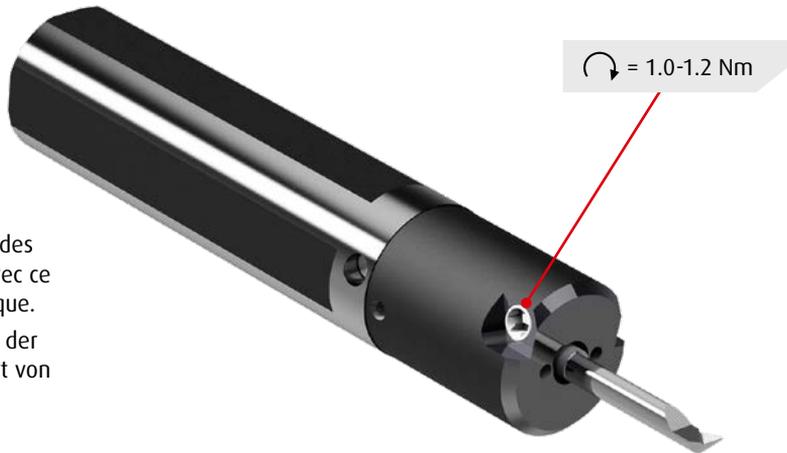
BHY



Arrosage par la barre d'alésage
 Kühlung durch die Bohrstange
 Cooling through the boring bar

Excellente absorption des vibrations!
 Ausgezeichnete Schwingungsdämpfung!
 Excellent vibration absorption!

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

Nuances Sorten Grades

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, Stahlliegierung, 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, Finox
- aciers alliés contenant: Chrome Nickel, Vanadium, Molybdène, ...

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

- very wear and high temperature resistant grade. Recommended for following material: Inox 304, 316L, 317L, 904, Finox
- 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

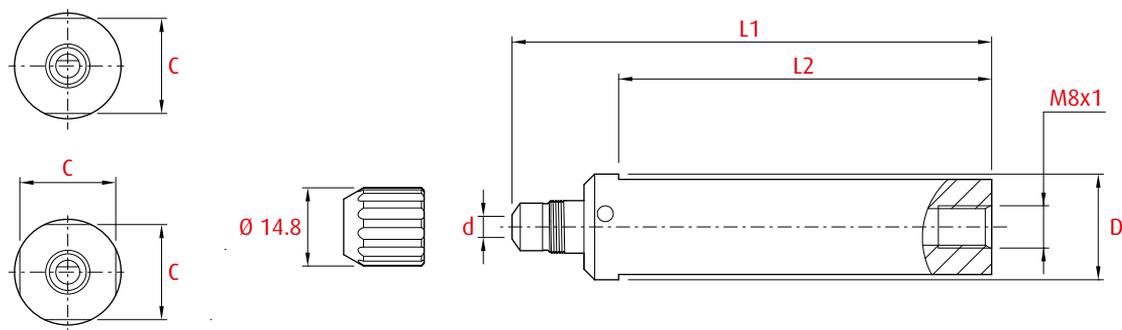
- tough base micro-grain grade
- first choice for non-ferrous materials

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 | 60-100 | 0.02-0.03 | 0.02-0.08 | 0.03-0.10 |
| Acier faiblement allié Leicht legierter Stahl Low alloyed steel | 50-80 | 0.01-0.03 | 0.02-0.05 | 0.03-0.06 |
| Acier fortement allié Legierter Stahl High alloyed steel | 40-60 | 0.01-0.02 | 0.02-0.04 | 0.02-0.06 |
| Acier inoxydable Rostfreistahl Stainless steel | 40-90 | 0.01-0.03 | 0.02-0.05 | 0.03-0.08 |
| Aluminium | 60-150 | 0.01-0.03 | 0.02-0.06 | 0.03-0.10 |
| Titane Titan Titanium | 30-70 | 0.01-0.03 | 0.02-0.05 | 0.03-0.10 |
| Cuivre, laiton, bronze Kupfer, Messing, Bronze Copper, brass, bronze | 60-150 | 0.01-0.03 | 0.02-0.05 | 0.03-0.08 |



> page 110



| Art. N° | d | Bars | D | L1 | L2 | C | 2 flats | 4 flats |
|------------------|---|------------------|-------|-----|-----|------|---------|---------|
| BH4-D10-75-N | 4 | BB4... BF4... | 10 | 75 | 55 | 8.8 | ■ | |
| BH4-D12-75-N | | | 12 | 75 | 55 | 11.2 | ■ | |
| BH4-D12.7-75-N | | | 12.7 | 75 | 55 | 11.2 | ■ | |
| BH4-D15.87-75-N | | | 15.87 | 75 | 55 | 14 | ■ | |
| BH4-D16-75-N | | | 16 | 75 | 55 | 14 | ■ | |
| BH4-D16-75-F4-N | | | 16 | 75 | 55 | 14 | | ■ |
| BH4-D19.05-90-N | | | 19.05 | 90 | 70 | 17 | ■ | |
| BH4-D20-90-N | | | 20 | 90 | 70 | 18 | ■ | |
| BH4-D20-90-F4-N | | | 20 | 90 | 70 | 18 | | ■ |
| BH4-D20-160-F4-N | | | 20 | 160 | 140 | 18 | | ■ |
| BH4-D22-90-N | | | 22 | 90 | 70 | 20 | ■ | |
| BH4-D22-90-F4-N | | | 22 | 90 | 70 | 20 | | ■ |
| BH4-D22-130-F4-N | | | 22 | 130 | 110 | 20 | | ■ |
| BH4-D25-100-N | | | 25 | 100 | 80 | 23 | ■ | |
| BH4-D25-100-F4-N | | | 25 | 100 | 80 | 23 | | ■ |
| BH4-D25-170-F4-N | | | 25 | 170 | 150 | 23 | | ■ |
| BH4-D25.4-100-N | | | 25.4 | 100 | 80 | 23.4 | ■ | |
| BH4-D28-100-N | | | 28 | 100 | 80 | 26 | ■ | |

Pièces de rechange
 Ersatzteile
 Spare parts

BH4...

Art. N°

BH4-M10

Art. N°

C-BH4-M10

Option

BH4...

Art. N°

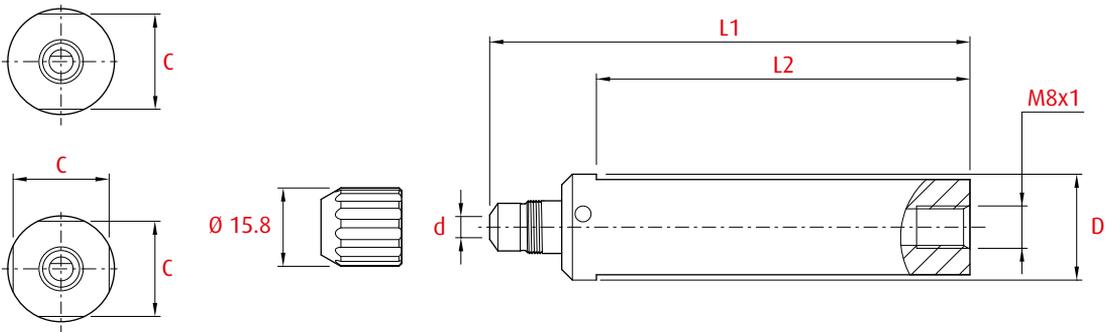
J-M8x1-D6

Porte-outils avec écrou de serrage
Halter mit Spannmutter
Tool holder with clamping nut

BH6...



> page 110



| Art. N° | d | Bars | D | L1 | L2 | C | 2 flats | 4 flats |
|------------------|---|------------------|-------|-----|-----|------|---------|---------|
| BH6-D12-75-N | 6 | BB6... BF6... | 12 | 75 | 55 | 11.2 | ■ | |
| BH6-D12.7-75-N | | | 12.7 | 75 | 55 | 11.2 | ■ | |
| BH6-D15.87-75-N | | | 15.87 | 75 | 55 | 14 | ■ | |
| BH6-D16-75-N | | | 16 | 75 | 55 | 14 | ■ | |
| BH6-D19.05-90-N | | | 19.05 | 90 | 70 | 17 | ■ | |
| BH6-D20-90-N | | | 20 | 90 | 70 | 18 | ■ | |
| BH6-D20-90-F4-N | | | 20 | 90 | 70 | 18 | | ■ |
| BH6-D20-160-F4-N | | | 20 | 160 | 140 | 18 | | ■ |
| BH6-D22-90-N | | | 22 | 90 | 70 | 20 | ■ | |
| BH6-D22-90-F4-N | | | 22 | 90 | 70 | 20 | | ■ |
| BH6-D22-130-F4-N | | | 22 | 130 | 110 | 20 | | ■ |
| BH6-D25-100-N | | | 25 | 100 | 80 | 23 | ■ | |
| BH6-D25-100-F4-N | | | 25 | 100 | 80 | 23 | | ■ |
| BH6-D25-170-F4-N | | | 25 | 170 | 150 | 23 | | ■ |
| BH6-D25.4-100-N | | | 25.4 | 100 | 80 | 23.4 | ■ | |
| BH6-D28-100-N | | | 28 | 100 | 80 | 26 | ■ | |

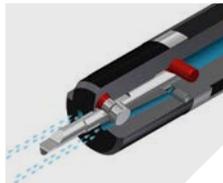
| | | |
|---|---|---|
| Pièces de rechange Ersatzteile Spare parts | Art. N° | Art. N° |
| |  |  |
| BH6... | BH6-M12 | C-BH6-M12 |

| | |
|---------------|---|
| Option | Art. N° |
| |  |
| BH6... | J-M8x1-D6 |

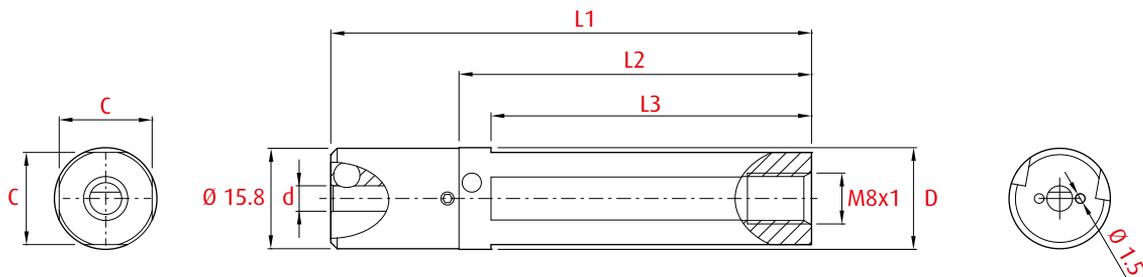
■ = disponible / verfügbar / available
 □ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Porte-outils avec arrosage multiple
 Halter mit mehrfaches Kühlungssystem
 Tool holders with multiple coolant system

BHS4...



> page 110



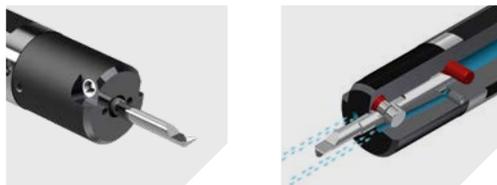
| Art. N° | d | Bars | D | L1 | L2 | L3 | C |
|---------------------|---|------------------|-------|-----|-----|-----|------|
| BHS4-D10-75-F4-N | 4 | BB4... BF4... | 10 | 75 | 55 | 50 | 9.2 |
| BHS4-D12-75-F4-N | | | 12 | 75 | 55 | 50 | 11 |
| BHS4-D12.7-75-F4-N | | | 12.7 | 75 | 55 | 50 | 11.7 |
| BHS4-D15.87-75-F4-N | | | 15.87 | 75 | 55 | 50 | 14.5 |
| BHS4-D16-75-F4-N | | | 16 | 75 | 55 | 50 | 14.5 |
| BHS4-D16-110-F4-N | | | 16 | 110 | 90 | 85 | 14.5 |
| BHS4-D19.05-90-F4-N | | | 19.05 | 90 | 70 | 65 | 17 |
| BHS4-D20-90-F4-N | | | 20 | 90 | 70 | 65 | 18 |
| BHS4-D20-160-F4-N | | | 20 | 160 | 140 | 135 | 18 |
| BHS4-D22-90-F4-N | | | 22 | 90 | 70 | 65 | 20 |
| BHS4-D22-130-F4-N | | | 22 | 130 | 110 | 105 | 20 |
| BHS4-D25-100-F4-N | | | 25 | 100 | 80 | 75 | 23 |
| BHS4-D25-170-F4-N | | | 25 | 170 | 150 | 145 | 23 |
| BHS4-D25.4-100-F4-N | | | 25.4 | 100 | 80 | 75 | 23 |
| BHS4-D28-100-F4-N | | | 28 | 100 | 80 | 75 | 26 |

| | | |
|--|-----------------|---------|
| Pièces de rechange Ersatzteile Spare parts | Art. N° | Art. N° |
| | | |
| BHS4... | V-BHS-M4x0.5-T8 | C-T8 |

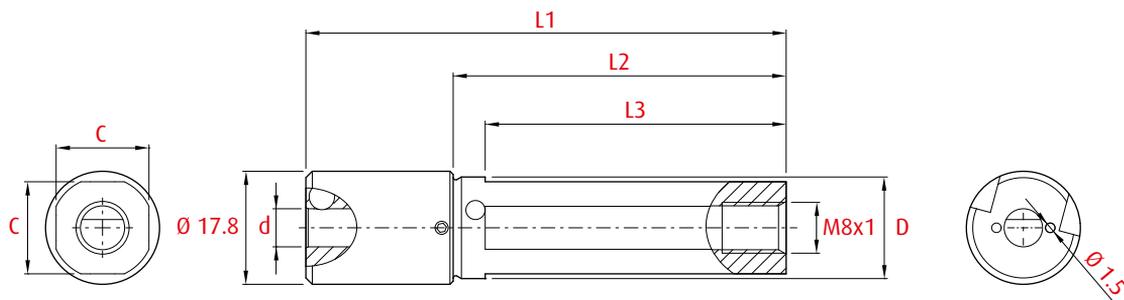
| | | |
|---------|-----------|---------------|
| Option | Art. N° | Art. N° |
| | | |
| BHS4... | J-M8x1-D6 | SET-NM1.2-TX8 |

Porte-outils avec arrosage multiple
Halter mit mehrfaches Kühlungssystem
Tool holders with multiple coolant system

BHS6...

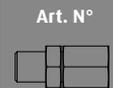
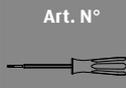


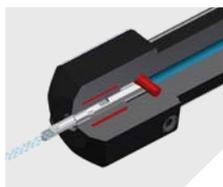
> page 110



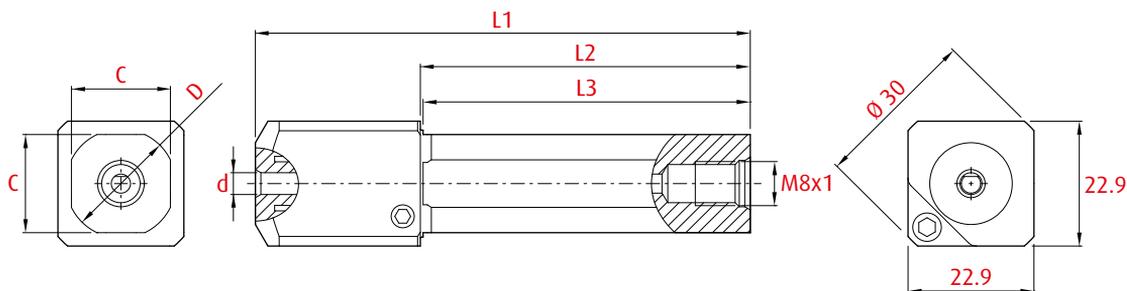
| Art. N° | d | Bars | D | L1 | L2 | L3 | C |
|---------------------|---|------------------|-------|-----|-----|-----|------|
| BHS6-D12-75-F4-N | 6 | BB6... BF6... | 12 | 75 | 52 | 47 | 11 |
| BHS6-D12.7-75-F4-N | | | 12.7 | 75 | 52 | 47 | 11.7 |
| BHS6-D15.87-75-F4-N | | | 15.87 | 75 | 52 | 47 | 14.5 |
| BHS6-D16-75-F4-N | | | 16 | 75 | 52 | 47 | 14.5 |
| BHS6-D19.05-90-F4-N | | | 19.05 | 90 | 67 | 62 | 17 |
| BHS6-D20-90-F4-N | | | 20 | 90 | 67 | 62 | 18 |
| BHS6-D20-160-F4-N | | | 20 | 160 | 137 | 132 | 18 |
| BHS6-D22-90-F4-N | | | 22 | 90 | 67 | 62 | 20 |
| BHS6-D22-130-F4-N | | | 22 | 130 | 107 | 102 | 20 |
| BHS6-D25-100-F4-N | | | 25 | 100 | 77 | 72 | 23 |
| BHS6-D25-170-F4-N | | | 25 | 170 | 147 | 142 | 23 |
| BHS6-D25.4-100-F4-N | | | 25.4 | 100 | 77 | 72 | 23 |
| BHS6-D28-100-F4-N | | | 28 | 100 | 77 | 72 | 26 |

| | | |
|---|---|---|
| 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 111



| Art. N° | d | Bars | D | L1 | L2 | L3 | C |
|---------------------|---|------------------|-------|-----|----|------|------|
| BHY4-D12-90-F4-N | 4 | BB4... BF4... | 12 | 90 | 60 | 59.5 | 11.2 |
| BHY4-D16-90-F4-N | | | 16 | 90 | 60 | 59.5 | 14.5 |
| BHY4-D19.05-90-F4-N | | | 19.05 | 90 | 60 | 59.5 | 17 |
| BHY4-D20-90-F4-N | | | 20 | 90 | 60 | 59.5 | 18 |
| BHY4-D22-90-F4-N | | | 22 | 90 | 60 | 59.5 | 20 |
| BHY4-D25-100-F4-N | | | 25 | 100 | 70 | 70 | 23 |

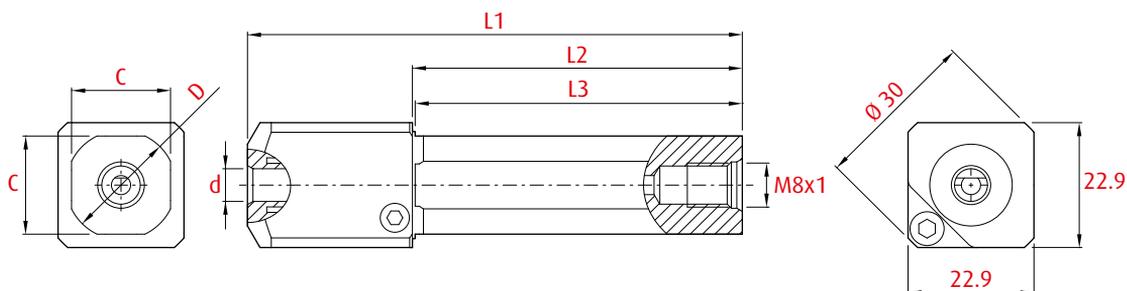
| | | |
|--|-----------|----------|
| Pièces de rechange Ersatzteile Spare parts | Art. N° | Art. N° |
| | | |
| BHY4... | J-M8x1-D6 | C-6P-3.0 |

Porte-outils à serrage hydraulique
Halter mit Hydro-Dehnspann-System
Tool holders with hydraulic clamping system

BHY6...

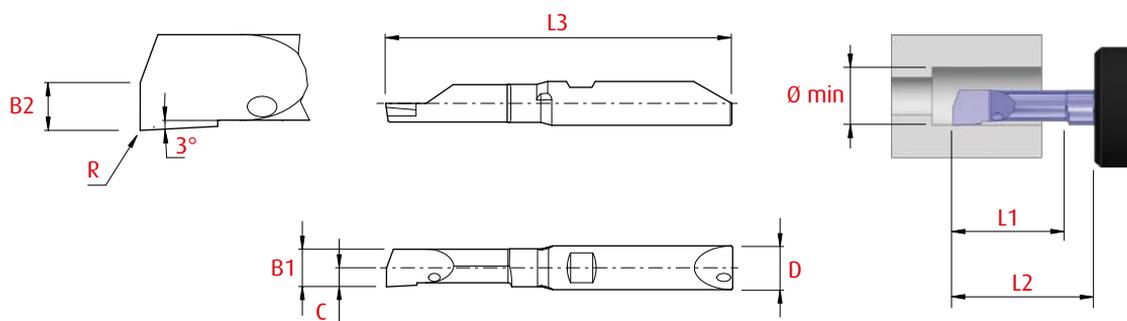


> page 111

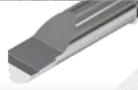


| Art. N° | d | Bars | D | L1 | L2 | L3 | C |
|---------------------|---|------------------|-------|-----|----|------|------|
| BHY6-D12-90-F4-N | 6 | BB6... BF6... | 12 | 90 | 60 | 59.5 | 11.2 |
| BHY6-D16-90-F4-N | | | 16 | 90 | 60 | 59.5 | 14.5 |
| BHY6-D19.05-90-F4-N | | | 19.05 | 90 | 60 | 59.5 | 17 |
| BHY6-D20-90-F4-N | | | 20 | 90 | 60 | 59.5 | 18 |
| BHY6-D22-90-F4-N | | | 22 | 90 | 60 | 59.5 | 20 |
| BHY6-D25-100-F4-N | | | 25 | 100 | 70 | 70 | 23 |

| | | |
|--|--|--|
| Pièces de rechange Ersatzteile Spare parts | Art. N°  | Art. N°  |
| BHY6... | J-M8x1-D6 | C-6P-3.0 |

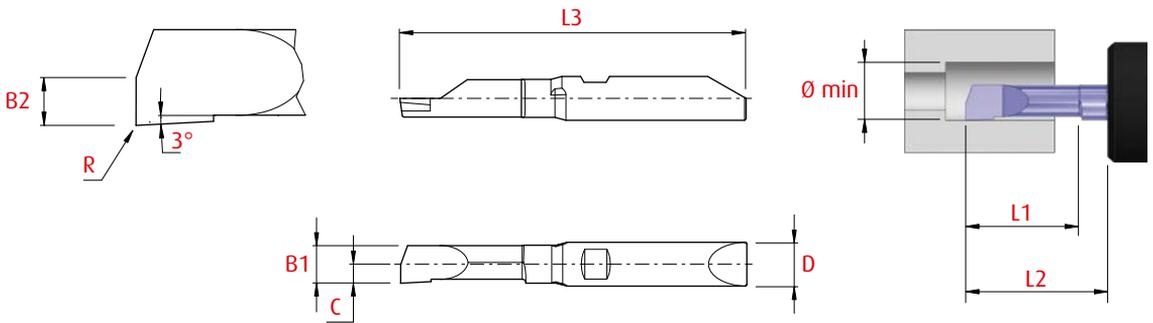


| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | B1 | B2 | C | R | L3 |
|---------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB4R/L-0309-BA | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 0.3 | 0.9 | 10 | 8.5 | 0.27 | 0.13 | 0.15 | 0 | 32 |
| BB4R/L-0412-BA | ■ | ■ | ■ | □ | □ | | | 0.4 | 1.2 | 10 | 8.5 | 0.36 | 0.18 | 0.20 | 0 | 32 |
| BB4R/L-0515-BA | ■ | ■ | ■ | □ | □ | | | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.22 | 0.25 | 0 | 32 |
| BB4R/L-1030-BA-R02 | ■ | ■ | ■ | □ | □ | | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.45 | 0.60 | 0.02 | 32 |
| BB4R/L-1545-BA-R02 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.67 | 0.65 | 0.02 | 32 |
| BB4R/L-2060-BA-R02 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 0.90 | 1.15 | 0.02 | 32 |
| BB4R/L-2575-BA-R02 | ■ | ■ | ■ | □ | □ | | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.13 | 1.30 | 0.02 | 32 |
| BB4R/L-3090-BA-R05 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 1.35 | 0.05 | 37 |
| BB4R/L-35105-BA-R05 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.58 | 1.60 | 0.05 | 37 |

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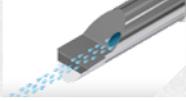
BF4...

BA



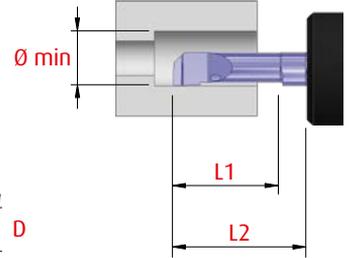
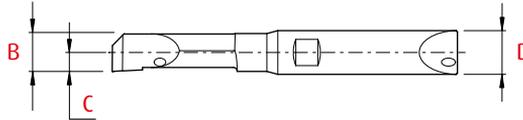
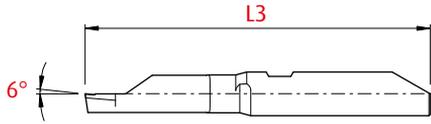
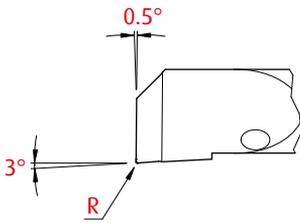
| Art. N° | R | | | L | | D _{h5} | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | B1 | B2 | C | R | L3 |
|---------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF4R/L-0309-BA | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 0.3 | 0.9 | 10 | 8.5 | 0.27 | 0.13 | 0.15 | 0 | 32 |
| BF4R/L-0412-BA | ■ | ■ | ■ | □ | □ | | | 0.4 | 1.2 | 10 | 8.5 | 0.36 | 0.18 | 0.20 | 0 | 32 |
| BF4R/L-0515-BA | ■ | ■ | ■ | □ | □ | | | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.22 | 0.25 | 0 | 32 |
| BF4R/L-1030-BA-R02 | ■ | ■ | ■ | □ | □ | | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.45 | 0.60 | 0.02 | 32 |
| BF4R/L-1545-BA-R02 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.67 | 0.65 | 0.02 | 32 |
| BF4R/L-2060-BA-R02 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 0.90 | 1.15 | 0.02 | 32 |
| BF4R/L-2575-BA-R02 | ■ | ■ | ■ | □ | □ | | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.13 | 1.30 | 0.02 | 32 |
| BF4R/L-3090-BA-R05 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 1.35 | 0.05 | 37 |
| BF4R/L-35105-BA-R05 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.58 | 1.60 | 0.05 | 37 |

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BB4... / BB6...

BAX



| Art. N° | R | | | L | | D h ₅ | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | B | C | R | L3 |
|----------------------|------|-------|----|------|----|------------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | |
| BB4R/L-0515-BAX | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.25 | 0 | 32 |
| BB4R/L-0618-BAX | ■ | ■ | ■ | □ | □ | | | 0.6 | 1.8 | 10 | 8.5 | 0.54 | 0.30 | 0 | 32 |
| BB4R/L-0721-BAX | ■ | ■ | ■ | □ | □ | | | 0.7 | 2.1 | 10 | 8.5 | 0.63 | 0.35 | 0 | 32 |
| BB4R/L-0824-BAX | ■ | ■ | ■ | □ | □ | | | 0.8 | 2.4 | 10 | 8.5 | 0.72 | 0.40 | 0 | 32 |
| BB4R/L-0927-BAX | ■ | ■ | ■ | □ | □ | | | 0.9 | 2.7 | 10 | 8.5 | 0.81 | 0.45 | 0 | 32 |
| BB4R/L-1030-BAX-R02 | ■ | ■ | ■ | □ | □ | | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 |
| BB4R/L-1050-BAX-R02 | ■ | ■ | ■ | □ | □ | | | | 5.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 |
| BB4R/L-1545-BAX-R02 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 |
| BB4R/L-1575-BAX-R02 | ■ | ■ | ■ | □ | □ | | | | 7.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 |
| BB4R/L-2060-BAX-R02 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 1.15 | 0.02 | 32 |
| BB4R/L-20100-BAX-R02 | ■ | ■ | ■ | □ | □ | | | | 10.0 | 15 | 13.5 | 1.80 | 1.15 | 0.02 | 37 |
| BB4R/L-2575-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.30 | 0.05 | 32 |
| BB4R/L-25125-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 12.5 | 15 | 13.5 | 2.25 | 1.30 | 0.05 | 37 |
| BB4R/L-3090-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 0.05 | 37 |
| BB4R/L-30150-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 2.70 | 1.35 | 0.05 | 42 |
| BB4R/L-35105-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.60 | 0.05 | 37 |
| BB4R/L-35175-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 3.15 | 1.60 | 0.05 | 42 |

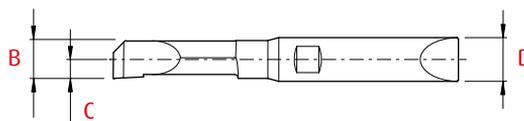
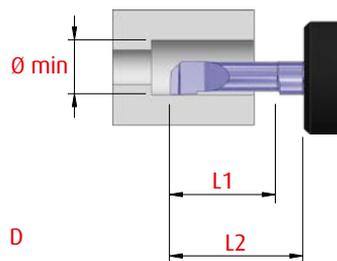
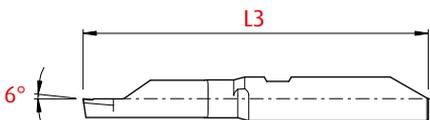
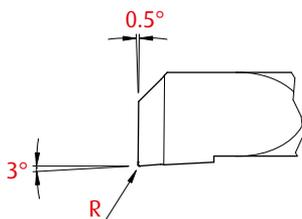
| Art. N° | R | | | L | | D h ₅ | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | B | C | R | L3 |
|----------------------|------|-------|----|------|----|------------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | |
| BB6R/L-40120-BAX-R05 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 3.80 | 2.20 | 0.05 | 47 |
| BB6R/L-40200-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 3.80 | 2.20 | 0.05 | 57 |
| BB6R/L-45135-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 4.28 | 2.30 | 0.05 | 47 |
| BB6R/L-45225-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 22.5 | 30 | 28.5 | 4.28 | 2.30 | 0.05 | 57 |
| BB6R/L-50150-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 4.75 | 2.40 | 0.05 | 47 |
| BB6R/L-50250-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 4.75 | 2.40 | 0.05 | 57 |
| BB6R/L-55165-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 5.5 | 16.5 | 20 | 18.5 | 5.15 | 2.60 | 0.05 | 47 |
| BB6R/L-55275-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 5.15 | 2.60 | 0.05 | 57 |

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BF4... / BF6...

BAX



| Art. N° | R | | | L | | D h ₅ | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | B | C | R | L3 |
|----------------------|------|-------|----|------|----|------------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | |
| BF4R/L-0515-BAX | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 0.5 | 1.5 | 10 | 8.5 | 0.45 | 0.25 | 0 | 32 |
| BF4R/L-0618-BAX | ■ | ■ | ■ | □ | □ | | | 0.6 | 1.8 | 10 | 8.5 | 0.54 | 0.30 | 0 | 32 |
| BF4R/L-0721-BAX | ■ | ■ | ■ | □ | □ | | | 0.7 | 2.1 | 10 | 8.5 | 0.63 | 0.35 | 0 | 32 |
| BF4R/L-0824-BAX | ■ | ■ | ■ | □ | □ | | | 0.8 | 2.4 | 10 | 8.5 | 0.72 | 0.40 | 0 | 32 |
| BF4R/L-0927-BAX | ■ | ■ | ■ | □ | □ | | | 0.9 | 2.7 | 10 | 8.5 | 0.81 | 0.45 | 0 | 32 |
| BF4R/L-1030-BAX-R02 | ■ | ■ | ■ | □ | □ | | | 1.0 | 3.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 |
| BF4R/L-1050-BAX-R02 | ■ | ■ | ■ | □ | □ | | | | 5.0 | 10 | 8.5 | 0.90 | 0.60 | 0.02 | 32 |
| BF4R/L-1545-BAX-R02 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 |
| BF4R/L-1575-BAX-R02 | ■ | ■ | ■ | □ | □ | | | | 7.5 | 10 | 8.5 | 1.35 | 0.65 | 0.02 | 32 |
| BF4R/L-2060-BAX-R02 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 1.80 | 1.15 | 0.02 | 32 |
| BF4R/L-20100-BAX-R02 | ■ | ■ | ■ | □ | □ | | | | 10.0 | 15 | 13.5 | 1.80 | 1.15 | 0.02 | 37 |
| BF4R/L-2575-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 2.5 | 7.5 | 10 | 8.5 | 2.25 | 1.30 | 0.05 | 32 |
| BF4R/L-25125-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 12.5 | 15 | 13.5 | 2.25 | 1.30 | 0.05 | 37 |
| BF4R/L-3090-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 2.70 | 1.35 | 0.05 | 37 |
| BF4R/L-30150-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 2.70 | 1.35 | 0.05 | 42 |
| BF4R/L-35105-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 3.15 | 1.60 | 0.05 | 37 |
| BF4R/L-35175-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 3.15 | 1.60 | 0.05 | 42 |

| Art. N° | R | | | L | | D h ₅ | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | B | C | R | L3 |
|----------------------|------|-------|----|------|----|------------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | |
| BF6R/L-40120-BAX-R05 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 3.80 | 2.20 | 0.05 | 47 |
| BF6R/L-40200-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 3.80 | 2.20 | 0.05 | 57 |
| BF6R/L-45135-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 4.28 | 2.30 | 0.05 | 47 |
| BF6R/L-45225-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 22.5 | 30 | 28.5 | 4.28 | 2.30 | 0.05 | 57 |
| BF6R/L-50150-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 4.75 | 2.40 | 0.05 | 47 |
| BF6R/L-50250-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 4.75 | 2.40 | 0.05 | 57 |
| BF6R/L-55165-BAX-R05 | ■ | ■ | ■ | □ | □ | | | 5.5 | 16.5 | 20 | 18.5 | 5.15 | 2.60 | 0.05 | 47 |
| BF6R/L-55275-BAX-R05 | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 5.15 | 2.60 | 0.05 | 57 |

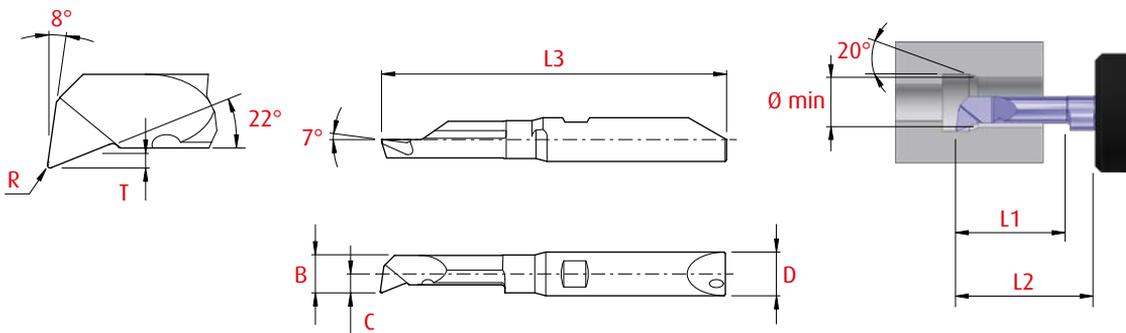
■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

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Boring chambering



BB4... / BB6...

BCX



| Art. N° | R | | | L | | D _{hs} | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | T | B | C | R | L3 |
|----------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB4R/L-1030-BCX-R05 | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 1.0 | 3.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 |
| BB4R/L-1050-BCX-R05 | ■ | ■ | ■ | □ | □ | | | | 5.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 |
| BB4R/L-1545-BCX-R05 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 |
| BB4R/L-1575-BCX-R05 | ■ | ■ | ■ | □ | □ | | | | 7.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 |
| BB4R/L-2060-BCX-R05 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 0.30 | 1.80 | 1.15 | 0.05 | 32 |
| BB4R/L-20100-BCX-R05 | ■ | ■ | ■ | □ | □ | | | | 10.0 | 15 | 13.5 | 0.30 | 1.80 | 1.15 | 0.05 | 37 |
| BB4R/L-2575-BCX-R10 | ■ | ■ | ■ | □ | □ | | | 2.5 | 7.5 | 10 | 8.5 | 0.38 | 2.25 | 1.30 | 0.10 | 32 |
| BB4R/L-25125-BCX-R10 | ■ | ■ | ■ | □ | □ | | | | 12.5 | 15 | 13.5 | 0.38 | 2.25 | 1.30 | 0.10 | 37 |
| BB4R/L-3090-BCX-R10 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 0.45 | 2.70 | 1.35 | 0.10 | 37 |
| BB4R/L-30150-BCX-R10 | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 0.45 | 2.70 | 1.35 | 0.10 | 42 |
| BB4R/L-35105-BCX-R10 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 0.53 | 3.15 | 1.60 | 0.10 | 37 |
| BB4R/L-35175-BCX-R10 | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 0.53 | 3.15 | 1.60 | 0.10 | 42 |

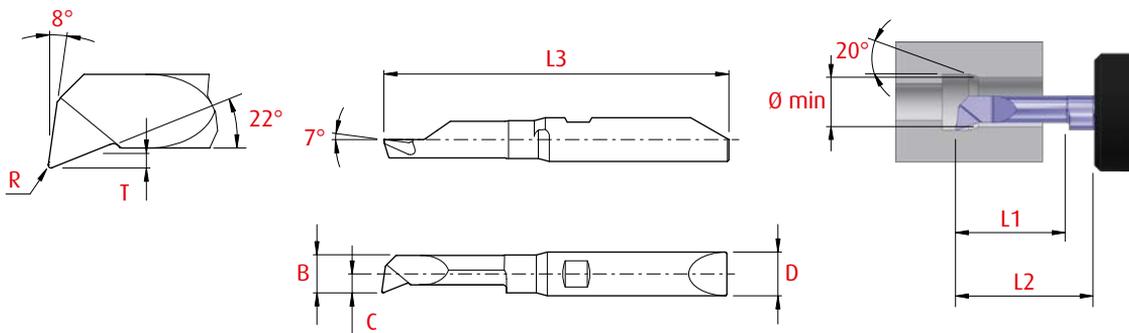
| Art. N° | R | | | L | | D _{hs} | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B | C | R | L3 |
|----------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB6R/L-40120-BCX-R15 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 0.60 | 3.80 | 2.20 | 0.15 | 47 |
| BB6R/L-40200-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 0.60 | 3.80 | 2.20 | 0.15 | 57 |
| BB6R/L-45135-BCX-R15 | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 0.68 | 4.28 | 2.30 | 0.15 | 47 |
| BB6R/L-45225-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 22.5 | 30 | 28.5 | 0.68 | 4.28 | 2.30 | 0.15 | 57 |
| BB6R/L-50150-BCX-R15 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 0.75 | 4.75 | 2.40 | 0.15 | 47 |
| BB6R/L-50250-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 0.75 | 4.75 | 2.40 | 0.15 | 57 |
| BB6R/L-55165-BCX-R15 | ■ | ■ | ■ | □ | □ | | | 5.5 | 16.5 | 20 | 18.5 | 0.83 | 5.15 | 2.60 | 0.15 | 47 |
| BB6R/L-55275-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 0.83 | 5.15 | 2.60 | 0.15 | 57 |

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BF4... / BF6...

BCX



| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | T | B | C | R | L3 |
|----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF4R/L-1030-BCX-R05 | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 1.0 | 3.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 |
| BF4R/L-1050-BCX-R05 | ■ | ■ | ■ | □ | □ | | | | 5.0 | 10 | 8.5 | 0.15 | 0.90 | 0.70 | 0.05 | 32 |
| BF4R/L-1545-BCX-R05 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 |
| BF4R/L-1575-BCX-R05 | ■ | ■ | ■ | □ | □ | | | | 7.5 | 10 | 8.5 | 0.23 | 1.35 | 0.75 | 0.05 | 32 |
| BF4R/L-2060-BCX-R05 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 0.30 | 1.80 | 1.15 | 0.05 | 32 |
| BF4R/L-20100-BCX-R05 | ■ | ■ | ■ | □ | □ | | | | 10.0 | 15 | 13.5 | 0.30 | 1.80 | 1.15 | 0.05 | 37 |
| BF4R/L-2575-BCX-R10 | ■ | ■ | ■ | □ | □ | | | 2.5 | 7.5 | 10 | 8.5 | 0.38 | 2.25 | 1.30 | 0.10 | 32 |
| BF4R/L-25125-BCX-R10 | ■ | ■ | ■ | □ | □ | | | | 12.5 | 15 | 13.5 | 0.38 | 2.25 | 1.30 | 0.10 | 37 |
| BF4R/L-3090-BCX-R10 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 0.45 | 2.70 | 1.35 | 0.10 | 37 |
| BF4R/L-30150-BCX-R10 | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 0.45 | 2.70 | 1.35 | 0.10 | 42 |
| BF4R/L-35105-BCX-R10 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 0.53 | 3.15 | 1.60 | 0.10 | 37 |
| BF4R/L-35175-BCX-R10 | ■ | ■ | ■ | □ | □ | 17.5 | 20 | | 18.5 | 0.53 | 3.15 | 1.60 | 0.10 | 42 | | |

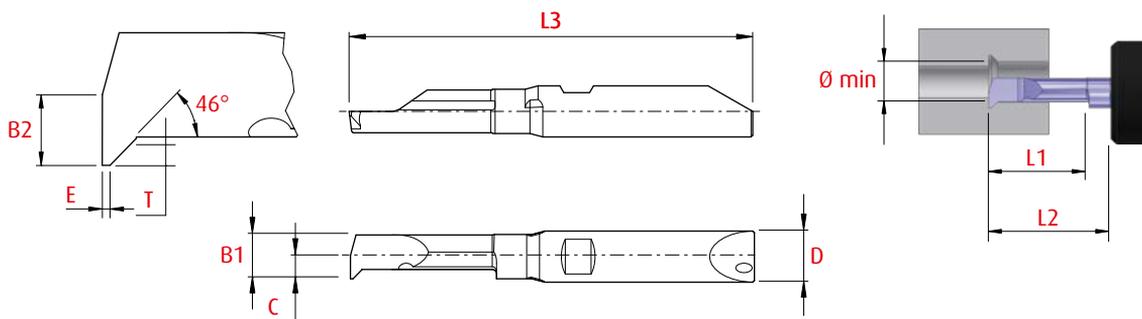
| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B | C | R | L3 |
|----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF6R/L-40120-BCX-R15 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 0.60 | 3.80 | 2.20 | 0.15 | 47 |
| BF6R/L-40200-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 0.60 | 3.80 | 2.20 | 0.15 | 57 |
| BF6R/L-45135-BCX-R15 | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 0.68 | 4.28 | 2.30 | 0.15 | 47 |
| BF6R/L-45225-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 22.5 | 30 | 28.5 | 0.68 | 4.28 | 2.30 | 0.15 | 57 |
| BF6R/L-50150-BCX-R15 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 0.75 | 4.75 | 2.40 | 0.15 | 47 |
| BF6R/L-50250-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 0.75 | 4.75 | 2.40 | 0.15 | 57 |
| BF6R/L-55165-BCX-R15 | ■ | ■ | ■ | □ | □ | | | 5.5 | 16.5 | 20 | 18.5 | 0.83 | 5.15 | 2.60 | 0.15 | 47 |
| BF6R/L-55275-BCX-R15 | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 0.83 | 5.15 | 2.60 | 0.15 | 57 |

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BB4... / BB6...

C45



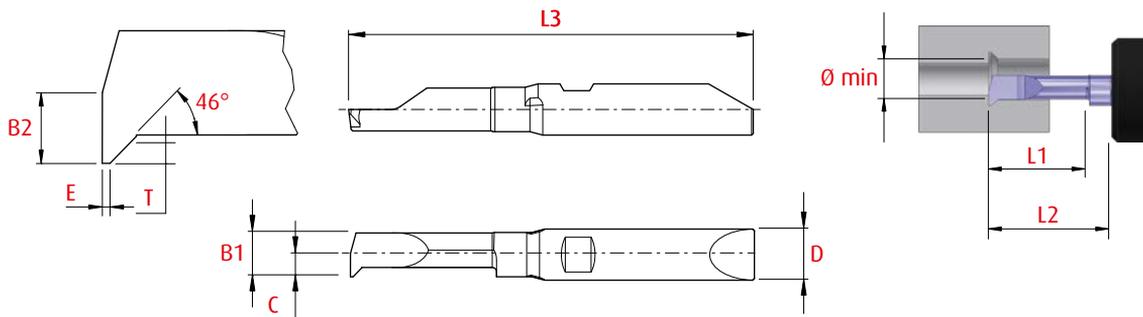
| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | T | B1 | B2 | C | E | L3 |
|----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | | |
| BB4R/L-0306-C45-E03 | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 0.3 | 0.6 | 10 | 8.5 | 0.05 | 0.27 | 0.13 | 0.15 | 0.03 | 32 |
| BB4R/L-0408-C45-E03 | ■ | ■ | ■ | □ | □ | | | 0.4 | 0.8 | 10 | 8.5 | 0.07 | 0.36 | 0.18 | 0.20 | 0.03 | 32 |
| BB4R/L-0510-C45-E03 | ■ | ■ | ■ | □ | □ | | | 0.5 | 1.0 | 10 | 8.5 | 0.08 | 0.45 | 0.22 | 0.25 | 0.03 | 32 |
| BB4R/L-0816-C45-E05 | ■ | ■ | ■ | □ | □ | | | 0.8 | 1.6 | 10 | 8.5 | 0.14 | 0.72 | 0.36 | 0.40 | 0.05 | 32 |
| BB4R/L-1030-C45-E10 | ■ | ■ | ■ | □ | □ | | | 1.0 | 3.0 | 10 | 8.5 | 0.17 | 0.90 | 0.45 | 0.70 | 0.10 | 32 |
| BB4R/L-1545-C45-E10 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 0.25 | 1.35 | 0.67 | 0.75 | 0.10 | 32 |
| BB4R/L-2060-C45-E20 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 0.34 | 1.80 | 0.90 | 1.15 | 0.20 | 32 |
| BB4R/L-3090-C45-E30 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 0.51 | 2.70 | 1.35 | 1.35 | 0.30 | 37 |
| Art. N° | ZTAF | ZTAXF | ZN | ZTAF | ZN | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B1 | B2 | C | E | L3 |
| BB6R/L-40120-C45-E40 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 0.68 | 3.80 | 1.90 | 2.30 | 0.40 | 47 |
| BB6R/L-50150-C45-E50 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 0.85 | 4.75 | 2.37 | 2.50 | 0.50 | 47 |

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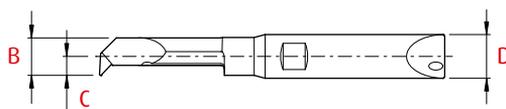
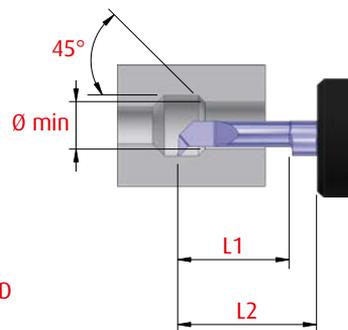
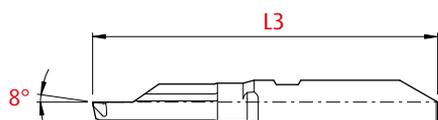
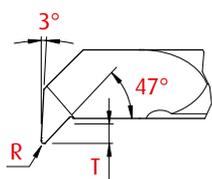
BF4... / BF6...

C45



| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | T | B1 | B2 | C | E | L3 |
|---------------------|------|-------|----|------|----|------|------------------------------|-------|-----|-------------------------|---------------|------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | | |
| BF4R/L-0306-C45-E03 | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 0.3 | 0.6 | 10 | 8.5 | 0.05 | 0.27 | 0.13 | 0.15 | 0.03 | 32 |
| BF4R/L-0408-C45-E03 | ■ | ■ | ■ | □ | □ | | | 0.4 | 0.8 | 10 | 8.5 | 0.07 | 0.36 | 0.18 | 0.20 | 0.03 | 32 |
| BF4R/L-0510-C45-E03 | ■ | ■ | ■ | □ | □ | | | 0.5 | 1.0 | 10 | 8.5 | 0.08 | 0.45 | 0.22 | 0.25 | 0.03 | 32 |
| BF4R/L-0816-C45-E05 | ■ | ■ | ■ | □ | □ | | | 0.8 | 1.6 | 10 | 8.5 | 0.14 | 0.72 | 0.36 | 0.40 | 0.05 | 32 |
| BF4R/L-1030-C45-E10 | ■ | ■ | ■ | □ | □ | | | 1.0 | 3.0 | 10 | 8.5 | 0.17 | 0.90 | 0.45 | 0.70 | 0.10 | 32 |
| BF4R/L-1545-C45-E10 | ■ | ■ | ■ | □ | □ | | | 1.5 | 4.5 | 10 | 8.5 | 0.25 | 1.35 | 0.67 | 0.75 | 0.10 | 32 |
| BF4R/L-2060-C45-E20 | ■ | ■ | ■ | □ | □ | | | 2.0 | 6.0 | 10 | 8.5 | 0.34 | 1.80 | 0.90 | 1.15 | 0.20 | 32 |
| BF4R/L-3090-C45-E30 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 0.51 | 2.70 | 1.35 | 1.35 | 0.30 | 37 |

| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B1 | B2 | C | E | L3 |
|----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | | |
| BF6R/L-40120-C45-E40 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 0.68 | 3.80 | 1.90 | 2.30 | 0.40 | 47 |
| BF6R/L-50150-C45-E50 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 0.85 | 4.75 | 2.37 | 2.50 | 0.50 | 47 |



| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | T | B | C | R | L3 |
|-----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB4R/L-2575-C45X-R10 | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 2.5 | 7.5 | 10 | 8.5 | 0.50 | 2.25 | 1.35 | 0.10 | 32 |
| BB4R/L-25125-C45X-R10 | ■ | ■ | ■ | □ | □ | | | | 12.5 | 15 | 13.5 | 0.50 | 2.25 | 1.35 | 0.10 | 37 |
| BB4R/L-3090-C45X-R10 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 0.60 | 2.70 | 1.45 | 0.10 | 37 |
| BB4R/L-30150-C45X-R10 | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 0.60 | 2.70 | 1.45 | 0.10 | 42 |
| BB4R/L-35105-C45X-R10 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 0.70 | 3.15 | 1.60 | 0.10 | 37 |
| BB4R/L-35175-C45X-R10 | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 0.70 | 3.15 | 1.60 | 0.10 | 42 |

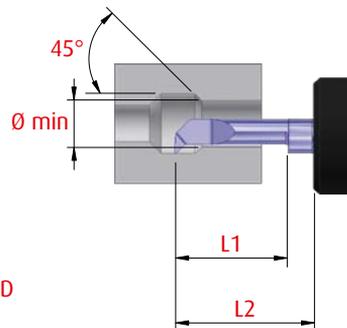
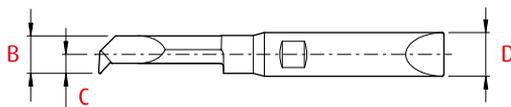
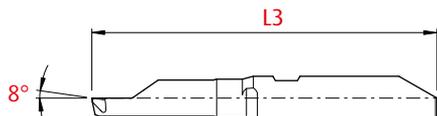
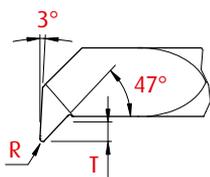
| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B | C | R | L3 |
|-----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB6R/L-40120-C45X-R15 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 0.80 | 3.80 | 2.30 | 0.15 | 47 |
| BB6R/L-40200-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 0.80 | 3.80 | 2.30 | 0.15 | 57 |
| BB6R/L-45135-C45X-R15 | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 0.90 | 4.28 | 2.40 | 0.15 | 47 |
| BB6R/L-45225-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 22.5 | 30 | 28.5 | 0.90 | 4.28 | 2.40 | 0.15 | 57 |
| BB6R/L-50150-C45X-R15 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 4.75 | 2.50 | 0.15 | 47 |
| BB6R/L-50250-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 1.00 | 4.75 | 2.50 | 0.15 | 57 |
| BB6R/L-55165-C45X-R15 | ■ | ■ | ■ | □ | □ | | | 5.5 | 16.5 | 20 | 18.5 | 1.10 | 5.15 | 2.60 | 0.15 | 47 |
| BB6R/L-55275-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 1.10 | 5.15 | 2.60 | 0.15 | 57 |

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BF4... / BF6...

C45X

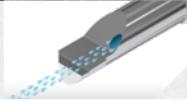


| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | T | B | C | R | L3 |
|-----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF4R/L-2575-C45X-R10 | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 2.5 | 7.5 | 10 | 8.5 | 0.50 | 2.25 | 1.35 | 0.10 | 32 |
| BF4R/L-25125-C45X-R10 | ■ | ■ | ■ | □ | □ | | | | 12.5 | 15 | 13.5 | 0.50 | 2.25 | 1.35 | 0.10 | 37 |
| BF4R/L-3090-C45X-R10 | ■ | ■ | ■ | □ | □ | | | 3.0 | 9.0 | 15 | 13.5 | 0.60 | 2.70 | 1.45 | 0.10 | 37 |
| BF4R/L-30150-C45X-R10 | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 0.60 | 2.70 | 1.45 | 0.10 | 42 |
| BF4R/L-35105-C45X-R10 | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 0.70 | 3.15 | 1.60 | 0.10 | 37 |
| BF4R/L-35175-C45X-R10 | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 0.70 | 3.15 | 1.60 | 0.10 | 42 |

| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B | C | R | L3 |
|-----------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF6R/L-40120-C45X-R15 | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 0.80 | 3.80 | 2.30 | 0.15 | 47 |
| BF6R/L-40200-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 0.80 | 3.80 | 2.30 | 0.15 | 57 |
| BF6R/L-45135-C45X-R15 | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 0.90 | 4.28 | 2.40 | 0.15 | 47 |
| BF6R/L-45225-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 22.5 | 30 | 28.5 | 0.90 | 4.28 | 2.40 | 0.15 | 57 |
| BF6R/L-50150-C45X-R15 | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 4.75 | 2.50 | 0.15 | 47 |
| BF6R/L-50250-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 1.00 | 4.75 | 2.50 | 0.15 | 57 |
| BF6R/L-55165-C45X-R15 | ■ | ■ | ■ | □ | □ | | | 5.5 | 16.5 | 20 | 18.5 | 1.10 | 5.15 | 2.60 | 0.15 | 47 |
| BF6R/L-55275-C45X-R15 | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 1.10 | 5.15 | 2.60 | 0.15 | 57 |

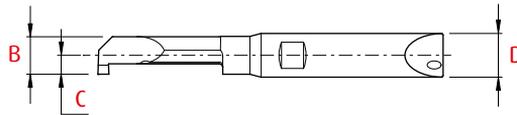
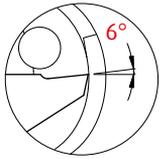
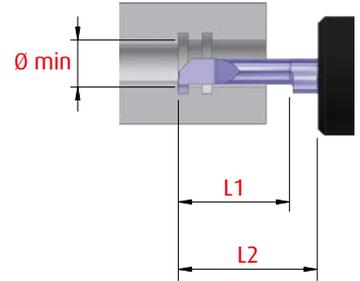
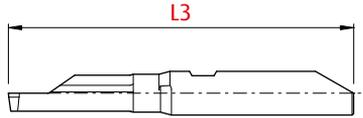
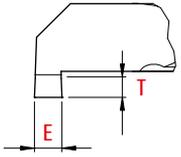
■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Gorge
Einstechen
Grooving



BB4... / BB6...

GX



| Art. N° | R | | | L | | D hs | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | E | T | B | C | L3 |
|--------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB4R/L-3090-G050X | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 3.0 | 9.0 | 15 | 13.5 | 0.50 | 0.60 | 2.70 | 1.45 | 37 |
| BB4R/L-30150-G050X | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 0.50 | 0.60 | 2.70 | 1.45 | 42 |
| BB4R/L-35105-G075X | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 0.75 | 0.70 | 3.15 | 1.60 | 37 |
| BB4R/L-35175-G075X | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 0.75 | 0.70 | 3.15 | 1.60 | 42 |

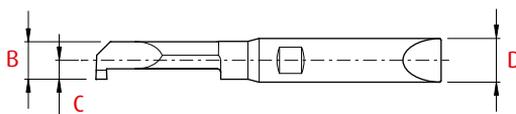
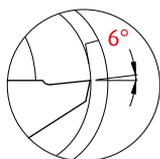
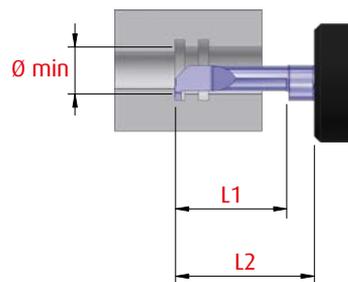
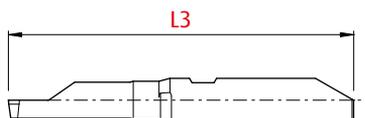
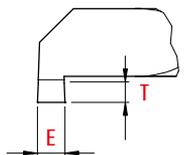
| Art. N° | R | | | L | | D hs | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | E | T | B | C | L3 |
|--------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB6R/L-40120-G100X | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 1.00 | 0.80 | 3.80 | 2.20 | 47 |
| BB6R/L-40200-G100X | ■ | ■ | ■ | □ | □ | | | | 20.0 | 30 | 28.5 | 1.00 | 0.80 | 3.80 | 2.20 | 57 |
| BB6R/L-45135-G100X | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 1.00 | 0.90 | 4.28 | 2.40 | 47 |
| BB6R/L-45135-G150X | ■ | ■ | ■ | □ | □ | | | | | | | 1.50 | 0.90 | 4.28 | 2.40 | 47 |
| BB6R/L-45225-G100X | ■ | ■ | ■ | □ | □ | | | 22.5 | 30 | 28.5 | 1.00 | 0.90 | 4.28 | 2.40 | 57 | |
| BB6R/L-45225-G150X | ■ | ■ | ■ | □ | □ | | | | | | 1.50 | 0.90 | 4.28 | 2.40 | 57 | |
| BB6R/L-50150-G100X | ■ | ■ | ■ | □ | □ | | | 15.0 | 20 | 18.5 | 1.00 | 1.00 | 4.75 | 2.50 | 47 | |
| BB6R/L-50150-G150X | ■ | ■ | ■ | □ | □ | | | | | | 1.50 | 1.00 | 4.75 | 2.50 | 47 | |
| BB6R/L-50250-G100X | ■ | ■ | ■ | □ | □ | | | 25.0 | 30 | 28.5 | 1.00 | 1.00 | 4.75 | 2.50 | 57 | |
| BB6R/L-50250-G150X | ■ | ■ | ■ | □ | □ | | | | | | 1.50 | 1.00 | 4.75 | 2.50 | 57 | |
| BB6R/L-55165-G100X | ■ | ■ | ■ | □ | □ | | | 16.5 | 20 | 18.5 | 1.00 | 1.10 | 5.15 | 2.60 | 47 | |
| BB6R/L-55165-G150X | ■ | ■ | ■ | □ | □ | | | | | | 1.50 | 1.10 | 5.15 | 2.60 | 47 | |
| BB6R/L-55165-G200X | ■ | ■ | ■ | □ | □ | | | 27.5 | 30 | 28.5 | 2.00 | 1.10 | 5.15 | 2.60 | 57 | |
| BB6R/L-55275-G100X | ■ | ■ | ■ | □ | □ | | | | | | 1.00 | 1.10 | 5.15 | 2.60 | 57 | |
| BB6R/L-55275-G150X | ■ | ■ | ■ | □ | □ | | | 27.5 | 30 | 28.5 | 1.50 | 1.10 | 5.15 | 2.60 | 57 | |
| BB6R/L-55275-G200X | ■ | ■ | ■ | □ | □ | | | | | | 2.00 | 1.10 | 5.15 | 2.60 | 57 | |

Gorge
Einstechen
Grooving



BF4... / BF6...

GX



| Art. N° | R | | | L | | D _{hs} | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | E | T | B | C | L3 |
|--------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF4R/L-3090-G050X | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 3.0 | 9.0 | 15 | 13.5 | 0.50 | 0.60 | 2.70 | 1.45 | 37 |
| BF4R/L-30150-G050X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | |
| BF4R/L-35105-G075X | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 0.75 | 0.70 | 3.15 | 1.60 | 37 |
| BF4R/L-35175-G075X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | |

| Art. N° | R | | | L | | D _{hs} | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | E | T | B | C | L3 |
|--------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|------|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF6R/L-40120-G100X | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 12.0 | 20 | 18.5 | 1.00 | 0.80 | 3.80 | 2.20 | 47 |
| BF6R/L-40200-G100X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | |
| BF6R/L-45135-G100X | ■ | ■ | ■ | □ | □ | | | 4.5 | 13.5 | 20 | 18.5 | 1.00 | 0.90 | 4.28 | 2.40 | 47 |
| BF6R/L-45135-G150X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | |
| BF6R/L-45225-G100X | ■ | ■ | ■ | □ | □ | | | 15.0 | 20 | 18.5 | 1.00 | 1.00 | 4.75 | 2.50 | 47 | |
| BF6R/L-45225-G150X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | 25.0 |
| BF6R/L-50150-G100X | ■ | ■ | ■ | □ | □ | | | 5.0 | 15.0 | 20 | 18.5 | 1.00 | 1.00 | 4.75 | 2.50 | |
| BF6R/L-50150-G150X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | 25.0 |
| BF6R/L-55165-G100X | ■ | ■ | ■ | □ | □ | | | 16.5 | 20 | 18.5 | 1.50 | 1.10 | 5.15 | 2.60 | 47 | |
| BF6R/L-55165-G150X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | 27.5 |
| BF6R/L-55165-G200X | ■ | ■ | ■ | □ | □ | | | 27.5 | 30 | 28.5 | 1.00 | 1.50 | 5.15 | 2.60 | 57 | |
| BF6R/L-55275-G100X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | 27.5 |
| BF6R/L-55275-G150X | ■ | ■ | ■ | □ | □ | | | 27.5 | 30 | 28.5 | 2.00 | 1.50 | 5.15 | 2.60 | 57 | |
| BF6R/L-55275-G200X | ■ | ■ | ■ | □ | □ | | | | | | | | | | | |

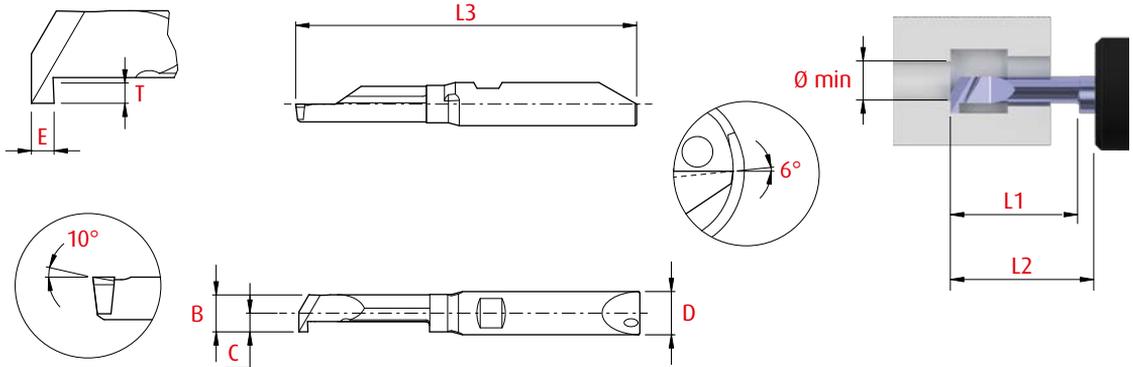
■ = disponible / verfügbar / available
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Foncer-tourner
Einstechen und drehen
Grooving and turning



BB4... / BB6...

GTX



| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | E | T | B | C | L3 |
|---------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB4R/L-3090-GT100X | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 3.0 | 9.0 | 15 | 13.5 | 1.00 | 0.60 | 2.7 | 1.45 | 37 |
| BB4R/L-30150-GT100X | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 1.00 | 0.60 | 2.7 | 1.45 | 42 |
| BB4R/L-35105-GT100X | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 1.00 | 0.70 | 3.15 | 1.6 | 37 |
| BB4R/L-35175-GT100X | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 1.00 | 0.70 | 3.15 | 1.6 | 42 |

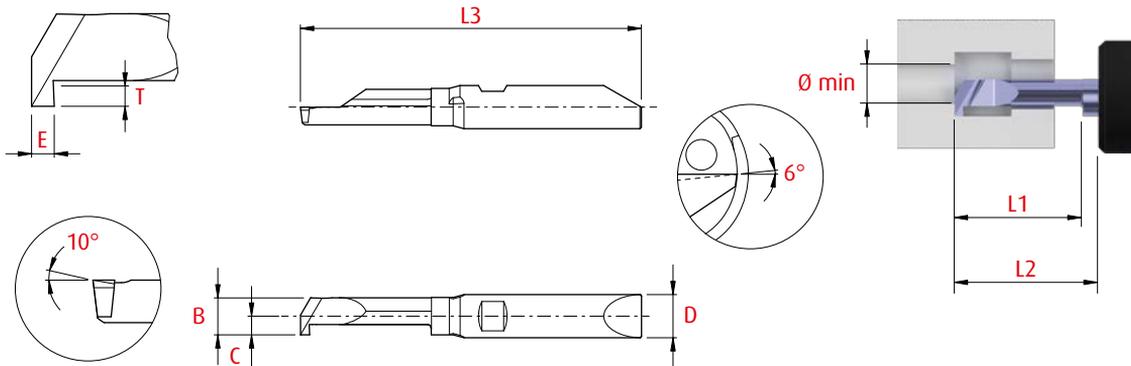
| Art. N° | R | | | L | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | E | T | B | C | L3 |
|---------------------|------|-------|----|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|-----|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BB6R/L-40140-GT125X | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 14.0 | 20 | 18.5 | 1.25 | 0.80 | 3.8 | 2.2 | 47 |
| BB6R/L-40220-GT125X | ■ | ■ | ■ | □ | □ | | | | 22.0 | 30 | 28.5 | 1.25 | 0.80 | 3.8 | 2.2 | 57 |
| BB6R/L-45160-GT125X | ■ | ■ | ■ | □ | □ | | | 4.5 | 16.0 | 20 | 18.5 | 1.25 | 0.90 | 4.28 | 2.4 | 47 |
| BB6R/L-45250-GT125X | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 1.25 | 0.90 | 4.28 | 2.4 | 57 |
| BB6R/L-50175-GT125X | ■ | ■ | ■ | □ | □ | | | 5.0 | 17.5 | 20 | 18.5 | 1.25 | 1.00 | 4.75 | 2.5 | 47 |
| BB6R/L-50275-GT125X | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 1.25 | 1.00 | 4.75 | 2.5 | 57 |
| BB6R/L-55175-GT125X | ■ | ■ | ■ | □ | □ | | | 5.5 | 17.5 | 20 | 18.5 | 1.25 | 1.10 | 5.15 | 2.6 | 47 |
| BB6R/L-55275-GT125X | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 1.25 | 1.10 | 5.15 | 2.6 | 57 |

Foncer-tourner
Einstecken und drehen
Grooving and turning



BF4... / BF6...

GTX



| Art. N° | R | | | L | | D _{hs} | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | E | T | B | C | L3 |
|---------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF4R/L-3090-GT100X | ■ | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 3.0 | 9.0 | 15 | 13.5 | 1.00 | 0.60 | 2.7 | 1.45 | 37 |
| BF4R/L-30150-GT100X | ■ | ■ | ■ | □ | □ | | | | 15.0 | 20 | 18.5 | 1.00 | 0.60 | 2.7 | 1.45 | 42 |
| BF4R/L-35105-GT100X | ■ | ■ | ■ | □ | □ | | | 3.5 | 10.5 | 15 | 13.5 | 1.00 | 0.70 | 3.15 | 1.6 | 37 |
| BF4R/L-35175-GT100X | ■ | ■ | ■ | □ | □ | | | | 17.5 | 20 | 18.5 | 1.00 | 0.70 | 3.15 | 1.6 | 42 |

| Art. N° | R | | | L | | D _{hs} | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | E | T | B | C | L3 |
|---------------------|------|-------|----|------|----|-----------------|------------------------------|-------|------|-------------------------|---------------|------|------|------|-----|----|
| | ZTAF | ZTAXF | ZN | ZTAF | ZN | | | | | | | | | | | |
| BF6R/L-40140-GT125X | ■ | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 4.0 | 14.0 | 20 | 18.5 | 1.25 | 0.80 | 3.8 | 2.2 | 47 |
| BF6R/L-40220-GT125X | ■ | ■ | ■ | □ | □ | | | | 22.0 | 30 | 28.5 | 1.25 | 0.80 | 3.8 | 2.2 | 57 |
| BF6R/L-45160-GT125X | ■ | ■ | ■ | □ | □ | | | 4.5 | 16.0 | 20 | 18.5 | 1.25 | 0.90 | 4.28 | 2.4 | 47 |
| BF6R/L-45250-GT125X | ■ | ■ | ■ | □ | □ | | | | 25.0 | 30 | 28.5 | 1.25 | 0.90 | 4.28 | 2.4 | 57 |
| BF6R/L-50175-GT125X | ■ | ■ | ■ | □ | □ | | | 5.0 | 17.5 | 20 | 18.5 | 1.25 | 1.00 | 4.75 | 2.5 | 47 |
| BF6R/L-50275-GT125X | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 1.25 | 1.00 | 4.75 | 2.5 | 57 |
| BF6R/L-55175-GT125X | ■ | ■ | ■ | □ | □ | | | 5.5 | 17.5 | 20 | 18.5 | 1.25 | 1.10 | 5.15 | 2.6 | 47 |
| BF6R/L-55275-GT125X | ■ | ■ | ■ | □ | □ | | | | 27.5 | 30 | 28.5 | 1.25 | 1.10 | 5.15 | 2.6 | 57 |

■ = disponible / verfügbar / available

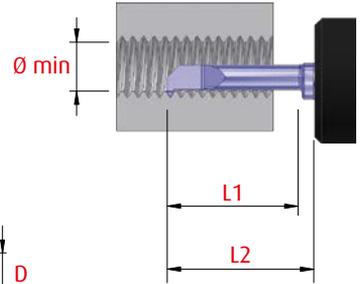
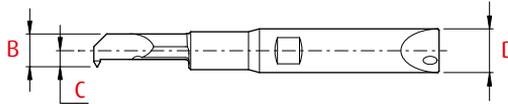
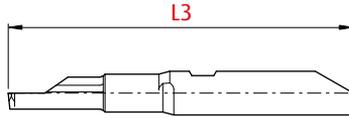
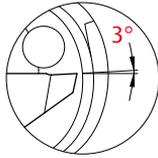
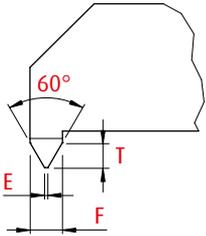
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

**Filetage
Gewindedrehen
Threading**



BB4... / BB6...

TP60



| Art. N° | R | | L | | D _{h5} | Holder | Ø min | L1 | L2 | L2 | P (mm) | P (TPI) | F | E (0/-0.01) | T | B | C | L3 |
|-------------------|------|----|------|----|-----------------|------------------------------|-------|-----|------------------------------|-----------|-----------|---------|------|----------------|------|------|------|----|
| | ZTAF | ZN | ZTAF | ZN | | | | | BH4... BHS4... BHY4... | BHS4... | | | | | | | | |
| BB4R/L-1232-TP60 | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 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-1640-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-2560-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-2590-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-3380-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-33120-TP60 | ■ | ■ | □ | □ | | | 12.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | |

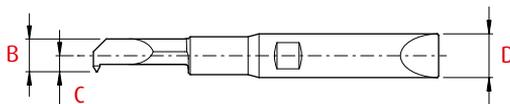
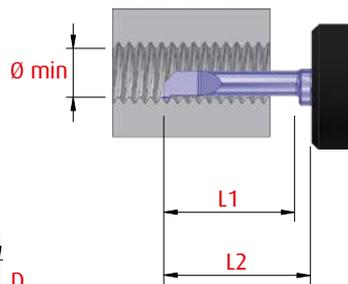
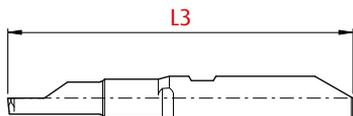
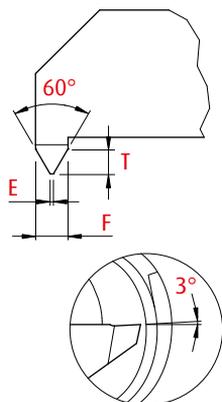
| Art. N° | R | | L | | D _{h5} | Holder | Ø min | L1 | L2 | L2 | P (mm) | P (TPI) | F | E (0/-0.01) | T | B | C | L3 |
|-------------------|------|----|------|----|-----------------|------------------------------|-------|------|------------------------------|-----------|-----------|---------|------|----------------|------|------|------|----|
| | ZTAF | ZN | ZTAF | ZN | | | | | BH6... BHS6... BHY6... | BHS6... | | | | | | | | |
| BB6R/L-42100-TP60 | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 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-42150-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-50120-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-50180-TP60 | ■ | ■ | □ | □ | | | 18.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | |

Filetage
Gewindedrehen
Threading



BF4... / BF6...

TP60

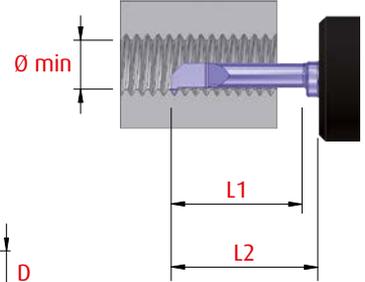
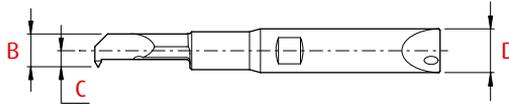
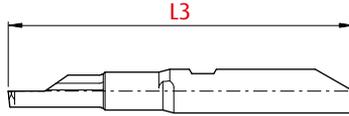
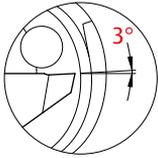
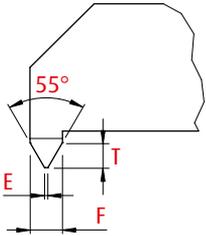
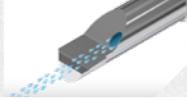


| Art. N° | R | | L | | D h5 | Holder | Ø min | L1 | L2 BH4... BHY4... | L2 BHS4... | P (mm) | P (TPI) | F | E (0/-0.01) | T | B | C | L3 |
|-------------------|------------|----|------------|----|---------|------------------------------|----------|-----|-------------------------|---------------|-----------|---------|------|----------------|------|------|------|----|
| | ZTAF ZN | ZN | ZTAF ZN | ZN | | | | | | | | | | | | | | |
| BF4R/L-1232-TP60 | ■ | ■ | □ | □ | 4 | BH4... BHS4... BHY4... | 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-1640-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-2560-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-2590-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-3380-TP60 | ■ | ■ | □ | □ | | | 8.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | |
| BF4R/L-33120-TP60 | ■ | ■ | □ | □ | | | 12.0 | 15 | 13.5 | 0.50-0.75 | 40-36 | 0.62 | 0.06 | 0.48 | 2.97 | 1.50 | 37 | |

| Art. N° | R | | L | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | P (mm) | P (TPI) | F | E (0/-0.01) | T | B | C | L3 |
|-------------------|------------|----|------------|----|---------|------------------------------|----------|------|-------------------------|---------------|-----------|---------|------|----------------|------|------|------|----|
| | ZTAF ZN | ZN | ZTAF ZN | ZN | | | | | | | | | | | | | | |
| BF6R/L-42100-TP60 | ■ | ■ | □ | □ | 6 | BH6... BHS6... BHY6... | 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-42150-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-50120-TP60 | ■ | ■ | □ | □ | | | 12.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | |
| BF6R/L-50180-TP60 | ■ | ■ | □ | □ | | | 18.0 | 20 | 18.5 | 0.75-1.00 | 28-24 | 0.89 | 0.09 | 0.69 | 4.50 | 2.20 | 47 | |

■ = disponible / verfügbar / available

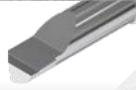
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability



| Art. N° | R | | L | | D _{hs} | Holder | Ø _{min} | L1 | L2 BH4... BHY4... | L2 BHS4... | P (TPI) | F | E (0/-0.02) | T | B | C | L3 |
|------------------|------|----|------|----|-----------------|--------------------|------------------|-----|-------------------------|---------------|---------|------|----------------|------|------|------|----|
| | ZTAF | ZN | ZTAF | ZN | | | | | | | | | | | | | |
| BB4R/L-1845-TP55 | ■ | ■ | □ | □ | 4 | BH4... | 1.85 | 4.5 | 10 | 8.5 | 48 | 0.54 | 0.09 | 0.44 | 1.67 | 0.97 | 32 |
| BB4R/L-2560-TP55 | ■ | ■ | □ | □ | | BHS4... BHY4... | 2.55 | 6.0 | 10 | 8.5 | 40 | 0.64 | 0.10 | 0.52 | 2.25 | 1.35 | 32 |

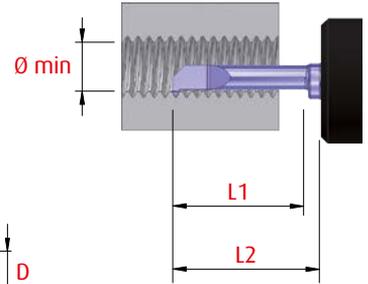
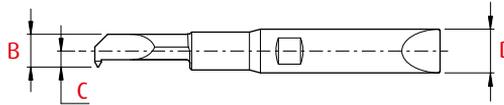
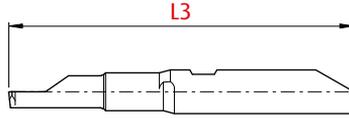
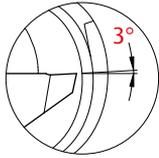
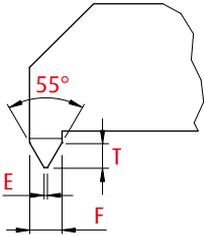
| Art. N° | | | | | D _{hs} | Holder | Ø _{min} | L1 | L2 BH6... BHY6... | L2 BHS6... | P (TPI) | F | E (0/-0.02) | T | B | C | L3 |
|-------------------|------|----|------|----|-----------------|---------|------------------|------|-------------------------|---------------|---------|------|----------------|------|------|------|----|
| | ZTAF | ZN | ZTAF | ZN | | | | | | | | | | | | | |
| BB6R/L-37110-TP55 | ■ | ■ | □ | □ | 6 | BH6... | 3.70 | 11.0 | 20 | 18.5 | 32-24 | 1.08 | 0.13 | 0.91 | 3.33 | 1.83 | 47 |
| BB6R/L-51150-TP55 | ■ | ■ | □ | □ | | BHS6... | 5.10 | 15.0 | 20 | 18.5 | 26-20 | 1.30 | 0.16 | 1.09 | 4.60 | 2.05 | 47 |
| BB6R/L-55160-TP55 | ■ | ■ | □ | □ | | BHY6... | 5.50 | 16.0 | 20 | 18.5 | 22-16 | 1.48 | 0.19 | 1.24 | 5.15 | 2.60 | 47 |

Filetage
Gewindedrehen
Threading



BF4... / BF6...

TP55

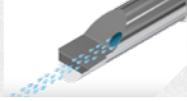


| Art. N° | R | | L | | D _{h5} | Holder | Ø _{min} | L1 | L2 BH4... BHY4... | L2 BHS4... | P (TPI) | F | E (0/-0.02) | T | B | C | L3 |
|-------------------------|------|----|------|----|-----------------|--------------------|------------------|-----|-------------------------|---------------|---------|------|----------------|------|------|------|----|
| | ZTAF | ZN | ZTAF | ZN | | | | | | | | | | | | | |
| BF4R/L-1845-TP55 | ■ | ■ | □ | □ | 4 | BH4... | 1.85 | 4.5 | 10 | 8.5 | 48 | 0.54 | 0.09 | 0.44 | 1.67 | 0.97 | 32 |
| BF4R/L-2560-TP55 | ■ | ■ | □ | □ | | BHS4... BHY4... | 2.55 | 6.0 | 10 | 8.5 | 40 | 0.64 | 0.10 | 0.52 | 2.25 | 1.35 | 32 |

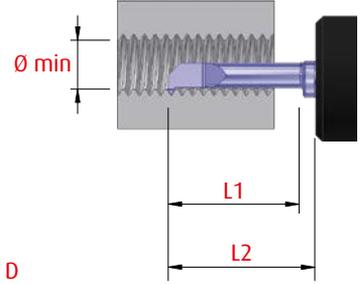
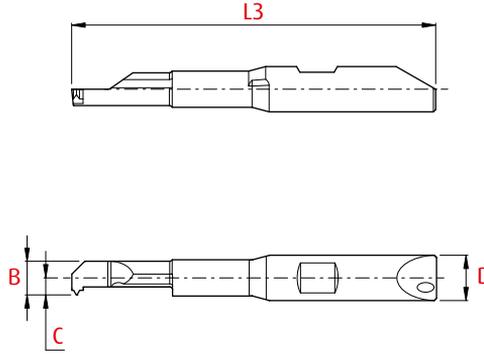
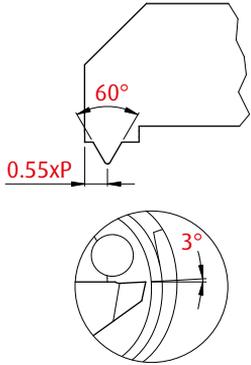
| Art. N° | R | | L | | D _{h5} | Holder | Ø _{min} | L1 | L2 BH6... BHY6... | L2 BHS6... | P (TPI) | F | E (0/-0.02) | T | B | C | L3 |
|--------------------------|------|----|------|----|-----------------|---------|------------------|------|-------------------------|---------------|---------|------|----------------|------|------|------|----|
| | ZTAF | ZN | ZTAF | ZN | | | | | | | | | | | | | |
| BF6R/L-37110-TP55 | ■ | ■ | □ | □ | 6 | BH6... | 3.70 | 11.0 | 20 | 18.5 | 32-24 | 1.08 | 0.13 | 0.91 | 3.33 | 1.83 | 47 |
| BF6R/L-51150-TP55 | ■ | ■ | □ | □ | | BHS6... | 5.10 | 15.0 | 20 | 18.5 | 26-20 | 1.30 | 0.16 | 1.09 | 4.60 | 2.05 | 47 |
| BF6R/L-55160-TP55 | ■ | ■ | □ | □ | | BHY6... | 5.50 | 16.0 | 20 | 18.5 | 22-16 | 1.48 | 0.19 | 1.24 | 5.15 | 2.60 | 47 |

■ = disponible / verfügbar / available

□ = selon disponibilité du stock / jnach Lagerverfügbarkeit / depending the stock availability



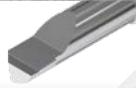
Profil complet métrique
Vollprofil metrisch
Full profile metric



| Art. N° | R | | D h5 | Holder | M (min) | Ø min | P (mm) | L1 | L2 | L2 | B | C | L3 |
|-------------------|------|----|------|------------------------------|---------|-------|--------|-----|-------------------|---------|------|------|----|
| | ZTAF | ZN | | | | | | | BH4... BHY4... | BHS4... | | | |
| BB4R-2560-TM-0.50 | ■ | ■ | 4 | BH4... BHS4... BHY4... | M3x0.5 | 2.50 | 0.50 | 6.0 | 10 | 8.5 | 2.25 | 1.35 | 32 |
| BB4R-3380-TM-0.70 | ■ | ■ | | | M4x0.7 | 3.30 | 0.70 | 8.0 | 15 | 13.5 | 2.97 | 1.50 | 37 |

| Art. N° | R | | D h5 | Holder | M (min) | Ø min | P (mm) | L1 | L2 | L2 | B | C | L3 |
|--------------------|------|----|------|------------------------------|---------|-------|--------|------|-------------------|---------|------|------|----|
| | ZTAF | ZN | | | | | | | BH6... BHY6... | BHS6... | | | |
| BB6R-42100-TM-0.80 | ■ | ■ | 6 | BH6... BHS6... BHY6... | M5x0.8 | 4.20 | 0.80 | 10.0 | 20 | 18.5 | 3.78 | 2.10 | 47 |
| BB6R-50120-TM-1.00 | ■ | ■ | | | M6x1.0 | 5.00 | 1.00 | 12.0 | 20 | 18.5 | 4.50 | 2.20 | 47 |

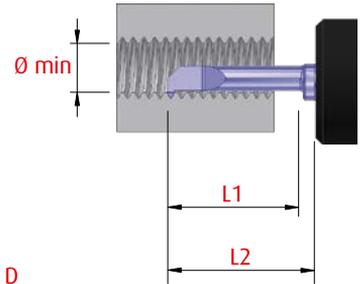
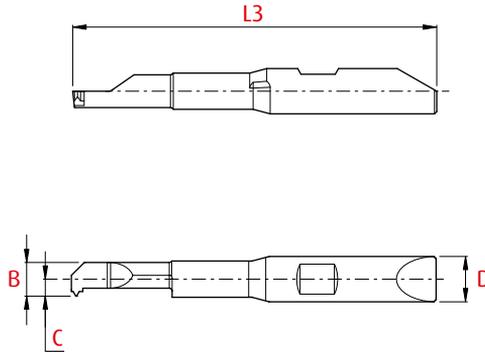
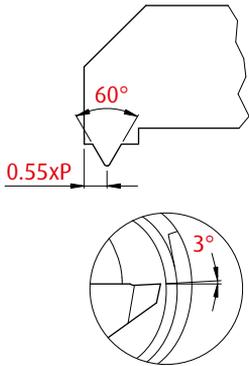
**Filetage
Gewindedrehen
Threading**



BF4... / BF6...

TM

Profil complet métrique
Vollprofil metrisch
Full profile metric



| Art. N° | R | | D h5 | Holder | M (min) | Ø min | P (mm) | L1 | L2 | L2 | B | C | L3 |
|--------------------|------|----|------|--------------------|---------|-------|--------|------|-------------------|---------|------|------|----|
| | ZTAF | ZN | | | | | | | BH4... BHY4... | BHS4... | | | |
| BF4R-2560-TM-0.50 | ■ | ■ | 4 | BH4... | M3x0.5 | 2.50 | 0.50 | 6.0 | 10 | 8.5 | 2.25 | 1.35 | 32 |
| BF4R-3380-TM-0.70 | ■ | ■ | | BHS4... BHY4... | M4x0.7 | 3.30 | 0.70 | 8.0 | 15 | 13.5 | 2.97 | 1.50 | 37 |
| Art. N° | ZTAF | ZN | D h5 | Holder | M (min) | Ø min | P (mm) | L1 | L2 | L2 | B | C | L3 |
| BF6R-42100-TM-0.80 | ■ | ■ | 6 | BH6... | M5x0.8 | 4.20 | 0.80 | 10.0 | 20 | 18.5 | 3.78 | 2.10 | 47 |
| BF6R-50120-TM-1.00 | ■ | ■ | | BHS6... BHY6... | M6x1.0 | 5.00 | 1.00 | 12.0 | 20 | 18.5 | 4.50 | 2.20 | 47 |

■ = disponible / verfügbar / available

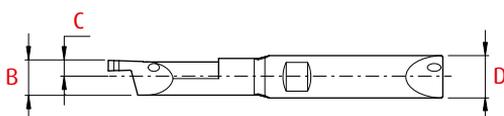
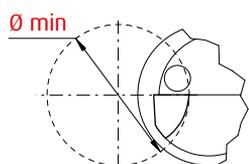
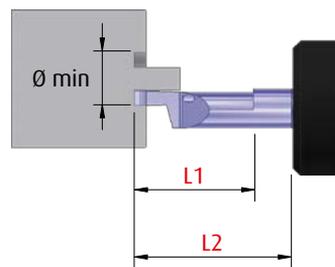
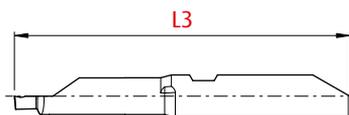
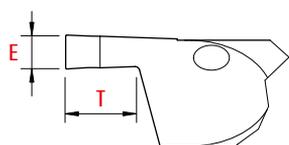
□ = selon disponibilité du stock / jnach Lagerverfügbarkeit / depending the stock availability

Gorge frontale extérieure
 Aussen axiales stechen
 External axial grooving



BB6...

FEG



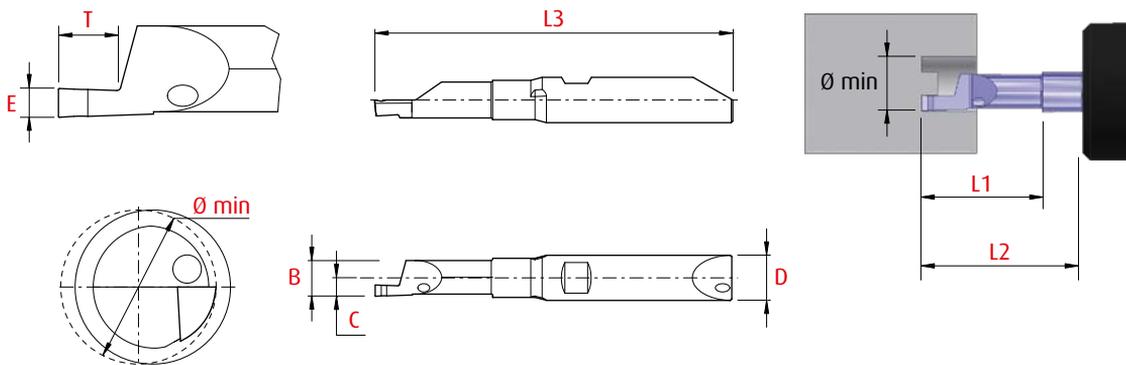
| Art. N° | R | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B | C | E | L3 |
|--------------------|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZN | | | | | | | | | | | |
| BB6R-50150-FEG150X | ■ | ■ | 6 | BH6... BHS6... BHY6... | 5.0 | 15.0 | 20 | 18.5 | 3.00 | 4.90 | 2.30 | 1.50 | 47 |

Gorge frontale intérieure
Innen axiales stechen
Internal axial grooving



BB6...

FIG



| Art. N° | R | | D h5 | Holder | Ø min | L1 | L2 BH6... BHY6... | L2 BHS6... | T | B | C | E | L3 |
|--------------------|------|----|------|------------------------------|-------|------|-------------------------|---------------|------|------|------|------|----|
| | ZTAF | ZN | | | | | | | | | | | |
| BB6R-50150-FIG150X | ■ | ■ | 6 | BH6... BHS6... BHY6... | 5.0 | 15.0 | 20 | 18.5 | 3.00 | 4.75 | 2.45 | 1.50 | 47 |

■ = disponible / verfügbar / available

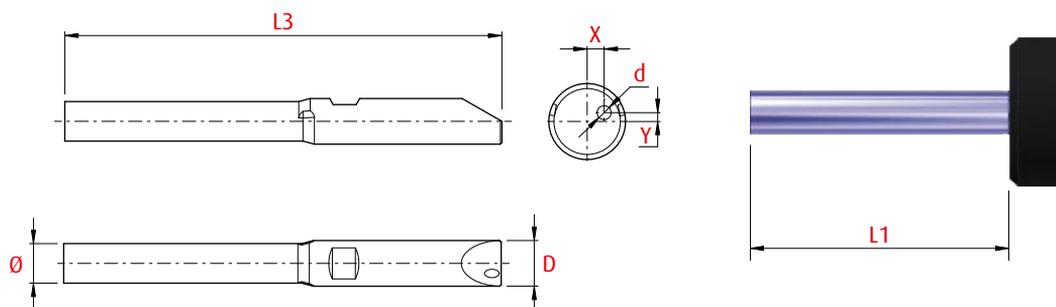
□ = selon disponibilité du stock / jenach Lagerverfügbarkeit / depending the stock availability

Ebauches avec arrosage
Rohlinge mit Kühlung
Blanks with coolant



BB4... / BB6...

BB_E



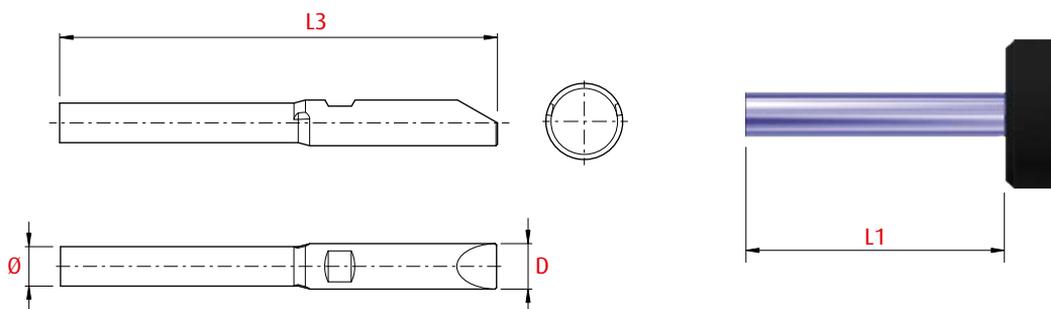
| Art. N° | ZN | D h5 | Holder | L1 BH4... BHY4... | L1 BHS4... | Ø | X | Y | d | L3 |
|----------|----|------|------------------------------|-------------------------|---------------|------|------|------|------|----|
| BB4R-E42 | ■ | 4 | BH4... BHS4... BHY4... | 20.0 | 18.5 | 3.20 | 0.84 | 0.55 | 0.85 | 42 |
| Art. N° | ZN | D h5 | Holder | L1 BH6... BHY6... | L1 BHS6... | Ø | X | Y | d | L3 |
| BB6R-E57 | ■ | 6 | BH6... BHS6... BHY6... | 30.0 | 28.5 | 5.20 | 1.33 | 0.70 | 1.10 | 57 |

Ebauches
Rohlinge
Blanks



BF4... / BF6...

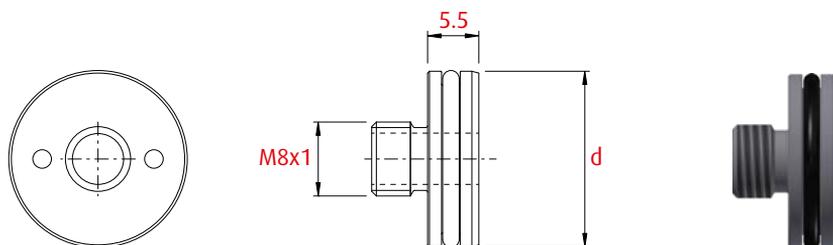
BF_E



| Art. N° | ZN | D h5 | Holder | L1 BH4... BHY4... | L1 BHS4... | Ø | L3 |
|----------------|----|------|------------------------------|-------------------------|---------------|------|----|
| BF4-E42 | ■ | 4 | BH4... BHS4... BHY4... | 20.0 | 18.5 | 3.20 | 42 |
| Art. N° | ZN | D h5 | Holder | L1 BH6... BHY6... | L1 BHS6... | Ø | L3 |
| BF6-E57 | ■ | 6 | BH6... BHS6... BHY6... | 30.0 | 28.5 | 5.20 | 57 |

■ = disponible / verfügbar / available

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



| Art. N° | | d |
|----------------|---|-------|
| JB-M8x1-D19.05 | ■ | 19.05 |
| JB-M8x1-D20 | ■ | 20 |
| JB-M8x1-D22 | ■ | 22 |
| JB-M8x1-D25 | ■ | 25 |
| JB-M8x1-D25.4 | ■ | 25.4 |

■ = disponible / verfügbar / available

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

Conditions générales de vente et de livraison

Verkaufs- und Lieferbedingungen

General terms of sale and delivery

Vente

Le contrat de vente est conclu sur la base d'une confirmation écrite de la commande ou par la livraison de la marchandise. Aucune compensation n'est accordée lors d'un éventuel retard de livraison.

Verkauf

Der Kaufvertrag gilt erst aufgrund einer schriftlichen Auftragsbestätigung oder mit der Auslieferung der Ware als abgeschlossen. Im Fall einer Lieferverzögerung wird keine Kompensation bewilligt.

Contract of sale

The contract of sale shall be deemed concluded upon written confirmation of the order or delivery of the goods only. In case of late delivery, no compensation is given.

Prix et livraison

Les prix sont nets départ usine. Les emballages ne sont pas compris dans le prix.

Preis und Lieferung

Die Preise verstehen sich netto ab Werk. Die Verpackung ist im Preis nicht inbegriffen.

Prices and shipment

All prices are ex factory. Packaging are not included in the prices.

Conditions de paiement

Sont valables, les conditions de paiement figurant en bas de la facture. Nous nous réservons le droit de propriété de la marchandise livrée jusqu'à réception du paiement intégral de celle-ci.

Zahlungsbedingungen

Die Zahlungsbedingungen sind gültig, welche auf der Rechnung erwähnt sind. Bis zur vollständigen Bezahlung behalten wir uns das Eigentum an der gelieferten Ware vor.

Terms of payment

Are valid the terms of payment mentioned on the invoice. We retain title to the goods delivered until full payment thereof.

Réclamations

Toute réclamation doit être communiquée par écrit dans un délai de 7 jours dès réception de la marchandise. En cas de produits défectueux ou non conformes aux spécifications et tolérances usuelles applicables en la matière, la limite de notre garantie s'étend au remplacement des produits défectueux retournés. Nous déclinons toute responsabilité pour tout autre dommage direct ou indirect ou dommage consécutif que ce soit d'ordre contractuel ou délictuel y compris par négligence ou autre.

Beanstandungen

Beanstandungen sind innert 7 Tagen seit Empfang der Ware schriftlich anzumelden. Im Fall von defekten Produkten oder Abweichungen von branchenüblichen Spezifikationen und Toleranzen, beschränkt sich die Garantie auf den Ersatz der zurückgesandten Produkte. Wir lehnen jede Haftung für weitere direkte oder indirekte Schäden oder Folgeschäden ab, weder auf Grund vertraglicher oder Verschuldenshaftung einschliesslich Fahrlässigkeit oder anderes.

Complaints

Any complaints shall be addressed within 1 week upon receipt of the goods. In the event that products are defective or do not comply with specifications and tolerances applicable in the relevant industry, the warranty is limited to the replacement of the returned products. We shall not be liable for any other direct or indirect damages or consequential damages whether in contract, tort including negligence or otherwise.

Fabrications spéciales

Toutes les exécutions spéciales sont soumises à un plan ou à vos indications précises. En aucun cas les outils ne pourront être repris. Nous nous gardons la possibilité de livrer +/- 10% de la quantité commandée, mais au minimum 1 pièce.

Spezialanfertigungen

Spezialanfertigungen werden nur auf Grund eines Planes oder Ihrer genauesten Angaben angefertigt. Die Werkzeuge werden unter keinen Umständen durch uns zurückgenommen. Wir behalten uns vor +/-10% der bestellten Menge zu liefern, aber im Minimum 1 Stück.

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Every special tools are produced with a draw or specifics indications given by the customer. In any case the pieces will be took back by Alfatool. We keep the possibility to deliver +/- 10% of the ordered quantity, but in minimum 1 item.

Le for juridique est Moutier – Suisse.

Gerichtstand ist Moutier – Schweiz.

Sole place of jurisdiction is Moutier – Switzerland.

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