



Tools for **Swiss type machines**



INDUSTRY 4.0
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About this Tools for Swiss type machines catalog

■ Note in using this catalog:

- ★ This catalog provides the information of Tungaloy's cutting tools as of December 2020.
- ★ The specifications are subject to change without prior notice for product improvements. Also, the products may be discontinued in the future due to the development of new products.
- ★ The dimensions of all products are shown in millimeters (mm).
- ★ For indexable tools, such as toolholders, cutters, drill bodies, applicable inserts or heads need to be ordered separately.

■ How to use this catalog:

The diagram illustrates the navigation process in the catalog. On the left, a table of contents lists categories from 1 to 9. On the right, two pages show tool details for 'J-SERIES JSDJCR.L' and 'TUNE CUT JSDJCR.L-CHP'. Red annotations show the path: 1. Selecting a category (e.g., External Toolholder), 2. Selecting a tool type (e.g., External Toolholder), and 3. Checking the tool designation in the table of contents.

- 1 Select the tool category at the product group index on the right pages.
- 2 Select the tool type at the application index on the left pages.
- 3 Check the tool designation on the page of the tool details.

■ How to read the list for the standard items:

- ★ Designations for indexable tools – toolholders, cutters, drill bodies, etc.
 - Orders are to be received for the tools with the designations in the catalog.
 - For the tool with right- and left-hand options, the designation includes ****R/L**** as shown below.
- Ex. 1: Designation: A16Q-STFPR/L13-D180
 You can order both right- and left-hand tools. A16Q-STFPR13-D180 (a right-hand tool) and A16Q-STFPL13-D180 (a left-hand tool) will be available.
- Ex. 2: Designation: A16Q-SNGR09-D200
 You can order only right-hand tools. Please contact us when you need left-hand tools.
- ★ Line up for inserts and solid tools
 Blank : Please contact us regarding the product.

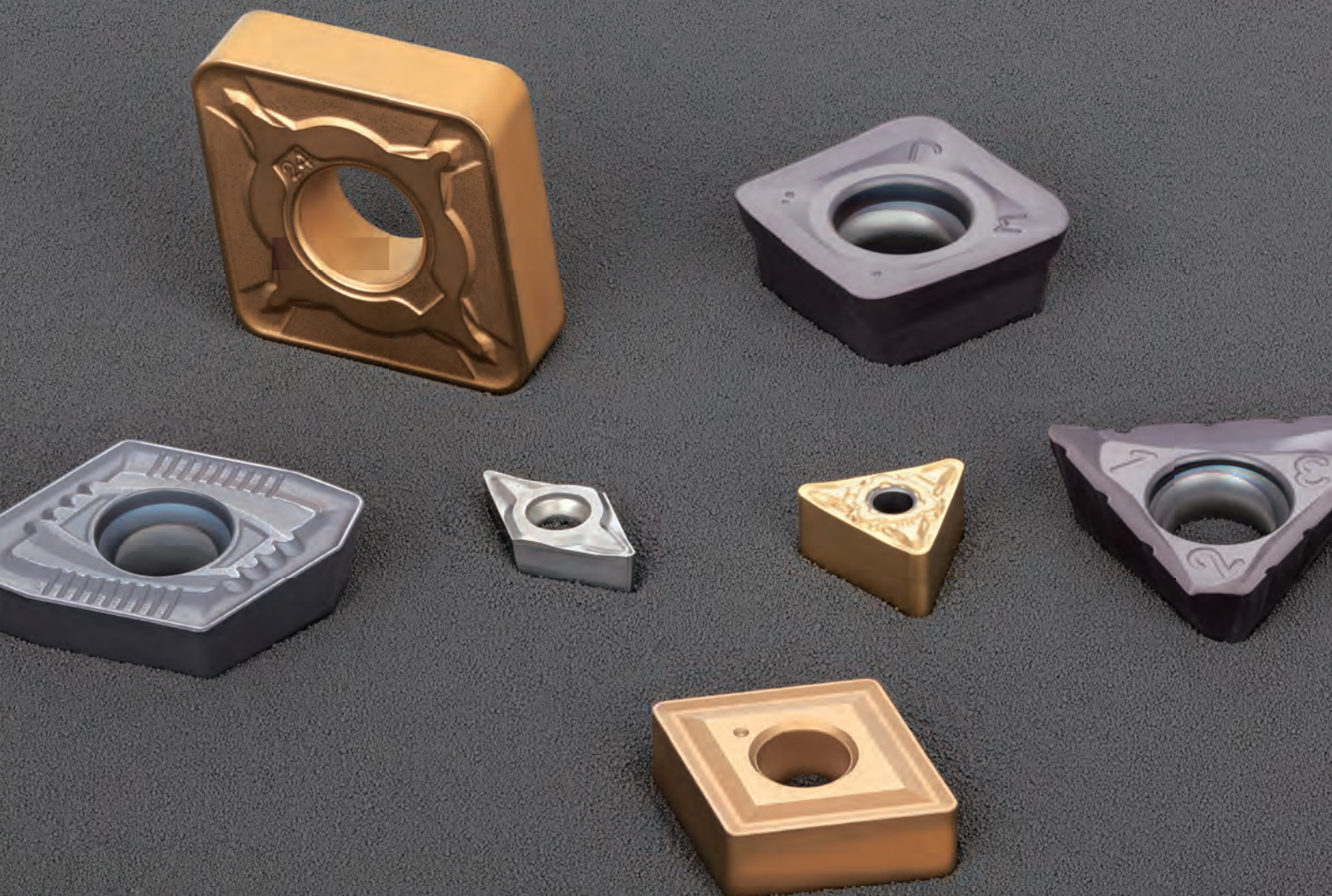
■ When ordering:

- ★ Please specify the designation, grade, and quantity.
 e.g. **ACLNR2020K12-A ... 1** (one external toolholder per package)
 *Inserts are not included. Please order those separately.
- e.g. **CNMG120408-TM T9205 ... 10 pieces** (10 inserts per package)
 *You will find a note if the number per package is not 10.

| | |
|----------------------------|----------|
| Grade | 1 |
| Insert | 2 |
| External Toolholder | 3 |
| Internal Toolholder | 4 |
| Threading Tool | 5 |
| Parting, Grooving | 6 |
| Endmill | 7 |
| Drilling Tool | 8 |
| Technical Reference | 9 |

| | |
|---------------------|----------|
| Grade | 1 |
| Insert | 2 |
| Ext. Toolholder | 3 |
| Int. Toolholder | 4 |
| Threading | 5 |
| Grooving | 6 |
| Endmill | 7 |
| Drilling Tool | 8 |
| Technical Reference | 9 |

1. Grade



Grade

Quick Guide

1-2

Coated Grade PVD

1-3

Coated Grade CVD

1-4

Cermet

1-4

CBN (T-CBN)

1-5

PCD (T-DIA)

1-5

Uncoated Cemented Carbide

1-5

Grade - Quick Guide

Application ranges of G-tolerance positive turning inserts

Application ranges of M-tolerance negative turning inserts

P
Steel

| | | | |
|-------------------------|------------|-------------------|-------------------|
| High speed (> 150) | | | |
| Medium speed (80 < 150) | SH725 | AH725 | |
| Low speed (< 80) | J740 | | |
| | Continuous | Light interrupted | Heavy interrupted |

| | | | |
|-------------------------|------------------|-------------------------|-------------------|
| High speed (> 150) | GT9530 NS9530 | T9205 T9215 T9225 | T9235 |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | AH120 | | AH645 |
| | Continuous | Light interrupted | Heavy interrupted |

M
Stainless

| | | | |
|-------------------------|------------|-------------------|-------------------|
| High speed (> 150) | | | |
| Medium speed (80 < 150) | SH725 | AH725 | |
| Low speed (< 80) | J740 | | |
| | Continuous | Light interrupted | Heavy interrupted |

| | | | |
|-------------------------|------------|-------------------|-------------------|
| High speed (> 150) | T6120 | T6130 | |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | AH8015 | | AH645 |
| | Continuous | Light interrupted | Heavy interrupted |

N
Non-ferrous

| | | | |
|-------------------------|-------------------------|-------------------|-------------------|
| High speed (> 150) | DX110 DX120 DX140 | | |
| Medium speed (80 < 150) | | KS05F TH10 | |
| Low speed (< 80) | | | |
| | Continuous | Light interrupted | Heavy interrupted |

| | | | |
|-------------------------|------------|-------------------|-------------------|
| High speed (> 150) | | | |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | | TH10 | |
| | Continuous | Light interrupted | Heavy interrupted |

S
Superalloy

| | | | |
|-------------------------|------------|-------------------|-------------------|
| High speed (> 150) | BX480 | | |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | SH725 | AH8005 AH8015 | |
| | Continuous | Light interrupted | Heavy interrupted |

| | | | |
|-------------------------|------------|-------------------|-------------------|
| High speed (> 150) | | | |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | | AH8005 AH8015 | |
| | Continuous | Light interrupted | Heavy interrupted |

H
Hard material

| | | | |
|-------------------------|----------------|-------------------|-------------------|
| High speed (> 150) | BXA10 BXA20 | | |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | | TH10 | |
| | Continuous | Light interrupted | Heavy interrupted |

| | | | |
|-------------------------|----------------|-------------------|-------------------|
| High speed (> 150) | BXA10 BXA20 | | |
| Medium speed (80 < 150) | | | |
| Low speed (< 80) | | TH10 | |
| | Continuous | Light interrupted | Heavy interrupted |

PVD - Coated Grade

| Grade | Coating | | Application | Feature | Turning | Grooving | Milling | Drilling | Grade |
|---|------------------|---------------------------|--------------------------------------|--|---------|----------|---------|----------|-------|
| | Main composition | Thickness / μm | | | | | | | |
| AH120 P15 - P25 M15 - M25 K15 - K30 S10 - S25 | (Ti, Al)N | 3 | P M K S | - Good balance between wear and fracture resistance - Suitable for machining steel, stainless steel, and cast iron under general cutting conditions | | | | | 1 |
| AH130 P25 - P40 M25 - M40 | (Ti, Al)N | 3 | P M | - High chipping and fracture resistance - Designed for machining austenitic stainless steel under general cutting conditions | | | | | 2 |
| AH630 P15 - P30 M15 - M30 | (Ti, Al)N | 5 | P M | - Good resistance to wear and fracture in machining stainless steel at low to medium cutting speed | | | | | 3 |
| AH645 P30 - P40 M30 - M40 | (Ti, Al)N | 5 | P M | - High fracture resistance in machining stainless steel | | | | | 4 |
| AH725 P15 - P30 M15 - M30 K25 - K30 S15 - S25 | (Ti, Al)N | 2 | P M K S | - Good balance between wear and chipping resistance - Suitable for machining steel and stainless steel under general cutting conditions | | | | | 5 |
| New AH7025 P20 - P30 M20 - M30 S15 - S25 | (Ti, Al)N | 3.5 | P M S | - Excellent wear resistance and high rigidity - First choice for grooving of various materials | | | | | 6 |
| AH8005 M01 - M10 S01 - S10 | (Al,Ti)N | 3.5 | M S H | - Good resistance to wear and adhesion - Excellent performance in machining heat-resistant alloy at high speed | | | | | 7 |
| AH8015 M10 - M20 S10 - S20 | (Al,Ti)N | 3.5 | P M K S H | - Good balance between wear and fracture resistance - First choice for machining heat-resistant alloy under general cutting conditions | | | | | 8 |
| AH3135 P30 - P40 M30 - M40 | (Ti, Al)N | 4 | P M | - High fracture resistance - Suitable for machining steel and stainless steel under general cutting conditions | | | | | 9 |
| New AH9130 P15 - P35 M25 - M35 K10 - K25 S15 - S30 | (Ti, Al)N | 4.5 | P M K S | - High wear resistance - Designed for drilling various materials | | | | | 10 |
| SH725 P20 - P30 M20 - M30 | (Ti, Al)N | 2 | P M | - High wear resistance - Designed for machining steel and stainless steel | | | | | 11 |
| SH730 P20 - P35 M20 - M35 S05 - S15 | (Ti, Al)N | 1 | P M S | - High wear resistance - Designed for machining steel, stainless steel, and difficult-to-cut material | | | | | 12 |
| GH110 K10 - K25 N05 - N15 | Ti(C, N, O) | 3 | P M K N S | - High wear resistance | | | | | 13 |
| GH130 P25 - P40 M25 - M40 K25 - K40 | Ti(C, N, O) | 3 | P M K | - High chipping and fracture resistance - Suitable for steel, stainless steel, and cast iron | | | | | 14 |
| GH330 P15 - P30 M15 - M30 K05 - K30 | Ti(C, N, O) | 3 | P M K | - High resistance to wear and fracture - Suitable for continuous to medium interrupted cutting | | | | | 15 |
| J740 - | TiN | 1 | For small lathes | - Ultra-fine-grain cemented carbide coated with TiN-based compound | | | | | 16 |
| YH170 P20 - P35 M20 - M35 | Ti(C, N) | 1.5 | P M | - High resistance to wear and fracture - Designed for drilling carbon steel and stainless steel | | | | | 17 |
| YH180 P20 - P35 M20 - M35 | Ti(C, N) | 1.5 | P M | - High wear resistance - Designed for drilling carbon steel and stainless steel | | | | | 18 |

CVD - Coated Grade

| Grade | Coating | | Application | Feature | Turning | Grooving | Milling | Drilling |
|--|--|---------------------------|--------------|---|---------|----------|---------|----------|
| | Main composition | Thickness / μm | | | | | | |
| New T9205 P01 - P10 K10 - K20 | Ti compound +Al ₂ O ₃ | 18 | P K | - High wear resistance - Excellent performance in high speed cutting | | | | |
| New T9215 P10 - P20 | Ti compound +Al ₂ O ₃ | 18 | P M K | - Well-balanced between wear and chipping resistance - First choice for steel - High versatility for a wide range of applications | | | | |
| New T9225 P15 - P25 | Ti compound +Al ₂ O ₃ | 18 | P | - First choice for roughing to medium cutting - High fracture resistance | | | | |
| New T9235 P30 - P40 | Ti compound +Al ₂ O ₃ | 18 | P | - High fracture resistance in heavy interrupted cutting | | | | |
| T6120 P10 - P20 M10 - M20 | TiCN | 6 | P M | - Excellent wear resistance in high speed continuous cutting | | | | |
| T6130 P15 - P30 M15 - M30 | TiCN | 6 | P M | - High wear resistance in cutting at medium to high speed - First choice for stainless steel | | | | |
| T313V - | TiCN-Al ₂ O ₃ | 3 | Threading | - High resistance to plastic deformation | | | | |

Cermet

| Grade | Coating | | Application | Feature | Turning | Grooving | Milling | Drilling |
|-------------------|----------------------------------|---------------------------|---------------------|---|---------|----------|---------|----------|
| | Main composition | Thickness / μm | | | | | | |
| New AT9530 | (Ti,Al)N laminated coating | 3 | P | - High wear resistance - First choice for machining alloy steel | | | | |
| GT9530 | Ti(C, N, O) | 3 | P K | - High wear resistance - Excellent surface quality in finishing | | | | |
| J9530 | TiN | 1 | For Swiss lathes | - Suitable for small-part machining | | | | |
| NS9530 | Uncoated | - | P K | - High fracture resistance - Suitable for finishing to medium cutting of steel | | | | |

CBN

| Grade | Hardness (Hv) | T.R.S. (GPa) | Application | Feature | Turning | Grooving | Milling | Drilling | Grade |
|-------------------------|---------------|--------------|----------------------------|--|---------|----------|---------|----------|-------|
| New BXA10 | 3200 ~ 3400 | 1.00 ~ 1.10 | H | - Coated T-CBN for excellent performance in continuous cutting of hardened steel | █ | | | | 1 |
| BXA20 | 3300 ~ 3500 | 1.30 ~ 1.50 | H | - Coated T-CBN for excellent performance in machining hardened steel | █ | | | | 2 |
| BXM10 | 2700 ~ 2900 | 0.80 ~ 0.90 | H | - Coated T-CBN for excellent performance in high speed continuous cutting of hardened steel | █ | | | | 3 |
| BXM20 | 3500 ~ 3700 | 1.35 ~ 1.50 | H | - Coated T-CBN for machining hardened steel in a wide range of application area | █ | | | | 4 |
| BX310 | 2700 ~ 2900 | 0.80 ~ 0.90 | H | - High wear resistance - Designed for high-speed continuous cutting of hardened steel | █ | | | | 5 |
| BX330 | 2800 ~ 3000 | 0.85 ~ 0.95 | H | - Excellent sharpness - Designed for finishing hardened steel | █ | | | | 6 |
| BX360 | 3200 ~ 3400 | 1.00 ~ 1.10 | H | - Suitable for general machining of hardened steel | █ | █ | | | 7 |
| BX470 | 4100 ~ 4300 | 1.90 ~ 2.10 | Sintered metal K | - Excellent sharpness - Suitable for ferrous sintered metal | █ | | | | 8 |
| BX480 | 4100 ~ 4300 | 1.90 ~ 2.10 | Sintered metal K | - Hardest T-CBN - Ideal for ferrous sintered metal - Suitable for high-speed face milling of cast iron | █ | | █ | | 9 |
| BX815 | 3000 ~ 3200 | 1.00 ~ 1.10 | S | - High wear resistance and thermo stability - Suitable for high-speed machining of Inconel | █ | | | | |

PCD (T-DIA)

| Grade | Grain size (µm) | Hardness (Hv) | T.R.S. (GPa) | Application | Feature | Turning | Grooving | Milling | Drilling | Grade |
|-------------------------|-----------------|---------------|--------------|-------------|---|---------|----------|---------|----------|-------|
| New DX110 | < 1 | 8500 | 1.8 | N | - Excellent sharpness for high surface quality - Suitable for finishing non-ferrous metal and nonmetal | █ | | | | 6 |
| DX120 | 4.5 | 9000 | 1.8 | N | - Suitable for finishing non-ferrous metal and nonmetal | █ | | | | 7 |
| DX140 | 12.5 | 10000 | 1.7 | N | - High wear resistance - Designed for non-ferrous metal and nonmetal | █ | | | | 8 |
| DX160 | 28 | 11000 | 1.6 | N | - Designed for ceramic, cemented carbide, and nonmetal | █ | | | | 9 |

Uncoated Cemented Carbide

| Grade | Hardness (HRA) | T.R.S. (GPa) | Application | Turning | Grooving | Milling | Drilling | Grade |
|---|----------------|--------------|--------------------------|---------|----------|---------|----------|-------|
| UX30 P30 M30 | 91.1 | 2.3 | P M | █ | | | | 8 |
| TH10 P10 M10 K10 N10 | 92.0 | 2.4 | P M K N | █ | | | | 9 |
| KS05F K05 S05 N05 | 93.0 | 2.9 | K S N | █ | | | | |

1

2

3

4

5

6

7

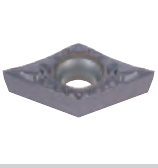
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9

2. Insert



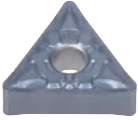
Insert



Positive type

Coated CVD/PVD, Cermet, Uncoated cemented carbide

2-9



Negative type

Coated CVD/PVD, Cermet, Uncoated cemented carbide

2-41



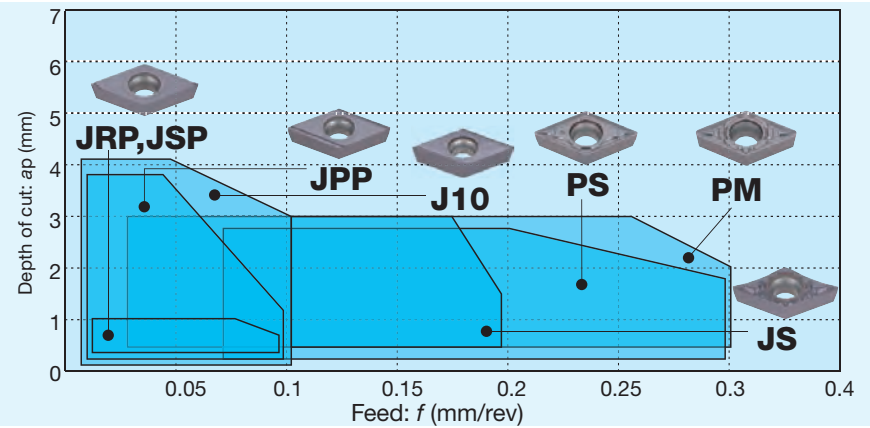
CBN / PCD Insert

CBN (T-CBN), PCD (T-DIA)

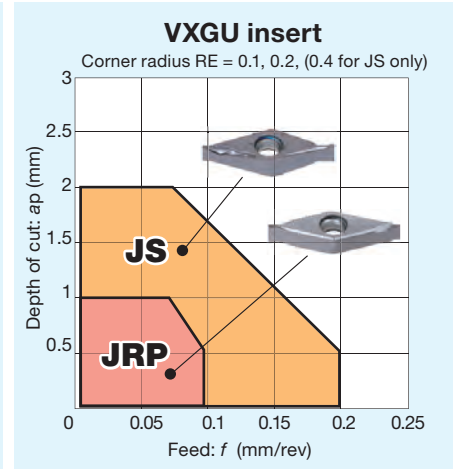
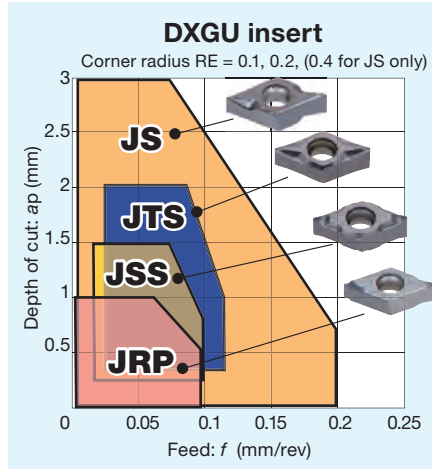
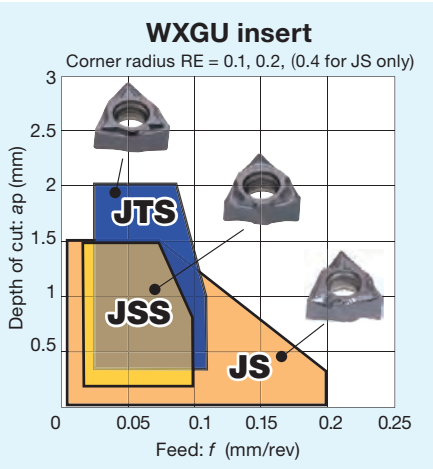
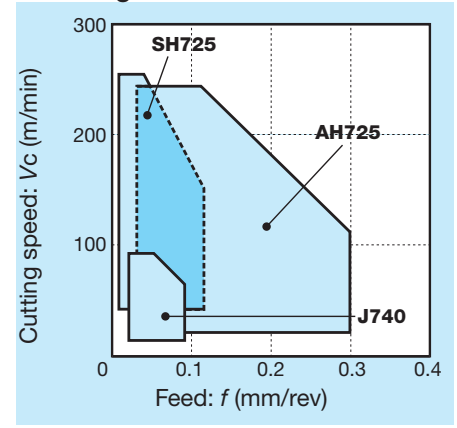
2-61

Positive Inserts - Quick Guide

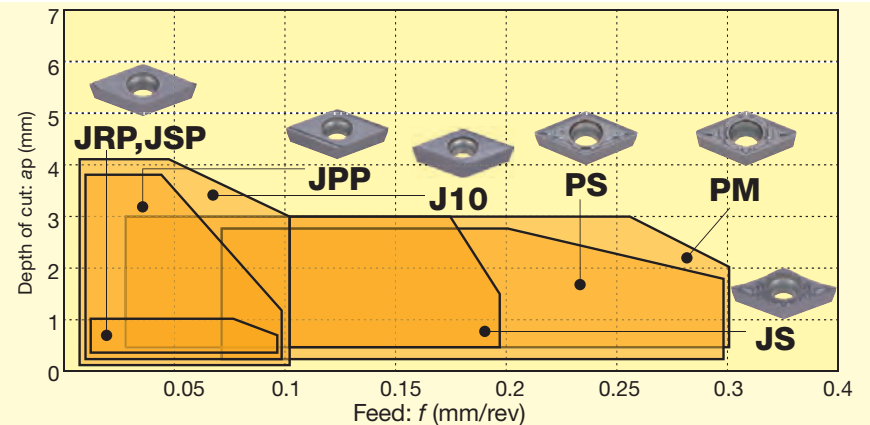
P Steel



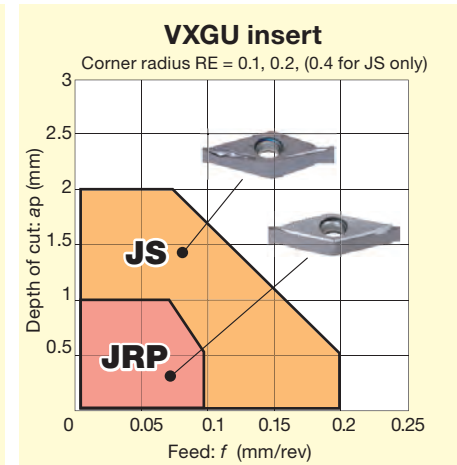
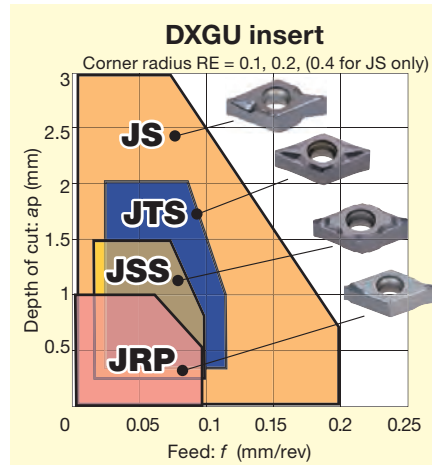
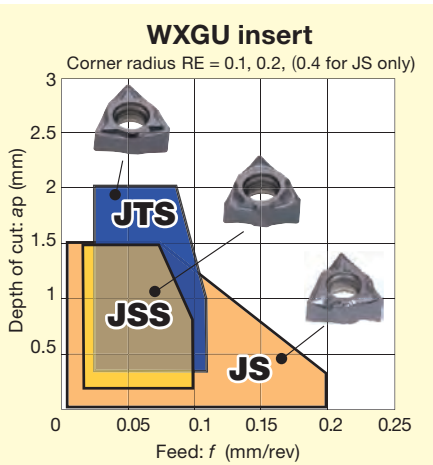
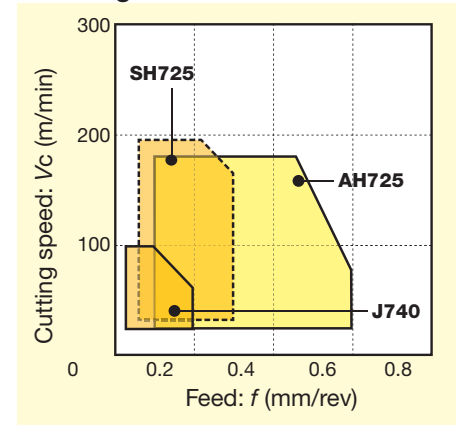
Coated grades



M Stainless Steel

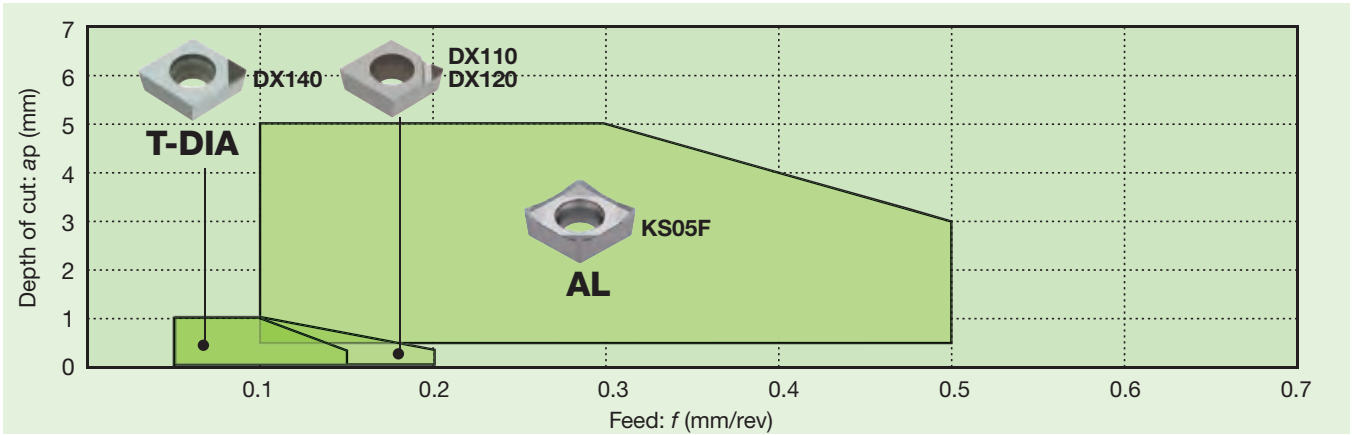


Coated grades

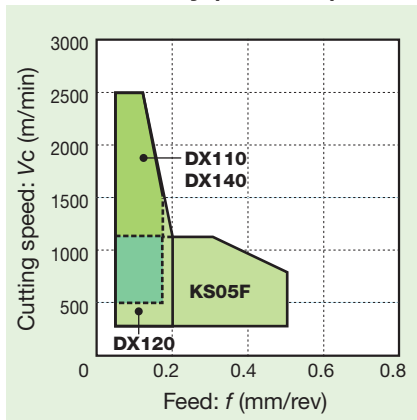


Positive Inserts - Quick Guide

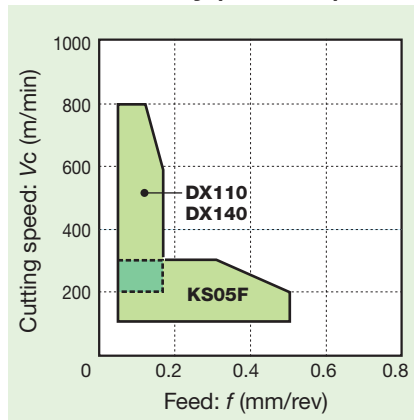
N Non-ferrous Metal



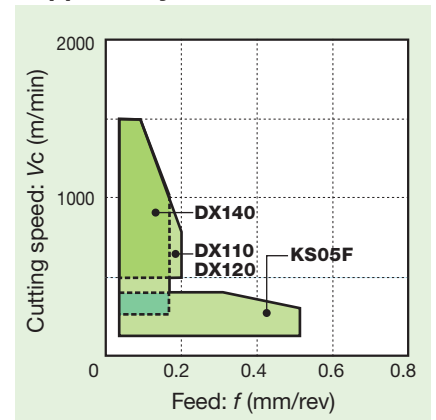
Aluminium alloy (Si < 12%)



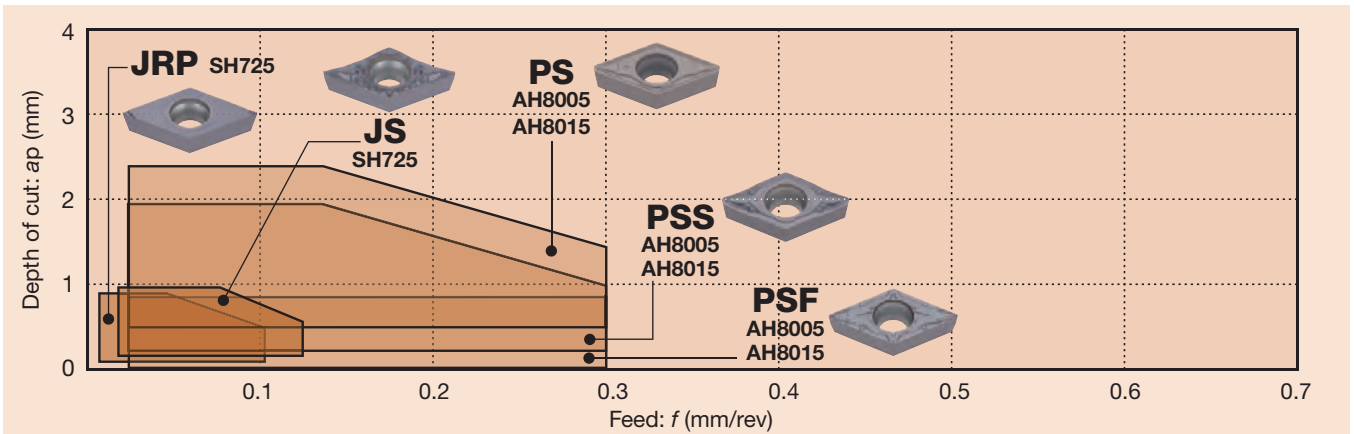
Aluminium alloy (Si \geq 12%)



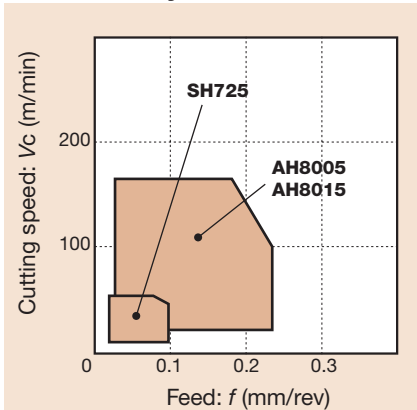
Copper alloy



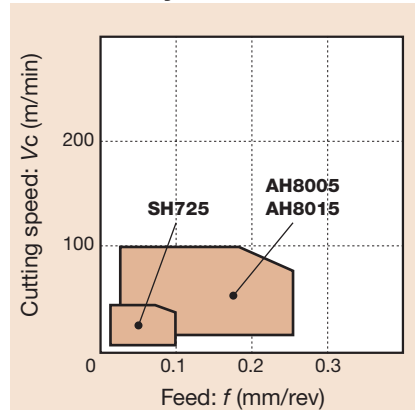
S Superalloys and titanium



Titanium alloy



Ni-base alloy



Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

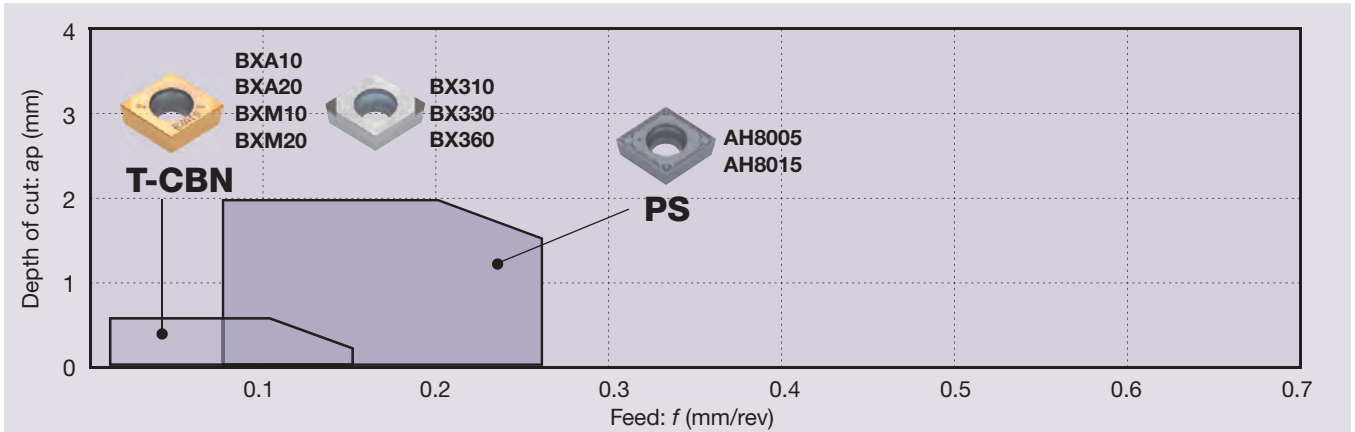
Endmill

Drilling Tool

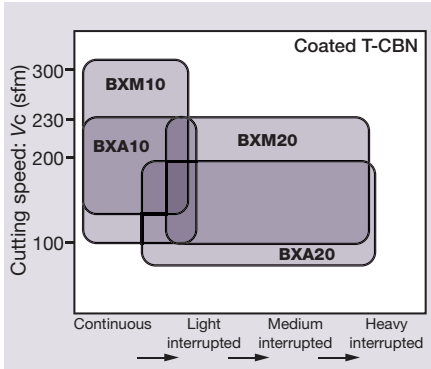
Technical Reference

Positive Inserts - Quick Guide

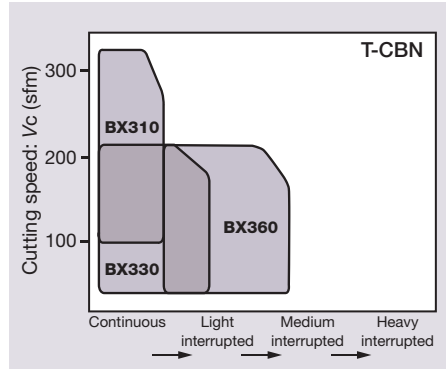
H Hard Materials



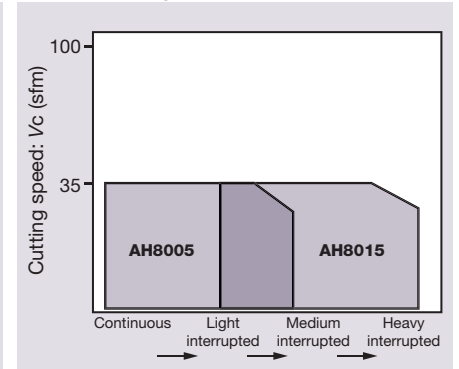
Coated T-CBN




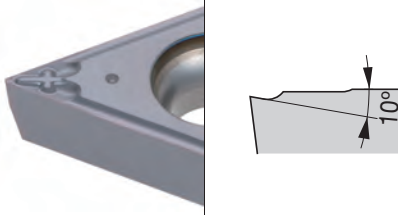
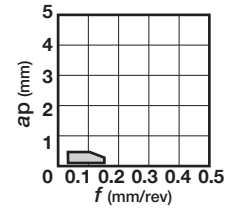

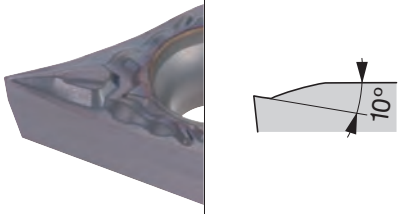
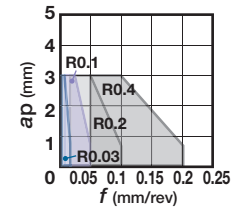

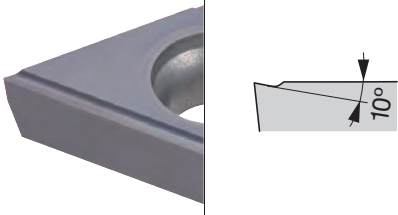
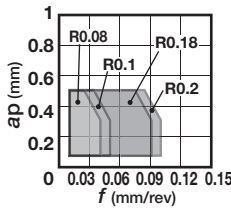

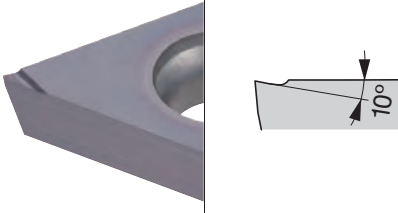
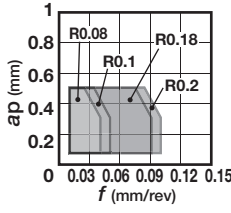

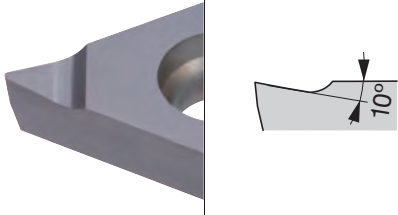
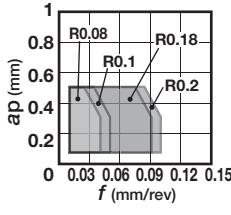

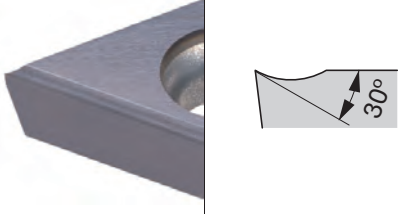
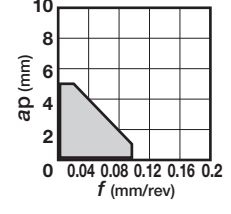

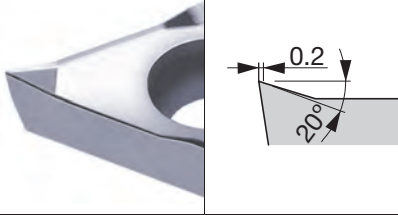
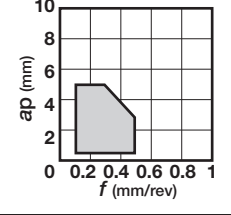
T-CBN



PVD coating



Positive Inserts - Chipbreaker Overview

| Application | Type | Chipbreaker design | Applicable range |
|--|------------|--|---|
|  Precision finishing | 01 |  |  |
|  Finishing | JS |  |  |
|  Precision finishing | JPP |  |  |
|  Precision finishing | JRP |  |  |
|  Precision finishing | JSP |  |  |
|  Finishing to medium cutting | J10 |  |  |
|  Finishing to medium cutting | AL |  |  |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

Positive Inserts - Chipbreaker Overview

| Application | | Type | Chipbreaker design | | Applicable range |
|-------------|-----------------------------|------------|--------------------|--|------------------|
| | Finishing | PSF | | | |
| | Finishing | PF | | | |
| | Finishing to light cutting | PSS | | | |
| | Finishing to medium cutting | PS | | | |
| | Finishing to medium cutting | TSF | | | |
| | Finishing to medium cutting | TM | | | |
| | Medium cutting | PM | | | |

Double-sided positive inserts - Chipbreaker Overview

| Application | Type | Chipbreaker design | Applicable range |
|-------------|---------------------|--------------------|------------------|
| | Precision finishing | JSS | |
| | Finishing | JS | |
| | Finishing | JTS | |
| | Finishing | JRP | |
| | Finishing | SS | |
| | Finishing | TSW | |
| | Finishing | TS | |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

1

2

3

4

5


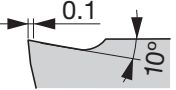
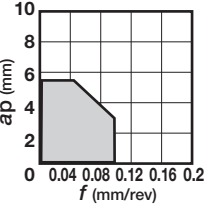

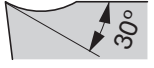
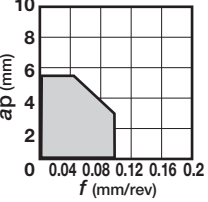


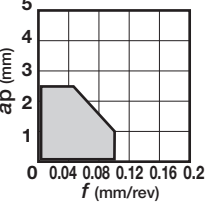


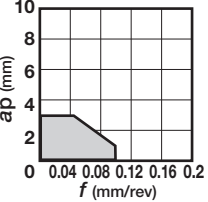


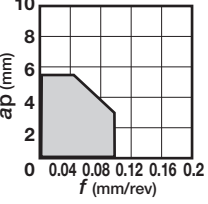
6

7

8

9

Other inserts - Chipbreaker Overview

| | Application | Type | Chipbreaker design | | Applicable range |
|--------------------------|-----------------|-------------|---|--|---|
| P M N S | Front turning | JXF |  |  |  |
| P M N S | Back turning | JXB |  |  |  |
| P M N S | Back turning | JTB |  |  |  |
| P M N S | Back turning | J10E |  |  |  |
| P M N S | Reverse turning | JXR |  |  |  |

Insert POSITIVE TYPE

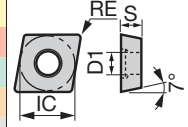
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

CC



Rhombic, 80°
with hole
Positive 7°

| Material | Coated | Grade |
|-----------------|-------------|-------|
| P Steel | ● ● ● ● ● ● | 1 |
| M Stainless | ● ● ● ● ● ● | 2 |
| K Cast iron | ● ● ● ● ● ● | 3 |
| N Non-ferrous | ● ● ● ● ● ● | 4 |
| S Superalloy | ● ● ● ● ● ● | 5 |
| H Hard material | ● ● ● ● ● ● | 6 |




| Application | Chipbreaker | Designation | Coated | | | | Dimension (mm) | | | |
|----------------------------------|-------------|--------------------|--------|-------|-------|------|----------------|-------|------|-----|
| | | | AH725 | SH725 | SH730 | J740 | RE | IC | S | D1 |
| Precision finishing | | 01 CCGT060202-01 | | | ● | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | CCGT09T302-01 | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 |
| Precision finishing (sharp edge) | | 01 CCGT060202F-01 | | ● | | | <0.2 | 6.35 | 2.38 | 2.8 |
| | | CCGT060204F-01 | | ● | | | <0.4 | 6.35 | 2.38 | 2.8 |
| | | CCGT09T302F-01 | | ● | | | <0.2 | 9.525 | 3.97 | 4.4 |
| | | CCGT09T304F-01 | | ● | | | <0.4 | 9.525 | 3.97 | 4.4 |
| Internal finishing | | JS CCGT03X101-JS | | | ● | | <0.1 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X102-JS | | | ● | | <0.2 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X104-JS | | | ● | | <0.4 | 3.57 | 1.39 | 1.9 |
| | | CCGT04T101-JS | | | ● | | <0.1 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T102-JS | | | ● | | <0.2 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T104-JS | | | ● | | <0.4 | 4.37 | 1.79 | 2.2 |
| Internal finishing (sharp edge) | | JS CCGT03X101F-JS | | ● | | | <0.1 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X102F-JS | | ● | | | <0.2 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X104F-JS | | ● | | | <0.4 | 3.57 | 1.39 | 1.9 |
| | | CCGT04T101F-JS | | ● | | | <0.1 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T102F-JS | | ● | | | <0.2 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T104F-JS | | ● | | | <0.4 | 4.37 | 1.79 | 2.2 |
| Finishing | | JS CCGT060201N-JS | ● | | | | 0.1 | 6.35 | 2.38 | 2.8 |
| | | CCGT060202N-JS | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | CCGT060204N-JS | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | CCGT09T301N-JS | ● | | | | 0.1 | 9.525 | 3.97 | 4.4 |
| | | CCGT09T302N-JS | ● | | | | 0.2 | 9.525 | 3.97 | 4.4 |
| | | CCGT09T304N-JS | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| Finishing (sharp edge) | | JS CCGT060200FN-JS | ● | ● | | | 0.03 | 6.35 | 2.38 | 2.8 |
| | | CCGT060201FN-JS | ● | ● | | | <0.1 | 6.35 | 2.38 | 2.8 |
| | | CCGT060202FN-JS | ● | ● | | | <0.2 | 6.35 | 2.38 | 2.8 |
| | | CCGT060204FN-JS | ● | ● | | | <0.4 | 6.35 | 2.38 | 2.8 |
| | | CCGT09T300FN-JS | ● | ● | | | 0.03 | 9.525 | 3.97 | 4.4 |
| | | CCGT09T301FN-JS | ● | ● | | | <0.1 | 9.525 | 3.97 | 4.4 |
| | | CCGT09T302FN-JS | ● | ● | | | <0.2 | 9.525 | 3.97 | 4.4 |
| | | CCGT09T304FN-JS | ● | ● | | | <0.4 | 9.525 | 3.97 | 4.4 |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

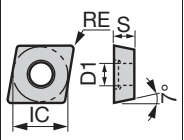
● : Line up

Insert POSITIVE TYPE

CC
Rhombic, 80°
with hole
Positive 7°



| | P | M | K | N | S | H | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material |
|---|---|---|---|---|---|---|-------|-----------|-----------|-------------|------------|---------------|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ | ✳ |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | Coated cermet | | Cermet | Uncoated | Dimension (mm) | | | | | | |
|-----------------------------|------------------|----------------|---|------------|------------------|-------|-------|-------|-------|-------|--------|--------|---------------|-------|--------|----------|----------------|--------|-------|-------|------|------|------|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | AH8005 | AH8015 | GH730 | SH725 | SH730 | GT9530 | AT9530 | NS9530 | TH10 | RE | IC | S | D1 |
| | | | Finishing to medium cutting (sharp edge) | J10 | CCGT060200FR-J10 | | | | | | | | | | | | | | | | ● | 0.03 | 6.35 |
| | CCGT060200FL-J10 | | | | | | | | | | | | | | | | | ● | 0.03 | 6.35 | 2.38 | 2.8 | |
| | CCGT060201FR-J10 | | | | | | | | | | | | | | | | | ● | 0.1 | 6.35 | 2.38 | 2.8 | |
| | CCGT060201FL-J10 | | | | | | | | | | | | | | | | | ● | 0.1 | 6.35 | 2.38 | 2.8 | |
| | CCGT060202FR-J10 | | | | | | | | | | | | | | | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| | CCGT060202FL-J10 | | | | | | | | | | | | | | | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| | CCGT09T300FR-J10 | | | | | | | | | | | | | | | | | ● | 0.03 | 9.525 | 3.97 | 4.4 | |
| | CCGT09T300FL-J10 | | | | | | | | | | | | | | | | | ● | 0.03 | 9.525 | 3.97 | 4.4 | |
| | CCGT09T301FR-J10 | | | | | | | | | | | | | | | | | ● | 0.1 | 9.525 | 3.97 | 4.4 | |
| | CCGT09T301FL-J10 | | | | | | | | | | | | | | | | | ● | 0.1 | 9.525 | 3.97 | 4.4 | |
| | CCGT09T302FR-J10 | | | | | | | | | | | | | | | | | ● | 0.2 | 9.525 | 3.97 | 4.4 | |
| | CCGT09T302FL-J10 | | | | | | | | | | | | | | | | | ● | 0.2 | 9.525 | 3.97 | 4.4 | |
| | CCGT09T304FR-J10 | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| Finishing | PSF | CCMT060202-PSF | | | | | | | | | | ● | | | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | | CCMT060204-PSF | ● | ● | | | | | | | | ● | ● | ● | | | ● | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | | CCMT09T302-PSF | | | | | | | | | | ● | ● | ● | | | ● | 0.2 | 9.525 | 3.97 | 4.4 | | |
| | | CCMT09T304-PSF | ● | ● | | | | | | | | ● | ● | ● | | | ● | 0.4 | 9.525 | 3.97 | 4.4 | | |
| | | CCMT09T308-PSF | ● | ● | | | | | | | | ● | | | | | ● | 0.8 | 9.525 | 3.97 | 4.4 | | |
| | | CCMT09T302-PF | | | | | | | | | | | | | | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| Finishing to light cutting | PSS | CCMT060204-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | | | | ● | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | | CCMT060208-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | | | | ● | 0.8 | 6.35 | 2.38 | 2.8 | | |
| | | CCMT09T304-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | | | | ● | 0.4 | 9.525 | 3.97 | 4.4 | | |
| | | CCMT09T308-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | | | | ● | 0.8 | 9.525 | 3.97 | 4.4 | | |
| | | CCMT060202-PF | | | | | | | | | | | | | | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| Medium cutting (wiper) | SW | CCMT060204-SW | ● | ● | | | | | | | | | | | | | ● | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | | CCMT060208-SW | ● | ● | | | | | | | | | | | | | ● | 0.8 | 6.35 | 2.38 | 2.8 | | |
| | | CCMT09T304-SW | ● | ● | | | | | | | | | | | | | ● | 0.4 | 9.525 | 3.97 | 4.4 | | |
| | | CCMT09T308-SW | ● | ● | | | | | | | | | | | | | ● | 0.8 | 9.525 | 3.97 | 4.4 | | |
| Finishing to medium cutting | PS | CCMT060202-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | CCMT060204-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | CCMT060208-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | CCMT09T302-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.2 | 9.525 | 3.97 | 4.4 | |
| | | CCMT09T304-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | CCMT09T308-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 0.8 | 9.525 | 3.97 | 4.4 | |

● : Line up

Reference pages: External toolholder → 3-22 - 3-25 Internal toolholder → 4-16

● : Continuous cutting
 ● : Light interrupted cutting
 ✖ : Heavy interrupted cutting

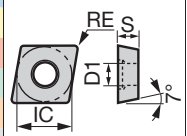
Insert POSITIVE TYPE

CC



Rhombic, 80°
 with hole
 Positive 7°

| | P | M | K | N | S | H |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Steel | ● ● ● ✖ ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● |
| Stainless | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● |
| Cast iron | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● |
| Non-ferrous | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● |
| Superalloy | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● |
| Hard material | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● | ● ● ● ● ● ● ● ● |



| Application | Chipbreaker | Designation | Coated | | Uncoated | | Dimension (mm) | | | | | |
|---------------------------------|-------------|-----------------------------|--------|-------|----------|-------|----------------|------|------|-------|------|-----|
| | | | T9215 | T9225 | SH725 | SH730 | TH10 | RE | IC | S | D1 | |
| | | | | | | | | | | | | |
| Finishing to medium cutting | | TSF CCMT060204-TSF | ● | ● | | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | CCMT060208-TSF | ● | ● | | | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | | CCMT09T304-TSF | ● | ● | | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | CCMT09T308-TSF | ● | ● | | | | | 0.8 | 9.525 | 3.97 | 4.4 |
| | | TM CCMT060204-TM | ● | ● | | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | CCMT060208-TM | ● | ● | | | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | | CCMT09T304-TM | ● | ● | | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | CCMT09T308-TM | ● | ● | | | | | 0.8 | 9.525 | 3.97 | 4.4 |
| Internal finishing | | W08 CCGT03X100R-W08 | | | ● | ● | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X100L-W08 | | | ● | ● | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X101R-W08 | | | ● | ● | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X101L-W08 | | | ● | ● | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X102R-W08 | | | ● | ● | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X102L-W08 | | | ● | ● | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X104R-W08 | | | ● | ● | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X104L-W08 | | | ● | ● | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | CCGT04T100R-W08 | | | ● | ● | | | 0.03 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T100L-W08 | | | ● | ● | | | 0.03 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T101R-W08 | | | ● | ● | | | 0.1 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T101L-W08 | | | ● | ● | | | 0.1 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T102R-W08 | | | ● | ● | | | 0.2 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T102L-W08 | | | ● | ● | | | 0.2 | 4.37 | 1.79 | 2.2 |
| Internal finishing (sharp edge) | | W08 CCGT03X100FL-W08 | | | ● | | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X100FR-W08 | | | ● | | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X101FL-W08 | | | ● | | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X101FR-W08 | | | ● | | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X102FL-W08 | | | ● | | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X102FR-W08 | | | ● | | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X104FL-W08 | | | ● | | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | CCGT03X104FR-W08 | | | ● | | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | CCGT04T100FL-W08 | | | ● | | | | 0.03 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T100FR-W08 | | | ● | | | | 0.03 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T101FL-W08 | | | ● | | | | 0.1 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T101FR-W08 | | | ● | | | | 0.1 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T102FL-W08 | | | ● | | | | 0.2 | 4.37 | 1.79 | 2.2 |
| | | CCGT04T102FR-W08 | | | ● | | | | 0.2 | 4.37 | 1.79 | 2.2 |
| CCGT04T104FL-W08 | | | ● | | | | 0.4 | 4.37 | 1.79 | 2.2 | | |
| CCGT04T104FR-W08 | | | ● | | | | 0.4 | 4.37 | 1.79 | 2.2 | | |

● : Line up

Reference pages: External toolholder → 3-22 - 3-25 Internal toolholder → 4-16

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

Insert POSITIVE TYPE

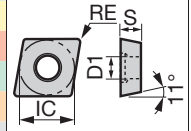
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

CP



Rhombic, 80°
with hole
Positive 11°

| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Coated | Coated cermet | Cermet |
|----------|-------|-----------|-----------|-------------|------------|---------------|--------|---------------|--------|
| P | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● |
| M | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ● | ● | ● |
| K | ◐ | ◐ | ● | ◐ | ◐ | ◐ | ● | ● | ● |
| N | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ● | ● | ● |
| S | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ● | ● | ● |
| H | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | Coated cermet | | Cermet | Dimension (mm) | | | | | | |
|-----------------------------|----------------|----------------|---------------|-------|-------|-------|-------|-------|-------|---------------|--------|--------|----------------|--------|--------|--------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | AH8005 | AH8015 | GH730 | GT9530 | AT9530 | NS9530 | RE | IC | S |
| Finishing | PSF | CPMT060202-PSF | | | | | | | ● | | | | | | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | CPMT060204-PSF | ● | ● | | | | | ● | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | CPMT080202-PSF | | | | | | | ● | | | | | | | 0.2 | 7.94 | 2.38 | 3.4 |
| | | CPMT080204-PSF | ● | ● | | | | | ● | | | | | | | 0.4 | 7.94 | 2.38 | 3.4 |
| | | CPMT090302-PSF | | | | | | | ● | | | | ● | ● | | 0.2 | 9.525 | 3.18 | 4.4 |
| | | CPMT090304-PSF | ● | ● | | | | | ● | | | | ● | ● | | 0.4 | 9.525 | 3.18 | 4.4 |
| | | CPMT09T302-PSF | | | | | | | ● | | | | | | | 0.2 | 9.525 | 3.97 | 4.4 |
| | | CPMT09T304-PSF | ● | ● | | | | | ● | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | PF | CPMT090302-PF | | | | | | | | | | ● | ● | | 0.2 | 9.525 | 3.18 | 4.4 | |
| | | CPMT090304-PF | | | | | | | | | | ● | ● | | 0.4 | 9.525 | 3.18 | 4.4 | |
| Finishing to light cutting | PSS | CPMT060204-PSS | ● | ● | | | | | ● | | | ● | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | CPMT080204-PSS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.4 | 7.94 | 2.38 | 3.4 | |
| | | CPMT080208-PSS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.8 | 7.94 | 2.38 | 3.4 | |
| | | CPMT090304-PSS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.4 | 9.525 | 3.18 | 4.4 | |
| | | CPMT090308-PSS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.8 | 9.525 | 3.18 | 4.4 | |
| | | CPMT09T304-PSS | ● | ● | | | | | ● | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | CPMT09T308-PSS | ● | ● | | | | | ● | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| Finishing to medium cutting | PS | CPMT060202-PS | ● | ● | | | | | ● | ● | ● | ● | | ● | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | CPMT060204-PS | ● | ● | | | | | ● | ● | ● | ● | | ● | ● | 0.4 | 6.35 | 2.38 | 2.8 |
| | | CPMT080202-PS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.2 | 7.94 | 2.38 | 3.4 | |
| | | CPMT080204-PS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.4 | 7.94 | 2.38 | 3.4 | |
| | | CPMT080208-PS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.8 | 7.94 | 2.38 | 3.4 | |
| | | CPMT090304-PS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.4 | 9.525 | 3.18 | 4.4 | |
| | | CPMT090308-PS | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | 0.8 | 9.525 | 3.18 | 4.4 | |
| | | CPMT09T302-PS | ● | ● | | | | | ● | ● | ● | | | | 0.2 | 9.525 | 3.97 | 4.4 | |
| | | CPMT09T304-PS | ● | ● | | | | | ● | ● | ● | | | ● | 0.4 | 9.525 | 3.97 | 4.4 | |
| | CPMT09T308-PS | ● | ● | | | | | ● | ● | ● | | | | 0.8 | 9.525 | 3.97 | 4.4 | | |
| | TSF | CPMT09T304-TSF | ● | ● | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | CPMT09T308-TSF | ● | ● | | | | | | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| | | TM | CPMT09T304-TM | ● | ● | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| CPMT09T308-TM | | | ● | ● | | | | | | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | |

● : Line up

Reference pages: Internal toolholder → 4-17

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

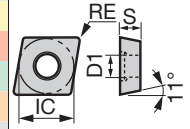
Insert POSITIVE TYPE

● : Continuous cutting
 ● : Light interrupted cutting
 ✖ : Heavy interrupted cutting

CP

Rhombic, 80°
with hole
Positive 11°

| Material | Coated | Cermet | Uncoated |
|-----------------|---------------------|--------|----------|
| P Steel | ✖ ✖ ● ● ✖ ✖ ✖ ✖ ● ● | ● ● | ● ● |
| M Stainless | ● ● ● ● ✖ ● ● ● ● | ● ● | ● ● |
| K Cast iron | ● ● ● ● ✖ ● ● ● ● | ● ● | ● ● |
| N Non-ferrous | ● ● ● ● ✖ ● ● ● ● | ● ● | ● ● |
| S Superalloy | ● ● ● ● ✖ ● ● ● ● | ● ● | ● ● |
| H Hard material | ● ● ● ● ✖ ● ● ● ● | ● ● | ● ● |



| Application | Chipbreaker | Designation | Coated | | | | | Cermet | Uncoated | Dimension (mm) | | | | | |
|----------------|-------------|----------------------------|--------|-------|-------|-------|-------|--------|----------|----------------|-----|------|-------|------|-----|
| | | | T9225 | T6120 | T6130 | AH630 | AH645 | AH725 | NS9530 | TH10 | RE | IC | S | D1 | |
| Finishing | | W15 CPGT050202L-W15 | | | | | | ● | | | 0.2 | 5.56 | 2.35 | 2.5 | |
| | | CPGT050204L-W15 | | | | | | ● | | | 0.4 | 5.56 | 2.35 | 2.5 | |
| | | CPGT080202R-W15 | | | | | | | ● | | | 0.2 | 7.94 | 2.38 | 3.4 |
| | | CPGT080202L-W15 | | | | | | | ● | ● | | 0.2 | 7.94 | 2.38 | 3.4 |
| | | CPGT080204R-W15 | | | | | | | | ● | | 0.4 | 7.94 | 2.38 | 3.4 |
| | | CPGT080204L-W15 | | | | | | | | ● | ● | 0.4 | 7.94 | 2.38 | 3.4 |
| | | W20 CPGT090302R-W20 | | | | | | | ● | ● | | 0.2 | 9.525 | 3.18 | 4.4 |
| | | CPGT090302L-W20 | | | | | | | ● | ● | | 0.2 | 9.525 | 3.18 | 4.4 |
| | | CPGT090304R-W20 | | | | | | | | ● | ● | 0.4 | 9.525 | 3.18 | 4.4 |
| | | CPGT090304L-W20 | | | | | | | | ● | ● | 0.4 | 9.525 | 3.18 | 4.4 |
| Medium cutting | | PM CPMT060204-PM | | ● | ● | ● | ● | ● | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | CPMT060208-PM | | ● | ● | ● | ● | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | CPMT090304-PM | | ● | ● | ● | ● | ● | ● | | | 0.4 | 9.525 | 3.18 | 4.4 |
| | | CPMT090308-PM | | ● | ● | ● | ● | ● | ● | ● | | 0.8 | 9.525 | 3.18 | 4.4 |

● : Line up

Insert POSITIVE TYPE

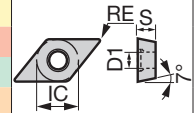
● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°



| | P | M | K | N | S | H |
|---------------|-------|-------|-------|-------|-------|-------|
| Steel | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Stainless | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Cast iron | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Non-ferrous | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Superalloy | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Hard material | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |



| Application | Chipbreaker | Designation | Coated | | Coated cermet | Cermet | Uncoated | Dimension (mm) | | | | |
|--|-------------|--|--------|-----------------------------|---------------|--------|----------|----------------|-------|-------|------|------|
| | | | SH725 | SH730 J740 | J9530 | NS9530 | TH10 | RE | IC | S | D1 | |
| Precision finishing (sharp edge) | | JRP DCET0702008MFR-JRP | ● | ● | | | | | <0.08 | 6.35 | 2.38 | 2.8 |
| | | DCET070201MFR-JRP | ● | ● | | | | | <0.1 | 6.35 | 2.38 | 2.8 |
| | | DCET070201MFL-JRP | ● | | | | | | <0.1 | 6.35 | 2.38 | 2.8 |
| | | DCET0702018MFR-JRP | | ● | | | | | <0.18 | 6.35 | 2.38 | 2.8 |
| | | DCET0702018MFL-JRP | ● | ● | | | | | <0.18 | 6.35 | 2.38 | 2.8 |
| | | DCET070202MFR-JRP | ● | ● | | | | | <0.2 | 6.35 | 2.38 | 2.8 |
| | | DCET070202MFL-JRP | ● | ● | | | | | <0.2 | 6.35 | 2.38 | 2.8 |
| | | DCET11T3008MFR-JRP | ● | ● | | | | | <0.08 | 9.525 | 3.97 | 4.4 |
| | | DCET11T301MFR-JRP | ● | ● | | | | | <0.1 | 9.525 | 3.97 | 4.4 |
| | | DCET11T3018MFR-JRP | | ● | | | | | <0.18 | 9.525 | 3.97 | 4.4 |
| | | DCET11T3018MFL-JRP | ● | | | | | | <0.18 | 9.525 | 3.97 | 4.4 |
| | | DCET11T302MFR-JRP | ● | ● | | | | | <0.2 | 9.525 | 3.97 | 4.4 |
| | | DCET11T302MFL-JRP | ● | ● | | | | | <0.2 | 9.525 | 3.97 | 4.4 |
| | | Finishing to medium cutting (sharp edge) | | J10 DCGT070200FR-J10 | ● | ● | | | ● | 0.03 | 6.35 | 2.38 |
| DCGT070200FL-J10 | ● | | | ● | | | ● | 0.03 | 6.35 | 2.38 | 2.8 | |
| DCGT070201FR-J10 | ● | | | ● | | | ● | 0.1 | 6.35 | 2.38 | 2.8 | |
| DCGT070201FL-J10 | ● | | | ● | | | ● | 0.1 | 6.35 | 2.38 | 2.8 | |
| DCGT070202FR-J10 | ● | | | ● | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| DCGT070202FL-J10 | ● | | | ● | | | ● | 0.2 | 6.35 | 2.38 | 2.8 | |
| DCGT070204FR-J10 | ● | | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| DCGT070204FL-J10 | ● | | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| DCGT11T300FR-J10 | ● | | | ● | | | | ● | 0.03 | 9.525 | 3.97 | 4.4 |
| DCGT11T300FL-J10 | ● | | | ● | | | | ● | 0.03 | 9.525 | 3.97 | 4.4 |
| Finishing to medium cutting (honed edge) | | J10 DCGT070202R-J10 | | | ● | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | DCGT11T302R-J10 | | | ● | | | 0.2 | 9.525 | 3.97 | 4.4 | |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → 3-12 - 3-17 Internal toolholder → 4-22, 4-23

Insert POSITIVE TYPE

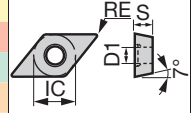
● : Continuous cutting
● : Light interrupted cutting
● : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°



| Material | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | AH8005 | AH8015 | AH905 | GH730 | GT9530 | AT9530 | NS9530 | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|--------|--------|--|--|--|
| P Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| M Stainless | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| K Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| N Non-ferrous | | | | | | | | | | | | | | | | | | |
| S Superalloy | | | | | | | | | | | | | | | | | | |
| H Hard material | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | | Coated cemet | | Cermet | Dimension (mm) | | | | | | | |
|-----------------------------|----------------------------|----------------|----------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------------|--------|--------|----------------|----|-----|-------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | AH8005 | AH8015 | AH905 | GH730 | GT9530 | AT9530 | NS9530 | RE | IC | S | D1 | | | | |
| Finishing | PSF | DCMT070202-PSF | | | | | | | ● | | | | | | ● | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | | DCMT070204-PSF | ● | ● | | | | | ● | | | | | | ● | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | DCMT11T302-PSF | | | | | | | ● | | | | | | ● | | ● | | | | 0.2 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T304-PSF | ● | ● | | | | | ● | ● | ● | ● | | | ● | | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T308-PSF | ● | ● | | | | | ● | ● | ● | ● | | | ● | | ● | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| | | PF | DCMT070202-PF | | | | | | | | | | | ● | | ● | | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 |
| | DCMT070204-PF | | | | | | | | | | | | ● | | ● | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | DCMT070208-PF | | | | | | | | | | | | | ● | | ● | | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | DCMT11T302-PF | | | | | | | | | | | | ● | | ● | | ● | | | | 0.2 | 9.525 | 3.97 | 4.4 | |
| | DCMT11T304-PF | | | | | | | | | | | | ● | | ● | | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | DCMT11T308-PF | | | | | | | | | | | | | | ● | | ● | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| | Finishing to light cutting | PSS | DCMT070204-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | | DCMT070208-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | ● | | ● | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | | | DCMT11T304-PSS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| DCMT11T308-PSS | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | | ● | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| DCMT11T312-PSS | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | 1.2 | 9.525 | 3.97 | 4.4 | |
| Finishing to medium cutting | PS | DCMT070202-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | | | | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | | DCMT070204-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | DCMT070208-PS | ● | ● | | | | | ● | ● | ● | ● | | ● | ● | ● | | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | DCMT11T302-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | ● | | | 0.2 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T304-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | ● | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T308-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | ● | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T312-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | 1.2 | 9.525 | 3.97 | 4.4 | |
| | | TSF | DCMT070202-TSF | ● | ● | | | | | | | | | | | | | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | DCMT070204-TSF | ● | ● | | | | | | | | | | | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | DCMT070208-TSF | ● | ● | | | | | | | | | | | | | | | | | 0.8 | 6.35 | 2.38 | 2.8 | | |
| | DCMT11T304-TSF | ● | ● | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | | |
| | DCMT11T308-TSF | ● | ● | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | | |
| | TM | DCMT070202-TM | ● | ● | | | | | | | | | | | | | | | | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | DCMT070204-TM | ● | ● | | | | | | | | | | | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | DCMT070208-TM | ● | ● | | | | | | | | | | | | | | | | | 0.8 | 6.35 | 2.38 | 2.8 | | |
| | DCMT11T304-TM | ● | ● | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | | |
| | DCMT11T308-TM | ● | ● | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | | |

● : Line up

Grade
 1
 Insert
 2
 Ext. Toolholder
 3
 Int. Toolholder
 4
 Threading
 5
 Grooving
 6
 Endmill
 7
 Drilling Tool
 8
 Technical Reference
 9

Insert POSITIVE TYPE

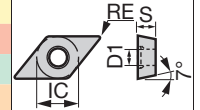
- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°



| | P | M | K | N | S | H | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | GH330 | GH730 | GT9530 | AT9530 | NS9530 | TH10 | KS05F | |
|---------------|---|---|---|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|------|-------|---|
| Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Stainless | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Superalloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hard material | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | Coated cermet | | Cermet | Uncoated | | Dimension (mm) | | | | | | | | | | | | | |
|-----------------------------|-------------|-----------------------------|--------|-------|-------|-------|-------|-------|-------|---------------|-------|--------|----------|--------|----------------|------|-------|----|----|---|----|------|------|-------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | GH330 | GH730 | GT9530 | AT9530 | NS9530 | TH10 | KS05F | RE | IC | S | D1 | | | | | | | |
| Finishing | | W10 DCGT070200R-W10 | | | | | | | | | | | | | | | | | | ● | | 0.03 | 6.35 | 2.38 | 2.8 | | | |
| | | DCGT070200L-W10 | | | | | | | | | | | | | | | | | | | ● | | 0.03 | 6.35 | 2.38 | 2.8 | | |
| | | DCGT070202R-W10 | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | | DCGT070202L-W10 | | | | | | | | | | | | | | | | | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | | DCGT070204R-W10 | | | | | | | | | | | | | ● | | | | | | ● | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | DCGT070204L-W10 | | | | | | | | | | | | | ● | | | | | | ● | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| Finishing | | W15 DCGT11T302R-W15 | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 | | |
| | | DCGT11T302L-W15 | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 | | |
| | | DCGT11T304R-W15 | | | | | | | | | | | | | | | | | | | ● | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | DCGT11T304L-W15 | | | | | | | | | | | | | ● | | | | | | ● | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | DCGT11T308R-W15 | | | | | | | | | | | | | | | | | | | | ● | | | 0.8 | 9.525 | 3.97 | 4.4 |
| | | DCGT11T308L-W15 | | | | | | | | | | | | | | | | | | | | ● | | | 0.8 | 9.525 | 3.97 | 4.4 |
| Medium cutting | | PM DCMT070204-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | | DCMT070208-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | DCMT11T304-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T308-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| | | DCMT11T312-PM | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 1.2 | 9.525 | 3.97 | 4.4 | |
| Finishing to medium cutting | | AL DCGT070202-AL | | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | DCGT070204-AL | | | | | | | | | | | | | | | | | | | | | ● | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | DCGT11T302-AL | | | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 |
| | | DCGT11T304-AL | | | | | | | | | | | | | | | | | | | | | ● | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | DCGT11T308-AL | | | | | | | | | | | | | | | | | | | | | ● | | 0.8 | 9.525 | 3.97 | 4.4 |
| Finishing to medium cutting | | All-round DCGT070202 | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 6.35 | 2.38 | 2.8 | | |
| | | DCGT070204 | | | | | | | | | | | | | | | | | | | | ● | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | DCGT11T302 | | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 | |
| | | DCGT11T304 | | | | | | | | | | | | | | | | | | | | ● | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | DCGT11T308 | | | | | | | | | | | | | | | | | | | | ● | | 0.8 | 9.525 | 3.97 | 4.4 | |

● : Line up

Insert POSITIVE TYPE

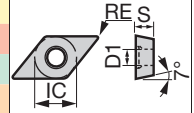
- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

DC

Rhombic, 55°
with hole
Positive 7°



| Material | Continuous | Light Int. | Heavy Int. |
|-----------------|------------|------------|------------|
| P Steel | ● | | |
| M Stainless | ● | | |
| K Cast iron | ● | | |
| N Non-ferrous | ● | | |
| S Superalloy | | | |
| H Hard material | | | |



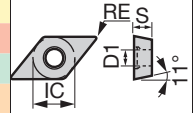
| Application | Chipbreaker | Designation | Uncoated | | | | Dimension (mm) | | | |
|-----------------------------|-------------|----------------------------|----------|--|--|--|----------------|-------|------|-----|
| | | | TH10 | | | | RE | IC | S | D1 |
| Finishing to medium cutting | | Angular DCGT070202R | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | DCGT070202L | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | DCGT070204R | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | DCGT070204L | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | DCGT11T302R | ● | | | | 0.2 | 9.525 | 3.97 | 4.4 |
| | | DCGT11T302L | ● | | | | 0.2 | 9.525 | 3.97 | 4.4 |
| | | DCGT11T304R | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | DCGT11T304L | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | | | | | | | | | |

DP

Rhombic, 55°
with hole
Positive 11°



| Material | Continuous | Light Int. | Heavy Int. |
|-----------------|------------|------------|------------|
| P Steel | ●◐ | | ●◐ |
| M Stainless | ●◐ | | ●◐ |
| K Cast iron | ●◐ | | ●◐ |
| N Non-ferrous | ●◐ | | ●◐ |
| S Superalloy | ●◐ | | ●◐ |
| H Hard material | | | |



| Application | Chipbreaker | Designation | Coated | | Cermet | Dimension (mm) | | | |
|-----------------------------|-------------|-------------------------|--------|--------|--------|----------------|------|------|-----|
| | | | T9225 | AH8015 | NS9530 | RE | IC | S | D1 |
| Finishing to medium cutting | | PS DPMT070202-PS | ● | ● | ● | 0.2 | 6.35 | 2.38 | 2.8 |
| | | DPMT070204-PS | ● | ● | ● | 0.4 | 6.35 | 2.38 | 2.8 |
| | | DPMT070208-PS | ● | ● | ● | 0.8 | 6.35 | 2.38 | 2.8 |
| | | | | | | | | | |

●◐ : Line up

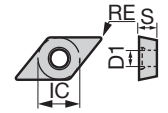
Insert POSITIVE TYPE / DOUBLE SIDE

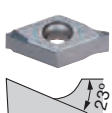
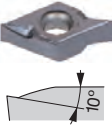
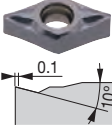
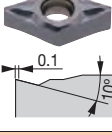
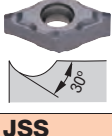
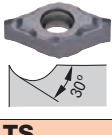
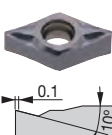

- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

DX

 Rhombic, 55° with hole

| | P | M | K | N | S | H |
|---------------|---|---|---|---|---|---|
| Steel | ◐ | ◑ | ◑ | | | |
| Stainless | ◐ | ◑ | ◑ | | | |
| Cast iron | ◐ | | ◑ | ◑ | | |
| Non-ferrous | | | | ◑ | | |
| Superalloy | | | | | ◑ | |
| Hard material | | | | | | ◑ |



| Application | Chipbreaker | Designation | Coated | | Coated cermet | Cermet | Uncoated | Dimension (mm) | | | | |
|--|---|---------------------------------|--------|--------|---------------|--------|----------|----------------|------|------|------|-----|
| | | | AH725 | AH8015 | SH725 | GT9530 | NS9530 | KS05F | RE | IC | S | D1 |
| Finishing (sharp edge) | JRP | DXGU070301MFRE-JRP** | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070301MFLE-JRP** | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFRE-JRP** | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFLE-JRP** | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing to medium cutting (sharp edge) | JS | DXGU070301MFR-JS ⁽¹⁾ | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070301MFL-JS ⁽¹⁾ | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFR-JS ⁽¹⁾ | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFL-JS ⁽¹⁾ | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070304MFR-JS ⁽¹⁾ | | | ● | | | | <0.4 | 6.35 | 3.18 | 2.7 |
| | | DXGU070304MFL-JS ⁽¹⁾ | | | ● | | | | <0.4 | 6.35 | 3.18 | 2.7 |
| Finishing to medium cutting (sharp edge) | JTS | DXGU070301MFR-JTS | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070301MFL-JTS | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFR-JTS | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFL-JTS | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing to medium cutting | JTS | DXGU070301MR-JTS | ● | | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070301ML-JTS | | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MR-JTS | | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302ML-JTS | | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing (low cutting force) (sharp edge) | JSS | DXGU070301MFR-JSS | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070301MFL-JSS | | | ● | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFR-JSS | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MFL-JSS | | | ● | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing (low cutting force) | JSS | DXGU070301MR-JSS | ● | | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070301ML-JSS | | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302MR-JSS | | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070302ML-JSS | | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing to medium cutting | TS | DXGU070302R-TS | ● | ● | | ● | ● | | 0.2 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070302L-TS | | ● | | ● | ● | | 0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070304R-TS | | ● | | ● | ● | | 0.4 | 6.35 | 3.18 | 2.7 |
| | | DXGU070304L-TS | | ● | | ● | ● | | 0.4 | 6.35 | 3.18 | 2.7 |
| | | DXGU070308R-TS | | ● | | ● | ● | | 0.8 | 6.35 | 3.18 | 2.7 |
| | | DXGU070308L-TS | | ● | | ● | ● | | 0.8 | 6.35 | 3.18 | 2.7 |
| Finishing | SS | DXGU070302R-SS | ● | ● | | ● | ● | | 0.2 | 6.35 | 3.18 | 2.7 |
| |  | DXGU070302L-SS | | ● | | ● | ● | | 0.2 | 6.35 | 3.18 | 2.7 |
| | | DXGU070304R-SS | | ● | | ● | ● | | 0.4 | 6.35 | 3.18 | 2.7 |
| | | DXGU070304L-SS | | ● | | ● | ● | | 0.4 | 6.35 | 3.18 | 2.7 |

* Corner radius (RE) with a sign of inequality (<) means minus tolerance.

** For external turning applications

(1) Due to chipbreaker profile, max ap for face or ID turning is 1 mm

● : Line up

Insert POSITIVE TYPE

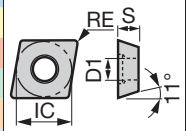
- : Continuous cutting
- (with dot) : Light interrupted cutting
- ✳ : Heavy interrupted cutting

EP

Rhombic, 75° with hole
Positive 11°



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---|----|----|--|--|----|--|----|--|---|---|--|--|--|--|--|--|--|--|--|--|
| P | Steel | ● | ●● | ●● | | | ●● | | ●● | | ● | ● | | | | | | | | | | |
| M | Stainless | ● | ●● | ●● | | | ●● | | ●● | | ● | ● | | | | | | | | | | |
| K | Cast iron | ● | | | | | ●● | | ●● | | ● | ● | | | | | | | | | | |
| N | Non-ferrous | | | | | | | | | | ● | | | | | | | | | | | |
| S | Superalloy | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| H | Hard material | | | | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | Coated cermet | | Cermet | | Uncoated | | Dimension (mm) | | | | | |
|---------------------------------|------------------|-------------|------------------|-------|---------------|--------|--------|------|----------|-----|----------------|------|------|------|------|-----|
| | | | GH110 | SH725 | SH730 | GT9530 | NS9530 | TH10 | UX30 | RE | IC | S | D1 | | | |
| | | | | | | | | | | | | | | | | |
| Internal finishing | | W08 | EPGT03X100R-W08 | | ● | | | | | ● | | 0.03 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X100L-W08 | | ● | | | | | ● | | 0.03 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X101R-W08 | | ● | | | | | ● | | 0.1 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X101L-W08 | | ● | | | | | ● | | 0.1 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X102R-W08 | | ● | | | | | ● | | 0.2 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X102L-W08 | | ● | | | | | ● | | 0.2 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X104R-W08 | | ● | | | | | ● | | 0.4 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X104L-W08 | | ● | | | | | ● | | 0.4 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT040100R-W08 | | ● | | | | | ● | | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | | EPGT040100L-W08 | ● | ● | | | | | ● | ● | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | | EPGT040101R-W08 | | ● | | | | | ● | | 0.1 | 3.97 | 1.59 | 2.3 | |
| | | | EPGT040101L-W08 | | ● | | | | | ● | | 0.1 | 3.97 | 1.59 | 2.3 | |
| | | | EPGT040102R-W08 | ● | ● | | | | | ● | ● | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | | EPGT040102L-W08 | ● | ● | | ● | | | ● | ● | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | | EPGT040104R-W08 | ● | ● | | | | | ● | ● | 0.4 | 3.97 | 1.59 | 2.3 | |
| | EPGT040104L-W08 | ● | ● | | ● | | | ● | ● | 0.4 | 3.97 | 1.59 | 2.3 | | | |
| Internal finishing (sharp edge) | | W08 | EPGT03X100FL-W08 | ● | | | | | | | | 0.03 | 3.57 | 1.39 | 1.9 | |
| | | | EPGT03X100FR-W08 | ● | | | | | | | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | | EPGT03X101FL-W08 | ● | | | | | | | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | | EPGT03X101FR-W08 | ● | | | | | | | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | | EPGT03X102FL-W08 | ● | | | | | | | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | | EPGT03X102FR-W08 | ● | | | | | | | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | | EPGT03X104FL-W08 | ● | | | | | | | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | | EPGT03X104FR-W08 | ● | | | | | | | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | | EPGT040100FL-W08 | ● | | | | | | | | | 0.03 | 3.97 | 1.59 | 2.3 |
| | | | EPGT040100FR-W08 | ● | | | | | | | | | 0.03 | 3.97 | 1.59 | 2.3 |
| | | | EPGT040101FL-W08 | ● | | | | | | | | | 0.1 | 3.97 | 1.59 | 2.3 |
| | | | EPGT040101FR-W08 | ● | | | | | | | | | 0.1 | 3.97 | 1.59 | 2.3 |
| | | | EPGT040102FL-W08 | ● | | | | | | | | | 0.2 | 3.97 | 1.59 | 2.3 |
| | | | EPGT040102FR-W08 | ● | | | | | | | | | 0.2 | 3.97 | 1.59 | 2.3 |
| | | | EPGT040104FL-W08 | ● | | | | | | | | | 0.4 | 3.97 | 1.59 | 2.3 |
| | EPGT040104FR-W08 | ● | | | | | | | | | 0.4 | 3.97 | 1.59 | 2.3 | | |

● : Line up

Reference pages: Internal toolholder → 4-13, 4-14

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

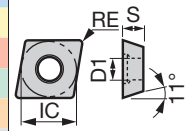
Insert POSITIVE TYPE

- : Continuous cutting
 ●◐ : Light interrupted cutting
 ◐ : Heavy interrupted cutting

EP

Rhombic, 75°
with hole
Positive 11°

| | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | | | | | | | | | | | | | | | | | |
|--|---------|-------------|-------------|---------------|--------------|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | ●◐●◐●◐ | ●◐●◐●◐ | | | | ●◐ | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | | | | | | | | | | Dimension (mm) | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------|-----------------------------|--------|-------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|----------------|------|------|------|------|------|------|-----|--|--|--|--|--|------|------|------|------|------|------|------|
| | | | SH725 | SH730 | J740 | | | | | | | | | | | | | | | | | RE | IC | S | D1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Internal finishing | | JS EPGT03X101-JS | ● | | | | | | | | | | | | | | | | | | | | | <0.1 | 3.57 | 1.39 | 1.9 | | | | | | | | | | | | | | | |
| | | EPGT03X102-JS | ● | | | | | | | | | | | | | | | | | | | | | | <0.2 | 3.57 | 1.39 | 1.9 | | | | | | | | | | | | | | |
| | | EPGT03X104-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.4 | 3.57 | 1.39 | 1.9 | | | | | | | | | | | | | |
| | | EPGT040101-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.1 | 3.97 | 1.59 | 2.3 | | | | | | | | | | | | | |
| | | EPGT040102-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.2 | 3.97 | 1.59 | 2.3 | | | | | | | | | | | | | |
| | | EPGT040104-JS | ● | | | | | | | | | | | | | | | | | | | | | | | | <0.4 | 3.97 | 1.59 | 2.3 | | | | | | | | | | | | |
| Internal finishing (sharp edge) | | JS EPGT03X101F-JS | ● | | | | | | | | | | | | | | | | | | | | | | <0.1 | 3.57 | 1.39 | 1.9 | | | | | | | | | | | | | | |
| | | EPGT03X102F-JS | ● | | | | | | | | | | | | | | | | | | | | | | <0.2 | 3.57 | 1.39 | 1.9 | | | | | | | | | | | | | | |
| | | EPGT03X104F-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.4 | 3.57 | 1.39 | 1.9 | | | | | | | | | | | | | |
| | | EPGT040101F-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.1 | 3.97 | 1.59 | 2.3 | | | | | | | | | | | | | |
| | | EPGT040102F-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.2 | 3.97 | 1.59 | 2.3 | | | | | | | | | | | | | |
| | | EPGT040104F-JS | ● | | | | | | | | | | | | | | | | | | | | | | | <0.4 | 3.97 | 1.59 | 2.3 | | | | | | | | | | | | | |
| Internal finishing | | J08 EPGT040100L-J08 | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.03 | 3.97 | 1.59 | 2.3 | | | |
| | | EPGT040102L-J08 | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.2 | 3.97 | 1.59 | 2.3 | | |
| | | EPGT040104L-J08 | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 3.97 | 1.59 | 2.3 | |
| Internal finishing (sharp edge) | | J08 EPGT040100FL-J08 | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.03 | 3.97 | 1.59 | 2.3 |
| | | EPGT040102FL-J08 | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.2 | 3.97 | 1.59 | 2.3 |
| | | EPGT040104FL-J08 | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 3.97 | 1.59 |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Insert POSITIVE TYPE

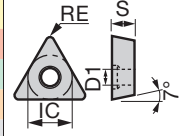
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

TC



Triangular, 60°
with hole
Positive 7°

| | P | M | K | N | S | H | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steel | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Stainless | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Cast iron | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Non-ferrous | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Superalloy | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Hard material | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |



| Application | Chipbreaker | Designation | Coated | | | | Coated cermet | Cermet | | Uncoated | Dimension (mm) | | | | |
|----------------------------------|-------------|----------------------|--------|-------|-------|------|---------------|--------|-------|----------|----------------|-------|------|------|-----|
| | | | AH725 | SH725 | SH730 | J740 | J9530 | NS9530 | NS520 | TH10 | RE | IC | S | D1 | |
| Precision finishing | | 01 TCGT090204-01 | | | | | | | ● | ● | 0.4 | 5.56 | 2.38 | 2.5 | |
| | | TCGT110202-01 | | | ● | | | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110204-01 | | | | | | ● | ● | ● | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110208-01 | | | | | | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | TCGT16T304-01 | | | | | | | | ● | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | TCGT16T308-01 | | | | | | | ● | ● | 0.8 | 9.525 | 3.97 | 4.4 | |
| Precision finishing (sharp edge) | | 01 TCGT110202F-01 | | ● | | | | | | | <0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110204F-01 | | ● | | | | | | | <0.4 | 6.35 | 2.38 | 2.8 | |
| Finishing (sharp edge) | | JS TCGT110200FN-JS | | ● | ● | | | | | | 0.03 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110201FN-JS | | ● | ● | | | | | | <0.1 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110202FN-JS | | ● | ● | | | | | | <0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110204FN-JS | | ● | ● | | | | | | <0.4 | 6.35 | 2.38 | 2.8 | |
| Finishing | | JS TCGT110201N-JS | | ● | | | | | | | 0.1 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110202N-JS | | ● | | | | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110204N-JS | | ● | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| Finishing (sharp edge) | | J08 TCGT080200FR-J08 | | ● | ● | | | | ● | | 0.03 | 4.76 | 2.38 | 2.3 | |
| | | TCGT080200FL-J08 | | ● | ● | | | | ● | | 0.03 | 4.76 | 2.38 | 2.3 | |
| | | TCGT080201FR-J08 | | ● | ● | | | | | ● | | 0.1 | 4.76 | 2.38 | 2.3 |
| | | TCGT080201FL-J08 | | ● | ● | | | | | ● | | 0.1 | 4.76 | 2.38 | 2.3 |
| | | TCGT080202FR-J08 | | ● | ● | | | | | ● | | 0.2 | 4.76 | 2.38 | 2.3 |
| | | TCGT080202FL-J08 | | ● | ● | | | | | ● | | 0.2 | 4.76 | 2.38 | 2.3 |
| Finishing (sharp edge) | | J10 TCGT110200FR-J10 | | ● | ● | | | | ● | | 0.03 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110200FL-J10 | | ● | ● | | | | ● | | 0.03 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110201FR-J10 | | ● | ● | | | | | ● | | 0.1 | 6.35 | 2.38 | 2.8 |
| | | TCGT110201FL-J10 | | ● | ● | | | | | ● | | 0.1 | 6.35 | 2.38 | 2.8 |
| | | TCGT110202FR-J10 | | ● | ● | | | ● | | ● | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | TCGT110202FL-J10 | | ● | ● | | | ● | | ● | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | TCGT110204FR-J10 | | ● | ● | | | | | ● | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | TCGT110300FR-J10 | | ● | ● | | | | | ● | | 0.03 | 6.35 | 3.18 | 2.8 |
| | | TCGT110300FL-J10 | | ● | ● | | | | | ● | | 0.03 | 6.35 | 3.18 | 2.8 |
| | | TCGT110301FR-J10 | | ● | ● | | | | | ● | | 0.1 | 6.35 | 3.18 | 2.8 |
| | | TCGT110301FL-J10 | | ● | ● | | | | | ● | | 0.1 | 6.35 | 3.18 | 2.8 |
| | | TCGT110302FR-J10 | | ● | ● | | | ● | | ● | | 0.2 | 6.35 | 3.18 | 2.8 |
| TCGT110302FL-J10 | | ● | ● | | | ● | | ● | | 0.2 | 6.35 | 3.18 | 2.8 | | |
| Finishing (honed edge) | | J10 TCGT110302R-J10 | | | | | ● | | | | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | TCGT110302L-J10 | | | | | ● | | | | 0.2 | 6.35 | 3.18 | 2.8 | |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → 3-38, 3-39 Internal toolholder → 4-21

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

Insert POSITIVE TYPE

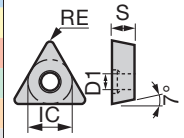
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

TC



Triangular, 60°
with hole
Positive 7°

| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Coated | Cermet | Uncoated |
|----------|-------|-----------|-----------|-------------|------------|---------------|--------|--------|----------|
| P | ● | ◐ | ◑ | ◐ | ◐ | ◐ | ● | ● | ● |
| M | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ● | ● | ● |
| K | ◐ | ◐ | ● | ◐ | ◐ | ◐ | ● | ● | ● |
| N | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ● | ● | ● |
| S | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● |
| H | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | Cermet | Uncoated | | Dimension (mm) | | | | |
|-----------------------------|-------------|----------------------------|--------|-------|-------|-------|-------|-------|-------|--------|----------|-------|----------------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH725 | NS9530 | TH10 | KS05F | RE | IC | S | D1 | |
| Finishing | | W15 TCGT16T302L-W15 | | | | | | | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 | |
| | | TCGT16T304L-W15 | | | | | | | ● | | ● | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | TCGT16T308L-W15 | | | | | | | | | ● | | 0.8 | 9.525 | 3.97 | 4.4 | |
| | | | | | | | | | | | | | | | | | |
| Medium cutting | | PM TCMT110202-PM | | | ● | ● | ● | ● | | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCMT110204-PM | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TCMT110208-PM | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | TCMT110302-PM | | | ● | ● | ● | | | | | | | 0.2 | 6.35 | 3.18 | 2.8 |
| | | TCMT110304-PM | | | ● | ● | ● | | | | | | | 0.4 | 6.35 | 3.18 | 2.8 |
| | | TCMT110308-PM | | | ● | ● | ● | | | | | | | 0.8 | 6.35 | 3.18 | 2.8 |
| | | TCMT16T304-PM | | | ● | ● | ● | ● | | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | TCMT16T308-PM | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 9.525 | 3.97 | 4.4 |
| | | TCMT16T312-PM | ● | ● | ● | ● | ● | ● | | | | | | 1.2 | 9.525 | 3.97 | 4.4 |
| Finishing to medium cutting | | SS TCGT110202-SS | | | | | | | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110204-SS | | | | | | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110208-SS | | | | | | | | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | TCGT16T304-SS | | | | | | | | ● | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | | | | | | | | | | | | | | | | |
| Finishing to medium cutting | | AL TCGT110202-AL | | | | | | | | | ● | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TCGT110204-AL | | | | | | | | | ● | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TCGT16T302-AL | | | | | | | | | | ● | | 0.2 | 9.525 | 3.97 | 4.4 |
| | | TCGT16T304-AL | | | | | | | | | | ● | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | TCGT16T308-AL | | | | | | | | | | ● | | 0.8 | 9.525 | 3.97 | 4.4 |

● : Line up

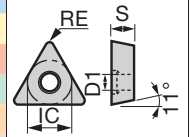
Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

TP

Triangular, 60°
with hole
Positive 11°

| | P | M | K | N | S | H | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Coated | Coated cermet | Cermet | Uncoated | |
|---|---|---|---|---|---|---|-------|-----------|-----------|-------------|------------|---------------|--------|---------------|--------|----------|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ |



| Application | Chipbreaker | Designation | Coated | | | | | | | | Coated cermet | | Cermet | | Uncoated | | Dimension (mm) | | | | | | |
|----------------------------|----------------------|---------------------------|--------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|--------|-------|----------|---|----------------|-----|-------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH725 | GH730 | GT9530 | GT720 | NS9530 | NS520 | TH10 | | | | | RE | IC | S | D1 |
| Precision finishing | | 01 TPGT090202-01 | | | | | | | | | ● | | | ● | | | | | 0.2 | 5.56 | 2.38 | 2.5 | |
| | | TPGT090204-01 | | | | | | | | | ● | | | | ● | ● | | | | 0.4 | 5.56 | 2.38 | 2.5 |
| | | TPGT110202-01 | | | | | | | | | ● | | | | ● | | | | | 0.2 | 6.35 | 2.38 | 2.8 |
| | | TPGT110204-01 | | | | | | | | | ● | | | | ● | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | TPGT110208-01 | | | | | | | | | | | | | ● | | | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | | TPGT130302-01 | | | | | | | | | | ● | | | | ● | | | | 0.2 | 7.94 | 3.18 | 3.4 |
| | | TPGT130304-01 | | | | | | | | | | ● | | | | ● | ● | | | 0.4 | 7.94 | 3.18 | 3.4 |
| | | TPGT130308-01 | | | | | | | | | | | | | | ● | ● | | | 0.8 | 7.94 | 3.18 | 3.4 |
| | | TPGT16T304-01 | | | | | | | | | | ● | | | | ● | ● | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | TPGT16T308-01 | | | | | | | | | | | | | | ● | | ● | | 0.8 | 9.525 | 3.97 | 4.4 |
| Finishing | | PSF TPMT090202-PSF | | | | | | | | | ● | | | | ● | | | | 0.2 | 5.56 | 2.38 | 2.5 | |
| | | TPMT090204-PSF | ● | ● | | | | | | | ● | | | | ● | | | | 0.4 | 5.56 | 2.38 | 2.5 | |
| | | TPMT110202-PSF | | | | | | | | | ● | | | | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110204-PSF | ● | ● | | | | | | | ● | | | | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110302-PSF | | | | | | | | | ● | | | | ● | | | | 0.2 | 6.35 | 3.18 | 3.4 | |
| | | TPMT110304-PSF | ● | ● | | | | | | | ● | | | | ● | | | | 0.4 | 6.35 | 3.18 | 3.4 | |
| | | TPMT130304-PSF | ● | ● | | | | | | | ● | | | | ● | | | | 0.4 | 7.94 | 3.18 | 3.4 | |
| | | TPMT16T304-PSF | ● | ● | | | | | | | ● | | | | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | PF TPMT110204-PF | | | | | | | | | | | ● | | ● | | ● | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | TPMT110208-PF | | | | | | | | | | | | | ● | | ● | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | TPMT110302-PF | | | | | | | | | | ● | | | ● | | | | 0.2 | 6.35 | 3.18 | 3.4 | | |
| | TPMT110304-PF | | | | | | | | | | ● | | | ● | | | | 0.4 | 6.35 | 3.18 | 3.4 | | |
| | TPMT130304-PF | | | | | | | | | | ● | | | ● | | | | 0.4 | 7.94 | 3.18 | 3.4 | | |
| | TPMT130308-PF | | | | | | | | | | | | | ● | | ● | | 0.8 | 7.94 | 3.18 | 3.4 | | |
| | TPMT16T304-PF | | | | | | | | | | ● | | | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 | | |
| Finishing to light cutting | | PSS TPMT090204-PSS | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.4 | 5.56 | 2.38 | 2.5 | |
| | | TPMT090208-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.8 | 5.56 | 2.38 | 2.5 |
| | | TPMT110204-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | | TPMT110208-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | | TPMT110304-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.4 | 6.35 | 3.18 | 3.4 |
| | | TPMT110308-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.8 | 6.35 | 3.18 | 3.4 |
| | | TPMT130304-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | | | 0.4 | 7.94 | 3.18 | 3.4 |
| | | TPMT130308-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | ● | | | 0.8 | 7.94 | 3.18 | 3.4 |
| | | TPMT16T304-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | ● | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | TPMT16T308-PSS | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | ● | | | 0.8 | 9.525 | 3.97 | 4.4 |

● : Line up

Reference pages: Mounting hole specification → 2-29
Internal toolholder → 4-19, 4-20

Insert POSITIVE TYPE

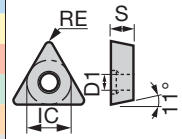
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

TP



Triangular, 60°
with hole
Positive 11°

| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | | | | | | | | | | | | |
|----------|-------|-----------|-----------|-------------|------------|---------------|---|--|--|--|--|--|--|--|--|--|--|--|
| P | ● | ◐ | ◑ | ◐ | ◐ | ◐ | ◐ | | | | | | | | | | | |
| M | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | | | | | | | | | | | |
| K | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | | | | | | | | | | | |
| N | | | | ● | ● | ● | ● | | | | | | | | | | | |
| S | | | | | | | | | | | | | | | | | | |
| H | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | Coated cermet | | Cermet | Uncoated | | Dimension (mm) | | | | | |
|-----------------------------|----------------|-----------------|--------|----------------|-------|-------|-------|-------|-------|-------|---------------|--------|--------|----------|------|----------------|------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | AH730 | GT9530 | AT9530 | NS9530 | TH10 | UX30 | RE | IC | S | D1 | |
| Finishing to medium cutting | PS | TPMT090202-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.2 | 5.56 | 2.38 | 2.5 | | |
| | | TPMT090204-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 5.56 | 2.38 | 2.5 | |
| | | TPMT090208-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 5.56 | 2.38 | 2.5 | |
| | | TPMT110202-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110204-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110208-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110304-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 6.35 | 3.18 | 3.4 | |
| | | TPMT110308-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 6.35 | 3.18 | 3.4 | |
| | | TPMT130302-PS | ● | ● | | | | | | ● | | ● | ● | ● | | | | 0.2 | 7.94 | 3.18 | 3.4 |
| | | TPMT130304-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 7.94 | 3.18 | 3.4 |
| | | TPMT130308-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 7.94 | 3.18 | 3.4 |
| | | TPMT16T304-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | TPMT16T308-PS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 9.525 | 3.97 | 4.4 |
| | | Finishing | TSF | TPMT110204-TSF | ● | ● | | | | | | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 |
| | TPMT110208-TSF | | | ● | ● | | | | | | | | | | | | | 0.8 | 6.35 | 2.38 | 2.8 |
| | TPMT110304-TSF | | | ● | ● | | | | | | | | | | | | | 0.4 | 6.35 | 3.18 | 2.8 |
| | TPMT110308-TSF | | | ● | ● | | | | | | | | | | | | | 0.8 | 6.35 | 3.18 | 2.8 |
| TPMT16T304-TSF | ● | | | ● | | | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| TPMT16T308-TSF | ● | | | ● | | | | | | | | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| Finishing | TM | TPMT110204-TM | ● | ● | | | | | | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 | | |
| | | TPMT110208-TM | ● | ● | | | | | | | | | | | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110304-TM | ● | ● | | | | | | | | | | | | | 0.4 | 6.35 | 3.18 | 3.4 | |
| | | TPMT110308-TM | ● | ● | | | | | | | | | | | | | 0.8 | 6.35 | 3.18 | 3.4 | |
| | | TPMT16T304-TM | ● | ● | | | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| | | TPMT16T308-TM | ● | ● | | | | | | | | | | | | | 0.8 | 9.525 | 3.97 | 4.4 | |
| Finishing | W08 | TPGT070100R-W08 | | | | | | | | | | | | ● | | 0.03 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070100L-W08 | | | | | | | | | | | | ● | | 0.03 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070101R-W08 | | | | | | | | | | | | ● | | 0.1 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070101L-W08 | | | | | | | | | | | | ● | | 0.1 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070102R-W08 | | | | | | | | | | | | ● | | 0.2 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070102L-W08 | | | | | | | | | | | | ● | | 0.2 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070104R-W08 | | | | | | | | | | | | ● | | 0.4 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT070104L-W08 | | | | | | | | | | | | ● | | 0.4 | 4.37 | 1.59 | 2.58 | | |
| | | TPGT080200L-W08 | | | | | | | | | | ● | ● | | | | 0.03 | 4.76 | 2.38 | 2.3 | |
| | | TPGT080202L-W08 | | | | | | | | | | ● | ● | ● | ● | | 0.2 | 4.76 | 2.38 | 2.3 | |
| | | TPGT080204L-W08 | | | | | | | | | | ● | ● | ● | ● | | 0.4 | 4.76 | 2.38 | 2.3 | |

● : Line up

Reference pages: Mounting hole specification → 2-29
Internal toolholder → 4-19, 4-20

Grade
1
2
3
4
5
6
7
8
9

Insert POSITIVE TYPE

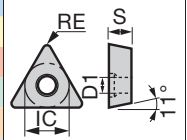
- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

TP



Triangular, 60°
with hole
Positive 11°

| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Coated | Coated cermet | Cermet | Dimension (mm) |
|----------|-------|-----------|-----------|-------------|------------|---------------|--------|---------------|--------|----------------|
| P | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | RE |
| M | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | IC |
| K | ◐ | ◐ | ● | ◐ | ◐ | ◐ | ● | ● | ● | S |
| N | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ● | ● | ● | D1 |
| S | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ● | ● | ● | |
| H | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● | |



| Application | Chipbreaker | Designation | Coated | | | | | | | Coated cermet | Cermet | Dimension (mm) | | | | | | |
|-----------------------------|-------------|----------------------------|--------|-------|-------|-------|-------|-------|-------|---------------|--------|----------------|--------|--------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | GH330 | GH730 | GT9530 | NS9530 | RE | IC | S | D1 |
| Medium cutting | | PM TPMT090204-PM | | | ● | ● | ● | ● | ● | | | | | 0.4 | 5.56 | 2.38 | 2.5 | |
| | | TPMT090208-PM | | | ● | ● | ● | ● | ● | | | | | 0.8 | 5.56 | 2.38 | 2.5 | |
| | | TPMT110204-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110208-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 0.8 | 6.35 | 2.38 | 2.8 | |
| | | TPMT110304-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | 0.4 | 6.35 | 3.18 | 3.4 | |
| | | TPMT110308-PM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | 0.8 | 6.35 | 3.18 | 3.4 | |
| | | TPMT130304-PM | | | ● | ● | ● | ● | ● | ● | ● | | ● | | 0.4 | 7.94 | 3.18 | 3.4 |
| | | TPMT130308-PM | | | ● | ● | ● | ● | ● | ● | ● | ● | | 0.8 | 7.94 | 3.18 | 3.4 | |
| | | TPMT16T304-PM | | | ● | ● | ● | ● | ● | ● | ● | | ● | | 0.4 | 9.525 | 3.97 | 4.4 |
| | | TPMT16T308-PM | | | ● | ● | ● | ● | ● | ● | ● | | ● | | 0.8 | 9.525 | 3.97 | 4.4 |
| TPMT16T312-PM | | | ● | ● | ● | ● | ● | ● | ● | | | | 1.2 | 9.525 | 3.97 | 4.4 | | |
| Finishing to medium cutting | | SS TPGT110202-SS | | | | | | | | | | | | 0.2 | 6.35 | 2.38 | 2.8 | |
| | | TPGT110204-SS | | | | | | | | | | | | 0.4 | 6.35 | 2.38 | 2.8 | |
| | | TPGT130302-SS | | | | | | | | | | | | 0.2 | 7.94 | 3.18 | 3.4 | |
| | | TPGT130304-SS | | | | | | | | | | | | 0.4 | 7.94 | 3.18 | 3.4 | |
| | | TPGT16T304-SS | | | | | | | | | | | | 0.4 | 9.525 | 3.97 | 4.4 | |
| Finishing to medium cutting | | H11 TPGH110302L-H11 | | | | | | | | | | | | 0.2 | 6.35 | 3.18 | 3.4 | |
| | | TPGH110304L-H11 | | | | | | | | | | | | 0.4 | 6.35 | 3.18 | 3.4 | |

● : Line up

| Mounting hole specification | TP*T | TPGM0701 | TPGM (A) 0902~1603 | TPGH | D1 (mm) | | | | | | | | | |
|-----------------------------|------|----------|--------------------|------|---------|--------|--------|--------|--------|--------|--------|--------|-----|--|
| | | | | | 0701** | 0802** | 0902** | 1102** | 1103** | 1303** | 1603** | 16T3** | | |
| | | | | | | | | | | | | | | |
| | | | | | TP*T(W) | - | 2.3 | 2.5 | 2.8 | 3.4 | 3.4 | - | 4.4 | |
| | | | | | TPGM(A) | 2.7 | - | 3.2 | 3.0 | 3.0 | - | 4.0 | - | |
| | | | | | TPGH | - | 2.3 | 3.0 | 3.4 | 3.4 | - | 4.5 | - | |

Reference pages: Internal toolholder → 4-19, 4-20

Grade 1
 Insert 2
 Ext. Toolholder 3
 Int. Toolholder 4
 Threading 5
 Grooving 6
 Endmill 7
 Drilling Tool 8
 Technical Reference 9

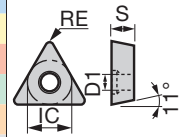
Insert POSITIVE TYPE

● : Continuous cutting
 ●● : Light interrupted cutting
 ●●● : Heavy interrupted cutting

TP

Triangular, 60°
with hole
Positive 11°

| | P | M | K | N | S | H |
|---------------|------|------|----|---|---|---|
| Steel | ●●●● | ●●●● | ●● | ● | ● | ● |
| Stainless | ●●●● | ●●●● | ●● | ● | ● | ● |
| Cast iron | ●● | ●● | ●● | ● | ● | ● |
| Non-ferrous | ● | ● | ● | ● | ● | ● |
| Superalloy | ●● | ●● | ●● | ● | ● | ● |
| Hard material | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | Cermet | | Uncoated | | Dimension (mm) | | | | |
|---------------------------------|-------------|----------------|--------|-------|--------|--|----------|---|----------------|------|-------|------|------|
| | | | SH725 | SH730 | NS9530 | | TH10 | | | RE | IC | S | D1 |
| Finishing to medium cutting | - | TPGA090204 | | | | | | | | 0.4 | 5.56 | 2.38 | 3.2 |
| | | TPGA110202 | | | ● | | | | | 0.2 | 6.35 | 2.38 | 3 |
| | | TPGA110204 | | | | | ● | | | 0.4 | 6.35 | 2.38 | 3 |
| | | TPGA110302 | | | ● | | ● | | | 0.2 | 6.35 | 3.18 | 3 |
| | | TPGA110304 | | | | | ● | | | 0.4 | 6.35 | 3.18 | 3 |
| | | TPGA160304 | | | ● | | ● | | | 0.4 | 9.525 | 3.18 | 4 |
| | | TPGA160308 | | | | | | ● | | 0.8 | 9.525 | 3.18 | 4 |
| Internal finishing | JS | TPGT070101-JS | ● | | | | | | | <0.1 | 4.37 | 1.59 | 2.58 |
| | | TPGT070102-JS | ● | | | | | | | <0.2 | 4.37 | 1.59 | 2.58 |
| | | TPGT070104-JS | ● | | | | | | | <0.4 | 4.37 | 1.59 | 2.58 |
| Internal finishing (sharp edge) | JS | TPGT070101F-JS | ● | | | | | | | <0.1 | 4.37 | 1.59 | 2.58 |
| | | TPGT070102F-JS | ● | | | | | | | <0.2 | 4.37 | 1.59 | 2.58 |
| | | TPGT070104F-JS | ● | | | | | | | <0.4 | 4.37 | 1.59 | 2.58 |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: Internal toolholder → 4-19, 4-20

Insert POSITIVE TYPE

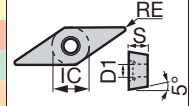
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

VB

Rhombic, 35°
with hole
Positive 5°



| Material | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH725 | SH725 | SH730 | J740 | J9530 | GT9530 | NS9530 | TH10 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|--------|--------|------|
| P Steel | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| M Stainless | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| K Cast iron | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| N Non-ferrous | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| S Superalloy | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| H Hard material | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |



| Application | Chipbreaker | Designation | Coated | | | | | | | Coated cermet | | Cermet | Uncoated | Dimension (mm) | | | | | |
|--|-------------|----------------------|--------|-------|-------|-------|-------|-------|-------|---------------|-------|--------|----------|----------------|--------|-------|-------|------|-----|
| | | | T9215 | T9225 | T6120 | T6130 | AH630 | AH645 | AH725 | SH725 | SH730 | J740 | J9530 | GT9530 | NS9530 | TH10 | RE | IC | S |
| Finishing (sharp edge) | | JS VBGT110300FN-JS | | | | | | | ● | ● | | | | | | 0.03 | 6.35 | 3.18 | 2.8 |
| | | VBGT110301FN-JS | | | | | | | ● | ● | | | | | | <0.1 | 6.35 | 3.18 | 2.8 |
| | | VBGT110302FN-JS | | | | | | | ● | ● | | | | | | <0.2 | 6.35 | 3.18 | 2.8 |
| | | VBGT110304FN-JS | | | | | | | ● | ● | | | | | | <0.4 | 6.35 | 3.18 | 2.8 |
| Finishing | | JS VBGT110301N-JS | | | | | | ● | | | | | | | 0.1 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110302N-JS | | | | | | ● | | | | | | | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110304N-JS | | | | | | ● | | | | | | | 0.4 | 6.35 | 3.18 | 2.8 | |
| Finishing to medium cutting (sharp edge) | | J10 VBGT110300FR-J10 | | | | | | ● | ● | | | | | ● | 0.03 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110300FL-J10 | | | | | | ● | ● | | | | | ● | 0.03 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110301FR-J10 | | | | | | ● | ● | | | | ● | ● | 0.1 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110301FL-J10 | | | | | | ● | ● | | | | ● | ● | 0.1 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110302FR-J10 | | | | | | ● | ● | | | | ● | ● | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110302FL-J10 | | | | | | ● | ● | | | | ● | ● | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110304FR-J10 | | | | | | ● | ● | | | | ● | ● | 0.4 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110304FL-J10 | | | | | | ● | ● | | | | ● | ● | 0.4 | 6.35 | 3.18 | 2.8 | |
| Finishing to medium cutting (honed edge) | | J10 VBGT110302R-J10 | | | | | | | | | ● | | | | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110302L-J10 | | | | | | | | | ● | | | | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110304R-J10 | | | | | | | | | | ● | | | 0.4 | 6.35 | 3.18 | 2.8 | |
| | | VBGT110304L-J10 | | | | | | | | | | ● | | | 0.4 | 6.35 | 3.18 | 2.8 | |
| Finishing | | PSF VBMT110302-PSF | | | | | | ● | | | ● | ● | | | 0.2 | 6.35 | 3.18 | 2.8 | |
| | | VBMT110304-PSF | ● | ● | | | | ● | | | ● | ● | | | 0.4 | 6.35 | 3.18 | 2.8 | |
| | | VBMT160402-PSF | | | | | | ● | | | ● | ● | | | 0.2 | 9.525 | 4.76 | 4.4 | |
| | | VBMT160404-PSF | ● | ● | | | | ● | | | ● | ● | | | 0.4 | 9.525 | 4.76 | 4.4 | |
| | | PF VBMT110302-PF | | | | | | | | | | ● | ● | | | 0.2 | 6.35 | 3.18 | 2.8 |
| | | VBMT110304-PF | | | | | | | | | | ● | ● | | | 0.4 | 6.35 | 3.18 | 2.8 |
| | | VBMT110308-PF | | | | | | | | | | ● | ● | | | 0.8 | 6.35 | 3.18 | 2.8 |
| | | VBMT160404-PF | | | | | | | | | | ● | ● | | | 0.4 | 9.525 | 4.76 | 4.4 |
| VBMT160408-PF | | ● | | | | | | | | ● | ● | | | 0.8 | 9.525 | 4.76 | 4.4 | | |
| Finishing to light cutting | | PSS VBMT110304-PSS | ● | ● | ● | ● | ● | ● | | | ● | ● | | | 0.4 | 6.35 | 3.18 | 2.8 | |
| | | VBMT110308-PSS | ● | ● | ● | ● | ● | ● | | | ● | ● | | | 0.8 | 6.35 | 3.18 | 2.8 | |
| | | VBMT160404-PSS | ● | ● | ● | ● | ● | ● | | | ● | ● | | | 0.4 | 9.525 | 4.76 | 4.4 | |
| | | VBMT160408-PSS | ● | ● | ● | ● | ● | ● | | | ● | ● | | | 0.8 | 9.525 | 4.76 | 4.4 | |
| | | VBMT160412-PSS | ● | ● | | | | ● | | | | | | | | 1.2 | 9.525 | 4.76 | 4.4 |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: External toolholder → 3-29 - 3-32 Internal toolholder → 4-26

Grade
Insert
Toolholder
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

Insert POSITIVE TYPE

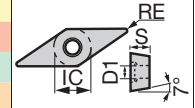
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

VC

Rhombic, 35°
with hole
Positive 7°



| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----------|-------|-----------|-----------|-------------|------------|---------------|---|---|---|---|---|---|---|---|---|
| P | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | | | | | | | | |
| M | ◐ | ● | ◐ | ◐ | ◐ | ◐ | | | | | | | | | |
| K | ◐ | ◐ | ● | ◐ | ◐ | ◐ | | | | | | | | | |
| N | ◐ | ◐ | ◐ | ● | ◐ | ◐ | | | | | | | | | |
| S | ◐ | ◐ | ◐ | ◐ | ● | ◐ | | | | | | | | | |
| H | ◐ | ◐ | ◐ | ◐ | ◐ | ● | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | Uncoated | | | | | Dimension (mm) | | | | | |
|-----------------------------|-------------|-----------------------------|--------|-------|-------|-------|--------|----------|--|--|--|--|----------------|--|-----|-------|------|-----|
| | | | T9215 | T9225 | AH120 | AH725 | AH8005 | KS05F | | | | | | | RE | IC | S | D1 |
| Finishing to medium cutting | | TSF VCMT160404-TSF | ● | ● | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 4.4 |
| | | VCMT160408-TSF | ● | ● | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 4.4 |
| | | TM VCMT160404-TM | ● | ● | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 4.4 |
| | | VCMT160408-TM | ● | ● | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 4.4 |
| Medium cutting | | All-round VCMT160404 | | | ● | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 4.4 |
| | | VCMT160408 | | | ● | ● | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 4.4 |
| | | VCMT160412 | | | ● | ● | ● | | | | | | | | 1.2 | 9.525 | 4.76 | 4.4 |
| Finishing to medium cutting | | AL VCGT160404-AL | | | | | | ● | | | | | | | 0.4 | 9.525 | 4.76 | 4.4 |
| | | VCGT160408-AL | | | | | | ● | | | | | | | 0.8 | 9.525 | 4.76 | 4.4 |
| | | VCGT160412-AL | | | | | | ● | | | | | | | 1.2 | 9.525 | 4.76 | 4.4 |
| | | VCGT220520-AL | | | | | | ● | | | | | | | 2 | 12.7 | 5.56 | 5.5 |
| | | VCGT220530-AL | | | | | | ● | | | | | | | 3 | 12.7 | 5.56 | 5.5 |

● : Line up

Insert POSITIVE TYPE

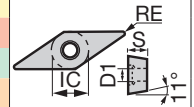
● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

VP

Rhombic, 35°
 with hole
 Positive 11°



| | P | M | K | N | S | H |
|---------------|-----|---|---|---|---|---|
| Steel | ●●● | | | | | |
| Stainless | ●●● | | | | | |
| Cast iron | | | | | | |
| Non-ferrous | | | | | | |
| Superalloy | | | | | | |
| Hard material | | | | | | |



| Application | Chipbreaker | Designation | Coated | | Dimension (mm) | | | | | |
|----------------------------------|-------------|--------------------|--------------------|-------|----------------|-------|-------|------|------|-----|
| | | | SH725 | SH730 | RE | IC | S | D1 | | |
| Precision finishing (sharp edge) | JPP | VPET0802008MFR-JPP | ● | ● | | <0.08 | 4.76 | 2.38 | 2.3 | |
| | | VPET0802008MFL-JPP | ● | | | <0.08 | 4.76 | 2.38 | 2.3 | |
| | | VPET080201MFR-JPP | ● | ● | | <0.1 | 4.76 | 2.38 | 2.3 | |
| | | VPET080201MFL-JPP | ● | ● | | <0.1 | 4.76 | 2.38 | 2.3 | |
| | | VPET0802018MFR-JPP | ● | | | <0.18 | 4.76 | 2.38 | 2.3 | |
| | | VPET0802018MFL-JPP | ● | | | <0.18 | 4.76 | 2.38 | 2.3 | |
| | | VPET080202MFR-JPP | ● | ● | | <0.2 | 4.76 | 2.38 | 2.3 | |
| | | VPET080202MFL-JPP | ● | ● | | <0.2 | 4.76 | 2.38 | 2.3 | |
| | | VPET1103008MFR-JPP | ● | ● | | <0.08 | 6.35 | 3.18 | 2.8 | |
| | | VPET110301MFR-JPP | ● | ● | | <0.1 | 6.35 | 3.18 | 2.8 | |
| | | VPET110301MFL-JPP | ● | | | <0.1 | 6.35 | 3.18 | 2.8 | |
| | | VPET1103018MFR-JPP | ● | ● | | <0.18 | 6.35 | 3.18 | 2.8 | |
| | | VPET110302MFR-JPP | ● | ● | | <0.2 | 6.35 | 3.18 | 2.8 | |
| | | VPET110302MFL-JPP | ● | ● | | <0.2 | 6.35 | 3.18 | 2.8 | |
| | | JRP | VPET0802008MFR-JRP | ● | ● | | <0.08 | 4.76 | 2.38 | 2.3 |
| | | | VPET080201MFR-JRP | ● | ● | | <0.1 | 4.76 | 2.38 | 2.3 |
| | | | VPET080201MFL-JRP | ● | ● | | <0.1 | 4.76 | 2.38 | 2.3 |
| | | | VPET0802018MFR-JRP | ● | | | <0.18 | 4.76 | 2.38 | 2.3 |
| | | | VPET0802018MFL-JRP | ● | | | <0.18 | 4.76 | 2.38 | 2.3 |
| | | | VPET080202MFR-JRP | ● | ● | | <0.2 | 4.76 | 2.38 | 2.3 |
| | | VPET080202MFL-JRP | ● | ● | | <0.2 | 4.76 | 2.38 | 2.3 | |
| | | VPET1103008MFR-JRP | ● | ● | | <0.08 | 6.35 | 3.18 | 2.8 | |
| | | VPET1103008MFL-JRP | ● | | | <0.08 | 6.35 | 3.18 | 2.8 | |
| | | VPET110301MFR-JRP | ● | ● | | <0.1 | 6.35 | 3.18 | 2.8 | |
| | | VPET110301MFL-JRP | ● | ● | | <0.1 | 6.35 | 3.18 | 2.8 | |
| | | VPET1103018MFR-JRP | ● | ● | | <0.18 | 6.35 | 3.18 | 2.8 | |
| | | VPET1103018MFL-JRP | ● | | | <0.18 | 6.35 | 3.18 | 2.8 | |
| | | VPET110302MFR-JRP | ● | ● | | <0.2 | 6.35 | 3.18 | 2.8 | |
| | | VPET110302MFL-JRP | ● | ● | | <0.2 | 6.35 | 3.18 | 2.8 | |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

● : Continuous cutting
 ●● : Light interrupted cutting
 ●●● : Heavy interrupted cutting

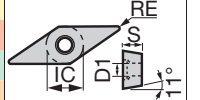
Insert POSITIVE TYPE

VP

Rhombic, 35°
 with hole
 Positive 11°



| | | |
|---|---------------|-----|
| P | Steel | ●●● |
| M | Stainless | ●●● |
| K | Cast iron | ●●● |
| N | Non-ferrous | ●●● |
| S | Superalloy | ●● |
| H | Hard material | |



| Application | Chipbreaker | Designation | Coated | | Dimension (mm) | | | | |
|-------------------------------------|-------------|-------------|---------------------------|-------|----------------|-------|------|------|-----|
| | | | SH725 | SH730 | RE | IC | S | D1 | |
| Precision finishing (sharp edge) | | JSP | VPET0802008MFN-JSP | ● | ● | <0.08 | 4.76 | 2.38 | 2.3 |
| | | | VPET080201MFN-JSP | ● | ● | <0.1 | 4.76 | 2.38 | 2.3 |
| | | | VPET0802018MFN-JSP | ● | ● | <0.18 | 4.76 | 2.38 | 2.3 |
| | | | VPET080202MFN-JSP | ● | ● | <0.2 | 4.76 | 2.38 | 2.3 |
| | | | VPET1103008MFN-JSP | ● | ● | <0.08 | 6.35 | 3.18 | 2.8 |
| | | | VPET110301MFN-JSP | ● | ● | <0.1 | 6.35 | 3.18 | 2.8 |
| | | | VPET1103018MFN-JSP | ● | ● | <0.18 | 6.35 | 3.18 | 2.8 |
| | | | VPET110302MFN-JSP | ● | ● | <0.2 | 6.35 | 3.18 | 2.8 |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance. ● : Line up

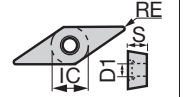
Insert POSITIVE TYPE / DOUBLE SIDE

VX

Rhombic, 35°
 with hole



| | | |
|---|---------------|----|
| P | Steel | ●● |
| M | Stainless | ●● |
| K | Cast iron | ●● |
| N | Non-ferrous | ●● |
| S | Superalloy | ● |
| H | Hard material | |



| Application | Chipbreaker | Designation | Coated | | Dimension (mm) | | | | |
|---|-------------|---------------------------------|---------------------------------------|---|----------------|------|------|------|-----|
| | | | SH725 | | RE | IC | S | D1 | |
| Finishing (sharp edge) | | JRP | VXGU09T201MFRE-JRP** | ● | | <0.1 | 5.56 | 2.47 | 2.5 |
| | | | VXGU09T201MFLE-JRP** | ● | | <0.1 | 5.56 | 2.47 | 2.5 |
| | | | VXGU09T202MFRE-JRP** | ● | | <0.2 | 5.56 | 2.47 | 2.5 |
| | | | VXGU09T202MFLE-JRP** | ● | | <0.2 | 5.56 | 2.47 | 2.5 |
| Finishing to medium cutting (sharp edge) | | JS | VXGU09T201MFR-JS⁽¹⁾ | ● | | <0.1 | 5.56 | 2.47 | 2.5 |
| | | | VXGU09T201MFL-JS ⁽¹⁾ | ● | | <0.1 | 5.56 | 2.47 | 2.5 |
| | | | VXGU09T202MFR-JS ⁽¹⁾ | ● | | <0.2 | 5.56 | 2.47 | 2.5 |
| | | | VXGU09T202MFL-JS ⁽¹⁾ | ● | | <0.2 | 5.56 | 2.47 | 2.5 |
| | | VXGU09T204MFR-JS ⁽¹⁾ | ● | | <0.4 | 5.56 | 2.47 | 2.5 | |
| | | VXGU09T204MFL-JS ⁽¹⁾ | ● | | <0.4 | 5.56 | 2.47 | 2.5 | |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance. ● : Line up
 ** For external turning applications
 (1) Due to chipbreaker profile, max ap for face or ID turning is 1 mm

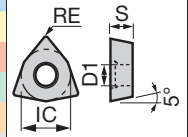
Insert POSITIVE TYPE

● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

WB

Trigon, 80°
with hole
Positive 5°

| | P | M | K | N | S | H |
|---------------|------|------|------|------|------|------|
| Steel | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Stainless | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Cast iron | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Non-ferrous | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Superalloy | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |
| Hard material | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● | ●●●● |



| Application | Chipbreaker | Designation | Coated | | | Cermet | Uncoated | | Dimension (mm) | | | | |
|---------------------------------|-----------------|-----------------------------|--------|-------|-------|--------|----------|------|----------------|------|------|------|-----|
| | | | GH110 | SH725 | SH730 | NS9530 | TH10 | UX30 | RE | IC | S | D1 | |
| Internal finishing | | W08 WBGT030100R-W08 | | ● | | | | | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030100L-W08 | | ● | | ● | ● | ● | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030101R-W08 | | ● | | | | | 0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030101L-W08 | | ● | | | | ● | 0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102R-W08 | | ● | | | | | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102L-W08 | ● | ● | | ● | ● | ● | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104R-W08 | | ● | | | | | 0.4 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104L-W08 | ● | ● | | ● | ● | ● | 0.4 | 3.97 | 1.59 | 2.3 | |
| Internal finishing (sharp edge) | | W08 WBGT030100FR-W08 | | ● | | | | | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030100FL-W08 | | ● | | | | | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030101FR-W08 | | ● | | | | | 0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030101FL-W08 | | ● | | | | | 0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102FR-W08 | | ● | | | | | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102FL-W08 | | ● | | | | | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104FR-W08 | | ● | | | | | 0.4 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104FL-W08 | | ● | | | | | 0.4 | 3.97 | 1.59 | 2.3 | |
| | | W11 WBGT060102L-W11 | ● | | | ● | | | | 0.2 | 3.97 | 1.59 | 2.3 |
| | | WBGT060104L-W11 | | | | ● | | | | 0.4 | 3.97 | 1.59 | 2.3 |
| | WBGT080202L-W11 | | | | ● | | | 0.2 | 4.76 | 2.38 | 2.3 | | |
| | WBGT080204L-W11 | | | | ● | | | 0.4 | 4.76 | 2.38 | 2.3 | | |
| Internal finishing | | JS WBGT030101R-JS | | ● | | | | | <0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030101L-JS | | ● | | | | | <0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102R-JS | | ● | | | | | <0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102L-JS | | ● | | | | | <0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104R-JS | | ● | | | | | <0.4 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104L-JS | | ● | | | | | <0.4 | 3.97 | 1.59 | 2.3 | |
| Internal finishing (sharp edge) | | JS WBGT030101FR-JS | | ● | | | | | <0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030101FL-JS | | ● | | | | | <0.1 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102FR-JS | | ● | | | | | <0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030102FL-JS | | ● | | | | | <0.2 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104FR-JS | | ● | | | | | <0.4 | 3.97 | 1.59 | 2.3 | |
| | | WBGT030104FL-JS | | ● | | | | | <0.4 | 3.97 | 1.59 | 2.3 | |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : Line up

Reference pages: Internal toolholder → 4-15

Insert POSITIVE TYPE / DOUBLE SIDE

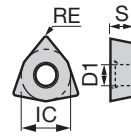
- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊛ : Heavy interrupted cutting

WX



**Trigon, 80°
with hole**

| | P | M | K | N | S | H |
|---------------|---|---|---|---|---|---|
| Steel | ● | ● | | | | |
| Stainless | ● | ● | | | | |
| Cast iron | ● | | ● | ● | | |
| Non-ferrous | | | | ● | | |
| Superalloy | | | | | ● | |
| Hard material | | | | | | ● |



| Application | Chipbreaker | Designation | Coated | | Coated cermet | Cermet | Uncoated | Dimension (mm) | | | |
|---|--------------------|---------------------------------|--------|-------|---------------|--------|----------|----------------|------|------|-----|
| | | | AH725 | SH725 | GT9530 | NS9530 | KS05F | RE | IC | S | D1 |
| Finishing to medium cutting (sharp edge) | JS | WXGU040301MFR-JS ⁽¹⁾ | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040301MFL-JS ⁽¹⁾ | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MFR-JS ⁽¹⁾ | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MFL-JS ⁽¹⁾ | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304MFR-JS ⁽¹⁾ | ● | | | | | <0.4 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304MFL-JS ⁽¹⁾ | ● | | | | | <0.4 | 6.35 | 3.18 | 2.7 |
| | JTS | WXGU040301MFR-JTS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040301MFL-JTS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MFR-JTS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MFL-JTS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing to medium cutting | JTS | WXGU040301MR-JTS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040301ML-JTS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MR-JTS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302ML-JTS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing (low cutting force) (sharp edge) | JSS | WXGU040301MFR-JSS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040301MFL-JSS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MFR-JSS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MFL-JSS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing (low cutting force) | JSS | WXGU040301MR-JSS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040301ML-JSS | ● | | | | | <0.1 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302MR-JSS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302ML-JSS | ● | | | | | <0.2 | 6.35 | 3.18 | 2.7 |
| Finishing to medium cutting | TS | WXGU040302R-TS | | | ● | ● | ● | 0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302L-TS | | | ● | ● | ● | 0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304R-TS | | | ● | ● | ● | 0.4 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304L-TS | | | ● | ● | ● | 0.4 | 6.35 | 3.18 | 2.7 |
| | | WXGU040308R-TS | | | ● | ● | ● | 0.8 | 6.35 | 3.18 | 2.7 |
| | | WXGU040308L-TS | | | ● | ● | ● | 0.8 | 6.35 | 3.18 | 2.7 |

*Corner radius (RE) with a sign of inequality (<) means minus tolerance.
(1) Due to chipbreaker profile, max ap for face or ID turning is 1 mm

● : Line up

Grade
1

Insert
2

Ext. Toolholder
3

Int. Toolholder
4

Threading
5

Grooving
6

Endmill
7

Drilling Tool
8

Technical Reference
9

Insert POSITIVE TYPE / DOUBLE SIDE

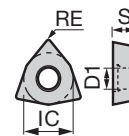
- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

WX



Trigon, 80°
with hole

| Material | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material |
|----------|---------|-------------|-------------|---------------|--------------|-----------------|
| c | ● | ● | | | | |
| ◐ | ● | ● | | | | |
| ✱ | | | ● | ● | | |
| ● | | | | | | |



| Application | Chipbreaker | Designation | Coated | | Coated cermet | Cermet | Uncoated | Dimension (mm) | | | |
|-------------------|-------------|----------------------------|--------|--------|---------------|--------|----------|----------------|------|------|-----|
| | | | AH725 | AH8015 | GT9530 | NS9530 | KS05F | RE | IC | S | D1 |
| Finishing (wiper) | | TSW WXGU040304R-TSW | ● | ● | ● | ● | | 0.4 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304L-TSW | ● | ● | ● | ● | | 0.4 | 6.35 | 3.18 | 2.7 |
| | | WXGU040308R-TSW | ● | ● | ● | ● | | 0.8 | 6.35 | 3.18 | 2.7 |
| | | WXGU040308L-TSW | ● | ● | ● | ● | | 0.8 | 6.35 | 3.18 | 2.7 |
| | | | | | | | | | | | |
| Finishing | | SS WXGU040302R-SS | ● | ● | ● | ● | ● | 0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040302L-SS | ● | ● | ● | ● | ● | 0.2 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304R-SS | ● | ● | ● | ● | ● | 0.4 | 6.35 | 3.18 | 2.7 |
| | | WXGU040304L-SS | ● | ● | ● | ● | ● | 0.4 | 6.35 | 3.18 | 2.7 |
| | | | | | | | | | | | |

● : Line up

Insert POSITIVE TYPE

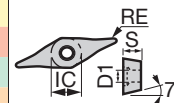
- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

YW



Rhombic, 25°
with hole
Positive 7°

| Material | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material |
|----------|---------|-------------|-------------|---------------|--------------|-----------------|
| c✱ | | | | | | |
| ◐ | | ● | | | | |
| ✱ | | | ● | ● | | |
| ● | | | | | | |



| Application | Chipbreaker | Designation | Coated | | Coated cermet | Dimension (mm) | | | | |
|-----------------------------|-------------|-------------------------|--------|--------|---------------|----------------|-----|-------|------|------|
| | | | T9225 | AH8015 | GT9530 | RE | IC | S | D1 | |
| Finishing to medium cutting | | ZF YWMT11T202-ZF | ● | ● | ● | | 0.2 | 4.679 | 2.78 | 2.3 |
| | | YWMT11T204-ZF | ● | ● | ● | | 0.4 | 4.679 | 2.78 | 2.3 |
| | | YWMT16T302-ZF | ● | ● | ● | | 0.2 | 7.018 | 3.97 | 2.86 |
| | | YWMT16T304-ZF | ● | ● | ● | | 0.4 | 7.018 | 3.97 | 2.86 |
| | | YWMT16T308-ZF | ● | ● | ● | | 0.8 | 7.018 | 3.97 | 2.86 |
| | | | | | | | | | | |
| Finishing | | ZM YWMT11T204-ZM | ● | ● | ● | | 0.4 | 4.679 | 2.78 | 2.3 |
| | | YWMT16T304-ZM | ● | ● | ● | | 0.4 | 7.018 | 3.97 | 2.86 |
| | | YWMT16T308-ZM | ● | ● | ● | | 0.8 | 7.018 | 3.97 | 2.86 |
| | | | | | | | | | | |

● : Line up

Reference pages: WXGU...: External toolholder → **3-26 - 3-28**
YWMT...: External toolholder → **3-39, 3-40**

Internal toolholder → **4-18**
Internal toolholder → **4-29**

Insert POSITIVE TYPE

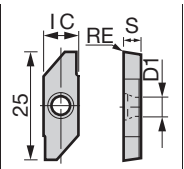
● : Continuous cutting
 ● : Light interrupted cutting
 ✖ : Heavy interrupted cutting

JXF



Front turning

| Material | Coated | Uncoated |
|-----------------|--------|----------|
| P Steel | ●● | ● |
| M Stainless | ●● | ● |
| K Cast iron | | ● |
| N Non-ferrous | | ● |
| S Superalloy | | |
| H Hard material | | |



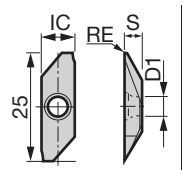
| Application | Chipbreaker | Designation | Coated | | Uncoated | | Dimension (mm) | | | |
|---------------|-------------|-------------|--------|--|----------|--|----------------|----|------|-----|
| | | | J740 | | TH10 | | RE | IC | S | D1 |
| Front turning | | JXFR8000F | ● | | ● | | 0.03 | 8 | 3.97 | 4.4 |
| | | JXFR8010F | ● | | ● | | 0.1 | 8 | 3.97 | 4.4 |

JXR



Reverse turning

| Material | Coated | Uncoated |
|-----------------|--------|----------|
| P Steel | ●● | ● |
| M Stainless | ●● | ● |
| K Cast iron | | ● |
| N Non-ferrous | | ● |
| S Superalloy | | |
| H Hard material | | |



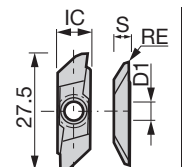
| Application | Chipbreaker | Designation | Coated | | Uncoated | | Dimension (mm) | | | |
|-----------------|-------------|-------------|--------|--|----------|--|----------------|----|------|-----|
| | | | J740 | | TH10 | | RE | IC | S | D1 |
| Reverse turning | | JXRR8000F | ● | | ● | | 0.03 | 8 | 3.97 | 4.4 |
| | | JXRR8010F | ● | | ● | | 0.1 | 8 | 3.97 | 4.4 |

JXB



Back turning

| Material | Coated | Uncoated |
|-----------------|--------|----------|
| P Steel | ●● | ● |
| M Stainless | ●● | ● |
| K Cast iron | | ● |
| N Non-ferrous | | ● |
| S Superalloy | | |
| H Hard material | | |



| Application | Chipbreaker | Designation | Coated | | Uncoated | | Dimension (mm) | | | |
|--------------|-------------|-------------|--------|--|----------|--|----------------|----|------|-----|
| | | | J740 | | TH10 | | RE | IC | S | D1 |
| Back turning | | JXBR8000F | ● | | ● | | 0.03 | 8 | 3.97 | 4.4 |
| | | JXBL8000F | ● | | ● | | 0.03 | 8 | 3.97 | 4.4 |
| | | JXBR8005F | ● | | ● | | 0.05 | 8 | 3.97 | 4.4 |
| | | JXBL8005F | ● | | ● | | 0.05 | 8 | 3.97 | 4.4 |
| | | JXBR8005 | ● | | ● | | 0.05 | 8 | 3.97 | 4.4 |
| | | JXBL8005 | ● | | ● | | 0.05 | 8 | 3.97 | 4.4 |
| | | JXBR8010F | ● | | ● | | 0.10 | 8 | 3.97 | 4.4 |
| | | JXBL8010F | ● | | ● | | 0.10 | 8 | 3.97 | 4.4 |
| | | JXBR8010 | ● | | ● | | 0.10 | 8 | 3.97 | 4.4 |
| | | JXBL8010 | ● | | ● | | 0.10 | 8 | 3.97 | 4.4 |
| | | JXBR8015F | ● | | ● | | 0.15 | 8 | 3.97 | 4.4 |
| | | JXBL8015F | ● | | ● | | 0.15 | 8 | 3.97 | 4.4 |
| | | JXBR8015 | ● | | ● | | 0.15 | 8 | 3.97 | 4.4 |
| | | JXBL8015 | ● | | ● | | 0.15 | 8 | 3.97 | 4.4 |

● : Line up

Reference pages: External toolholder → 3-57

Grade
 Insert
 Ext. Toolholder
 Int. Toolholder
 Threading
 Grooving
 Endmill
 Drilling Tool
 Technical Reference

Insert POSITIVE TYPE

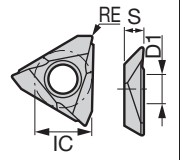
● : Continuous cutting
 ○ : Light interrupted cutting
 * : Heavy interrupted cutting

JTB



Back turning

| | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material |
|---|---------|-------------|-------------|---------------|--------------|-----------------|
| ● | ● | ● | ● | ● | ● | ● |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| * | * | * | * | * | * | * |



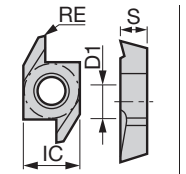
| Application | Chipbreaker | Designation | Coated | | Coated cermet | Cermet | Uncoated | Dimension (mm) | | | |
|--------------|-------------|-------------|--------|------|---------------|--------|----------|----------------|------|------|-----|
| | | | SH725 | J740 | J9530 | NS9530 | TH10 | RE | IC | S | D1 |
| Back turning | - | JTBR3000F | ● | ● | | | | 0.03 | 9.5 | 3.18 | 4.4 |
| | | JTBL3000F | ● | ● | | | | 0.03 | 9.5 | 3.18 | 4.4 |
| | | JTBR3005F | ● | ● | | | | 0.05 | 9.5 | 3.18 | 4.4 |
| | | JTBL3005F | ● | ● | | | | 0.05 | 9.5 | 3.18 | 4.4 |
| | | JTBR3005 | | ● | ● | | | 0.05 | 9.5 | 3.18 | 4.4 |
| | | JTBL3005 | | ● | | | | 0.05 | 9.5 | 3.18 | 4.4 |
| | | JTBR3010F | ● | ● | | ● | ● | 0.10 | 9.5 | 3.18 | 4.4 |
| | | JTBL3010F | ● | ● | | ● | ● | 0.10 | 9.5 | 3.18 | 4.4 |
| | | JTBR3010 | | ● | ● | | | 0.10 | 9.5 | 3.18 | 4.4 |
| | | JTBL3010 | | ● | | | | 0.10 | 9.5 | 3.18 | 4.4 |
| | JTBR3015F | ● | ● | | | | 0.15 | 9.5 | 3.18 | 4.4 | |
| | JTBL3015F | ● | | | | | 0.15 | 9.5 | 3.18 | 4.4 | |

J10E



Back turning

| | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material |
|---|---------|-------------|-------------|---------------|--------------|-----------------|
| ● | ● | ● | ● | ● | ● | ● |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| * | * | * | * | * | * | * |



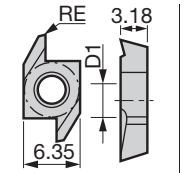
| Application | Chipbreaker | Designation | Coated | | Coated cermet | Cermet | Uncoated | Dimension (mm) | | | |
|--------------|-------------|-------------|--------|------|---------------|--------|----------|----------------|------|------|-----|
| | | | SH725 | J740 | J9530 | NS9530 | TH10 | RE | IC | S | D1 |
| Back turning | - | J10ER005BF | ● | ● | | ● | ● | 0.05 | 6.35 | 3.18 | 3.0 |
| | | J10EL005BF | ● | ● | | | ● | 0.05 | 6.35 | 3.18 | 3.0 |
| | | J10ER005B | | ● | ● | | | 0.05 | 6.35 | 3.18 | 3.0 |
| | | J10EL005B | | ● | | | | 0.05 | 6.35 | 3.18 | 3.0 |
| | | J10ER010BF | ● | ● | | ● | ● | 0.10 | 6.35 | 3.18 | 3.0 |
| | | J10EL010BF | ● | ● | | | ● | 0.10 | 6.35 | 3.18 | 3.0 |
| | | J10ER010B | | ● | ● | | | 0.10 | 6.35 | 3.18 | 3.0 |
| | | J10EL010B | | ● | | | | 0.10 | 6.35 | 3.18 | 3.0 |
| | | J10EL015BF | ● | | | | | 0.15 | 6.35 | 3.18 | 3.0 |
| | | J10ER015BF | ● | | | | | 0.15 | 6.35 | 3.18 | 3.0 |

10E



Back turning

| | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material |
|---|---------|-------------|-------------|---------------|--------------|-----------------|
| ● | ● | ● | ● | ● | ● | ● |
| ○ | | | | | | |
| * | | | | | | |



| Application | Chipbreaker | Designation | Uncoated | | | | Dimension (mm) | | | | |
|--------------|-------------|-------------|----------|--|--|--|----------------|------|------|------|-----|
| | | | TH10 | | | | RE | IC | S | D1 | |
| Back turning | - | 10ER100B | ● | | | | | 0.03 | 6.35 | 3.18 | 3.0 |
| | | 10EL100B | ● | | | | | 0.03 | 6.35 | 3.18 | 3.0 |
| | | 10ER150B | ● | | | | | 0.03 | 6.35 | 3.18 | 3.0 |
| | | 10EL150B | ● | | | | | 0.03 | 6.35 | 3.18 | 3.0 |
| | | 10ER300 | ● | | | | | - | 6.35 | 3.18 | 3.0 |
| | | 10EL300 | ● | | | | | - | 6.35 | 3.18 | 3.0 |

● : Line up

Reference pages: JTB...: External toolholder → [3-59](#) J10E...: External toolholder → [3-58](#)

Insert NEGATIVE TYPE

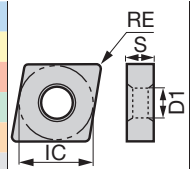
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

CN



Rhombic, 80°
with hole

| | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH120 | AH8015 | GH110 | GT9530 | AT9530 | NS9530 | NS520 | TH10 | Dimension (mm) | | | | |
|---|---------|-------------|-------------|---------------|--------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|--------|--------|-------|------|----------------|----|----|---|----|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | RE | IC | S | D1 |
| ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | | | | |
| ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | ◑ | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | Coated cermet | | Cermet | | Uncoated | Dimension (mm) | | | | | | | | | | | | | |
|---------------------|-------------------------|--------------------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|---------------|--------|--------|-------|----------|----------------|----|---|----|---|-----|------|------|-------|-------|-------|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH120 | AH8015 | GH110 | GT9530 | AT9530 | NS9530 | NS520 | TH10 | RE | IC | S | D1 | | | | | | | | | | |
| Precision finishing | | TF CNMG120404-TF | | | | | | | | | | | | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | | | | | |
| | | CNMG120408-TF | | | | | | | | | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | | | | |
| | | 01 CNGG090302-01 | | | | | | | | | | | | | | | | | | | | ● | | | 0.2 | 9.525 | 3.18 | 3.81 | | | |
| | | CNGG090304-01 | | | | | | | | | | | | | | | | | | | | | ● | | | 0.4 | 9.525 | 3.18 | 3.81 | | |
| | | CNGG090308-01 | | | | | | | | | | | | | | | | | | | | | ● | | | 0.8 | 9.525 | 3.18 | 3.81 | | |
| | | CNGG120402-01 | | | | | | | | | | | | | | | | | | | | | ● | ● | ● | 0.2 | 12.7 | 4.76 | 5.16 | | |
| | | CNGG120404-01 | | | | | | | | | | | | | | | | | | | | | ● | ● | ● | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | | CNGG120408-01 | | | | | | | | | | | | | | | | | | | | | ● | ● | ● | 0.8 | 12.7 | 4.76 | 5.16 | | |
| | | C CNGG120404R-C | | | | | | | | | | | | | | | ● | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | CNGG120404L-C | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| CNGG120408R-C | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| CNGG120408L-C | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| Finishing | | | TSF CNMG090402E-TSF | | | | | | | | | | | | | | | | | | | | | | | | | 0.2 | 9.525 | 4.76 | 3.81 |
| | CNMG090404E-TSF | | | ● | ● | | | | | | | | | | | | | | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | CNMG090408E-TSF | | | ● | ● | | | | | | | | | | | | | | ● | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | CNMG120404-TSF | | | ● | ● | ● | | | | | | | | | | | | | ● | ● | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | CNMG120408-TSF | | | ● | ● | ● | ● | | | | | | | | | | | | ● | ● | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | CNMG120412-TSF | | | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 |
| | | ZF CNMG090404E-ZF | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | CNMG120404-ZF | | ● | ● | | | | | | | | | | | | | | ● | ● | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408-ZF | | ● | ● | ● | | | | | | | | | | | | | ● | ● | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-ZF | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 |
| | SF CNMG090304-SF | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | | 0.4 | 9.525 | 3.18 | 3.81 | |
| | CNMG090308-SF | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | | 0.8 | 9.525 | 3.18 | 3.81 | |
| | CNMG120404-SF | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | CNMG120408-SF | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | CNMG120412-SF | | | | | | | | | | | ● | ● | ● | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |

● : Line up

Insert NEGATIVE TYPE

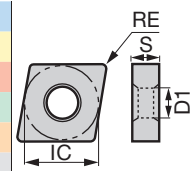
● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

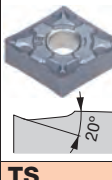
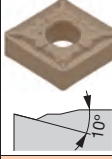
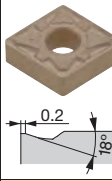
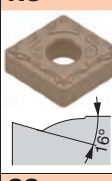


CN



Rhombic, 80°
with hole

| | P | M | K | N | S | H | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | AH725 | AH8005 | AH8015 | GT9530 | AT9530 | GH330 | NS9530 | NS520 |
|---------------|---|---|---|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|--------|-------|
| Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ✱ | ● | ✱ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Stainless | | ● | ● | | | | | | | | | | | | | | | | | | | | | |
| Cast iron | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Non-ferrous | | | | ● | | | | | | | | | | | | | | | | | | | | |
| Superalloy | | | | | ● | | | | | | | | | | | | | | | | | | | |
| Hard material | | | | | | ● | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | | | | | | | Coated cermet | | | Cermet | | Dimension (mm) | | | | | | | |
|-------------------------------|---|----------------|-----------|------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|--------|---------------|----|----|--------|----|----------------|--|--|--|-----|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | AH725 | AH8005 | AH8015 | GT9530 | AT9530 | GH330 | NS9530 | NS520 | RE | IC | S | D1 | | | | | | | | |
| | | | Finishing | HRF | CNMG120404-HRF | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.4 |
| |  | CNMG120408-HRF | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-HRF | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Finishing | TS | CNMG120404-TS | | ● | ● | ● | | | | | | | | | | | | | | | ● | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| |  | CNMG120408-TS | ● | ● | ● | ● | | ● | | | | | | | | | | | | | ● | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-TS | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| High feed, small depth of cut | AS | CNMG120404-AS | | ● | ● | | | | | | | | | | | | | | | | | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| |  | CNMG120408-AS | | ● | ● | | | | | | | | | | | | | | | | | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-AS | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Finishing | NS | CNMG120404-NS | | | | | | | | | | | | | | | | | | | | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| |  | CNMG120408-NS | | ● | ● | | | | | | | | | | | | | | | | | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| Medium cutting | SS | CNMG090404E-SS | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| |  | CNMG090408E-SS | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | CNMG120404-SS | | | | | | | | | | ● | ● | ● | ● | | ● | | | | | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408-SS | | | | | | | | | | ● | ● | ● | ● | | ● | | | | | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-SS | | | | | | | | | | ● | ● | ● | ● | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Medium cutting | TM | CNMG090304-TM | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 3.18 | 3.81 |
| |  | CNMG090308-TM | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 3.18 | 3.81 |
| | | CNMG090404E-TM | | ● | ● | | | | ● | ● | | | ● | ● | | ● | | | | | | | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | CNMG090408E-TM | | ● | ● | | | | ● | ● | | | ● | ● | | ● | | | | | | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | CNMG090412E-TM | | ● | ● | | | | ● | ● | | | ● | ● | | ● | | | | | | | ● | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |
| | | CNMG120404-TM | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | | | | | | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408-TM | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | | | | | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-TM | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |

● : Line up

Insert NEGATIVE TYPE

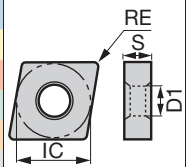
● : Continuous cutting
 ●● : Light interrupted cutting
 ●●● : Heavy interrupted cutting

CN



Rhombic, 80° with hole

| Material | P | M | K | N | S | H | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | | | |
|---------------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|
| Steel | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stainless | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cast iron | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-ferrous | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Superalloy | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard material | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | ●●●●●● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | Coated cermet | | Cermet | | Dimension (mm) | | | |
|-----------------------------|-------------|--------------------------|--------|-------|-------|---------------|--------|--------|--------|----------------|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | GT9530 | AT9530 | NS9530 | RE | IC | S | D1 |
| Finishing to medium cutting | | AM CNMG120408-AM | ●● | ●● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-AM | ●● | ●● | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | NM CNMG120408-NM | ●●●● | ●●●● | | | | | ● | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-NM | ●●●● | ●●●● | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | TQ CNMG120404-TQ | ●● | ●● | | | ●● | ●● | ● | 0.4 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408-TQ | ●● | ●● | | | ●● | ●● | ● | 0.8 | 12.7 | 4.76 | 5.16 |
| Medium cutting | | TA CNMG120408-TA | ●● | ●● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-TA | ●● | ●● | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Finishing to medium cutting | | ZM CNMG090408E-ZM | ●● | ●● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | CNMG120408-ZM | ●●●● | ●●●● | | | ● | ● | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-ZM | ●●●● | ●●●● | | | ● | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Medium cutting | | DM CNMG120404-DM | ●● | ●● | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408-DM | ●●●● | ●●●● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-DM | ●●●● | ●●●● | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |

● : Line up

Grade 1
 Insert 2
 Ext. Toolholder 3
 Int. Toolholder 4
 Threading 5
 Grooving 6
 Endmill 7
 Drilling Tool 8
 Technical Reference 9

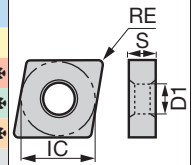
Insert NEGATIVE TYPE

● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

CN

Rhombic, 80°
with hole

| | P | M | K | N | S | H | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | AH725 | AH8005 | AH8015 | AH905 | GH110 | GH330 | GT720 | NS9530 | TH10 | KS05F | KS20 | RE | IC | S | D1 | |
|---------------|---|---|---|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|------|-------|------|----|----|---|----|---|
| Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Stainless | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Superalloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hard material | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | | | | | | | | Coated cermet | Cermet | Uncoated | | Dimension (mm) | | | | | | | |
|-----------------------------|-------------|---------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|--------|------|-------|---------------|--------|----------|---|----------------|--|-----|-------|-------|------|------|------|
| | | | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | AH725 | AH8005 | AH8015 | AH905 | GH110 | GH330 | GT720 | NS9530 | TH10 | KS05F | KS20 | RE | IC | S | D1 | | | | | | | |
| Medium cutting | | SM CNMG090404E-SM | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | | CNMG090408E-SM | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | CNMG090412E-SM | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | CNMG120404-SM | | | ● | ● | ● | ● | | | | ● | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120408-SM | | | ● | ● | ● | ● | ● | | | ● | | | | | | | ● | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120412-SM | | | ● | ● | ● | ● | | | | ● | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| Medium cutting | | P CNGG120404R-P | | | | | | | | | | | | | | | | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | | CNGG120404L-P | | | | | | | | | | | | | | | | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | | CNGG120408R-P | | | | | | | | | | | | | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | CNGG120408L-P | | | | | | | | | | | | | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| Finishing to medium cutting | | HRM CNMG120404-HRM | | | | | | | | | | | | | | | ● | ● | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | | CNMG120408-HRM | | | | | | | | | | | | | | | | ● | ● | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120412-HRM | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| Medium cutting | | HMM CNMG120404-HMM | | | | | | | | | | | | | | | | | ● | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120408-HMM | | | | | | | | | | | | | | | | | | ● | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120412-HMM | | | | | | | | | | | | | | | | | | ● | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| | | SA CNMG120404-SA | | | ● | ● | ● | ● | | | | ● | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408-SA | | | ● | ● | ● | ● | ● | | | ● | | | | | | | | | | | | | | | ● | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120412-SA | | | ● | ● | ● | ● | | | | ● | | | | | | | | | | | | | | | ● | | 1.2 | 12.7 | 4.76 | 5.16 |
| Medium cutting | | S CNMG120404R-S | ● | ● | | ● | ● | ● | | | | | | | | | | | | | | ● | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120404L-S | ● | ● | | ● | ● | ● | | | | | | | | | | | | | | | ● | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120408R-S | ● | ● | | ● | ● | ● | | | | | | | | | | | | | | | ● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | CNMG120408L-S | ● | ● | | ● | ● | ● | | | | | | | | | | | | | | | ● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| Medium to heavy cutting | | SH CNMG120408-SH | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | CNMG120412-SH | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |

● : Line up

Reference pages: External toolholder → 3-45 - 3-47

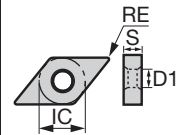
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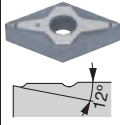
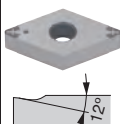
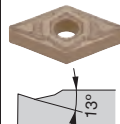
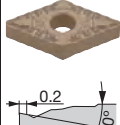
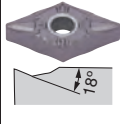
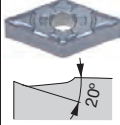
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

DN

 Rhombic, 55° with hole

| Material | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH120 | AH8005 | AH8015 | GH110 | GT9530 | AT9530 | GT720 | NS9530 | NS520 | TH10 | RE | IC | S | D1 | |
|-----------------|---------|-------------|-------------|---------------|--------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--------|--------|-------|--------|-------|------|----|----|---|----|---|
| P Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| M Stainless | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| K Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| N Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| S Superalloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| H Hard material | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | Coated cermet | | | Cermet | | Uncoated | Dimension (mm) | | | | | | | | | | |
|---|---|----------------------------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|---------------|--------|--------|--------|--------|----------|----------------|----|----|---|----|-----|------|-------|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH120 | AH8005 | AH8015 | GH110 | GT9530 | AT9530 | GT720 | NS9530 | NS520 | TH10 | RE | IC | S | D1 | | | | | | |
| Precision finishing |  | TF DNMG150404-TF | | | | | | | | | | | | | | | | | | | | ● | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | | DNMG150408-TF | | | | | | | | | | | | | | | | | | | | | ● | | 0.8 | 12.7 | 4.76 | 5.16 | |
| |  | 01 DNGG110402-01 | | | | | | | | | | | | | | | | | | | | | ● | | 0.2 | 9.525 | 4.76 | 3.81 | |
| | | DNGG110404-01 | | | | | | | | | | | | | | | | | | | | | ● | ● | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | DNGG110408-01 | | | | | | | | | | | | | | | | | | | | | ● | ● | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | DNGG150402-01 | | | | | | | | | | | | | | | | | | | | | | ● | ● | | 0.2 | 12.7 | 4.76 |
| Finishing |  | TSF DNMG110402E-TSF | | | | | | | | | | | | | ● | ● | | | | | | | | | 0.2 | 9.525 | 4.76 | 3.81 | |
| | | DNMG110404E-TSF | | ● | ● | | | | | | | | | | ● | ● | | | | | | | ● | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | DNMG110408E-TSF | | ● | ● | | | | | | | | | | ● | ● | | | | | | | ● | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | DNMG110412E-TSF | | ● | ● | | | | | | | | | | ● | ● | | | | | | | ● | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | DNMG150404-TSF | | ● | ● | ● | ● | | | | | | | | ● | ● | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | DNMG150408-TSF | | ● | ● | ● | ● | | | | | | | | ● | ● | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | DNMG150412-TSF | | ● | ● | ● | ● | | | | | | | | ● | ● | | | | | | | ● | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| | DNMG150604-TSF | | ● | ● | | | | | | | | | | | | | | | | | | ● | ● | | 0.4 | 12.7 | 6.35 | 5.16 | |
| | DNMG150608-TSF | | ● | ● | ● | ● | | | | | | | | | | | | | | | | ● | ● | | 0.8 | 12.7 | 6.35 | 5.16 | |
| | DNMG150612-TSF | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | |
| |  | ZF DNMG110404E-ZF | | ● | ● | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | DNMG150404-ZF | | ● | ● | ● | | | | | | | | | | | | | | | | | ● | ● | | 0.4 | 12.7 | 4.76 | 5.16 |
| DNMG150408-ZF | | | ● | ● | ● | | | | | | | | | | | | | | | | | ● | ● | | 0.8 | 12.7 | 4.76 | 5.16 | |
| DNMG150412-ZF | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| DNMG150604-ZF | | | ● | ● | | | | | | | | | | | | | | | | | | ● | ● | | 0.4 | 12.7 | 6.35 | 5.16 | |
| DNMG150608-ZF | | | ● | ● | ● | | | | | | | | | | | | | | | | | ● | ● | | 0.8 | 12.7 | 6.35 | 5.16 | |
|  | SF DNMG150404-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | DNMG150408-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | DNMG150604-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 |
| | DNMG150608-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 |
|  | HRF DNMG150404-HRF | | | | | | | | | | | | | | ● | ● | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | DNMG150408-HRF | | | | | | | | | | | | | | ● | ● | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | DNMG150604-HRF | | | | | | | | | | | | | | ● | ● | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 |
| | DNMG150608-HRF | | | | | | | | | | | | | | ● | ● | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 |

● : Line up

Reference pages: External toolholder → 3-50 - 3-52

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

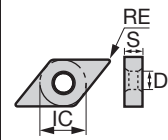
Insert NEGATIVE TYPE

● : Continuous cutting
 ● : Light interrupted cutting
 ✖ : Heavy interrupted cutting

DN

**Rhombic, 55°
with hole**

| | | | | | | | | | | | | | | | | | | | | | |
|----------|---------------|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|---|---|---|
| P | Steel | ● | ● | ● | ● | ✖ | ✖ | ● | ✖ | ✖ | ● | ● | | | | | | | | | |
| M | Stainless | | ● | ● | | | ● | ● | ● | ✖ | ● | ● | | | | | | | | | |
| K | Cast iron | ● | ● | | | | | | | | ● | ● | | | | | | | | | |
| N | Non-ferrous | | | | | | | | | | | | | | | | | | ● | ✖ | ✖ |
| S | Superalloy | | | | | | | | | | | | | | | | | | | | |
| H | Hard material | | | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | Coated cermet | | Cermet | | Uncoated | Dimension (mm) | | | | | | |
|-------------------------------|-------------|--------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|--------|--------|----------|----------------|-------|-------|-------|------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | AH8015 | GH330 | GT9530 | AT9530 | | NS9530 | NS520 | KS20 | RE | IC | S | D1 |
| Finishing | | TS DNMG150404-TS | ● | ● | ● | | | | | | | | | ● | ● | | ● | ● | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-TS | ● | ● | ● | ● | | | | | | | | | ● | ● | | ● | ● | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | DNMG150412-TS | ● | ● | ● | ● | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | DNMG150604-TS | | | | | | | | | | | | | ● | ● | | | | | 0.4 | 12.7 | 6.35 | 5.16 |
| | | DNMG150608-TS | | | | | | | | | | | | | ● | ● | | | | | 0.8 | 12.7 | 6.35 | 5.16 |
| | | DNMG150612-TS | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 |
| High feed, small depth of cut | | AS DNMG150404-AS | | ● | | ● | | | | | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-AS | | ● | ● | ● | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-AS | | ● | ● | ● | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150604-AS | | | | ● | | | | | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150608-AS | | | | ● | ● | | | | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150612-AS | | | | ● | | | | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | |
| Finishing | | NS DNMG150404-NS | | | | ● | | | | | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-NS | ● | ● | ● | | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | SS DNMG110404E-SS | | | | | | | | | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | DNMG110408E-SS | | | | | | | | | ● | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | DNMG150404-SS | | | | | | ● | ● | ● | | | | | | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-SS | | | | | | ● | ● | ● | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-SS | | | | | | ● | ● | ● | | | | | | | | | ● | 1.2 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150604-SS | | | | | | ● | ● | ● | | ● | ● | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150608-SS | | | | | | ● | ● | ● | | ● | ● | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | |
| DNMG150612-SS | | | | | | ● | ● | ● | | | ● | ● | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | | | |
| Medium cutting | | TM DNMG110404E-TM | | ● | ● | | | | | | | | | | ● | ● | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | | DNMG110408E-TM | | ● | ● | | | | | | | | | | | ● | ● | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | DNMG110412E-TM | | ● | ● | | | | | | | | | | | ● | ● | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | DNMG110404-TM | | ● | ● | ● | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | DNMG110408-TM | | ● | ● | ● | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | DNMG150404-TM | ● | ● | ● | ● | | | | | | ● | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-TM | ● | ● | ● | ● | | | | | | ● | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-TM | ● | ● | ● | ● | | | | | | ● | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150604-TM | ● | ● | ● | ● | | | | | | ● | ● | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150608-TM | ● | ● | ● | ● | | | | | | ● | ● | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | |
| DNMG150612-TM | ● | ● | ● | ● | | | | | | ● | ● | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | | | |
| Finishing to medium cutting | | AM DNMG150408-AM | | ● | ● | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | | |
| | | DNMG150412-AM | | ● | ● | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | | |
| | | DNMG150608-AM | | ● | ● | | | | | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | | |
| | | DNMG150612-AM | | ● | ● | | | | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | | |

● : Line up

Reference pages: External toolholder → **3-50 - 3-52**

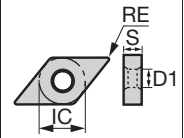
Insert NEGATIVE TYPE








- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

DN

 Rhombic, 55° with hole

| Material | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | Coated | Coated cermet | Cermet | Uncoated |
|-----------------|---------|-------------|-------------|---------------|--------------|-----------------|--------|---------------|--------|----------|
| P Steel | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ◐ |
| M Stainless | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ◐ |
| K Cast iron | ◐ | ◐ | ● | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ◐ |
| N Non-ferrous | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ● | ◐ | ◐ | ◐ |
| S Superalloy | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ● | ◐ | ◐ | ◐ |
| H Hard material | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ◐ | ◐ | ◐ |



| Application | Chipbreaker | Designation | Coated | | | | | | | | Coated cermet | | Cermet | | Uncoated | Dimension (mm) | | | | | |
|---|---|----------------|--------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|--------|--------|----------|----------------|-------|-------|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | GT9530 | AT9530 | NS9530 | NS520 | TH10 | RE | IC | S | D1 |
| Finishing to medium cutting |  | DNMG150408-NM | ● | ● | ● | | | | | | | ● | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-NM | ● | ● | ● | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | DNMG150608-NM | | | | | | | | | | | ● | | ● | | | 0.8 | 12.7 | 6.35 | 5.16 |
| |  | DNMG150404-TQ | | | ● | | | | | | | ● | ● | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | DNMG150408-TQ | | | ● | | | | | | | ● | ● | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 |
| |  | DNMG110408E-ZM | | ● | ● | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | DNMG150408-ZM | | ● | ● | ● | | | | | | ● | | ● | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | DNMG150412-ZM | | ● | ● | ● | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | DNMG150608-ZM | | ● | ● | ● | | | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 |
| | | DNMG150612-ZM | | ● | ● | | | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 |
| Medium cutting |  | DNMG150408-DM | | ● | ● | ● | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-DM | | ● | ● | ● | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | DNMG150604-DM | | | ● | | | | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 |
| | | DNMG150608-DM | | | ● | ● | ● | | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 |
| | | DNMG150612-DM | | ● | ● | ● | ● | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 |
| |  | DNMG110404 | | | ● | ● | | | | | | ● | | ● | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | DNMG110408 | | ● | ● | ● | | | | | | ● | | ● | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | DNMG150404 | | | ● | ● | ● | | | | | ● | | ● | ● | ● | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | DNMG150408 | | ● | ● | ● | ● | | | | | ● | | ● | ● | ● | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | DNMG150412 | | ● | ● | ● | ● | | | | | | | ● | ● | ● | | 1.2 | 12.7 | 4.76 | 5.16 |
| DNMG150604 | | | | ● | ● | | | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | |
| DNMG150608 | | | ● | ● | ● | ● | | | | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | |
| DNMG150612 | | ● | ● | ● | ● | | | | | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | | |
|  | Parallel DNGG150404R | | | | | | | | | | ● | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | DNGG150404L | | | | | | | | | | ● | | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | DNGG150408R | | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | | |
| | DNGG150408L | | | | | | | | | | | | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | | |
|  | SM DNMG110404E-SM | | | | | ● | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | DNMG110408E-SM | | | | | ● | ● | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | DNMG150404-SM | | | | | ● | ● | ● | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | DNMG150408-SM | | | | | ● | ● | ● | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | | |
| | DNMG150412-SM | | | | | ● | ● | ● | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | | |
| | DNMG150604-SM | | | | | ● | ● | ● | ● | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | | |
| | DNMG150608-SM | | | | | ● | ● | ● | ● | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | | |
| | DNMG150612-SM | | | | | ● | ● | ● | ● | | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | | |

● : Line up

Reference pages: External toolholder → [3-50](#) - [3-52](#)

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

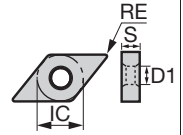
Insert NEGATIVE TYPE

● : Continuous cutting
◐ : Light interrupted cutting
* : Heavy interrupted cutting

DN

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|----|---|---|----|---|----|----|---|----|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Steel | ◐* | * | * | ◐* | * | ◐◐ | ◐ | ◐ | ◐◐ | ◐ | ◐◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| M | Stainless | | | | ◐ | ◐ | * | ◐◐ | ◐ | ◐ | | | | | | | | | | | | | | | | | | | | | | |
| K | Cast iron | | | | | | | ◐◐ | ◐ | ◐ | | | | | | | | | | | | | | | | | | | | | | |
| N | Non-ferrous | | | | | | | ◐◐ | ◐ | ◐ | | | | | | | | | | | | | | | | | | | | | | |
| S | Superalloy | | | | | | | ◐◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| H | Hard material | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Rhombic, 55° with hole



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | Cermet | Uncoated | | Dimension (mm) | | | | | |
|-----------------------------|-------------|---------------------------|--------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|--------|----------|----|----------------|-----|------|------|------|------|
| | | | T9225 | T9235 | T6130 | AH630 | AH645 | AH120 | AH8005 | AH8015 | AH905 | GH110 | GH330 | NS9530 | TH10 | RE | IC | S | D1 | | | |
| Medium cutting | | P DNGG150402R-P | | | | | | | | | | | | ● | ● | | | 0.2 | 12.7 | 4.76 | 5.16 | |
| | | DNGG150402L-P | | | | | | | | | | | | ● | ● | | | 0.2 | 12.7 | 4.76 | 5.16 | |
| | | DNGG150404R-P | | | | | | | | | | | | ● | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNGG150404L-P | | | | | | | | | | | | ● | ● | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNGG150408R-P | | | | | | | | | | | | ● | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNGG150408L-P | | | | | | | | | | | | ● | ● | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| Finishing to medium cutting | | HRM DNMG150404-HRM | | | | | | | | | ● | ● | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-HRM | | | | | | | | | ● | ● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-HRM | | | | | | | | | ● | ● | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150604-HRM | | | | | | | | | ● | ● | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150608-HRM | | | | | | | | | ● | ● | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150612-HRM | | | | | | | | | ● | ● | | | | | | 1.2 | 12.7 | 6.35 | 5.16 | |
| Medium cutting | | HMM DNMG150404-HMM | | | | | | | | | | ● | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-HMM | | | | | | | | | | ● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150412-HMM | | | | | | | | | | ● | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| Medium cutting | | SA DNMG150404-SA | | | | | | | | ● | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150408-SA | | | | | | | | ● | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150604-SA | | | | | | | | ● | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 | |
| | | DNMG150608-SA | | | | | | | | ● | | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Medium cutting | | S DNMG150404R-S | ● | ● | ● | ● | ● | | | | | ● | | ● | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | DNMG150404L-S | ● | ● | ● | ● | ● | | | | | ● | | ● | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | DNMG150408R-S | ● | ● | ● | ● | ● | | | | | ● | | ● | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | DNMG150408L-S | ● | ● | ● | ● | ● | | | | | ● | | ● | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | DNMG150604R-S | ● | ● | ● | ● | ● | | | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 |
| | | DNMG150604L-S | ● | ● | ● | ● | ● | | | | | | | | | | | | 0.4 | 12.7 | 6.35 | 5.16 |
| | | DNMG150608R-S | ● | ● | ● | ● | ● | | | | | ● | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 |
| | | DNMG150608L-S | ● | ● | ● | ● | ● | | | | | ● | | | | | | | 0.8 | 12.7 | 6.35 | 5.16 |

● : Line up

Reference pages: External toolholder → 3-50 - 3-52

Insert NEGATIVE TYPE

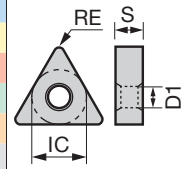
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

TN



Triangular, 60° with hole

| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Coated | Coated cermet | Cermet | Uncoated |
|----------|-------|-----------|-----------|-------------|------------|---------------|--------|---------------|--------|----------|
| P | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● |
| M | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| K | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| N | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| S | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| H | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | Coated cermet | | Cermet | | Uncoated | Dimension (mm) | | | | | |
|----------------------------------|-------------|---------------------------|--------|-------|-------|---------------|-------|--------|-------|----------|----------------|-------|-------|-------|------|------|
| | | | GH110 | GH330 | SH725 | GT9530 | GT720 | NS9530 | NS520 | X407 | TH10 | RE | IC | S | D1 | |
| Precision finishing | | W TNGG160404R-W | | | | | | | ● | | ● | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160404L-W | | | | | | | ● | | ● | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160408R-W | | | | | | | | ● | | ● | 0.8 | 9.525 | 4.76 | 3.81 |
| | | TNGG160408L-W | | | | | | | | ● | | ● | 0.8 | 9.525 | 4.76 | 3.81 |
| Precision finishing (sharp edge) | | W TNGG160402FR-W | | ● | | | | | | | | 0.2 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160402FL-W | | ● | | | | | | | | 0.2 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160404FR-W | | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160404FL-W | | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160408FR-W | | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160408FL-W | | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| Precision finishing | | TF TNMG160404-TF | | | | | | | ● | ● | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160408-TF | | | | | | | ● | ● | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | 01 TNGG110302-01 | | | | | | | | ● | | | 0.2 | 6.35 | 3.18 | 2.26 |
| | | TNGG110304-01 | | | | | | | | ● | | | 0.4 | 6.35 | 3.18 | 2.26 |
| | | TNGG110308-01 | | | | | | | | ● | ● | | 0.8 | 6.35 | 3.18 | 2.26 |
| | | TNGG160402-01 | ● | | | | | | | ● | ● | | 0.2 | 9.525 | 4.76 | 3.81 |
| Precision finishing (sharp edge) | | TNGG160404-01 | ● | | | | | | ● | ● | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160408-01 | ● | | | | | | ● | ● | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | TNGG160412-01 | | | | | ● | | | ● | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | 01 TNGG160402F-01 | | ● | | | | | | | | | 0.2 | 9.525 | 4.76 | 3.81 |
| | | TNGG160404F-01 | | ● | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNGG160408F-01 | | ● | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| Precision finishing | | A, C TNGG110304R-A | | | | | ● | | ● | | | 0.4 | 6.35 | 3.18 | 2.26 | |
| | | TNGG110304L-A | | | | | ● | | ● | | | 0.4 | 6.35 | 3.18 | 2.26 | |
| | | TNGG110308R-A | | | | | ● | | ● | | | 0.8 | 6.35 | 3.18 | 2.26 | |
| | | TNGG110308L-A | | | | | ● | | ● | | | 0.8 | 6.35 | 3.18 | 2.26 | |
| | | TNGG160304R-C | | | | | | | ● | ● | | 0.4 | 9.525 | 3.18 | 3.81 | |
| | | TNGG160304L-C | | | | | | | ● | ● | | 0.4 | 9.525 | 3.18 | 3.81 | |
| | | TNGG160308R-C | | | | | | | ● | ● | | 0.8 | 9.525 | 3.18 | 3.81 | |
| | | TNGG160308L-C | | | | | | | ● | ● | | 0.8 | 9.525 | 3.18 | 3.81 | |
| | | TNGG160400R-C | | | | | | | | ● | ● | | 0.03 | 9.525 | 4.76 | 3.81 |
| | | TNGG160400L-C | | | | | | | | ● | ● | | 0.03 | 9.525 | 4.76 | 3.81 |
| | | TNGG160402R-C | | | | | | ● | | ● | ● | | 0.2 | 9.525 | 4.76 | 3.81 |
| | | TNGG160402L-C | | | | | | ● | | ● | ● | | 0.2 | 9.525 | 4.76 | 3.81 |
| | | TNGG160404R-C | ● | ● | | | | ● | ● | ● | ● | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNGG160404L-C | ● | ● | | | | ● | ● | ● | ● | | 0.4 | 9.525 | 4.76 | 3.81 |
| TNGG160408R-C | ● | ● | | | | ● | ● | ● | ● | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| TNGG160408L-C | ● | ● | | | | ● | ● | ● | ● | | 0.8 | 9.525 | 4.76 | 3.81 | | |

● : Line up

Reference pages: External toolholder → 3-41 - 3-45

Grade
Insert
Toolholder
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

Insert NEGATIVE TYPE

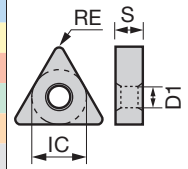
- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

TN



Triangular, 60°
with hole

| Material | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | Coated | Coated cermet | Cermet | Uncoated |
|----------|---------|-------------|-------------|---------------|--------------|-----------------|--------|---------------|--------|----------|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | Coated cermet | | Cermet | | Uncoated | Dimension (mm) | | | | | |
|----------------|-------------------------------|----------------|---------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|---------------|-------|--------|--------|----------|----------------|-------|------|-------|-------|------|
| | | | T9205 | T9125 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH8005 | AH8015 | AH120 | AH725 | GH330 | GT9530 | AT9530 | NS9530 | NS520 | KS20 | RE | IC | S |
| Finishing | HRF | TNMG160404-HRF | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNMG160408-HRF | | | | | | | | ● | ● | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | TS | TNMG160404-TS | | ● | ● | ● | | | | | | | | | ● | ● | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNMG160408-TS | ● | ● | ● | ● | | | | | | | | | ● | ● | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | TNMG160412-TS | ● | ● | ● | ● | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |
| | High feed, small depth of cut | AS | TNMG160404-AS | | | ● | ● | | | | | | | | | | | ● | | | 0.4 | 9.525 | 4.76 |
| TNMG160408-AS | | | ● | ● | ● | ● | | | | | | | | | | | ● | | | 0.8 | 9.525 | 4.76 | 3.81 |
| TNMG160412-AS | | | ● | ● | ● | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |
| Finishing | NS | TNMG160404-NS | | ● | ● | | | | | | | | | | | | ● | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNMG160408-NS | ● | ● | ● | | | | | | | | | | | | ● | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | SS | TNMG110404E-SS | | | | | | | ● | ● | | | | | | | | | | 0.4 | 6.35 | 4.76 | 2.26 |
| | | TNMG110408E-SS | | | | | | | ● | ● | | | | | | | | | | 0.8 | 6.35 | 4.76 | 2.26 |
| | | TNMG160404-SS | | | | | ● | ● | ● | ● | | ● | ● | | | | ● | | | 0.4 | 9.525 | 4.76 | 3.81 |
| Medium cutting | TM | TNMG110304-TM | ● | ● | ● | | | | | | | | | | | | | | 0.4 | 6.35 | 3.18 | 2.26 | |
| | | TNMG110308-TM | ● | ● | ● | | | | | | | | | | | | | | | 0.8 | 6.35 | 3.18 | 2.26 |
| Medium cutting | TM | TNMG110404E-TM | ● | ● | | | | | | | | | | | | | | | 0.4 | 6.35 | 4.76 | 2.26 | |
| | | TNMG110408E-TM | ● | ● | | | | | | | | | | | | | | | 0.8 | 6.35 | 4.76 | 2.26 | |
| | | TNMG110412E-TM | ● | ● | | | | | | | | | | | | | | | 1.2 | 6.35 | 4.76 | 2.26 | |
| | | TNMG160404-TM | ● | ● | ● | | | | | | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNMG160408-TM | ● | ● | ● | ● | | | | | ● | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | TNMG160412-TM | ● | ● | ● | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |

● : Line up

Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

Insert NEGATIVE TYPE

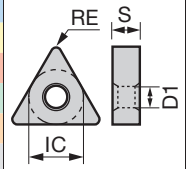
 ● : Continuous cutting
 ● : Light interrupted cutting
 * : Heavy interrupted cutting

TN



Triangular, 60°
with hole

| Material | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Coated | Coated cermet | Cermet | Uncoated |
|----------|-------|-----------|-----------|-------------|------------|---------------|--------|---------------|--------|----------|
| P | ●●●●* | ●● | ●●●●* | ●● | ●● | ●● | ●●●●● | ●●●●● | ●●●●● | ● |
| M | ●● | ●● | ●● | ●● | ●● | ●● | ●●●●● | ●●●●● | ●●●●● | ● |
| K | ●● | ●● | ●●●●* | ●● | ●● | ●● | ●●●●● | ●●●●● | ●●●●● | ● |
| N | | | | ●● | ●● | ●● | ●●●●● | ●●●●● | ●●●●● | ● |
| S | | | | | ●● | ●● | ●●●●● | ●●●●● | ●●●●● | ● |
| H | | | | | | ●● | ●●●●● | ●●●●● | ●●●●● | ● |



| Application | Chipbreaker Designation | | Coated | | | | | | Coated cermet | | | Cermet | | Uncoated | | Dimension (mm) | | | |
|-----------------------------|----------------------------|---------------|--------|---------------|-------|-------|-------|-------|---------------|-------|--------|--------|-------|----------|-------|----------------|------|-------|------|
| | | | T9205 | T9215 | T9225 | T9235 | AH110 | AH120 | GT9530 | GT720 | AT9530 | NS9530 | NS520 | TH10 | RE | IC | S | D1 | |
| | | | AM | TNMG160408-AM | ● | ● | | | | | | | | | | | 0.8 | 9.525 | 4.76 |
| | 0.25, 8° | TNMG160412-AM | ● | ● | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | |
| Finishing to medium cutting | NM | TNMG160408-NM | | | ● | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | 7.2° | TNMG160412-NM | | ● | ● | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | |
| | TQ | TNMG160404-TQ | | ● | ● | | | ● | ● | ● | | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | 17° | TNMG160408-TQ | | ● | ● | | | ● | ● | ● | | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| Medium cutting | TA | TNMG160404-TA | | ● | ● | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | 22° | TNMG160408-TA | | ● | ● | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | | TNMG160412-TA | | ● | ● | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | |
| Finishing to medium cutting | ZM | TNMG160404-ZM | | ● | ● | ● | | ● | | ● | | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | 7° | TNMG160408-ZM | | ● | ● | ● | | ● | | ● | | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | | TNMG160412-ZM | | ● | ● | ● | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | |
| Medium cutting | DM | TNMG160408-DM | ● | ● | ● | ● | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | 0.25, 15° | TNMG160412-DM | | ● | ● | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | |
| | All-round | TNMG110304 | | ● | ● | | | | | ● | | ● | | 0.4 | 6.35 | 3.18 | 2.26 | | |
| | | TNMG110308 | | ● | ● | | | | | ● | | ● | | 0.8 | 6.35 | 3.18 | 2.26 | | |
| | 0.2, 13° | TNMG160304 | | | | | | | | | | ● | | 0.4 | 9.525 | 3.18 | 3.81 | | |
| | | TNMG160308 | | | | | | | | | | ● | | 0.8 | 9.525 | 3.18 | 3.81 | | |
| | | TNMG160404 | | ● | ● | ● | ● | ● | | | ● | ● | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | | TNMG160408 | | ● | ● | ● | ● | ● | ● | | ● | ● | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | TNMG160412 | | ● | ● | ● | ● | ● | | | ● | ● | | 1.2 | 9.525 | 4.76 | 3.81 | | | |

● : Line up

Reference pages: External toolholder → 3-41 - 3-45

Insert NEGATIVE TYPE

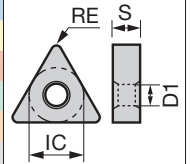
● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

TN



Triangular, 60°
with hole

| | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | | | | | | | | | | | | | | | | | | | | | |
|---|---------|-------------|-------------|---------------|--------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



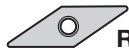
| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | Cermet | Uncoated | Dimension (mm) | | | | | |
|-----------------------------|-------------|---------------------------|--------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|----------|----------------|-----|-------|-------|------|------|
| | | | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH8005 | AH8015 | AH905 | AH725 | GH330 | NS9530 | KS20 | RE | IC | S | D1 | |
| Medium cutting | | SM TNMG110404E-SM | | | | ● | ● | ● | | | | | | | | | | 0.4 | 6.35 | 4.76 | 2.26 |
| | | TNMG110408E-SM | | | | ● | ● | ● | | | | | | | | | | 0.8 | 6.35 | 4.76 | 2.26 |
| | | TNMG160404-SM | | | | ● | ● | ● | ● | | | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | TNMG160408-SM | | | | ● | ● | ● | ● | | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | TNMG160412-SM | | | | ● | ● | ● | ● | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |
| Finishing to medium cutting | | HRM TNMG160404-HRM | | | | | | | | ● | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160408-HRM | | | | | | | | ● | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160412-HRM | | | | | | | | ● | ● | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| Medium cutting | | HMM TNMG160404-HMM | | | | | | | | | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160408-HMM | | | | | | | | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160412-HMM | | | | | | | | | ● | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| Medium cutting | | SA TNMG160404-SA | | | | ● | ● | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160408-SA | | | | ● | ● | ● | ● | | | | | | ● | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160412-SA | | | | ● | ● | ● | ● | | | | | | ● | | 1.2 | 9.525 | 4.76 | 3.81 | |
| Medium cutting | | S TNMG160404R-S | ● | ● | ● | ● | ● | ● | | | | ● | ● | | ● | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160404L-S | ● | ● | ● | ● | ● | ● | | | | ● | | | ● | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160408R-S | ● | ● | ● | ● | ● | ● | | | | ● | ● | | ● | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | TNMG160408L-S | ● | ● | ● | ● | ● | ● | | | | ● | | | ● | | 0.8 | 9.525 | 4.76 | 3.81 | |

● : Line up

Insert NEGATIVE TYPE

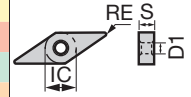
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

VN



**Rhombic, 35°
with hole**

| | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P Steel | ● | ● | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| M Stainless | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| K Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| N Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| S Superalloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| H Hard material | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | Coated cermet | | Cermet | | Dimension (mm) | | | | | | | |
|-----------------------------|----------------|---------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|--------|--------|--------|----------------|--------|-------|-------|-------|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH110 | AH120 | AH8005 | AH8015 | GH330 | GT9530 | AT9530 | NS9530 | NS520 | RE | IC | S | D1 | |
| Finishing | | HRF VNMG160404-HRF | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | VNMG160408-HRF | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | TS VNMG160404-TS | ● | ● | ● | | | | | | | | | | | ● | ● | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | VNMG160408-TS | ● | ● | ● | | | | | | | | | | | ● | ● | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | VNMG160412-TS | ● | ● | ● | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | Medium cutting | | SS VNMG120404E-SS | | | | | ● | ● | ● | ● | | | | | | | | | | 0.4 | 7.15 | 4.76 | 3.81 |
| VNMG120408E-SS | | | | | | | ● | ● | ● | ● | | | | | | | | | | 0.8 | 7.15 | 4.76 | 3.81 | |
| | | VNMG160404-SS | | | | | ● | ● | ● | ● | ● | | | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | VNMG160408-SS | | | | | ● | ● | ● | ● | ● | | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | VNMG160412-SS | | | | | ● | ● | ● | ● | ● | | | ● | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | | TM VNMG120404E-TM | | ● | ● | | | | | | | | | | | | | | | 0.4 | 7.15 | 4.76 | 3.81 |
| Finishing to medium cutting | | TQ VNMG160404-TQ | | ● | ● | | | | | | | | | | ● | ● | | | 0.4 | 9.525 | 4.76 | 3.81 | | |
| | | VNMG160408-TQ | | ● | ● | | | | | | | | | | ● | ● | | | 0.8 | 9.525 | 4.76 | 3.81 | | |
| | | ZM VNMG160408-ZM | ● | ● | ● | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | VNMG160412-ZM | ● | ● | ● | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | | DM VNMG160408-DM | ● | ● | ● | ● | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | | VNMG160412-DM | ● | ● | ● | ● | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |

● : Line up

Reference pages: External toolholder → 3-52 - 3-55

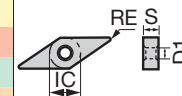
Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

Insert **NEGATIVE TYPE**

● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

VN**Rhombic, 35°
with hole**

| | P | M | K | N | S | H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Steel | ● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | |
| Stainless | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● |
| Cast iron | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● |
| Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Superalloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hard material | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | Cermet | Uncoated | | | Dimension (mm) | | | | | | | | | | | | | | | | |
|-------------|-------------|----------------|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--------|----------|--------|------|----------------|----|---|-----|-------|-------|------|------|--|--|--|--|--|--|--|--|--|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH645 | AH8005 | AH8015 | AH905 | AH110 | AH120 | NS9530 | TH10 | RE | IC | S | D1 | | | | | | | | | | | | | |
| All-round | | VNMG160404 | ● | ● | ● | ● | | | | | | | | | | ● | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | | | | | | | | | |
| | | VNMG160408 | ● | ● | ● | ● | | | | | | | | | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| | | VNMG160412 | | ● | ● | | | | | | | | | | | ● | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| SM | | VNMG120404E-SM | | | | | ● | ● | ● | ● | | | | | | | | | | | 0.4 | 7.15 | 4.76 | 3.81 | | | | | | | | | | |
| | | VNMG120408E-SM | | | | | ● | ● | ● | ● | | | | | | | | | | | | 0.8 | 7.15 | 4.76 | 3.81 | | | | | | | | | |
| | | VNMG160404-SM | | | | | ● | ● | ● | ● | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| | | VNMG160408-SM | | | | | ● | ● | ● | ● | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| | | VNMG160412-SM | | | | | ● | ● | ● | ● | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HRM | | VNMG160404-HRM | | | | | | | | | | ● | ● | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | | | | | | | | | |
| | | VNMG160408-HRM | | | | | | | | | | ● | ● | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| | | VNMG160412-HRM | | | | | | | | | | ● | ● | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| HMM | | VNMG160404-HMM | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | | | | | | | | | | |
| | | VNMG160408-HMM | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | | | | | | | | | |
| | | VNMG160412-HMM | | | | | | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | | | | | | | | | |

● : Line up

Reference pages: External toolholder → **3-52 - 3-55**

Insert NEGATIVE TYPE

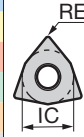
● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

WN



**Trigon, 80°
with hole**

| Material | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH8015 | AH8015 | AH120 | GT9530 | AT9530 | GT720 | NS9530 | NS520 | |
|-----------------|---------|-------------|-------------|---------------|--------------|-----------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|--------|--------|-------|--------|-------|--|
| P Steel | ●●●●●✱ | ●● | ●●●● | ●● | ●● | ●● | | | | | | | | | | | | | | | | |
| M Stainless | ●● | ●● | | | | | | | | | | | | | | | | | | | | |
| K Cast iron | ●●●● | ●● | ●●●● | ●● | ●● | ●● | | | | | | | | | | | | | | | | |
| N Non-ferrous | ●● | | | ●● | ●● | ●● | | | | | | | | | | | | | | | | |
| S Superalloy | ●● | | | | ●● | ●● | | | | | | | | | | | | | | | | |
| H Hard material | ●● | | | | ●● | ●● | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | | | | | | Coated cermet | | | Cermet | | Dimension (mm) | | | | | | | | | | | | | | |
|---------------------|----------------------------------|-----------------------------------|--------|-------|-------|-------|-------|-------|-------|--------|---------------|-------|--------|--------|-------|----------------|-------|----|----|---|----|--|-----|------|------|-------|-------|-------|------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH8015 | AH8015 | AH120 | GT9530 | AT9530 | GT720 | NS9530 | NS520 | RE | IC | S | D1 | | | | | | | | | |
| Precision finishing | 72° | TF WNMG080404-TF | | | | | | | | | | | | | | | ● | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | | | | |
| | | WNMG080408-TF | | | | | | | | | | | | | | | | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | | |
| | 72° | O1 WNGG080402-O1 | | | | | | | | | | | | | | | | ● | ● | | | | | | 0.2 | 12.7 | 4.76 | 5.16 | | |
| | | WNGG080404-O1 | | | | | | | | | | | | | | | | ● | ● | ● | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | WNGG080408-O1 | | | | | | | | | | | | | | | | ● | ● | ● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finishing | 73° | TSF WNMG060402E-TSF | | | | | | | | | | | | | | | | | | | | | | | 0.2 | 9.525 | 4.76 | 3.81 | | |
| | | WNMG060404E-TSF | ● | ● | | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | WNMG060408E-TSF | ● | ● | | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | WNMG060412E-TSF | ● | ● | | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | WNMG060404-TSF | ● | ● | | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | WNMG060408-TSF | ● | ● | | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| | | WNMG080404-TSF | ● | ● | ● | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | WNMG080408-TSF | ● | ● | ● | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | 70° | ZF WNMG060404E-ZF | ● | ● | | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | WNMG060404-ZF | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | WNMG060408-ZF | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | WNMG080404-ZF | ● | ● | ● | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| | | WNMG080408-ZF | ● | ● | ● | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | WNMG080412-ZF | ● | ● | ● | | | | | | | | | | ● | ● | | ● | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |
| | 78° | SF WNMG060404-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 | |
| | | WNMG060408-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | WNMG080404-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | WNMG080408-SF | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| 20° | HRF WNMG080404-HRF | | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | WNMG080408-HRF | | | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| 70° | TS WNMG080404-TS | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | | |
| | WNMG080408-TS | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | WNMG080412-TS | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |

● : Line up

Reference pages: External toolholder → [3-48](#), [3-49](#)

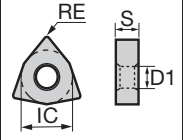
Grade
 Insert
 Toolholder
 Ext. Toolholder
 Int. Toolholder
 Threading
 Grooving
 Endmill
 Drilling Tool
 Technical Reference

Insert **NEGATIVE TYPE**

● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

WN**Trigon, 80°
with hole**

| | P | M | K | N | S | H |
|---------------|-------|-------|-------|-------|-------|-------|
| Steel | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Stainless | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Cast iron | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Non-ferrous | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Superalloy | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |
| Hard material | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |



| Application | Chipbreaker | Designation | Coated | | | | | | | Coated cermet | Cermet | Dimension (mm) | | | | | | | | | |
|--------------------------------------|-------------|----------------------|-----------------------|-------|-------|-------|-------|-------|-------|---------------|--------|----------------|-------|--------|--------|--------|----|----|---|----|--|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH630 | AH8015 | AH120 | AH725 | GH330 | GT9530 | AT9530 | NS9530 | RE | IC | S | D1 | |
| High feed, small depth of cut | AS | WNMG080404-AS | ● | | | | | | | | | | | | | | | | | | |
| | | WNMG080408-AS | ● | ● | ● | ● | | | | | | | | | | | | | | | |
| | | WNMG080412-AS | ● | ● | ● | ● | | | | | | | | | | | | | | | |
| Boring (double side) | CB | WNMG060404-CB | | | ● | | | | | | | | | | | | | | | | |
| | | WNMG060408-CB | | | ● | | | | | | | | | | | | | | | | |
| Finishing | NS | WNMG080404-NS | ● | ● | | | | | | | | | | | | | | | | | |
| | | WNMG080408-NS | ● | ● | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | SS | WNMG060404E-SS | | | | | | | ● | | | | | | | | | | | |
| | | | WNMG060408E-SS | | | | | | | ● | | | | | | | | | | | |
| | | | WNMG060412E-SS | | | | | | | ● | | | | | | | | | | | |
| Medium cutting | | WNMG080404-SS | | | | ● | ● | ● | | | | | | | | | | | | | |
| | | WNMG080408-SS | | | | ● | ● | ● | | | | | | | | | | | | | |
| | | WNMG080412-SS | | | | ● | ● | ● | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | TM | WNMG060404E-TM | ● | ● | | | | | ● | ● | | | | | | | | | | |
| | | | WNMG060408E-TM | ● | ● | | | | | ● | ● | | | | | | | | | | |
| | | | WNMG060412E-TM | ● | ● | | | | | ● | ● | | | | | | | | | | |
| Finishing to medium cutting | | WNMG060404-TM | ● | ● | ● | | | | | | | | | | | | | | | | |
| | | WNMG060408-TM | ● | ● | ● | | | | | ● | | | | | | | | | | | |
| | | WNMG080404-TM | ● | ● | ● | ● | | | | ● | ● | ● | | | | | | | | | |
| | | WNMG080408-TM | ● | ● | ● | ● | | | | ● | ● | ● | | | | | | | | | |
| | | WNMG080412-TM | ● | ● | ● | ● | | | | ● | ● | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | AM | WNMG080408-AM | ● | ● | | | | | | | | | | | | | | | | | |
| | | WNMG080412-AM | ● | ● | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | TQ | WNMG080404-TQ | | | ● | | | | | ● | ● | | ● | | | | | | | | |
| | | WNMG080408-TQ | | | ● | | | | | ● | ● | | ● | | | | | | | | |

● : Line up

Reference pages: External toolholder → 3-48, 3-49

Insert NEGATIVE TYPE

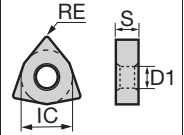
- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

WN



**Trigon, 80°
with hole**

| | P | M | K | N | S | H | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH110 | AH120 | AH630 | AH645 | AH725 | GT9530 | NS9530 | NS520 | TH10 | |
|---------------|---|---|---|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|------|---|
| Steel | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Stainless | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cast iron | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Superalloy | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hard material | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



| Application | Chipbreaker | Designation | Coated | | | | | | | | | | | | | | | Coated cermet | | Cermet | | Uncoated | Dimension (mm) | | | | | | | | |
|-----------------------------|-------------|-----------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|------|---------------|----|--------|----|----------|----------------|--|--|-----|------|-------|-------|-------|------|
| | | | T9205 | T9215 | T9225 | T9235 | T6120 | T6130 | AH110 | AH120 | AH630 | AH645 | AH725 | GT9530 | NS9530 | NS520 | TH10 | RE | IC | S | D1 | | | | | | | | | | |
| Medium cutting | | TA WNMG080408-TA | ● | ● | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | | |
| | | WNMG080412-TA | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Finishing to medium cutting | | NM WNMG060412E-NM | | | ● | | | | | | | | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 | |
| | | WNMG080408-NM | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | WNMG080412-NM | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 |
| | | ZM WNMG060408E-ZM | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | WNMG060408-ZM | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | WNMG060412-ZM | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |
| | | WNMG080408-ZM | | ● | ● | ● | ● | | | | | | | | | | | | ● | | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | WNMG080412-ZM | | ● | ● | ● | ● | | | | | | | | | | | | ● | | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Medium cutting | | DM WNMG080408-DM | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| | | WNMG080412-DM | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | All-round WNMG060404 | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | WNMG060408 | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | WNMG080404 | ● | ● | ● | ● | | | | | | | | ● | ● | | | | | | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | WNMG080408 | ● | ● | ● | ● | | | | | | | | ● | ● | | | | | | ● | ● | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | WNMG080412 | ● | ● | ● | ● | | | | | | | | ● | ● | | | | | | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| | | SM WNMG060404E-SM | | | | | ● | ● | | | | | | | | ● | | | | | | | | | | | | | 0.4 | 9.525 | 4.76 |
| | | WNMG060408E-SM | | | | | ● | ● | | | | | | | ● | | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| | | WNMG060412E-SM | | | | | ● | ● | | | | | | | ● | | | | | | | | | | | | | 1.2 | 9.525 | 4.76 | 3.81 |
| WNMG060408-SM | | | | | | ● | ● | | | | | | | ● | ● | | | | | | | | | | | | 0.8 | 9.525 | 4.76 | 3.81 | |
| WNMG080404-SM | | | | | | ● | ● | | | | | | | ● | ● | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 | |
| WNMG080408-SM | | | | | | ● | ● | | | | | | | ● | ● | ● | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 | |
| WNMG080412-SM | | | | | | ● | ● | | | | | | | ● | ● | ● | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 | |

● : Line up

Reference pages: External toolholder → 3-48, 3-49

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

Insert NEGATIVE TYPE

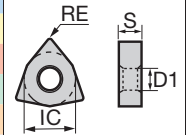
● : Continuous cutting
 ● : Light interrupted cutting
 * : Heavy interrupted cutting

WN



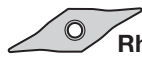
Trigon, 80° with hole

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P Steel | ● | * | ● | * | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M Stainless | ● | ● | ● | * | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K Cast iron | | | | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N Non-ferrous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S Superalloy | | | | | | | | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H Hard material | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



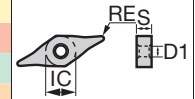
| Application | Chipbreaker | Designation | Coated | | | | | | | Uncoated | | | | Dimension (mm) | | | | | | |
|-----------------------------|-------------|----------------|--------|-------|-------|-------|-------|-------|--------|----------|-------|------|--|----------------|--|--|-----|------|------|------|
| | | | T6120 | T6130 | AH630 | AH645 | AH120 | AH725 | AH8005 | AH8015 | AH905 | KS20 | | | | | RE | IC | S | D1 |
| Finishing to medium cutting | HRM | WNMG080404-HRM | | | | | | | ● | ● | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | WNMG080408-HRM | | | | | | | ● | ● | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | WNMG080412-HRM | | | | | | | ● | ● | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Medium cutting | HMM | WNMG080404-HMM | | | | | | | | | | | | | | | 0.4 | 12.7 | 4.76 | 5.16 |
| | | WNMG080408-HMM | | | | | | | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | WNMG080412-HMM | | | | | | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |
| Medium cutting | SA | WNMG080408-SA | ● | ● | ● | ● | ● | ● | | | | | | | | | 0.8 | 12.7 | 4.76 | 5.16 |
| | | WNMG080412-SA | ● | ● | ● | ● | ● | | | | | | | | | | 1.2 | 12.7 | 4.76 | 5.16 |

YN



Rhombic, 25° with hole

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P Steel | ● | * | ● | * | | | | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M Stainless | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K Cast iron | | | | | | | | | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N Non-ferrous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S Superalloy | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H Hard material | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| Application | Chipbreaker | Designation | Coated | | | Coated cermet | Cermet | Dimension (mm) | | | | | | | | | | |
|-----------------------------|-------------|---------------|--------|-------|-------|---------------|--------|----------------|---|--|--|--|----|----|-----|-------|------|------|
| | | | T9125 | T9225 | T9235 | AH8015 | GT9530 | NS9530 | | | | | RE | IC | S | D1 | | |
| Finishing | ZF | YNMG160404-ZF | ● | ● | ● | ● | ● | | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | YNMG160408-ZF | ● | ● | ● | ● | ● | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |
| Finishing to medium cutting | ZM | YNMG160404-ZM | ● | ● | ● | ● | ● | | ● | | | | | | 0.4 | 9.525 | 4.76 | 3.81 |
| | | YNMG160408-ZM | ● | ● | ● | ● | ● | | ● | | | | | | 0.8 | 9.525 | 4.76 | 3.81 |

● : Line up

CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

| | | Material | | | | | | Dimension (mm) | | | | | | Edge prep. | | | | | | | | | |
|-------|-------------|----------|-------|-------|-------|-------|-------|----------------|-----|-----|-------|------|-----|------------|------------|---|---|----|----|----|---|-------|-------------|
| | | P | M | K | N | S | H | No. of corners | LE | RE | IC | S | D1 | Standard | Sharp edge | F | L | LF | LC | LT | H | Wiper | Chipbreaker |
| Shape | Designation | BXM10 | BXM20 | BXA10 | BXA20 | BX470 | BX480 | | | | | | | | | | | | | | | | |
| | | ● | ● | ● | ● | ● | ● | 2 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | | ● | ● | ● | ● | ● | ● | 2 | 2.3 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | | ● | ● | ● | ● | ● | ● | 2 | 2.3 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | | ● | ● | ● | ● | ● | ● | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | | ● | ● | ● | ● | ● | ● | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |
| | | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | ○ | | | | | |

● : Line up

Reference pages: External toolholder → **3-22 - 3-25** Internal toolholder → **4-16**

Grade 1
 Insert 2
 Ext. Toolholder 3
 Int. Toolholder 4
 Threading 5
 Grooving 6
 Endmill 7
 Drilling Tool 8
 Technical Reference 9

CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

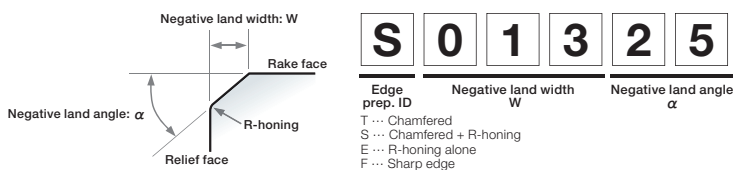
| Shape | Designation | Material | | | | | | Dimension (mm) | | | | | | Edge prep. | | | | | | | | | |
|-------|----------------|----------|-----------|-----------|-------------|------------|---------------|----------------|-----|-----|-------|------|-----|------------|------------|---|---|----|----|----|---|-------|-------------|
| | | P | M | K | N | S | H | No. of corners | LE | RE | IC | S | D1 | Standard | Sharp edge | F | L | LF | LC | LT | H | Wiper | Chipbreaker |
| | | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | Sintered metal | | | | | | | | | | | | | | | |
| | 2QP-CCMW060202 | | | | | | | 2 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-CCMW060204 | | | | | | | 2 | 2.3 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-CCMW09T304 | | | | | | | 2 | 2.3 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-CCMW09T308 | | | | | | | 2 | 2.2 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | Q-CCMW060204 | | | | | | | 1 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | Q-CCMW09T304 | | | | | | | 1 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 1QP-CCGW03X102 | | | | | | | 1 | 1.4 | 0.2 | 3.57 | 1.39 | 1.9 | | | | | | | | | | |
| | 1QP-CCGW03X104 | | | | | | | 1 | 1.3 | 0.4 | 3.57 | 1.39 | 1.9 | | | | | | | | | | |
| | 1QP-CCGW04T102 | | | | | | | 1 | 1.9 | 0.2 | 4.37 | 1.79 | 2.3 | | | | | | | | | | |
| | 1QP-CCGW04T104 | | | | | | | 1 | 1.8 | 0.4 | 4.37 | 1.79 | 2.3 | | | | | | | | | | |
| | 2QP-CPGW080202 | | | | | | | 2 | 2.3 | 0.2 | 7.94 | 2.38 | 3.4 | ○ | | | | | | | | | |
| | 2QP-CPGW080204 | | | | | | | 2 | 2.3 | 0.4 | 7.94 | 2.38 | 3.4 | ○ | | | | | | | | | |
| | 2QP-CPGW080208 | | | | | | | 2 | 2.2 | 0.8 | 7.94 | 2.38 | 3.4 | ○ | | | | | | | | | |
| | 2QP-CPGW090302 | | | | | | | 2 | 2.3 | 0.2 | 9.525 | 3.18 | 4.4 | ○ | | | | | | | | | |
| | 2QP-CPGW090304 | | | | | | | 2 | 2.3 | 0.4 | 9.525 | 3.18 | 4.4 | ○ | | | | | | | | | |
| | CPGA090204-QBN | | | | | | | 1 | 4.0 | 0.4 | 9.525 | 2.38 | 4.0 | ○ | | | | | | | | | |
| | CPGA090208-QBN | | | | | | | 1 | 3.8 | 0.8 | 9.525 | 2.38 | 4.0 | ○ | | | | | | | | | |

Q-CCMW: 2 pieces per package

● : Line up

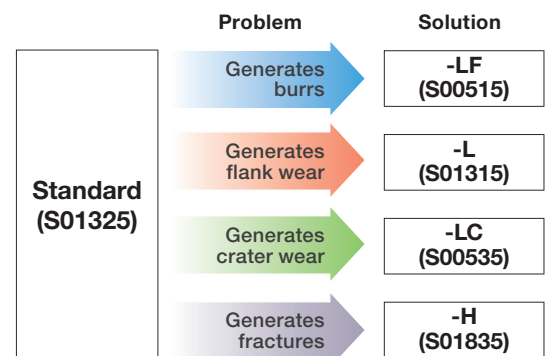
Edge preparation specification

| | BXM10 BXM20 | BXA20 | BX310 BX330 BX360 BX480 | BX470 |
|------------|----------------|--------|----------------------------------|--------|
| Standard | S01325 | S01325 | S00515 | T01315 |
| Sharp edge | - | - | - | F |
| -L | - | S01315 | - | - |
| -LF | - | S00515 | - | - |
| -LC | - | S00535 | - | - |
| -H | - | S01835 | - | - |
| Wiper | - | S01315 | - | - |



Selections of edge preparations

Allows you to select the most suited types of edge prep for your applications



Reference pages: CC... : External toolholder → 3-22 - 3-25 Internal toolholder → 4-16
 CP... : Internal toolholder → 4-17

CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

| | | P Steel | M Stainless | K Cast iron | N Non-ferrous | S Superalloy | H Hard material | Sintered metal | | | | | | | | | | | | | | | | |
|----------------------|--|---------|-------------|-------------|---------------|--------------|-----------------|----------------|----------------|----------------|-----|-------|------|-----|------------|----------|------------|----|----|----|---|-------|--------------|---|
| | | | | ●●✱ | | | ●● | ●●✱ | | | | | | | | | | | | | | | | |
| Shape | Designation | BXM10 | BXM20 | BXA10 | BXA20 | BX470 | BX480 | BX815 | Dimension (mm) | | | | | | Edge prep. | | | | | | | | | |
| | | | | | | | | | | No. of corners | LE | RE | IC | S | D1 | Standard | Sharp edge | | | | | Wiper | Chip breaker | |
| | | | | | | | | | | | | | | | | F | L | LF | LC | LT | H | | | |
| | 2QP-DCGW 2QP-DCGW070202 | ● | ● | ● | ● | | | | 2 | 2.7 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-DCGW070204 | ● | ● | ● | ● | ● | ● | | 2 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-DCGW070208 | | | ● | ● | ● | | | 2 | 2.1 | 0.8 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-DCGW11T301 | ● | ● | ● | ● | | | | 2 | 2.7 | 0.1 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-DCGW11T302 | ● | ● | ● | ● | | | | 2 | 2.7 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-DCGW11T304 | ● | ● | ● | ● | ● | | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-DCGW11T308 | ● | ● | ● | ● | ● | | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| 2QP-DCGW**-E | 2QP-DCGW11T304-E | | | | | | ● | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | ○ | | | | | | | | |
| | 2QP-DCGW**-L 2QP-DCGW070202-L | | | ● | ● | | | | 2 | 2.5 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | | ○ | | | | |
| | 2QP-DCGW070204-L | | | ● | ● | | | | 2 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | | ○ | | | | |
| | 2QP-DCGW070208-L | | | ● | ● | | | | 2 | 2.1 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | | ○ | | | | |
| | 2QP-DCGW11T302-L | | | ● | ● | | | | 2 | 2.5 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | | ○ | | | | |
| | 2QP-DCGW11T304-L | | | ● | ● | | | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | | ○ | | | | |
| | 2QP-DCGW11T308-L | | | ● | ● | | | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | | ○ | | | | |
| | 2QP-DCGW**-LF 2QP-DCGW070202-LF | | | ● | ● | | | | 2 | 2.5 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | | ○ | | | | |
| | 2QP-DCGW070204-LF | | | ● | ● | | | | 2 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | | ○ | | | | |
| | 2QP-DCGW070208-LF | | | ● | ● | | | | 2 | 2.1 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | | ○ | | | | |
| | 2QP-DCGW11T302-LF | | | ● | ● | | | | 2 | 2.5 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | | ○ | | | | |
| | 2QP-DCGW11T304-LF | | | ● | ● | | | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | | ○ | | | | |
| | 2QP-DCGW11T308-LF | | | ● | ● | | | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | | ○ | | | | |
| | 2QP-DCGW**-LC 2QP-DCGW070202-LC | | | ● | ● | | | | 2 | 2.5 | 0.2 | 6.35 | 2.38 | 2.8 | | | | | | | ○ | | | |
| | 2QP-DCGW070204-LC | | | ● | ● | | | | 2 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | | | ○ | | | |
| | 2QP-DCGW070208-LC | | | ● | ● | | | | 2 | 2.1 | 0.8 | 6.35 | 2.38 | 2.8 | | | | | | | ○ | | | |
| | 2QP-DCGW11T302-LC | | | ● | ● | | | | 2 | 2.5 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | | | ○ | | | |
| | 2QP-DCGW11T304-LC | | | ● | ● | | | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | | | ○ | | | |
| | 2QP-DCGW11T308-LC | | | ● | ● | | | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | | | ○ | | | |
| 2QP-DCGW**-LT | 2QP-DCGW11T304-LT | | | | | | ● | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | | | ○ | | | |
| | 2QP-DCGW**-H 2QP-DCGW11T302-H | | | | ● | | | | 2 | 2.5 | 0.2 | 9.525 | 3.97 | 4.4 | | | | | | | | ○ | | |
| | 2QP-DCGW11T304-H | | | | ● | | | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | | | | ○ | | |
| | 2QP-DCGW11T308-H | | | | ● | | | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | | | | ○ | | |
| | 2QP-DCGT**-HP 2QP-DCGT070204-HP | ● | ● | ● | | | | | 2 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | | | | | | | | | | ○ |
| | 2QP-DCGT11T304-HP | ● | ● | ● | | | | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | | | | | | | | | | ○ |
| | 2QP-DCGT11T308-HP | ● | ● | ● | | | | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | | | | | | | | | | ○ |




● : Line up

Reference pages: External toolholder → 3-12 - 3-17 Internal toolholder → 4-22, 4-23

- Grade 1
- Insert 2
- Ext. Toolholder 3
- Int. Toolholder 4
- Threading 5
- Grooving 6
- Endmill 7
- Drilling Tool 8
- Technical Reference 9


CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

| Shape | Designation | Material | | | | No. of corners | Dimension (mm) | | | | | Edge prep. | | | | | | Wiper | Chipbreaker | | |
|---|-----------------|----------|-------|-------|-------|----------------|----------------|-----|-------|------|-----|------------|------------|---|---|----|----|-------|-------------|----|---|
| | | P | M | K | N | | LE | RE | IC | S | D1 | Standard | Sharp edge | E | L | LF | LC | | | LT | H |
| | | BX310 | BX330 | BX360 | BX470 | | | | | | | | | | | | | | | | |
|  | 2QP-DCMW070202 | ● | ● | ● | | 2 | 2.7 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-DCMW070204 | ● | ● | ● | | 2 | 2.5 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 2QP-DCMW11T302 | ● | ● | ● | | 2 | 2.7 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-DCMW11T304 | ● | ● | ● | | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-DCMW11T308 | ● | ● | ● | | 2 | 2.1 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
|  | 2QP-DCGW11T302F | | | | ● | 2 | 2.7 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
| | 2QP-DCGW11T304F | | | | ● | 2 | 2.5 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |
|  | Q-DCMW070204 | | ● | | | 1 | 2.1 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | Q-DCMW11T304 | | ● | | | 1 | 2.1 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | |

Q-DCMW: 2 pieces per package

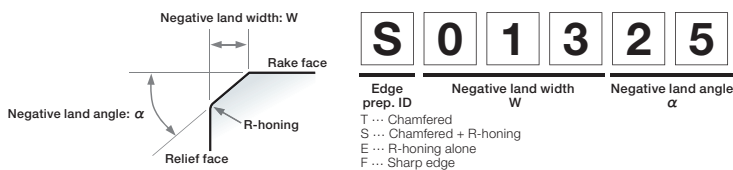
● : Line up

| Shape | Designation | Material | | | | No. of corners | Dimension (mm) | | | | | Edge prep. | | | | | | Wiper | Chipbreaker | | |
|---|----------------|----------|-------|---|---|----------------|----------------|-----|------|------|-----|------------|------------|---|---|----|----|-------|-------------|----|---|
| | | P | M | K | N | | LE | RE | IC | S | D1 | Standard | Sharp edge | E | L | LF | LC | | | LT | H |
| | | BX310 | BX470 | | | | | | | | | | | | | | | | | | |
|  | 1QP-EPGW03X102 | ● | ● | | | 1 | 1.4 | 0.2 | 3.57 | 1.39 | 1.9 | | | | | | | | | | |
| | 1QP-EPGW03X104 | ● | ● | | | 1 | 1.3 | 0.4 | 3.57 | 1.39 | 1.9 | | | | | | | | | | |
| | 1QP-EPGW040102 | ● | ● | | | 1 | 1.7 | 0.2 | 3.97 | 1.59 | 2.3 | | | | | | | | | | |
| | 1QP-EPGW040104 | ● | ● | | | 1 | 1.6 | 0.4 | 3.97 | 1.59 | 2.3 | | | | | | | | | | |

● : Line up

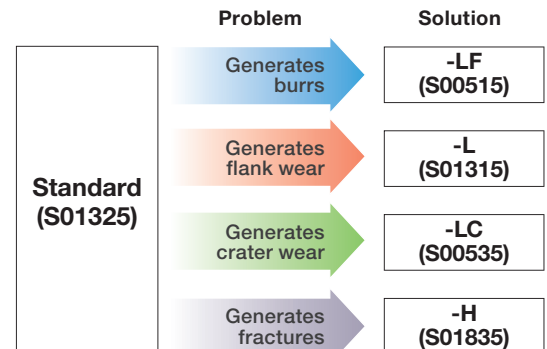
Edge preparation specification

| | BXM10 BXM20 | BXA20 | BX310 BX330 BX360 BX480 | BX470 |
|------------|----------------|--------|----------------------------------|--------|
| Standard | S01325 | S01325 | S00515 | T01315 |
| Sharp edge | - | - | - | F |
| -L | - | S01315 | - | - |
| -LF | - | S00515 | - | - |
| -LC | - | S00535 | - | - |
| -H | - | S01835 | - | - |
| Wiper | - | S01315 | - | - |



Selections of edge preparations

Allows you to select the most suited types of edge prep for your applications










Reference pages: DC...: External toolholder → 3-12, 3-17
EP... : Internal toolholder → 4-13, 4-14

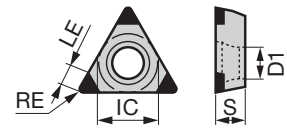
Internal toolholder → 4-22, 4-23

CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

| Shape | Designation | Material | | | | | | Dimension (mm) | | | | | Edge prep. | | | | | | Chipbreaker | | | | |
|---|--|----------|-----------|-----------|-------------|------------|---------------|----------------|-----|-----|------|------|------------|----------|------------|---|---|----|-------------|----|----|---|-------|
| | | P | M | K | N | S | H | No. of corners | LE | RE | IC | S | D1 | Standard | Sharp edge | E | L | LF | | CL | LT | H | Wiper |
| | | Steel | Stainless | Cast iron | Non-ferrous | Superalloy | Hard material | | | | | | | | | | | | | | | | |
|  | 3QP-TPGW 3QP-TPGW080202 | | | | | | | 3 | 2.2 | 0.2 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | |
| | 3QP-TPGW080204 | ● | ● | ● | ● | | | 3 | 2.2 | 0.4 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | |
| | 3QP-TPGW080208 | | | ● | ● | | | 3 | 1.9 | 0.8 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | |
| | 3QP-TPGW090202 | | | ● | ● | | | 3 | 2.2 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | |
| | 3QP-TPGW090204 | ● | ● | ● | ● | | | 3 | 2.2 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | |
| | 3QP-TPGW090208 | | | ● | ● | | | 3 | 1.9 | 0.8 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | |
| | 3QP-TPGW110202 | | ● | ● | ● | | | 3 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 3QP-TPGW110204 | ● | ● | ● | ● | ● | | 3 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 3QP-TPGW110208 | | | ● | ● | ● | | 3 | 1.9 | 0.8 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | |
| | 3QP-TPGW110302 | | ● | ● | ● | | ● | 3 | 2.3 | 0.2 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | 3QP-TPGW110304 | ● | ● | ● | ● | ● | ● | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | 3QP-TPGW110308 | ● | ● | ● | ● | ● | ● | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | 3QP-TPGW130302 | | ● | ● | ● | | ● | 3 | 2.3 | 0.2 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | 3QP-TPGW130304 | ● | ● | ● | ● | | ● | 3 | 2.2 | 0.4 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | 3QP-TPGW130308 | | | ● | ● | | | 3 | 1.9 | 0.8 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | | |
|  | 3QP-TPGW**F 3QP-TPGW110304F | | | | | ● | | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | 3QP-TPGW110308F | | | | | ● | | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | | |
|  | 3QP-TPGW**-L 3QP-TPGW110302-L | | | ● | ● | | | 3 | 2.2 | 0.2 | 6.35 | 3.18 | 3.4 | | | ○ | | | | | | | |
| | 3QP-TPGW110304-L | | | ● | ● | | | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | | | ○ | | | | | | | |
| | 3QP-TPGW110308-L | | | ● | ● | | | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | | | ○ | | | | | | | |
|  | 3QP-TPGW**-LF 3QP-TPGW110302-LF | | | ● | ● | | | 3 | 2.2 | 0.2 | 6.35 | 3.18 | 3.4 | | | | ○ | | | | | | |
| | 3QP-TPGW110304-LF | | | ● | ● | | | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | | | | ○ | | | | | | |
| | 3QP-TPGW110308-LF | | | ● | ● | | | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | | | | ○ | | | | | | |
|  | 3QP-TPGW**-LC 3QP-TPGW110302-LC | | | ● | ● | | | 3 | 2.2 | 0.2 | 6.35 | 3.18 | 3.4 | | | | | ○ | | | | | |
| | 3QP-TPGW110304-LC | | | ● | ● | | | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | | | | | ○ | | | | | |
| | 3QP-TPGW110308-LC | | | ● | ● | | | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | | | | | ○ | | | | | |
|  | 3QP-TPGW**-H 3QP-TPGW110302-H | | | | | ● | | 3 | 2.2 | 0.2 | 6.35 | 3.18 | 3.4 | | | | | | | | ○ | | |
| | 3QP-TPGW110304-H | | | | | ● | | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | | | | | | | | ○ | | |
| | 3QP-TPGW110308-H | | | | | ● | | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | | | | | | | | ○ | | |
|  | 3QP-TPGT 3QP-TPGT110304-HP | ● | ● | ● | | | | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | | | | | | | | | ○ | |
| | 3QP-TPGT110308-HP | ● | ● | ● | | | | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | | | | | | | | | ○ | |

● : Line up



Reference pages: Internal toolholder → 4-19, 4-20

Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

CBN Insert POSITIVE TYPE

● : Continuous cutting
 ● : Light interrupted cutting
 ✱ : Heavy interrupted cutting

| Material | P | M | K | N | S | H | Other |
|----------------|---|---|---|---|---|---|-------|
| Steel | ● | ● | ● | ● | ● | ● | ● |
| Stainless | ● | ● | ● | ● | ● | ● | ● |
| Cast iron | ● | ● | ● | ● | ● | ● | ● |
| Non-ferrous | ● | ● | ● | ● | ● | ● | ● |
| Superalloy | ● | ● | ● | ● | ● | ● | ● |
| Hard material | ● | ● | ● | ● | ● | ● | ● |
| Sintered metal | ● | ● | ● | ● | ● | ● | ● |

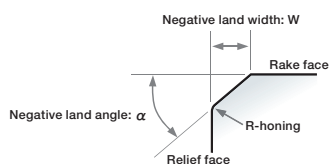


| Shape | Designation | BXA10 | BXA20 | BX310 | BX330 | BX360 | Dimension (mm) | | | | | Edge prep. | | | | | | | | | |
|--------------|-----------------------------------|-------|-------|-------|-------|-------|----------------|-----|------|------|------|------------|----------|------------|---|---|-----|-----|---|-------|--------------|
| | | | | | | | No. of corners | LE | RE | IC | S | D1 | Standard | Sharp edge | E | L | LFL | CLT | H | Wiper | Chip breaker |
| | | | | | | | | | | | | | | | | | | | | | |
| | 3QP-TPMW 3QP-TPMW080204 | | | ● | ● | ● | 3 | 2.2 | 0.4 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | |
| | 3QP-TPMW090202 | | | ● | ● | | 3 | 2.3 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | 3QP-TPMW090204 | | | ● | ● | ● | 3 | 2.2 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | 3QP-TPMW110202 | | | ● | ● | ● | 3 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 3QP-TPMW110204 | | | ● | ● | ● | 3 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 3QP-TPMW110302 | | | ● | ● | ● | 3 | 2.3 | 0.2 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | |
| | 3QP-TPMW110304 | | | ● | ● | ● | 3 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | |
| | 3QP-TPMW110308 | | | ● | ● | ● | 3 | 1.9 | 0.8 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | |
| | 3QP-TPMW130302 | | | ● | ● | ● | 3 | 2.3 | 0.2 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | |
| | 3QP-TPMW130304 | | | ● | ● | ● | 3 | 2.2 | 0.4 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | |
| | 3QP-TCGW 3QP-TCGW090202 | ● | ● | | | | 3 | 2.2 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | 3QP-TCGW090204 | ● | ● | | | | 3 | 2.2 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | 3QP-TCGW090208 | ● | ● | | | | 3 | 1.9 | 0.8 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | 3QP-TCGW110202 | ● | ● | | | | 3 | 2.2 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 3QP-TCGW110204 | ● | ● | | | | 3 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 3QP-TCGW110208 | ● | ● | | | | 3 | 1.9 | 0.8 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | Q-TPMW Q-TPMW080204 | | | | ● | | 1 | 2.2 | 0.4 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | |
| | Q-TPMW090202 | | | | ● | | 1 | 2.4 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | Q-TPMW090204 | | | | ● | | 1 | 2.3 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | Q-TPMW110202 | | | | ● | | 1 | 2.4 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | Q-TPMW110204 | | | | ● | | 1 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | Q-TPMW110304 | | | | ● | | 1 | 2.2 | 0.4 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | |
| | Q-TPMW110308 | | | | ● | | 1 | 2.0 | 0.8 | 6.35 | 3.18 | 3.4 | ○ | | | | | | | | |
| | Q-TPMW130302 | | | | ● | | 1 | 2.4 | 0.2 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | |
| Q-TPMW130304 | | | | ● | | 1 | 2.3 | 0.4 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | | |
| | TPGW** -QBN TPGW090202-QBN | | | | ● | | 1 | 3.3 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | TPGW090204-QBN | | | | ● | | 1 | 3.2 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | |
| | TPGW110202-QBN | | | | ● | | 1 | 3.9 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | TPGW110204-QBN | | | | ● | | 1 | 3.7 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | TPGW130302-QBN | | | | ● | | 1 | 3.9 | 0.2 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | |
| | TPGW130304-QBN | | | | ● | | 1 | 3.7 | 0.4 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | |
| | TPGA** -QBN TPGA090202-QBN | | | | ● | | 1 | 3.1 | 0.2 | 5.56 | 2.38 | 3.2 | ○ | | | | | | | | |
| | TPGA090204-QBN | | | | ● | | 1 | 2.9 | 0.4 | 5.56 | 2.38 | 3.2 | ○ | | | | | | | | |
| | TPGA110202-QBN | | | | ● | | 1 | 3.9 | 0.2 | 6.35 | 2.38 | 3.0 | ○ | | | | | | | | |
| | TPGA110204-QBN | | | | ● | | 1 | 3.7 | 0.4 | 6.35 | 2.38 | 3.0 | ○ | | | | | | | | |
| | TPGA110302-QBN | | | | ● | | 1 | 3.9 | 0.2 | 6.35 | 3.18 | 3.0 | ○ | | | | | | | | |
| | TPGA110304-QBN | | | | ● | | 1 | 3.7 | 0.4 | 6.35 | 3.18 | 3.0 | ○ | | | | | | | | |

● : Line up

Edge preparation specification

| | BXM10 BXM20 | BXA20 | BX310 BX330 BX360 BX480 | BX470 |
|------------|----------------|--------|----------------------------------|--------|
| Standard | S01325 | S01325 | S00515 | T01315 |
| Sharp edge | - | - | - | F |
| -L | - | S01315 | - | - |
| -LF | - | S00515 | - | - |
| -LC | - | S00535 | - | - |
| +H | - | S01835 | - | - |
| Wiper | - | S01315 | - | - |



| Edge prep. ID | Negative land width W | Negative land angle alpha |
|---------------|-----------------------|---------------------------|
| S | 0 | 1 |
| 3 | 2 | 5 |

T ... Chamfered
S ... Chamfered + R-honing
E ... R-honing alone
F ... Sharp edge

Reference pages: Internal toolholder → [4-19](#), [4-20](#)

CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

| Shape | Designation | Material | | | | | | Dimension (mm) | | | | | Edge prep. | | | | | Wiper | Chipbreaker | | | |
|------------------|--|--------------------------------------|-------|-------|-------|-------|-------|----------------|-----|-----|-------|------|------------|------------|---|---|----|-------|-------------|----|----|---|
| | | P | M | K | N | S | H | No. of corners | LE | RE | IC | S | D1 | Standard | F | L | LF | | | LC | LT | H |
| | | BXM10 | BXM20 | BXA10 | BXA20 | BX310 | BX330 | BX360 | LE | RE | IC | S | D1 | Sharp edge | F | L | LF | | | LC | LT | H |
| | 2QP-VBGW 2QP-VBGW110202 | | ● | ● | | | | 2 | 3.1 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW110204 | | ● | ● | | | | 2 | 3.1 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW110208 | | ● | ● | | | | 2 | 2.2 | 0.8 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW110301 | ● | ● | ● | ● | | | 2 | 3.1 | 0.1 | 6.35 | 3.18 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW110302 | ● | ● | ● | ● | | | 2 | 3.1 | 0.2 | 6.35 | 3.18 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW110304 | ● | ● | ● | ● | | | 2 | 3.1 | 0.4 | 6.35 | 3.18 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW110308 | ● | ● | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 3.18 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBGW160402 | ● | ● | ● | ● | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | |
| | 2QP-VBGW160404 | ● | ● | ● | ● | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | |
| | 2QP-VBGW160408 | ● | ● | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | |
| | 2QP-VBGW160412 | | | ● | ● | | | 2 | 3.0 | 1.2 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | |
| | | 2QP-VBGW**-L 2QP-VBGW110302-L | | | ● | ● | | | 2 | 3.1 | 0.2 | 6.35 | 3.18 | 2.8 | | | ○ | | | | | |
| 2QP-VBGW110304-L | | | | ● | ● | | | 2 | 3.1 | 0.4 | 6.35 | 3.18 | 2.8 | | | ○ | | | | | | |
| 2QP-VBGW110308-L | | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 3.18 | 2.8 | | | ○ | | | | | | |
| 2QP-VBGW160402-L | | | | ● | ● | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | | | ○ | | | | | | |
| 2QP-VBGW160404-L | | | | ● | ● | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | | | ○ | | | | | | |
| 2QP-VBGW160408-L | | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | ○ | | | | | | |
| | 2QP-VBGW**-LF 2QP-VBGW110302-LF | | | ● | ● | | | 2 | 3.1 | 0.2 | 6.35 | 3.18 | 2.8 | | | | ○ | | | | | |
| | 2QP-VBGW110304-LF | | | ● | ● | | | 2 | 3.1 | 0.4 | 6.35 | 3.18 | 2.8 | | | | ○ | | | | | |
| | 2QP-VBGW110308-LF | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 3.18 | 2.8 | | | | ○ | | | | | |
| | 2QP-VBGW160402-LF | | | ● | ● | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | | | | ○ | | | | | |
| | 2QP-VBGW160404-LF | | | ● | ● | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | | | | ○ | | | | | |
| | 2QP-VBGW160408-LF | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | | ○ | | | | | |
| | 2QP-VBGW**-LC 2QP-VBGW110302-LC | | | ● | ● | | | 2 | 3.1 | 0.2 | 6.35 | 3.18 | 2.8 | | | | | ○ | | | | |
| | 2QP-VBGW110304-LC | | | ● | ● | | | 2 | 3.1 | 0.4 | 6.35 | 3.18 | 2.8 | | | | | ○ | | | | |
| | 2QP-VBGW110308-LC | | | ● | ● | | | 2 | 2.2 | 0.8 | 6.35 | 3.18 | 2.8 | | | | | ○ | | | | |
| | 2QP-VBGW160402-LC | | | ● | ● | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | | | | | ○ | | | | |
| | 2QP-VBGW160404-LC | | | ● | ● | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | | | | | ○ | | | | |
| | 2QP-VBGW160408-LC | | | ● | ● | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | | | ○ | | | | |
| | 2QP-VBGW**-H 2QP-VBGW160402-H | | | ● | | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | |
| | 2QP-VBGW160404-H | | | ● | | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | |
| | 2QP-VBGW160408-H | | | ● | | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | |
| | 2QP-VBGT**-HP 2QP-VBGT110304-HP | ● | ● | ● | | | | 2 | 3 | 0.4 | 6.35 | 3.18 | 2.8 | | | | | | | ○ | | |
| | 2QP-VBGT110308-HP | ● | ● | ● | | | | 2 | 2.2 | 0.8 | 6.35 | 3.18 | 2.8 | | | | | | | ○ | | |
| | 2QP-VBGT160404-HP | ● | ● | ● | | | | 2 | 3 | 0.4 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | |
| | 2QP-VBGT160408-HP | ● | ● | ● | | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | |
| | 2QP-VBMW 2QP-VBMW110304 | | | | ● | ● | ● | 2 | 3.1 | 0.4 | 6.35 | 3.18 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBMW110308 | | | | ● | ● | ● | 2 | 2.2 | 0.8 | 6.35 | 3.18 | 2.8 | ○ | | | | | | | | |
| | 2QP-VBMW160404 | | | | ● | ● | ● | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | |
| | 2QP-VBMW160408 | | | | ● | ● | ● | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | |

● : Line up

Reference pages: External toolholder → 3-29 - 3-32 Internal toolholder → 4-26

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

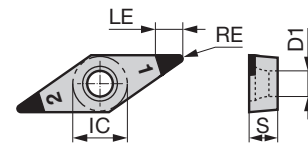
Technical Reference

CBN Insert POSITIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

Positive

Negative



| | | | | | | | | | | | | | | | |
|---|----------------|----|----|----|----|----|----|----|----|----|----|----|--|--|--|
| P | Steel | | | | | | | | | | | | | | |
| M | Stainless | | | | | | | | | | | | | | |
| K | Cast iron | | | | | | | | | | | | | | |
| N | Non-ferrous | | | | | | | | | | | | | | |
| S | Superalloy | | | | | | | | | ●● | | | | | |
| H | Hard material | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | ●● | | | |
| | Sintered metal | | | | | | | | | | | | | | |

PCD / CBN

C

D

E

T

V

W

Y

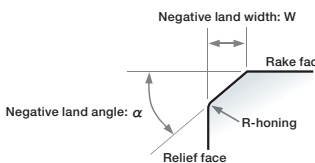
OTHERS

| Shape | Designation | BXM10 | BXM20 | BXA10 | BXA20 | BX815 | BX330 | BX360 | Dimension (mm) | | | | | | Edge prep. | | | | | | | | | |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|----------------|-----|-----|-------|------|-----|------------|------------|---|---|----|----|----|---|-------|--------------|
| | | | | | | | | | No. of corners | LE | RE | IC | S | D1 | Standard | Sharp edge | E | L | LF | LC | LT | H | Wiper | Chip breaker |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2QP-VCGW160408-E | | | | | ● | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | |
| | 2QP-VCGW160412-E | | | | | ● | | | 2 | 3 | 1.2 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | |
| | 2QP-VCGW160408-LT | | | | | ● | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | | |
| | 2QP-VCGW160412-LT | | | | | ● | | | 2 | 3 | 1.2 | 9.525 | 4.76 | 4.4 | | | | | | | ○ | | | |
| | 2QP-VCGW080202 | | | | ●● | | | | 2 | 3.1 | 0.2 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | |
| | 2QP-VCGW080204 | | | | ●● | | | | 2 | 3.1 | 0.4 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | |
| | 2QP-VCGW080208 | | | | ●● | | | | 2 | 2.2 | 0.8 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | |
| | 2QP-VCGW160402 | | | | ●● | | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | |
| | 2QP-VCGW160404 | ●● | ●● | ●● | ●● | | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | |
| | 2QP-VCGW160408 | | | | ●● | | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | |
| | 2QP-VCGW160402-H | | | | ●● | | | | 2 | 3.1 | 0.2 | 9.525 | 4.76 | 4.4 | | | | | | | | ○ | | |
| | 2QP-VCGW160404-H | | | | ●● | | | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | | | | | | | | ○ | | |
| | 2QP-VCGW160408-H | | | | ●● | | | | 2 | 2.2 | 0.8 | 9.525 | 4.76 | 4.4 | | | | | | | | ○ | | |
| | 2QP-VCMW160404 | | | | | | ●● | | 2 | 3.1 | 0.4 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | |

● : Line up

Edge preparation specification

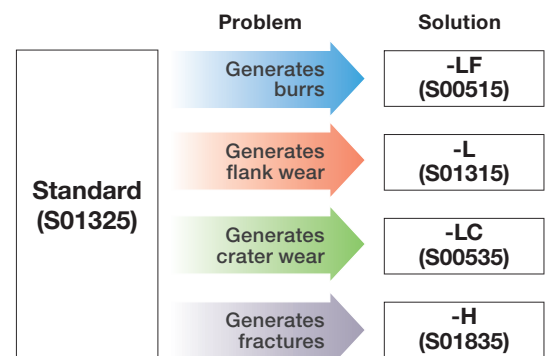
| | BXM10 BXM20 | BXA20 | BX310 BX330 BX360 BX480 | BX470 |
|------------|----------------|--------|----------------------------------|--------|
| Standard | S01325 | S01325 | S00515 | T01315 |
| Sharp edge | - | - | - | F |
| -L | - | S01315 | - | - |
| -LF | - | S00515 | - | - |
| -LC | - | S00535 | - | - |
| -H | - | S01835 | - | - |
| Wiper | - | S01315 | - | - |



| | | | | | |
|---|----------|----------|--------------------------|----------|----------|
| S | 0 | 1 | 3 | 2 | 5 |
| Edge prep. ID | | | | | |
| Negative land width W | | | Negative land angle α | | |
| T ... Chamfered S ... Chamfered + R-honing E ... R-honing alone F ... Sharp edge | | | | | |

Selections of edge preparations

Allows you to select the most suited types of edge prep for your applications



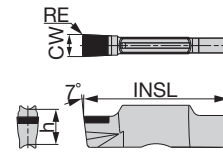
Reference pages: External toolholder → 3-37 Internal toolholder → 4-27, 4-28

CBN Insert GROOVING INSERT

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

For TungCut

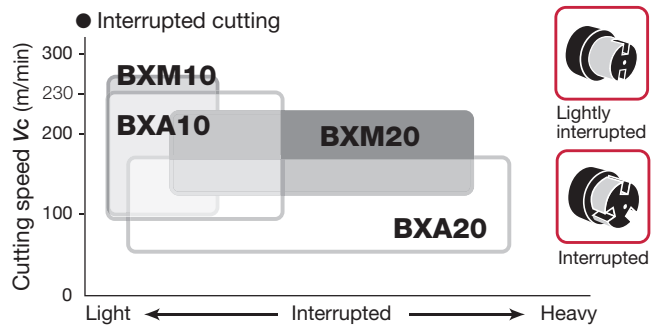
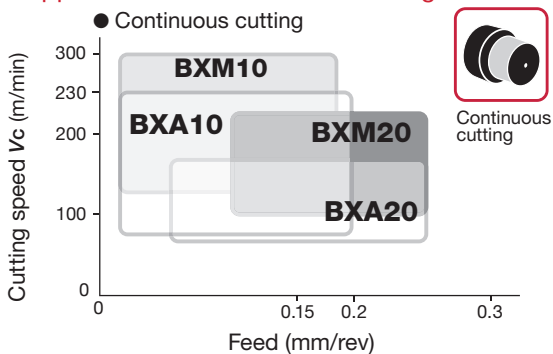
| | | | | | | | | | | | | | | | | | | | | |
|----------|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Steel | | | | | | | | | | | | | | | | | | | |
| M | Stainless | | | | | | | | | | | | | | | | | | | |
| K | Cast iron | | | | | | | | | | | | | | | | | | | |
| N | Non-ferrous | | | | | | | | | | | | | | | | | | | |
| S | Superalloy | | | | | | | | | | | | | | | | | | | |
| H | Hard material | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |



| Shape | Designation | BX360 | Dimension (mm) | | | | | Edge prep. | | |
|-------|-----------------------|-------|----------------|----------|-----|------|-----|------------|---|---|
| | | | Seat size | CW±0.025 | RE | INSL | h | No symbol | S | H |
| | SGN SGN200-020 | ● | 2 | 2 | 0.2 | 20 | 5 | ○ | | |
| | SGN200-020-S | ● | 2 | 2 | 0.2 | 20 | 5 | | ○ | |
| | SGN200-020-H | ● | 2 | 2 | 0.2 | 20 | 5 | | | ○ |
| | SGN300-020 | ● | 3 | 3 | 0.2 | 20 | 5 | ○ | | |
| | SGN300-020-S | ● | 3 | 3 | 0.2 | 20 | 5 | | ○ | |
| | SGN300-020-H | ● | 3 | 3 | 0.2 | 20 | 5 | | | ○ |
| | SGN400-020 | ● | 4 | 4 | 0.2 | 20 | 5 | ○ | | |
| | SGN400-020-S | ● | 4 | 4 | 0.2 | 20 | 5 | | ○ | |
| | SGN400-020-H | ● | 4 | 4 | 0.2 | 20 | 5 | | | ○ |
| | SGN500-020-S | ● | 5 | 5 | 0.2 | 25 | 5.5 | | ○ | |
| | SGN500-020-H | ● | 5 | 5 | 0.2 | 25 | 5.5 | | | ○ |

● : Line up

Application area of coated T-CBN grades



Reference pages: SGN...: Toolholder → 6-12 - 6-16

Grade 1

Insert 2

Ext. Toolholder 3

Int. Toolholder 4

Threading 5

Grooving 6

Endmill 7

Drilling Tool 8

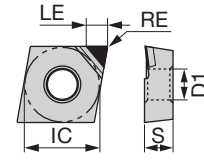
Technical Reference 9

PCD Insert

- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

Positive type
with rake

| | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Steel | | | | | | | | | | | | | | | | | | | |
| M | Stainless | | | | | | | | | | | | | | | | | | | |
| K | Cast iron | | | | | | | | | | | | | | | | | | | |
| N | Non-ferrous | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| S | Superalloy | | | | | | | | | | | | | | | | | | | |
| H | Hard material | | | | | | | | | | | | | | | | | | | |



| Shape | Designation | DX110 | DX120 | DX140 | DX160 | No. of corners | Dimension (mm) | | | | | Edge prep. | | | Rake angle |
|----------------|----------------------------------|-------|-------|-------|-------|----------------|----------------|------|-------|------|-----|------------|--|---|------------|
| | | | | | | | LE | RE | IC | S | D1 | Sharp edge | | | |
| | CCMT**-DIA CCMT060202-DIA | | ● | | | 1 | 2.4 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | CCMT060204-DIA | | ● | | | 1 | 2.4 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | CCMT09T302-DIA | | ● | | | 1 | 2.4 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | ○ |
| | CCMT09T304-DIA | | ● | | | 1 | 2.4 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | ○ |
| | 1QP-CCMT060204 | ● | | | | 1 | 2.4 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | 1QP-CCMT09T304 | ● | | | | 1 | 2.4 | 0.4 | 6.35 | 3.97 | 4.4 | ○ | | | ○ |
| | DCMT**-DIA DCMT070202-DIA | | ● | | | 1 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | DCMT070204-DIA | | ● | | | 1 | 2.1 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | DCMT11T302-DIA | | ● | | | 1 | 3.2 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | ○ |
| | DCMT11T304-DIA | | ● | | | 1 | 3.0 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | ○ |
| | TCMT**-DIA TCMT080202-DIA | | ● | | | 1 | 2.2 | 0.2 | 4.76 | 2.38 | 2.7 | ○ | | | ○ |
| | TCMT080204-DIA | | ● | | | 1 | 2.0 | 0.4 | 4.76 | 2.38 | 2.7 | ○ | | | ○ |
| | TCMT110202-DIA | | ● | | | 1 | 2.4 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | TCMT110204-DIA | | ● | | | 1 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | ○ |
| | TCMT110302-DIA | | ● | | | 1 | 2.4 | 0.2 | 6.35 | 3.18 | 2.8 | ○ | | | ○ |
| | TCMT110304-DIA | | ● | | | 1 | 2.2 | 0.4 | 6.35 | 3.18 | 2.8 | ○ | | | ○ |
| 1QP-TCMT110304 | ● | | | | 1 | 2.2 | 0.4 | 6.35 | 3.18 | 2.8 | ○ | | | ○ | |
| | VCMT**-DIA VCMT160402-DIA | | ● | | | 1 | 4.8 | 0.2 | 9.525 | 4.76 | 4.4 | ○ | | | ○ |
| | VCMT160404-DIA | | ● | | | 1 | 4.4 | 0.4 | 9.525 | 4.76 | 4.4 | ○ | | | ○ |
| | CCGW**-DIA CCGW060200-DIA | | | ● | | 1 | 2.4 | 0.05 | 6.35 | 2.38 | 2.8 | ○ | | | |
| | CCGW060202-DIA | | | ● | | 1 | 2.4 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | |
| | CCGW060204-DIA | | | ● | | 1 | 2.4 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | |
| | CCGW09T302-DIA | | | ● | | 1 | 3.5 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | |
| | CCGW09T304-DIA | | | ● | ● | 1 | 3.5 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | |
| | CCGW09T308-DIA | | | ● | | 1 | 3.4 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | |
| | CPGA**-DIA CPGA080202-DIA | | | ● | | 1 | 2.4 | 0.2 | 9.525 | 2.38 | 4.0 | ○ | | | |
| | CPGA090204-DIA | | | ● | | 1 | 3.5 | 0.4 | 9.525 | 2.38 | 4.0 | ○ | | | |
| | DCGW**-DIA DCGW070200-DIA | | | ● | | 1 | 2.4 | 0.05 | 6.35 | 2.38 | 2.8 | ○ | | | |
| | DCGW070202-DIA | | ● | ● | | 1 | 2.3 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | |
| | DCGW070204-DIA | | | ● | | 1 | 2.1 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | |
| | DCGW11T302-DIA | | | ● | | 1 | 3.2 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | |
| | DCGW11T304-DIA | | | ● | | 1 | 3.0 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | |
| | DCGW11T308-DIA | | | ● | | 1 | 2.7 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | |
| | EPGW**-DIA EPGW040102-DIA | | | ● | | 1 | 2.0 | 0.2 | 3.97 | 1.59 | 2.3 | ○ | | | |
| | EPGW040104-DIA | | | ● | | 1 | 1.9 | 0.4 | 3.97 | 1.59 | 2.3 | ○ | | | |

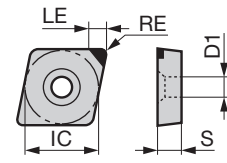
● : Line up

PCD Insert

- : Continuous cutting
- ◐ : Light interrupted cutting
- ◑ : Heavy interrupted cutting

Positive type

| | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P | Steel | | | | | | | | | | | | | | | | | | | |
| M | Stainless | | | | | | | | | | | | | | | | | | | |
| K | Cast iron | | | | | | | | | | | | | | | | | | | |
| N | Non-ferrous | ● | ● | ● | | | | | | | | | | | | | | | | |
| S | Superalloy | | | | | | | | | | | | | | | | | | | |
| H | Hard material | | | | | | | | | | | | | | | | | | | |



| Shape | Designation | DX120 | DX140 | No. of corners | Dimension (mm) | | | | | Edge prep. | | | | | | | | | | |
|----------------|----------------------------------|-------|-------|----------------|----------------|-------|-------|------|-----|------------|--|--|--|--|--|--|--|--|--|--|
| | | | | | LE | RE | IC | S | D1 | Sharp edge | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | TPGA**-DIA TPGA090202-DIA | | ● | 1 | 2.4 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | | |
| | TPGA090204-DIA | | ● | 1 | 2.2 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | | |
| | TPGA110202-DIA | | ● | 1 | 2.4 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | | |
| | TPGA110204-DIA | | ● | 1 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | | |
| | TPGA110302-DIA | | ● | 1 | 2.4 | 0.2 | 6.35 | 3.18 | 3.0 | ○ | | | | | | | | | | |
| | TPGA110304-DIA | | ● | 1 | 2.2 | 0.4 | 6.35 | 3.18 | 3.0 | ○ | | | | | | | | | | |
| | TPGA110308-DIA | | ● | 1 | 2.9 | 0.8 | 6.35 | 3.18 | 3.0 | ○ | | | | | | | | | | |
| | TPGA160302-DIA | | ● | 1 | 3.3 | 0.2 | 9.525 | 3.18 | 4.0 | ○ | | | | | | | | | | |
| | TPGA160304-DIA | | ● | 1 | 3.2 | 0.4 | 9.525 | 3.18 | 4.0 | ○ | | | | | | | | | | |
| | TPGA160308-DIA | | ● | 1 | 2.9 | 0.8 | 9.525 | 3.18 | 4.0 | ○ | | | | | | | | | | |
| | TPGW**-DIA TPGW080202-DIA | | ● | 1 | 2.4 | 0.2 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | | |
| | TPGW080204-DIA | | ● | 1 | 2.3 | 0.4 | 4.76 | 2.38 | 2.3 | ○ | | | | | | | | | | |
| | TPGW090202-DIA | ● | ● | 1 | 2.4 | 0.2 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | | |
| | TPGW090204-DIA | | ● | 1 | 2.2 | 0.4 | 5.56 | 2.38 | 2.5 | ○ | | | | | | | | | | |
| | TPGW110202-DIA | ● | ● | 1 | 2.4 | 0.2 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | | |
| | TPGW110204-DIA | | ● | 1 | 2.2 | 0.4 | 6.35 | 2.38 | 2.8 | ○ | | | | | | | | | | |
| | TPGW130302-DIA | ● | ● | 1 | 3.3 | 0.2 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | | | |
| | TPGW130304-DIA | | ● | 1 | 3.2 | 0.4 | 7.94 | 3.18 | 3.4 | ○ | | | | | | | | | | |
| | TPGW16T302-DIA | | ● | 1 | 3.3 | 0.2 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | | |
| | TPGW16T304-DIA | | ● | 1 | 3.2 | 0.4 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | | |
| TPGW16T308-DIA | | ● | 1 | 2.9 | 0.8 | 9.525 | 3.97 | 4.4 | ○ | | | | | | | | | | | |
| | VCGW**-DIA VCGW160402-DIA | | ● | 1 | 4.8 | 0.2 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | | |
| | VCGW160404-DIA | | ● | 1 | 4.4 | 0.4 | 9.525 | 4.76 | 4.4 | ○ | | | | | | | | | | |

● : Line up

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference



3. External Toolholders



Main products



MINI FORCE

Economical double-sided inserts with excellent sharpness



DXGU **3-18**
 WXGU **3-26**
 VXGU **3-32**



J-SERIES

Stepped-head off-set toolholder

DC** **3-19** WXGU **3-17**
 DXGU **3-19** VB** **3-30**
 CC** **3-24** VXGU **3-34**



J-SERIES

Round shank toolholder series

DC** **3-17**
 DXGU **3-21**
 VXGU **3-35**



J-SERIES

Interchangeable head toolholder

DC** **3-12** WXGU **3-26**
 DXGU **3-18** VB** **3-29**
 CC** **3-22** VXGU **3-32**
 Shank **3-60**



J-SERIES

Back turning toolholder

3-57

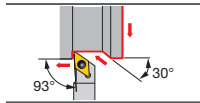
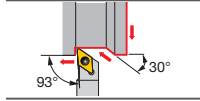
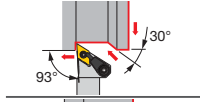
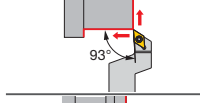
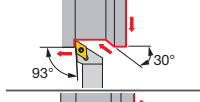
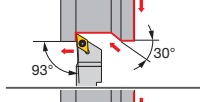
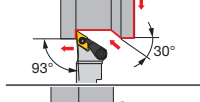
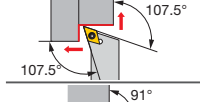
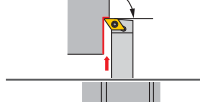
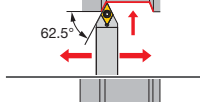
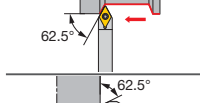
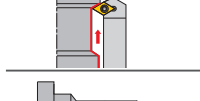
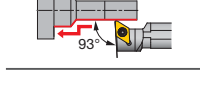
Parts for coolant

3-61

Quick Guide

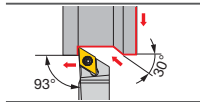
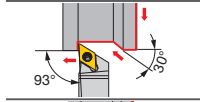
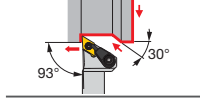
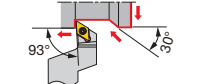


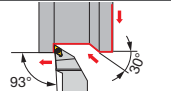
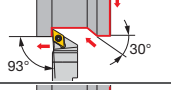

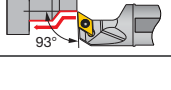
For DC** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|-------------------------|------------------|----------------|---------|-------------|
|  | 93° | JSDJ2CR/L | DC**07 DC**11 | Screw-on | Without | 3-12 |
|  | 93° | JTDJ2CR/L | DC**07 DC**11 | Back-clamp | Without | 3-12 |
|  | 93° | JSDJ2CR/L-CHP | DC**07 DC**11 | Screw-on | Without | 3-13 |
|  | 93° | JSDJCR/L-F15 | DC**07 DC**11 | Screw-on | With | 3-13 |
|  | 93° | JSDJCR/L | DC**07 DC**11 | Screw-on | With | 3-14 |
|  | 93° | QC12-JSDJ2CR | DC**07 DC**11 | Screw-on | Without | 3-14 |
|  | 93° | QC12-JSDJ2CR-CHP | DC**07 DC**11 | Screw-on | Without | 3-15 |
|  | 107.5° | SDQCR/L | DC**11 | Screw-on | With | 3-15 |
|  | 91° | JSDFCR/L | DC**07 DC**11 | Screw-on | With | 3-15 |
|  | 62.5° | JSDNCN | DC**07 DC**11 | Screw-on | With | 3-16 |
|  | 62.5° | SDNCN | DC**11 | Screw-on | With | 3-16 |
|  | 62.5° | JSDN3CR | DC**07 DC**11 | Screw-on | With | 3-16 |
|  | 93° | JS***-SDUCL | DC**07 DC**11 | Screw-on | - | 3-17 |

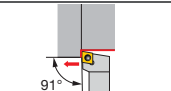

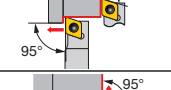
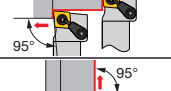
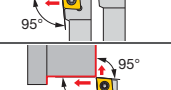
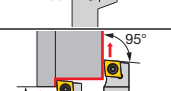
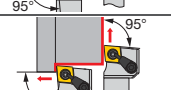



For DXGU inserts

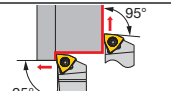

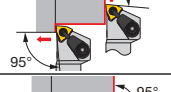

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|----------------------|--------|----------------|---------|-------------|
|  | 93° | JSDJ2XR/L | DXGU | Screw-on | Without | 3-18 |
|  | 93° | JPDJ2XR/L | DXGU | Back-clamp | Without | 3-18 |
|  | 93° | JSDJ2XR/L-CHP | DXGU | Screw-on | Without | 3-19 |
|  | 93° | JSDJXR/L-F15 | DXGU | Screw-on | With | 3-19 |

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|-------------------------|--------|----------------|---------|-------------|
|  | 93° | JSDJXR/L | DXGU | Screw-on | With | 3-20 |
|  | 93° | QC12-JSDJ2XR | DXGU | Screw-on | Without | 3-20 |
|  | 93° | QC12-JSDJ2XR-CHP | DXGU | Screw-on | Without | 3-20 |
|  | 93° | JS***-SDUXL | DXGU | Screw-on | - | 3-21 |

 **For CC** inserts**

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|-------------------------|------------------|----------------|---------|-------------|
|  | 91° | JSCGCR/L | CC**06 CC**09 | Screw-on | With | 3-22 |
|  | 95° | JSCL2CR/L | CC**06 CC**09 | Screw-on | Without | 3-22 |
|  | 95° | JTCL2CR/L | CC**06 CC**09 | Back-clamp | Without | 3-23 |
|  | 95° | JSCL2CR/L-CHP | CC**09 | Screw-on | Without | 3-23 |
|  | 95° | JSCLCR/L | CC**06 CC**09 | Screw-on | With | 3-24 |
|  | 95° | JSCLCR/L-F15 | CC**09 | Screw-on | With | 3-24 |
|  | 95° | QC12-JSCL2CR | CC**09 | Screw-on | Without | 3-24 |
|  | 95° | QC12-JSCL2CR-CHP | CC**09 | Screw-on | Without | 3-25 |

 **For WXGU inserts**

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|----------------------|--------|----------------|---------|-------------|
|  | 95° | JSWL2XR/L | WXGU | Screw-on | Without | 3-26 |
|  | 95° | JPWL2XR/L | WXGU | Back-clamp | Without | 3-26 |
|  | 95° | JSWL2XR/L-CHP | WXGU | Screw-on | Without | 3-27 |
|  | 95° | JSWLXR/L-F15 | WXGU | Screw-on | With | 3-27 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

1

2

3

4

5

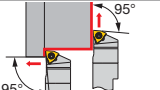
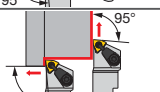
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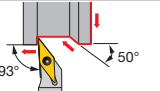
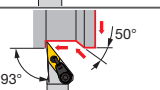
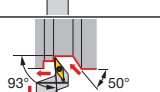

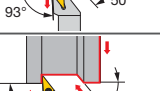
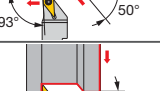
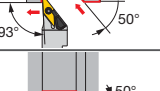
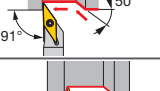
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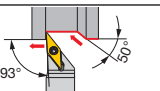
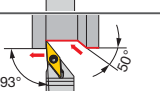
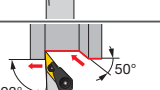
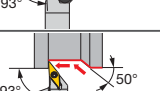
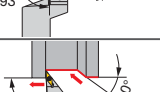
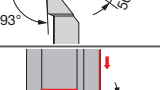
Quick Guide

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|-------------------------|--------|----------------|---------|-------------|
|  | 95° | QC12-JSWL2XR | WXGU | Screw-on | Without | 3-28 |
|  | 95° | QC12-JSWL2XR-CHP | WXGU | Screw-on | Without | 3-28 |

For VB** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|-------------------------|--------|----------------|---------|-------------|
|  | 93° | JSVJ2BR/L | VB**11 | Screw-on | Without | 3-29 |
|  | 93° | JSVJ2BR/L-CHP | VB**11 | Screw-on | Without | 3-29 |
|  | 93° | JSVJBR/L-F15 | VB**11 | Screw-on | With | 3-30 |
|  | 93° | JSVJBR/L | VB**11 | Screw-on | With | 3-30 |
|  | 93° | QC12-JSVJ2BR | VB**11 | Screw-on | Without | 3-31 |
|  | 93° | QC12-JSVJ2BR-CHP | VB**11 | Screw-on | Without | 3-31 |
|  | 91° | JSVABR/L | VB**11 | Screw-on | Without | 3-31 |
|  | 72.5° | JSVNBN | VB**11 | Screw-on | With | 3-32 |

For VXGU inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|---|---------------|----------------------|--------|----------------|---------|-------------|
|  | 93° | JSVJ2XR/L | VXGU | Screw-on | Without | 3-32 |
|  | 93° | JPVJ2XR/L | VXGU | Back-clamp | Without | 3-33 |
|  | 93° | JSVJ2XR/L-CHP | VXGU | Screw-on | Without | 3-33 |
|  | 93° | JSVJXR/L-F15 | VXGU | Screw-on | With | 3-34 |
|  | 93° | JSVJXR/L | VXGU | Screw-on | Without | 3-34 |
|  | 93° | QC12-JSVJ2XR | VXGU | Screw-on | Without | 3-34 |

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|-------------------------|--------|----------------|---------|-------------|
| | 93° | QC12-JSVJ2XR-CHP | VXGU | Screw-on | Without | 3-35 |
| | 93° | JS***-SVUXL | VXGU | Screw-on | - | 3-35 |

For VP** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|------------------|------------------|----------------|---------|-------------|
| | 95° | JSVL2PR/L | VP**08 VP**11 | Screw-on | Without | 3-36 |
| | 117.5° | JSVP2PR/L | VP**08 VP**11 | Screw-on | Without | 3-36 |

For VC** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|----------------|--------|----------------|--------|-------------|
| | 93° | SVJCR | VC**16 | Screw-on | With | 3-37 |
| | 72.5° | SWCN | VC**16 | Screw-on | With | 3-37 |
| | 117.5° | SVQCR/L | VC**16 | Screw-on | With | 3-38 |

For TC** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|-----------------|------------------|----------------|--------|-------------|
| | 91° | JSTACR/L | TC**08 TC**11 | Screw-on | With | 3-38 |
| | 91° | JTTACR/L | TC**08 TC**11 | Back-clamp | With | 3-39 |

For YWMT inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|----------------|--------|----------------|--------|-------------|
| | 93° | SYJBR/L | YWMT16 | Screw-on | With | 3-39 |
| | 100° | SYHBR/L | YWMT16 | Screw-on | With | 3-40 |
| | 77.5° | SYIBN | YWMT16 | Screw-on | With | 3-40 |
| | 122.5° | SYQBR/L | YWMT16 | Screw-on | With | 3-40 |

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference



Quick Guide



For TN** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|---------------------|----------------------|----------------|---------|-------------|
| | 95° | PTL2NR/L | TN**1604 | Lever-lock | Without | 3-41 |
| | 95° | JTTLNR/L | TN**1604 | Back-clamp | Without | 3-41 |
| | 91° | JTANR/L | TN**1604 | Back-clamp | Without | 3-41 |
| | 91° | ATGNR/L | TN**1604 | Double-clamp | With | 3-42 |
| | 91° | PTGNR/L | TN**1104 TN**1604 | Lever-lock | With | 3-42 |
| | 91° | PTGNR/L -CHP | TN**1104 TN**1604 | Lever-lock | With | 3-43 |
| | 93° | ATJNR/L | TN**1604 | Double-clamp | With | 3-43 |
| | 105° | ATQNR/L | TN**1604 | Double-clamp | With | 3-44 |
| | 91° | ATFNR/L | TN**1604 | Double-clamp | With | 3-44 |
| | 91° | PTFNR/L | TN**1104 TN**1604 | Lever-lock | With | 3-45 |



For CN** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|--------------------|----------------------------------|----------------|---------|-------------|
| | 95° | PCL2NR/L | CN**1204 | Lever-lock | Without | 3-45 |
| | 95° | ACLNR/L | CN**0904 CN**1204 | Double-clamp | With | 3-46 |
| | 95° | PCLNR/L | CN**0904 CN**0903 CN**1204 | Lever-lock | With | 3-46 |
| | 95° | PCLNR/L-CHP | CN**0904 CN**1204 | Lever-lock | With | 3-47 |
| | 91° | PCFNR/L | CN**1204 | Lever-lock | With | 3-47 |



For WN** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|--------------------|----------------------|----------------|--------|-------------|
| | 95° | AWLNR/L | WN**0604 WN**0804 | Double-clamp | With | 3-48 |
| | 95° | PWLNR/L | WN**0604 | Lever-lock | With | 3-48 |
| | 95° | PWLNR/L-CHP | WN**0604 WN**0804 | Lever-lock | With | 3-49 |



For DN** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|--------------------|----------------------------------|----------------|--------|-------------|
| | 93° | ADJNR/L | DN**1104 DN**1504 DN**1506 | Double-clamp | With | 3-50 |
| | 93° | PDJNR/L | DN**1104 DN**1504 DN**1506 | Lever-lock | With | 3-50 |
| | 93° | PDJNR/L-CHP | DN**1104 DN**1504 | Lever-lock | With | 3-51 |
| | 62.5° | ADPNN | DN**1504 | Double-clamp | With | 3-51 |
| | 107.5° | ADQNR/L | DN**1104 DN**1504 DN**1506 | Double-clamp | With | 3-52 |



For V/YN** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|--------------------|------------------------|----------------|---------|-------------|
| | 93° | AVJNR/L | VN**1204 V/YN**1604 | Double-clamp | With | 3-52 |
| | 93° | PVJNR/L | VN**1204 | Lever-lock | With | 3-53 |
| | 93° | PVJ2NR/L | VN**1204 | Back-clamp | Without | 3-53 |
| | 93° | PVJNR/L-CHP | VN**1204 V/YN**1604 | Lever-lock | With | 3-54 |
| | 72.5° | AVVNN | VN**1204 V/YN**1604 | Double-clamp | With | 3-54 |
| | 72.5° | PVVNN | VN**1204 | Lever-lock | With | 3-55 |
| | 117.5° | AVQNR/L | VN**1204 V/YN**1604 | Double-clamp | With | 3-55 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

1

2

3

4

5

6

7

8

9

Quick Guide



For V/YN** inserts

| Application | Cutting angle | Designation | Insert | Clamping style | Offset | Page |
|-------------|---------------|--------------------|------------|----------------|--------|-------------|
| | 117.5° | PVQNR/L | VN**1204 | Lever-lock | With | 3-55 |
| | 117.5° | PVQNR/L-CHP | V/YN**1604 | Lever-lock | With | 3-56 |



For JXF inserts

| Application | Designation | Insert | Clamping style | Offset | Page |
|-------------|----------------|--------------------|----------------|---------|-------------|
| | JSXGR/L | JXFR/L8 JXRR/L8 | Screw-on | Without | 3-57 |



For JXB inserts

| Application | Designation | Insert | Clamping style | Offset | Page |
|-------------|----------------|--------|----------------|---------|-------------|
| | JSXBR/L | JXBR/L | Screw-on | Without | 3-58 |



For J10E inserts

| Application | Designation | Insert | Clamping style | Offset | Page |
|-------------|-------------------|---------|----------------|---------|-------------|
| | JSEGR/L | J10ER/L | Screw-on | Without | 3-58 |
| | QC12-JSEGR | J10ER/L | Screw-on | Without | 3-58 |



For JTB inserts

| Application | Designation | Insert | Clamping style | Offset | Page |
|-------------|-----------------|---------|----------------|---------|-------------|
| | JSTBR/L3 | JTBR/L3 | Screw-on | Without | 3-59 |
| | JS-TBL3 | JTBR/L3 | Round shank | – | 3-59 |



Thru-coolant holder system

High pressure coolant is supplied through the holder to facilitate smooth chip evacuation, improved chip breaking and reduced machine down-time

External coolant supply at normal pressure



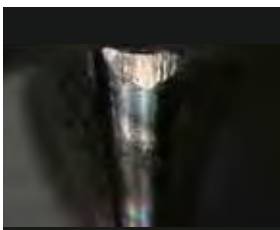
High pressure coolant (7 MPa)



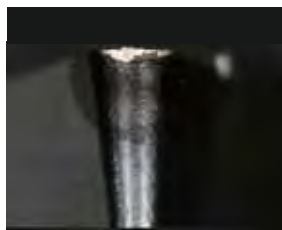
Coolant jets from two outlets ensure high cutting efficiency and extended tool life

Directly to the cutting edge

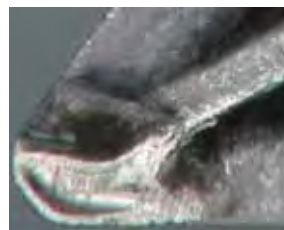
Reliable chip control
Reduces crater and notch wears



Excessive wear with external coolant supply (at normal pressure)



High pressure coolant (7 MPa)



Excessive crater wear with external coolant supply (at normal pressure)



High pressure coolant (7 MPa)

- Grade 1
- Insert 2
- Ext. Toolholder 3
- Int. Toolholder 4
- Threading 5
- Grooving 6
- Endmill 7
- Drilling Tool 8
- Technical Reference 9

Tube-free design streamlines tool setup.
Through-coolant supply enables high productivity

Conventional



Hose

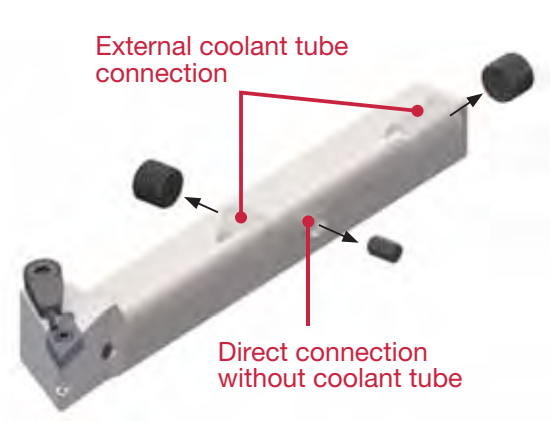
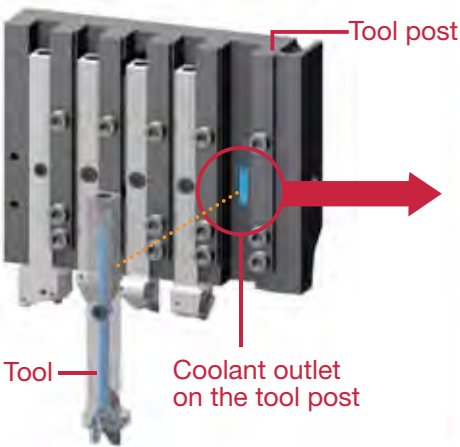


Direct connection without coolant tube



No need for coolant tube setup. Eliminates chip entanglement on tubes and streamlines tool replacement.

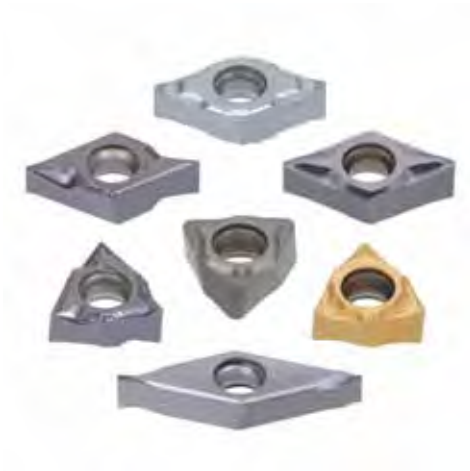
Coolant is supplied from the tool post directly to the tools.



Use a non-coolant-through tool when a coolant supply is not needed through the tool.



Nozzle tube delivers coolant directly to the cutting edge

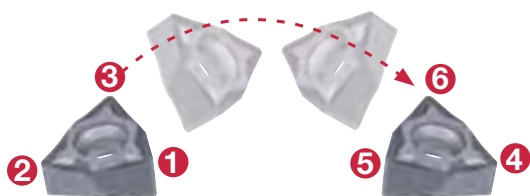


Economical double-sided positive insert

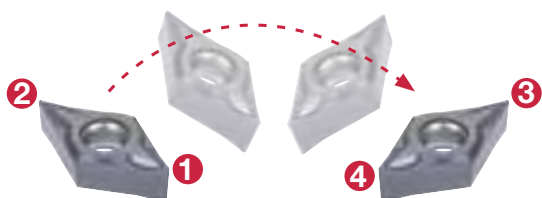
Innovative geometry and seat interface ensures stability and high performance.

■ Insert

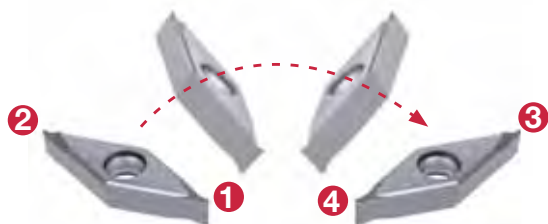
WXGU0403.. 6 positive cutting edges



DXGU0703.. 4 positive cutting edges



VXGU09T2.. 4 positive cutting edges



■ High rake angle

External turning



Internal turning



External turning



Internal turning



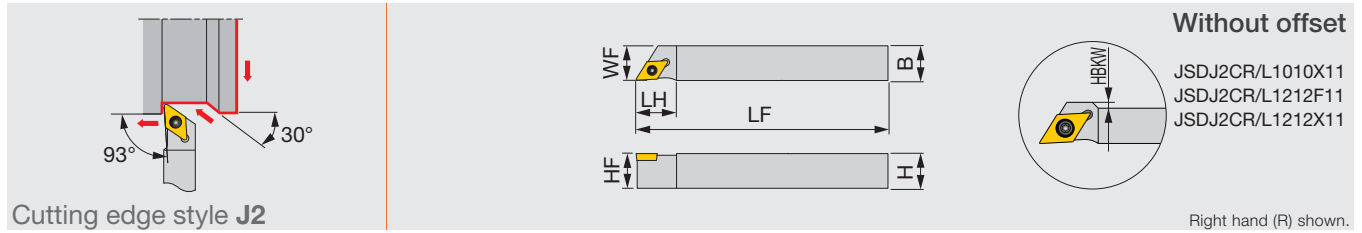
External turning



J-SERIES

JSDJ2CR/L

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style J2

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | HBKW | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------|-------------|---------|
| JSDJ2CR/L0808F07 | 8 | 8 | 85 | 14 | 8 | 8 | - | 0.2 | DC**0702... | 1.2 |
| JSDJ2CR/L1010X07 | 10 | 10 | 120 | 14 | 10 | 10 | - | 0.2 | DC**0702... | 1.2 |
| JSDJ2CR/L1010X11 | 10 | 10 | 120 | 20 | 10 | 10 | 4 | 0.2 | DC**11T3... | 1.2 |
| JSDJ2CR/L1212F07 | 12 | 12 | 85 | 14 | 12 | 12 | - | 0.2 | DC**0702... | 1.2 |
| JSDJ2CR/L1212F11 | 12 | 12 | 85 | 20 | 12 | 12 | 2 | 0.2 | DC**11T3... | 1.2 |
| JSDJ2CR/L1212X07 | 12 | 12 | 120 | 14 | 12 | 12 | - | 0.2 | DC**0702... | 1.2 |
| JSDJ2CR/L1212X11 | 12 | 12 | 120 | 20 | 12 | 12 | 2 | 0.2 | DC**11T3... | 1.2 |
| JSDJ2CR/L1616X11 | 16 | 16 | 120 | 20 | 16 | 16 | - | 0.2 | DC**11T3... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

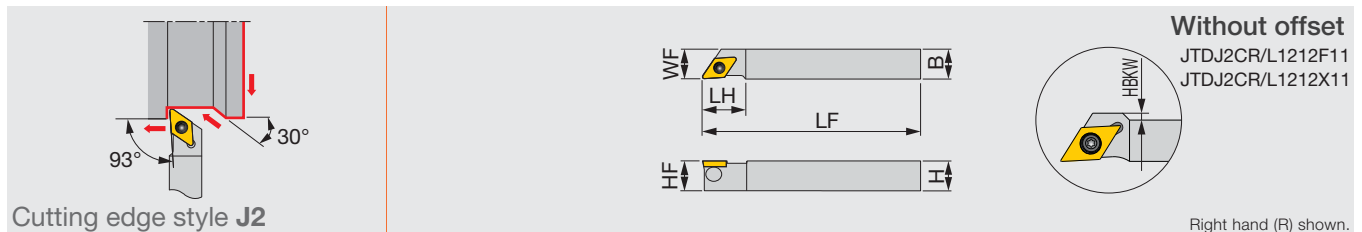
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSDJ2CR/L**07 | CSTB-2.5 | T-8F |
| JSDJ2CR/L**11 | CSTB-4SD | T-8F |

J-SERIES

JTDJ2CR/L

Back-clamp toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style J2

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | HBKW | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------|-------------|---------|
| JTDJ2CR/L1010X07 | 10 | 10 | 120 | 14 | 10 | 10 | - | 0.2 | DC**0702... | 0.9 |
| JTDJ2CR/L1212F07 | 12 | 12 | 85 | 14 | 12 | 12 | - | 0.2 | DC**0702... | 0.9 |
| JTDJ2CR/L1212X07 | 12 | 12 | 120 | 14 | 12 | 12 | - | 0.2 | DC**0702... | 0.9 |
| JTDJ2CR/L1212F11 | 12 | 12 | 85 | 20 | 12 | 12 | 2 | 0.2 | DC**11T3... | 1.2 |
| JTDJ2CR/L1212X11 | 12 | 12 | 120 | 20 | 12 | 12 | 2 | 0.2 | DC**11T3... | 1.2 |
| JTDJ2CR/L1616X11 | 16 | 16 | 120 | 20 | 16 | 16 | - | 0.2 | DC**11T3... | 1.2 |

*Torque: Recommended clamping torque (N·m)

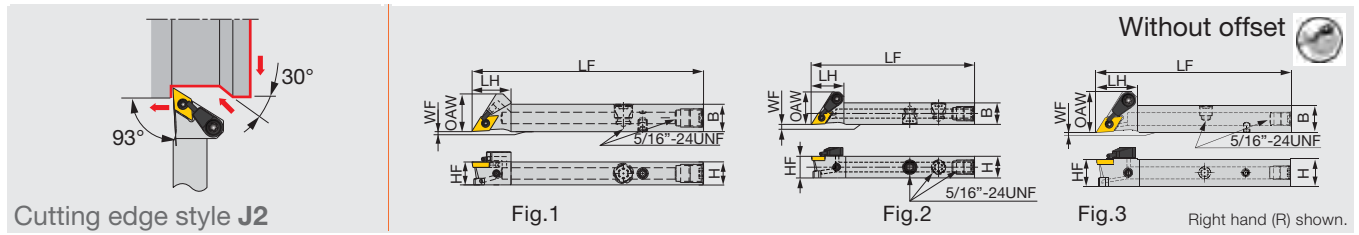
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|---------------|-------|----------------|--------|
| JTDJ2CR/L**07 | JCP-2 | JDS-3525 | P-2F |
| JTDJ2CR/L**11 | JCP-3 | JDS-5040 | P-2.5F |

Reference pages : JSDJ2CR/L, JTDJ2CR/L: Inserts → 2-15 -, CBN → 2-63, PCD → 2-70

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability

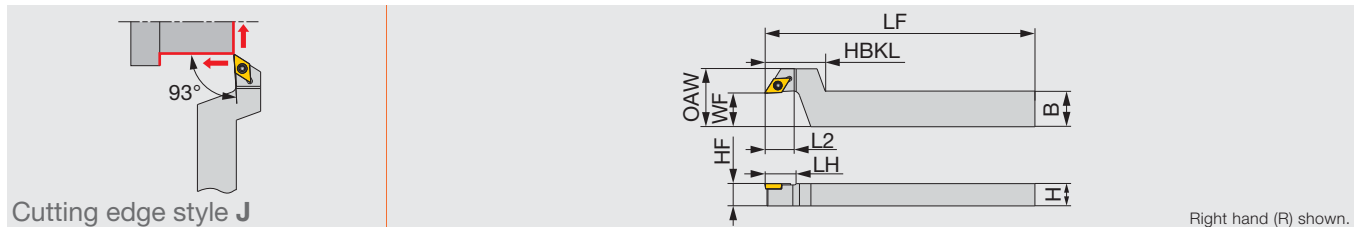


| Designation | H | B | LF | LH | HF | WF | OAW | RE** | Insert | Torque* | Fig. |
|-----------------------------------|----|----|-----|----|----|----|------|------|-------------|---------|------|
| JSDJ2CR1012H07-CHP ^(*) | 10 | 12 | 100 | 17 | 10 | 0 | 16.4 | 0.2 | DC**0702... | 1.2 | 1 |
| JSDJ2CR/L1212F07-CHP | 12 | 12 | 85 | 18 | 12 | 0 | 18 | 0.2 | DC**0702... | 1.2 | 3 |
| JSDJ2CR/L1212F11-CHP | 12 | 12 | 85 | 19 | 12 | 0 | 20.5 | 0.2 | DC**11T3... | 1.2 | 3 |
| JSDJ2CR1212X11-CHP ^(*) | 12 | 12 | 120 | 19 | 12 | 0 | 20.5 | 0.2 | DC**11T3... | 1.2 | 2 |
| JSDJ2CR1616X11-CHP ^(*) | 16 | 16 | 120 | 19 | 16 | 0 | 20.5 | 0.2 | DC**11T3... | 1.2 | 2 |

(*) Direct coolant supply *Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| Designation | Clamping screw | Coolant nozzle | Nozzle retainer screw | Coolant unit | Wrench 1 | Coolant plug | Wrench | DirectJet plug | Wrench 2 |
|----------------------|----------------|----------------|-----------------------|--------------|----------|----------------|--------|----------------|----------|
| JSDJ2CR1012H07-CHP | CSTB-2.5 | NZ-1.10-7-CHP | SSHM4-4-TB | - | T-8F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |
| JSDJ2CR/L1212F07-CHP | CSTB-2.5 | - | - | S-CU-CHP | T-8F | SR5/16UNFTL360 | P-4 | - | - |
| JSDJ2CR/L1212F11-CHP | CSTB-4SD | - | - | S-CU-CHP | T-8F | SR5/16UNFTL360 | P-4 | - | - |
| JSDJ2CR**11-CHP | CSTB-4SD | - | S-CU-CHP | - | T-8F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Screw-on stepped-head toolholder with 93° approach angle, for positive 55° rhombic inserts



| Designation | H | B | LF | L2 | HBKL | LH | HF | WF | OAW | RE** | Insert | Torque* |
|-------------------|----|----|-----|------|------|----|----|----|-----|------|-------------|---------|
| JSDJCR1016X07-F15 | 10 | 16 | 120 | 12.5 | 27 | 14 | 10 | 15 | 26 | 0.2 | DC**0702... | 1.2 |
| JSDJCR1216F07-F15 | 12 | 16 | 85 | 12.5 | 27 | 14 | 12 | 15 | 26 | 0.2 | DC**0702... | 1.2 |
| JSDJCR1216X07-F15 | 12 | 16 | 120 | 12.5 | 27 | 14 | 12 | 15 | 26 | 0.2 | DC**0702... | 1.2 |
| JSDJCR1216F11-F15 | 12 | 16 | 85 | 12.5 | 27 | 20 | 12 | 15 | 28 | 0.2 | DC**11T3... | 1.2 |
| JSDJCR1216X11-F15 | 12 | 16 | 120 | 12.5 | 27 | 20 | 12 | 15 | 28 | 0.2 | DC**11T3... | 1.2 |
| JSDJCR1620X11-F15 | 16 | 20 | 120 | 12.5 | 27 | 20 | 16 | 15 | 28 | 0.2 | DC**11T3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

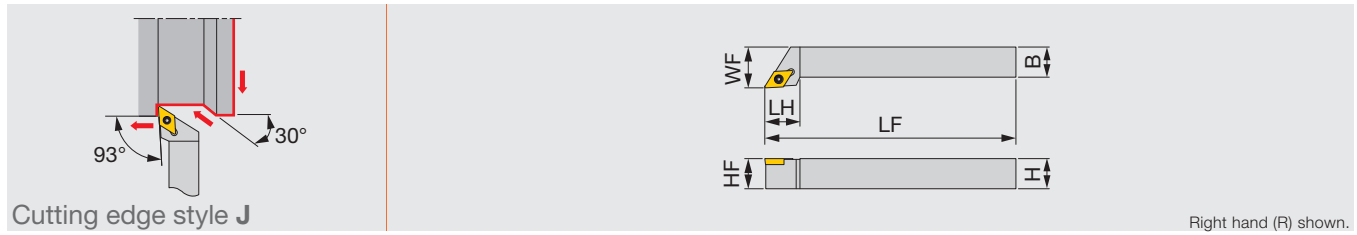
**RE: Standard corner radius

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| JSDJCR**07-F15 | CSTB-2.5 | T-8F |
| JSDJCR**11-F15 | CSTB-4SD | T-8F |

J-SERIES

JSDJCR/L

Screw-on toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style J

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JSDJCR/L0808H07 | 8 | 8 | 100 | 14 | 8 | 10 | 0.4 | DC**0702... | 1.2 |
| JSDJCR/L1010H11 | 10 | 10 | 100 | 18 | 10 | 12 | 0.8 | DC**11T3... | 1.2 |
| JSDJCR/L1212H07 | 12 | 12 | 100 | 14 | 12 | 16 | 0.4 | DC**0702... | 1.2 |
| JSDJCR/L1212H11 | 12 | 12 | 100 | 18 | 12 | 16 | 0.8 | DC**11T3... | 1.2 |
| JSDJCR/L1616H11 | 16 | 16 | 100 | 18 | 16 | 20 | 0.8 | DC**11T3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

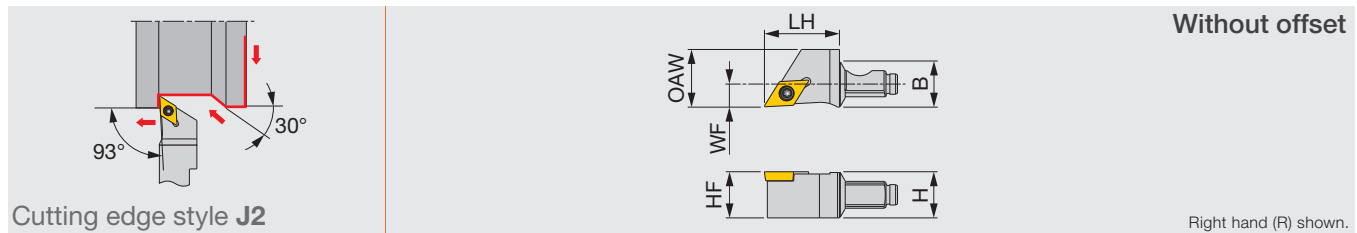
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSDJC**H07 | CSTB-2.5 | T-8F |
| JSDJC**H11 | CSTB-4SD | T-8F |

J-SERIES

QC12-JSDJ2CR

Screw-on head with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style J2

Without offset

Right hand (R) shown.

| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|----------------|----|----|------|----|----|-----|------|-------------|---------|
| QC12-JSDJ2CR07 | 12 | 12 | 19.5 | 12 | 6 | 15 | 0.2 | DC**0702... | 1.2 |
| QC12-JSDJ2CR11 | 12 | 12 | 19.5 | 12 | 6 | 15 | 0.2 | DC**11T3... | 1.2 |

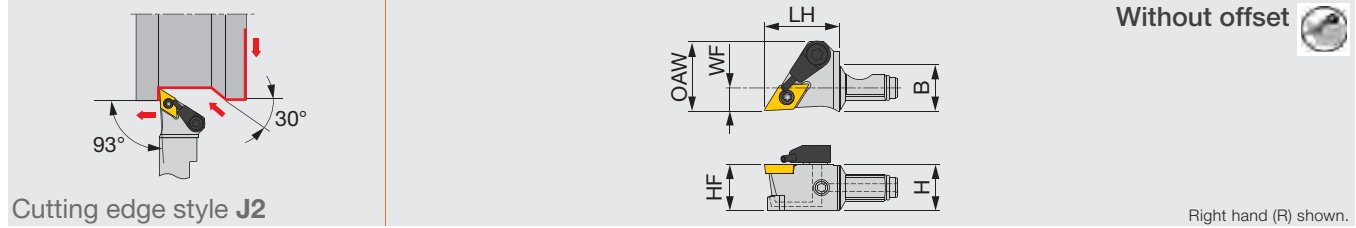
*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| QC12-JSDJ2CR07 | CSTB-2.5 | T-8F |
| QC12-JSDJ2CR11 | CSTB-4SD | T-8F |

Screw-on head with 93° approach angle, for positive 55° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|--------------------|----|----|------|----|----|-----|------|-------------|---------|
| QC12-JSDJ2CR07-CHP | 12 | 12 | 19.5 | 12 | 6 | 18 | 0.2 | DC**0702... | 1.2 |
| QC12-JSDJ2CR11-CHP | 12 | 12 | 19.5 | 12 | 6 | 21 | 0.2 | DC**11T3... | 1.2 |

Through-coolant head

*Torque: Recommended clamping torque (N-m)

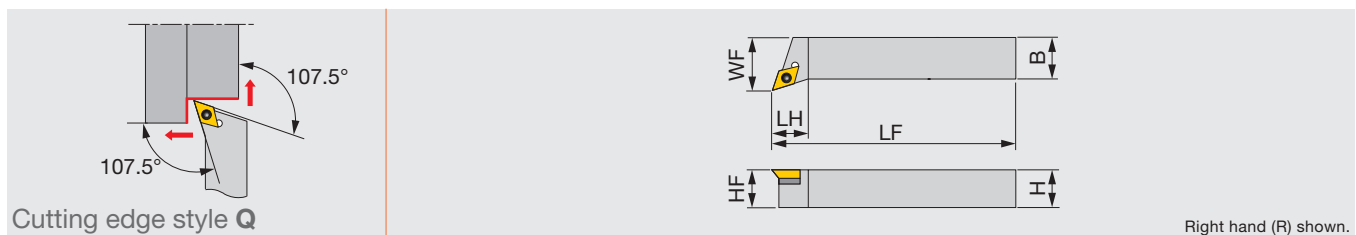
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench | O-ring |
|--------------------|----------------|--------------|--------|----------------------|
| QC12-JSDJ2CR07-CHP | CSTB-2.5 | S-CU-CHP | T-8F | ORSS-0454.5X1.0NBR70 |
| QC12-JSDJ2CR11-CHP | CSTB-4SD | S-CU-CHP | T-8F | ORSS-0454.5X1.0NBR70 |

SDQCR/L

Screw-on toolholder with 107.5° approach angle, for positive 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|------|----|----|------|-------------|---------|
| SDQCR/L2020K11 | 20 | 20 | 125 | 20.5 | 20 | 25 | 0.8 | DC**11T3... | 3 |

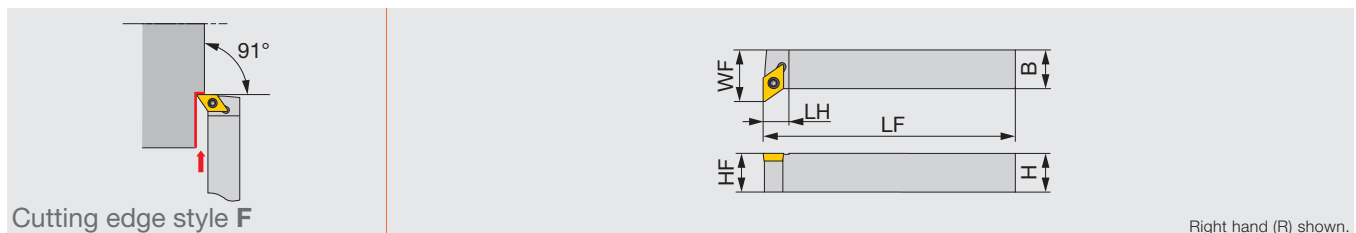
**RE : Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Shim screw | Shim | Wrench 1 | Wrench 2 |
|-------------|----------------|------------|-------|----------|----------|
| SDQCR/L... | CSTB-3.5L | DTS5-3.5 | SSD32 | P-3.5 | T-15F |

J-SERIES
JSDFCR/L

Screw-on toolholder for facing with 91° approach angle, for positive 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|------|----|----|------|-------------|---------|
| JSDFCR/L1212H07 | 12 | 12 | 100 | 8 | 12 | 16 | 0.4 | DC**0702... | 1.2 |
| JSDFCR/L1616H11 | 16 | 16 | 100 | 10.5 | 16 | 22 | 0.8 | DC**11T3... | 1.2 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-----------------|----------------|--------|
| JSDFCR/L1212H07 | CSTB-2.5 | T-8F |
| JSDFCR/L1616H11 | CSTB-4SD | T-8F |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

Reference pages : QC12-JSDJ2CR-CHP, SDQCR/L, JSDFCR/L: Inserts → 2-15 -, CBN → 2-63, PCD → 2-70
QC-Shank → 3-60, Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

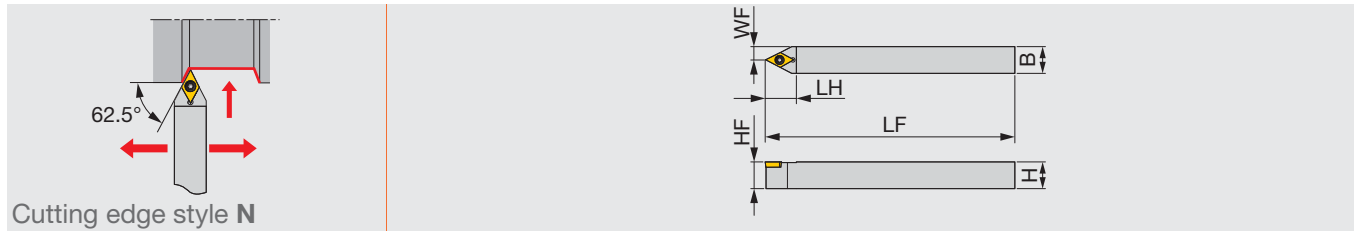
Drilling Tool

Technical Reference

J-SERIES

JSDNCN

Screw-on toolholder with 62.5° approach angle, for positive 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|---------------|----|----|-----|----|----|----|------|-------------|---------|
| JSDNCN1010X07 | 10 | 10 | 120 | 15 | 10 | 5 | 0.2 | DC**0702... | 1.2 |
| JSDNCN1010X11 | 10 | 10 | 120 | 21 | 10 | 5 | 0.2 | DC**11T3... | 1.2 |
| JSDNCN1212F07 | 12 | 12 | 85 | 15 | 12 | 6 | 0.2 | DC**0702... | 1.2 |
| JSDNCN1212X07 | 12 | 12 | 120 | 15 | 12 | 6 | 0.2 | DC**0702... | 1.2 |
| JSDNCN1212F11 | 12 | 12 | 85 | 21 | 12 | 6 | 0.2 | DC**11T3... | 1.2 |
| JSDNCN1212X11 | 12 | 12 | 120 | 21 | 12 | 6 | 0.2 | DC**11T3... | 1.2 |
| JSDNCN1616X11 | 16 | 16 | 120 | 21 | 16 | 8 | 0.2 | DC**11T3... | 1.2 |

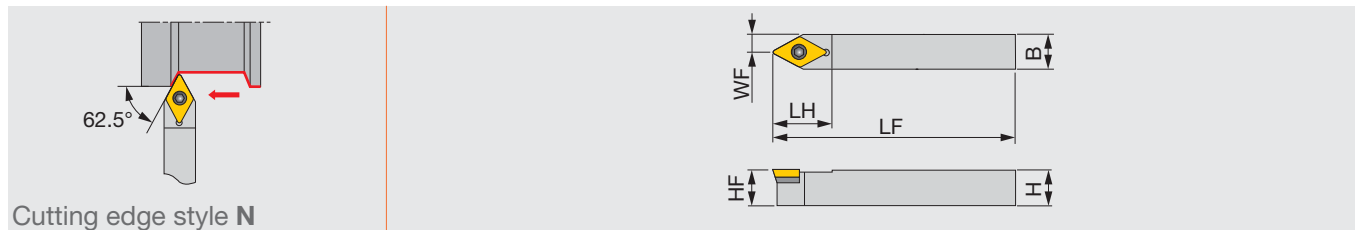
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSDNCN**07 | CSTB-2.5 | T-8F |
| JSDNCN**11 | CSTB-4SD | T-8F |

*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

SDNCN

Screw-on toolholder with 62.5° approach angle, for positive 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------|----|----|-----|----|----|----|------|-------------|---------|
| SDNCN1616H11 | 16 | 16 | 100 | 21 | 16 | 8 | 0.8 | DC**11T3... | 3 |
| SDNCN2020K11 | 20 | 20 | 125 | 21 | 20 | 10 | 0.8 | DC**11T3... | 3 |

**RE: Standard corner radius

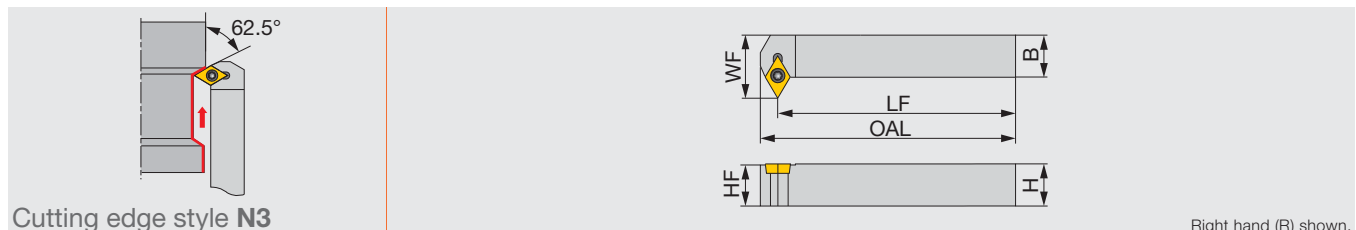
SPARE PARTS

| Designation | Clamping screw | Shim screw | Shim | Wrench1 | Wrench2 |
|-------------|----------------|------------|-------|---------|---------|
| SDNCN... | CSTB-3.5L | DTS5-3.5 | SSD32 | P-3.5 | T-15F |

J-SERIES

JSDN3CR

Screw-on toolholder with 62.5° approach angle (N3-style), for positive 55° rhombic inserts



| Designation | H | B | OAL | LF | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|-----|----|----|------|-------------|---------|
| JSDN3CR1212H07 | 12 | 12 | 105 | 100 | 12 | 18 | 0.4 | DC**0702... | 1.2 |
| JSDN3CR1616H11 | 16 | 16 | 107 | 100 | 16 | 25 | 0.8 | DC**11T3... | 1.2 |

Right hand (R) shown.

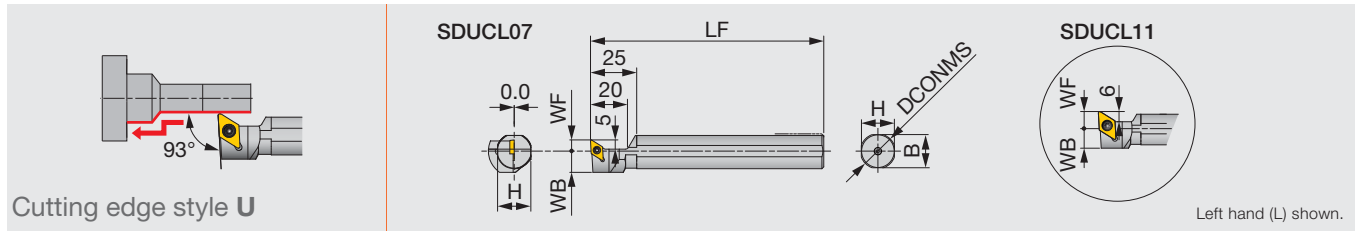
SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| JSDN3CR1212H07 | CSTB-2.5 | T-8F |
| JSDN3CR1616H11 | CSTB-4SD | T-8F |

*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

Reference pages : JSDNCN, SDNCN, JSDN3CR: Inserts → 2-15 -, CBN → 2-63 , PCD → 2-70

Screw-on round-shank toolholder with 93° approach angle, for positive 55° rhombic inserts



Cutting edge style U

| Designation | DCONMS | WF | LF | H | B | WB | RE** | Insert | Torque* |
|---------------|--------|----|-----|----|----|------|------|-------------|---------|
| JS19K-SDUCL07 | 19.05 | 6 | 125 | 18 | 18 | 11.5 | 0.4 | DC**0702... | 1.2 |
| JS20K-SDUCL07 | 20 | 6 | 125 | 19 | 19 | 11.5 | 0.4 | DC**0702... | 1.2 |
| JS22K-SDUCL07 | 22 | 6 | 125 | 21 | 21 | 11.5 | 0.4 | DC**0702... | 1.2 |
| JS19K-SDUCL11 | 19.05 | 10 | 125 | 18 | 18 | 11.5 | 0.8 | DC**11T3... | 1.2 |
| JS20K-SDUCL11 | 20 | 10 | 125 | 19 | 19 | 11.5 | 0.8 | DC**11T3... | 1.2 |
| JS22K-SDUCL11 | 22 | 11 | 125 | 21 | 21 | 11.5 | 0.8 | DC**11T3... | 1.2 |
| JS25K-SDUCL11 | 25.4 | 12 | 125 | 24 | 24 | 12.7 | 0.8 | DC**11T3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JS**K-SDUCL07 | CSTB-2.5 | T-8F |
| JS**K-SDUCL11 | CSTB-4SD | T-8F |

INSERT SELECTION

| | | | | | | | | | | | |
|----------|-------------------|---------------------|-----------------|--------------------------|--------------------------|-------------------|-------------------|--------------------------|----------------|--------------------------|--------------------------|
| P | Application areas | Precision finishing | Finish cutting | Medium to finish cutting | Medium to finish cutting | M | Application areas | Precision Finishing | Finish cutting | Medium to finish cutting | Medium to finish cutting |
| | Grade | SH725 | SH725 | AH725 | SH725 | | Grade | SH725 | SH725 | AH725 | SH725 |
| | Breaker Shape | 01 | JS | JS | J10 | | Breaker Shape | 01 | JS | JS | J10 |
| N | Application areas | Precision finishing | Finish cutting | Medium cutting | S | Application areas | Finish cutting | Medium to finish cutting | | | |
| | Grade | DX120 | DX140 | KS05F | | Grade | SH725 | AH725 | | | |
| | Breaker Shape | T-DIA | with rake T-DIA | AL | | Breaker Shape | JS | JS | | | |
| H | Application areas | Precision finishing | Finish cutting | Technical Reference | 9 | | | | | | |
| | Grade | BXM10 | BXM10 | | | | | | | | |
| | Breaker Shape | T-CBN | T-CBN | | | | | | | | |

Reference pages : JS-SDUCL: Inserts → 2-15 -, CBN → 2-63, PCD → 2-70

Grade 1

Insert 2

Ext. Toolholder 3

Int. Toolholder 4

Threading 5

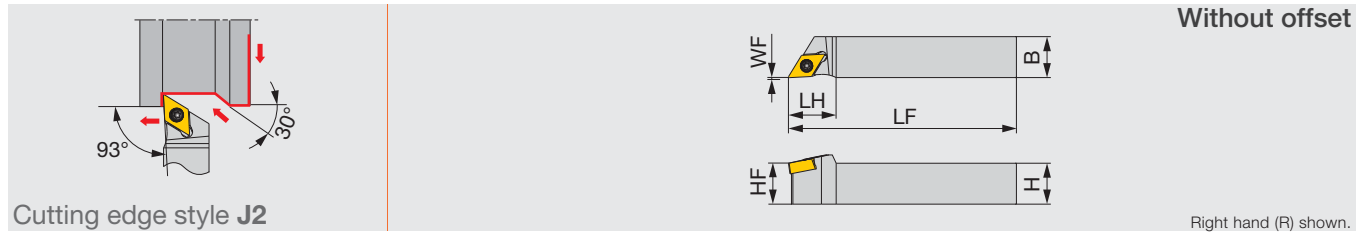
Grooving 6

Endmill 7

Drilling Tool 8

Technical Reference 9

Screw-on toolholder with 93° approach angle, for DXGU inserts



Cutting edge style J2

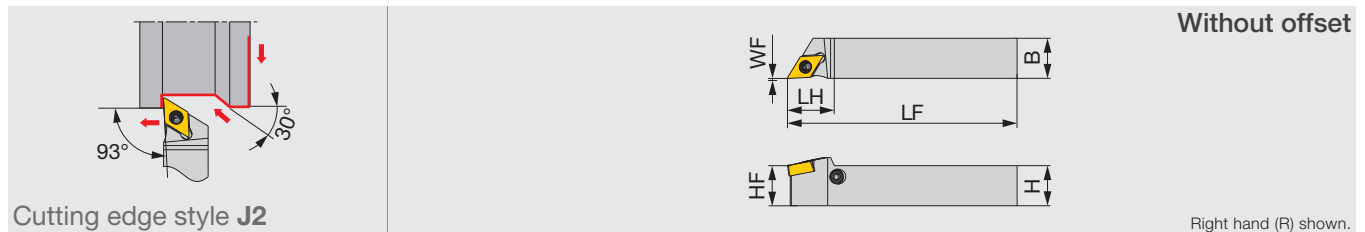
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------------------|---------|
| JSDJ2XR/L1010X07 | 10 | 10 | 120 | 14 | 10 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JSDJ2XR/L1212F07 | 12 | 12 | 85 | 14 | 12 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JSDJ2XR/L1212X07 | 12 | 12 | 120 | 14 | 12 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JSDJ2XR/L1616X07 | 16 | 16 | 120 | 18 | 16 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JSDJ2XR/L2020H07 | 20 | 20 | 100 | 18 | 20 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JSDJ2XR/L... | SR34-514 | T-7F |

Lever-lock toolholder with 93° approach angle, for DXGU inserts



Cutting edge style J2

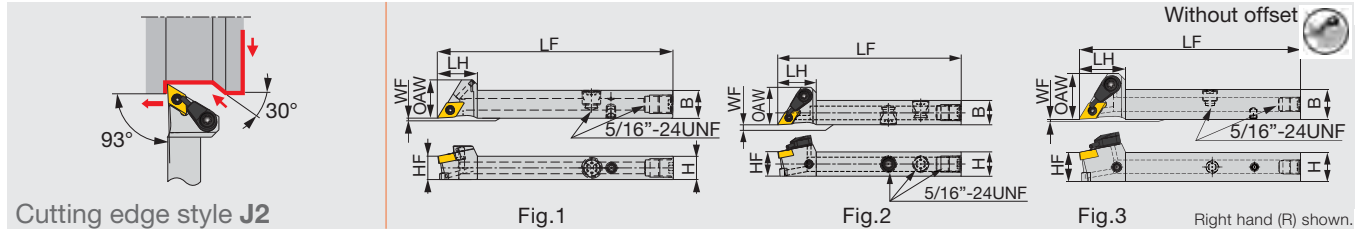
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------------------|---------|
| JPDJ2XR/L1010X07 | 10 | 10 | 120 | 14 | 10 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JPDJ2XR/L1212F07 | 12 | 12 | 85 | 14 | 12 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JPDJ2XR/L1212X07 | 12 | 12 | 120 | 14 | 12 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |
| JPDJ2XR/L1616X07 | 16 | 16 | 120 | 18 | 16 | 0 | 0.2 | DXGU0703**L/R... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

| Designation | Lever | Pin | Clamping screw | Wrench |
|--------------|--------|---------|----------------|------------|
| JPDJ2XR/L... | SLLV-2 | SL-PI-2 | SR10400611 | HW2.0/5RED |

Screw-on toolholder without offset, 93° approach angle, for DXGU inserts, high pressure coolant compatible



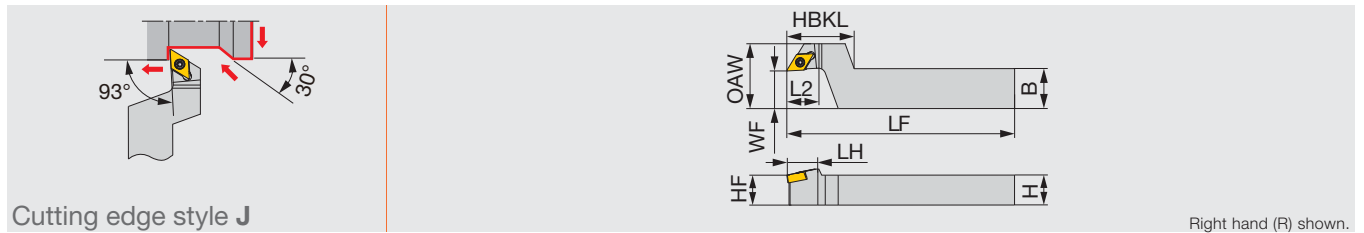
| Designation | H | B | LF | LH | HF | WF | OAW | RE** | Insert | Torque* | Fig. |
|-----------------------------------|----|----|-----|----|----|----|------|------|------------------|---------|------|
| JSDJ2XR1012H07-CHP ⁽⁺⁾ | 10 | 12 | 100 | 17 | 10 | 0 | 14.7 | 0.2 | DXGU0703**L | 0.9 | 1 |
| JSDJ2XR/L1212F07-CHP | 12 | 12 | 85 | 19 | 12 | 0 | 18.5 | 0.2 | DXGU0703**L/R... | 0.9 | 3 |
| JSDJ2XR1212X07-CHP ⁽⁺⁾ | 12 | 12 | 120 | 19 | 12 | 0 | 18.5 | 0.2 | DXGU0703**L | 0.9 | 2 |
| JSDJ2XR1616X07-CHP ⁽⁺⁾ | 16 | 16 | 120 | 19 | 16 | 0 | 18.5 | 0.2 | DXGU0703**L | 0.9 | 2 |

(+) Direct coolant supply *Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench 3 |
|--------------------|----------------|--------------|----------|----------------|----------|----------------|----------|
| JSDJ2XR1012H07-CHP | SR34-514 | - | T-7F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |
| JSDJ2XR**F/X07-CHP | SR34-514 | S-CU-CHP | T-7F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Screw-on stepped-head toolholder with 93° approach angle, for DXGU inserts



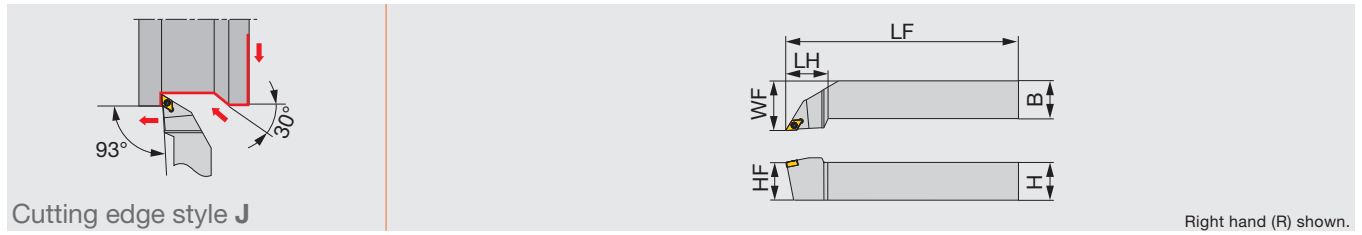
| Designation | H | B | LF | L2 | HBKL | LH | HF | WF | OAW | RE** | Insert | Torque* |
|-------------------|----|----|-----|----|------|----|----|----|-----|------|----------------|---------|
| JSDJXR1016X07-F15 | 10 | 16 | 120 | 12 | 27 | 14 | 10 | 15 | 26 | 0.2 | DXGU0703**L... | 0.9 |
| JSDJXR1216F07-F15 | 12 | 16 | 85 | 12 | 27 | 14 | 12 | 15 | 26 | 0.2 | DXGU0703**L... | 0.9 |
| JSDJXR1216X07-F15 | 12 | 16 | 120 | 12 | 27 | 14 | 12 | 15 | 26 | 0.2 | DXGU0703**L... | 0.9 |
| JSDJXR1620X07-F15 | 16 | 20 | 120 | 12 | 27 | 14 | 16 | 15 | 26 | 0.2 | DXGU0703**L... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSDJXR**F15 | SR34-514 | T-7F |

Screw-on toolholder with 93° approach angle, for DXGU inserts



Cutting edge style J

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|----------------|---------|
| JSDJXR/L2020K07 | 20 | 20 | 125 | 27 | 20 | 25 | 0.4 | DXGU0703**L... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

DC**

DXGU

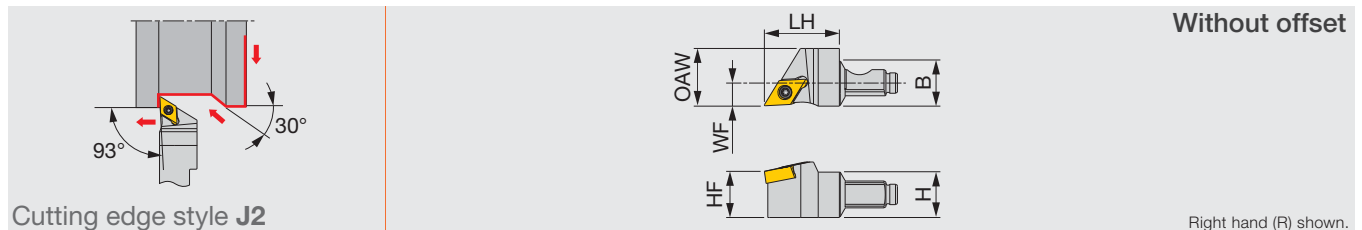
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSDJXR/L... | SR34-514 | T-7F |

CC**

WXGU

Screw-on head with 93° approach angle, for DXGU inserts



Cutting edge style J2

Without offset

Right hand (R) shown.

| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|----------------|----|----|------|----|----|-----|------|----------------|---------|
| QC12-JSDJ2XR07 | 12 | 12 | 19.5 | 12 | 6 | 15 | 0.2 | DXGU0703**L... | 0.9 |

Use right-hand toolholders (R) with left-hand inserts (L).
*Torque: Recommended clamping torque (N-m)
**RE: Standard corner radius

YWMT

TN**

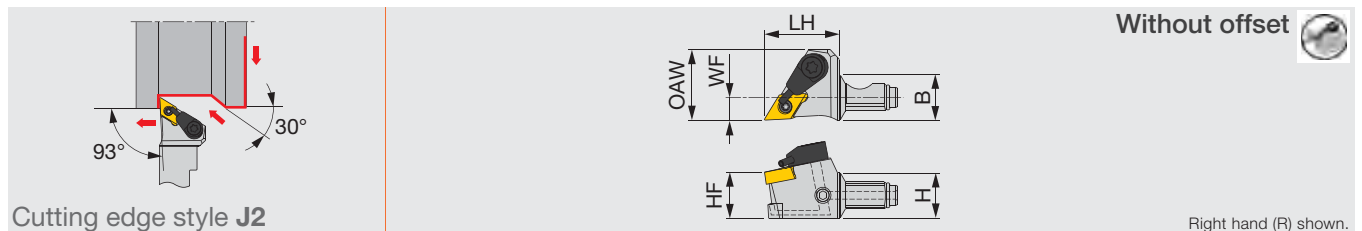
SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| QC12-JSDJ2XR07 | SR34-514 | T-7F |

CN**

WN**

Screw-on head with 93° approach angle, for DXGU inserts, with high pressure coolant capability



Cutting edge style J2

Without offset

Right hand (R) shown.

| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|--------------------|----|----|------|----|----|------|------|----------------|---------|
| QC12-JSDJ2XR07-CHP | 12 | 12 | 19.5 | 12 | 6 | 18.4 | 0.2 | DXGU0703**L... | 0.9 |

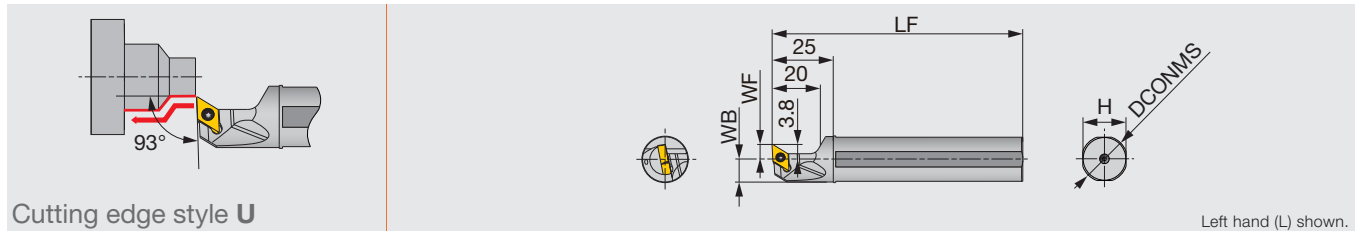
Use right-hand toolholders (R) with left-hand inserts (L).
Through-coolant head
*Torque: Recommended clamping torque (N-m)
**RE: Standard corner radius

JTB

| Designation | Clamping screw | Coolant unit | Wrench | O-ring |
|--------------------|----------------|--------------|--------|-------------------------|
| QC12-JSDJ2XR07-CHP | SR34-514 | S-CU-CHP | T-7F | OR SS-045 4.5X1.0 NBR70 |

Reference pages : JSDJXR/L, QC12-JSDJ2XR, QC12-JSDJ2XR-CHP: Inserts → 2-20 -,
QC-Shank → 3-60, Parts for coolant hose → 3-61

Screw-on round-shank toolholder with 93° approach angle, for DXGU inserts



Cutting edge style U

Left hand (L) shown.

| Designation | DCONMS | WF | LF | H | WB | RE** | Insert | Torque* |
|----------------|--------|----|-----|----|-------|------|----------------|---------|
| JS14H-SDUXL07 | 14 | 6 | 100 | 13 | 6.75 | 0.2 | DXGU0703**L... | 0.9 |
| JS159F-SDUXL07 | 15.875 | 6 | 85 | 15 | 7.687 | 0.2 | DXGU0703**L... | 0.9 |
| JS16F-SDUXL07 | 16 | 6 | 85 | 15 | 7.75 | 0.2 | DXGU0703**L... | 0.9 |
| JS19G-SDUXL07 | 19.05 | 6 | 90 | 18 | 9.275 | 0.2 | DXGU0703**L... | 0.9 |
| JS19X-SDUXL07 | 19.05 | 6 | 120 | 18 | 9.275 | 0.2 | DXGU0703**L... | 0.9 |
| JS20G-SDUXL07 | 20 | 6 | 90 | 19 | 9.75 | 0.2 | DXGU0703**L... | 0.9 |
| JS20X-SDUXL07 | 20 | 6 | 120 | 19 | 9.75 | 0.2 | DXGU0703**L... | 0.9 |
| JS22X-SDUXL07 | 22 | 10 | 120 | 21 | 10.75 | 0.2 | DXGU0703**L... | 0.9 |
| JS25H-SDUXL07 | 25 | 10 | 100 | 24 | 12.25 | 0.2 | DXGU0703**L... | 0.9 |
| JS254X-SDUXL07 | 25.4 | 10 | 120 | 24 | 12.45 | 0.2 | DXGU0703**L... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use left-hand toolholders (L) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JS**-SDUXL07 | SR34-514 | T-7F |

INSERT SELECTION

Swiss lathes

| Application | Finishing | Medium cutting | Application | Finishing | Medium cutting |
|-------------------|-----------|----------------|-------------------|-----------|----------------|
| | Grade | Grade | | Grade | Grade |
| | SH725 | SH725 | | SH725 | SH725 |
| Chipbreaker shape | JSS | JS | Chipbreaker shape | JSS | JS |

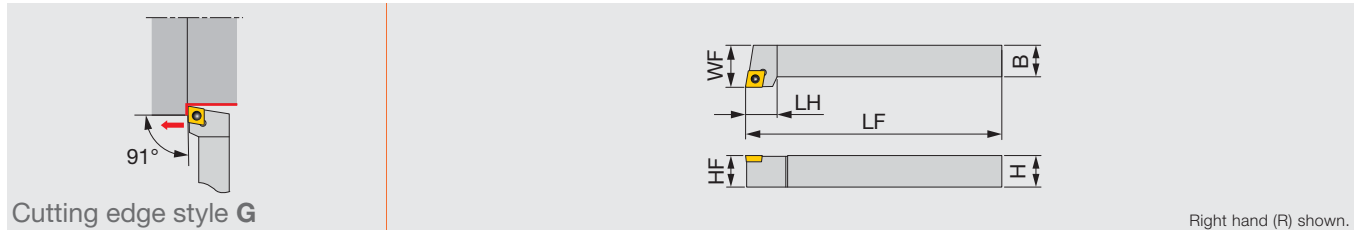
Small CNC lathes

| Application | Finishing | Medium cutting | Application | Finishing | Medium cutting |
|-------------------|-----------|----------------|-------------------|-----------|----------------|
| | Grade | Grade | | Grade | Grade |
| | AH725 | AH725 | | AH8015 | AH8015 |
| Chipbreaker shape | SS | TS | Chipbreaker shape | SS | TS |

J-SERIES

JSCGCR/L

Screw-on toolholder with 91° approach angle, for positive 80° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JSCGCR/L1212H06 | 12 | 12 | 100 | 12 | 12 | 16 | 0.4 | CC**0602... | 1.2 |
| JSCGCR/L1616H09 | 16 | 16 | 100 | 16 | 16 | 20 | 0.8 | CC**09T3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

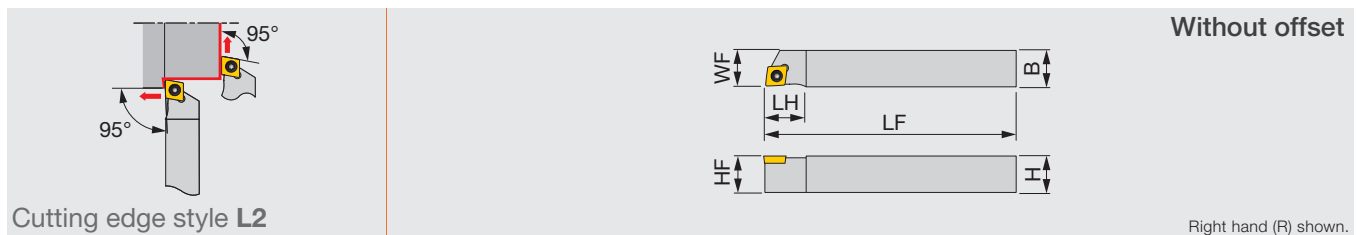
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-----------------|----------------|--------|
| JSCGCR/L1212H06 | CSTB-2.5 | T-8F |
| JSCGCR/L1616H09 | CSTB-4SD | T-8F |

J-SERIES

JSCL2CR/L

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| JSCL2CR/L1010X06 | 10 | 10 | 120 | 12 | 10 | 10 | 0.2 | CC**0602... | 1.2 |
| JSCL2CR/L1212F06 | 12 | 12 | 85 | 12 | 12 | 12 | 0.2 | CC**0602... | 1.2 |
| JSCL2CR/L1212X06 | 12 | 12 | 120 | 12 | 12 | 12 | 0.2 | CC**0602... | 1.2 |
| JSCL2CR/L1212F09 | 12 | 12 | 85 | 16 | 12 | 12 | 0.2 | CC**09T3... | 1.2 |
| JSCL2CR/L1212X09 | 12 | 12 | 120 | 16 | 12 | 12 | 0.2 | CC**09T3... | 1.2 |
| JSCL2CR/L1616X09 | 16 | 16 | 120 | 16 | 16 | 16 | 0.2 | CC**09T3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

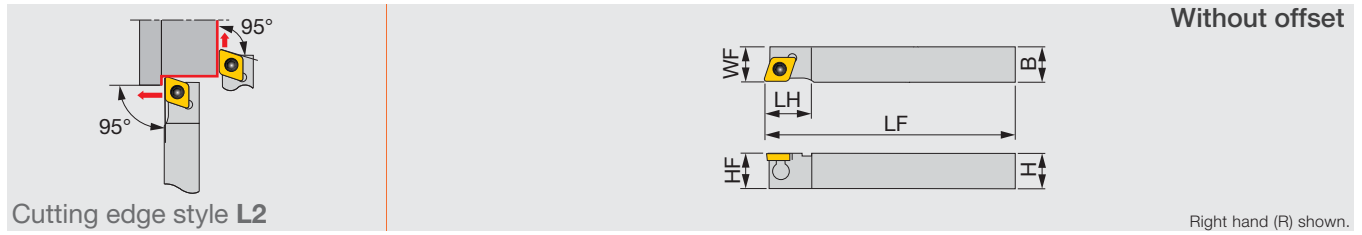
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSCL2CR/L**06 | CSTB-2.5 | T-8F |
| JSCL2CR/L**09 | CSTB-4SD | T-8F |

Reference pages : JSCGR/L, JSCL2CR/L: Inserts → 2-9 -, CBN → 2-61, PCD → 2-70

Back-clamp toolholder with 95° approach angle, for positive 80° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| JTCL2CR/L1010X06 | 10 | 10 | 120 | 12 | 10 | 10 | 0.2 | CC**0602... | 0.9 |
| JTCL2CR/L1212F09 | 12 | 12 | 85 | 16 | 12 | 12 | 0.2 | CC**09T3... | 1.2 |
| JTCL2CR/L1212X09 | 12 | 12 | 120 | 16 | 12 | 12 | 0.2 | CC**09T3... | 1.2 |
| JTCL2CR/L1616X09 | 16 | 16 | 120 | 16 | 16 | 16 | 0.2 | CC**09T3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

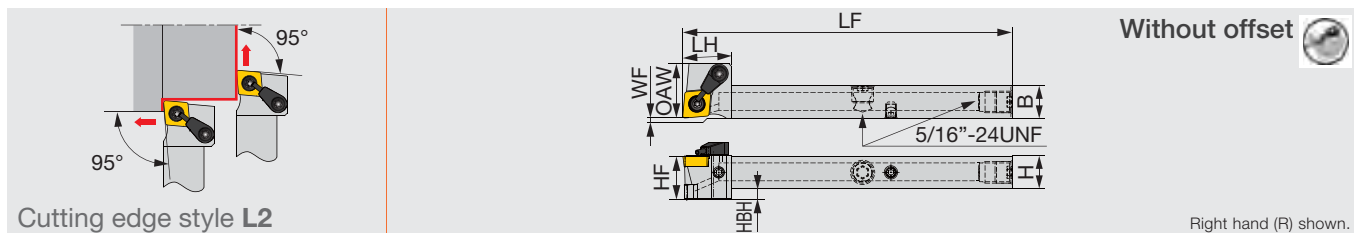
SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|---------------|-------|----------------|--------|
| JTCL2CR/L**06 | JCP-2 | JDS-3525 | P-2F |
| JTCL2CR/L**09 | JCP-3 | JDS-5040 | P-2.5F |

TUNG T^{URN}JET

JSCL2CR-CHP

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LF | LH | HF | HBH | WF | OAW | RE** | Insert | Torque* |
|-----------------------|----|----|-----|----|----|-----|----|-----|------|----------|---------|
| JSCL2CR1212X09-CHP*** | 12 | 12 | 120 | 18 | 12 | 4 | 0 | 20 | 0.2 | CC**09T3 | 1.2 |
| JSCL2CR1212X09B-CHP | 12 | 12 | 120 | 18 | 12 | 1.5 | 0 | 20 | 0.2 | CC**09T3 | 1.2 |
| JSCL2CR1616X09-CHP | 16 | 16 | 120 | 18 | 16 | 0 | 0 | 20 | 0.2 | CC**09T3 | 1.2 |

*Torque: Recommended clamping torque (N-m) **RE : Standard corner radius

*** : This item will be replaced with a new product in the future.

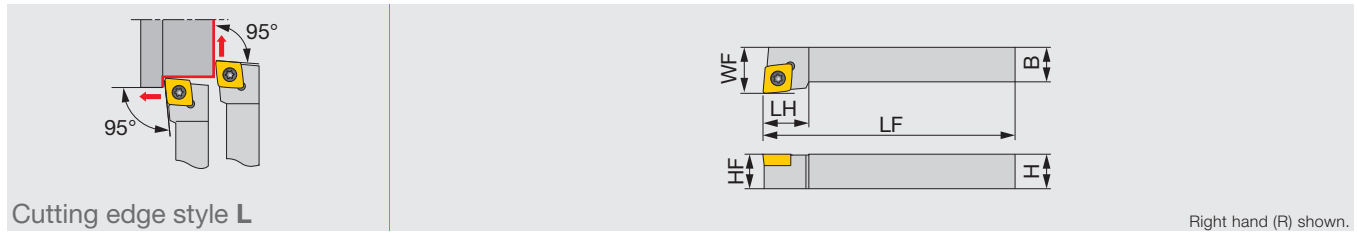
SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench |
|---------------|----------------|--------------|--------|
| JSCL2CR**-CHP | CSTB-4SD | S-CU-CHP | T-8F |

J-SERIES

JSCLCR/L

Screw-on toolholder with 95° approach angle, for positive 80° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JSCLCR/L0808H06 | 8 | 8 | 100 | 12 | 8 | 10 | 0.4 | CC**0602... | 1.2 |
| JSCLCR/L1010H06 | 10 | 10 | 100 | 12 | 10 | 12 | 0.4 | CC**0602... | 1.2 |
| JSCLCR/L1212H09 | 12 | 12 | 100 | 16 | 12 | 16 | 0.8 | CC**09T3... | 1.2 |
| JSCLCR/L1616H09 | 16 | 16 | 100 | 16 | 16 | 20 | 0.8 | CC**09T3... | 1.2 |

**RE: Standard corner radius

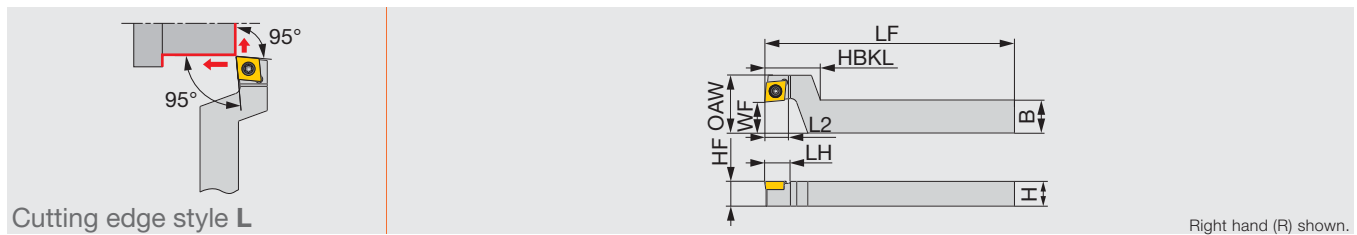
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSCLCR/L**H06 | CSTB-2.5 | T-8F |
| JSCLCR/L**H09 | CSTB-4SD | T-8F |

J-SERIES

JSCLCR-F

Screw-on stepped-head toolholder with 95° approach angle, for positive 80° rhombic inserts



| Designation | H | B | LF | L2 | HBKL | LH | HF | WF | OAW | RE** | Insert | Torque* |
|-------------------|----|----|-----|----|------|------|----|----|-----|------|-------------|---------|
| JSCLCR1216F09-F15 | 12 | 16 | 85 | 12 | 27 | 12.5 | 12 | 15 | 28 | 0.2 | CC**09T3... | 1.2 |
| JSCLCR1216X09-F15 | 12 | 16 | 120 | 12 | 27 | 12.5 | 12 | 15 | 28 | 0.2 | CC**09T3... | 1.2 |
| JSCLCR1620X09-F15 | 16 | 20 | 120 | 12 | 27 | 12.5 | 16 | 15 | 28 | 0.2 | CC**09T3... | 1.2 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

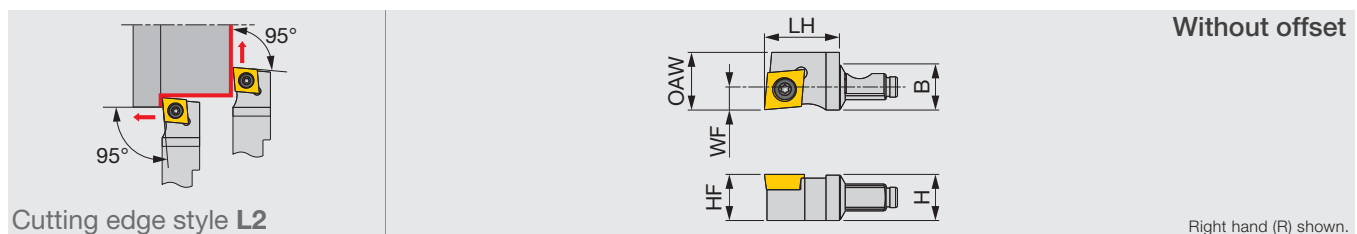
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSCLCR**F15 | CSTB-4SD | T-8F |

J-SERIES

QC12-JSCL2CR

Screw-on head with 95° approach angle, for positive 80° rhombic inserts



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|----------------|----|----|------|----|----|-----|------|-------------|---------|
| QC12-JSCL2CR09 | 12 | 12 | 19.5 | 12 | 6 | 15 | 0.2 | CC**09T3... | 1.2 |

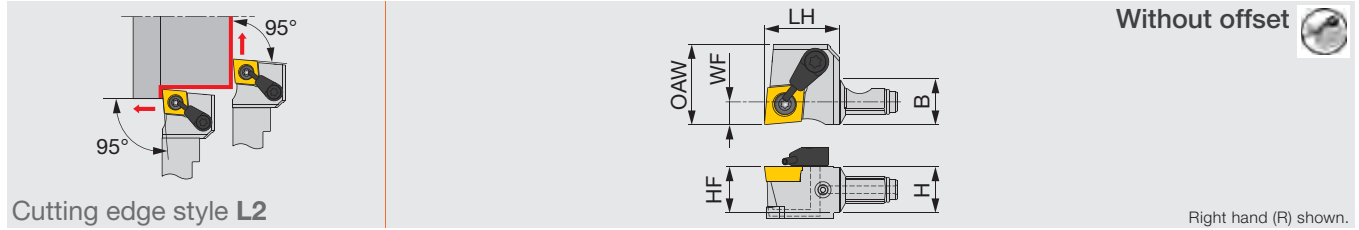
*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| QC12-JSCL2CR09 | CSTB-4SD | T-8F |

Reference pages : JSCLCR/L, JSCLCR-F, QC12-JSCL2CR: Inserts → 2-9 -, CBN → 2-61, PCD → 2-70
QC-Shank → 3-60

Screw-on head with 95° approach angle, for positive 80° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|--------------------|----|----|------|----|----|-----|------|-------------|---------|
| QC12-JSCL2CR09-CHP | 12 | 12 | 19.5 | 12 | 6 | 21 | 0.2 | CC**09T3... | 1.2 |

Through-coolant head
*Torque: Recommended clamping torque (N-m)
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench | O-ring |
|--------------------|----------------|--------------|--------|-------------------------|
| QC12-JSCL2CR09-CHP | CSTB-4SD | S-CU-CHP | T-8F | OR SS-045 4.5X1.0 NBR70 |

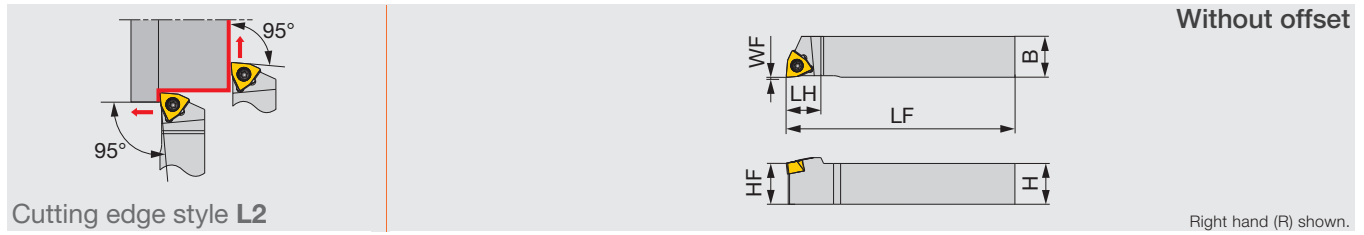
INSERT SELECTION

| | | | | | | | | | | | |
|----------|-------------------|---------------------|----------------|--------------------------|--------------------------|-------------------|-------------------|--------------------------|----------------|--------------------------|--------------------------|
| P | Application areas | Precision finishing | Finish cutting | Medium to finish cutting | Medium to finish cutting | M | Application areas | Precision finishing | Finish cutting | Medium to finish cutting | Medium to finish cutting |
| | Grade | SH725 | SH725 | AH725 | SH725 | | Grade | SH725 | SH725 | AH725 | SH725 |
| | Breaker Shape | 01 | JS | JS | J10 | | Breaker Shape | 01 | JS | JS | J10 |
| N | Application areas | Precision finishing | Finish cutting | Medium cutting | S | Application areas | Finish cutting | Medium to finish cutting | | | |
| | Grade | DX120 | TH10 | KS05F | | Grade | SH725 | AH725 | | | |
| | Breaker Shape | T-DIA with rake | W20 | AL | | Breaker Shape | JS | JS | | | |
| H | Application areas | Precision finishing | Finish cutting | Technical Reference | 9 | | | | | | |
| | Grade | BXM10 | BXM20 | | | | | | | | |
| | Breaker Shape | T-CBN | T-CBN | | | | | | | | |

Reference pages : QC12-JSCL2CR-CHP: Inserts → 2-9 -, CBN → 2-61, PCD → 2-70
QC-Shank → 3-60, Parts for coolant hose → 3-61

Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

Screw-on toolholder with 95° approach angle, for WXGU inserts



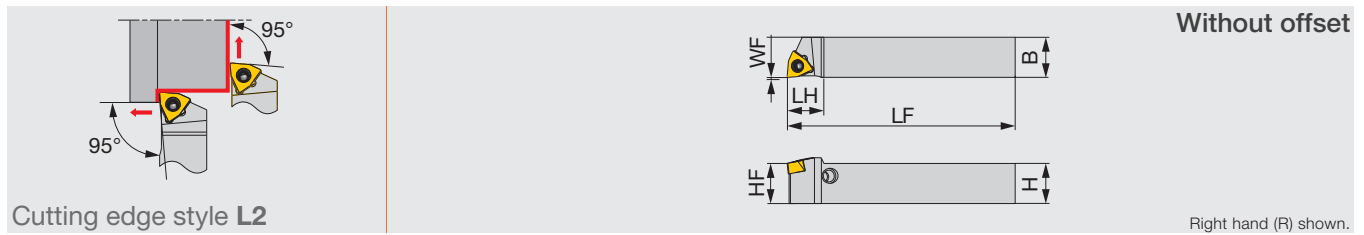
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------------------|---------|
| JSWL2XR/L1010X04 | 10 | 10 | 120 | 11 | 10 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JSWL2XR/L1212F04 | 12 | 12 | 85 | 11 | 12 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JSWL2XR/L1212X04 | 12 | 12 | 120 | 11 | 12 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JSWL2XR/L1616X04 | 16 | 16 | 120 | 13 | 16 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JSWL2XR/L2020H04 | 20 | 20 | 100 | 13 | 20 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JSWL2XR/L... | SR34-514 | T-7F |

Lever-lock toolholder with 95° approach angle, for WXGU inserts



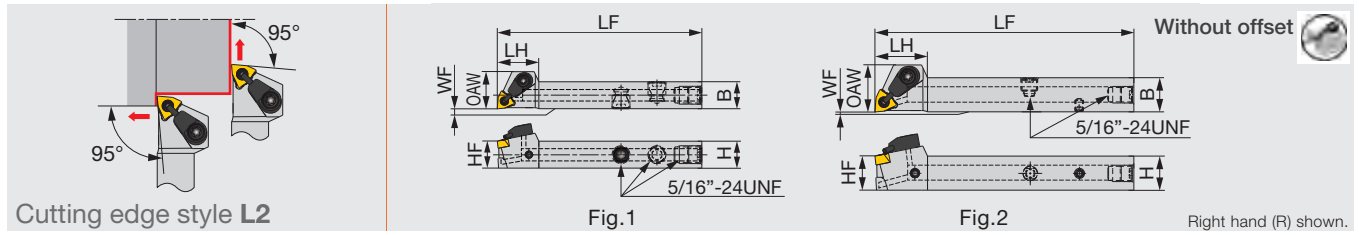
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------------------|---------|
| JPWL2XR/L1010X04 | 10 | 10 | 120 | 11 | 10 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JPWL2XR/L1212F04 | 12 | 12 | 85 | 11 | 12 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JPWL2XR/L1212X04 | 12 | 12 | 120 | 11 | 12 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |
| JPWL2XR/L1616X04 | 16 | 16 | 120 | 13 | 16 | 0 | 0.2 | WXGU0403**L/R... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

| Designation | Lever | Pin | Clamping screw | Wrench |
|--------------|--------|---------|----------------|------------|
| JPWL2XR/L... | SLLV-2 | SL-PI-2 | SR10400611 | HW2.0/5RED |

Screw-on toolholder with 95° approach angle, for WXGU inserts, with high pressure coolant capability



| Designation | H | B | LF | LH | HF | WF | OAW | RE** | Insert | Torque* | Fig |
|--------------------------|----|----|-----|------|----|----|------|------|------------------|---------|-----|
| JSWL2XR/L1212F04-CHP | 12 | 12 | 85 | 18 | 12 | 0 | 16.5 | 0.2 | WXGU0403**L/R... | 0.9 | 2 |
| JSWL2XR/L1212X04-CHP (*) | 12 | 12 | 120 | 18.5 | 12 | 0 | 16.5 | 0.2 | WXGU0403**L... | 0.9 | 1 |
| JSWL2XR/L1616X04-CHP (*) | 16 | 16 | 120 | 18.5 | 16 | 0 | 16.5 | 0.2 | WXGU0403**L... | 0.9 | 1 |

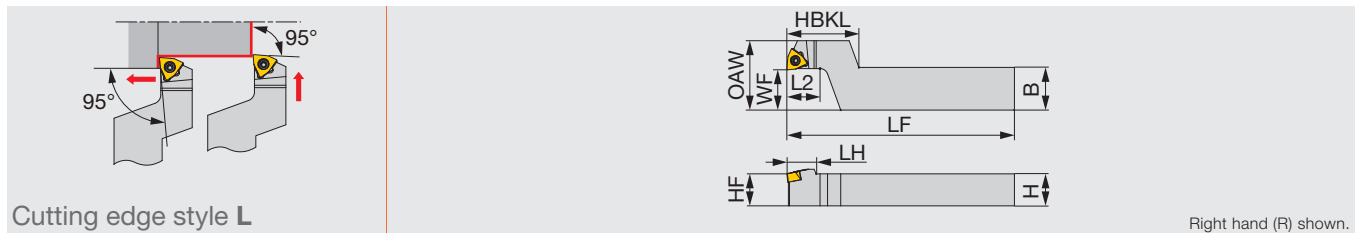
(*) Direct coolant supply *Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench |
|----------------------|----------------|--------------|----------|----------------|----------|----------------|--------|
| JSWL2XR/L1212F04-CHP | SR34-514 | S-CU-CHP | T-7F | SR5/16UNFTL360 | P-4 | - | - |
| JSWL2XR**X04-CHP | SR34-514 | S-CU-CHP | T-7F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Please see Tungaloy report (TR432) for tool overhang length and coolant plug.

Screw-on stepped-head toolholder with 95° approach angle, for WXGU inserts



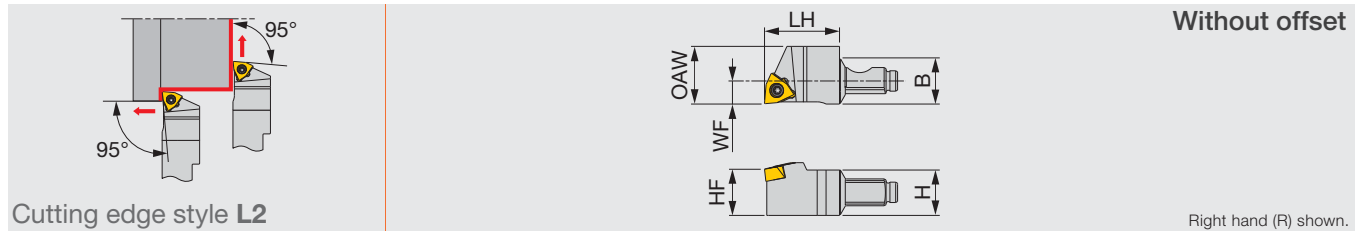
| Designation | H | B | LF | L2 | HBKL | LH | HF | WF | OAW | RE** | Insert | Torque* |
|-------------------|----|----|-----|----|------|----|----|----|-----|------|----------------|---------|
| JSWLXR1016X04-F15 | 10 | 16 | 120 | 12 | 27 | 11 | 10 | 15 | 26 | 0.2 | WXGU0403**L... | 0.9 |
| JSWLXR1216F04-F15 | 12 | 16 | 85 | 12 | 27 | 11 | 12 | 15 | 26 | 0.2 | WXGU0403**L... | 0.9 |
| JSWLXR1216X04-F15 | 12 | 16 | 120 | 12 | 27 | 11 | 12 | 15 | 26 | 0.2 | WXGU0403**L... | 0.9 |
| JSWLXR1620X04-F15 | 16 | 20 | 120 | 12 | 27 | 11 | 16 | 15 | 26 | 0.2 | WXGU0403**L... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JSWLXR**-F15 | SR34-514 | T-7F |

Screw-on head with 95° approach angle, for WXGU inserts



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|----------------|----|----|------|----|----|-----|------|----------------|---------|
| QC12-JSWL2XR04 | 12 | 12 | 19.5 | 12 | 6 | 15 | 0.2 | WXGU0403**L... | 0.9 |

Use right-hand toolholders (R) with left-hand inserts (L).
 *Torque: Recommended clamping torque (N-m)
 **RE: Standard corner radius

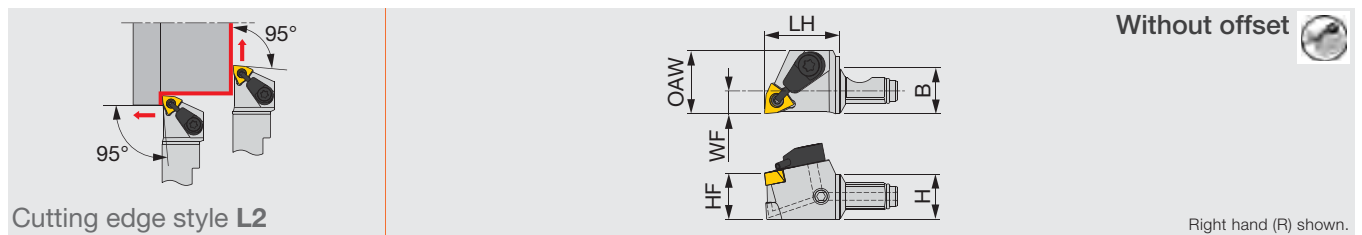
SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| QC12-JSWL2XR04 | SR34-514 | T-7F |

TUNGJET

QC12-JSWL2XR-CHP

Screw-on head with 95° approach angle, for WXGU inserts, with high pressure coolant capability



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|--------------------|----|----|------|----|----|------|------|----------------|---------|
| QC12-JSWL2XR04-CHP | 12 | 12 | 19.5 | 12 | 6 | 16.5 | 0.2 | WXGU0403**L... | 0.9 |

Use right-hand toolholders (R) with left-hand inserts (L).
 Through-coolant head
 *Torque: Recommended clamping torque (N-m)
 **RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench | O-ring |
|--------------------|----------------|--------------|--------|-------------------------|
| QC12-JSWL2XR04-CHP | SR34-514 | S-CU-CHP | T-7F | OR SS-045 4.5X1.0 NBR70 |

INSERT SELECTION

Swiss lathes

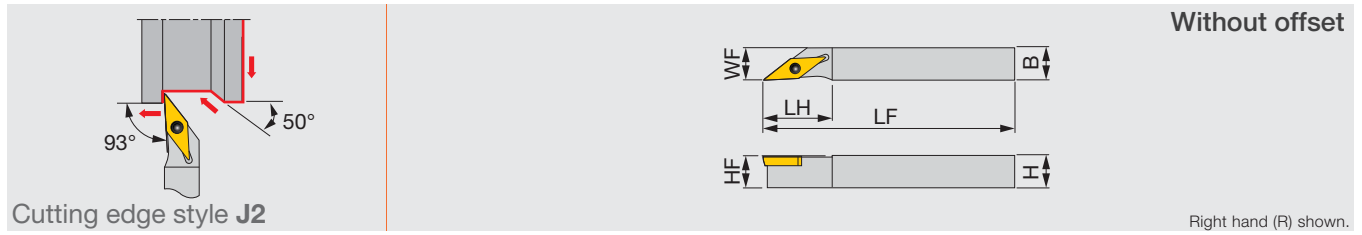
| P | Application areas | Finish cutting | Medium to finish cutting | M | Application areas | Finish cutting | Medium to finish cutting |
|---------------|-------------------|----------------|--------------------------|-----|-------------------|----------------|--------------------------|
| | Grade | SH725 | SH725 | | Grade | SH725 | SH725 |
| Breaker Shape | JSS | JS | Breaker Shape | JSS | JS | | |

Small CNC lathes

| P | Application areas | Finish cutting | Medium cutting | M | Application areas | Finish cutting | Medium cutting |
|---------------|-------------------|----------------|----------------|----|-------------------|----------------|----------------|
| | Grade | AH725 | AH725 | | Grade | AH8015 | AH8015 |
| Breaker Shape | SS | TS | Breaker Shape | SS | TS | | |

Reference pages : QC12-JSWL2XR, QC12-JSWL2XR-CHP: Inserts → 2-37, QC-Shank → 3-60,
 Parts for coolant hose → 3-61

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts



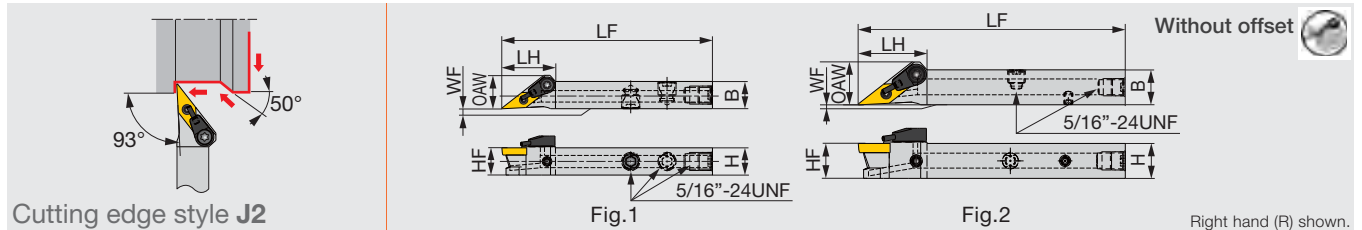
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| JSVJ2BR/L1010X11 | 10 | 10 | 120 | 21 | 10 | 10 | 0.2 | VB**1103... | 1.2 |
| JSVJ2BR/L1212F11 | 12 | 12 | 85 | 21 | 12 | 12 | 0.2 | VB**1103... | 1.2 |
| JSVJ2BR/L1212X11 | 12 | 12 | 120 | 21 | 12 | 12 | 0.2 | VB**1103... | 1.2 |
| JSVJ2BR/L1616X11 | 16 | 16 | 120 | 21 | 16 | 16 | 0.2 | VB**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m)
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JSVJ2BR/L... | CSTB-2.5 | T-8F |

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LF | LH | HF | WF | OAW | RE** | Insert | Torque* | Fig |
|-------------------------------------|----|----|-----|------|----|----|------|------|-------------|---------|-----|
| JSVJ2BR/L1212F11-CHP | 12 | 12 | 85 | 23.6 | 12 | 0 | 14.7 | 0.2 | VB**1103... | 1.2 | 1 |
| JSVJ2BR/L1212X11-CHP ⁽⁺⁾ | 12 | 12 | 120 | 23.6 | 12 | 0 | 14.7 | 0.2 | VB**1103... | 1.2 | 2 |
| JSVJ2BR/L1616X11-CHP ⁽⁺⁾ | 16 | 16 | 120 | 23.6 | 16 | 0 | 16 | 0.2 | VB**1103... | 1.2 | 2 |

(+) Direct coolant supply *Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

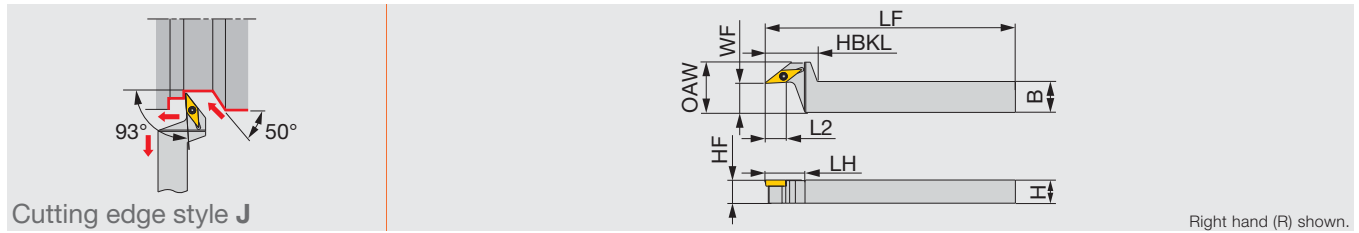
| Designation | Clamping screw | Coolant unit | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench 3 |
|----------------------|----------------|--------------|----------|----------------|----------|----------------|----------|
| JSVJ2BR/L1212F11-CHP | CSTB-2.5 | S-CU-CHP | T-8F | SR5/16UNFTL360 | P-4 | - | - |
| JSVJ2B**11-CHP | CSTB-2.5 | S-CU-CHP | T-8F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Please see Tungaloy report (TR432) for tool overhang length and coolant plug.

J-SERIES

JSVJBR-F

Screw-on stepped-head toolholder with 93° approach angle, for positive 35° rhombic inserts



Right hand (R) shown.

| Designation | H | B | LF | L2 | HBKL | LH | HF | WF | OAW | RE** | Insert | Torque* |
|-------------------|----|----|-----|------|------|----|----|----|-----|------|-------------|---------|
| JSVJBR1216F11-F15 | 12 | 16 | 85 | 12.6 | 27 | 21 | 12 | 15 | 26 | 0.2 | VB**1103... | 1.2 |
| JSVJBR1216X11-F15 | 12 | 16 | 120 | 12.6 | 27 | 21 | 12 | 15 | 26 | 0.2 | VB**1103... | 1.2 |
| JSVJBR1620X11-F15 | 16 | 20 | 120 | 12.6 | 27 | 21 | 16 | 15 | 26 | 0.2 | VB**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

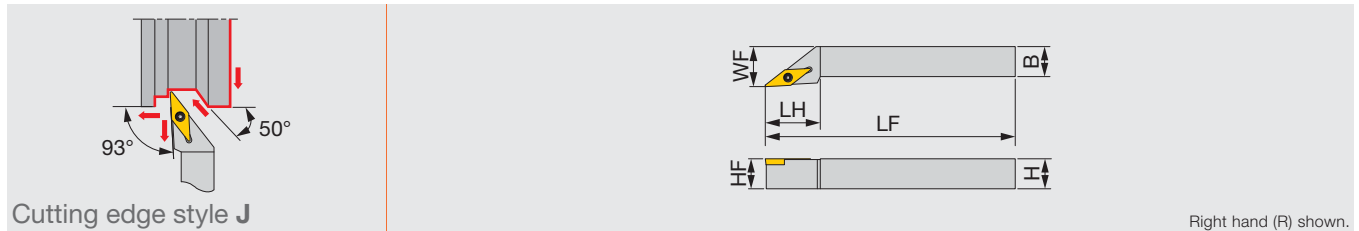
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSVJBR**F15 | CSTB-2.5 | T-8F |

J-SERIES

JSVJBR/L

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts



Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JSVJBR/L1010H11 | 10 | 10 | 100 | 20 | 10 | 12 | 0.4 | VB**1103... | 1.2 |
| JSVJBR/L1212H11 | 12 | 12 | 100 | 22 | 12 | 16 | 0.4 | VB**1103... | 1.2 |
| JSVJBR/L1616H11 | 16 | 16 | 100 | 22 | 16 | 20 | 0.4 | VB**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

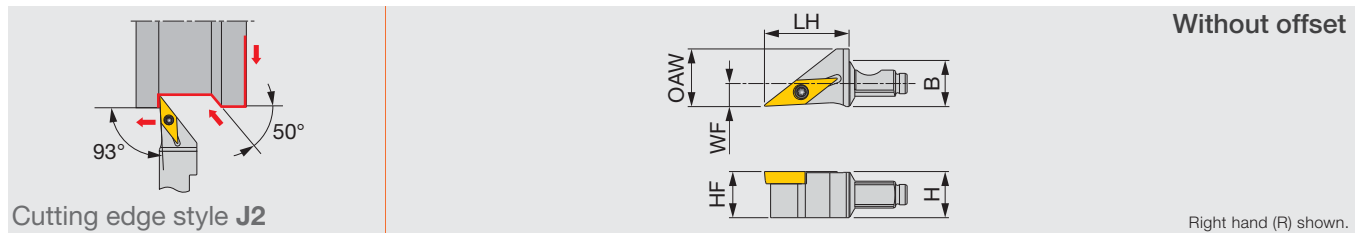
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSVJBR/L... | CSTB-2.5 | T-8F |

J-SERIES

QC12-JSVJ2BR

Screw-on head with 93° approach angle, for positive 35° rhombic inserts



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|----------------|----|----|----|----|----|-----|------|-------------|---------|
| QC12-JSVJ2BR11 | 12 | 12 | 22 | 12 | 6 | 15 | 0.2 | VB**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

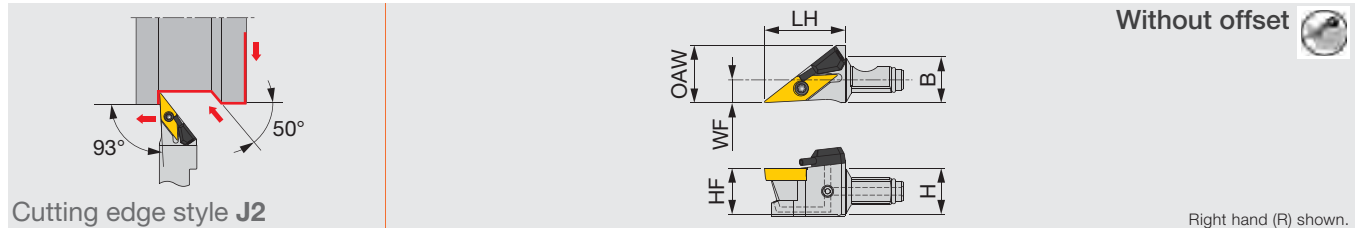
| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| QC12-JSVJ2BR11 | CSTB-2.5 | T-8F |

TUNG T^{URN}JET

QC12-JSVJ2BR-CHP

MINIFURN

Screw-on head with 93° approach angle, for positive 35° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|--------------------|----|----|----|----|----|-----|------|-------------|---------|
| QC12-JSVJ2BR11-CHP | 12 | 12 | 21 | 12 | 6 | 15 | 0.2 | VB**1103... | 1.2 |

Through-coolant head

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

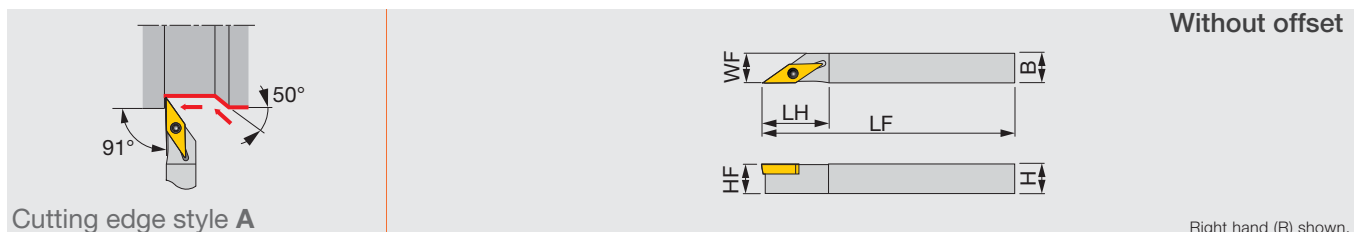
SPARE PARTS

| Designation | Clamping screw | Wrench 1 | O-ring | Coolant nozzle | Screw | Wrench 2 |
|--------------------|----------------|----------|-------------------------|----------------|------------|----------|
| QC12-JSVJ2BR11-CHP | CSTB-2.5 | T-8F | OR SS-045 4.5X1.0 NBR70 | NZ-1.10-7-CHP | SSHM4-4-TB | P-2 |

J-SERIES

JSVABR/L

Screw-on toolholder with 91° approach angle, for positive 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JSVABR/L1010K11 | 10 | 10 | 125 | 21 | 10 | 10 | 0.2 | VB**1103... | 1.2 |
| JSVABL1212K11 | 12 | 12 | 125 | 21 | 12 | 12 | 0.2 | VB**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSVABR/L... | CSTB-2.5 | T-8F |

Reference pages : QC12-JSVJ2BR, QC12-JSVJ2BR-CHP, JSVABR/L: Inserts → 2-31 -, CBN → 2-67
QC-Shank → 3-60, Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

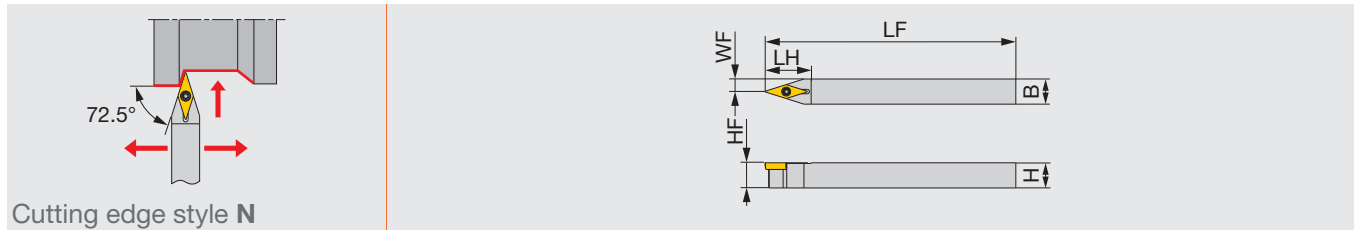
Grooving

Endmill

Drilling Tool

Technical Reference

Screw-on toolholder with 72.5° approach angle, for positive 35° rhombic inserts



Cutting edge style N

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|---------------|----|----|-----|----|----|----|------|-------------|---------|
| JSVNBN1010X11 | 10 | 10 | 120 | 22 | 10 | 5 | 0.2 | VB**1103... | 1.2 |
| JSVNBN1212F11 | 12 | 12 | 85 | 22 | 12 | 6 | 0.2 | VB**1103... | 1.2 |
| JSVNBN1212X11 | 12 | 12 | 120 | 22 | 12 | 6 | 0.2 | VB**1103... | 1.2 |
| JSVNBN1616X11 | 16 | 16 | 120 | 22 | 16 | 8 | 0.2 | VB**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

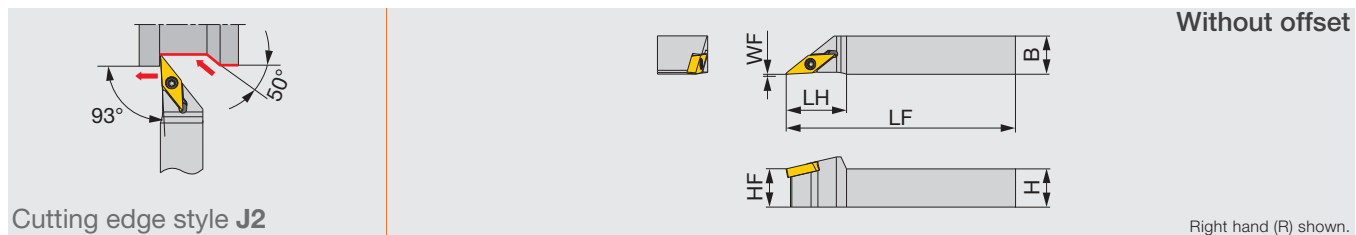
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSVNBN... | CSTB-2.5 | T-8F |

MINIFORCE

JSVJ2XR/L

Screw-on toolholder with 93° approach angle, for VXGU inserts



Cutting edge style J2

Without offset

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------------|---------|
| JSVJ2XR/L1010X09 | 10 | 10 | 120 | 17 | 10 | 0 | 0.2 | VXGU09T2**/L/R... | 0.9 |
| JSVJ2XR/L1212F09 | 12 | 12 | 85 | 19 | 12 | 0 | 0.2 | VXGU09T2**/L/R... | 0.9 |
| JSVJ2XR/L1212X09 | 12 | 12 | 120 | 19 | 12 | 0 | 0.2 | VXGU09T2**/L/R... | 0.9 |
| JSVJ2XR/L1616X09 | 16 | 16 | 120 | 19 | 16 | 0 | 0.2 | VXGU09T2**/L/R... | 0.9 |
| JSVJ2XR/L2020H09 | 20 | 20 | 100 | 19 | 20 | 0 | 0.2 | VXGU09T2**/L/R... | 0.9 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JSVJ2XR/L... | SR34-508 | T-7F |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

Use right-hand toolholders (R) with left-hand inserts (L).

Use left-hand toolholders (L) with right-hand inserts (R).

INSERT SELECTION

| Application areas | Finish cutting | Medium to finish cutting | Medium to finish cutting |
|-------------------|----------------|--------------------------|--------------------------|
| | Grade | Grade | Grade |
| | SH725 | AH725 | SH725 |
| Breaker Shape | JS | JS | J10 |

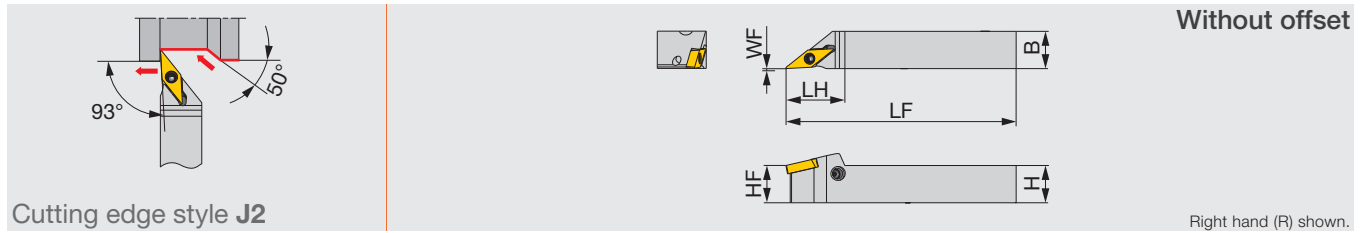
| Application areas | Finish cutting | Medium to finish cutting | Medium to finish cutting |
|-------------------|----------------|--------------------------|--------------------------|
| | Grade | Grade | Grade |
| | SH725 | AH725 | SH725 |
| Breaker Shape | JS | JS | J10 |

| Application areas | Finish cutting | Medium to finish cutting |
|-------------------|----------------|--------------------------|
| | Grade | Grade |
| | SH725 | AH725 |
| Breaker Shape | JS | JS |

| Application areas | Precision finishing | Finish cutting |
|-------------------|---------------------|----------------|
| | Grade | Grade |
| | BXM10 | BXM10 |
| Breaker Shape | T-CBN | T-CBN |

Reference pages : JSVNBN: Inserts → 2-31 -, CBN → 2-67
 JSVJ2XR/L: Inserts → 2-35 -

Lever-lock toolholder with 93° approach angle, for VXGU inserts



Cutting edge style J2

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------------------|---------|
| JPVJ2XR/L1010X09 | 10 | 10 | 120 | 19 | 10 | 0 | 0.2 | VXGU09T2**L/R... | 0.9 |
| JPVJ2XR/L1212F09 | 12 | 12 | 85 | 19 | 12 | 0 | 0.2 | VXGU09T2**L/R... | 0.9 |
| JPVJ2XR/L1212X09 | 12 | 12 | 120 | 19 | 12 | 0 | 0.2 | VXGU09T2**L/R... | 0.9 |
| JPVJ2XR/L1616X09 | 16 | 16 | 120 | 19 | 16 | 0 | 0.2 | VXGU09T2**L/R... | 0.9 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

Use right-hand toolholders (R) with left-hand inserts (L).

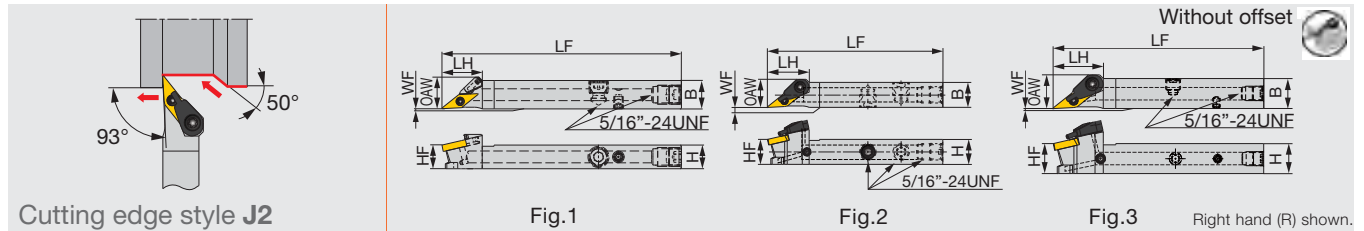
Use left-hand toolholders (L) with right-hand inserts (R).

| Designation | Lever | Pin | Clamping screw | Wrench |
|--------------|--------|---------|----------------|------------|
| JPVJ2XR/L... | SLLV-1 | SL-PI-2 | SR10400611 | HW2.0/5RED |

TUNGJET

JSVJ2XR-CHP

Screw-on toolholder without offset, 93° approach angle, for VXGU inserts, high pressure coolant compatible



Cutting edge style J2

| Designation | H | B | LF | LH | HF | WF | OAW | RE** | Insert | Torque* | Fig. |
|------------------------|----|----|-----|------|----|----|------|------|------------------|---------|------|
| JSVJ2XR1012H07-CHP (+) | 10 | 12 | 100 | 17 | 10 | 0 | 13.4 | 0.2 | VXGU09T2**L | 0.9 | 1 |
| JSVJ2XR/L1212F09-CHP | 12 | 12 | 85 | 20 | 12 | 0 | 13.5 | 0.2 | VXGU09T2**L/R... | 0.9 | 3 |
| JSVJ2XR1212X09-CHP (+) | 12 | 12 | 120 | 19.5 | 12 | 0 | 13.4 | 0.2 | VXGU09T2**L | 0.9 | 2 |
| JSVJ2XR1616X09-CHP (+) | 16 | 16 | 120 | 19.5 | 16 | 0 | 16 | 0.2 | VXGU09T2**L | 0.9 | 2 |

(+) Direct coolant supply *Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

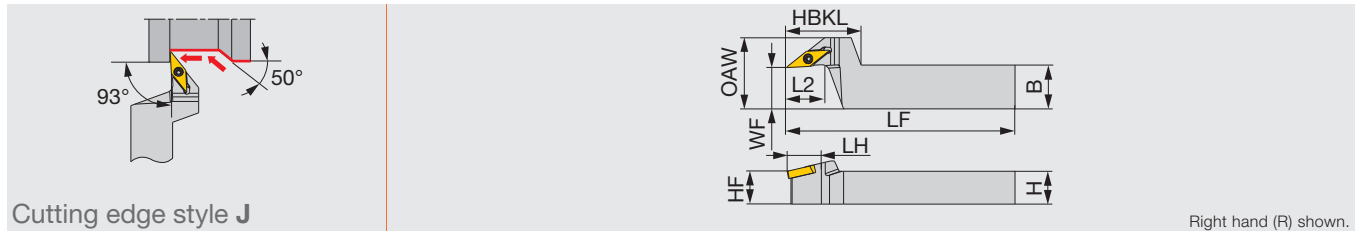
| Designation | Clamping screw | Coolant unit | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench 3 |
|----------------------|----------------|--------------|----------|----------------|----------|----------------|----------|
| JSVJ2XR/L1212F09-CHP | SR34-508 | S-CU-CHP | T-7F | SR5/16UNFTL360 | P-4 | - | - |
| JSVJ2XR1012H07-CHP | SR34-508 | - | T-7F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |
| JSVJ2XR**X09-CHP | SR34-508 | S-CU-CHP | T-7F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Please see Tungaloy report (TR432) for tool overhang length and coolant plug.

MINIFORCE

JSVJXR-F

Screw-on stepped-head toolholder with 93° approach angle, for VXGU inserts



| Designation | H | B | LF | L2 | HBKL | LH | HF | WF | OAW | RE** | Insert | Torque* |
|-------------------|----|----|-----|----|------|----|----|----|-----|------|----------------|---------|
| JSVJXR1016X09-F15 | 10 | 16 | 120 | 12 | 27 | 19 | 10 | 15 | 26 | 0.2 | VXGU09T2**L... | 0.9 |
| JSVJXR1216F09-F15 | 12 | 16 | 85 | 12 | 27 | 19 | 12 | 15 | 26 | 0.2 | VXGU09T2**L... | 0.9 |
| JSVJXR1216X09-F15 | 12 | 16 | 120 | 12 | 27 | 19 | 12 | 15 | 26 | 0.2 | VXGU09T2**L... | 0.9 |
| JSVJXR1620X09-F15 | 16 | 20 | 120 | 12 | 27 | 19 | 16 | 15 | 26 | 0.2 | VXGU09T2**L... | 0.9 |

*Torque: Recommended clamping torque (N·m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L).

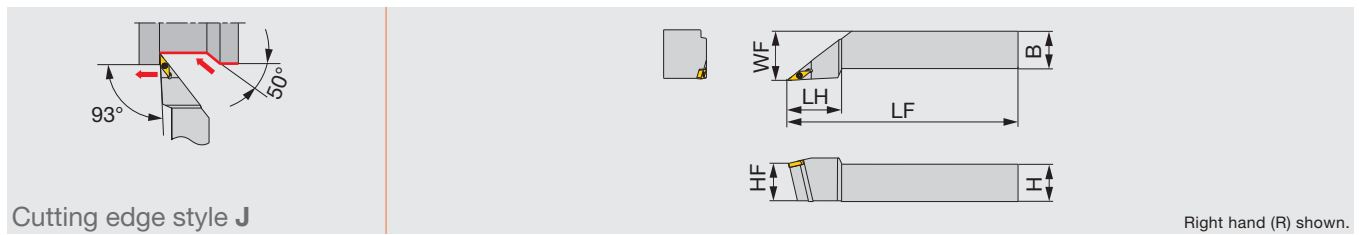
SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JSVJXR**-F15 | SR34-508 | T-7F |

MINIFORCE

JSVJXR/L

Screw-on toolholder with 93° approach angle, for VXGU inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|------------------|---------|
| JSVJXR/L2020K09 | 20 | 20 | 125 | 35 | 20 | 25 | 0.4 | VXGU09T2**L/R... | 0.9 |

*Torque: Recommended clamping torque (N·m) **RE: Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

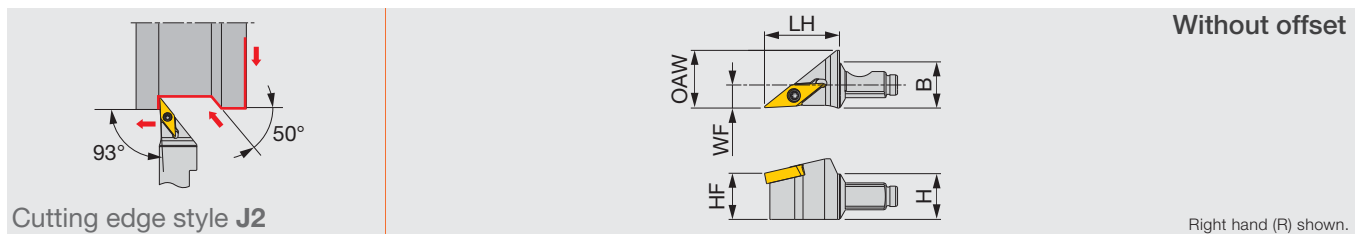
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSVJXR/L... | SR34-508 | T-7F |

MINIFORCE

QC12-JSVJ2XR

Screw-on head with 93° approach angle, for VXGU inserts



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|----------------|----|----|------|----|----|-----|------|----------------|---------|
| QC12-JSVJ2XR09 | 12 | 12 | 19.5 | 12 | 6 | 15 | 0.2 | VXGU09T2**L... | 0.9 |

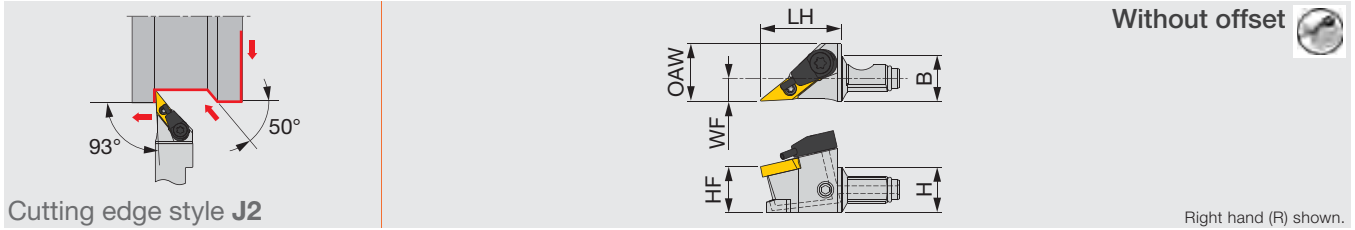
Use right-hand toolholders (R) with left-hand inserts (L).
*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| QC12-JSVJ2XR09 | SR34-508 | T-7F |

Reference pages : JSVJXR-F, JSVJXR/L, QC12-JSVJ2XR: Inserts → 2-35 -, QC-Shank → 3-60

Screw-on head with 93° approach angle, for VXGU inserts, with high pressure coolant capability



| Designation | H | B | LH | HF | WF | OAW | RE** | Insert | Torque* |
|--------------------|----|----|----|----|----|-----|------|----------------|---------|
| QC12-JSVJ2XR09-CHP | 12 | 12 | 21 | 12 | 6 | 15 | 0.2 | VXGU09T2**L... | 0.9 |

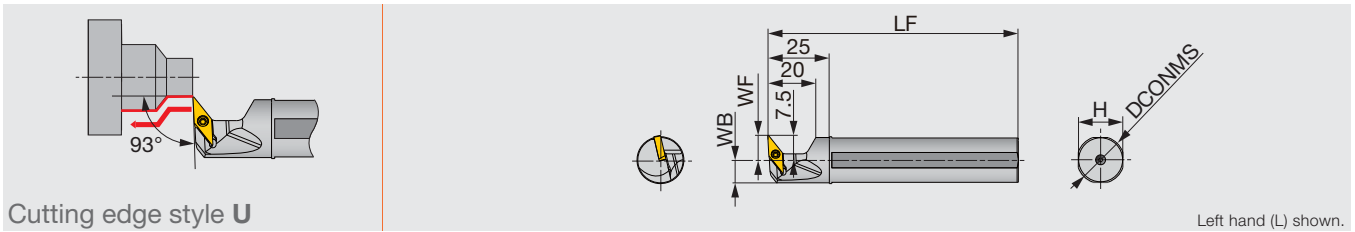
Use right-hand toolholders (R) with left-hand inserts (L).
Through-coolant head
*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Coolant unit | Wrench | O-ring |
|--------------------|----------------|--------------|--------|-------------------------|
| QC12-JSVJ2XR09-CHP | SR34-508 | S-CU-CHP | T-7F | OR SS-045 4.5X1.0 NBR70 |

MINIF^{ORCE}TURN
JS-SVUXL

Screw-on round-shank toolholder with 93° approach angle, for VXGU inserts



| Designation | DCONMS | WF | LF | H | WB | RE** | Insert | Torque* |
|----------------|--------|----|-----|----|------|------|----------------|---------|
| JS159F-SVUXL09 | 15.875 | 10 | 85 | 15 | 7.7 | 0.2 | VXGU09T2**L... | 0.9 |
| JS16F-SVUXL09 | 16 | 10 | 85 | 15 | 7.7 | 0.2 | VXGU09T2**L... | 0.9 |
| JS19G-SVUXL09 | 19.05 | 10 | 90 | 18 | 9.2 | 0.2 | VXGU09T2**L... | 0.9 |
| JS19X-SVUXL09 | 19.05 | 10 | 120 | 18 | 9.2 | 0.2 | VXGU09T2**L... | 0.9 |
| JS20G-SVUXL09 | 20 | 10 | 90 | 19 | 9.7 | 0.2 | VXGU09T2**L... | 0.9 |
| JS20X-SVUXL09 | 20 | 10 | 120 | 19 | 9.7 | 0.2 | VXGU09T2**L... | 0.9 |
| JS22X-SVUXL09 | 22 | 10 | 120 | 21 | 10.7 | 0.2 | VXGU09T2**L... | 0.9 |
| JS25H-SVUXL09 | 25 | 10 | 100 | 24 | 12.2 | 0.2 | VXGU09T2**L... | 0.9 |
| JS254X-SVUXL09 | 25.4 | 10 | 120 | 24 | 12.4 | 0.2 | VXGU09T2**L... | 0.9 |

*Torque: Recommended clamping torque (N·m) **RE: Standard corner radius
Use left-hand toolholders (L) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| JS**-SVUXL09 | SR34-508 | T-7F |

INSERT SELECTION

| P | Application areas | Finish cutting | Medium to finish cutting | M | Application areas | Finish cutting | Medium to finish cutting |
|---------------|-------------------|----------------|--------------------------|---|-------------------|----------------|--------------------------|
| | Grade | JRP | SH725 | | SH725 | Grade | JRP |
| Breaker Shape | | | | | Breaker Shape | | |

Reference pages : QC12-JSVJ2XR-CHP, JS-SVUXL: Inserts → 2-35 -, QC-Shank → 3-60,
Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

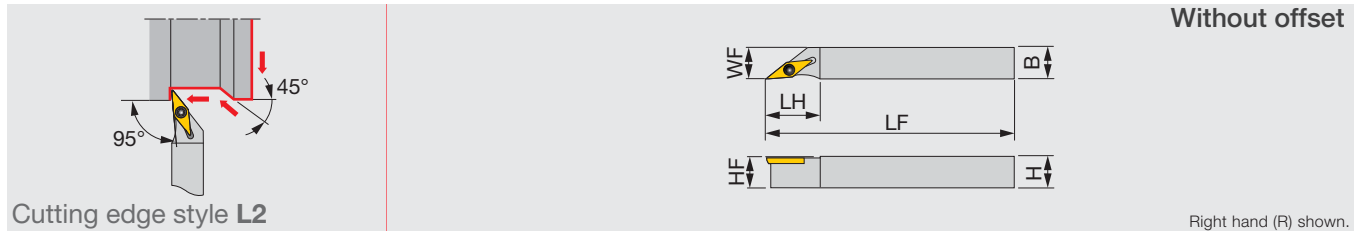
Drilling Tool

Technical Reference

J-SERIES

JSVL2PR/L

Screw-on toolholder with 95° approach angle, for positive 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| JSVL2PR/L1010X08 | 10 | 10 | 120 | 16 | 10 | 10 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1010K08 | 10 | 10 | 125 | 16 | 10 | 10 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1212F08 | 12 | 12 | 85 | 16 | 12 | 12 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1212F11 | 12 | 12 | 85 | 21 | 12 | 12 | 0.2 | VP**1103... | 1.2 |
| JSVL2PR/L1212X08 | 12 | 12 | 120 | 16 | 12 | 12 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1212X11 | 12 | 12 | 120 | 21 | 12 | 12 | 0.2 | VP**1103... | 1.2 |
| JSVL2PR/L1212K08 | 12 | 12 | 125 | 16 | 12 | 12 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1616X08 | 16 | 16 | 120 | 16 | 16 | 16 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1616K08 | 16 | 16 | 125 | 16 | 16 | 16 | 0.2 | VP**0802... | 0.6 |
| JSVL2PR/L1616X11 | 16 | 16 | 120 | 21 | 16 | 16 | 0.2 | VP**1103... | 1.2 |

SPARE PARTS

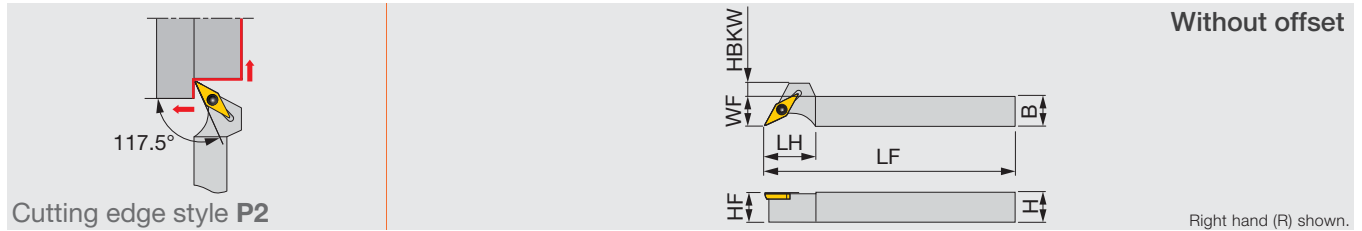
| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSVL2PR/L**08 | CSTB-2L | T-6F |
| JSVL2PR/L**11 | CSTB-2.5 | T-8F |

*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

J-SERIES

JSVP2PR/L

Screw-on toolholder with 117.5° approach angle, for positive 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | HBKW | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|------|-------------|---------|
| JSVP2PR/L1010K08 | 10 | 10 | 125 | 16 | 10 | 10 | 4 | 0.2 | VP**0802... | 0.6 |
| JSVP2PR/L1010K11 | 10 | 10 | 125 | 20 | 10 | 10 | 8 | 0.2 | VP**1103... | 1.2 |
| JSVP2PR/L1212K08 | 12 | 12 | 125 | 16 | 12 | 12 | 2 | 0.2 | VP**0802... | 0.6 |
| JSVP2PR/L1212K11 | 12 | 12 | 125 | 20 | 12 | 12 | 6 | 0.2 | VP**1103... | 1.2 |
| JSVP2PR/L1616K08 | 16 | 16 | 125 | 16 | 16 | 16 | 2 | 0.2 | VP**0802... | 0.6 |
| JSVP2PR/L1616K11 | 16 | 16 | 125 | 20 | 16 | 16 | 6 | 0.2 | VP**1103... | 1.2 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSVP2PR/L**08 | CSTB-2L | T-6F |
| JSVP2PR/L**11 | CSTB-2.5 | T-8F |

*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

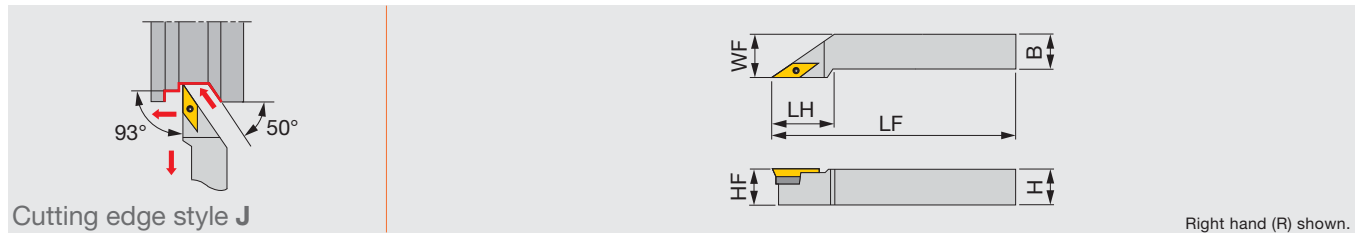
INSERT SELECTION

| Application areas | Finish cutting | | Application areas | Finish cutting | | Application areas | Finish cutting | |
|-------------------|----------------|-------|-------------------|----------------|-------|-------------------|----------------|-------|
| | Grade | Grade | | Grade | Grade | | Grade | Grade |
| Breaker Shape | JRP | JSP | Breaker Shape | JRP | JSP | Breaker Shape | JRP | JSP |

Reference pages : JSVL2PR/L, JSVP2PR/L: Inserts → 2-34 -

SVJCR/L

Screw-on toolholder with 93° approach angle, for positive 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|----|------|-------------|---------|
| SVJCR/L1616H16 | 16 | 16 | 100 | 32 | 16 | 20 | 0.8 | VC**1604... | 3 |
| SVJCR/L2020K16 | 20 | 20 | 125 | 32 | 20 | 25 | 0.8 | VC**1604... | 3 |

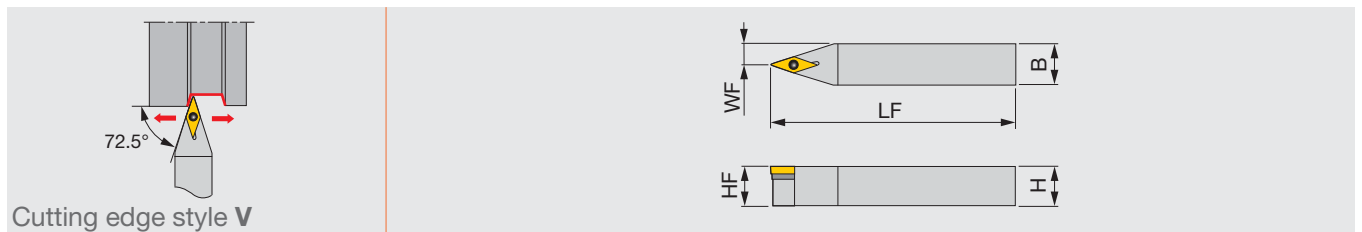
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Shim screw | Shim | Wrench1 | Wrench2 |
|-------------|----------------|------------|-------|---------|---------|
| SVJCR/L... | CSTB-3.5L | DTS5-3.5 | SSV32 | P-3.5 | T-15F |

SVVCN

Screw-on toolholder with 72.5° approach angle, for positive 35° rhombic inserts



| Designation | H | B | LF | HF | WF | RE** | Insert | Torque* |
|--------------|----|----|-----|----|----|------|-------------|---------|
| SVVCN2020K16 | 20 | 20 | 125 | 20 | 10 | 0.8 | VC**1604... | 3 |

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Shim screw | Shim | Wrench1 | Wrench2 |
|-------------|----------------|------------|-------|---------|---------|
| SVVCN... | CSTB-3.5L | DTS5-3.5 | SSV32 | P-3.5 | T-15F |

INSERT SELECTION

| | | | | | | | | | |
|----------|-------------------|---------------------|-----------------------------|----------------|-------------------|---------------------|-----------------------------|----------------|-------|
| P | Application | Finishing | Finishing to medium cutting | M | Application | Finishing | Finishing to medium cutting | Medium cutting | |
| | Grade | NS9530 | T9215 | | Grade | AH725 | AH630 | T6130 | |
| | Chipbreaker shape | PSS | PS | | Chipbreaker shape | PSF | PSS | PM | |
| N | Application | Precision finishing | Finishing | Medium cutting | H | Application | Precision finishing | Finishing | |
| | Grade | DX120 | DX140 | KS05F | | Grade | T-CBN | BXM10 | BXM20 |
| | Chipbreaker shape | T-DIA | with rake T-DIA | AL | | Chipbreaker shape | T-CBN | T-CBN | |
| S | Application | Finishing | Finishing to medium cutting | H | Application | Precision finishing | Finishing | | |
| | Grade | AH8015 | AH8015 | | Grade | T-CBN | BXM10 | BXM20 | |
| | Chipbreaker shape | PSS | PS | | Chipbreaker shape | T-CBN | T-CBN | | |

Reference pages: SVJCR/L, SVVCN:Inserts → 2-33 -, CBN → 2-68, PCD → 2-71

Grade 1

Insert 2

Ext. Toolholder 3

Int. Toolholder 4

Threading 5

Grooving 6

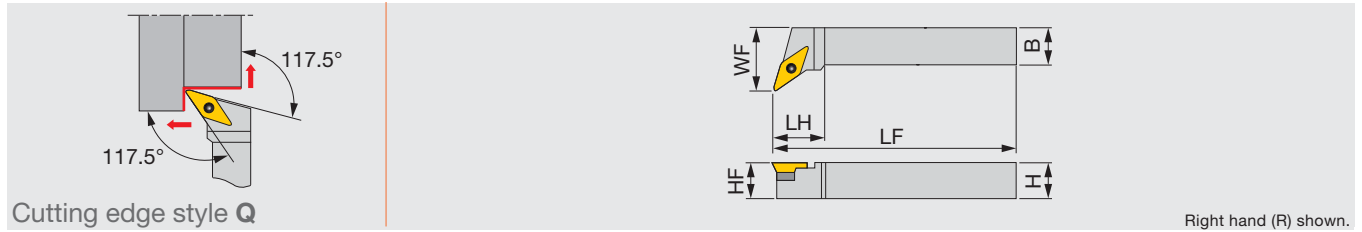
Endmill 7

Drilling Tool 8

Technical Reference 9

SVQCR/L

Screw-on toolholder with 117.5° approach angle, for positive 35° rhombic inserts



Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|----|------|-------------|---------|
| SVQCR/L2020K16 | 20 | 20 | 125 | 35 | 20 | 27 | 0.8 | VC**1604... | 3 |

**RE : Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Shim screw | Shim | Wrench 1 | Wrench 2 |
|-------------|----------------|------------|-------|----------|----------|
| SVQCR/L... | CSTB-3.5L | DTS5-3.5 | SSV32 | P-3.5 | T-15F |

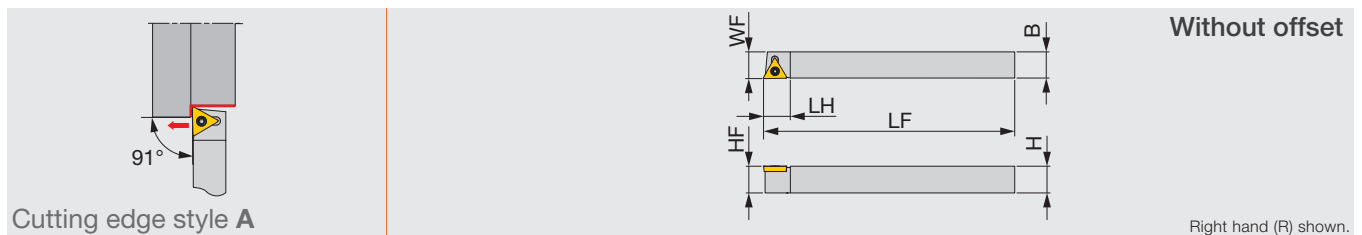
INSERT SELECTION

| P | Application | Finishing | Finishing to medium cutting | M | Application | Finishing | Finishing to medium cutting | Medium cutting |
|-------------------|-------------|---------------------|-----------------------------|-------------------|-------------|---------------------|-----------------------------|----------------|
| | Grade | NS9530 | T9215 | | Grade | AH725 | AH630 | T6130 |
| Chipbreaker shape | PSS | PS | | Chipbreaker shape | PSF | PSS | PM | |
| | | | | | | | | |
| N | Application | Precision finishing | Finishing | Medium cutting | | | | |
| | Grade | DX120 | DX140 | KS05F | | | | |
| Chipbreaker shape | T-DIA | with rake T-DIA | AL | | | | | |
| | | | | | | | | |
| S | Application | Finishing | Finishing to medium cutting | H | Application | Precision finishing | Finishing | |
| | Grade | AH8015 | AH8015 | | Grade | BXM10 | BXM20 | |
| Chipbreaker shape | PSS | PS | | Chipbreaker shape | T-CBN | T-CBN | | |
| | | | | | | | | |

J-SERIES

JSTACR/L

Screw-on toolholder with 91° approach angle, for positive 60° triangular inserts



Without offset

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JSTACR/L0808K08 | 8 | 8 | 125 | 10 | 8 | 8 | 0.2 | TC**0802... | 0.6 |
| JSTACR/L1010K08 | 10 | 10 | 125 | 10 | 10 | 10 | 0.2 | TC**0802... | 0.6 |
| JSTACR/L1212K11 | 12 | 12 | 125 | 12 | 12 | 12 | 0.4 | TC**1102... | 1.2 |
| JSTACR/L1616H11 | 16 | 16 | 100 | 12 | 16 | 16 | 0.4 | TC**1102... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

SPARE PARTS

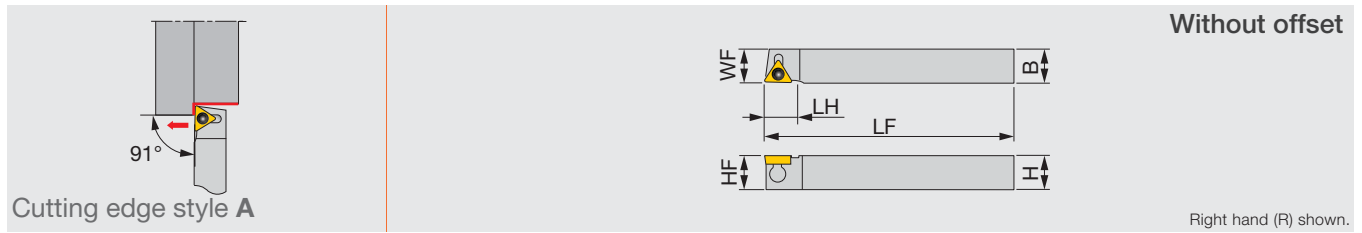
| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSTACR/L**K08 | CSTB-2L | T-6F |
| JSTACR/L**11 | CSTB-2.5 | T-8F |

Reference pages: SVQCR/L: Inserts → 2-33 -, CBN → 2-68, PCD → 2-71
 JSTACR/L: Inserts → 2-23 -, PCD → 2-70

J-SERIES

JTTACR/L

Back-clamp toolholder with 91° approach angle, for positive 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JTTACL0810K08 | 8 | 10 | 125 | 10 | 8 | 10 | 0.2 | TC**0802... | 0.9 |
| JTTACR/L1212M11 | 12 | 12 | 150 | 12 | 12 | 12 | 0.4 | TC**1102... | 0.9 |
| JTTACR/L1616M11 | 16 | 16 | 150 | 12 | 16 | 16 | 0.4 | TC**1102... | 0.9 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|---------------|-------|----------------|--------|
| JTTACL0810K08 | JCP-1 | JDS-3525 | P-2F |
| JTTACR/L**M11 | JCP-2 | JDS-3525 | P-2F |

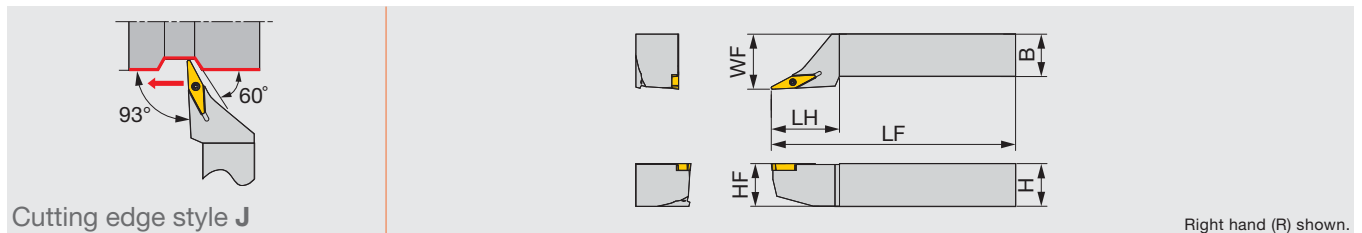
INSERT SELECTION

| P | Application areas | Precision finishing | Finish cutting | Medium to finish cutting | Medium to finish cutting | M | Application areas | Precision finishing | Finish cutting | Medium to finish cutting | Medium to finish cutting |
|---|-------------------|---------------------|----------------|--------------------------|--------------------------|---|-------------------|---------------------|----------------|--------------------------|--------------------------|
| | Grade | SH725 | SH725 | AH725 | SH725 | | Grade | SH725 | SH725 | AH725 | SH725 |
| | Breaker Shape | 01 | JS | JS | J10 | | 01 | JS | JS | J10 | |
| | | | | | | | | | | | |
| N | Application areas | Precision finishing | Medium cutting | | | | | | | | |
| | Grade | DX120 | KS05F | | | | | | | | |
| | Breaker Shape | T-DIA | with rake AL | | | | | | | | |
| | | | | | | | | | | | |

Y-PRO SERIES

SYJBR/L

Screw-on toolholder with 93° approach angle, for positive 25° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|----|------|-------------|---------|
| SYJBR/L2020K16 | 20 | 20 | 125 | 35 | 20 | 25 | 0.8 | YWMT16T3... | 1.2 |

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| SYJBR/L... | CSTB-2.5L080 | T-8F |

Reference pages : JTTACR/L: Inserts → 2-23 -, PCD → 2-70
 SYJBR/L: Inserts → 2-38 -

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

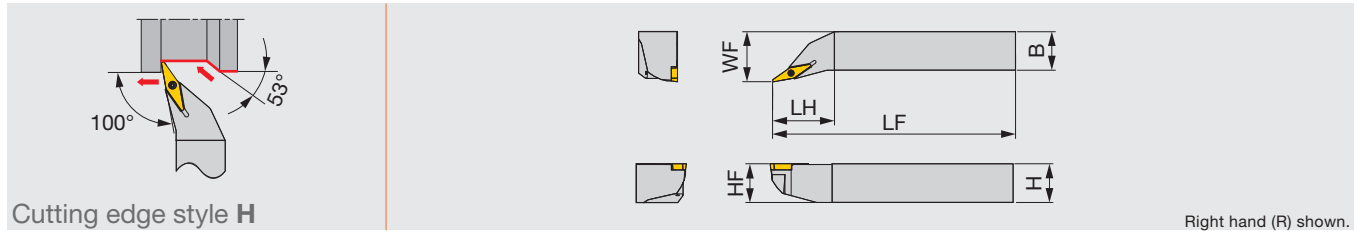
Drilling Tool

Technical Reference

Y-PRO SERIES

SYHBR/L

Screw-on toolholder with 100° approach angle, for positive 25° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|----|------|-------------|---------|
| SYHBR/L2020K16 | 20 | 20 | 125 | 35 | 20 | 27 | 0.8 | YWMT16T3... | 1.2 |

**RE : Standard corner radius

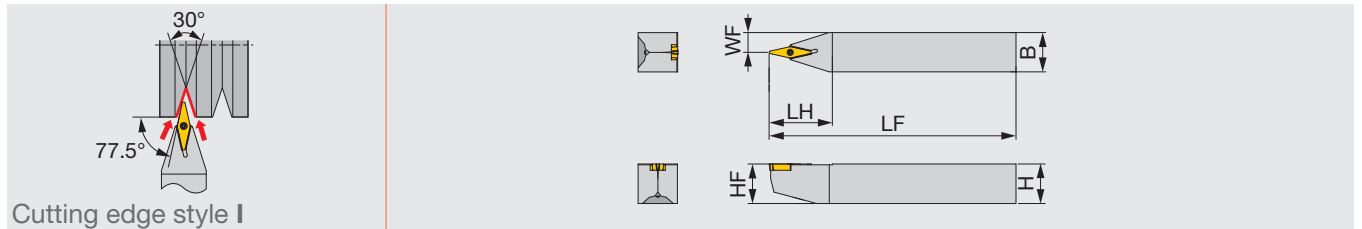
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| SYHBR/L... | CSTB-2.5L080 | T-8F |

Y-PRO SERIES

SYIBN

Screw-on toolholder with 77.5° approach angle, for positive 25° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------|----|----|-----|----|----|----|------|-------------|---------|
| SYIBN2020K16 | 20 | 20 | 125 | 32 | 20 | 10 | 0.8 | YWMT16T3... | 1.2 |

**RE : Standard corner radius

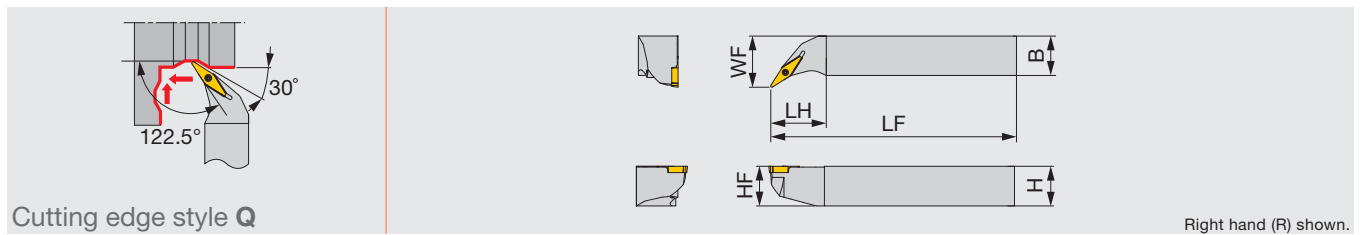
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| SYIBN... | CSTB-2.5L080 | T-8F |

Y-PRO SERIES

SYQBR/L

Screw-on toolholder with 122.5° approach angle, for positive 25° rhombic inserts




| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|----|------|-------------|---------|
| SYQBR/L2020K16 | 20 | 20 | 125 | 35 | 20 | 27 | 0.8 | YWMT16T3... | 1.2 |

**RE : Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| SYQBR/L... | CSTB-2.5L080 | T-8F |

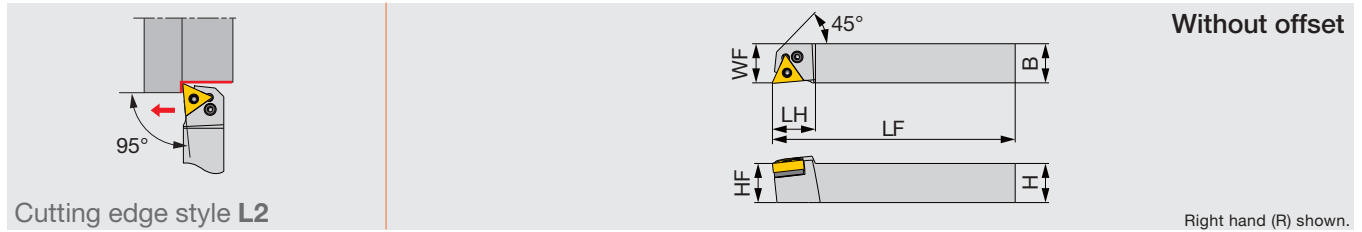
INSERT SELECTION

| | | |
|----------|-------------------|--|
| P | Application | Finishing to medium cutting |
| | Grade | T9225 |
| | Chipbreaker Shape | ZM  |

Reference pages: SYHBR/L, SYIBN, SYQBR/L : Inserts → 2-38 -

PTL2NR/L

Lever-lock toolholder with 95° approach angle, for negative 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| PTL2NR/L2020H16 | 20 | 20 | 100 | 22 | 20 | 20 | 0.4 | TN**1604... | 2 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

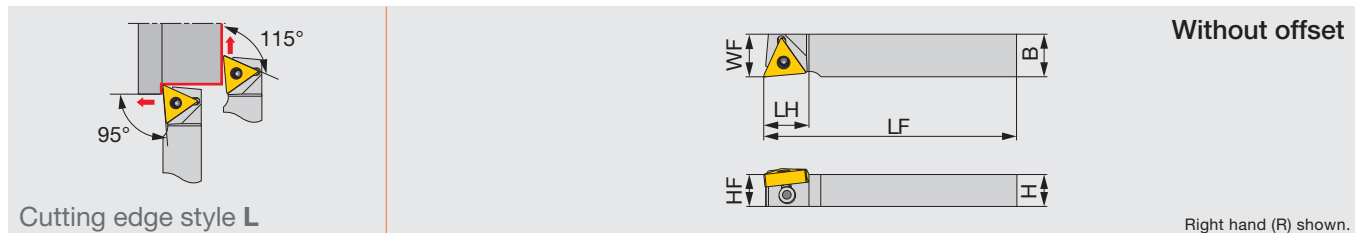
SPARE PARTS

| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
|-------------|------------|----------------|--------|------------|-------|
| PTL2NR/L... | LST317 D30 | LCS3 | P-2.5 | LSP3 | LCL3 |

J-SERIES

JTTLNR/L

Back-clamp toolholder with 95° approach angle, for negative 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|----|----|----|------|-------------|---------|
| JTTLNR/L1216F16 | 12 | 16 | 85 | 17 | 12 | 16 | 0.4 | TN**1604... | 1.2 |
| JTTLNR/L1216X16 | 12 | 16 | 120 | 17 | 12 | 16 | 0.4 | TN**1604... | 1.2 |
| JTTLNR/L1616X16 | 16 | 16 | 120 | 17 | 16 | 16 | 0.4 | TN**1604... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

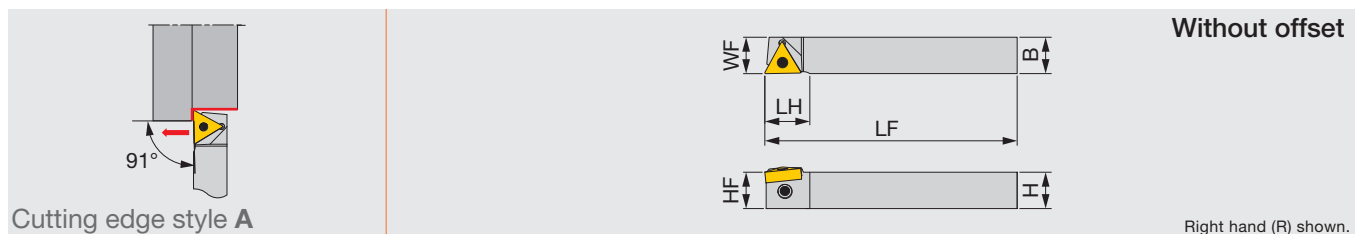
SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|-------------|--------|----------------|--------|
| JTTLNR/L... | JCP-3N | JDS-5040 | P-2.5F |

J-SERIES

JTTANR/L

Back-clamp toolholder with 91° approach angle, for negative 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-----------------|----|----|-----|------|----|----|------|-------------|---------|
| JTTANR/L1216K16 | 12 | 16 | 125 | 19.8 | 12 | 16 | 0.4 | TN**1604... | 1.2 |
| JTTANR/L1616K16 | 16 | 16 | 125 | 19.8 | 16 | 16 | 0.4 | TN**1604... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|-------------|--------|----------------|--------|
| JTTANR/L... | JCP-3N | JDS-5040 | P-2.5F |

Reference pages: PTL2NR/L, JTTLNR/L, JTTANR/L: Inserts → 2-49 -

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

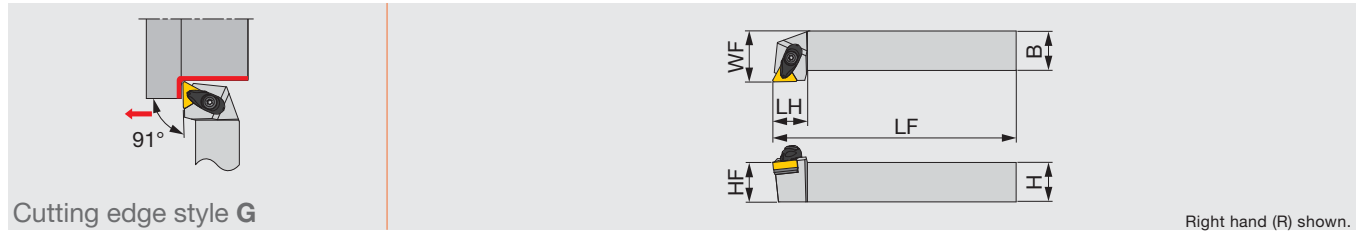
Grooving

Endmill

Drilling Tool

Technical Reference

Double-clamp toolholder with 91° approach angle, for negative 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| ATGNR/L2020K16-A | 20 | 20 | 125 | 22 | 20 | 25 | 0.8 | TN**1604... | 3 |

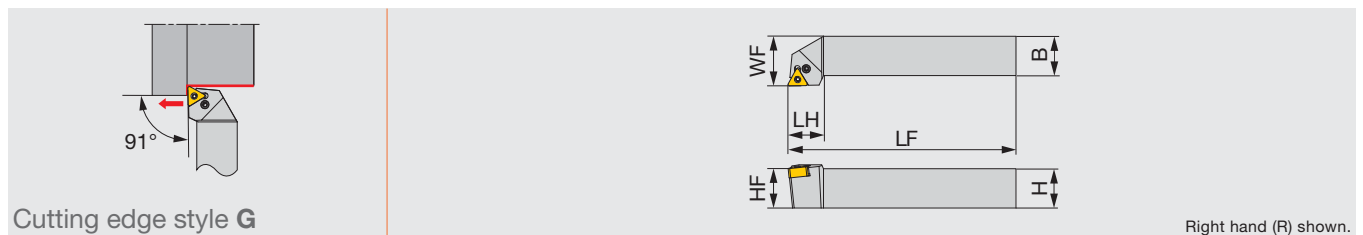
*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

SPARE PARTS

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|---------------|-------|-------------|--------|------------|--------|------------|--------|
| ATGNR/L**16-A | ACP3S | ACS-5W | BP-7 | SP-2.5 | AST322 | CSTB-3.5 | T-15F |
| ATGNR/L**22-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | AST422 | CSTB-3.5 | T-15F |

PTGNR/L

Lever-lock toolholder with 91° approach angle, for negative triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PTGNR/L1616 | 16 | 16 | 100 | 22 | 16 | 20 | 0.8 | TN**1604... | 2 |
| PTGNR/L2020K1104 | 20 | 20 | 125 | 20 | 20 | 25 | 0.8 | TN**1104... | 2 |
| PTGNR/L2020 | 20 | 20 | 125 | 22 | 20 | 25 | 0.8 | TN**1604... | 2 |

*Torque: Recommended clamping torque (N·m) **RE: Standard corner radius

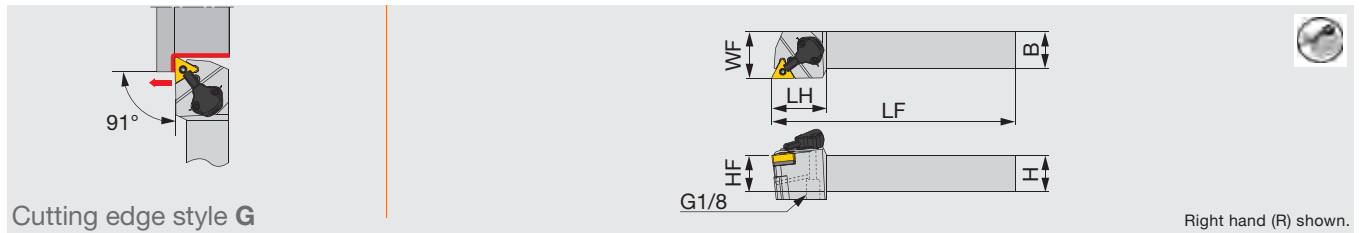
SPARE PARTS

| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
|-------------------|--------|----------------|--------|------------|-------|
| PTGNR/L1616, 2020 | LST317 | LCS3 | P-2.5 | LSP3 | LCL3 |
| PTGNR/L**1104 | - | LCS23A | P-2.5 | - | LCL23 |

TUNG T^{URN} T^{JET}

PTGNR/L-CHP

Lever-lock toolholders with 91° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Cutting edge style **G**

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------------|----|----|-----|----|----|----|------|-------------|---------|
| PTGNR/L2020K1104-CHP | 20 | 20 | 125 | 38 | 20 | 32 | 0.8 | TN**1104... | 2 |
| PTGNR/L2020K16-CHP | 20 | 20 | 125 | 38 | 20 | 32 | 0.8 | TN**1604... | 2 |

*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

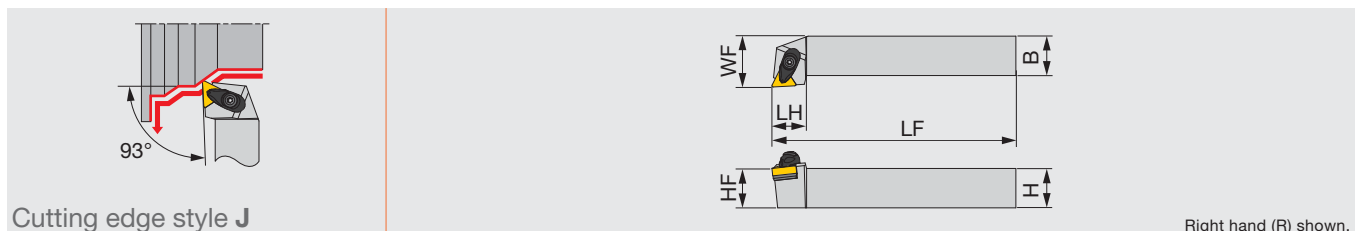
| Designation | Shim | Clamping screw | Wrench 1 | Spring pin | Lever |
|-------------------|--------|----------------|----------|------------|-------|
| PTGNR/L**1104-CHP | - | LCS23A | P-2.5 | LSP3 | LCL23 |
| PTGNR/L**16-CHP | LST317 | LCS3 | P-2.5 | LSP3 | LCL3 |

| Designation | Coolant unit | Mounting screw | Wrench 2 | O-ring | Coolant screw | Wrench 3 |
|-------------------|--------------|----------------|----------|------------|---------------|----------|
| PTGNR/L**1104-CHP | CU-CW-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |
| PTGNR/L**16-CHP | CU-CW-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |

TURNING A

ATJNR/L

Double-clamp toolholder with 93° approach angle, for negative 60° triangular inserts



Cutting edge style **J**

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| ATJNR/L2020K16-A | 20 | 20 | 125 | 22 | 20 | 25 | 0.8 | TN**1604... | 3 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|---------------|-------|-------------|--------|------------|--------|------------|--------|
| ATJNR/L**16-A | ACP3S | ACS-5W | BP-7 | SP-2.5 | AST322 | CSTB-3.5 | T-15F |

Reference pages: PTGNR/L-CHP, ATJNR/L: Inserts → 2-49 -, Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

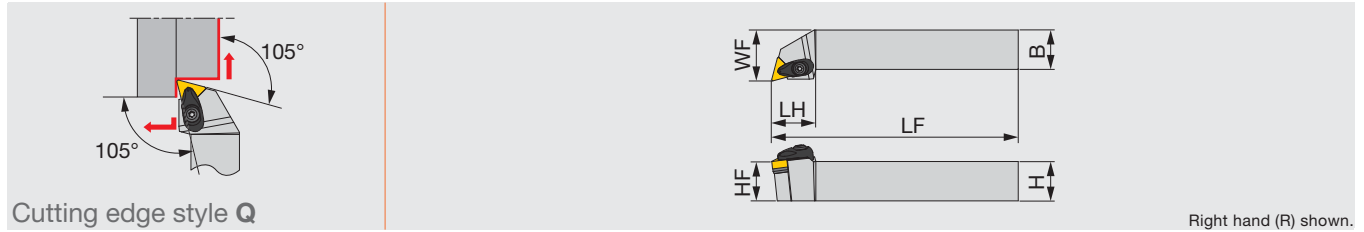
Drilling Tool

Technical Reference

TURNINGA

ATQNR/L

Double-clamp toolholder with 105° approach angle, for negative 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| ATQNR/L2020K16-A | 20 | 20 | 125 | 28 | 20 | 25 | 0.8 | TN**1604... | 3 |

*Torque: Recommended clamping torque (N·m)
 **RE : Standard corner radius

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|---------------|-------|-------------|--------|------------|--------|------------|--------|
| ATQNR/L**16-A | ACP3S | ACS-5W | BP-7 | SP-2.5 | AST322 | CSTB-3.5 | T-15F |

DC**

DXGU

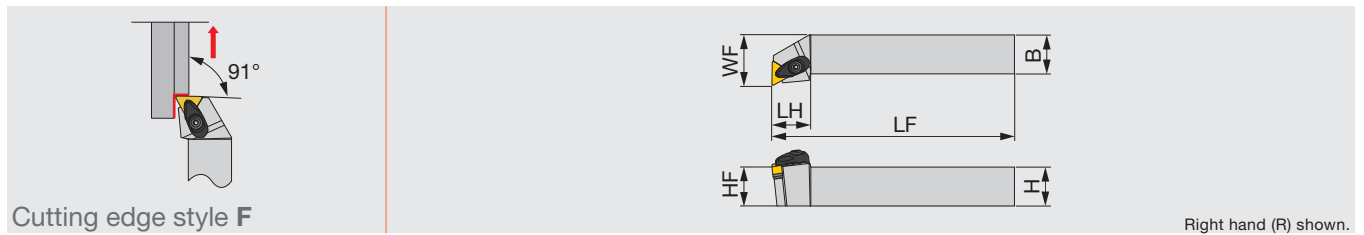
CC**

WXGU

TURNINGA

ATFNR/L

Double-clamp toolholder for facing with 91° approach angle, for negative 60° triangular inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| ATFNR/L2020K16-A | 20 | 20 | 125 | 25 | 20 | 25 | 0.8 | TN**1604... | 3 |

*Torque: Recommended clamping torque (N·m)
 **RE : Standard corner radius

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|---------------|-------|-------------|--------|------------|--------|------------|--------|
| ATFNR/L**16-A | ACP3S | ACS-5W | BP-7 | SP-2.5 | AST322 | CSTB-3.5 | T-15F |

TN**

CN**

WN**

DN**

VN**

JXF

JXB

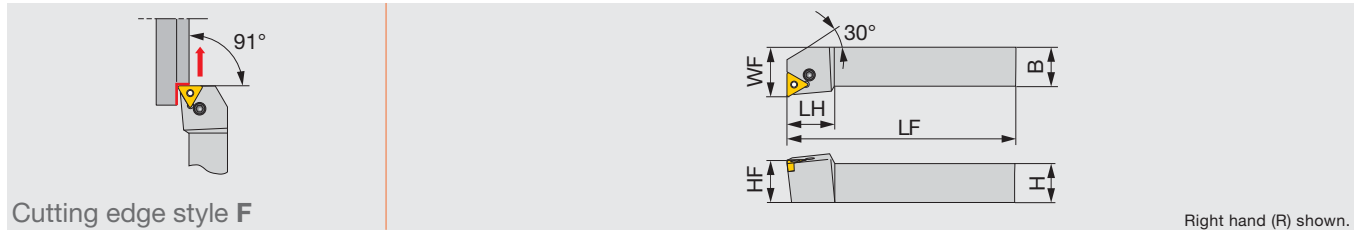
J10E

JTB

Reference pages: ATQNR/L, ATFNR/L: Inserts → 2-49 -

PTFNR/L

Lever-lock toolholder with 91° approach angle, for negative triangular inserts



Cutting edge style F

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PTFNR/L1616 | 16 | 16 | 100 | 22 | 16 | 20 | 0.8 | TN**1604... | 2 |
| PTFNR/L2020K1104 | 20 | 20 | 125 | 16 | 20 | 25 | 0.8 | TN**1104... | 2 |
| PTFNR/L2020 | 20 | 20 | 125 | 22 | 20 | 25 | 0.8 | TN**1604... | 2 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

SPARE PARTS

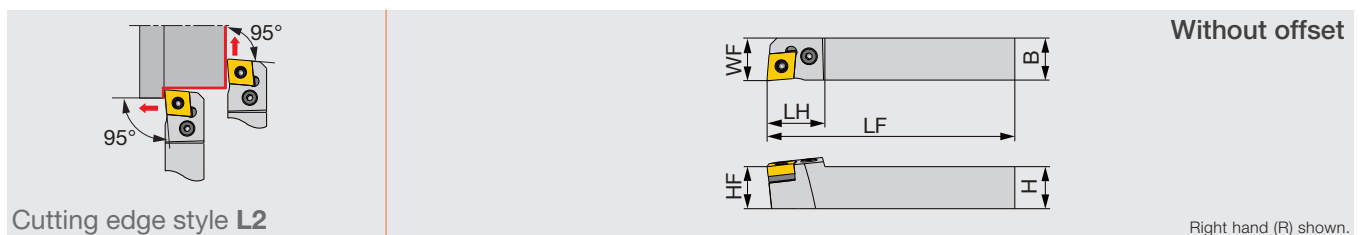
| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
|-------------------|--------|----------------|--------|------------|-------|
| PTFNR/L1616, 2020 | LST317 | LCS3 | P-2.5 | LSP3 | LCL3 |
| PTFNR/L**1104 | - | LCS23A | P-2.5 | - | LCL23 |

INSERT SELECTION

| | | | | | | | | | | | |
|-------------------|-------------------|---------------------|---------------------|-----------|----------------|-------------------------|-------------------|-------------------|---------------------|-----------|----------------|
| P | Application | Precision finishing | Precision finishing | Finishing | Medium cutting | Medium to heavy cutting | M | Application | Precision finishing | Finishing | Medium cutting |
| | Grade | SH725 | NS9530 | GT9530 | T9215 | T9215 | | Grade | SH725 | T6120 | T6130 |
| | Chipbreaker Shape | 01 | TF | TSF | TM | TH | | Chipbreaker Shape | 01 | SF | SM |
| N | Application | Medium cutting | | | | | | S | Application | Finishing | Medium cutting |
| | Grade | TH10 | | | | | | | Grade | AH8005 | AH8005 |
| Chipbreaker Shape | P | | | | | | Chipbreaker Shape | HRF | HRM | | |

PCL2NR

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts



Cutting edge style L2

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|---------------|----|----|-----|----|----|----|------|----------------|---------|
| PCL2NR2020H12 | 20 | 20 | 100 | 26 | 20 | 20 | 0.8 | CN/GN**1204... | 3 |

*Torque: Recommended clamping torque (N·m)

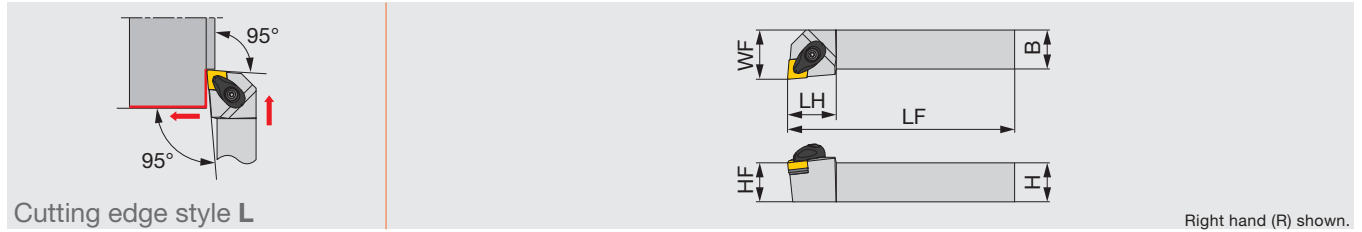
**RE: Standard corner radius

SPARE PARTS

| Designation | Shim | Clamping screw | Lever | Spring pin | Wrench |
|---------------|-------|----------------|-------|------------|--------|
| PCL2NR2020H12 | LSC42 | LCS4 | LCL4 | LSP4 | P-3 |

Reference pages: PTFNR/L: Inserts → 2-49 -
PCL2NR: Inserts → 2-41 -

Double-clamp toolholder with 95° approach angle, for negative 80° rhombic inserts



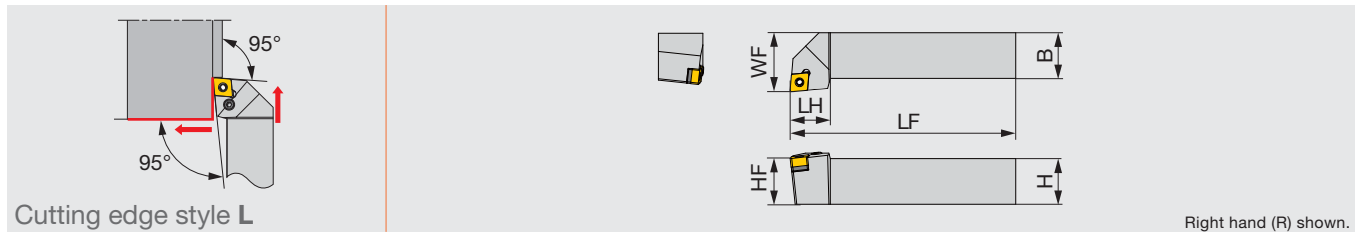
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|-------------|---------|
| ACLNR/L2020K0904-A | 20 | 20 | 125 | 25 | 20 | 25 | 0.8 | CN**0904... | 3 |
| ACLNR/L2020H12-A | 20 | 20 | 100 | 26 | 20 | 25 | 0.8 | CN**1204... | 3 |
| ACLNR/L2020K12-A | 20 | 20 | 125 | 26 | 20 | 25 | 0.8 | CN**1204... | 3 |

*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench1 |
|-----------------|---------|-------------|--------|------------|--------|------------|---------|
| ACLNR/L**0904-A | ACP3S-E | ACS-5W | BP-7 | SP-2.5 | ASC322 | CSTB-3.5 | T-15F |
| ACLNR/L**12-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASC422 | CSTB-3.5 | T-15F |

PCLNR/L

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts

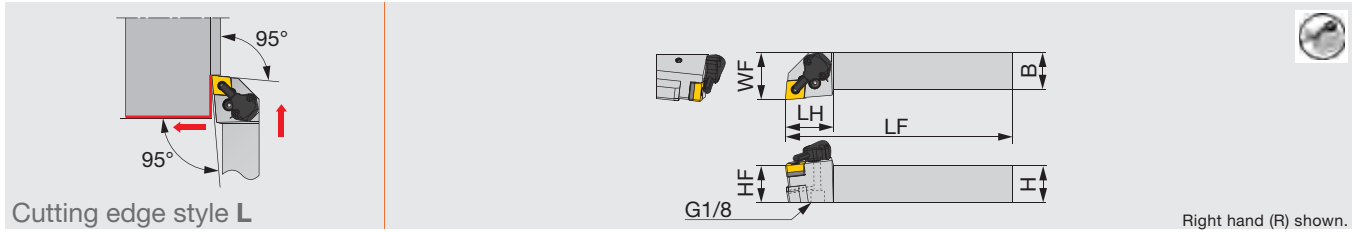


| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PCLNR/L1616H09 | 16 | 16 | 100 | 20 | 16 | 20 | 0.8 | CN**0903... | 2 |
| PCLNR/L1616 | 16 | 16 | 100 | 26 | 16 | 20 | 0.8 | CN**1204... | 3 |
| PCLNR/L2020K0904 | 20 | 20 | 125 | 20 | 20 | 25 | 0.8 | CN**0904... | 2 |
| PCLNR/L2020K09 | 20 | 20 | 125 | 20 | 20 | 25 | 0.8 | CN**0903... | 2 |
| PCLNR/L2020 | 20 | 20 | 125 | 28 | 20 | 25 | 0.8 | CN**1204... | 3 |

*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
|----------------|--------|----------------|--------|------------|-------|
| PCLNR/L1616H09 | ELSC32 | LCS3 | P-2.5 | LSP3L | LCL33 |
| PCLNR/L1616 | LSC42 | LCS4CA | P-3 | LSP4 | LCL4 |
| PCLNR/L**0904 | LSC317 | LCS3 | P-2.5 | LSP3 | LCL33 |
| PCLNR/L2020K09 | ELSC32 | LCS3 | P-2.5 | LSP3L | LCL33 |
| PCLNR/L2020 | LSC42 | LCS4 | P-3 | LSP4 | LCL4 |

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------------|----|----|-----|----|----|----|------|-------------|---------|
| PCLNR/L2020K0904-CHP | 20 | 20 | 125 | 33 | 20 | 32 | 0.8 | CN**0904... | 2 |
| PCLNR/L2020K12-CHP | 20 | 20 | 125 | 33 | 20 | 32 | 0.8 | CN**1204... | 3 |

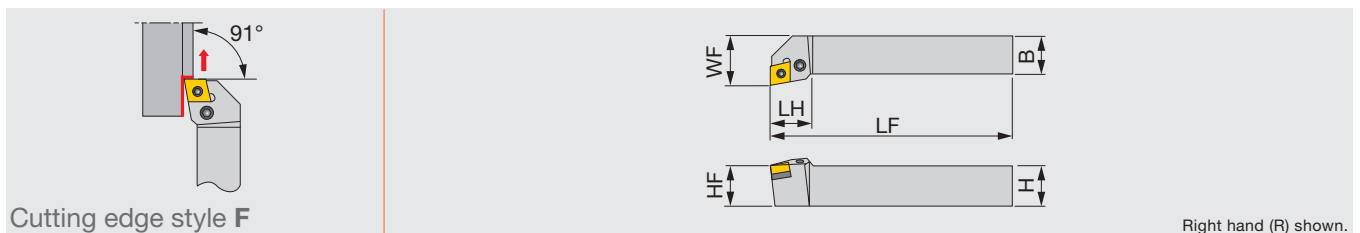
*Torque: Recommended clamping torque (N·m)
**RE: Standard corner radius

| SPARE PARTS | | | | | |
|-------------------|--------|----------------|---------|------------|-------|
| Designation | Shim | Clamping screw | Wrench1 | Spring pin | Lever |
| PCLNR/L**0904-CHP | LSC317 | LCS3 | P-2.5 | LSP3 | LCL33 |
| PCLNR/L**12-CHP | LSC42 | LCS4 | P-3 | LSP4 | LCL4 |

| SPARE PARTS | | | | | | |
|--------------------------------------|--------------|----------------|---------|------------|---------------|---------|
| Designation | Coolant unit | Mounting screw | Wrench2 | O-ring | Coolant screw | Wrench3 |
| PCLNR/L**0904-CHP PCLNR/L**12-CHP | CU-CW-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |

PCFNR/L

Lever-lock type toolholder for facing with 91° approach angle, for negative 80° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|-------------|----|----|-----|----|----|----|------|-------------|---------|
| PCFNR/L2020 | 20 | 20 | 125 | 28 | 20 | 25 | 0.8 | CN**1204... | 3 |

**RE : Standard corner radius

| SPARE PARTS | | | | | |
|-------------|-----------|----------------|--------|------------|-------|
| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
| PCFNR/L... | LSC42 D30 | LCS4 | P-3 | LSP4 | LCL4 |

INSERT SELECTION

| | | | | | | | | | | |
|----------|-------------------|---------------------|-----------|-------------------|-------------------------|----------------|-------------------|-----------|----------------|-------------------------|
| P | Application | Precision finishing | Finishing | Medium cutting | Medium to heavy cutting | M | Application | Finishing | Medium cutting | Medium to heavy cutting |
| | Grade | NS9530 | GT9530 | T9215 | T9215 | | Grade | T6120 | T6130 | T6130 |
| | Chipbreaker shape | TF | TSF | TM | TH | | Chipbreaker shape | SF | SM | SH |
| | | | | | | | | | | |
| N | Application | Medium cutting | S | Application | Finishing | Medium cutting | | | | |
| | Grade | TH10 | | Grade | AH8005 | AH8005 | | | | |
| | Chipbreaker shape | P | | Chipbreaker shape | HRF | HRM | | | | |
| | | | | | | | | | | |

Reference pages: PCLNR/L-CHP, PCFNR/L: Inserts → 2-41 -, Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

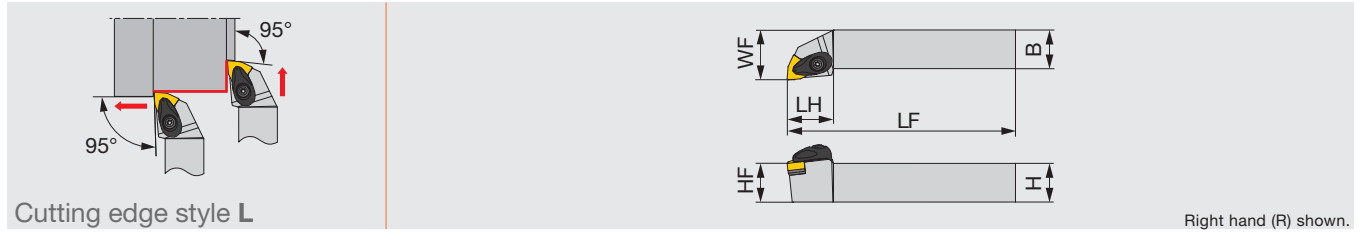
Grooving

Endmill

Drilling Tool

Technical Reference

Double-clamp toolholder with 95° approach angle, for negative 80° trigon inserts



Right hand (R) shown.

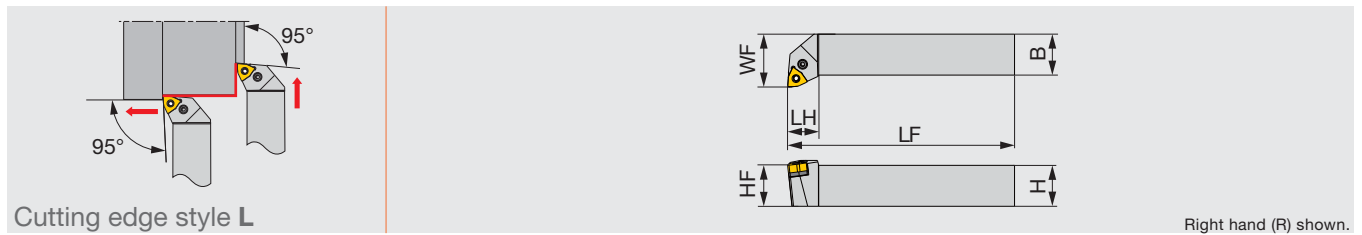
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|-------------|---------|
| AWLNR/L2020K0604-A | 20 | 20 | 125 | 27 | 20 | 25 | 0.8 | WN**0604... | 3 |
| AWLNR/L2020H08-A | 20 | 20 | 100 | 30 | 20 | 25 | 0.8 | WN**0804... | 3 |
| AWLNR/L2020K08-A | 20 | 20 | 125 | 30 | 20 | 25 | 0.8 | WN**0804... | 3 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| SPARE PARTS | | | | | | | |
|-----------------|---------|-------------|--------|------------|--------|------------|--------|
| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
| AWLNR/L**0604-A | ACP3S-E | ACS-5W | BP-7 | SP-2.5 | ASW322 | CSTB-3.5 | T-15F |
| AWLNR/L**08-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASW422 | CSTB-3.5 | T-15F |

PWLNR/L

Lever-lock toolholder with 95° approach angle, for negative 80° trigon inserts



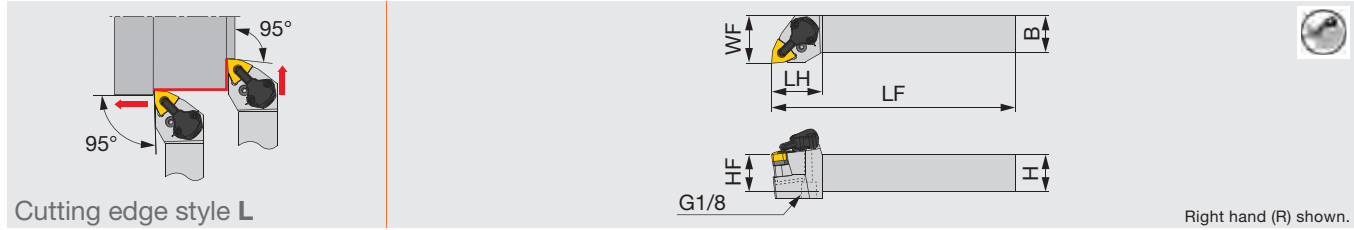
Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PWLNR/L2020K0604 | 20 | 20 | 125 | 15 | 20 | 25 | 0.8 | WN**0604... | 2 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| SPARE PARTS | | | | | |
|---------------|--------|----------------|--------|------------|-------|
| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
| PWLNR/L**0604 | LSW312 | LCS3 | P-2.5 | LSP3 | LCL3 |

Lever-lock toolholder with 95° approach angle, for negative 80° trigon inserts, with high pressure coolant capability



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------------|----|----|-----|----|----|----|------|-------------|---------|
| PWLNR/L2020K0604-CHP | 20 | 20 | 125 | 34 | 20 | 32 | 0.8 | WN**0604... | 2 |
| PWLNR/L2020K08-CHP | 20 | 20 | 125 | 34 | 20 | 32 | 0.8 | WN**0804... | 3 |

*Torque: Recommended clamping torque (N·m) **RE: Standard corner radius

| SPARE PARTS | | | | | |
|-------------------|--------|----------------|---------|------------|-------|
| Designation | Shim | Clamping screw | Wrench1 | Spring pin | Lever |
| PWLNR/L**0604-CHP | LSW312 | LCS3 | P-2.5 | LSP3 | LCL3 |
| PWLNR/L**08-CHP | LSW42 | LCS4 | P-2.5 | LSP4 | LCL4 |

| SPARE PARTS | | | | | | |
|-------------------|--------------|----------------|---------|------------|---------------|---------|
| Designation | Coolant unit | Mounting screw | Wrench2 | O-ring | Coolant screw | Wrench3 |
| PWLNR/L**0604-CHP | CU-CW-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |
| PWLNR/L**08-CHP | | | | | | |

INSERT SELECTION

| P | Application | Precision finishing | Finishing | Medium cutting | Medium to heavy cutting |
|-------------------|-------------|---------------------|-----------|----------------|-------------------------|
| | Grade | NS9530 | GT9530 | T9215 | T9215 |
| Chipbreaker shape | TF | TSF | TM | TH | TH |

| M | Application | Finishing | Medium cutting | Medium to heavy cutting |
|-------------------|-------------|-----------|----------------|-------------------------|
| | Grade | T6120 | T6130 | T6130 |
| Chipbreaker shape | SF | SM | SH | SH |

| S | Application | Precision finishing | Finishing | Medium cutting |
|-------------------|-------------|---------------------|-----------|----------------|
| | Grade | BX480 | AH8005 | AH8005 |
| Chipbreaker shape | T-CBN | HRF | HRM | HRM |

| H | Application | Precision finishing | Finishing |
|-------------------|-------------|---------------------|-----------|
| | Grade | BXM10 | BXM20 |
| Chipbreaker shape | T-CBN | T-CBN | T-CBN |

Reference pages: PWLNR/L-CHP: Inserts → 2-57 -
Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

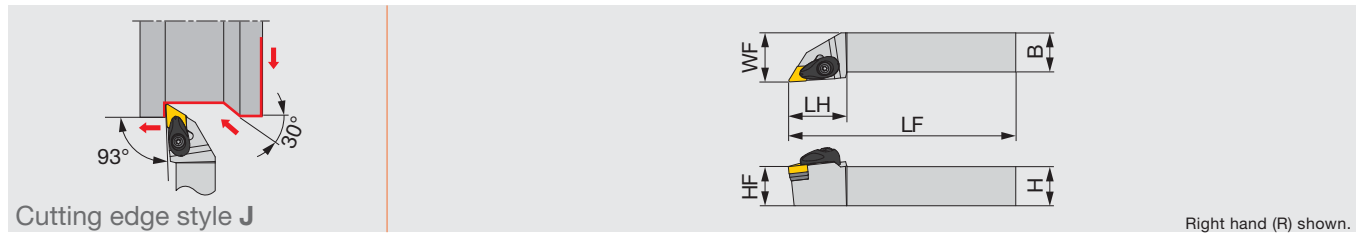
Grooving

Endmill

Drilling Tool

Technical Reference

Double-clamp toolholder with 93° approach angle, for negative 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|-------------|---------|
| ADJNR/L2020K1104-A | 20 | 20 | 125 | 30 | 20 | 25 | 0.8 | DN**1104... | 3 |
| ADJNR/L2020K15-A | 20 | 20 | 125 | 36 | 20 | 25 | 0.8 | DN**1504... | 3 |
| ADJNR/L2020K1506-A | 20 | 20 | 125 | 36 | 20 | 25 | 0.8 | DN**1506... | 3 |

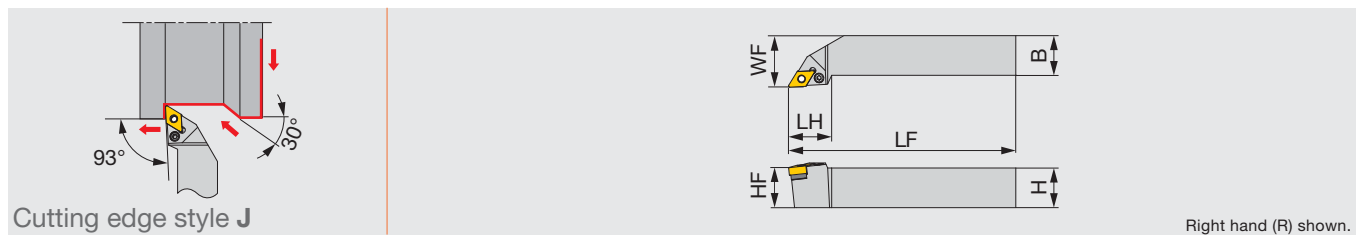
*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|-----------------|---------|-------------|--------|------------|--------|------------|--------|
| ADJNR/L**1104-A | ACP3S-E | ACS-5W | BP-7 | SP-2.5 | ASD322 | CSTB-3.5 | T-15F |
| ADJNR/L**15-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASD432 | CSTB-3.5 | T-15F |
| ADJNR/L**1506-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASD423 | CSTB-3.5 | T-15F |

PDJNR/L

Lever-lock toolholder with 93° approach angle, for negative 55° rhombic inserts



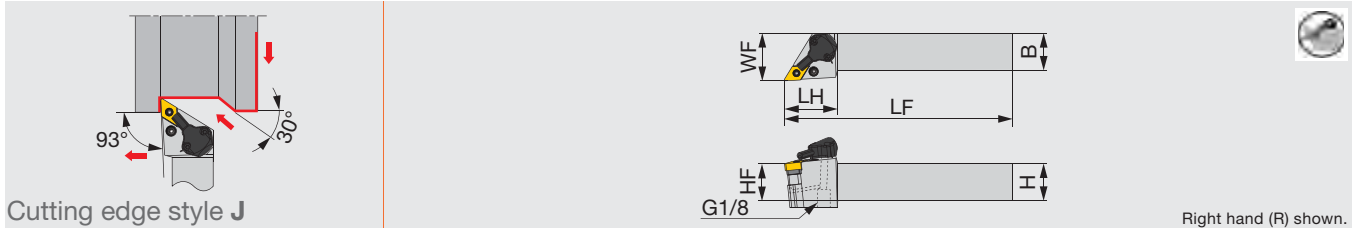
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PDJNR/L1616H1104 | 16 | 16 | 100 | 27 | 16 | 20 | 0.8 | DN**1104... | 2 |
| PDJNR/L1616H11 | 16 | 16 | 100 | 27 | 16 | 20 | 0.8 | DN**1104... | 2 |
| PDJNR/L2020K1104 | 20 | 20 | 125 | 27 | 20 | 25 | 0.8 | DN**1104... | 2 |
| PDJNR/L2020K11 | 20 | 20 | 125 | 27 | 20 | 25 | 0.8 | DN**1104... | 2 |
| PDJNR/L2020 | 20 | 20 | 125 | 34 | 20 | 25 | 0.8 | DN**1504... | 3 |
| PDJNR2020K15E | 20 | 20 | 125 | 36 | 20 | 25 | 0.8 | DN**1506... | 3 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
|---------------|--------|----------------|--------|------------|--------|
| PDJNR/L****11 | ELSD32 | LCS3 | P-2.5 | LSP3 | LCL33L |
| PDJNR/L2020 | LSD42 | LCS4 | P-3 | LSP4 | LCL4 |
| PDJNR2020K15E | ELSD42 | ELCS4 | P-3 | LSP4S | LCL44 |

Lever-lock toolholder with 93° approach angle, for negative 55° rhombic inserts, with high pressure coolant capability



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------------|----|----|-----|----|----|----|------|-------------|---------|
| PDJNR/L2020K1104-CHP | 20 | 20 | 125 | 36 | 20 | 32 | 0.8 | DN**1104... | 2 |
| PDJNR/L2020K15-CHP | 20 | 20 | 125 | 36 | 20 | 32 | 0.8 | DN**1504... | 3 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

| Designation | Shim | Clamping screw | Wrench1 | Spring pin | Lever |
|-------------------|--------|----------------|---------|------------|--------|
| PDJNR/L**1104-CHP | ELSD32 | LCS3 | P-2.5 | LSP3 | LCL33L |
| PDJNR/L**15-CHP | LSD43A | LCS4 | P-3 | LSP4 | LCL4 |

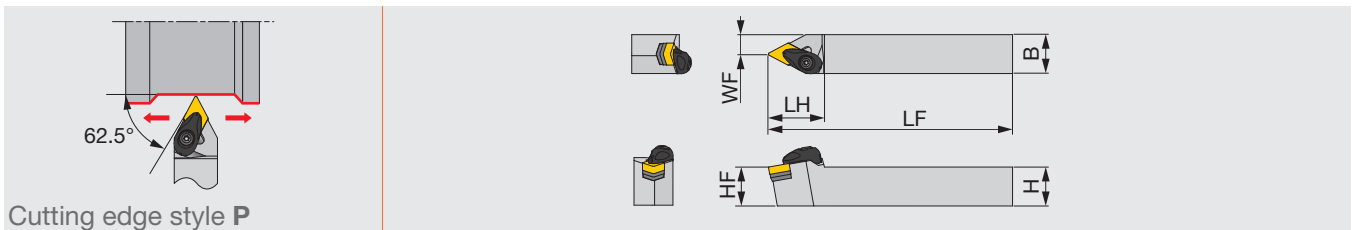
SPARE PARTS

| Designation | Coolant unit | Mounting screw | Wrench2 | O-ring | Coolant screw | Wrench3 |
|--------------------------------------|--------------|----------------|---------|------------|---------------|---------|
| PDJNR/L**1104-CHP PDJNR/L**15-CHP | CU-D-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |

TURNINGA

ADPNN

Double-clamp toolholder with 62.5° approach angle, for negative 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|-----|------|-------------|---------|
| ADPNN2020K15-A | 20 | 20 | 125 | 36 | 20 | 7.5 | 0.8 | DN**1504... | 3 |

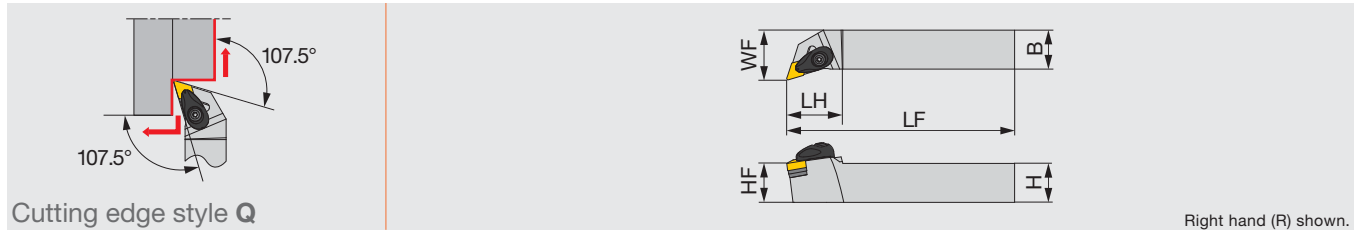
*Torque: Recommended clamping torque (N-m)

**RE: Standard corner radius

SPARE PARTS

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|-------------|-------|-------------|--------|------------|--------|------------|--------|
| ADPNN**15-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASD432 | CSTB-3.5 | T-15F |

Double-clamp toolholder with 107.5° approach angle, for negative 55° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|-------------|---------|
| ADQNR/L2020K1104-A | 20 | 20 | 125 | 30 | 20 | 25 | 0.8 | DN**1104... | 3 |
| ADQNR/L2020K15-A | 20 | 20 | 125 | 32 | 20 | 25 | 0.8 | DN**1504... | 3 |
| ADQNR/L2020K1506-A | 20 | 20 | 125 | 32 | 20 | 25 | 0.8 | DN**1506... | 3 |

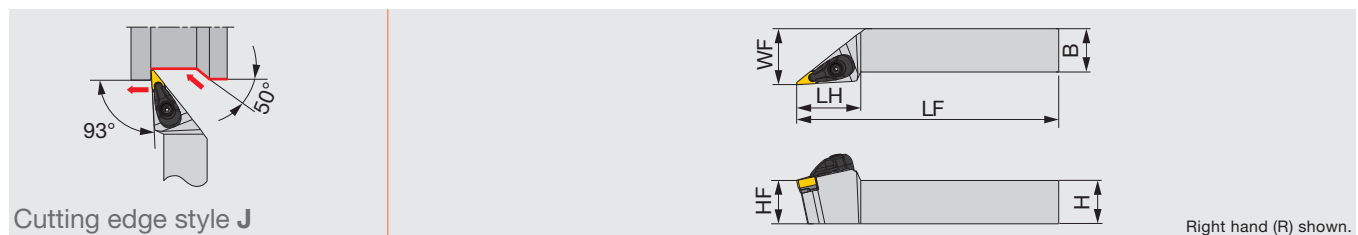
*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|-----------------|---------|-------------|--------|------------|--------|------------|--------|
| ADQNR/L**1104-A | ACP3S-E | ACS-5W | BP-7 | SP-2.5 | ASD322 | CSTB-3.5 | T-15F |
| ADQNR/L**15-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASD432 | CSTB-3.5 | T-15F |
| ADQNR/L**1506-A | ACP4S | ACS-5W | BP-7 | SP-2.5 | ASD423 | CSTB-3.5 | T-15F |

INSERT SELECTION

| P | Application | Precision finishing | Finishing | Medium cutting | Medium to heavy cutting | M | Application | Finishing | Medium cutting | Medium to heavy cutting |
|---|-------------------|---------------------|-----------|----------------|-------------------------|---|-------------------|-----------|----------------|-------------------------|
| | Grade | NS9530 | GT9530 | T9215 | T9215 | | Grade | T6120 | T6130 | T6130 |
| | Chipbreaker Shape | TF | TSF | TM | TH | | Chipbreaker Shape | SF | SM | SH |
| | Grade | TH10 | | | | | Grade | AH8005 | AH8005 | |
| | Chipbreaker Shape | P | | | | | Chipbreaker Shape | HRF | HRM | |

Double-clamp toolholder with 93° approach angle, for negative 35° rhombic inserts



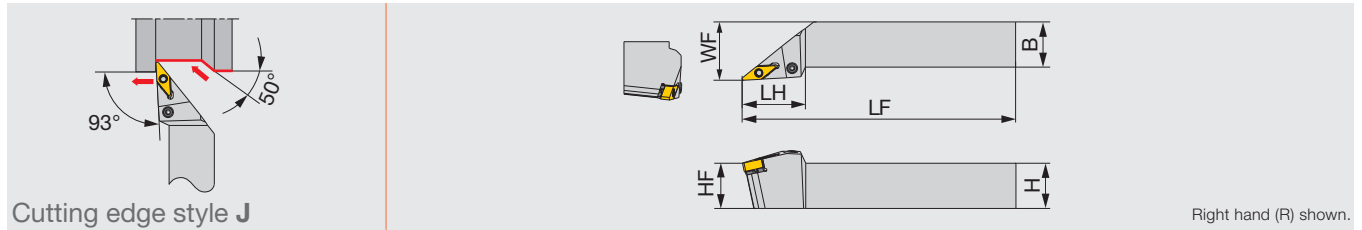
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|---------------|---------|
| AVJNR/L2020K1204-A | 20 | 20 | 125 | 37 | 20 | 25 | 0.8 | VN**1204... | 3 |
| AVJNR/L2020K16-A | 20 | 20 | 125 | 43 | 20 | 25 | 0.8 | V/YN**1604... | 3 |

*Torque: Recommended clamping torque (N·m) **RE: Standard corner radius

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|-----------------|---------|-------------|--------|------------|--------|------------|--------|
| AVJNR/L**1204-A | ACP3L-E | ACS-5W | BP-7 | SP-2.5 | ASV222 | CSTB-3.0 | T-15F |
| AVJNR/L**16-A | ACP3L | ACS-5W | BP-7 | SP-2.5 | ASV322 | CSTB-3.5 | T-15F |

Reference pages: ADQNR/L: Inserts → 2-45 -
AVJNR/L: Inserts → 2-54 -

Lever-lock toolholder with 93° approach angle, for negative 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PVJNR/L1616H1204 | 16 | 16 | 100 | 35 | 16 | 20 | 0.8 | VN**1204... | 2 |
| PVJNR/L2020K1204 | 20 | 20 | 125 | 35 | 20 | 25 | 0.8 | VN**1204... | 2 |

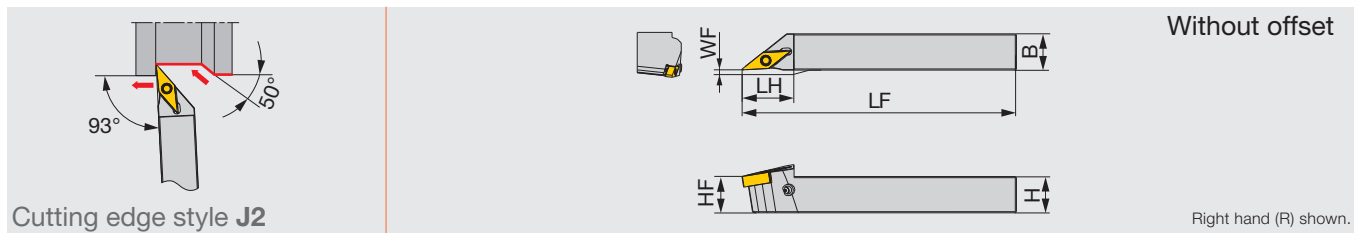
*Torque: Recommended clamping torque (N·m)

**RE: The holder measurements are true with this insert radius

SPARE PARTS

| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
|---------------|--------|----------------|--------|------------|-------|
| PVJNR/L**1204 | LSV212 | LCS3V | P-2.5 | LSP3 | LCL3V |

Back-clamp toolholder with 93° approach angle, for negative 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|-------------|---------|
| JPVJ2NR/L1212X1204 | 12 | 12 | 120 | 23 | 12 | 0 | 0.2 | VN**1204... | 0.9 |
| JPVJ2NR/L1616X1204 | 16 | 16 | 120 | 23 | 16 | 0 | 0.2 | VN**1204... | 0.9 |

*Torque: Recommended clamping torque (N·m)

**RE: The holder measurements are true with this insert radius

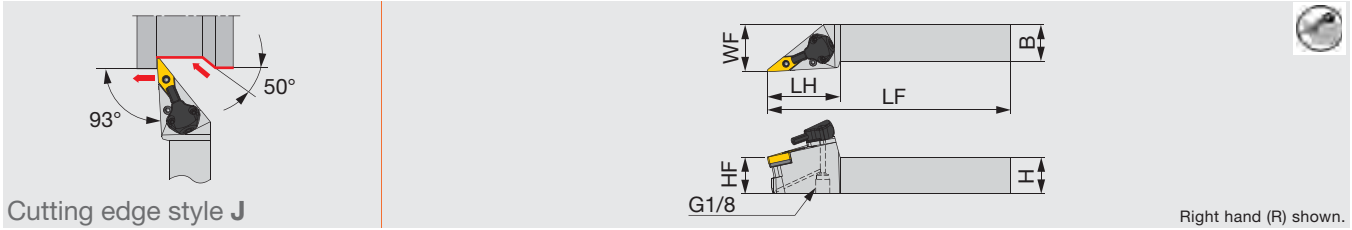
SPARE PARTS

| Designation | Lever | Pin | Clamping screw | Wrench |
|-----------------|--------|---------|----------------|------------|
| JPVJ2NR/L**1204 | SLLV-4 | SL-PI-2 | SR10400611 | HW2.0/5RED |

TUNG T^{URN} T^{JET}

PVJNR/L-CHP

Lever-lock toolholder with 93° approach angle, for negative 35° rhombic inserts, with high pressure coolant capability



Cutting edge style J

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------------|----|----|-----|----|----|----|------|---------------|---------|
| PVJNR/L2020K1204-CHP | 20 | 20 | 125 | 50 | 20 | 32 | 0.8 | VN**1204... | 2 |
| PVJNR/L2020K16-CHP | 20 | 20 | 125 | 50 | 20 | 32 | 0.8 | V/YN**1604... | 2 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

SPARE PARTS

| Designation | Shim | Clamping screw | Wrench1 | Spring pin | Lever |
|-------------------|--------|----------------|---------|------------|-------|
| PVJNR/L**1204-CHP | LSV212 | LCS3V | P-2.5 | LSP3 | LCL3V |
| PVJNR/L**16-CHP | LSV317 | LCS3V | P-2.5 | LSP3 | LCL3V |

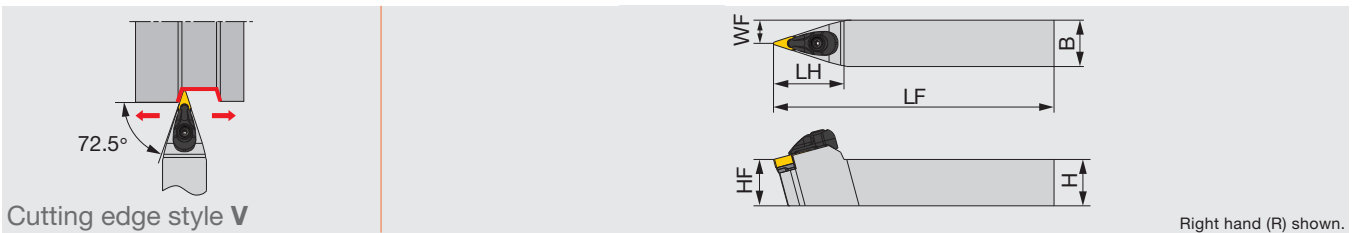
SPARE PARTS

| Designation | Coolant unit | Mounting screw | Wrench2 | O-ring | Coolant screw | Wrench3 |
|--------------------------------------|--------------|----------------|---------|------------|---------------|---------|
| PVJNR/L**1204-CHP PVJNR/L**16-CHP | CU-V-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |

TURNINGA

AVVNN

Double-clamp toolholder with 72.5° approach angle, for negative 35° rhombic inserts



Cutting edge style V

Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|---------------|---------|
| AVVNN2020K1204-A | 20 | 20 | 125 | 38 | 20 | 10 | 0.8 | VN**1204... | 3 |
| AVVNN2020K16-A | 20 | 20 | 125 | 46 | 20 | 10 | 0.8 | V/YN**1604... | 3 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

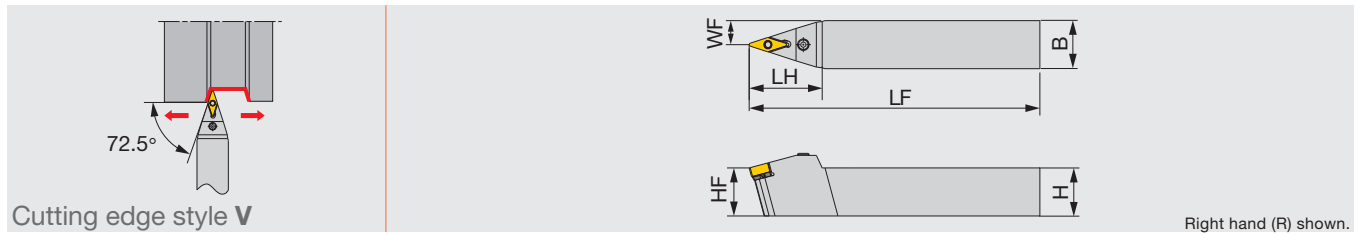
SPARE PARTS

| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
|---------------|---------|-------------|--------|------------|--------|------------|--------|
| AVVNN**1204-A | ACP3L-E | ACS-5W | BP-7 | SP-2.5 | ASV222 | CSTB-3.0 | T-15F |
| AVVNN**16-A | ACP3L | ACS-5W | BP-7 | SP-2.5 | ASV322 | CSTB-3.5 | T-15F |

Reference pages: PVJNR/L-CHP, AVVNN: Inserts → 2-54 -, Parts for coolant hose → 3-61

PVVNN-Eco

Lever-lock toolholder with 72.5° approach angle, for negative 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|----------------|----|----|-----|----|----|----|------|-------------|---------|
| PVVNN2020K1204 | 20 | 20 | 125 | 38 | 20 | 10 | 0.8 | VN**1204... | 2 |

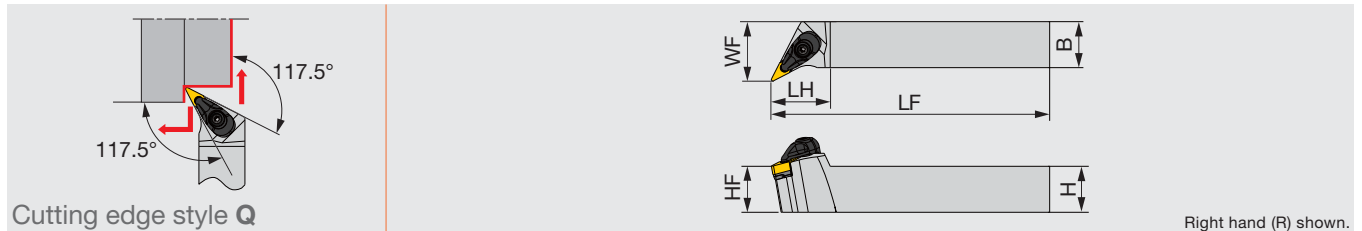
*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| SPARE PARTS | | | | | |
|-------------|--------|----------------|--------|------------|-------|
| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
| PVVNN**1204 | LSV212 | LCS3V | P-2.5 | LSP3 | LCL3V |

TURNING

AVQNR/L

Double-clamp toolholder with 117.5° approach angle, for negative 35° rhombic inserts



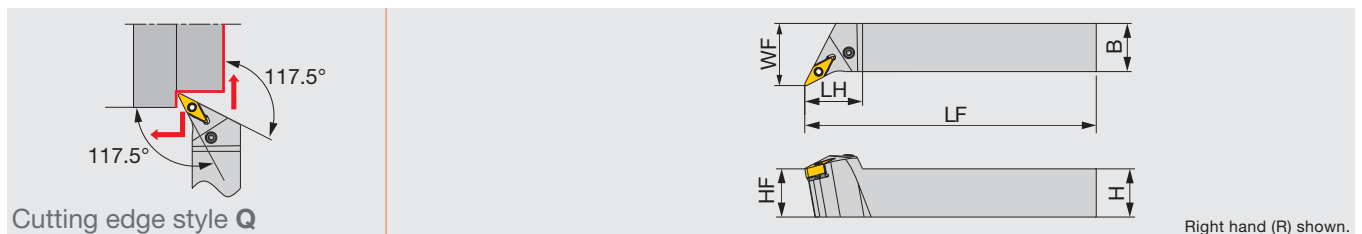
| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|----|----|----|------|---------------|---------|
| AVQNR/L2020K1204-A | 20 | 20 | 125 | 32 | 20 | 25 | 0.8 | VN**1204... | 3 |
| AVQNR/L2020K16-A | 20 | 20 | 125 | 35 | 20 | 25 | 0.8 | V/YN**1604... | 3 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| SPARE PARTS | | | | | | | |
|-----------------|---------|-------------|--------|------------|--------|------------|--------|
| Designation | Clamp | Clamp screw | Spring | Spring pin | Shim | Shim screw | Wrench |
| AVQNR/L**1204-A | ACP3L-E | ACS-5W | BP-7 | SP-2.5 | ASV222 | CSTB-3.0 | T-15F |
| AVQNR/L... | ACP3L | ACS-5W | BP-7 | SP-2.5 | ASV322 | CSTB-3.5 | T-15F |

PVQNR/L-Eco

Lever-lock toolholder with 117.5° approach angle, for negative 35° rhombic inserts



| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|------------------|----|----|-----|----|----|----|------|-------------|---------|
| PVQNR/L2020K1204 | 20 | 20 | 125 | 30 | 20 | 25 | 0.8 | VN**1204... | 2 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

| SPARE PARTS | | | | | |
|---------------|--------|----------------|--------|------------|-------|
| Designation | Shim | Clamping screw | Wrench | Spring pin | Lever |
| PVQNR/L**1204 | LSV212 | LCS3V | P-2.5 | LSP3 | LCL3V |

Reference pages: PVVNN-Eco, AVQNR/L, PVQNR/L-Eco: Inserts → 2-54 -

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

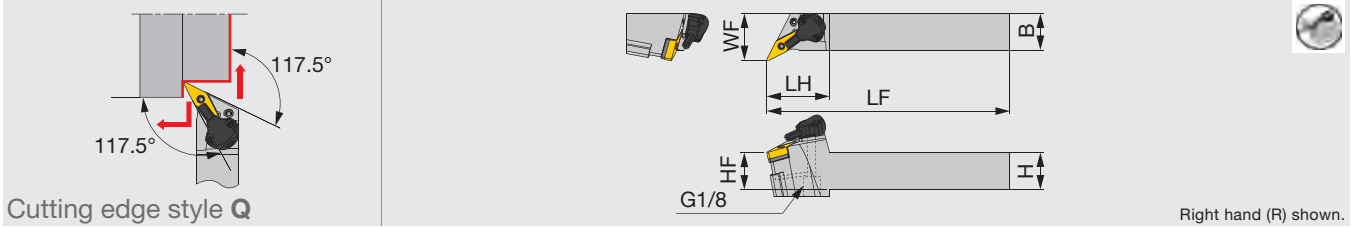
Grooving

Endmill

Drilling Tool

Technical Reference

Lever-lock toolholders with 117.5° approach angle, for negative 35° and 25° rhombic inserts, with high pressure coolant capability



Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | RE** | Insert | Torque* |
|--------------------|----|----|-----|------|----|----|------|---------------|---------|
| PVQNR/L2020K16-CHP | 20 | 20 | 125 | 42.5 | 20 | 32 | 0.8 | V/YN**1604... | 2 |

*Torque: Recommended clamping torque (N·m)
**RE : Standard corner radius

SPARE PARTS

| Designation | Shim | Clamping screw | Wrench 1 | Spring pin | Lever |
|---------------|--------|----------------|----------|------------|-------|
| PVQNR/L**-CHP | LSV317 | LCS3V | P-2.5 | LSP3 | LCL3V |

SPARE PARTS

| Designation | Coolant unit | Mounting screw | Wrench 2 | O-ring | Coolant screw | Wrench 3 |
|---------------|--------------|----------------|----------|------------|---------------|----------|
| PVQNR/L**-CHP | CU-V-CHP | SRM3 | T-8F | OR6.4X0.9N | SRM4X4TL360 | P-2 |

INSERT SELECTION

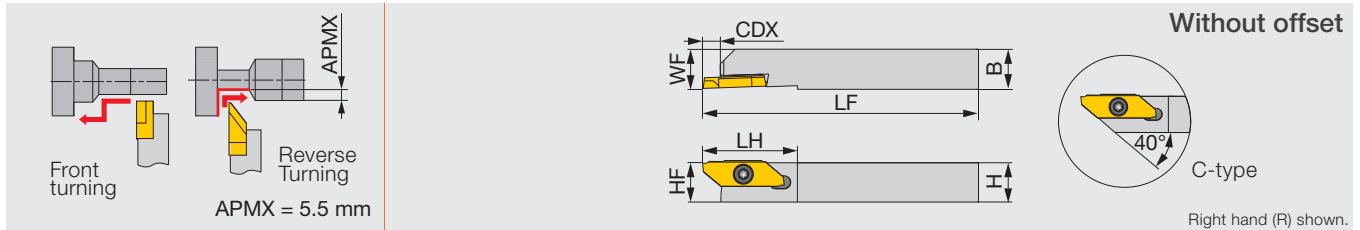
| Application | Precision finishing | Finishing | Medium cutting |
|-------------------|---------------------|-----------|----------------|
| | Grade | NS9530 | GT9530 |
| Chipbreaker Shape | TF | TSF | TM |

| Application | Finishing | Medium cutting |
|-------------------|-----------|----------------|
| | Grade | T6120 |
| Chipbreaker Shape | SF | SM |

| Application | Finishing | Medium cutting |
|-------------------|-----------|----------------|
| | Grade | AH8005 |
| Chipbreaker Shape | HRF | HRM |

Reference pages: PVQNR/L-CHP: Inserts → 2-54 -, Parts for coolant hose → 3-61

Screw-on toolholder for front/reverse turning and external grooving



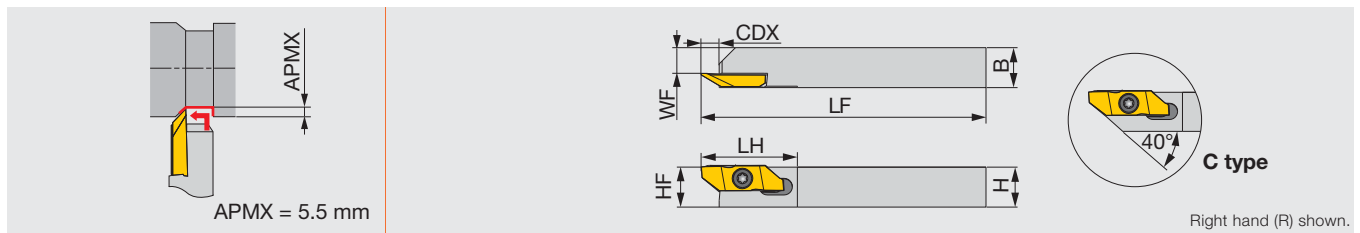
| Designation | H | B | LF | LH | CDX | HF | WF | Insert | Torque* |
|-----------------|----|----|-----|----|-----|----|----|------------------------|---------|
| JSXGR/L1010K8-C | 10 | 10 | 125 | 29 | 6.7 | 10 | 10 | JXFR/L8..., JXRR/L8... | 1.2 |
| JSXGR/L1212K8-C | 12 | 12 | 125 | 29 | 6.7 | 12 | 12 | JXFR/L8..., JXRR/L8... | 1.2 |
| JSXGR/L1616K8 | 16 | 16 | 125 | 29 | 6.5 | 16 | 16 | JXFR/L8..., JXRR/L8... | 1.2 |
| JSXGR/L2020K8 | 20 | 20 | 125 | 29 | 6.5 | 20 | 20 | JXFR/L8..., JXRR/L8... | 1.2 |

SPARE PARTS

| Designation | Clamping screw | Wrench 1 | Wrench 2 *Optional |
|-------------|----------------|----------|-----------------------|
| JSXGR/L... | CSTB-4SD | T-8F | (T-8L) |

Can be used with JXG insert for parting and grooving.
Can be wrenched also from the back with a double-head screw.

Screw-on toolholder for back turning and threading



| Designation | H | B | LF | LH | CDX | HF | WF | Insert | Torque* |
|-----------------|----|----|-----|----|-----|----|------|----------------------|---------|
| JSXBR/L1010K8-C | 10 | 10 | 125 | 29 | 6.7 | 10 | 5.7 | JXBR/L8..., JXT*R... | 1.2 |
| JSXBR/L1212K8-C | 12 | 12 | 125 | 29 | 6.7 | 12 | 7.7 | JXBR/L8..., JXT*R... | 1.2 |
| JSXBR/L1616K8 | 16 | 16 | 125 | 29 | 6.4 | 16 | 11.7 | JXBR/L8..., JXT*R... | 1.2 |
| JSXBR/L2020K8 | 20 | 20 | 125 | 29 | 6.4 | 20 | 15.7 | JXBR/L8..., JXT*R... | 1.2 |

Can be used with JXT insert for threading.
Can be wrenched also from the back with a double-head screw.

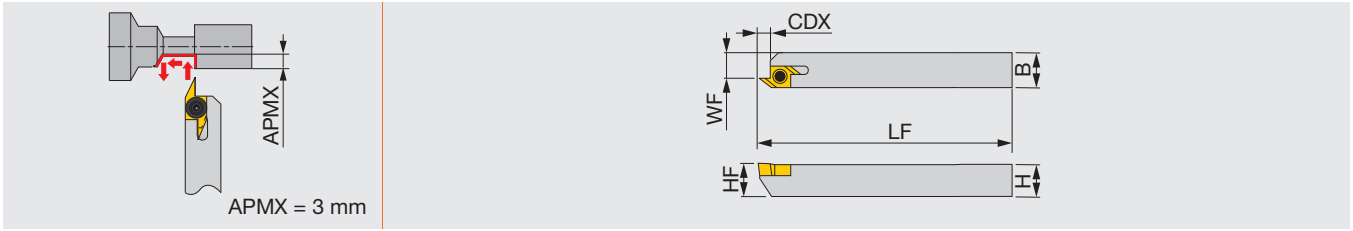
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSXBR/L... | CSTB-4SD | T-8F |

J-SERIES

JSEGR/L

Screw-on toolholder for back turning



| Designation | H | B | LF | CDX | HF | WF | Insert | Torque* |
|----------------|----|----|-----|-----|----|------|------------|---------|
| JSEGR/L1010K10 | 10 | 10 | 125 | 3.3 | 10 | 7.5 | J10ER/L... | 1.2 |
| JSEGR/L1212K10 | 12 | 12 | 125 | 3.3 | 12 | 9.5 | J10ER/L... | 1.2 |
| JSEGR/L1616K10 | 16 | 16 | 125 | 3.3 | 16 | 13.5 | J10ER/L... | 1.2 |

*Torque: Recommended clamping torque (N-m)

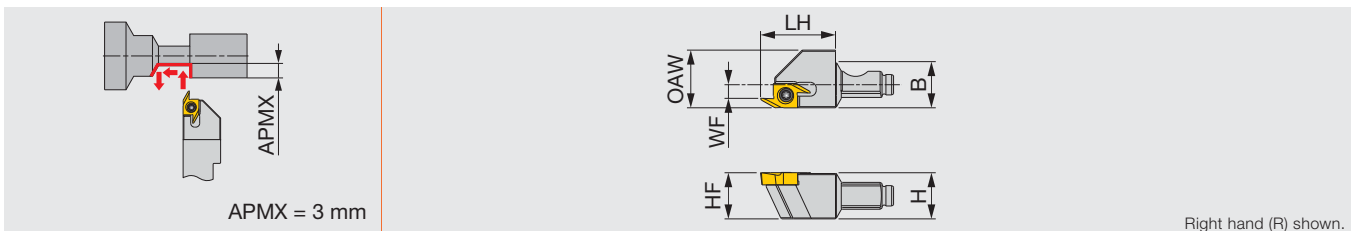
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSEGR/L... | CSTB-2.5 | T-8F |

J-SERIES

QC12-JSEGR

Screw-on head for back turning



Right hand (R) shown.

| Designation | H | B | LH | HF | WF | OAW | Insert | Torque* |
|--------------|----|----|------|----|-----|-----|----------|---------|
| QC12-JSEGR10 | 12 | 12 | 19.5 | 12 | 3.5 | 15 | J10ER... | 1.2 |

*Torque: Recommended clamping torque (N-m)

SPARE PARTS

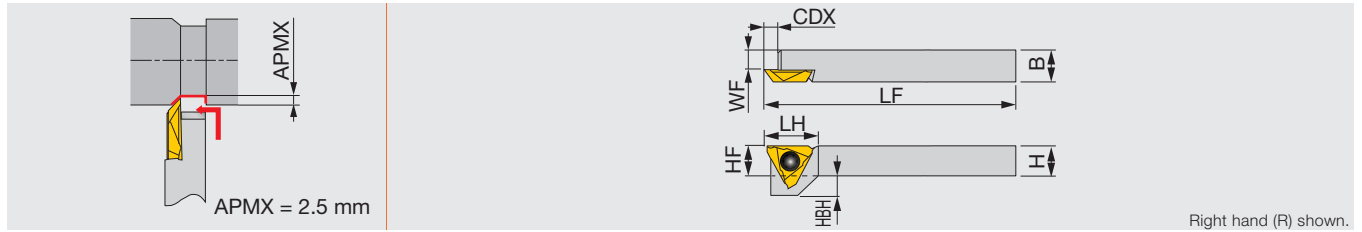
| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| QC12-JSEGR10 | CSTB-2.5 | T-8F |

Reference pages: JSEGR/L, QC12-JSEGR: Inserts → 2-49 -, QC-Shank → 3-60

J-SERIES

JSTBR/L

Screw-on toolholder for back turning



| Designation | H | B | LF | LH | CDX | HF | WF | HBH | Insert | Torque* |
|---------------|----|----|-----|----|-----|----|----|-----|------------|---------|
| JSTBR/L1010X3 | 10 | 10 | 120 | 15 | 5 | 10 | 6 | 5 | JTBR/L3... | 1.2 |
| JSTBL1010K3 | 10 | 10 | 125 | 15 | 5 | 10 | 6 | 5 | JTBR/L3... | 1.2 |
| JSTBR/L1212F3 | 12 | 12 | 85 | 15 | 5 | 12 | 8 | 3 | JTBR/L3... | 1.2 |
| JSTBR/L1212X3 | 12 | 12 | 120 | 15 | 5 | 12 | 8 | 3 | JTBR/L3... | 1.2 |
| JSTBR/L1616X3 | 16 | 16 | 120 | 15 | 5 | 16 | 12 | - | JTBR/L3... | 1.2 |

*Torque: Recommended clamping torque (N-m)

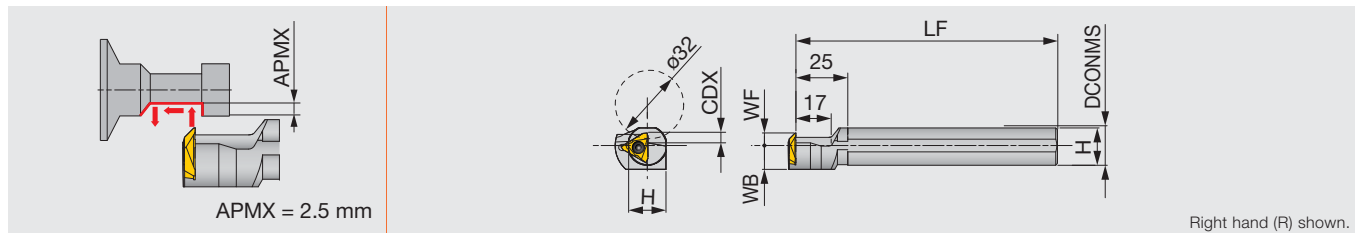
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSTBR/L... | CSTB-4SD | T-8F |

J-SERIES

JS-TBL3

Screw-on toolholder for back turning



| Designation | DCONMS | H | LF | CDX | WF | WB | Insert | Torque* |
|-------------|--------|----|-----|-----|----|------|----------|---------|
| JS19K-TBL3 | 19.05 | 18 | 125 | 4.5 | 6 | 11.5 | JTBR3... | 3 |
| JS20K-TBL3 | 20 | 19 | 125 | 4.5 | 6 | 11.5 | JTBR3... | 3 |
| JS22K-TBL3 | 22 | 21 | 125 | 4.5 | 6 | 11.5 | JTBR3... | 3 |
| JS25K-TBL3 | 25.4 | 24 | 125 | 4.5 | 10 | 12.7 | JTBR3... | 3 |

*Torque: Recommended clamping torque (N-m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JS**-TBL3 | CSTB-4S | T-15F |

Reference pages : JSTBR/L, JS-TBL3: Inserts → 2-40 -

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

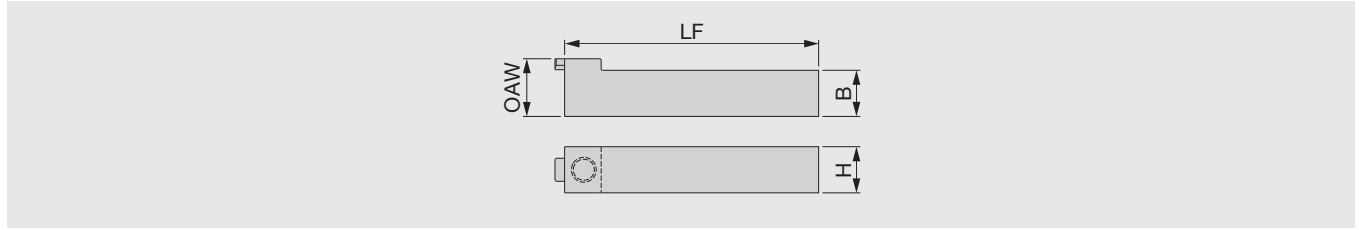
Drilling Tool

Technical Reference

J-SERIES

QC-1212

Shank for Interchangeable Heads



| Designation | H | B | LF | OAW | Torque* |
|-------------|----|----|-----|-----|---------|
| QC-1212F | 12 | 12 | 65 | 15 | 3 |
| QC-1212X | 12 | 12 | 100 | 15 | 3 |

*Torque: Recommended clamping torque (N-m)

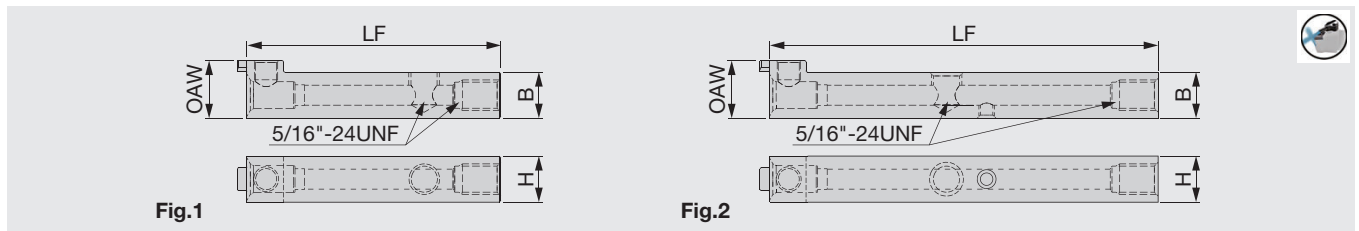
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|-----------------|--------|
| QC-1212* | SR M6X0.5-26977 | P-3 |

J-SERIES

QC-1212-CHP

Shank for Interchangeable Heads, with high pressure coolant capability



| Designation | H | B | LF | OAW | Torque* | Fig. |
|------------------|----|----|-----|-----|---------|------|
| QC-1212F-CHP | 12 | 12 | 65 | 15 | 3 | 1 |
| QC-1212X-CHP (1) | 12 | 12 | 100 | 15 | 3 | 2 |

(1) Compatible to the direct internal coolant supply system without the use of external coolant hose.

*Torque: Recommended clamping torque (N-m)

SPARE PARTS

| Designation | Clamping screw | Wrench | Coolant plug | Wrench | DirectJet plug | Wrench |
|--------------|-----------------|--------|-------------------|--------|----------------|--------|
| QC-1212F-CHP | SR M6X0.5-26977 | P-3 | SR 5/16 UNF TL360 | P-4 | - | - |
| QC-1212X-CHP | SR M6X0.5-26977 | P-3 | SR 5/16 UNF TL360 | P-4 | SSH4-6-TB | P-2 |

Technical Guide

PARTS FOR COOLANT HOSE

Connecting hose

Fig. 1

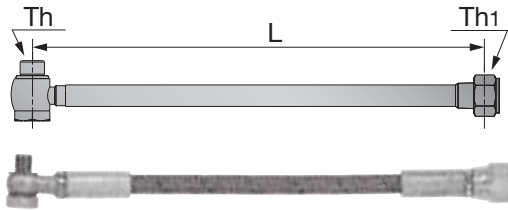
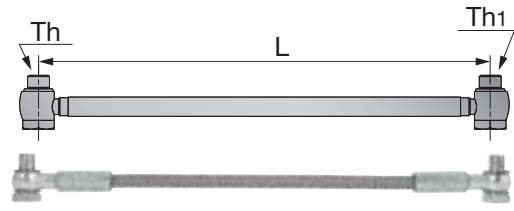
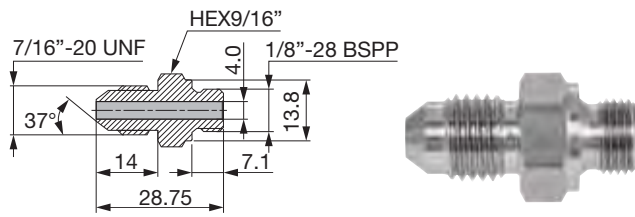


Fig. 2



| Designation | L | Th | Th1 | Max. pressure (Mpa) | Fig. |
|--------------------------|-----|---------------|---------------|---------------------|------|
| CHP-HOSE-G1/8-7/16-200BS | 200 | G1/8"-28 BSPP | 7/16"-20 UNF | 26 | 1 |
| CHP-HOSE-G1/8-7/16-250BS | 250 | G1/8"-28 BSPP | 7/16"-20 UNF | 26 | 1 |
| CHP-HOSE-5/16-7/16-200BS | 200 | 5/16"-24UNF | 7/16"-20 UNF | 20 | 1 |
| CHP-HOSE-5/16-G1/8-200BS | 200 | 5/16"-24UNF | G1/8"-28 BSPP | 20 | 1 |
| CHP-HOSE-G1/8-G1/8-200BB | 200 | G1/8"-28 BSPP | G1/8"-28 BSPP | 26 | 2 |
| CHP-HOSE-G1/8-G1/8-250BB | 250 | G1/8"-28 BSPP | G1/8"-28 BSPP | 26 | 2 |

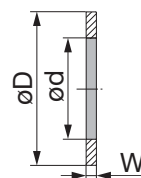
Connector



Designation

CHP-NIPPLE-G1/8-7/16UNF

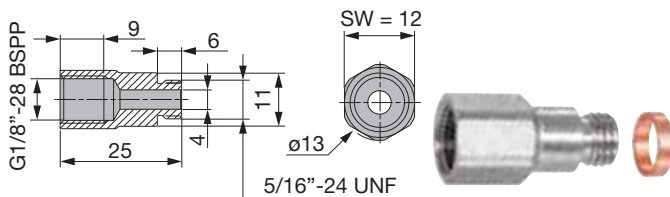
Seal washer



Designation

| Designation | øD | ød | W |
|-------------------------|------|------|------|
| CHP-COPPER-SEAL1/8 | 15 | 10 | 1 |
| CHP-COPPER-SEAL5/16 | 11.9 | 8.15 | 1.35 |
| CHP-COPPER-SEAL5/16-2.5 | 9.4 | 8 | 2.5 |

Connector for small lathe with seal washer



Designation

| Designation | L | Fig. |
|------------------------|------|------|
| CHP-CONECTOR5/16-G1/8 | 2.5 | 1 |
| CHP-CONECTOR-G1/8-R1/8 | 2.54 | 2 |

Grade 1

Insert 2

Ext. Toolholder 3

Int. Toolholder 4

Threading 5

Grooving 6

Endmill 7

Drilling Tool 8

Technical Reference 9

4. Internal Toolholders



Main products



TINYM^{INI}TURN

Solid boring bar for turning small diameters with high precision



4-5



STREAMJETBAR

Highly rigid toolholders providing good chip evacuation



4-13



MINIFORCE MINI TURN

Economical double-sided inserts with excellent sharpness



WXGU 4-18
DXGU 4-25



Y-PRO SERIES

Inserts with 25° corner angle for profiling



Shank \varnothing 12 - 16 mm

4-29

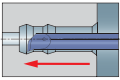
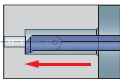
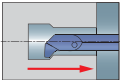
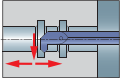
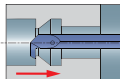
Sleeve

4-30

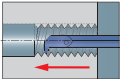
Internal Toolholder - Quick Guide

TinyMini-Turn - Solid carbide tools for small diameters turning

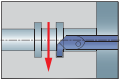
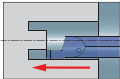
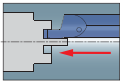
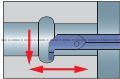
Boring, profiling & chamfering

| Application | Description & Application | Shank Size | Min. bore diameter DMIN (mm) | | | | | | Page |
|---|--|------------|------------------------------|----|------|---|-----|-----|------|
| | | | 0 | 2 | 4 | 6 | 8 | 10 | |
|  | JBT Boring, profiling & chamfering | ø4 & ø7 | ø0.6 | ø7 | | | | 4-5 | |
|  | JBP Boring & chamfering | ø4 & ø7 | ø2.8 | | ø5 | | | | 4-6 |
|  | JBU Back boring & chamfering | ø7 | ø5 | | | | 4-6 | | |
|  | JBC Boring & 45° chamfering | ø7 | ø5 | | ø6.8 | | | | 4-6 |
|  | JBB Back boring | ø4 & ø7 | ø3 | | ø7 | | | | 4-7 |

Threading

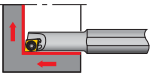
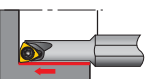
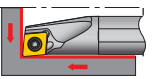
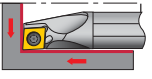
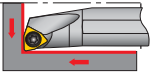
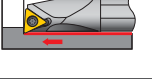

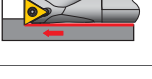
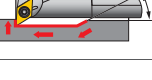
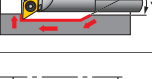
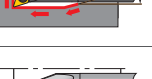




| Application | TinyMini-Turn Description & Application | Shank Size | Min. bore diameter DMIN (mm) | | | | | | Page |
|---|--|------------|------------------------------|---|----|---|---|----|------|
| | | | 0 | 2 | 4 | 6 | 8 | 10 | |
|  | JBI Threading (Metric thread) | ø4 & ø7 | ø4 | | ø7 | | | | 4-7 |

Internal Grooving

| Application | TinyMini-Turn Description & Application | Shank Size | Groove width | Min. bore diameter DMIN (mm) | | | | | | | | | | | Page |
|---|--|------------|--------------|------------------------------|---|------|---|---|----|----|----|----|--|--|------|
| | | | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | | |
|  | JBG Internal Grooving | ø4 & ø7 | 0.5 - 2 | ø2 | | ø6.8 | | | | | | | | | 4-8 |
|  | JBF Face grooving | ø7 | 1 - 3 | ø6 | | ø15 | | | | | | | | | 4-9 |
|  | JBS Face grooving (for shaft) | ø7 | 2 | ø6 | | | | | | | | | | | 4-9 |
|  | JBR Boring & profiling (full radius type) | ø7 | 1 | ø5 | | ø6.8 | | | | | | | | | 4-9 |

Internal Toolholder - Quick Guide

Positive type

| Style | Designation & Application | ISO Insert | MINIFURN Y-PRO | Material | Min. bore diameter DMIN (mm) | | | | Page |
|---|--|------------|-------------------|--------------------------------|------------------------------|-----|-------|----|------|
| | | | | | 0 | 10 | 20 | 30 | |
|  | SEXPR/L Boring & internal facing Insert : EP** | ✓ | | Steel Carbide | ø4.5 | ø7 | | | 4-13 |
|  | SWUBR/L Boring Insert : WB** | ✓ | | Steel Carbide | ø6 | ø8 | | | 4-15 |
|  | SCLCR/L Boring & internal facing Insert : CC** | ✓ | | Steel Carbide | ø5 | | ø20 | | 4-16 |
|  | SCLPR/L Boring & internal facing Insert : CP** | ✓ | | Steel Carbide | ø10 | | ø20 | | 4-17 |
|  | SWLXR/L Boring & internal facing Insert : WXGU | ✓ | ✓ | Steel Carbide | ø12 | | ø18 | | 4-18 |
|  | STUPR/L Boring Insert : TP** | ✓ | | Steel Carbide | ø8 | | ø20 | | 4-19 |
|  | STFPR/L Internal hole boring Insert : TP** | ✓ | | Steel Carbide | ø10 | | ø18 | | 4-20 |
|  | STFCR/L Internal hole boring Insert : TC** | ✓ | | Steel Carbide | ø12 | | ø18 | | 4-21 |
|  | SDXXR/L Boring & internal profiling Insert : DXGU | ✓ | ✓ | Steel Carbide | ø13 | | ø20 | | 4-25 |
|  | SDUCR/L Boring & internal profiling Insert : DC** | ✓ | | Steel Carbide | ø13 | | ø20 | | 4-22 |
|  | SDQCR/L Boring & internal profiling Insert : DC** | ✓ | | Steel Carbide | ø13 | | ø20 | | 4-22 |
|  | SDUPR/L Boring & internal profiling Insert : DPMT** | ✓ | | Special alloy steel Carbide | ø15 | | ø22 | | 4-24 |
|  | SDQPR/L Boring & internal profiling Insert : DPMT** | ✓ | | Special alloy steel Carbide | ø15 | | ø22 | | 4-24 |
|  | SVUBR/L Boring & internal profiling Insert : VB** | ✓ | | Steel | | | ø20 | | 4-26 |
|  | SVQBR/L Boring & internal profiling Insert : VB** | ✓ | | Steel Carbide | | ø17 | ø21.5 | | 4-26 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

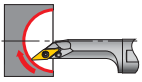
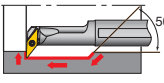
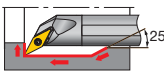
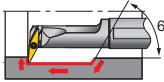
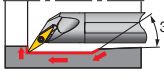
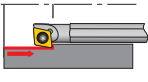
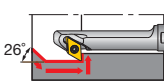
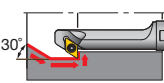
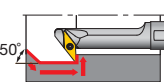
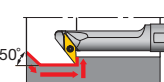
Endmill

Drilling Tool

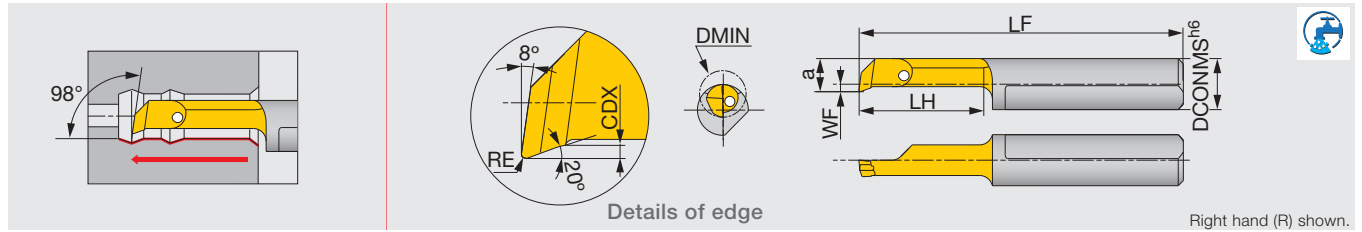
Technical Reference

Internal Toolholder - Quick Guide

Positive type

| Style | Designation & Application | ISO Insert | MINIFURN Y-PRO | Material | Min. bore diameter DMIN (mm) | | | | Page |
|---|---|------------|-------------------|------------------|------------------------------|----|-------|-------|------|
| | | | | | 0 | 10 | 20 | 30 | |
|  | SVJCR/L Internal sphere cutting Insert : VC** | ✓ | | Steel | | | ø16 | ø20 | 4-27 |
|  | SVUCR/L Boring & internal profiling Insert : VC** | ✓ | | Steel | | | | ø16 | 4-27 |
|  | SVQCR/L Boring & internal profiling Insert : VC** | ✓ | | Steel Carbide | | | ø13.5 | ø21.5 | 4-28 |
|  | SYUBR/L Boring & internal profiling Insert : YW** | | | Steel Carbide | | | | ø20 | 4-29 |
|  | SYQBR/L Boring, undercutting & profiling Insert : YW** | | | Steel Carbide | | | ø17 | ø21.5 | 4-29 |
|  | SEZPR/L Back boring Insert : EP** | ✓ | | Steel Carbide | | | ø5.5 | ø6.5 | 4-14 |
|  | SDZXR/L Back boring Insert : DXGU | | ✓ | Steel Carbide | | | ø14 | ø16 | 4-25 |
|  | SDZCR/L Back boring Insert : DC** | ✓ | | Steel Carbide | | | ø14 | ø16 | 4-23 |
|  | SVZBR/L Back boring Insert : VB** | ✓ | | Steel | | | | ø20 | 4-26 |
|  | SVZCR/L Back boring Insert : VC** | ✓ | | Steel | | | | ø16 | 4-28 |

Solid boring bar for boring, profiling, and chamfering



Right hand (R) shown.

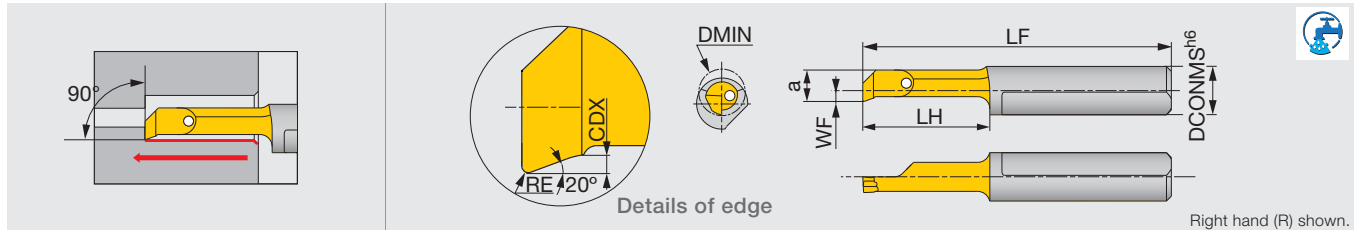
| Designation | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|---------------------|-------|------|--------|-----|-----|------|-----|------|----------------------------------|
| JBTR04020004-D006 | ● | 0.6 | 4 | - | 0.5 | 18.5 | 2 | 0.08 | 0.04 |
| JBTR04030004-D006 | ● | 0.6 | 4 | - | 0.5 | 19.5 | 3 | 0.08 | 0.04 |
| JBTR04045005-D010 | ● | 1 | 4 | - | 0.9 | 21 | 4.5 | 0.1 | 0.05 |
| JBTR04065005-D010 | ● | 1 | 4 | - | 0.9 | 23 | 6.5 | 0.1 | 0.05 |
| JBTR04040005-D020 | ● | 2 | 4 | - | 1.7 | 20.5 | 4 | 0.1 | 0.05 |
| JBTR04090005-D020 | ● | 2 | 4 | - | 1.7 | 25.5 | 9 | 0.1 | 0.05 |
| JBTR04140005-D020 | ● | 2 | 4 | - | 1.7 | 30.5 | 14 | 0.1 | 0.05 |
| JBTR/L04090010-D028 | ● | 2.8 | 4 | 0.6 | 2.6 | 25.5 | 9 | 0.2 | 0.1 |
| JBTR/L04150010-D028 | ● | 2.8 | 4 | 0.6 | 2.6 | 31.5 | 15 | 0.2 | 0.1 |
| JBTR/L04190010-D028 | ● | 2.8 | 4 | 0.6 | 2.6 | 35.5 | 19 | 0.2 | 0.1 |
| JBTR/L04090010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.3 | 0.1 |
| JBTR/L04150010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.3 | 0.1 |
| JBTR/L04190010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 35.5 | 19 | 0.3 | 0.1 |
| JBTR04230010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 39.5 | 23 | 0.3 | 0.1 |
| JBTR04270010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 43.5 | 27 | 0.3 | 0.1 |
| JBTR/L07090015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 0.5 | 0.15 |
| JBTR/L07140015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.5 | 0.15 |
| JBTR/L07190015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.5 | 0.15 |
| JBTR/L07240015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 40 | 24 | 0.5 | 0.15 |
| JBTR/L07290015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 45 | 29 | 0.5 | 0.15 |
| JBTR07340015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 50 | 34 | 0.5 | 0.15 |
| JBTR/L07140015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 0.5 | 0.15 |
| JBTR/L07210015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 0.5 | 0.15 |
| JBTR/L07240015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 0.5 | 0.15 |
| JBTR/L07290015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 0.5 | 0.15 |
| JBTR07340015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 50 | 34 | 0.5 | 0.15 |
| JBTR07410015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 57 | 41 | 0.5 | 0.15 |
| JBTR/L07190015-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 35 | 19 | 0.6 | 0.15 |
| JBTR07240015-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 40 | 24 | 0.6 | 0.15 |
| JBTR/L07290015-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 45 | 29 | 0.6 | 0.15 |
| JBTR/L07340015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 50 | 34 | 0.6 | 0.15 |
| JBTR07390015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 55 | 39 | 0.6 | 0.15 |
| JBTR07440015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 60 | 44 | 0.6 | 0.15 |
| JBTR07490015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 65 | 49 | 0.6 | 0.15 |

● : Line up

TINY^{INI}TURN

JBP R

Solid boring bar for boring and chamfering



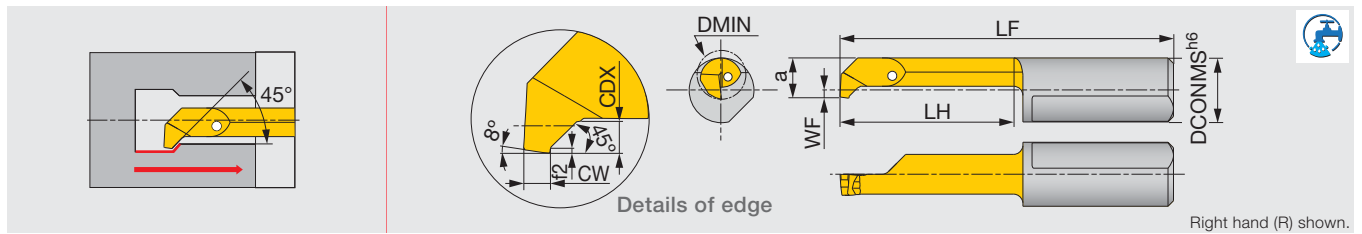
| Designation | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|-------------------|-------|------|--------|-----|-----|------|----|-----|----------------------------------|
| JBPR04090010-D028 | ● | 2.8 | 4 | 0.9 | 2.6 | 25.5 | 9 | 0.2 | 0.1 |
| JBPR04150010-D028 | ● | 2.8 | 4 | 0.9 | 2.6 | 31.5 | 15 | 0.2 | 0.1 |
| JBPR04090010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.3 | 0.1 |
| JBPR04150010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.3 | 0.1 |
| JBPR07140015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.5 | 0.15 |
| JBPR07190015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.5 | 0.15 |

● : Line up

TINY^{INI}TURN

JBU R

Solid boring bar for back boring and chamfering



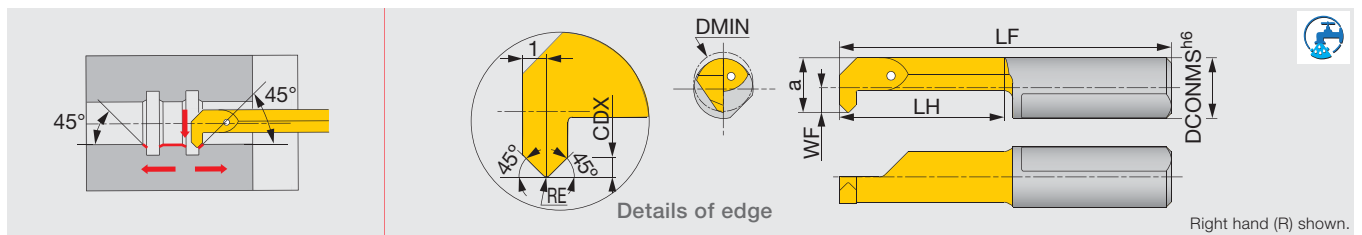
| Designation | SH730 | DMIN | DCONMS | WF | a | LF | LH | f2 | CDX | CW ^{+0.05} ₀ |
|-------------------|-------|------|--------|-----|-----|----|----|-----|-----|----------------------------------|
| JBUR07140010-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.2 | 1 | 1 |
| JBUR07190010-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.2 | 1 | 1 |

● : Line up

TINY^{INI}TURN

JBC R

Solid boring bar for boring and 45° chamfering



| Designation | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{±0.05} |
|-------------------|-------|------|--------|-----|-----|----|----|-----|---------------------|
| JBCR07140020-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.7 | 0.2 |
| JBCR07190020-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.7 | 0.2 |
| JBCR07190020-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 35 | 19 | 0.7 | 0.2 |

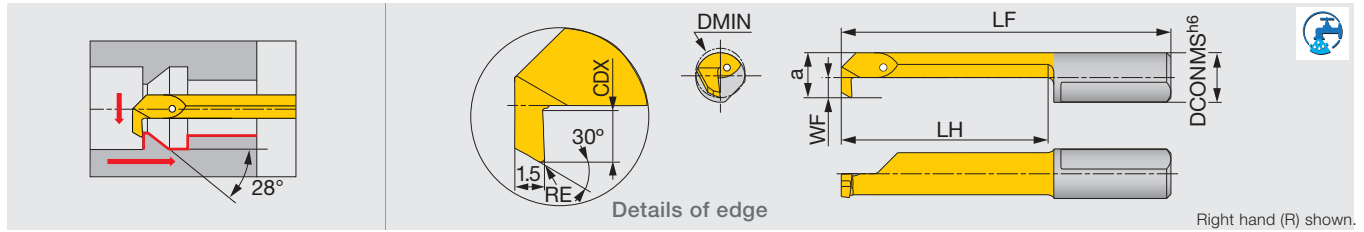
● : Line up

Reference pages : JBP R, JBU R, JBC R: Standard cutting conditions → 4-11

TINY^{INI}TURN

JBB R

Solid boring bar for back boring



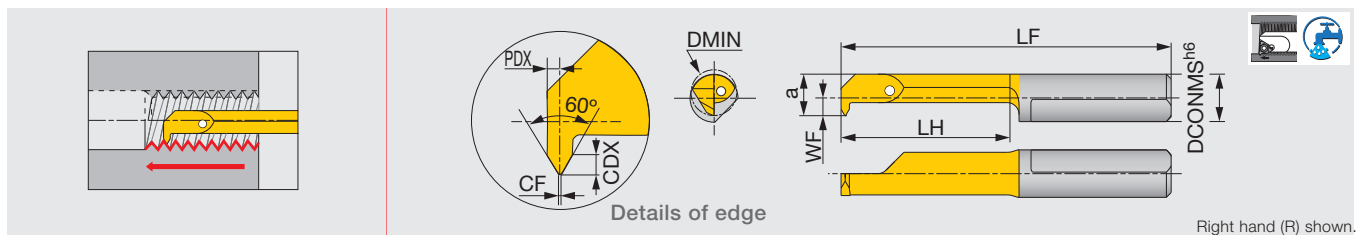
| Designation | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|-------------------|-------|------|--------|-----|-----|----|----|-----|----------------------------------|
| JBBR04140020-D030 | ● | 3 | 4 | 0.6 | 2.6 | 30 | 14 | 0.5 | 0.2 |
| JBBR04190020-D030 | ● | 3 | 4 | 0.6 | 2.6 | 35 | 19 | 0.5 | 0.2 |
| JBBR04140015-D040 | ● | 4 | 4 | 1.5 | 3.5 | 30 | 14 | 0.8 | 0.15 |
| JBBR04240015-D040 | ● | 4 | 4 | 1.5 | 3.5 | 40 | 24 | 0.8 | 0.15 |
| JBBR07190020-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 | 0.2 |
| JBBR07290020-D050 | ● | 5 | 7 | 0.9 | 4.4 | 45 | 29 | 1 | 0.2 |
| JBBR07190020-D060 | ● | 6 | 7 | 1.8 | 5.3 | 35 | 19 | 1.8 | 0.2 |
| JBBR07290020-D060 | ● | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 | 0.2 |
| JBBR07190020-D070 | ● | 7 | 7 | 2.8 | 6.3 | 35 | 19 | 2.5 | 0.2 |
| JBBR07290020-D070 | ● | 7 | 7 | 2.8 | 6.3 | 45 | 29 | 2.5 | 0.2 |

● : Line up

TINY^{INI}TURN

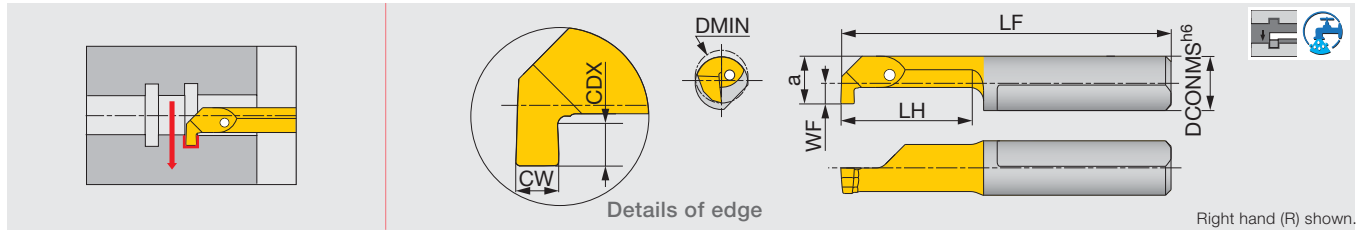
JBI R

Solid boring bar for threading (metric)



| Designation | SH730 | Pitch | DMIN | CF _{0.02} | DCONMS | WF | a | LF | LH | CDX | PDX |
|-------------------|-------|-------|------|--------------------|--------|-----|-----|----|----|-----|------|
| JBIR04140050-D040 | ● | 0.5 | 4 | 0.06 | 4 | 1.5 | 3.5 | 30 | 14 | 0.3 | 0.35 |
| JBIR07140050-D050 | ● | 0.5 | 5 | 0.06 | 7 | 0.9 | 4.4 | 30 | 14 | 0.3 | 0.35 |
| JBIR07140075-D050 | ● | 0.75 | 5 | 0.09 | 7 | 0.9 | 4.4 | 30 | 14 | 0.4 | 0.45 |
| JBIR07140100-D048 | ● | 1 | 4.8 | 0.12 | 7 | 0.9 | 4.4 | 30 | 14 | 0.6 | 0.55 |
| JBIR07140100-D060 | ● | 1 | 6 | 0.12 | 7 | 1.8 | 5.3 | 30 | 14 | 0.6 | 0.55 |
| JBIR07140125-D060 | ● | 1.25 | 6 | 0.15 | 7 | 1.8 | 5.3 | 30 | 14 | 0.7 | 0.65 |
| JBIR07140150-D060 | ● | 1.5 | 6 | 0.18 | 7 | 1.8 | 5.3 | 30 | 14 | 0.8 | 0.75 |
| JBIR07140150-D070 | ● | 1.5 | 7 | 0.18 | 7 | 2.8 | 6.3 | 30 | 14 | 0.8 | 0.75 |

● : Line up



| Designation | SH730 | CW ^{+0.05} ₀ | DMIN | DCONMS | WF | a | LF | LH | CDX |
|---------------------|-------|----------------------------------|------|--------|-----|-----|------|----|-----|
| JBGR04050050-D020 | ● | 0.5 | 2 | 4 | 0.2 | 1.8 | 21 | 5 | 0.4 |
| JBGR04100050-D020 | ● | 0.5 | 2 | 4 | 0.2 | 1.8 | 26 | 10 | 0.4 |
| JBGR04050070-D030 | ● | 0.7 | 3 | 4 | 0.7 | 2.7 | 21 | 5 | 0.6 |
| JBGR04100070-D030 | ● | 0.7 | 3 | 4 | 0.7 | 2.7 | 26 | 10 | 0.6 |
| JBGR04090100-D040 | ● | 1 | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.8 |
| JBGR04150100-D040 | ● | 1 | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.8 |
| JBGR07090100-D050 | ● | 1 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| JBGR07140100-D050 | ● | 1 | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 1 |
| JBGR07090150-D050 | ● | 1.5 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| JBGR07140150-D050 | ● | 1.5 | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 1 |
| JBGR07090200-D050 | ● | 2 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| JBGR07190200-D050 | ● | 2 | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 |
| JBGR/L07090100-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| JBGR07140100-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| JBGR07210100-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 1.8 |
| JBGR07290100-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 |
| JBGR/L07090150-D060 | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| JBGR07140150-D060 | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| JBGR07210150-D060 | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 1.8 |
| JBGR07240150-D060 | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 |
| JBGR07290150-D060 | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 |
| JBGR07090200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| JBGR07140200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| JBGR07210200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 1.8 |
| JBGR07240200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 |
| JBGR07290200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 |
| JBGR07090100-D068 | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| JBGR07140100-D068 | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| JBGR07210100-D068 | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| JBGR07090150-D068 | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| JBGR07140150-D068 | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| JBGR07210150-D068 | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| JBGR07290150-D068 | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 45 | 29 | 2.5 |
| JBGR07090200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| JBGR/L07140200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| JBGR07210200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| JBGR07250200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 40 | 25 | 2.5 |
| JBGR07290200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 45 | 29 | 2.5 |

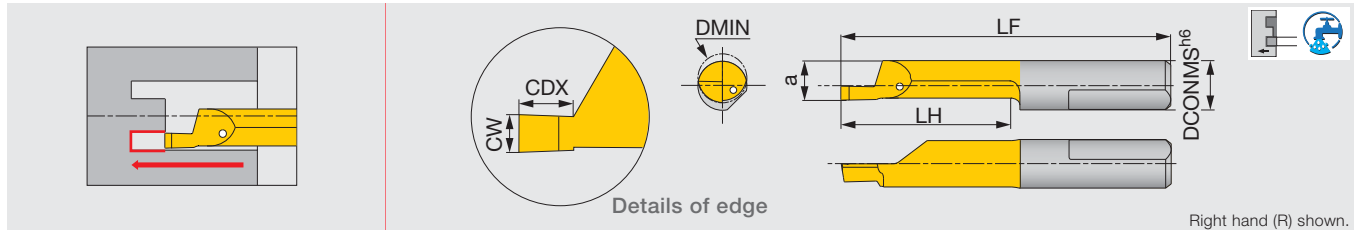
* Corner radius: less than 0.1 mm

● : Line up

TINYM^{INI}TURN

JBF R/L

Solid boring bar for face grooving



| Designation | SH730 | CW ^{+0.05} ₀ | DMIN | DCONMS | a | LF | LH | CDX |
|---------------------|-------|----------------------------------|------|--------|-----|----|----|-----|
| JBFR07110100-D060 | ● | 1 | 6 | 7 | 5.2 | 26 | 10 | 1.5 |
| JBFR07110150-D060 | ● | 1.5 | 6 | 7 | 5.2 | 26 | 10 | 2 |
| JBFR07110200-D060 | ● | 2 | 6 | 7 | 5.2 | 26 | 10 | 3 |
| JBFR07110100-D080 | ● | 1 | 8 | 7 | 5.9 | 27 | 11 | 1.5 |
| JBFR07110150-D080 | ● | 1.5 | 8 | 7 | 5.9 | 27 | 11 | 2.5 |
| JBFR07110200-D080 | ● | 2 | 8 | 7 | 5.9 | 27 | 11 | 3 |
| JBFR07110250-D080 | ● | 2.5 | 8 | 7 | 5.9 | 27 | 11 | 3.5 |
| JBFR07110300-D080 | ● | 3 | 8 | 7 | 5.9 | 27 | 11 | 3.5 |
| JBFR/L07210150-D080 | ● | 1.5 | 8 | 7 | 5.9 | 36 | 21 | 2.5 |
| JBFR07210200-D080 | ● | 2 | 8 | 7 | 5.9 | 36 | 21 | 3 |
| JBFR07210250-D080 | ● | 2.5 | 8 | 7 | 5.9 | 36 | 21 | 3.5 |
| JBFR07210300-D080 | ● | 3 | 8 | 7 | 5.9 | 36 | 21 | 3.5 |
| JBFR/L07300200-D080 | ● | 2 | 8 | 7 | 5.9 | 46 | 30 | 3 |
| JBFR07300300-D080 | ● | 3 | 8 | 7 | 5.9 | 46 | 30 | 3.5 |
| JBFR07200200-D080 | ● | 2 | 8 | 7 | 5.9 | 36 | 20 | 3 |
| JBFR07200250-D150 | ● | 2.5 | 15 | 7 | 5.9 | 36 | 20 | 20 |
| JBFR07200300-D150 | ● | 3 | 15 | 7 | 5.9 | 36 | 20 | 20 |
| JBFR07300300-D150 | ● | 3 | 15 | 7 | 5.9 | 46 | 30 | 30 |

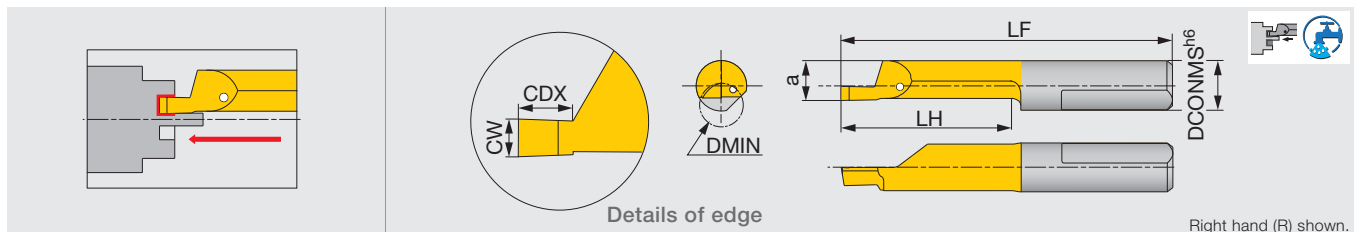
* Corner radius: less than 0.1 mm

● : Line up

TINYM^{INI}TURN

JBS R

Solid boring bar for face grooving (for shaft)



| Designation | SH730 | CW ^{+0.05} ₀ | DMIN | DCONMS | a | LF | LH | CDX |
|--------------------|-------|----------------------------------|------|--------|-----|----|----|-----|
| JBBSR07200200-D060 | ● | 2 | 6 | 7 | 5.2 | 36 | 20 | 4 |

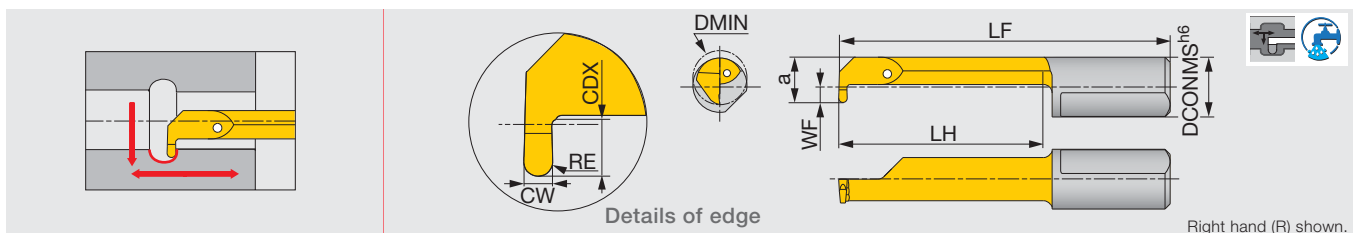
* Corner radius: less than 0.1 mm

● : Line up

TINYM^{INI}TURN

JBR R

Solid boring bar for boring and profiling



| Designation | SH730 | CW ^{+0.05} ₀ | DMIN | DCONMS | WF | a | LF | LH | CDX | RE |
|-------------------|-------|----------------------------------|------|--------|-----|-----|----|----|-----|-----|
| JBRR07190050-D050 | ● | 1 | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 | 0.5 |
| JBRR07240050-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 | 0.5 |
| JBRR07290050-D068 | ● | 1 | 6.8 | 7 | 2.8 | 6.3 | 45 | 29 | 2.5 | 0.5 |

● : Line up

Reference pages : JBF R/L, JBS R: Standard cutting condition → 4-11, JBR R: Standard cutting conditions → 4-12

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

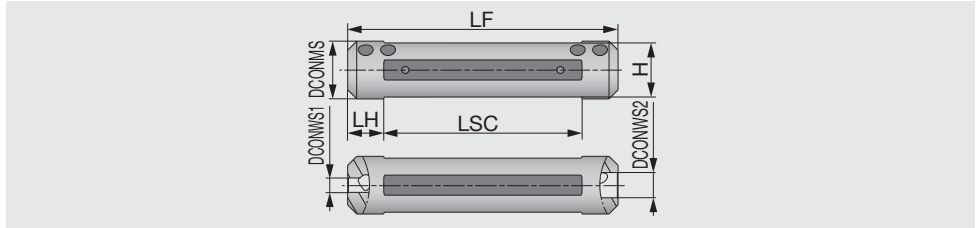
Grooving

Endmill

Drilling Tool

Technical Reference

Sleeve for external coolant supply



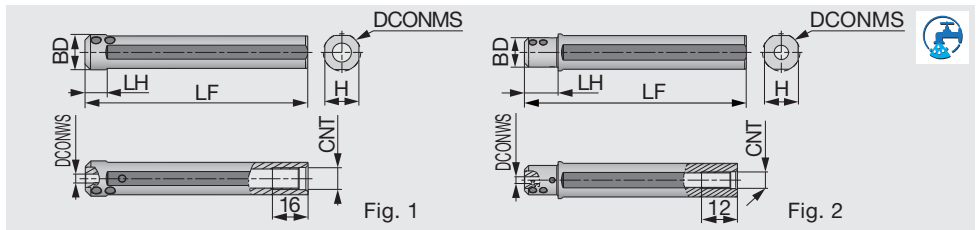
| Designation | DCONMS | DCONWS1 | DCONWS2 | LF | LH | LSC | H |
|-------------|--------|---------|---------|------|----|------|------|
| JBBS12-4-4 | 12 | 4 | 4 | 75 | 10 | 55 | 10.3 |
| JBBS127-4-4 | 12.7 | 4 | 4 | 76.2 | 10 | 56.2 | 11.6 |
| JBBS14-4-4 | 14 | 4 | 4 | 75 | 10 | 55 | 12 |
| JBBS159-4-7 | 15.875 | 4 | 7 | 76.2 | 10 | 56.2 | 14 |
| JBBS16-4-7 | 16 | 4 | 7 | 75 | 10 | 55 | 15 |
| JBBS19-4-7 | 19.05 | 4 | 7 | 89 | 10 | 69 | 17.2 |
| JBBS20-4-7 | 20 | 4 | 7 | 90 | 10 | 70 | 18 |
| JBBS22-4-7 | 22 | 4 | 7 | 90 | 10 | 70 | 20 |
| JBBS25-4-7 | 25 | 4 | 7 | 100 | 10 | 80 | 23 |
| JBBS254-4-7 | 25.4 | 4 | 7 | 90 | 10 | 70 | 23.4 |

SPARE PARTS



| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JBBS12-4-4 | SSHM5-4PF-S | P-2.5 |
| JBBS127-4-4 | SSHM5-6PF-S | P-2.5 |
| JBBS14-4-4 | SSHM5-4PF-S | P-2.5 |
| JBBS*-4-7 | SSHM5-6PF-S | P-2.5 |

Sleeve for internal coolant supply

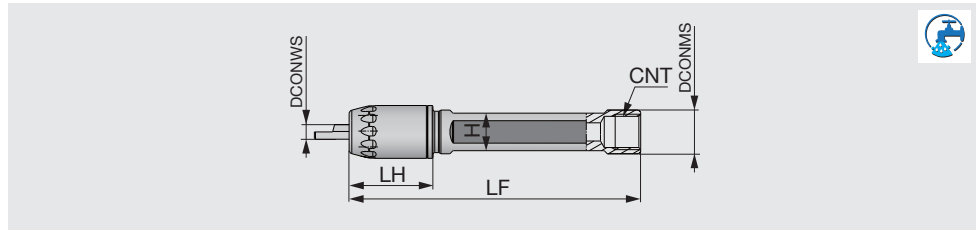


| Designation | DCONMS | BD | DCONWS | LF | LH | H | CNT | Fig. |
|-----------------|--------|--------|--------|-----|----|-------|------|------|
| JBBS159-4-L100C | 15.875 | 15.875 | 4 | 100 | 10 | 14.58 | R1/8 | 1 |
| JBBS159-7-L100C | 15.875 | 15.875 | 7 | 100 | 10 | 14.58 | R1/8 | 1 |
| JBBS16-4-L100C | 16 | 16 | 4 | 100 | 10 | 15 | R1/8 | 1 |
| JBBS16-7-L100C | 16 | 16 | 7 | 100 | 10 | 15 | R1/8 | 1 |
| JBBS19-4-L100C | 19.05 | 17.5 | 4 | 100 | 20 | 17.2 | R1/8 | 2 |
| JBBS19-7-L100C | 19.05 | 17.5 | 7 | 100 | 20 | 17.2 | R1/8 | 2 |
| JBBS20-4-L100C | 20 | 17.5 | 4 | 100 | 20 | 18 | R1/8 | 2 |
| JBBS20-7-L100C | 20 | 17.5 | 7 | 100 | 20 | 18 | R1/8 | 2 |
| JBBS22-4-L100C | 22 | 17.5 | 4 | 100 | 20 | 20 | R1/8 | 2 |
| JBBS22-7-L100C | 22 | 17.5 | 7 | 100 | 20 | 20 | R1/8 | 2 |
| JBBS25-4-L100C | 25 | 18 | 4 | 100 | 23 | 23 | R1/8 | 2 |
| JBBS25-7-L100C | 25 | 18 | 7 | 100 | 23 | 23 | R1/8 | 2 |
| JBBS254-4-L100C | 25.4 | 18 | 4 | 100 | 23 | 23.4 | R1/8 | 2 |
| JBBS254-7-L100C | 25.4 | 18 | 7 | 100 | 23 | 23.4 | R1/8 | 2 |

SPARE PARTS



| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JBBS*-4-L100C | SSHM5-6PF-S | P-2.5 |
| JBBS*-7-L100C | SSHM5-4PF-S | P-2.5 |



| Designation | DCONMS | DCONWS | LF | LH | H | CNT |
|-------------------|--------|--------|-----|----|------|-------|
| JBBSA12-4-L80C* | 12 | 4 | 80 | 23 | 10.3 | Rc1/8 |
| JBBSA127-4-L80C* | 12.7 | 4 | 80 | 23 | 11.6 | Rc1/8 |
| JBBSA14-4-L80C* | 14 | 4 | 80 | 23 | 12 | Rc1/8 |
| JBBSA159-4-L100C* | 15.875 | 4 | 100 | 23 | 14 | Rc1/8 |
| JBBSA159-7-L100C* | 15.875 | 7 | 100 | 23 | 14 | Rc1/8 |
| JBBSA16-4-L100C | 16 | 4 | 100 | 23 | 14 | Rc1/8 |
| JBBSA16-7-L100C | 16 | 7 | 100 | 23 | 14 | Rc1/8 |
| JBBSA19-4-L120C* | 19.05 | 4 | 120 | 23 | 17.2 | Rc1/8 |
| JBBSA19-7-L120C* | 19.05 | 7 | 120 | 23 | 17.2 | Rc1/8 |
| JBBSA20-4-L120C | 20 | 4 | 120 | 23 | 18 | Rc1/8 |
| JBBSA20-7-L120C | 20 | 7 | 120 | 23 | 18 | Rc1/8 |
| JBBSA22-4-L135C* | 22 | 4 | 135 | 23 | 20 | Rc1/8 |
| JBBSA22-7-L135C* | 22 | 7 | 135 | 23 | 20 | Rc1/8 |
| JBBSA25-4-L135C* | 25 | 4 | 120 | 23 | 23 | Rc1/8 |
| JBBSA25-7-L135C* | 25 | 7 | 120 | 23 | 23 | Rc1/8 |
| JBBSA254-4-L120C* | 25.4 | 4 | 120 | 23 | 23.4 | Rc1/8 |
| JBBSA254-7-L120C* | 25.4 | 7 | 120 | 23 | 23.4 | Rc1/8 |

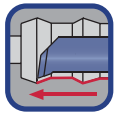
* Will be released in 2021.

SPARE PARTS



| Designation | Cap | Wrench |
|--------------|---------|------------|
| JBBSA**-4... | CAP-A-4 | WRENCH-A-4 |
| JBBSA**-7... | CAP-A-7 | WRENCH-A-7 |

STANDARD CUTTING CONDITIONS



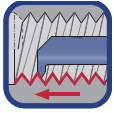
Boring, profiling, chamfering, back boring

| ISO | Workpiece material | Grade | Cutting speed V _c (m/min) | Feed f (mm/rev) |
|----------|---|-------|--------------------------------------|-----------------|
| P | Low carbon steels S15C, S25C, etc. C15, C20, etc. | SH730 | 40 - 140 | 0.01 - 0.08 * |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4 etc. | SH730 | 40 - 140 | 0.01 - 0.08 * |
| | Prehardened steels NAK80, PX5, etc. | SH730 | 40 - 140 | 0.01 - 0.08 * |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | SH730 | 40 - 140 | 0.01 - 0.08 * |
| N | Aluminium alloys, Copper alloys Si < 12% | SH730 | 90 - 200 | 0.01 - 0.08 * |
| S | Titanium alloys Ti-6Al-4V, etc. | SH730 | 30 - 100 | 0.01 - 0.08 * |
| | Superalloys Inconel718, etc. | SH730 | 30 - 100 | 0.01 - 0.08 * |

* JBTR/L04020004-D006,
JBTR/L04030004-D006
Max. f = 0.01 mm/rev

Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

STANDARD CUTTING CONDITIONS



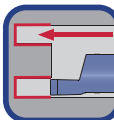
Threading (metric thread)

| ISO | Workpiece material | Grade | Cutting speed Vc (m/min) | Number of passes Pitch (mm) | | | | |
|-----|---|-------|-----------------------------|--------------------------------|--------|---------|---------|---------|
| | | | | 0.5 | 0.75 | 1 | 1.25 | 1.5 |
| P | Low carbon steels S15C, S25C, etc. C15, C20, etc. | SH730 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4, etc. | SH730 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| | Prehardened steels NAK80, PX5, etc. | SH730 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | SH730 | 40 - 140 | 8 | 10 | 12 | 15 | 18 |
| N | Aluminium alloys, Copper alloys Si < 12% | SH730 | 90 - 200 | 6 | 8 | 10 | 12 | 15 |



Internal grooving

| ISO | Workpiece material | Grade | Cutting speed Vc (m/min) | Feed f (mm/rev) |
|-----|---|-------|-----------------------------|--------------------|
| P | Low carbon steels S15C, S25C, etc. C15, C20, etc. | SH730 | 40 - 140 | 0.01 - 0.03 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4 etc. | SH730 | 40 - 140 | 0.01 - 0.03 |
| | Prehardened steels NAK80, PX5, etc. | SH730 | 40 - 140 | 0.01 - 0.03 |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | SH730 | 40 - 140 | 0.01 - 0.03 |
| N | Aluminium alloys, Copper alloys Si < 12% | SH730 | 90 - 200 | 0.01 - 0.03 |
| S | Titanium alloys Ti-6Al-4V, etc. | SH730 | 30 - 100 | 0.01 - 0.03 |
| | Superalloys Inconel718, etc. | SH730 | 30 - 100 | 0.01 - 0.03 |



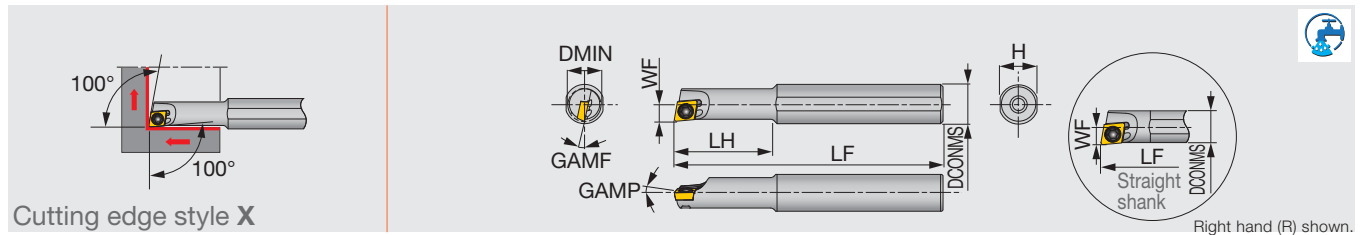
Face grooving

| ISO | Workpiece material | Grade | Cutting speed Vc (m/min) | Feed f (mm/rev) |
|-----|---|-------|-----------------------------|--------------------|
| P | Low carbon steels S15C, S25C, etc. C15, C20, etc. | SH730 | 40 - 140 | 0.01 - 0.05 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4 etc. | SH730 | 40 - 140 | 0.01 - 0.05 |
| | Prehardened steels NAK80, PX5, etc. | SH730 | 40 - 140 | 0.01 - 0.05 |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | SH730 | 40 - 140 | 0.01 - 0.05 |
| N | Aluminium alloys, Copper alloys Si < 12% | SH730 | 90 - 200 | 0.01 - 0.05 |
| S | Titanium alloys Ti-6Al-4V, etc. | SH730 | 30 - 100 | 0.01 - 0.05 |
| | Superalloys Inconel718, etc. | SH730 | 30 - 100 | 0.01 - 0.05 |

STREAMJETBAR

A/E-SEXPR/L

Screw-on boring bar, for positive 75° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|------|------|------|------|-------------|---------|
| A04F-SEXPR/L03-D045 | Steel | 4.5 | 4 | 2.3 | 80 | 8 | 3.8 | 0° | -15° | 0.2 | EP**03X1... | 0.6 |
| A04F-SEXPR/L03-D050 | Steel | 5 | 4 | 2.5 | 80 | 8 | 3.8 | 0° | -13° | 0.2 | EP**03X1... | 0.6 |
| A05F-SEXPR/L04-D055 | Steel | 5.5 | 5 | 2.75 | 80 | 9 | 4.8 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| A06G-SEXPR/L04-D070 | Steel | 7 | 6 | 3.6 | 90 | 11 | 5.75 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| A08H-SEXPR/L04-D055 | Steel | 5.5 | 8 | 2.75 | 100 | 16 | 7.5 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| A08H-SEXPR/L04-D070 | Steel | 7 | 8 | 3.6 | 100 | 20 | 7.5 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| E04G-SEXPR/L03-D045 | Carbide | 4.5 | 4 | 2.3 | 90 | 9 | 3.8 | 0° | -15° | 0.2 | EP**03X1... | 0.6 |
| E04G-SEXPR/L03-D050 | Carbide | 5 | 4 | 2.5 | 90 | 9 | 3.8 | 0° | -13° | 0.2 | EP**03X1... | 0.6 |
| E05G-SEXPR/L04-D055 | Carbide | 5.5 | 5 | 2.75 | 90 | 10 | 4.8 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| E06H-SEXPR/L04-D070 | Carbide | 7 | 6 | 3.6 | 100 | 12 | 5.75 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| E08K-SEXPR/L04-D055 | Carbide | 5.5 | 8 | 2.75 | 125 | 28 | 7.5 | 0° | -12° | 0.4 | EP**0401... | 0.6 |
| E08K-SEXPR/L04-D070 | Carbide | 7 | 8 | 3.6 | 125 | 40 | 7.5 | 0° | -12° | 0.4 | EP**0401... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (SEXPR**) with left-hand inserts (L); and left-hand toolholders (SEXPL**) with right-hand inserts (R).

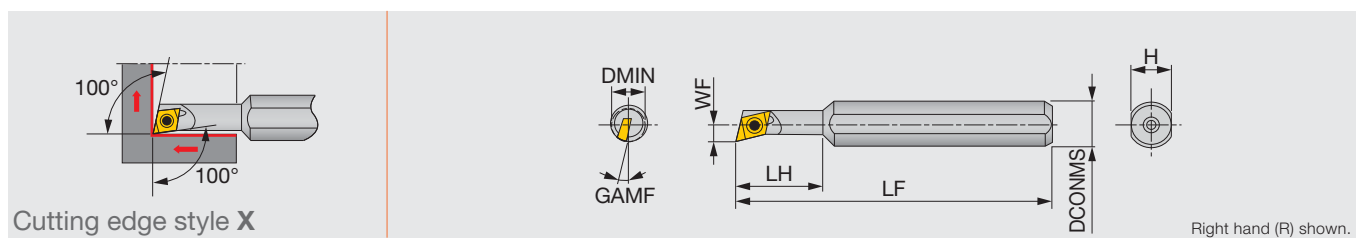
SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------------|----------------|--------|
| A**-SEXPR/L03-D... | CSTA-1.6 | T-6F |
| A**-SEXPR/L04-D... | CSTB-2 | T-6F |
| E**-SEXPR/L03-D... | CSTA-1.6 | T-6F |
| E**-SEXPR/L04-D... | CSTB-2 | T-6F |

J-SERIES

JS-SEXPR/L

Screw-on boring bar, for positive 75° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | RE** | Insert | Torque* |
|----------------|----------|------|--------|-----|-----|----|---|------|------|-------------|---------|
| JS08H-SEXPR045 | Steel | 5.5 | 8 | 2.7 | 100 | 16 | 7 | 12° | 0.4 | EP**0401... | 0.6 |
| JS08H-SEXPR047 | Steel | 7 | 8 | 3.6 | 100 | 20 | 7 | 12° | 0.4 | EP**0401... | 0.6 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------|----------------|--------|
| JS08H-SEXPR04... | CSTB-2 | T-6F |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (SEXPR**) with left-hand inserts (L); and left-hand toolholders (SEXPL**) with right-hand inserts (R).

Reference pages: A/E-SEXPR/L, JS-SEXPR/L: Insert → 2-21 -, CBN → 2-64, PCD → 2-70, Sleeve → 4-30, 4-31

Grade

Insert

Ext. Toolholder

Int. Toolholder

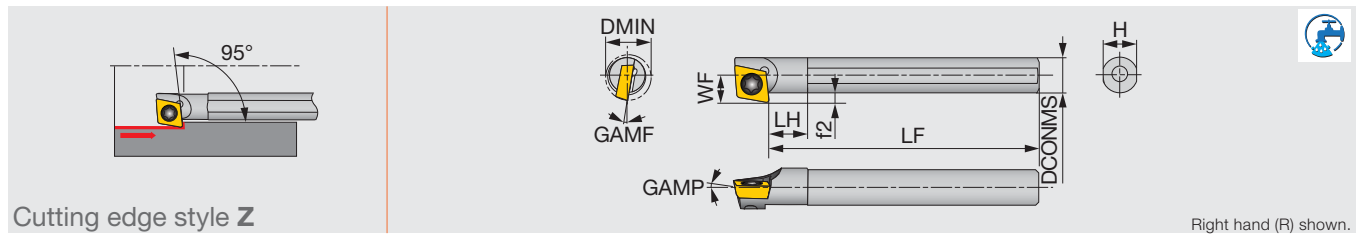
Threading

Grooving

Endmill

Drilling Tool

Technical Reference



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|-----|----|----|-----|-----|------|------|------|-------------|---------|
| A04F-SEZPR/L03-D055 | Steel | 5.5 | 4 | 3.2 | 80 | 4 | 3.8 | 1.2 | 0° | -8° | 0.2 | EP**03X1... | 0.6 |
| A05F-SEZPR/L03-D065 | Steel | 6.5 | 5 | 3.7 | 80 | 5 | 4.8 | 1.2 | 0° | -6° | 0.2 | EP**03X1... | 0.6 |
| E04G-SEZPR/L03-D055 | Carbide | 5.5 | 4 | 3.2 | 90 | 5 | 3.8 | 1.2 | 0° | -8° | 0.2 | EP**03X1... | 0.6 |
| E05G-SEZPR/L03-D065 | Carbide | 6.5 | 5 | 3.7 | 90 | 6 | 4.8 | 1.2 | 0° | -6° | 0.2 | EP**03X1... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (SEZPR**) with right-hand inserts (R); and left-hand toolholders (SEZPL**) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------------|----------------|--------|
| A**-SEZPR/L03-D... | CSTA-1.6 | T-6F |
| E**-SEZPR/L03-D... | CSTA-1.6 | T-6F |

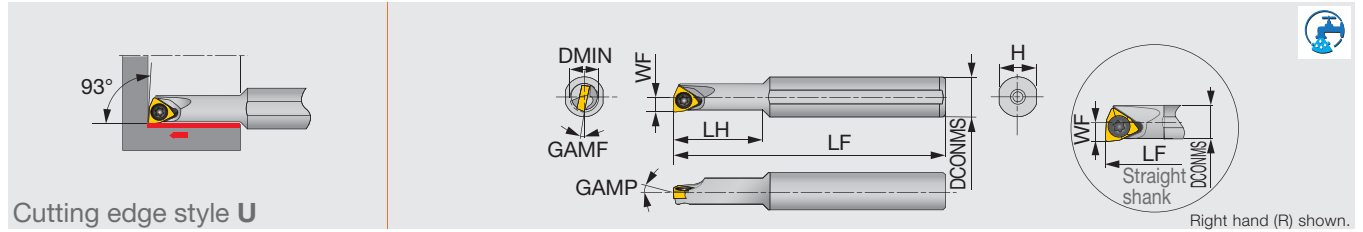
INSERT SELECTION

| P | Application | Finishing | M | Application | Finishing | N | Application | Precision finishing | Finishing | H | Application | Precision finishing |
|---|---------------|-----------|---|---------------|-----------|---|---------------|---------------------|-----------|---|---------------|---------------------|
| | Grade | SH725 | | Grade | SH725 | | Grade | DX140 | GH110 | | Grade | BX310 |
| | Breaker Shape | JS | | Breaker Shape | JS | | Breaker Shape | T-DIA | W08 | | Breaker Shape | T-CBN |

STREAMJETBAR

A/E-SWUBR/L

Screw-on boring bar, for positive 80° trigon inserts



Cutting edge style U

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|-----|-----|----|------|------|------|------|-------------|---------|
| A05F-SWUBR/L03-D060 | Steel | 6 | 5 | 3 | 80 | 9 | 4.8 | 0° | -13° | 0.4 | WB**0301... | 0.6 |
| A06G-SWUBR/L03-D070 | Steel | 7 | 6 | 3.5 | 90 | 11 | 5.75 | 0° | -12° | 0.4 | WB**0301... | 0.6 |
| A07G-SWUBR/L03-D080 | Steel | 8 | 7 | 4 | 90 | 12 | 6.75 | 0° | -11° | 0.4 | WB**0301... | 0.6 |
| A08H-SWUBR03-D060 | Steel | 6 | 8 | 3.1 | 100 | 18 | 7.5 | 0° | -12° | 0.4 | WB**0301... | 0.6 |
| A08H-SWUBR03-D070 | Steel | 7 | 8 | 3.6 | 100 | 20 | 7.5 | 0° | -12° | 0.4 | WB**0301... | 0.6 |
| E05G-SWUBR/L03-D060 | Carbide | 6 | 5 | 3 | 90 | 10 | 4.8 | 0° | -13° | 0.4 | WB**0301... | 0.6 |
| E06H-SWUBR/L03-D070 | Carbide | 7 | 6 | 3.5 | 100 | 12 | 5.75 | 0° | -12° | 0.4 | WB**0301... | 0.6 |
| E07H-SWUBR/L03-D080 | Carbide | 8 | 7 | 4 | 100 | 14 | 6.75 | 0° | -11° | 0.4 | WB**0301... | 0.6 |
| E08K-SWUBR03-D060 | Carbide | 6 | 8 | 3.1 | 125 | 30 | 7.5 | 0° | -12° | 0.4 | WB**0301... | 0.6 |
| E08K-SWUBR03-D070 | Carbide | 7 | 8 | 3.6 | 125 | 40 | 7.5 | 0° | -12° | 0.4 | WB**0301... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (SVUCR*) with left-hand inserts (L); and left-hand toolholders (SWUBL**) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------|----------------|--------|
| A/E**-SWUBR/L... | CSTB-2 | T-6F |

INSERT SELECTION

| P | Application | Finishing | M | Application | Finishing | N | Application | Finishing |
|---|---------------|-----------|---|---------------|-----------|---|---------------|-----------|
| | Grade | SH725 | | Grade | SH725 | | Grade | GH110 |
| | Breaker Shape | W08 | | Breaker Shape | W08 | | Breaker Shape | W08 |

Reference pages: A/E-SWUBR/L: Insert → 2-36 -, Sleeve → 4-30, 4-31

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

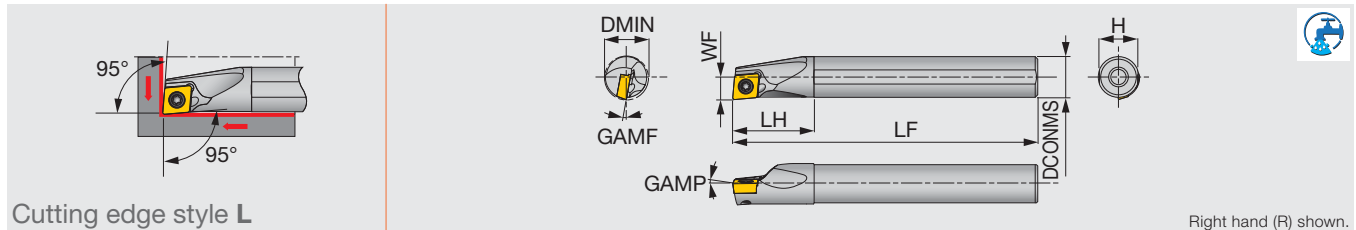
Endmill

Drilling Tool

Technical Reference

A/E-SCLCR/L

Screw-on boring bar, for positive 80° rhombic inserts



Cutting edge style L

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|-----|-----|----|------|------|------|------|-------------|---------|
| A04F-SCLCR/L03-D050 | Steel | 5 | 4 | 2.5 | 80 | 8 | 3.8 | 0° | -15° | 0.2 | CC**03X1... | 0.6 |
| A05F-SCLCR/L03-D060 | Steel | 6 | 5 | 3 | 80 | 9 | 4.8 | 0° | -13° | 0.2 | CC**03X1... | 0.6 |
| A06G-SCLCR/L04-D070 | Steel | 7 | 6 | 3.5 | 90 | 11 | 5.75 | 0° | -13° | 0.2 | CC**04T1... | 0.6 |
| A07G-SCLCR/L04-D080 | Steel | 8 | 7 | 4 | 90 | 12 | 6.75 | 0° | -11° | 0.2 | CC**04T1... | 0.6 |
| A08H-SCLCR/L06-D100 | Steel | 10 | 8 | 5.5 | 100 | 16 | 7.5 | 0° | -13° | 0.4 | CC**0602... | 1.2 |
| A10F-SCLCR06-D120 | Steel | 12 | 10 | 6 | 80 | 20 | 9 | 0° | -10° | 0.4 | CC**0602... | 1.2 |
| A10K-SCLCR/L06-D120 | Steel | 12 | 10 | 6 | 125 | 20 | 9 | 0° | -10° | 0.4 | CC**0602... | 1.2 |
| A12H-SCLCR06-D140 | Steel | 14 | 12 | 7 | 100 | 24 | 11 | 0° | -8° | 0.4 | CC**0602... | 1.2 |
| A12M-SCLCR/L06-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | 0° | -8° | 0.4 | CC**0602... | 1.2 |
| A12H-SCLCR06-D160 | Steel | 16 | 12 | 9 | 100 | 24 | 11 | 0° | -7° | 0.4 | CC**0602... | 1.2 |
| A12M-SCLCR/L06-D160 | Steel | 16 | 12 | 9 | 150 | 24 | 11 | 0° | -7° | 0.4 | CC**0602... | 1.2 |
| A16K-SCLCR09-D180 | Steel | 18 | 16 | 9 | 125 | 32 | 15 | 0° | -9° | 0.8 | CC**09T3... | 3 |
| A16Q-SCLCR/L09-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | 0° | -10° | 0.8 | CC**09T3... | 3 |
| A16K-SCLCR09-D200 | Steel | 20 | 16 | 11 | 125 | 32 | 15 | 0° | -9° | 0.8 | CC**09T3... | 3 |
| A16Q-SCLCR/L09-D200 | Steel | 20 | 16 | 11 | 180 | 32 | 15 | 0° | -9° | 0.8 | CC**09T3... | 3 |
| E04G-SCLCR/L03-D050 | Carbide | 5 | 4 | 2.5 | 90 | 9 | 3.8 | 0° | -15° | 0.2 | CC**03X1... | 0.6 |
| E05G-SCLCR/L03-D060 | Carbide | 6 | 5 | 3 | 90 | 10 | 4.8 | 0° | -13° | 0.2 | CC**03X1... | 0.6 |
| E06H-SCLCR/L04-D070 | Carbide | 7 | 6 | 3.5 | 100 | 12 | 5.75 | 0° | -13° | 0.2 | CC**04T1... | 0.6 |
| E07H-SCLCR/L04-D080 | Carbide | 8 | 7 | 4 | 100 | 14 | 6.75 | 0° | -11° | 0.2 | CC**04T1... | 0.6 |
| E08G-SCLCR06-D100 | Carbide | 10 | 8 | 5.5 | 90 | 22 | 7.5 | 0° | -13° | 0.4 | CC**0602... | 1.2 |
| E08K-SCLCR/L06-D100 | Carbide | 10 | 8 | 5.5 | 125 | 22 | 7.5 | 0° | -13° | 0.4 | CC**0602... | 1.2 |
| E10F-SCLCR06-D120 | Carbide | 12 | 10 | 6 | 80 | 25 | 9 | 0° | -10° | 0.4 | CC**0602... | 1.2 |
| E10H-SCLCR06-D120 | Carbide | 12 | 10 | 6 | 100 | 25 | 9 | 0° | -10° | 0.4 | CC**0602... | 1.2 |
| E10M-SCLCR/L06-D120 | Carbide | 12 | 10 | 6 | 150 | 25 | 9 | 0° | -10° | 0.4 | CC**0602... | 1.2 |
| E12G-SCLCR06-D140 | Carbide | 14 | 12 | 7 | 90 | 27 | 11 | 0° | -8° | 0.4 | CC**0602... | 1.2 |
| E12J-SCLCR06-D140 | Carbide | 14 | 12 | 7 | 110 | 27 | 11 | 0° | -8° | 0.4 | CC**0602... | 1.2 |
| E12Q-SCLCR/L06-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 0° | -8° | 0.4 | CC**0602... | 1.2 |
| E12G-SCLCR06-D160 | Carbide | 16 | 12 | 9 | 90 | 27 | 11 | 0° | -7° | 0.4 | CC**0602... | 1.2 |
| E12J-SCLCR06-D160 | Carbide | 16 | 12 | 9 | 110 | 27 | 11 | 0° | -7° | 0.4 | CC**0602... | 1.2 |
| E12Q-SCLCR/L06-D160 | Carbide | 16 | 12 | 9 | 180 | 27 | 11 | 0° | -7° | 0.4 | CC**0602... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

Use right-hand toolholders (SCLCR**) with left-hand inserts (L); and left-hand toolholders (SCLCL**) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------------|----------------|--------|
| A**-SCLCR/L03-D... | CSTA-1.6 | T-6F |
| A**-SCLCR/L04-D... | CSTB-2 | T-6F |
| A**-SCLCR/L06-D... | CSTB-2.5S | T-8F |
| A**-SCLCR/L09-D... | CSTB-4S | T-15F |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------------|----------------|--------|
| E**-SCLCR/L03-D... | CSTA-1.6 | T-6F |
| E**-SCLCR/L04-D... | CSTB-2 | T-6F |
| E**-SCLCR/L06-D... | CSTB-2.5S | T-8F |

INSERT SELECTION

| Application | Precision finishing | Finishing | Finishing to medium cutting | Medium cutting |
|---------------|---------------------|-----------|-----------------------------|----------------|
| Grade | SH725 | SH725 | T9215 | T9215 |
| Breaker Shape | 01 | JS | PS | PM |

| Application | Precision finishing | Finishing | Finishing to medium cutting | Medium cutting |
|---------------|---------------------|-----------|-----------------------------|----------------|
| Grade | GH330 | SH725 | AH630 | T6130 |
| Breaker Shape | W** | JS | PSS | PM |

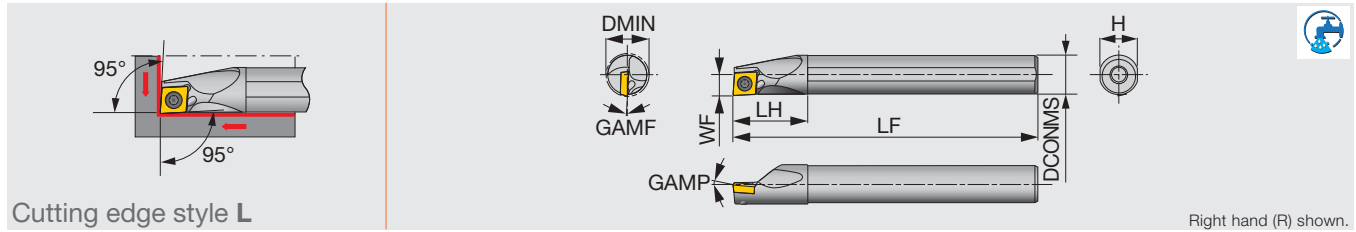
| Application | Precision finishing | Finishing | Medium cutting |
|---------------|---------------------|-----------------|----------------|
| Grade | DX120 | DX140 | KS05F |
| Breaker Shape | T-DIA | with rake T-DIA | AL |

| Application | Finishing | Finishing to medium cutting |
|---------------|-----------|-----------------------------|
| Grade | AH8015 | AH8015 |
| Breaker Shape | PSS | PS |

| Application | Precision finishing | Finishing |
|---------------|---------------------|-----------|
| Grade | BXM10 | BXM20 |
| Breaker Shape | T-CBN | T-CBN |

A/E-SCLPR/L

Screw-on boring bar, for positive 80° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|-----|-----|----|-----|------|-------|------|-------------|---------|
| A08H-SCLPR/L06-D100 | Steel | 10 | 8 | 5.5 | 100 | 16 | 7.5 | 5° | -8° | 0.4 | CP**0602... | 1.2 |
| A10K-SCLPR/L06-D120 | Steel | 12 | 10 | 6 | 125 | 20 | 9 | 5° | -5° | 0.4 | CP**0602... | 1.2 |
| A10K-SCLPR/L08-D120 | Steel | 12 | 10 | 6 | 125 | 20 | 9 | 5° | -5° | 0.4 | CP**0802... | 1.4 |
| A12M-SCLPR/L06-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | 5° | -4° | 0.4 | CP**0602... | 1.2 |
| A12M-SCLPR/L08-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | 5° | -4° | 0.4 | CP**0802... | 1.4 |
| A12M-SCLPR/L08-D160 | Steel | 16 | 12 | 9 | 150 | 24 | 11 | 5° | -3° | 0.4 | CP**0802... | 1.4 |
| A16Q-SCLPR/L09-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | 5° | -3.5° | 0.8 | CP**0903... | 3 |
| A16Q-SCLPR/L09-D200 | Steel | 20 | 16 | 11 | 180 | 32 | 15 | 5° | -3° | 0.8 | CP**0903... | 3 |
| E08K-SCLPR/L06-D100 | Carbide | 10 | 8 | 5.5 | 125 | 22 | 7.5 | 5° | -8° | 0.4 | CP**0602... | 1.2 |
| E10M-SCLPR/L06-D120 | Carbide | 12 | 10 | 6 | 150 | 25 | 9 | 5° | -5° | 0.4 | CP**0602... | 1.2 |
| E10H-SCLPR08-D120 | Carbide | 12 | 10 | 6 | 100 | 25 | 9 | 5° | -5° | 0.4 | CP**0802... | 1.4 |
| E10M-SCLPR/L08-D120 | Carbide | 12 | 10 | 6 | 150 | 25 | 9 | 5° | -5° | 0.4 | CP**0802... | 1.4 |
| E12Q-SCLPR/L06-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 5° | -4° | 0.4 | CP**0602... | 1.2 |
| E12G-SCLPR08-D140 | Carbide | 14 | 12 | 7 | 90 | 27 | 11 | 5° | -4° | 0.4 | CP**0802... | 1.4 |
| E12J-SCLPR08-D140 | Carbide | 14 | 12 | 7 | 110 | 27 | 11 | 5° | -4° | 0.4 | CP**0802... | 1.4 |
| E12Q-SCLPR/L08-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 5° | -4° | 0.4 | CP**0802... | 1.4 |
| E12G-SCLPR08-D160 | Carbide | 16 | 12 | 9 | 90 | 27 | 11 | 5° | -3° | 0.4 | CP**0802... | 1.4 |
| E12J-SCLPR08-D160 | Carbide | 16 | 12 | 9 | 110 | 27 | 11 | 5° | -3° | 0.4 | CP**0802... | 1.4 |
| E12Q-SCLPR/L08-D160 | Carbide | 16 | 12 | 9 | 180 | 27 | 11 | 5° | -3° | 0.4 | CP**0802... | 1.4 |

*Torque: Recommended clamping torque (N·m)

**RE: Standard corner radius

Use right-hand toolholders (SCLPR**) with left-hand inserts (L); and left-hand toolholders (SCLPL**) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A**-SCLPR/L06-D... | CSTB-2.5S | T-8F |
| A10K-SCLPR/L08-D120 | CSTB-3L042 | T-9F |
| A12M-SCLPR/L08-D... | CSTB-3L050 | T-9F |
| A**-SCLPR/L09-D... | CSTB-4L060 | T-15F |
| E**-SCLPR/L06-D... | CSTB-2.5S | T-8F |
| E10*-SCLPR/L08-D... | CSTB-3L042 | T-9F |
| E12*-SCLPR/L08-D... | CSTB-3L050 | T-9F |

INSERT SELECTION

| Application | Finishing to medium cutting | | Application | Finishing to medium cutting | |
|---------------|-----------------------------|-------|---------------|-----------------------------|-------|
| | T9215 | T9215 | | T9215 | T9215 |
| Grade | PS | PM | Grade | PS | PM |
| Breaker Shape | | | Breaker Shape | | |

Reference pages: A/E-SCLPR/L: Insert → 2-13 -, CBN → 2-62, DIA → 2-70, Sleeve → 4-31

Grade

Insert

Ext. Toolholder

Int. Toolholder

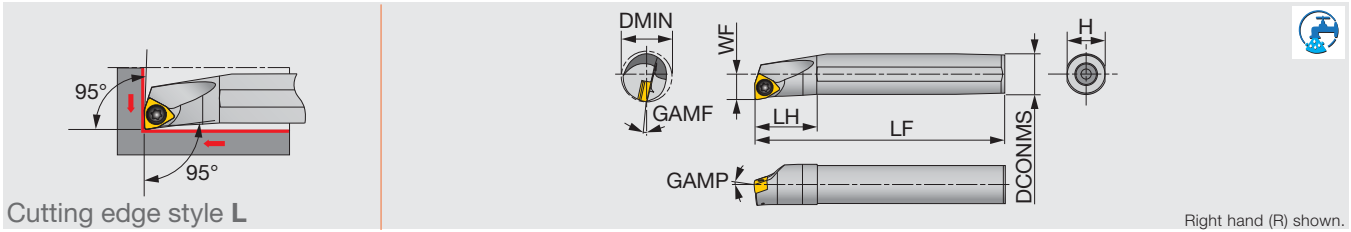
Threading

Grooving

Endmill

Drilling Tool

Technical Reference



Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|----|-----|----|----|------|------|------|------------------|---------|
| A10K-SWLXR/L04-D120 | Steel | 12 | 10 | 6 | 125 | 20 | 9 | -10° | -16° | 0.4 | WXGU0403**L/R... | 0.9 |
| A12M-SWLXR/L04-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | -10° | -14° | 0.4 | WXGU0403**L/R... | 0.9 |
| A16Q-SWLXR/L04-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | -10° | -11° | 0.4 | WXGU0403**L/R... | 0.9 |
| E10M-SWLXR/L04-D120 | Carbide | 12 | 10 | 6 | 150 | 25 | 9 | -10° | -16° | 0.4 | WXGU0403**L/R... | 0.9 |
| E12Q-SWLXR/L04-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | -10° | -14° | 0.4 | WXGU0403**L/R... | 0.9 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius
 Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------|----------------|--------|
| A/E**-SWLXR/L... | SR34-514 | T-7F |

INSERT SELECTION

| Application | Finishing | Medium cutting |
|---------------|-----------|----------------|
| | Grade | NS9530 |
| Breaker Shape | SS | TS |

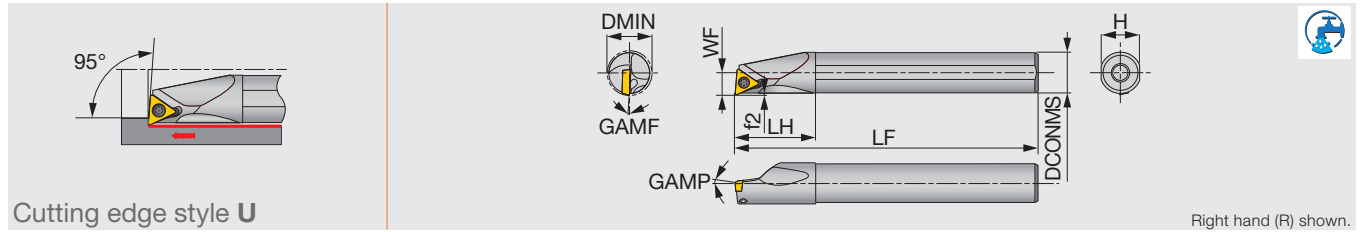
| Application | Finishing | Medium cutting |
|---------------|-----------|----------------|
| | Grade | AH8015 |
| Breaker Shape | SS | TS |

| Application | Finishing | Medium cutting |
|---------------|-----------|----------------|
| | Grade | KS05F |
| Breaker Shape | SS | TS |

Reference pages: A/E-SWLXR/L: Insert → 2-37 -
 Standard cutting conditions → 4-32, Sleeve → 4-31

A/E-STUPR/L

Screw-on boring bar, for positive 60° triangular inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|-----------------------|----------|------|--------|-----|-----|------|------|-----|------|------|------|----------------------------|---------|
| A07G-STUPR/L07-D080 | Steel | 8 | 7 | 4 | 90 | 12 | 6.75 | 0.4 | 5° | -10° | 0.4 | TP**0701... | 0.9 |
| A08H-STUPR/L07-D080 | Steel | 8 | 8 | 4 | 100 | 19.5 | 7.5 | 0.5 | 5° | -10° | 0.4 | TP**0701... | 0.9 |
| A08H-STUPR/L09-D100 | Steel | 10 | 8 | 5.5 | 100 | 16 | 7.5 | 0.6 | 5° | -8° | 0.4 | TP**0902... ⁽¹⁾ | 0.9 |
| A10F-STUPR1102-D120 | Steel | 12 | 10 | 6.5 | 80 | 20 | 9 | 1.4 | 5° | -6° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| A10K-STUPR/L1102-D120 | Steel | 12 | 10 | 6.5 | 125 | 20 | 9 | 0.7 | 5° | -6° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| A10K-STUPR/L1103-D120 | Steel | 12 | 10 | 6.5 | 125 | 20 | 9 | 0.6 | 5° | -10° | 0.4 | TP**1103... ⁽¹⁾ | 1.4 |
| A12H-STUPR1102-D140 | Steel | 14 | 12 | 7 | 100 | 24 | 11 | 0.8 | 5° | -4° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| A12M-STUPR/L1102-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | 0.8 | 5° | -4° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| A12M-STUPR/L1103-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | 0.6 | 5° | -6° | 0.4 | TP**1103... ⁽¹⁾ | 1.4 |
| A12H-STUPR1102-D160 | Steel | 16 | 12 | 9 | 100 | 24 | 11 | 0.6 | 5° | -3° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| A12M-STUPR/L1102-D160 | Steel | 16 | 12 | 9 | 150 | 24 | 11 | 0.6 | 5° | -3° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| A16K-STUPR13-D180 | Steel | 18 | 16 | 9 | 125 | 32 | 15 | 0.8 | 5° | -3° | 0.4 | TP**1303... ⁽¹⁾ | 1.4 |
| A16Q-STUPR/L1103-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | 0.8 | 5° | -4° | 0.4 | TP**1103... ⁽¹⁾ | 1.4 |
| A16Q-STUPR/L13-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | 0.8 | 5° | -3° | 0.4 | TP**1303... ⁽¹⁾ | 1.4 |
| A16K-STUPR13-D200 | Steel | 20 | 16 | 11 | 125 | 32 | 15 | 0.6 | 5° | -3° | 0.4 | TP**1303... ⁽¹⁾ | 1.4 |
| A16Q-STUPR/L13-D200 | Steel | 20 | 16 | 11 | 180 | 32 | 15 | 0.6 | 5° | -3° | 0.4 | TP**1303... ⁽¹⁾ | 1.4 |
| E07H-STUPR/L07-D080 | Carbide | 8 | 7 | 4 | 100 | 14 | 6.75 | 0.3 | 5° | -10° | 0.4 | TP**0701... | 0.9 |
| E08G-STUPR07-D080 | Carbide | 8 | 8 | 4 | 90 | 44.5 | 7.5 | 0.5 | 5° | -10° | 0.4 | TP**0701... | 0.9 |
| E08K-STUPR/L07-D080 | Carbide | 8 | 8 | 4 | 125 | 44.5 | 7.5 | 0.5 | 5° | -10° | 0.4 | TP**0701... | 0.9 |
| E08G-STUPR09-D100 | Carbide | 10 | 8 | 5.5 | 90 | 22 | 7 | 0.6 | 5° | -8° | 0.4 | TP**0902... ⁽¹⁾ | 0.9 |
| E08K-STUPR/L09-D100 | Carbide | 10 | 8 | 5.5 | 125 | 22 | 7 | 0.6 | 5° | -8° | 0.4 | TP**0902... ⁽¹⁾ | 0.9 |
| E10F-STUPR1102-D120 | Carbide | 12 | 10 | 6.5 | 80 | 25 | 9 | 0.5 | 5° | -6° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E10H-STUPR1102-D120 | Carbide | 12 | 10 | 6.5 | 100 | 25 | 9 | 0.6 | 5° | -6° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E10M-STUPR/L1102-D120 | Carbide | 12 | 10 | 6.5 | 150 | 25 | 9 | 0.6 | 5° | -6° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E10M-STUPR/L1103-D120 | Carbide | 12 | 10 | 6.5 | 150 | 25 | 9 | 0.7 | 5° | -10° | 0.4 | TP**1103... ⁽¹⁾ | 1.4 |
| E12G-STUPR1102-D140 | Carbide | 14 | 12 | 7 | 90 | 27 | 11 | 0.8 | 5° | -4° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E12J-STUPR1102-D140 | Carbide | 14 | 12 | 7 | 110 | 27 | 11 | 0.8 | 5° | -4° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E12Q-STUPR/L1102-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 0.8 | 5° | -4° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E12Q-STUPR/L1103-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 0.7 | 5° | -6° | 0.4 | TP**1103... ⁽¹⁾ | 1.4 |
| E12G-STUPR1102-D160 | Carbide | 16 | 12 | 9 | 90 | 27 | 11 | 0.6 | 5° | -3° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E12J-STUPR1102-D160 | Carbide | 16 | 12 | 9 | 110 | 27 | 11 | 0.6 | 5° | -3° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |
| E12Q-STUPR/L1102-D160 | Carbide | 16 | 12 | 9 | 180 | 27 | 11 | 0.6 | 5° | -3° | 0.4 | TP**1102... ⁽¹⁾ | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE : Standard corner radius

Use right-hand toolholders (STUPR**) with left-hand inserts (L); and left-hand toolholders (STUPL**) with right-hand inserts (R).

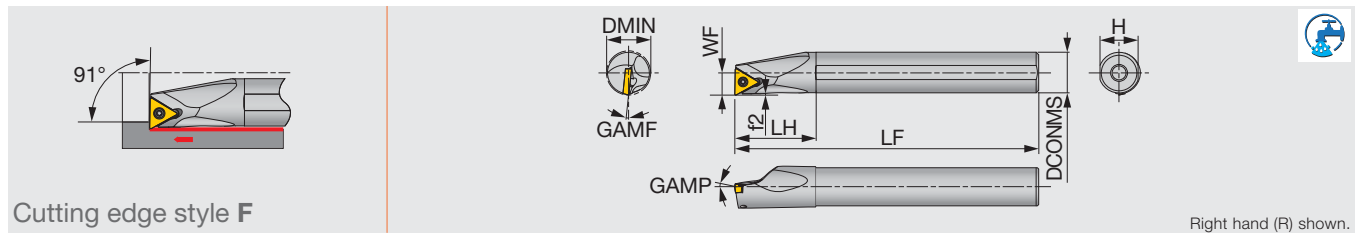
(1) TPGH, TPGM, and TPGA inserts cannot be used.

SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------------|----------------|--------|
| A/E07*-STUPR/L07-... | CSTB-2.2L038 | T-7F |
| A/E08*-STUPR/L07-... | CSTB-2.2L038 | T-7F |
| A/E08*-STUPR/L09-... | CSTB-2.2L038 | T-7F |
| A/E10*-STUPR/L1102-... | CSTB-2.5S | T-8F |
| A/E10*-STUPR/L1103-... | CSTB-3L050 | T-9F |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------------|----------------|--------|
| A/E12*-STUPR/L1102-... | CSTB-2.5B | T-8F |
| A/E12*-STUPR/L1103-... | CSTB-3L050 | T-9F |
| A/E16*-STUPR/L1103-... | CSTB-3S | T-9F |
| A/E16*-STUPR/L13-... | CSTB-3S | T-9F |



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|-----------------------|----------|------|--------|-----|-----|----|-----|-----|------|------|------|-------------|---------|
| A08H-STFPR/L09-D100 | Steel | 10 | 8 | 5.5 | 100 | 16 | 7.5 | 0.7 | 5° | -8° | 0.4 | TP**0902... | 0.9 |
| A10K-STFPR/L1102-D120 | Steel | 12 | 10 | 6.5 | 125 | 20 | 9 | 0.7 | 5° | -6° | 0.4 | TP**1102... | 1.2 |
| A12M-STFPR/L1102-D140 | Steel | 14 | 12 | 7.0 | 150 | 24 | 11 | 0.6 | 5° | -4° | 0.4 | TP**1102... | 1.2 |
| A16Q-STFPR/L13-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | 0.7 | 5° | -2° | 0.4 | TP**1303... | 1.4 |
| E08K-STFPR/L09-D100 | Carbide | 10 | 8 | 5.5 | 125 | 22 | 7.5 | 0.7 | 5° | -8° | 0.4 | TP**0902... | 0.9 |
| E10M-STFPR/L1102-D120 | Carbide | 12 | 10 | 6.5 | 150 | 25 | 9 | 0.7 | 5° | -6° | 0.4 | TP**1102... | 1.2 |
| E12Q-STFPR/L1102-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 0.6 | 5° | -4° | 0.4 | TP**1102... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE : Standard corner radius

Use right-hand toolholders (STFPR**) with left-hand inserts (L); and left-hand toolholders (STFPL**) with right-hand inserts (R).

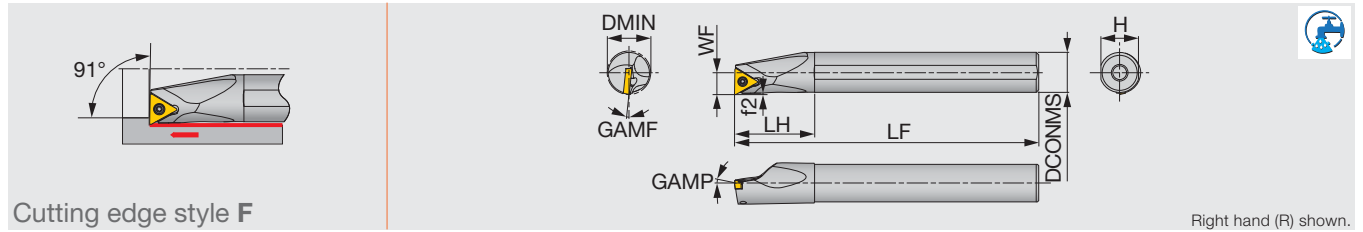
(1) TPGH, TPGM, and TPGA inserts cannot be used.

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-----------------------|----------------|--------|
| A08H-STFPR/L09-D100 | CSTB-2.2S | T-7F |
| A10K-STFPR/L1102-D120 | CSTB-2.5B | T-8F |
| A12M-STFPR/L1102-D140 | CSTB-2.5 | T-8F |
| A16Q-STFPR/L13-D180 | CSTB-3S | T-9F |
| E08K-STFPR/L09-D100 | CSTB-2.2S | T-7F |
| E10M-STFPR/L1102-D120 | CSTB-2.5B | T-8F |
| E12Q-STFPR/L1102-D140 | CSTB-2.5 | T-8F |

INSERT SELECTION

| | | | | | | | | | |
|----------|---------------|---------------------|-----------------------------|----------------|---------------|---------------|---------------------|-----------------------------|----------------|
| P | Application | Finishing | Finishing to medium cutting | Medium cutting | M | Application | Finishing | Finishing to medium cutting | Medium cutting |
| | Grade | SH725 | T9215 | T9215 | | Grade | SH725 | T9215 | T9215 |
| | Breaker Shape | JS | PS | PM | | Breaker Shape | JS | PS | PM |
| N | Application | Precision finishing | | | S | Application | Precision finishing | | |
| | Grade | DX120 | | | | Grade | BX470 | | |
| | Breaker Shape | T-DIA with rake | | | Breaker Shape | T-CBN | | | |
| H | Application | Precision finishing | Finishing | | | | | | |
| | Grade | BXM10 | BXM20 | | | | | | |
| | Breaker Shape | T-CBN | T-CBN | | | | | | |



Cutting edge style F

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|-----------------------|----------|------|--------|-----|-----|----|----|-----|------|------|------|-------------|---------|
| A10K-STFCR/L1103-D120 | Steel | 12 | 10 | 6.5 | 125 | 20 | 9 | 0.6 | 0° | -13° | 0.4 | TC**1103... | 1.2 |
| A12M-STFCR/L1103-D140 | Steel | 14 | 12 | 7 | 150 | 24 | 11 | 0.5 | 0° | -10° | 0.4 | TC**1103... | 1.2 |
| A16Q-STFCR/L1103-D180 | Steel | 18 | 16 | 9 | 180 | 32 | 15 | 0.5 | 0° | -7° | 0.4 | TC**1103... | 1.2 |
| E10M-STFCR/L1103-D120 | Carbide | 12 | 10 | 6.5 | 150 | 25 | 9 | 0.7 | 0° | -13° | 0.4 | TC**1103... | 1.2 |
| E12Q-STFCR/L1103-D140 | Carbide | 14 | 12 | 7 | 180 | 27 | 11 | 0.5 | 0° | -10° | 0.4 | TC**1103... | 1.2 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (STFCR**) with left-hand inserts (L); and left-hand toolholders (STFCL**) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------------|----------------|--------|
| A**-STFCR/L1103-D... | CSTB-2.5 | T-8F |
| E**-STFCR/L1103-D... | CSTB-2.5 | T-8F |

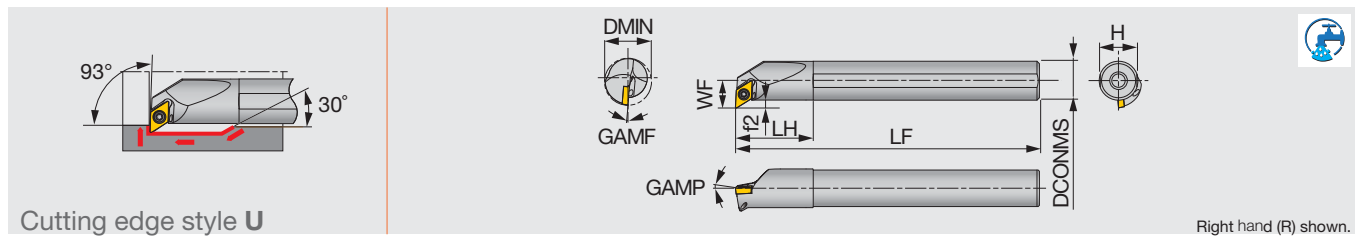
INSERT SELECTION

| P | Application | Precision finishing | Finishing | Finishing to medium cutting | Medium cutting | M | Application | Precision finishing | Finishing | Finishing to medium cutting | Medium cutting |
|---|---------------|---------------------|----------------|-----------------------------|----------------|---|---------------|---------------------|-----------|-----------------------------|----------------|
| | Grade | SH725 | SH725 | T9215 | T9215 | | Grade | SH725 | SH725 | T9215 | T9215 |
| | Breaker Shape | 01 | JS | PS | PM | | Breaker Shape | 01 | JS | PS | PM |
| | | | | | | | | | | | |
| N | Application | Precision finishing | Medium cutting | | | | | | | | |
| | Grade | DX120 | KS05F | | | | | | | | |
| | Breaker Shape | T-DIA | with rake AL | | | | | | | | |
| | | | | | | | | | | | |

STREAMJETBAR

A/E-SDUCR/L

Screw-on boring bars, for positive 55° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f ₂ | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|----------------|------|------|------|-------------|---------|
| A10K-SDUCR/L07-D130 | Steel | 13 | 10 | 7 | 125 | 20 | 9 | 2 | 0 | -10 | 0.4 | DC**0702... | 1.2 |
| A12M-SDUCR/L07-D160 | Steel | 16 | 12 | 9.3 | 150 | 24 | 11 | 3.3 | 0 | -6 | 0.4 | DC**0702... | 1.2 |
| A16Q-SDUCR/L07-D200 | Steel | 20 | 16 | 11.3 | 180 | 32 | 15 | 3.3 | 0 | -5 | 0.4 | DC**0702... | 1.2 |
| E10H-SDUCR07-D130 | Carbide | 13 | 10 | 7 | 100 | 25 | 9 | 1.9 | 5 | -3.5 | 0.4 | DC**0702... | 1.2 |
| E10M-SDUCR/L07-D130 | Carbide | 13 | 10 | 7 | 150 | 25 | 9 | 2 | 0 | -10 | 0.4 | DC**0702... | 1.2 |
| E12J-SDUCR07-D160 | Carbide | 16 | 12 | 9.3 | 110 | 27 | 11 | 3.2 | 0 | -6 | 0.4 | DC**0702... | 1.2 |
| E12Q-SDUCR/L07-D160 | Carbide | 16 | 12 | 9.3 | 180 | 27 | 11 | 3.3 | 0 | -6 | 0.4 | DC**0702... | 1.2 |

*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SDUCR** type), and the left hand insert (L) is used for the right hand toolholders (SDUCR** type).

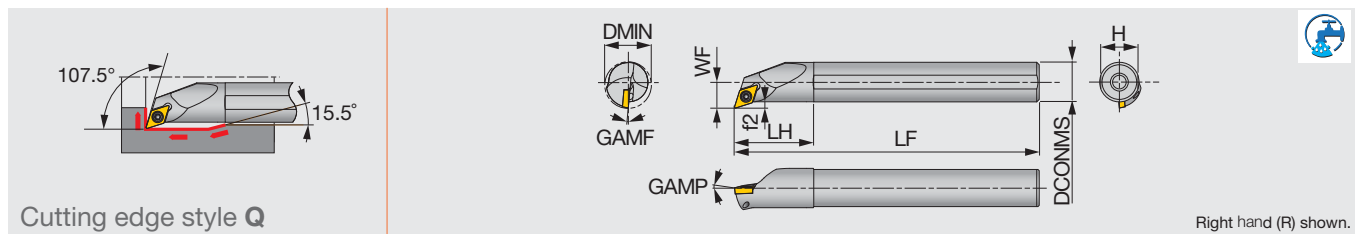
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A1**-SDUCR/L07-D1*0 | CSTB-2.5S | T-8F |
| A16Q-SDUCR/L07-D200 | CSTB-2.5 | T-8F |
| E1**-SDUCR/L07-D1*0 | CSTB-2.5S | T-8F |

STREAMJETBAR

A/E-SDQCR/L

Screw-on boring bars, for positive 55° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f ₂ | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|----------------|------|------|------|-------------|---------|
| A10K-SDQCR/L07-D130 | Steel | 13 | 10 | 7.6 | 125 | 20 | 9 | 2.6 | 0 | -8 | 0.4 | DC**0702... | 1.2 |
| A12M-SDQCR/L07-D160 | Steel | 16 | 12 | 8.6 | 150 | 24 | 11 | 2.6 | 0 | -6 | 0.4 | DC**0702... | 1.2 |
| A16Q-SDQCR/L07-D200 | Steel | 20 | 16 | 10.6 | 180 | 32 | 15 | 2.6 | 0 | -5 | 0.4 | DC**0702... | 1.2 |
| E10H-SDQCR07-D130 | Carbide | 13 | 10 | 7.6 | 100 | 25 | 9 | 2.5 | 0 | -8 | 0.4 | DC**0702... | 1.2 |
| E10M-SDQCR/L07-D130 | Carbide | 13 | 10 | 7.6 | 150 | 25 | 9 | 2.6 | 0 | -8 | 0.4 | DC**0702... | 1.2 |
| E12J-SDQCR07-D160 | Carbide | 16 | 12 | 8.6 | 110 | 27 | 11 | 2.5 | 0 | -6 | 0.4 | DC**0702... | 1.2 |
| E12Q-SDQCR/L07-D160 | Carbide | 16 | 12 | 8.6 | 180 | 27 | 11 | 2.6 | 0 | -6 | 0.4 | DC**0702... | 1.2 |

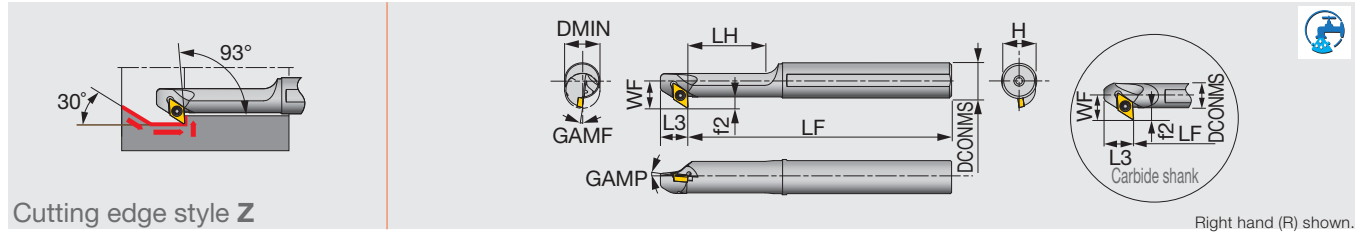
*Torque: Recommended clamping torque (N-m) **RE: Standard corner radius

When using a right or left hand insert, the right hand insert (R) is used for the left hand toolholders (SDQCR** type), and the left hand insert (L) is used for the right hand toolholders (SDQCR** type).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A1**-SDQCR/L07-D**0 | CSTB-2.5S | T-8F |
| E1**-SDQCR/L07-D**0 | CSTB-2.5S | T-8F |

Reference pages: A/E-SDUCR/L, A/E-SDQCR/L: Insert → 2-15 -, CBN → 2-63 -, PCD → 2-70, Sleeve → 4-31



| Designation | Material | DMIN | DCONMS | WF | LF | LH | L3 | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|------|----|-----|------|------|------|-------------|---------|
| A12M-SDZCR/L07-D140 | Steel | 14 | 12 | 10.5 | 150 | 30 | 12.5 | 11 | 4.5 | 0° | -9° | 0.4 | DC**0702... | 1.2 |
| A16Q-SDZCR/L07-D160 | Steel | 16 | 16 | 12.5 | 180 | 35 | 12.5 | 15 | 4.5 | 0° | -8° | 0.4 | DC**0702... | 1.2 |
| E12Q-SDZCR/L07-D180 | Carbide | 18 | 12 | 10.5 | 180 | - | 12.5 | 11 | 4.5 | 0° | -8° | 0.4 | DC**0702... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**RE : Standard corner radius

Use right-hand toolholders (SDZCR**) with right-hand inserts (R); and left-hand toolholders (SDZCL**) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A1**-SDZCR/L07-D1*0 | CSTB-2.5 | T-8F |
| E1**-SDZCR/L07-D**0 | CSTB-2.5 | T-8F |

INSERT SELECTION

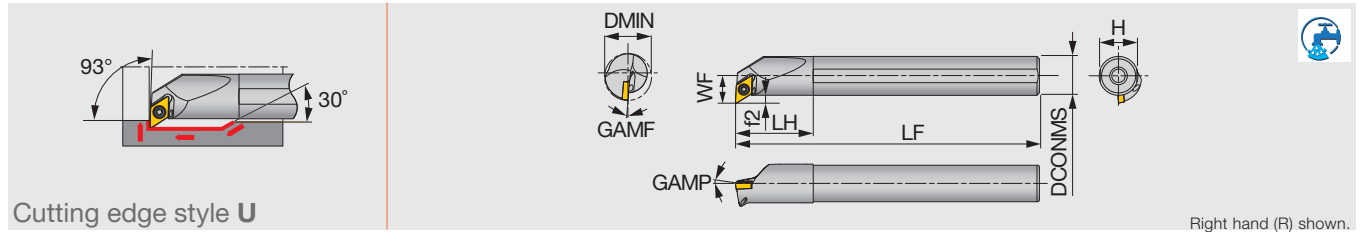
| | | | | | |
|----------|---------------|---------------------|-----------------------------|-----------------------------|----------------|
| P | Application | Precision finishing | Finishing | Finishing to medium cutting | Medium cutting |
| | Grade | SH725 | SH725 | T9215 | T9215 |
| | Breaker Shape | | | | |
| | | 01 | JS | PS | PM |
| N | Application | Precision finishing | Medium cutting | | |
| | Grade | DX120 | KS05F | | |
| | Breaker Shape | | | | |
| | | T-DIA with rake | AL | | |
| S | Application | Precision finishing | Finishing to medium cutting | | |
| | Grade | BX470 | AH8005 | | |
| | Breaker Shape | | | | |
| | | T-CBN | PS | | |
| H | Application | Precision finishing | Finishing | | |
| | Grade | BXM10 | BXM20 | | |
| | Breaker Shape | | | | |
| | | T-CBN | T-CBN | | |

Reference pages: A/E-SDZCR/L: Insert → 2-15 -, CBN → 2-63 -, PCD → 2-70, Sleeve → 4-31

STREAMJETBAR

A/E-SDUPR/L

Screw-on boring bar, for positive 55° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|---------------------|------|--------|------|-----|----|----|-----|------|------|------|-------------|---------|
| A12M-SDUPR07-D150-P | Special alloy steel | 15 | 12 | 8.3 | 150 | 24 | 11 | 2.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| A12M-SDUPL07-D150-P | Special alloy steel | 15 | 12 | 8.3 | 150 | 24 | 11 | 2.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| A12M-SDUPR07-D180-P | Special alloy steel | 18 | 12 | 10.3 | 150 | 24 | 11 | 4.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| A12M-SDUPL07-D180-P | Special alloy steel | 18 | 12 | 10.3 | 150 | 24 | 11 | 4.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| A16Q-SDUPR07-D220-P | Special alloy steel | 22 | 16 | 12.3 | 180 | 32 | 15 | 4.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| A16Q-SDUPL07-D220-P | Special alloy steel | 22 | 16 | 12.3 | 180 | 32 | 15 | 4.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| E12Q-SDUPR07-D150 | Carbide | 15 | 12 | 8.3 | 180 | 27 | 11 | 2.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| E12Q-SDUPL07-D150 | Carbide | 15 | 12 | 8.3 | 180 | 27 | 11 | 2.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| E12Q-SDUPR07-D180 | Carbide | 18 | 12 | 10.3 | 180 | 27 | 11 | 4.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |
| E12Q-SDUPL07-D180 | Carbide | 18 | 12 | 10.3 | 180 | 27 | 11 | 4.3 | 5 | 0 | 0.4 | DPMT0702... | 1.2 |

SPARE PARTS

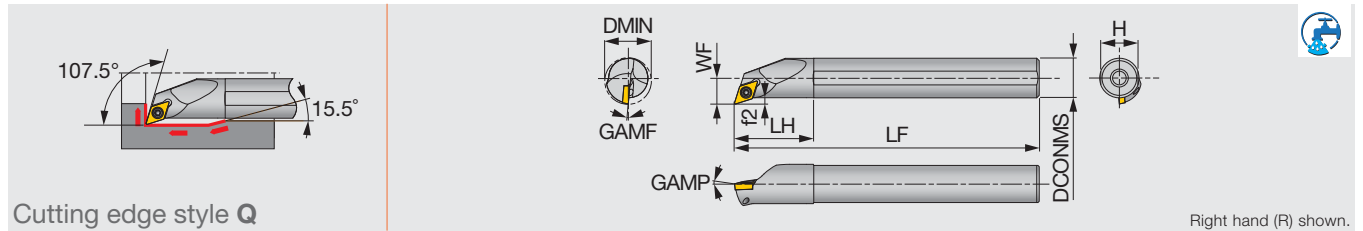
| Designation | Clamping screw | Wrench |
|----------------------|----------------|--------|
| A**-SDUPR/L07-D**0-P | CSTB-2.5S | T-8F |
| E**-SDUPR/L07-D**0 | CSTB-2.5S | T-8F |

*Torque: Recommended clamping torque (N·m) **RE : Standard corner radius
Use right-hand toolholders (SCLPR**) with left-hand inserts (L); and left-hand toolholders (SCLPL**) with right-hand inserts (R).

STREAMJETBAR

A/E-SDQPR/L

Screw-on boring bar, for positive 55° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|---------------------|------|--------|------|-----|----|----|-----|------|------|------|-------------|---------|
| A12M-SDQPR07-D150-P | Special alloy steel | 15 | 12 | 8.3 | 150 | 24 | 11 | 2.3 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| A12M-SDQPL07-D150-P | Special alloy steel | 15 | 12 | 8.3 | 150 | 24 | 11 | 2.3 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| A12M-SDQPR07-D180-P | Special alloy steel | 18 | 12 | 9.6 | 150 | 24 | 11 | 3.6 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| A12M-SDQPL07-D180-P | Special alloy steel | 18 | 12 | 9.6 | 150 | 24 | 11 | 3.6 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| A16Q-SDQPR07-D220-P | Special alloy steel | 22 | 16 | 11.6 | 180 | 32 | 15 | 3.6 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| A16Q-SDQPL07-D220-P | Special alloy steel | 22 | 16 | 11.6 | 180 | 32 | 15 | 3.6 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| E12Q-SDQPR07-D150 | Carbide | 15 | 12 | 8.3 | 180 | 27 | 11 | 2.3 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| E12Q-SDQPL07-D150 | Carbide | 15 | 12 | 8.3 | 180 | 27 | 11 | 2.3 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| E12Q-SDQPR07-D180 | Carbide | 18 | 12 | 9.6 | 180 | 27 | 11 | 3.6 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |
| E12Q-SDQPL07-D180 | Carbide | 18 | 12 | 9.6 | 180 | 27 | 11 | 3.6 | 5 | 0 | 0.40 | DPMT0702... | 1.2 |

SPARE PARTS

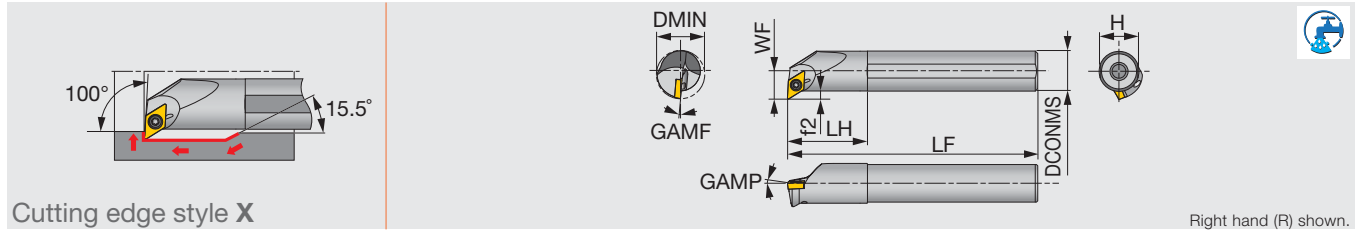
| Designation | Clamping screw | Wrench |
|----------------------|----------------|--------|
| A**-SDQPR/L07-D**0-P | CSTB-2.5S | T-8F |
| E**-SDQPR/L07-D**0 | CSTB-2.5S | T-8F |

*Torque: Recommended clamping torque (N·m) **RE : Standard corner radius
Use right-hand toolholders (SDQCR**) with left-hand inserts (L); and left-hand toolholders (SDQCL**) with right-hand inserts (R).

INSERT SELECTION

| Application | Finishing to medium cutting | | Application | Finishing to medium cutting | |
|---------------|-----------------------------|--------|-------------|-----------------------------|----|
| | Grade | PS | | Grade | PS |
| Breaker Shape | T9225 | NS9530 | AH8015 | PS | |

Reference pages: A/E-SDUPR/L, A/E-SDQPR/L:
Insert → 2-19
Sleeve → 4-30, 4-31



Cutting edge style X

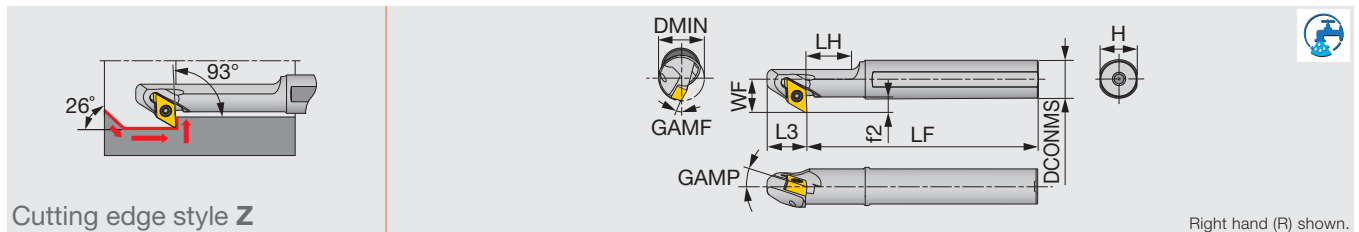
Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|-----|------|------|------|------------------|---------|
| A10K-SDXXR/L07-D130 | Steel | 13 | 10 | 7.6 | 125 | 20 | 9 | 2.6 | -14° | -16° | 0.4 | DXGU0703**L/R... | 0.9 |
| A12M-SDXXR/L07-D160 | Steel | 16 | 12 | 8.6 | 150 | 24 | 11 | 2.6 | -14° | -14° | 0.4 | DXGU0703**L/R... | 0.9 |
| A16Q-SDXXR/L07-D200 | Steel | 20 | 16 | 10.6 | 180 | 32 | 15 | 2.6 | -13° | -13° | 0.4 | DXGU0703**L/R... | 0.9 |
| E10M-SDXXR/L07-D130 | Carbide | 13 | 10 | 7.6 | 150 | 25 | 9 | 2.6 | -14° | -16° | 0.4 | DXGU0703**L/R... | 0.9 |
| E12Q-SDXXR/L07-D160 | Carbide | 16 | 12 | 8.6 | 180 | 27 | 11 | 2.6 | -14° | -14° | 0.4 | DXGU0703**L/R... | 0.9 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------|----------------|--------|
| A/E**-SDXXR/L... | SR34-514 | T-7F |

*Torque: Recommended clamping torque (N-m) **RE : Standard corner radius
Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R)



Cutting edge style Z

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | L3 | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|--------------------|----------|------|--------|------|-----|----|----|----|-----|------|--------|------|------------------|---------|
| A12M-SDZXRL07-D140 | Steel | 14 | 12 | 10.5 | 150 | 30 | 13 | 11 | 4.5 | -10° | -14° | 0.4 | DXGU0703**R/L... | 0.9 |
| A16Q-SDZXRL07-D160 | Steel | 16 | 16 | 12.5 | 180 | 35 | 13 | 15 | 4.5 | -10° | -12.5° | 0.4 | DXGU0703**R/L... | 0.9 |
| E12Q-SDZXRL07-D180 | Carbide | 18 | 12 | 10.5 | 180 | - | 13 | 11 | 4.5 | -11° | -11° | 0.4 | DXGU0703**R/L... | 0.9 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-----------------|----------------|--------|
| A/E**-SDZXRL... | SR34-514 | T-7F |

*Torque: Recommended clamping torque (N-m) **RE : Standard corner radius
Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

INSERT SELECTION

Swiss lathes

| Application | Finishing | | Medium cutting | |
|---------------|-----------|-------|----------------|-------|
| | Grade | Grade | Grade | Grade |
| | SH725 | AH725 | SH725 | AH725 |
| Breaker Shape | JSS | JTS | JSS | JTS |

Small CNC lathes

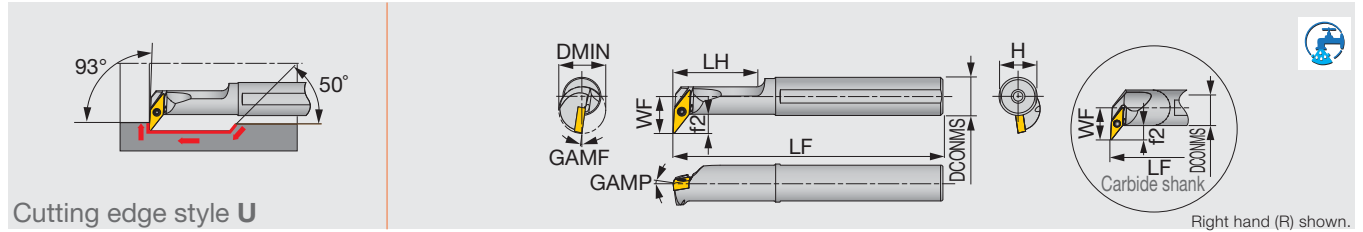
| Application | Finishing | | Medium cutting | |
|---------------|-----------|-------|----------------|--------|
| | Grade | Grade | Grade | Grade |
| | AH725 | AH725 | AH8015 | AH8015 |
| Breaker Shape | SS | TS | SS | TS |

Reference pages: A/E-SDXXR/L, A/E-SDZXRL: Insert → 2-20
Standard cutting conditions → 4-32, Sleeve → 4-31

STREAMJETBAR

A/E-SVUBR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style U

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|----|------|------|------|-------------|---------|
| A16Q-SVUBR/L11-D200 | Steel | 20 | 16 | 15.5 | 180 | 35 | 15 | 8 | 0° | -8° | 0.4 | VB**1103... | 1.2 |

SPARE PARTS

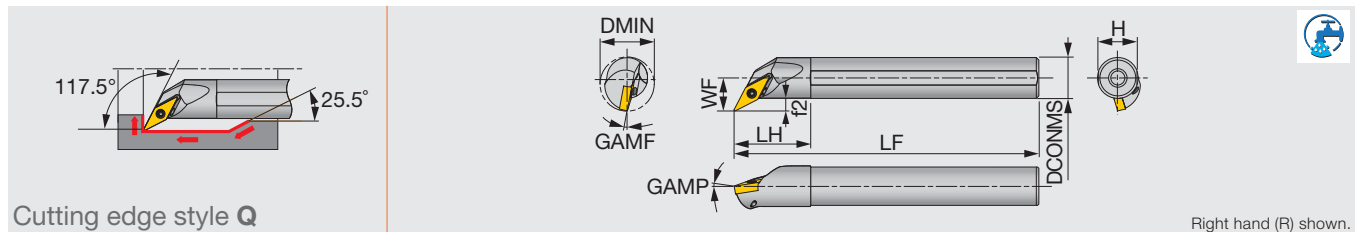
| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A16Q-SVUBR/L11-D200 | CSTB-2.5 | T-8F |

*Torque: Recommended clamping torque (N-m) **RE : Standard corner radius
Use right-hand toolholders (SVUBR**) with left-hand inserts (L); and left-hand toolholders (SVUBL**) with right-hand inserts (R).

STREAMJETBAR

A/E-SVQBR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style Q

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|-----|------|------|------|-------------|---------|
| A12M-SVQBR/L11-D170 | Steel | 17 | 12 | 10.5 | 150 | 24 | 11 | 4.5 | -5° | -10° | 0.4 | VB**1103... | 1.2 |
| A16Q-SVQBR/L11-D215 | Steel | 21.5 | 16 | 13 | 180 | 30 | 15 | 5 | -5° | -8° | 0.4 | VB**1103... | 1.2 |
| E12Q-SVQBR/L11-D170 | Carbide | 17 | 12 | 10.5 | 180 | 27 | 11 | 4.5 | -5° | -10° | 0.4 | VB**1103... | 1.2 |

SPARE PARTS

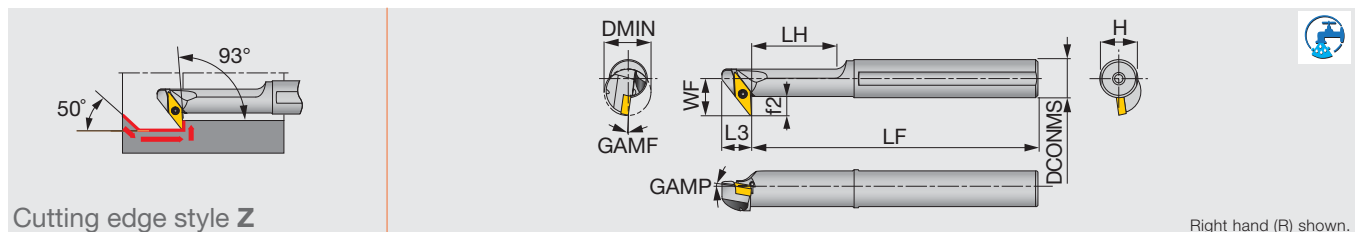
| Designation | Clamping screw | Wrench |
|--------------------|----------------|--------|
| A**-SVQBR/L11-D... | CSTB-2.5 | T-8F |
| E**-SVQBR/L11-D... | CSTB-2.5 | T-8F |

*Torque: Recommended clamping torque (N-m) **RE : Standard corner radius
Use right-hand toolholders (SVQBR**) with left-hand inserts (L); and left-hand toolholders (SVQBL**) with right-hand inserts (R).

STREAMJETBAR

A-SVZBR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style Z

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | L3 | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|------|----|----|------|------|------|-------------|---------|
| A16Q-SVZBR/L11-D200 | Steel | 20 | 16 | 15.5 | 180 | 35 | 12.5 | 15 | 8 | 0° | -8° | 0.4 | VB**1103... | 1.2 |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A16Q-SVZBR/L11-D200 | CSTB-2.5 | T-8F |

*Torque: Recommended clamping torque (N-m) **RE : Standard corner radius
Use right-hand toolholders (SVZBR**) with right-hand inserts (R); and left-hand toolholders (SVZBL**) with left-hand inserts (L).

INSERT SELECTION

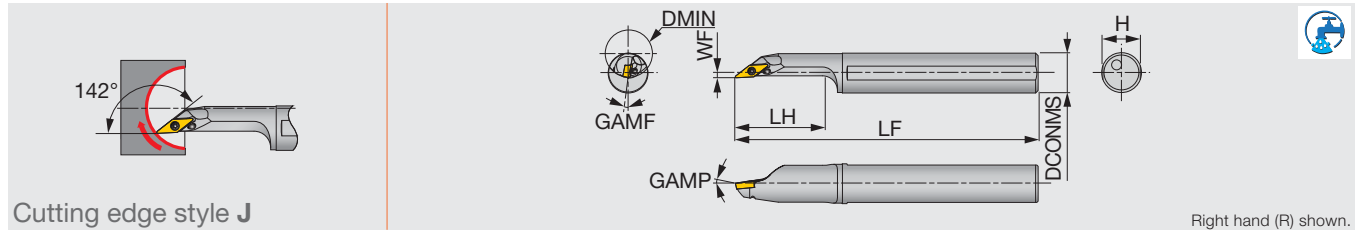
| Application | Finishing | | Application | Finishing to medium cutting | |
|---------------|-----------|-------|-------------|-----------------------------|-------|
| | Grade | Grade | | Grade | Grade |
| Breaker Shape | JS | PS | JS | PS | |

Reference pages: A/E-SVUBR/L, A/E-SVQBR/L, A/E-SVZBR/L: Insert → 2-31 -, CBN → 2-67, Sleeve → 4-31

STREAMJETBAR

A-SVJCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style J

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|----|-----|----|----|------|------|------|-------------|---------|
| A12M-SVJCR/L08-D160 | Steel | 16 | 12 | 2 | 150 | 28 | 11 | -5° | -5° | 0.4 | VC**0802... | 0.6 |
| A16Q-SVJCR/L08-D200 | Steel | 20 | 16 | 2 | 180 | 35 | 15 | -5° | -5° | 0.4 | VC**0802... | 0.6 |

*Torque: Recommended clamping torque (N·m)

**RE : Standard corner radius

Use right-hand toolholders (SVJCR**) with left-hand inserts (L); and left-hand toolholders (SVJCL**) with right-hand inserts (R).

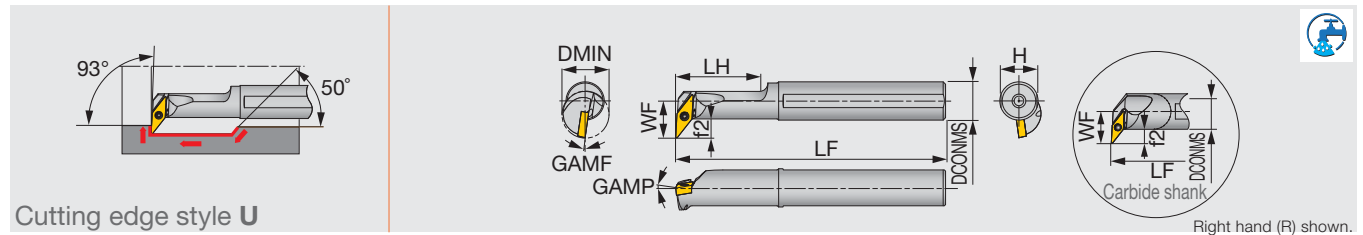
SPARE PARTS

| Designation | Clamping screw | Wrench |
|------------------|----------------|--------|
| A**-SVJC*08-D... | CSTB-2L | T-6F |

STREAMJETBAR

A/E-SVUCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style U

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|----|-----|----|----|-----|------|------|------|-------------|---------|
| A12M-SVUCR/L08-D160 | Steel | 16 | 12 | 11 | 150 | 30 | 11 | 5.5 | 0° | -8° | 0.4 | VC**0802... | 0.6 |

*Torque: Recommended clamping torque (N·m)

**RE : Standard corner radius

Use right-hand toolholders (SVUCR**) with left-hand inserts (L); and left-hand toolholders (SVUCL**) with right-hand inserts (R).

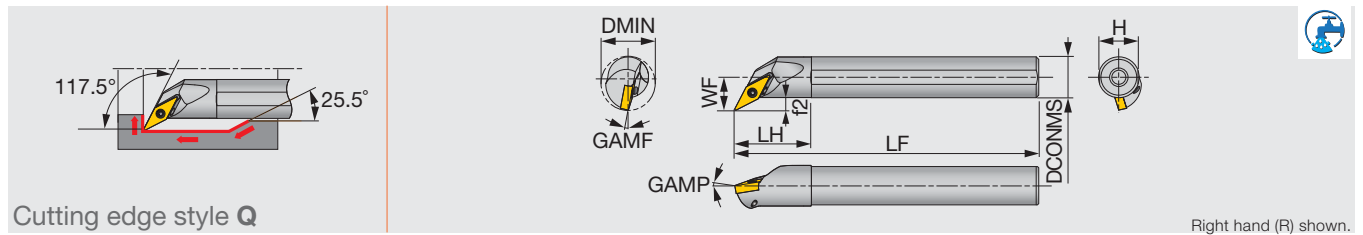
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A12M-SVUCR/L08-D160 | CSTB-2L | T-6F |

STREAMJETBAR

A/E-SVQCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style Q

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|----|-----|----|----|-----|------|------|------|-------------|---------|
| A10K-SVQCR/L08-D135 | Steel | 13.5 | 10 | 8 | 125 | 20 | 9 | 3 | -5° | -8° | 0.4 | VC**0802... | 0.6 |
| A16Q-SVQCR/L11-D215 | Steel | 21.5 | 16 | 13 | 180 | 30 | 15 | 4.9 | -5° | -8° | 0.4 | VC**1103... | 1.2 |
| E10M-SVQCR/L08-D135 | Carbide | 13.5 | 10 | 8 | 150 | 25 | 9 | 3 | -5° | -8° | 0.4 | VC**0802... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (SVQCR**) with left-hand inserts (L); and left-hand toolholders (SVQCL**) with right-hand inserts (R).

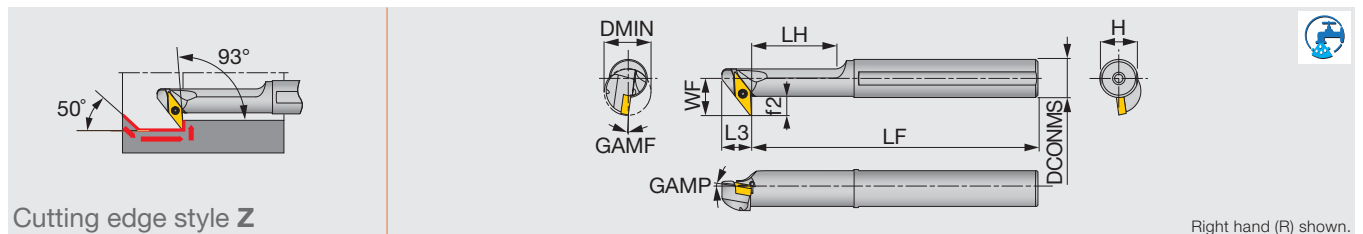
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A10K-SVQCR/L08-D135 | CSTB-2L | T-6F |
| A16Q-SVQCR/L11-D215 | CSTB-2.5 | T-8F |
| E10M-SVQCR/L08-D135 | CSTB-2L | T-6F |

STREAMJETBAR

A-SVZCR/L

Screw-on boring bar, for positive 35° rhombic inserts



Cutting edge style Z

Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | L3 | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|----|-----|----|----|----|-----|------|------|------|-------------|---------|
| A12M-SVZCR/L08-D160 | Steel | 16 | 12 | 11 | 150 | 30 | 10 | 11 | 5.5 | 0° | -8° | 0.4 | VC**0802... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

Use right-hand toolholders (SVZCR**) with right-hand inserts (R); and left-hand toolholders (SVZCL**) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A12M-SVZCR/L08-D160 | CSTB-2L | T-6F |

INSERT SELECTION

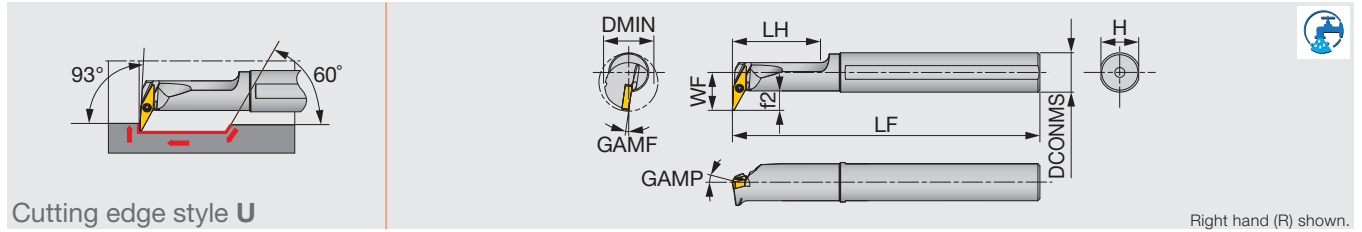
| | | | | | | | | | |
|----------|---------------|-----------------------------|----------|---------------|-----------------------------|----------|---------------|---------------------|----------------|
| P | Application | Finishing to medium cutting | M | Application | Finishing to medium cutting | N | Application | Precision finishing | Medium cutting |
| | Grade | T9215 | | Grade | T9215 | | Grade | DX120 | KS05F |
| | Breaker Shape | | | Breaker Shape | | | Breaker Shape | | |
| S | Application | Finishing to medium cutting | H | Application | Precision finishing | | Application | Finishing | |
| | Grade | AH8005 | | Grade | BXM10 | | BXM20 | Grade | T-CBN |
| | Breaker Shape | | | Breaker Shape | | | Breaker Shape | | |

Reference pages: A/E-SVQCR/L, A/E-SVZCR/L: Insert → 2-33, CBN → 2-68, Sleeve → 4-31

Y-PRO SERIES

A/E-SYUBR/L

Screw-on boring bar, for positive 25° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|-----|------|------|------|-------------|---------|
| A16Q-SYUBR/L11-D200 | Steel | 20 | 16 | 15.5 | 180 | 35 | 15 | 8 | 0° | -8° | 0.4 | YW**11T2... | 0.6 |
| E12Q-SYUBR/L11-D200 | Carbide | 20 | 12 | 13.5 | 180 | 27 | 11 | 7.5 | 0° | -8° | 0.4 | YW**11T2... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

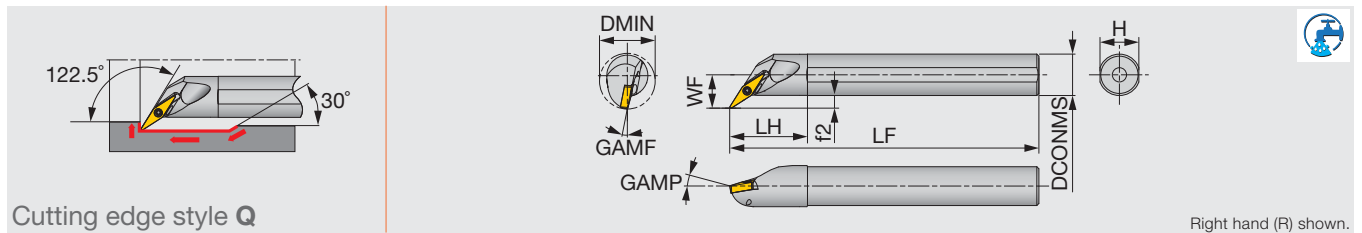
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| A16Q-SYUBR/L11-D200 | CSTB-2L | T-6F |
| E**SYUBR/L11-D... | CSTB-2L | T-6F |

Y-PRO SERIES

A/E-SYQBR/L

Screw-on boring bar, for positive 25° rhombic inserts



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | f2 | GAMP | GAMF | RE** | Insert | Torque* |
|---------------------|----------|------|--------|------|-----|----|----|-----|------|------|------|-------------|---------|
| A12M-SYQBR/L11-D170 | Steel | 17 | 12 | 10.5 | 150 | 24 | 11 | 4.5 | -5° | -10° | 0.4 | YW**11T2... | 0.6 |
| A16Q-SYQBR/L11-D215 | Steel | 21.5 | 16 | 13 | 180 | 30 | 15 | 5 | -5° | -8° | 0.4 | YW**11T2... | 0.6 |
| E12Q-SYQBR/L11-D170 | Carbide | 17 | 12 | 10.5 | 180 | 27 | 11 | 4.5 | -5° | -10° | 0.4 | YW**11T2... | 0.6 |

*Torque: Recommended clamping torque (N-m)

**RE : Standard corner radius

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------------|----------------|--------|
| A**SYQBR/L11-D... | CSTB-2L | T-6F |
| E**SYQBR/L11-D... | CSTB-2L | T-6F |

INSERT SELECTION

| | | |
|----------|---------------|-----------------------------|
| P | Application | Finishing to medium cutting |
| | Grade | T9225 |
| | Breaker Shape | ZM |



Reference pages: A/E-SYUBR/L, A/E-SYQBR/L: Insert → 2-38, Sleeve → 4-31

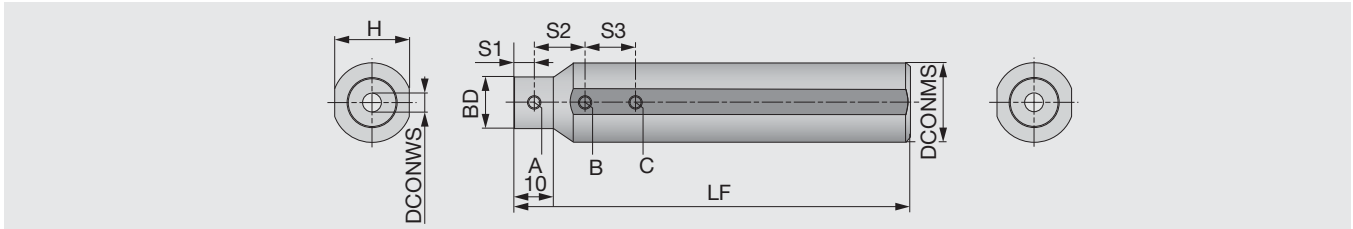
Grade
1
Insert
2
Ext. Toolholder
3
Int. Toolholder
4
Threading
5
Grooving
6
Endmill
7
Drilling Tool
8
Technical Reference
9

Technical Guide

STREAMJETBAR

BLM sleeve

Round shank sleeve for StreamJetBar-Mini series



| Designation | DCONMS | DCONWS | BD | LF | H | S1 | S2 | S3 |
|-------------|--------|--------|----|-----|----|----|----|----|
| BLM159-04 | 15.875 | 4 | 15 | 100 | 15 | 5 | 15 | 15 |
| BLM159-05 | 15.875 | 5 | 15 | 100 | 15 | 5 | 15 | 15 |
| BLM159-06 | 15.875 | 6 | 15 | 100 | 15 | 5 | 20 | 20 |
| BLM159-07 | 15.875 | 7 | 15 | 100 | 15 | 5 | 20 | 20 |
| BLM16-04 | 16 | 4 | 15 | 100 | 15 | 5 | 15 | 15 |
| BLM16-05 | 16 | 5 | 15 | 100 | 15 | 5 | 15 | 15 |
| BLM16-06 | 16 | 6 | 15 | 100 | 15 | 5 | 20 | 20 |
| BLM16-07 | 16 | 7 | 15 | 100 | 15 | 5 | 20 | 20 |
| BLM19-04 | 19.05 | 4 | 18 | 100 | 18 | 5 | 15 | 15 |
| BLM19-05 | 19.05 | 5 | 18 | 100 | 18 | 5 | 15 | 15 |
| BLM19-06 | 19.05 | 6 | 18 | 100 | 18 | 5 | 20 | 20 |
| BLM19-07 | 19.05 | 7 | 18 | 100 | 18 | 5 | 20 | 20 |
| BLM20-04 | 20 | 4 | 13 | 100 | 19 | 5 | 15 | 15 |
| BLM20-05 | 20 | 5 | 14 | 100 | 19 | 5 | 15 | 15 |
| BLM20-06 | 20 | 6 | 15 | 100 | 19 | 5 | 20 | 20 |
| BLM20-07 | 20 | 7 | 16 | 100 | 19 | 5 | 20 | 20 |
| BLM22-04 | 22 | 4 | 13 | 125 | 21 | 5 | 15 | 15 |
| BLM22-05 | 22 | 5 | 14 | 125 | 21 | 5 | 15 | 15 |
| BLM22-06 | 22 | 6 | 15 | 125 | 21 | 5 | 20 | 20 |
| BLM22-07 | 22 | 7 | 16 | 125 | 21 | 5 | 20 | 20 |
| BLM25-04 | 25 | 4 | 13 | 125 | 24 | 5 | 15 | 15 |
| BLM25-05 | 25 | 5 | 14 | 125 | 24 | 5 | 15 | 15 |
| BLM25-06 | 25 | 6 | 15 | 125 | 24 | 5 | 20 | 20 |
| BLM25-07 | 25 | 7 | 16 | 125 | 24 | 5 | 20 | 20 |
| BLM254-04 | 25.4 | 4 | 13 | 125 | 24 | 5 | 15 | 15 |
| BLM254-05 | 25.4 | 5 | 14 | 125 | 24 | 5 | 15 | 15 |
| BLM254-06 | 25.4 | 6 | 15 | 125 | 24 | 5 | 20 | 20 |
| BLM254-07 | 25.4 | 7 | 16 | 125 | 24 | 5 | 20 | 20 |

SPARE PARTS

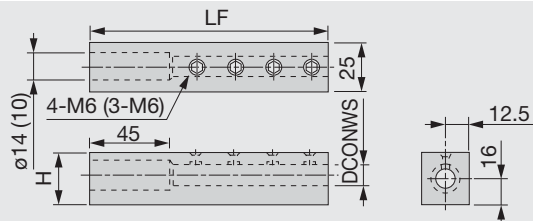


| Designation | Clamping screw A | Clamping screw B, C | Wrench | Seal cap* (inner screw) |
|-------------------|------------------|---------------------|--------|-------------------------|
| BLM159, 16... | SSH4-4 | SSH4-4 | P-2 | CA-16(M6) |
| BLM19-04 | SSH4-4 | SSH4-6 | P-2 | CA-16(M6) |
| BLM19-05, 06, 07 | SSH4-4 | SSH4-4 | P-2 | CA-16(M6) |
| BLM20-04, 05 | SSH4-4 | SSH4-6 | P-2 | CA-16(M6) |
| BLM20-06, 07 | SSH4-4 | SSH4-4 | P-2 | CA-16(M6) |
| BLM22-... | SSH4-4 | SSH4-6 | P-2 | CA-16(M6) |
| BLM25-04, 05 | SSH4-4 | SSH4-8 | P-2 | CA-16(M6) |
| BLM25-06 | SSH4-4 | SSH4-8 | P-2 | CA-16(M6) |
| BLM25-07 | SSH4-4 | SSH4-6 | P-2 | CA-16(M6) |
| BLM254-04, 05, 06 | SSH4-4 | SSH4-8 | P-2 | CA-16(M6) |
| BLM254-07 | SSH4-4 | SSH4-6 | P-2 | CA-16(M6) |

*Optional

BLS sleeve

Square shank sleeve for boring bars (regular length)



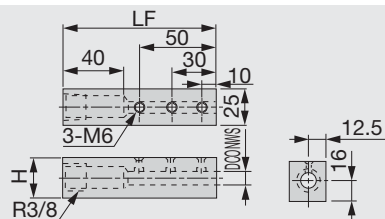
| Designation | DCONWS | LF | H |
|-------------|--------|-----|----|
| BLS16-08 | 8 | 125 | 28 |
| BLS16-10 | 10 | 125 | 28 |
| BLS16-12 | 12 | 125 | 28 |

SPARE PARTS

| Designation | Wrench |
|-------------|--------|
| BLS16-... | P-3 |

BLS-C sleeve

Square shank sleeve for boring bars (short type)



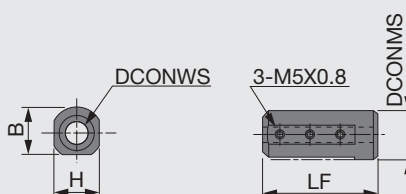
| Designation | DCONWS | LF | H |
|-------------|--------|-----|----|
| BLS16-08C | 8 | 100 | 28 |
| BLS16-10C | 10 | 100 | 28 |
| BLS16-12C | 12 | 100 | 28 |

SPARE PARTS

| Designation | Wrench |
|-------------|--------|
| BLS16-**C | P-3 |

BLM sleeve

Round shank sleeve for boring bars



| Designation | DCONWS | DCONMS | LF | H | B |
|-------------|--------|--------|-----|----|----|
| BLM19-08 | 8 | 19.05 | 100 | 18 | 18 |
| BLM20-08 | 8 | 20 | 100 | 18 | 19 |
| BLM22-08 | 8 | 22 | 125 | 21 | 21 |
| BLM254-08 | 8 | 25.4 | 125 | 24 | 24 |
| BLM25-08C | 8 | 25 | 55 | 23 | 24 |
| BLM25-10C | 10 | 25 | 55 | 23 | 24 |
| BLM25-12C | 12 | 25 | 55 | 23 | 24 |

SPARE PARTS

| Designation | Wrench |
|-------------|--------|
| BLM... | P-2.5 |

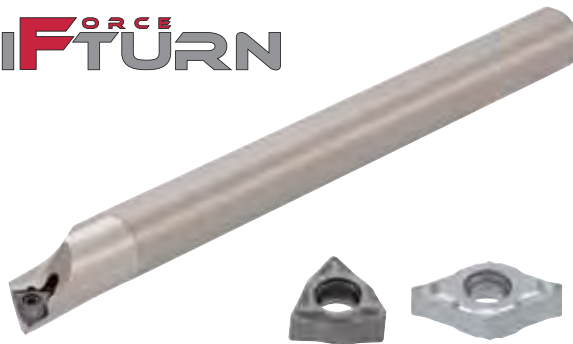
MINIFORCE

STANDARD CUTTING CONDITIONS

Internal turning

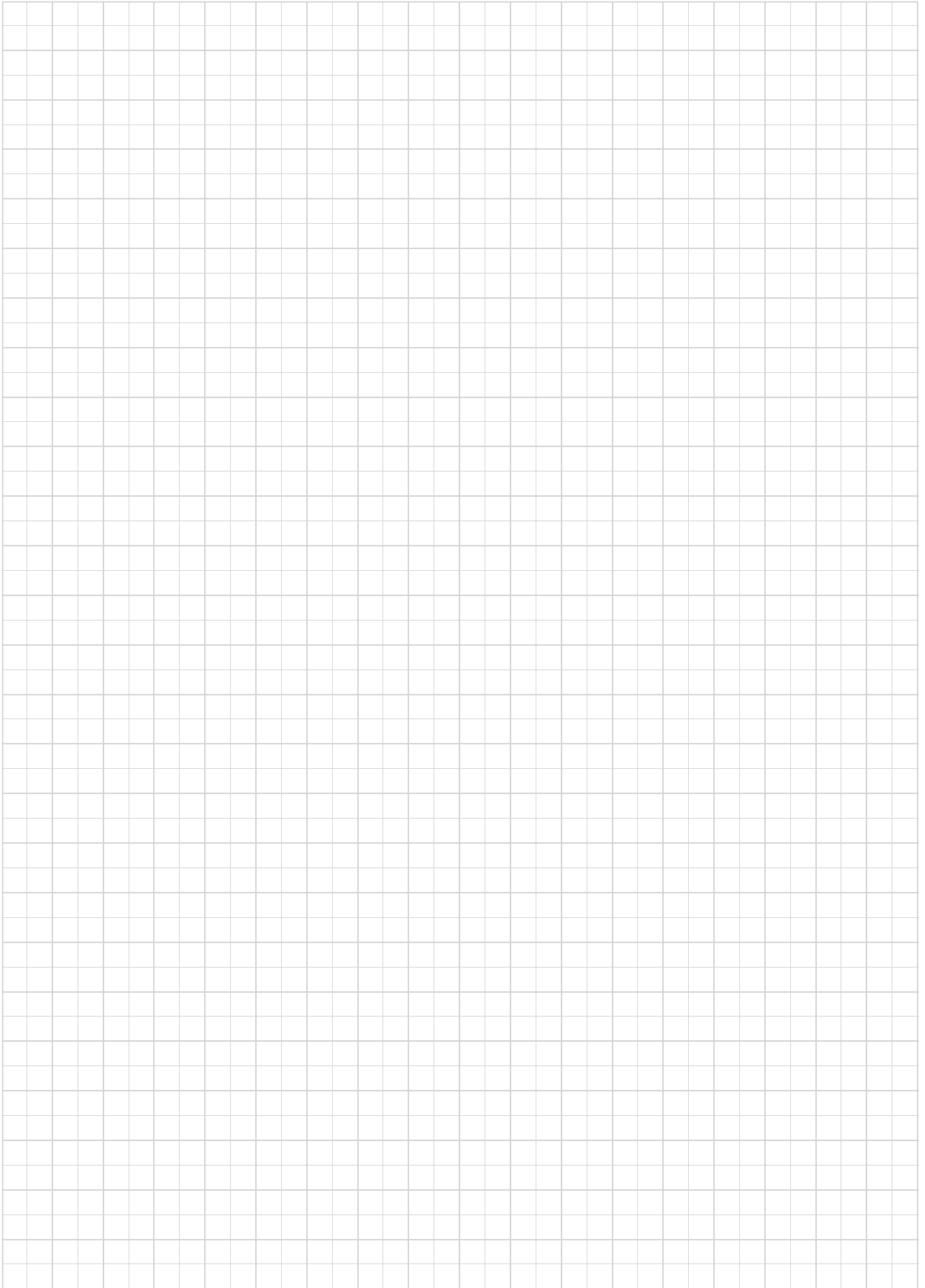
| ISO | Workpiece material | Grade | | | Cutting speed Vc (m/min) | Depth of cut ap (mm) | Feed f (mm/rev) | |
|---|---|---|--------------------|----------------------------------|-----------------------------|-------------------------|--------------------|------------|
| | | First Choice | For surface finish | For wear resistance (High speed) | | | | |
| P | Low carbon steel SS400, S25C, etc. E275A, C25, etc. | AH725 | - | - | 50 - 180 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | - | AH8015 | 50 - 200 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | NS9530 | - | 80 - 250 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | GT9530 | - | 80 - 300 | 0.3 - 2 | 0.08 - 0.3 | |
| | Carbon steel S45C, S55C, etc. C45, C55, etc. | AH725 | - | - | 50 - 180 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | - | AH8015 | 50 - 200 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | NS9530 | - | 80 - 250 | 0.3 - 2 | 0.08 - 0.3 | |
| | Low alloy steel SCM415, etc. 18CrMo4, etc. | - | GT9530 | - | 80 - 300 | 0.3 - 2 | 0.08 - 0.3 | |
| | | AH725 | - | - | 50 - 180 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | - | AH8015 | 50 - 200 | 0.3 - 2 | 0.08 - 0.3 | |
| | Alloy steel SCM440, SCr420, etc. 42CrMo4, 20Cr4, etc. | - | NS9530 | - | 80 - 250 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | GT9530 | - | 80 - 300 | 0.3 - 2 | 0.08 - 0.3 | |
| | | AH8015 | - | - | 50 - 150 | 0.3 - 2 | 0.08 - 0.3 | |
| | | - | - | AH8015 | 50 - 150 | 0.3 - 2 | 0.08 - 0.3 | |
| | M | Stainless steel (Austenitic) SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc. | AH8015 | - | - | 50 - 150 | 0.3 - 2 | 0.08 - 0.3 |
| | | Stainless steel (Martensitic and ferritic) SUS430, SUS416, etc. X6Cr17, X20Cr13, etc. | AH8015 | - | - | 50 - 150 | 0.3 - 2 | 0.08 - 0.3 |
| Stainless steel (Precipitation hardening) SUS630, etc. X5CrNiCuNb16-4, etc. | | AH8015 | - | - | 50 - 150 | 0.3 - 2 | 0.08 - 0.3 | |
| N | Non ferrous Metal Aluminum alloy, etc. | KS05F | - | - | 100 - 300 | 0.3 - 2 | 0.08 - 0.3 | |
| | Non ferrous Metal Copper Alloy, etc. | KS05F | - | - | 100 - 300 | 0.3 - 2 | 0.08 - 0.3 | |
| S | Heat-resistant alloys Titanium alloys, etc. | AH8015 | - | - | 20 - 80 | 0.3 - 2 | 0.08 - 0.3 | |
| | Heat-resistant alloys (Nickel-base alloys) | AH8015 | - | - | 20 - 80 | 0.3 - 2 | 0.08 - 0.3 | |

MINIFORCE



Reference pages: A/E-SWLXR/L → 4-18, A/E-SDXXR/L, A/E-SDZXR/L → 4-25

MEMO



Grade

1

Insert

2

Ext. Toolholder

3

Int. Toolholder

4

Threading

5

Grooving

6

Endmill

7

Drilling Tool

8

Technical Reference

9

5. Threading



Main products

Thread form

60° 5-4

M (Metric) 5-8

55° 5-10

UN (Unified) 5-11

W (Whitworth) 5-13

BSPT (R, PT) 5-14



TUNGTHREAD

Lay down insert, toolholder

Standard items cover a wide variety of threading inserts. Standard tool series with double-clamp system for excellent insert stability in machining API-standard threads.

5-7 - 5-14,
5-20 - 5-24



TETRAMCUT

Standard tool with 4 corners for threading on Swiss lathes. In small diameter threading using the center of the tool post on general NC lathes, interference with the center is less likely occur.

5-4,
5-15 - 5-17,
5-25



DUOJUST

Standard tool suitable for all types of threading on Swiss lathes. The incomplete thread part from the workpiece face to the thread groove can be the shortest thanks to the excellent accessibility to the workpiece face.

5-5, 5-17,
5-18, 5-26



J-SERIES

Tool series with 3-cornered inserts. Subselection for threading on Swiss lathes. Standard tool also suitable for radial Swiss lathes.

5-5, 5-6, 5-10,
5-19, 5-20

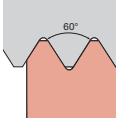
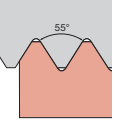
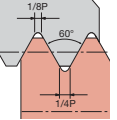
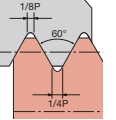
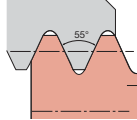
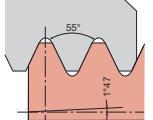
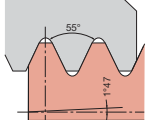
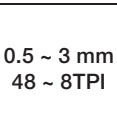
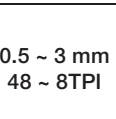
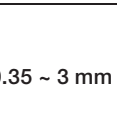
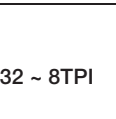
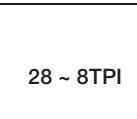
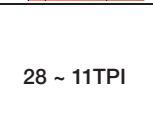
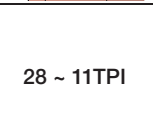












TINYMTURN

Internal threading tool suitable for the minimum machining diameter $\varnothing 4$. All tools have oil holes that can supply coolant from the cutting edge.

5-24, 5-26

Applicable tool for each external thread type

| Applicable tool for each external thread type | General purpose | | General purpose | | Pipe | | |
|---|---|---|---|---|---|---|---|
| Thread type | Partial-profile | | Full profile | | | | |
| | 60° | 55° | ISO metric | Unified | Whitworth | Parallel pipe thread | Taper pipe thread |
| | - | - | M | UNC, UNF UNEF | BSW, BSF W | G BSP, PF | R, PT, BSPT |
| Thread form |  |  |  |  |  |  |  |
| Tool type |  |  |  |  |  |  |  |
| ST type  5-20 | 0.5 ~ 3 mm 48 ~ 8TPI 5-7 | 0.5 ~ 3 mm 48 ~ 8TPI 5-10 | 0.35 ~ 3 mm 5-8 | 32 ~ 8TPI 5-11 | 28 ~ 8TPI 5-13 | 28 ~ 11TPI 5-14 | |
| TETRAMCUT STCR/L-18  5-15 | 0.4 ~ 3 mm 64 ~ 8TPI 5-4 | — | 0.5 ~ 1.5 mm 5-4 | — | — | — | — |
| TETRAMCUT JS-STCL18  5-17 | 0.4 ~ 3 mm 64 ~ 8TPI 5-4 | — | — | — | — | — | — |
| DUOJ CUT JSXXR/L  5-17 | 0.2 ~ 1.5 mm 127 ~ 16TPI 5-5 | — | — | — | — | — | — |
| DUOJ CUT JS-SXXL09  5-18 | 0.2 ~ 1.5 mm 127 ~ 16TPI 5-5 | — | — | — | — | — | — |
| JSTTR/L  5-19 | 0.5 ~ 1 mm 48 ~ 25TPI 5-5 | 0.5 ~ 1 mm 48 ~ 25TPI 5-10 | — | — | — | — | — |
| JS-TTL3  5-19 | 0.5 ~ 1 mm 48 ~ 25TPI 5-5 | 0.5 ~ 1 mm 48 ~ 25TPI 5-10 | — | — | — | — | — |
| JSXBR/L  5-20 | 0.5 ~ 1 mm 48 ~ 25TPI 5-6 | — | — | — | — | — | — |
| ST type  5-23 | 0.5 ~ 3 mm 48 ~ 8TPI 5-7 | 0.5 ~ 5 mm 48 ~ 8TPI 5-10 | 0.5 ~ 3 mm 5-8 | 32 ~ 8TPI 5-11 | 28 ~ 8TPI 5-13 | 19 ~ 11TPI 5-14 | — |
| TINYTURN  5-24 | 0.5 ~ 1.5 mm 48 ~ 16TPI 5-24 | — | — | — | — | — | — |



Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

1

2

3

4

5

6

7

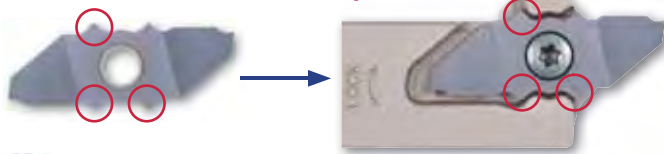
8

9

Unique clamping system for highly rigid clamping

The unused cutting edge is always protected due to the innovative clamping system. Even if the first cutting edge is chipped, the other unused cutting edge can be used because the insert is clamped in the center.

Insert is secured at 3 points



Excellent accessibility to the workpiece face

Utilizing various tools minimizes the incomplete thread part.



| | Type A | Type B | Type N |
|------------|---------|---------|---------|
| Right hand | $a > b$ | $a < b$ | $a = b$ |
| Left hand | $a > b$ | $a < b$ | $a = b$ |



| Insert designation | Cutting edge geometry (mm) | PDX (mm) | Pitch (mm) | | | | | | | | | | |
|--------------------|----------------------------|----------|-----------------|------|------|-----|-----------------|-----|-----|---|-----------------|-----|--|
| | | | 0.2 | 0.25 | 0.35 | 0.4 | 0.5 | 0.6 | 0.8 | 1 | 1.25 | 1.5 | |
| JXTG12FR-60A-000 | 0.05 (flat) | 0.25 | Applicable area | | | | | | | | | | |
| JXTG12FL-60A-000 | | | Applicable area | | | | | | | | | | |
| JXTG12FR-60B-000 | 0.05 (flat) | 2.25 | Applicable area | | | | | | | | | | |
| JXTG12FL-60B-000 | | | Applicable area | | | | | | | | | | |
| JXTG12FR-60A-005 | R0.05 | 0.6 | | | | | Applicable area | | | | | | |
| JXTG12FL-60A-005 | | | | | | | Applicable area | | | | | | |
| JXTG12FR-60B-005 | R0.05 | 1.9 | | | | | Applicable area | | | | | | |
| JXTG12FL-60B-005 | | | | | | | Applicable area | | | | | | |
| JXTG12FR-60N-010 | R0.1 | 1.25 | | | | | | | | | Applicable area | | |
| JXTG12FL-60N-010 | | | | | | | | | | | Applicable area | | |
| | | | 127 | 72 | 52 | 32 | 16 | | | | | | |

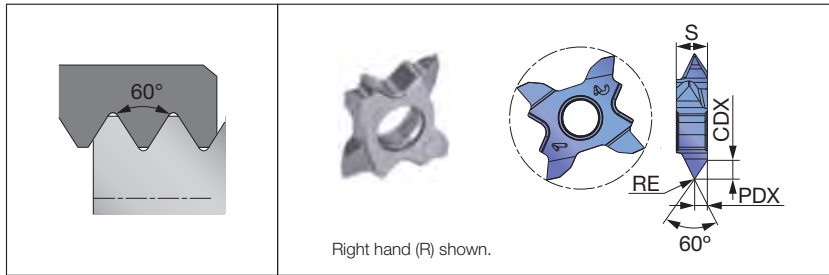
Threads per inch (TPI)

Reference pages: Inserts → 5-5, Toolholders → 5-17, 5-18, Standard cutting conditions → 5-26

TETRAMCUT

INSERT

60° thread angle (General purpose)



Applicable toolholder

| External |
|----------------|
| STCR/L**-18 |
| STCR/L**18-CHP |
| JS**-STCL18 |

Thread form

60°

M
(Metric)

55°

UN
(Unified)

W
(Whitworth)

BSPT
(R, PT)

Partial-profile insert

| Pitch | TPI | Hand of cut | External insert | | | | | | |
|---------|---------|-------------|------------------|--------|-------|-----|------|------|---|
| | | | Designation | Grade | | PDX | CDX | RE | S |
| | | | | Coated | | | | | |
| | | | | SH725 | AH725 | | | | |
| 0.4 - 1 | 25 - 64 | R | TCT18FR-60A-005 | ● | | 0.6 | 0.99 | 0.05 | 4 |
| 1 - 2 | 25 - 12 | R | TCT18FR-60A-010 | ● | | 1 | 1.63 | 0.1 | 4 |
| 0.8 - 3 | 8 - 32 | R/L | TCT18R/L-60N-010 | | ● | 1.6 | 2.67 | 0.1 | 4 |
| 1.5 - 3 | 8 - 16 | R/L | TCT18R/L-60N-020 | | ● | 1.6 | 2.57 | 0.2 | 4 |

TETRAMCUT

INSERT

60° thread angle (General purpose Full-profile insert)



Applicable toolholder

| External |
|----------------|
| STCR/L**-18 |
| STCR/L**18-CHP |
| JS**-STCL18 |

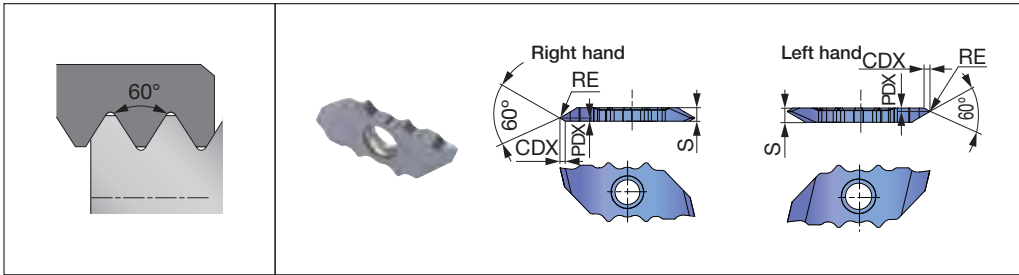
Full profile insert

| Pitch | TPI | Hand of cut | External insert | | | | | | |
|-------|-----|-------------|-----------------|--------|-------|------|-----|------|---|
| | | | Designation | Grade | | PDX | CDX | RE | S |
| | | | | Coated | | | | | |
| | | | | SH725 | AH725 | | | | |
| 0.5 | | R | TCT18FR-05ISO | ● | | 0.35 | | 0.06 | 4 |
| 0.7 | | R | TCT18FR-07ISO | ● | | 0.45 | | 0.09 | 4 |
| 0.75 | | R | TCT18FR-075ISO | ● | | 0.5 | | 0.09 | 4 |
| 0.8 | | R | TCT18FR-08ISO | ● | | 0.5 | | 0.1 | 4 |
| 1 | | R | TCT18R-10ISO | | ● | 0.6 | | 0.13 | 4 |
| 1.25 | | R | TCT18R-125ISO | | ● | 0.7 | | 0.17 | 4 |
| 1.5 | | R | TCT18R-15ISO | | ● | 0.8 | | 0.2 | 4 |

Reference pages: TetraMini-Cut : Toolholders → [5-15 - 5-17](#),
Standard cutting conditions → [5-25](#)

● : Line up / 5 pieces per package

60° thread angle (General purpose)



Applicable toolholder

| External |
|-----------------|
| JSXXR/L**09 |
| JSXXR/L**09-CHP |
| JS**-SXXL09 |

Partial-profile insert

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | Type A | Type B | Type N | |
|-------------|-----------|----------|-------------|--------------------|--------|---|------|------|---------------|-----|------------|--------|--------|--|
| | | | | Designation | Grade | | PDX | CDX | RE | S | | | | |
| | | | | | Coated | | | | | | | | | |
| | | | | | R | L | | | | | | | | |
| 12 | 0.2 - 0.4 | 64 - 127 | R/L | JXTG12FR/L-60A-000 | ● | ● | 0.25 | 0.4 | 0.05 max flat | 2.5 | Right hand | | | |
| 12 | 0.2 - 0.4 | 64 - 127 | R/L | JXTG12FR/L-60B-000 | ● | ● | 2.25 | 0.4 | 0.05 max flat | 2.5 | | | | |
| 12 | 0.4 - 1 | 25 - 64 | R/L | JXTG12FR/L-60A-005 | ● | ● | 0.6 | 0.99 | 0.05 | 2.5 | Left hand | | | |
| 12 | 0.4 - 1 | 25 - 64 | R/L | JXTG12FR/L-60B-005 | ● | ● | 1.9 | 0.99 | 0.05 | 2.5 | | | | |
| 12 | 1 - 1.5 | 16 - 25 | R/L | JXTG12FR/L-60N-010 | ● | ● | 1.25 | 2.07 | 0.1 | 2.5 | | | | |

J-SERIES

INSERT

60° thread angle (General purpose)



Applicable toolholder

| External |
|------------|
| JSTTR/L**3 |
| JS**-TTL3 |

Partial-profile insert

| Pitch | TPI | Hand of cut | External insert | | | | | | | | | | | | |
|---------|---------|-------------|-----------------|--------|---|------|---|--------|--|----------|--|-------|-----|------|------|
| | | | Designation | Grade | | | | | | | | IC | PDX | S | RE |
| | | | | Coated | | | | Cermet | | Uncoated | | | | | |
| | | | | SH725 | | J740 | | NS9530 | | TH10 | | | | | |
| R | L | R | L | R | L | R | L | | | | | | | | |
| 0.5 - 1 | 25 - 48 | R/L | JTTR/L3005F | ● | ● | ● | | ● | | ● | | 9.525 | 0.9 | 3.18 | 0.05 |
| 0.5 - 1 | 25 - 48 | R/L | JTTR/L3010F | ● | ● | ● | | ● | | ● | | 9.525 | 0.9 | 3.18 | 0.1 |

Reference pages: DuoJust-cut : Toolholders → [5-17](#), [5-18](#),
 Standard cutting conditions → [5-26](#)
 J-Series : Toolholders → [5-19](#), [5-20](#)

● : Line up / 5 pieces per package

60° thread angle (General purpose)



Applicable toolholder

| |
|-------------|
| External |
| JSXBR**K8 |
| JSXBR**K8-C |

Thread form

60°

M
(Metric)

55°

UN
(Unified)

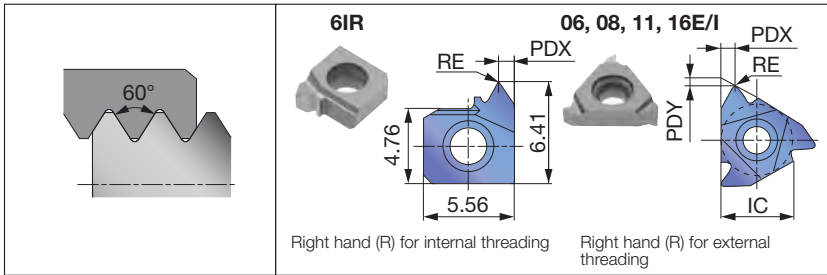
W
(Whitworth)

BSPT
(R, PT)

Partial-profile insert

| Pitch | TPI | Hand of cut | External insert | | | | | |
|---------|---------|-------------|-----------------|--------|----------|----|------|------|
| | | | Designation | Grade | | IC | S | RE |
| | | | | Coated | Uncoated | | | |
| | | | | J740 | TH10 | | | |
| 0.5 - 1 | 25 - 48 | R | JXT1R6000F | ● | ● | 8 | 3.97 | 0.03 |
| 0.5 - 1 | 25 - 48 | R | JXT2R6000F | ● | ● | 8 | 3.97 | 0.03 |

60° thread angle (General purpose)



Applicable toolholder

| Insert size | External | | Internal | |
|-------------|---|-------|---|-----------------|
| | Designation | Grade | Designation | Grade |
| 6 | | | SNR/L000*K06SC... | SNR/L000*H06... |
| 06 | | | SIR**06... | |
| 08 | | | SIR**08... | |
| 11 | SER**11... | | SNR/L**11... | |
| 16 | CER/L**16... JSER**16 JS**SEL16 B-SER/L**16 B-CER/L**16 BC-SER/L**16 | | TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16... | |

Partial-profile insert

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | Internal insert | | | | | | | | | | |
|-------------|----------|-------|-------------|-----------------|--------|----------|------|-------|-----|-----|-----------------|-------------|--------|----------|-------|-------|-----|------|------|------|------|
| | | | | Designation | Grade | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE | | |
| | | | | | Coated | Uncoated | | | | | | | Coated | Uncoated | | | | | | | |
| | | | | | AH725 | T313V | TH10 | | | | | | AH725 | GH330 | T313V | | | | | TH10 | |
| 6 | 0.5-1.5 | 48-16 | R | | | | | | | | | | | 6IRA60 | ● | | ● | - | 0.9 | - | 0.04 |
| 06 | 0.5-1.25 | 48-20 | R | | | | | | | | | | | 06IRA60 | | ● | | 4 | 0.6 | 0.6 | 0.04 |
| 08 | 0.5-1.5 | 48-16 | R | | | | | | | | | | | 08IRA60 | ● | | | 4 | 0.7 | 0.6 | 0.04 |
| 11 | 0.5-1.5 | 48-16 | R | 11ERA60 | ● | | | 6.35 | 0.9 | 0.8 | 0.06 | 11IRA60 | ● | | ● | 6.35 | 0.9 | 0.7 | 0.04 | | |
| 11 | 0.5-1.5 | 48-16 | L | | | | | | | | | | | 11ILA60 | ● | | ● | 6.35 | 0.9 | 0.7 | 0.04 |
| 16 | 0.5-1.5 | 48-16 | R | 16ERA60 | ● | ● | ● | 9.525 | 0.9 | 0.7 | 0.06 | 16IRA60 | ● | | ● | 9.525 | 0.9 | 0.7 | 0.04 | | |
| 16 | 0.5-1.5 | 48-16 | L | 16ELA60 | ● | ● | ● | 9.525 | 0.9 | 0.7 | 0.06 | 16ILA60 | ● | | ● | 9.525 | 0.9 | 0.7 | 0.04 | | |
| 16 | 0.5-3 | 48-8 | R | 16ERAG60 | ● | ● | | 9.525 | 1.6 | 1.2 | 0.06 | 16IRAG60 | ● | | ● | 9.525 | 1.6 | 1.2 | 0.04 | | |
| 16 | 1.75-3 | 14-8 | R | 16ERAG60 | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.22 | 16IRAG60 | ● | | ● | 9.525 | 1.6 | 1.2 | 0.12 | | |
| 16 | 1.75-3 | 14-8 | L | 16ELG60 | ● | ● | | 9.525 | 1.6 | 1.2 | 0.22 | 16ILG60 | ● | | ● | 9.525 | 1.6 | 1.2 | 0.12 | | |

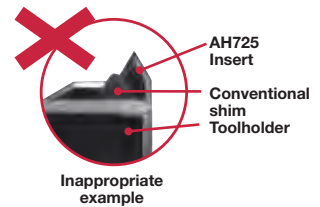
Partial-profile insert with chipbreaker

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | Internal insert | | | | | | | | | | |
|-------------|---------|-------|-------------|-----------------|--------|--------|----|-------|-----|-----|-----------------|------------|--------|-----------|-----|-------|-----|------|------|-----|------|
| | | | | Designation | Grade | | IC | PDX | PDY | RE | Designation | Grade | | IC | PDX | PDY | RE | | | | |
| | | | | | Coated | Cermet | | | | | | Coated | Cermet | | | | | | | | |
| | | | | | AH725 | NS9530 | | | | | | AH725 | NS9530 | | | | | | | | |
| 11 | 0.5-1.5 | 48-16 | R | | | | | | | | | | | 11IRA60-B | ● | | | 6.35 | 0.9 | 0.7 | 0.04 |
| 11 | 0.5-1.5 | 48-16 | R | | | | | | | | | | | 11IRA60-M | | ● | | 6.35 | 0.9 | 0.7 | 0.04 |
| 16 | 0.5-1.5 | 48-16 | R | 16ERA60-B | ●* | | | 9.525 | 0.9 | 0.8 | 0.05 | 16IRA60-B | ●* | | | 9.525 | 0.9 | 0.8 | 0.05 | | |
| 16 | 0.5-1.5 | 48-16 | R | 16ERA60-M | | ● | | 9.525 | 0.9 | 0.7 | 0.06 | 16IRA60-M | | ● | | 9.525 | 0.9 | 0.7 | 0.04 | | |
| 16 | 0.5-3 | 48-8 | R | 16ERAG60-B | ●* | | | 9.525 | 1.7 | 1.2 | 0.06 | 16IRAG60-B | ●* | | | 9.525 | 1.7 | 1.2 | 0.05 | | |
| 16 | 0.5-3 | 48-8 | R | 16ERAG60-M | ● | ● | | 9.525 | 1.6 | 1.2 | 0.06 | 16IRAG60-M | ● | ● | | 9.525 | 1.6 | 1.2 | 0.04 | | |
| 16 | 1.75-3 | 14-8 | R | 16ERAG60-B | ●* | | | 9.525 | 1.7 | 1.2 | 0.17 | 16IRAG60-B | ●* | | | 9.525 | 1.7 | 1.2 | 0.1 | | |
| 16 | 1.75-3 | 14-8 | R | 16ERAG60-M | | ● | | 9.525 | 1.6 | 1.2 | 0.22 | 16IRAG60-M | | ● | | 9.525 | 1.6 | 1.2 | 0.14 | | |

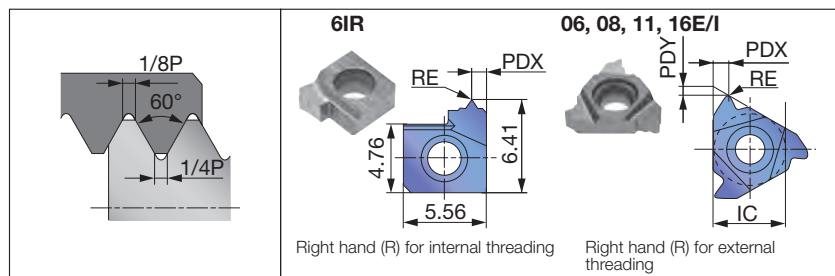
The adjustment of the cutting edge position will be needed as the dimensions of PDX and PDY are different from other inserts.

highlighted item requires changing shims.

When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim. Please refer to the page 5-27.



ISO metric (General purpose)



Applicable toolholder

| Insert size | External | Internal |
|-------------|---|--|
| 6 | | SNR/L000*K06SC... SNR/L000*H06... |
| 06 | | SIR**06... |
| 08 | | SIR**08... |
| 11 | SER**11... | SNR/L**11... |
| 16 | CER/L**16... JSER**16 JS**SEL16 B-SER/L**16 B-CER/L**16 BC-SER/L**16 | TSNR/L**16... SNR/L**16... TCNR/L**16... CNR/L**16... |

Full-profile insert

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | Internal insert | | | | | | | | | |
|-------------|-------|-----|-------------|-----------------|--------|--------|----------|-------|-----|------------|-----------------|------------|-------------|--------|-------|----------|-----|------|-----|----|
| | | | | Designation | Grade | | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE |
| | | | | | Coated | | Uncoated | | | | | | | Coated | | Uncoated | | | | |
| | | | | | AH725 | AH8015 | T313V | TH10 | | | | | | AH725 | T313V | TH10 | | | | |
| 6 | 0.75 | R | | | | | | | | 6IR075ISO | ● | ● | - | 0.5 | - | 0.05 | | | | |
| 6 | 1 | R | | | | | | | | 6IR10ISO | ● | ● | - | 0.9 | - | 0.07 | | | | |
| 6 | 1.25 | R | | | | | | | | 6IR125ISO | ● | ● | - | 0.9 | - | 0.09 | | | | |
| 6 | 1.5 | R | | | | | | | | 6IR15ISO | ● | ● | - | 0.9 | - | 0.11 | | | | |
| 6 | 1.75 | R | | | | | | | | 6IR175ISO | ● | ● | - | 0.9 | - | 0.12 | | | | |
| 6 | 2 | R | | | | | | | | 6IR20ISO | ● | ● | - | 0.9 | - | 0.14 | | | | |
| 06 | 0.5 | R | | | | | | | | 06IR05ISO | ● | ● | 4 | 0.4 | 0.9 | 0.04 | | | | |
| 06 | 0.75 | R | | | | | | | | 06IR075ISO | ● | ● | 4 | 0.5 | 0.6 | 0.05 | | | | |
| 06 | 1 | R | | | | | | | | 06IR10ISO | ● | ● | 4 | 0.6 | 0.6 | 0.05 | | | | |
| 06 | 1.25 | R | | | | | | | | 06IR125ISO | ● | ● | 4 | 0.6 | 0.6 | 0.07 | | | | |
| 08 | 1 | R | | | | | | | | 08IR10ISO | ● | ● | 5 | 0.6 | 0.6 | 0.05 | | | | |
| 08 | 1.25 | R | | | | | | | | 08IR125ISO | ● | ● | 5 | 0.7 | 0.7 | 0.07 | | | | |
| 08 | 1.5 | R | | | | | | | | 08IR15ISO | ● | ● | 5 | 0.7 | 0.7 | 0.09 | | | | |
| 08 | 1.75 | R | | | | | | | | 08IR175ISO | ● | ● | 5 | 0.8 | 0.6 | 0.1 | | | | |
| 11 | 0.35 | R | 11ER035ISO | ● | | | | 6.35 | 0.4 | 0.6 | 0.04 | | | | | | | | | |
| 11 | 0.5 | R | 11ER05ISO | ● | | | | 6.35 | 0.6 | 0.6 | 0.06 | 11IR05ISO | ● | ● | 6.35 | 0.5 | 1.2 | 0.04 | | |
| 11 | 0.7 | R | 11ER07ISO | ● | | | | 6.35 | 0.6 | 0.6 | 0.11 | | | | | | | | | |
| 11 | 0.75 | R | 11ER075ISO | ● | | | | 6.35 | 0.6 | 0.6 | 0.11 | 11IR075ISO | ● | ● | 6.35 | 0.5 | 1.2 | 0.05 | | |
| 11 | 0.8 | R | 11ER080ISO | ● | | | | 6.35 | 0.6 | 0.6 | 0.12 | | | | | | | | | |
| 11 | 1 | R | 11ER10ISO | ● | | | | 6.35 | 0.7 | 0.7 | 0.13 | 11IR10ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.07 | | |
| 11 | 1 | L | | | | | | | | | | 11IL10ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.07 | | |
| 11 | 1.25 | R | 11ER125ISO | ● | | | | 6.35 | 0.9 | 0.8 | 0.16 | 11IR125ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.09 | | |
| 11 | 1.25 | L | | | | | | | | | | 11IL125ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.09 | | |
| 11 | 1.5 | R | 11ER15ISO | ● | | | | 6.35 | 0.8 | 1 | 0.19 | 11IR15ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.11 | | |
| 11 | 1.5 | L | | | | | | | | | | 11IL15ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.11 | | |
| 11 | 1.75 | R | | | | | | | | | | 11IR175ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.12 | | |
| 11 | 1.75 | L | | | | | | | | | | 11IL175ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.12 | | |
| 11 | 2 | R | | | | | | | | | | 11IR20ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.14 | | |
| 11 | 2 | L | | | | | | | | | | 11IL20ISO | ● | ● | 6.35 | 0.9 | 0.7 | 0.14 | | |
| 16 | 0.5 | R | 16ER05ISO | ● | | ● | | 9.525 | 0.5 | 1.2 | 0.06 | 16IR05ISO | ● | ● | 9.525 | 0.5 | 1.2 | 0.04 | | |
| 16 | 0.75 | R | 16ER075ISO | ● | | ● | ● | 9.525 | 0.5 | 1.2 | 0.09 | 16IR075ISO | ● | ● | 9.525 | 0.5 | 1.2 | 0.05 | | |
| 16 | 1 | R | 16ER10ISO | ● | | ● | ● | 9.525 | 0.9 | 0.7 | 0.13 | 16IR10ISO | ● | ● | 9.525 | 0.9 | 0.7 | 0.07 | | |
| 16 | 1 | L | 16EL10ISO | ● | | | | 9.525 | 0.9 | 0.7 | 0.13 | 16IL10ISO | ● | ● | 9.525 | 0.9 | 0.7 | 0.07 | | |
| 16 | 1.25 | R | 16ER125ISO | ● | | ● | | 9.525 | 0.9 | 0.7 | 0.16 | 16IR125ISO | ● | ● | 9.525 | 0.9 | 0.7 | 0.09 | | |
| 16 | 1.25 | L | 16EL125ISO | ● | | | | 9.525 | 0.9 | 0.7 | 0.16 | 16IL125ISO | ● | ● | 9.525 | 0.9 | 0.7 | 0.09 | | |
| 16 | 1.5 | R | 16ER15ISO | ● | | ● | ● | 9.525 | 0.9 | 0.7 | 0.19 | 16IR15ISO | ● | ● | 9.525 | 0.9 | 0.7 | 0.11 | | |
| 16 | 1.5 | L | 16EL15ISO | ● | | | | 9.525 | 0.9 | 0.7 | 0.19 | 16IL15ISO | ● | ● | 9.525 | 0.9 | 0.7 | 0.11 | | |
| 16 | 1.75 | R | 16ER175ISO | ● | | ● | | 9.525 | 1.6 | 1.2 | 0.22 | 16IR175ISO | ● | ● | 9.525 | 1.6 | 1.2 | 0.12 | | |
| 16 | 2 | R | 16ER20ISO | ● | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.25 | 16IR20ISO | ● | ● | 9.525 | 1.6 | 1.2 | 0.14 | | |
| 16 | 2 | L | 16EL20ISO | ● | | | | 9.525 | 1.6 | 1.2 | 0.25 | 16IL20ISO | ● | ● | 9.525 | 1.6 | 1.2 | 0.14 | | |
| 16 | 2.5 | R | 16ER25ISO | ● | | ● | ● | 9.525 | 1.6 | 1.2 | 0.31 | 16IR25ISO | ● | ● | 9.525 | 1.6 | 1.2 | 0.18 | | |
| 16 | 3 | R | 16ER30ISO | ● | | ● | ● | 9.525 | 1.6 | 1.2 | 0.38 | 16IR30ISO | ● | ● | 9.525 | 1.6 | 1.2 | 0.21 | | |
| 16 | 3 | L | 16EL30ISO | ● | | | | 9.525 | 1.6 | 1.2 | 0.38 | 16IL30ISO | ● | ● | 9.525 | 1.6 | 1.2 | 0.21 | | |

Reference pages: Toolholders → 5-20 - 5-24,
Standard cutting conditions → 5-25

● : Line up / 5 pieces per package

INSERT

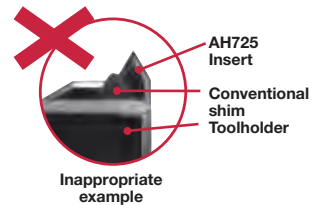
Full-profile insert with chipbreaker

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | | Internal insert | | | | | | | | | |
|-------------|-------|-----|--------------|-----------------|--------|--------|--------|-------|-----|-----|------|-----------------|--------------|--------|--------|----|-------|------|-----|------|------|
| | | | | Designation | Grade | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE | | |
| | | | | | Coated | | Cermet | | | | | | Coated | | Cermet | | | | | | |
| | | | | | AH725 | AH8015 | NS9530 | | | | | | AH725 | AH8015 | NS9530 | | | | | | |
| 11 | 0.5 | R | | | | | | | | | | | 11IR05ISO-B | ● | | | | 6.35 | 0.5 | 1.2 | 0.04 |
| 11 | 0.5 | R | | | | | | | | | | | 11IR05ISO-M | | ● | | | 6.35 | 0.5 | 1.2 | 0.04 |
| 11 | 0.75 | R | | | | | | | | | | | 11IR075ISO-B | ● | | | | 6.35 | 0.5 | 1.2 | 0.05 |
| 11 | 0.75 | R | | | | | | | | | | | 11IR075ISO-M | | ● | | | 6.35 | 0.5 | 1.2 | 0.05 |
| 11 | 1 | R | | | | | | | | | | | 11IR10ISO-B | ● | | | | 6.35 | 0.9 | 0.7 | 0.08 |
| 11 | 1 | R | | | | | | | | | | | 11IR10ISO-M | | ● | | | 6.35 | 0.9 | 0.7 | 0.08 |
| 11 | 1.25 | R | | | | | | | | | | | 11IR125ISO-B | ● | | | | 6.35 | 0.9 | 0.7 | 0.1 |
| 11 | 1.25 | R | | | | | | | | | | | 11IR125ISO-M | | ● | | | 6.35 | 0.9 | 0.7 | 0.1 |
| 11 | 1.5 | R | | | | | | | | | | | 11IR15ISO-B | ● | | | | 6.35 | 0.9 | 0.7 | 0.12 |
| 11 | 1.5 | R | | | | | | | | | | | 11IR15ISO-M | | ● | | | 6.35 | 0.9 | 0.7 | 0.12 |
| 11 | 1.75 | R | | | | | | | | | | | 11IR175ISO-B | ● | | | | 6.35 | 0.9 | 0.7 | 0.12 |
| 11 | 1.75 | R | | | | | | | | | | | 11IR175ISO-M | | ● | | | 6.35 | 0.9 | 0.7 | 0.12 |
| 11 | 2 | R | | | | | | | | | | | 11IR20ISO-B | ● | | | | 6.35 | 0.9 | 0.7 | 0.14 |
| 11 | 2 | R | | | | | | | | | | | 11IR20ISO-M | | ● | | | 6.35 | 0.9 | 0.7 | 0.14 |
| 16 | 0.5 | R | 16ER05ISO-M | | | ● | | 9.525 | 0.5 | 1.2 | 0.06 | | | | | | | | | | |
| 16 | 0.75 | R | 16ER075ISO-B | ●* | | | | 9.525 | 0.6 | 0.6 | 0.08 | | | | | | | | | | |
| 16 | 0.75 | R | 16ER075ISO-M | | | ● | | 9.525 | 0.5 | 1.2 | 0.09 | | | | | | | | | | |
| 16 | 1 | R | 16ER10ISO-B | ●* | | | | 9.525 | 0.7 | 0.7 | 0.11 | 16IR10ISO-B | ●* | | | | 9.525 | 0.7 | 0.6 | 0.05 | |
| 16 | 1 | R | 16ER10ISO-M | | | ● | | 9.525 | 0.9 | 0.7 | 0.13 | 16IR10ISO-M | | ● | ● | | 9.525 | 0.9 | 0.7 | 0.08 | |
| 16 | 1.25 | R | 16ER125ISO-B | ●* | | | | 9.525 | 0.9 | 0.8 | 0.14 | 16IR125ISO-B | ●* | | | | 9.525 | 0.9 | 0.8 | 0.07 | |
| 16 | 1.25 | R | 16ER125ISO-M | | | ● | ● | 9.525 | 0.9 | 0.7 | 0.16 | 16IR125ISO-M | | ● | ● | | 9.525 | 0.9 | 0.7 | 0.1 | |
| 16 | 1.5 | R | 16ER15ISO-B | ●* | | | | 9.525 | 1 | 0.8 | 0.19 | 16IR15ISO-B | ●* | | | | 9.525 | 1 | 0.8 | 0.08 | |
| 16 | 1.5 | R | 16ER15ISO-M | | | ● | ● | 9.525 | 0.9 | 0.7 | 0.19 | 16IR15ISO-M | | ● | ● | ● | 9.525 | 0.9 | 0.7 | 0.12 | |
| 16 | 1.75 | R | 16ER175ISO-B | ●* | | | | 9.525 | 1.2 | 0.9 | 0.2 | 16IR175ISO-B | ●* | | | | 9.525 | 1.2 | 0.9 | 0.10 | |
| 16 | 1.75 | R | 16ER175ISO-M | | | ● | | 9.525 | 1.6 | 1.2 | 0.22 | 16IR175ISO-M | | ● | ● | | 9.525 | 1.6 | 1.2 | 0.14 | |
| 16 | 2 | R | 16ER20ISO-B | ●* | | | | 9.525 | 1.3 | 1 | 0.24 | 16IR20ISO-B | ●* | | | | 9.525 | 1.3 | 1 | 0.11 | |
| 16 | 2 | R | 16ER20ISO-M | | | ● | | 9.525 | 1.6 | 1.2 | 0.25 | 16IR20ISO-M | | ● | ● | | 9.525 | 1.6 | 1.2 | 0.14 | |
| 16 | 2.5 | R | 16ER25ISO-B | ●* | | | | 9.525 | 1.5 | 1.1 | 0.3 | 16IR25ISO-B | ●* | | | | 9.525 | 1.5 | 1.1 | 0.14 | |
| 16 | 2.5 | R | 16ER25ISO-M | | | ● | | 9.525 | 1.6 | 1.2 | 0.31 | 16IR25ISO-M | | ● | ● | | 9.525 | 1.6 | 1.2 | 0.18 | |
| 16 | 3 | R | 16ER30ISO-B | ●* | | | | 9.525 | 1.6 | 1.2 | 0.38 | 16IR30ISO-B | ●* | | | | 9.525 | 1.5 | 1.1 | 0.18 | |
| 16 | 3 | R | 16ER30ISO-M | | | ● | | 9.525 | 1.6 | 1.2 | 0.38 | 16IR30ISO-M | | ● | ● | | 9.525 | 1.6 | 1.2 | 0.21 | |

The adjustment of the cutting edge position will be needed as the dimensions of PDX and PDY are different from other inserts.

●* highlighted item requires changing shims.

When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim. Please refer to the page 5-27.

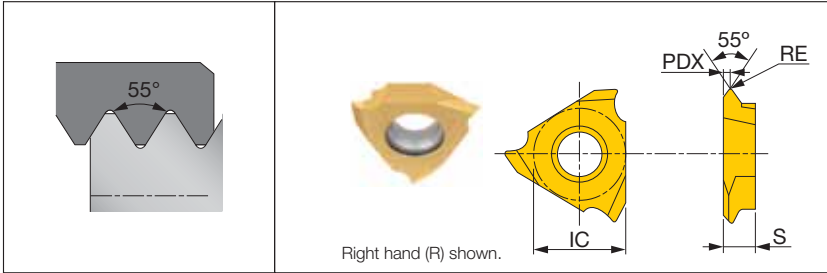


Reference pages: Toolholders → 5-20 - 5-24,
Standard cutting conditions → 5-25

● : Line up / 5 pieces per package

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

55° thread angle (General purpose)



Applicable toolholder

| External |
|------------|
| JSTTR/L**3 |
| JS**-TTL3 |

Thread form

60°

M
(Metric)

55°

UN
(Unified)

W
(Whitworth)

BSPT
(R, PT)

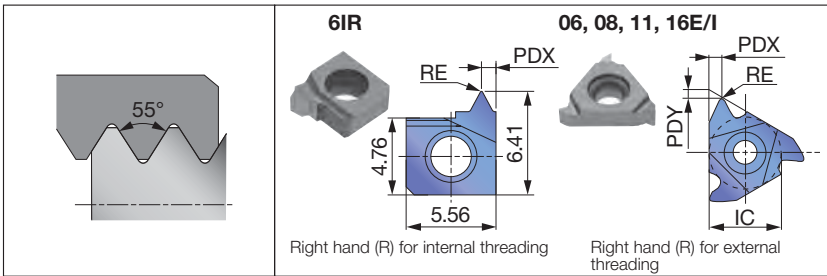
Partial-profile insert

| Pitch | TPI | Hand of cut | External insert | | | | | | | | |
|---------|---------|-------------|-----------------|--------|--|------|--|-------|-----|------|------|
| | | | Designation | Grade | | | | IC | PDX | S | RE |
| | | | | Coated | | | | | | | |
| | | | | SH725 | | J740 | | | | | |
| R | L | R | L | | | | | | | | |
| 0.5 - 1 | 25 - 48 | R/L | JTTR/L3005F-55 | ● | | ● | | 9.525 | 0.6 | 3.18 | 0.05 |

TUNGTHREAD

INSERT

55° thread angle (General purpose)



Applicable toolholder

| Insert size | External | Internal |
|-------------|--|---|
| 6 | | SNR/L000*K06SC... SNR/L000*H06... |
| 06 | | SIR/L**06... |
| 08 | | SIR**08... |
| 11 | SER**11... | SNR/L**11... |
| 16 | CER/L**16... JSER**16... JS**SEL16 B-SER/L**16 B-CER/L**16 BC-SER/L**16 | TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16... |

Partial-profile insert

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | | Internal insert | | | | | | | | | | | | | | |
|-------------|----------|-------|-------------|-----------------|--------|-------|------|-------|-----|-----|------|-----------------|-------|-------|-------|----|-----|-----|----------|------|--|---|-------|-----|------|------|
| | | | | Designation | Grade | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE | | | | | | | |
| | | | | | Coated | | | | | | | | | | | | | | | | | | | | | |
| | | | | | AH725 | T313V | TH10 | | | | | | AH725 | GH330 | T313V | | | | | TH10 | | | | | | |
| 6 | 0.5~1.5 | 48~16 | R | | | | | | | | | | | | | | | | 6IRA55 | ● | | ● | - | 0.9 | - | 0.07 |
| 06 | 0.5~1.25 | 48~20 | R | | | | | | | | | | | | | | | | 06IRA55 | ● | | 4 | 0.5 | 0.5 | 0.05 | |
| 08 | 0.5~1.5 | 48~16 | R | | | | | | | | | | | | | | | | 08IRA55 | ● | | 5 | 0.7 | 0.6 | 0.05 | |
| 11 | 0.5~1.5 | 48~16 | R | 11ERA55 | ● | | | 6.35 | 0.9 | 0.8 | 0.05 | | | | | | | | 11IRA55 | ● | | ● | 6.35 | 0.9 | 0.7 | 0.07 |
| 16 | 0.5~1.5 | 48~16 | R | 16ERA55 | ● | ● | ● | 9.525 | 0.9 | 0.7 | 0.07 | | | | | | | | 16IRA55 | ● | | ● | 9.525 | 0.9 | 0.7 | 0.07 |
| 16 | 0.5~3 | 48~8 | R | 16ERAG55 | ● | | | 9.525 | 1.7 | 1.2 | 0.07 | | | | | | | | 16IRAG55 | ● | | | 9.525 | 1.7 | 1.2 | 0.07 |
| 16 | 1.75~3 | 14~8 | R | 16ERG55 | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.25 | | | | | | | | 16IRG55 | ● | | ● | 9.525 | 1.7 | 1.2 | 0.25 |

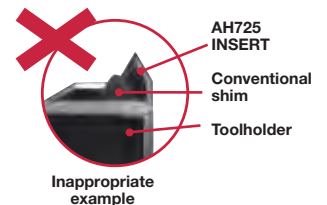
Partial-profile insert with chipbreaker

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | | Internal insert | | | | | | | | | | | | | |
|-------------|--------|-------|-------------|-----------------|--------|---|--|-------|-----|-----|------|-----------------|-------|--|--|----|-----|------------|----|---|--|-------|-----|-----|------|
| | | | | Designation | Grade | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE | | | | | | |
| | | | | | Coated | | | | | | | | | | | | | | | | | | | | |
| | | | | | AH725 | | | | | | | | | | | | | | | | | | | | |
| 16 | 0.5~3 | 48~16 | R | 16ERAG55-B | ● | * | | 9.525 | 1.7 | 1.2 | 0.07 | | | | | | | 16IRAG55-B | ● | * | | 9.525 | 1.7 | 1.2 | 0.05 |
| 16 | 1.75~3 | 14~8 | R | 16ERG55-B | ● | * | | 9.525 | 1.7 | 1.2 | 0.23 | | | | | | | 16IRG55-B | ● | * | | 9.525 | 1.7 | 1.2 | 0.2 |

The adjustment of the cutting edge position will be needed as the dimensions of PDX and PDY are different from other inserts.
highlighted item requires changing shims.

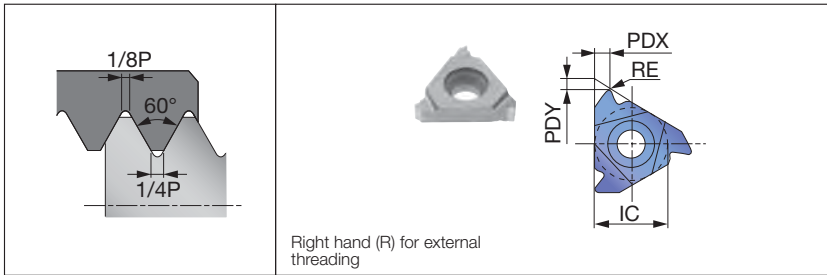
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim. Please refer to the page 5-27.

Reference pages: J-Series : Toolholders → [5-19, 5-20](#)
 TungThread : Toolholders → [5-20 - 5-24](#)
 Standard cutting conditions → [5-25](#)



● : Line up / 5 pieces per package

Unified (General purpose)



Applicable toolholder

| Insert size | External | Internal |
|-------------|---|---|
| 11 | SER**11... | SNR/L**11... |
| 16 | CER/L**16... JSER**16 JS**SEL16 B-SER/L**16 B-CER/L**16 BC-SER/L**16 | TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16... |

Full-profile insert

| Insert size | Pitch (Reference) | TPI | Hand of cut | External insert | | | | | | Internal insert | | | | | | | | | |
|-------------|-------------------|-----|-------------|-----------------|--------|-------|-------|-----|-----|-----------------|-------------|--------|-------|-------|-----|-----|------|--|--|
| | | | | Designation | Grade | | IC | PDX | PDY | RE | Designation | Grade | | IC | PDX | PDY | RE | | |
| | | | | | Coated | | | | | | | Coated | | | | | | | |
| | | | | | AH725 | T313V | | | | | | AH725 | T313V | | | | | | |
| 11 | (0.794) | 32 | R | | | | | | | | | | | | | | | | |
| 11 | (0.907) | 28 | R | | | | | | | | | | | | | | | | |
| 11 | (1.058) | 24 | R | | | | | | | | | | | | | | | | |
| 11 | (1.27) | 20 | R | | | | | | | | | | | | | | | | |
| 11 | (1.411) | 18 | R | | | | | | | | | | | | | | | | |
| 11 | (1.588) | 16 | R | | | | | | | | | | | | | | | | |
| 11 | (1.814) | 14 | R | | | | | | | | | | | | | | | | |
| 16 | (0.794) | 32 | R | 16ER32UN | ● | | 9.525 | 0.5 | 1.2 | 0.1 | 16IR32UN | ● | | 9.525 | 0.5 | 1.2 | 0.06 | | |
| 16 | (0.907) | 28 | R | 16ER28UN | ● | | 9.525 | 0.5 | 1.2 | 0.11 | 16IR28UN | ● | | 9.525 | 0.5 | 1.2 | 0.06 | | |
| 16 | (1.058) | 24 | R | 16ER24UN | ● | | 9.525 | 0.9 | 0.7 | 0.13 | 16IR24UN | ● | | 9.525 | 0.9 | 0.7 | 0.07 | | |
| 16 | (1.27) | 20 | R | 16ER20UN | ● | | 9.525 | 0.9 | 0.7 | 0.16 | 16IR20UN | ● | | 9.525 | 0.9 | 0.7 | 0.09 | | |
| 16 | (1.411) | 18 | R | 16ER18UN | ● | | 9.525 | 0.9 | 0.7 | 0.18 | 16IR18UN | ● | | 9.525 | 0.9 | 0.7 | 0.1 | | |
| 16 | (1.588) | 16 | R | 16ER16UN | ● | ● | 9.525 | 0.9 | 0.7 | 0.2 | 16IR16UN | ● | ● | 9.525 | 0.9 | 0.7 | 0.11 | | |
| 16 | (1.814) | 14 | R | 16ER14UN | ● | ● | 9.525 | 1.6 | 1.2 | 0.23 | 16IR14UN | ● | ● | 9.525 | 1.6 | 1.2 | 0.13 | | |
| 16 | (1.954) | 13 | R | 16ER13UN | ● | | 9.525 | 1.6 | 1.2 | 0.24 | 16IR13UN | ● | | 9.525 | 1.6 | 1.2 | 0.14 | | |
| 16 | (2.117) | 12 | R | 16ER12UN | ● | ● | 9.525 | 1.6 | 1.2 | 0.27 | 16IR12UN | ● | ● | 9.525 | 1.6 | 1.2 | 0.15 | | |
| 16 | (2.309) | 11 | R | 16ER11UN | ● | | 9.525 | 1.6 | 1.2 | 0.29 | 16IR11UN | ● | | 9.525 | 1.6 | 1.2 | 0.16 | | |
| 16 | (2.54) | 10 | R | 16ER10UN | ● | | 9.525 | 1.6 | 1.2 | 0.32 | 16IR10UN | ● | | 9.525 | 1.6 | 1.2 | 0.18 | | |
| 16 | (2.822) | 9 | R | 16ER9UN | ● | | 9.525 | 1.6 | 1.2 | 0.35 | 16IR9UN | ● | | 9.525 | 1.6 | 1.2 | 0.2 | | |
| 16 | (3.175) | 8 | R | 16ER8UN | ● | ● | 9.525 | 1.6 | 1.2 | 0.4 | 16IR8UN | ● | ● | 9.525 | 1.6 | 1.2 | 0.22 | | |

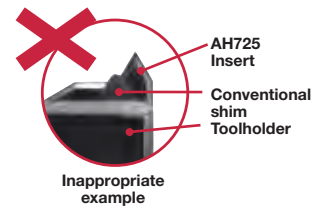
Full-profile insert with chipbreaker

| Insert size | Pitch | TPI | Hand of cut | External insert | | | | | | | | Internal insert | | | | | | | |
|-------------|-------|-----|-------------|-----------------|--------|--------|-----|-----|------|------------|-------------|-----------------|--------|-----|-----|------|----|--|--|
| | | | | Designation | Grade | | IC | PDX | PDY | RE | Designation | Grade | | IC | PDX | PDY | RE | | |
| | | | | | Coated | Cermet | | | | | | Coated | Cermet | | | | | | |
| | | | | | AH725 | NS9530 | | | | | | AH725 | NS9530 | | | | | | |
| 16 | 24 | R | 16ER24UN-B | ●* | | 9.525 | 0.8 | 0.7 | 0.11 | | | | | | | | | | |
| 16 | 24 | R | 16ER24UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.13 | | | | | | | | | | |
| 16 | 20 | R | 16ER20UN-B | ●* | | 9.525 | 0.9 | 0.8 | 0.14 | 16IR20UN-B | ●* | | 9.525 | 0.9 | 0.8 | 0.06 | | | |
| 16 | 20 | R | 16ER20UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.16 | 16IR20UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.09 | | | |
| 16 | 18 | R | 16ER18UN-B | ●* | | 9.525 | 1 | 0.8 | 0.15 | 16IR18UN-B | ●* | | 9.525 | 1 | 0.8 | 0.08 | | | |
| 16 | 18 | R | 16ER18UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.18 | 16IR18UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.1 | | | |
| 16 | 16 | R | 16ER16UN-B | ●* | | 9.525 | 1.1 | 0.9 | 0.19 | 16IR16UN-B | ●* | | 9.525 | 1.1 | 0.9 | 0.09 | | | |
| 16 | 16 | R | 16ER16UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.2 | 16IR16UN-M | | ● | 9.525 | 0.9 | 0.7 | 0.11 | | | |
| 16 | 14 | R | 16ER14UN-B | ●* | | 9.525 | 1.2 | 1 | 0.22 | 16IR14UN-B | ●* | | 9.525 | 1.2 | 0.9 | 0.11 | | | |
| 16 | 14 | R | 16ER14UN-M | | ● | 9.525 | 1.6 | 1.2 | 0.23 | 16IR14UN-M | | ● | 9.525 | 1.6 | 1.2 | 0.13 | | | |
| 16 | 13 | R | 16ER13UN-B | ●* | | 9.525 | 1.3 | 1 | 0.24 | | | | | | | | | | |
| 16 | 12 | R | 16ER12UN-B | ●* | | 9.525 | 1.4 | 1.1 | 0.25 | 16IR12UN-B | ●* | | 9.525 | 1.4 | 1.1 | 0.12 | | | |
| 16 | 12 | R | 16ER12UN-M | | ● | 9.525 | 1.6 | 1.2 | 0.27 | 16IR12UN-M | | ● | 9.525 | 1.6 | 1.2 | 0.15 | | | |
| 16 | 8 | R | 16ER8UN-B | ●* | | 9.525 | 1.6 | 1.2 | 0.41 | 16IR8UN-B | ●* | | 9.525 | 1.5 | 1.1 | 0.19 | | | |
| 16 | 8 | R | 16ER8UN-M | | ● | 9.525 | 1.6 | 1.2 | 0.4 | 16IR8UN-M | | ● | 9.525 | 1.6 | 1.2 | 0.22 | | | |

The adjustment of the cutting edge position will be needed as the dimensions of PDX and PDY are different from other inserts.

highlighted item requires changing shims.

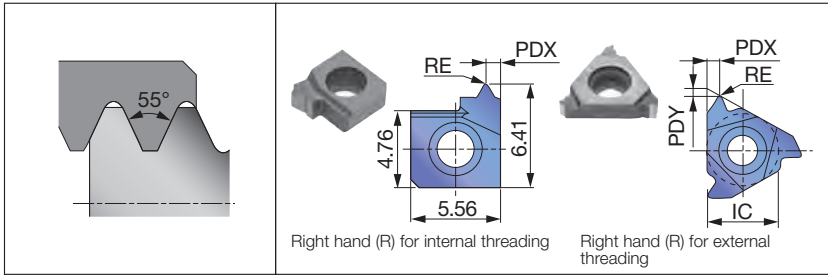
When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim. Please refer to the page 5-27.



Reference pages: Toolholders → 5-20 - 5-24,
Standard cutting conditions → 5-25

● : Line up / 5 pieces per package

Whitworth, Parallel pipe thread



Applicable toolholder

| Insert size | External | Internal |
|-------------|--|---|
| 6 | | SNR/L000*K06SC... SNR/L000*H06... |
| 11 | SER**11... | SNR/L**11... |
| 16 | CER/L**16... JSER**16 JSE**SEL16 B-SER/L**16 B-CER/L**16 BC-SER/L**16 | TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16... |

Full-profile insert

| Insert size | Pitch (Reference) | TPI | Hand of cut | External insert | | | | | | | | Internal insert | | | | | | | | | | |
|-------------|----------------------|-----|-------------|-----------------|--------|----------|---|-------|-----|-----|------|-----------------|--------|----------|---|-------|-----|-----|------|-------|------|--|
| | | | | Designation | Grade | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE | | | |
| | | | | | Coated | Uncoated | | | | | | | Coated | Uncoated | | | | | | | | |
| | | | | | AH725 | T313V | | | | | | | TH10 | AH725 | | | | | | T313V | TH10 | |
| 6 | (1.337) | 19 | R | | | | | | | | | | | | | | | | | | | |
| 11 | (1.337) | 19 | R | | | | | | | | | | | | | | | | | | | |
| 11 | (1.814) | 14 | R | | | | | | | | | | | | | | | | | | | |
| 16 | (0.907) | 28 | R | 16ER28W | ● | ● | | 9.525 | 0.9 | 0.7 | 0.11 | 16IR28W | ● | | | 9.525 | 0.9 | 0.7 | 0.11 | | | |
| 16 | (0.97) | 26 | R | 16ER26W | ● | | | 9.525 | 0.9 | 0.7 | 0.12 | 16IR26W | ● | | | 9.525 | 0.9 | 0.7 | 0.12 | | | |
| 16 | (1.27) | 20 | R | 16ER20W | ● | | | 9.525 | 0.9 | 0.7 | 0.16 | 16IR20W | ● | | | 9.525 | 0.9 | 0.7 | 0.16 | | | |
| 16 | (1.337) | 19 | R | 16ER19W | ● | ● | | 9.525 | 0.9 | 0.7 | 0.17 | 16IR19W | ● | | | 9.525 | 0.9 | 0.7 | 0.17 | | | |
| 16 | (1.411) | 18 | R | 16ER18W | ● | | | 9.525 | 0.9 | 0.7 | 0.18 | 16IR18W | ● | | | 9.525 | 0.9 | 0.7 | 0.18 | | | |
| 16 | (1.588) | 16 | R | 16ER16W | ● | ● | | 9.525 | 0.9 | 0.7 | 0.2 | 16IR16W | ● | ● | | 9.525 | 0.9 | 0.7 | 0.2 | | | |
| 16 | (1.814) | 14 | R | 16ER14W | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.23 | 16IR14W | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.23 | | | |
| 16 | (1.814) | 14 | L | 16EL14W | ● | | | 9.525 | 1.6 | 1.2 | 0.23 | | | | | | | | | | | |
| 16 | (2.117) | 12 | R | 16ER12W | ● | ● | | 9.525 | 1.6 | 1.2 | 0.27 | 16IR12W | ● | ● | | 9.525 | 1.6 | 1.2 | 0.27 | | | |
| 16 | (2.309) | 11 | R | 16ER11W | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.29 | 16IR11W | ● | ● | ● | 9.525 | 1.6 | 1.2 | 0.29 | | | |
| 16 | (2.54) | 10 | R | 16ER10W | ● | ● | | 9.525 | 1.6 | 1.2 | 0.32 | 16IR10W | ● | ● | | 9.525 | 1.6 | 1.2 | 0.32 | | | |
| 16 | (2.822) | 9 | R | 16ER9W | ● | | | 9.525 | 1.6 | 1.2 | 0.35 | 16IR9W | ● | | | 9.525 | 1.6 | 1.2 | 0.35 | | | |
| 16 | (3.175) | 8 | R | 16ER8W | ● | ● | | 9.525 | 1.6 | 1.2 | 0.4 | 16IR8W | ● | ● | | 9.525 | 1.6 | 1.2 | 0.4 | | | |

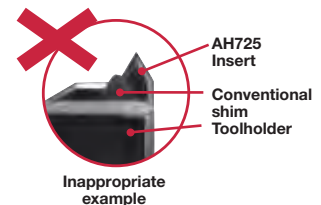
Full-profile insert with chipbreaker

| Insert size | Pitch (Reference) | TPI | Hand of cut | External insert | | | | | | | | Internal insert | | | | | | | | | | | |
|-------------|----------------------|-----|-------------|------------------|--------|--------|--|-------|-----|-----|------|------------------|--------|--------|---|----|-------|-----|-----|--------|--|--|--|
| | | | | Designation | Grade | | | IC | PDX | PDY | RE | Designation | Grade | | | IC | PDX | PDY | RE | | | | |
| | | | | | Coated | Cermet | | | | | | | Coated | Cermet | | | | | | | | | |
| | | | | | AH725 | NS9530 | | | | | | | AH725 | AH8015 | | | | | | NS9530 | | | |
| 16 | (1.337) | 19 | R | 16ER19W-B | ●* | | | 9.525 | 1 | 0.8 | 0.16 | | | | | | | | | | | | |
| 16 | (1.337) | 19 | R | 16ER19W-M | | ● | | 9.525 | 0.9 | 0.7 | 0.17 | 16IR19W-M | | | ● | | 9.525 | 0.9 | 0.7 | 0.17 | | | |
| 16 | (1.588) | 16 | R | 16ER16W-B | ●* | | | 9.525 | 1.1 | 0.9 | 0.2 | 16IR16W-B | ●* | | | | 9.525 | 1.1 | 0.9 | 0.18 | | | |
| 16 | (1.814) | 14 | R | 16ER14W-B | ●* | | | 9.525 | 1.2 | 1 | 0.24 | 16IR14W-B | ●* | | | | 9.525 | 1.2 | 1 | 0.21 | | | |
| 16 | (1.814) | 14 | R | 16ER14W-M | | ● | | 9.525 | 1.6 | 1.2 | 0.23 | 16IR14W-M | | ● | ● | | 9.525 | 1.6 | 1.2 | 0.23 | | | |
| 16 | (2.309) | 11 | R | 16ER11W-B | ●* | | | 9.525 | 1.5 | 1.1 | 0.27 | 16IR11W-B | ●* | | | | 9.525 | 1.5 | 1.1 | 0.27 | | | |
| 16 | (2.309) | 11 | R | 16ER11W-M | | ● | | 9.525 | 1.6 | 1.2 | 0.29 | 16IR11W-M | | | ● | | 9.525 | 1.6 | 1.2 | 0.29 | | | |

The adjustment of the cutting edge position will be needed as the dimensions of PDX and PDY are different from other inserts.

●* highlighted item requires changing shims.

When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim. Please refer to the page 5-27.



Reference pages: Toolholders → 5-20 - 5-24,
Standard cutting conditions → 5-25

● : Line up / 5 pieces per package

Grade 1

Insert 2

Ext. Toolholder 3

Int. Toolholder 4

Threading 5

Grooving 6

Endmill 7

Drilling Tool 8

Technical Reference 9

BSPT (for Pipe)

Thread form

60°

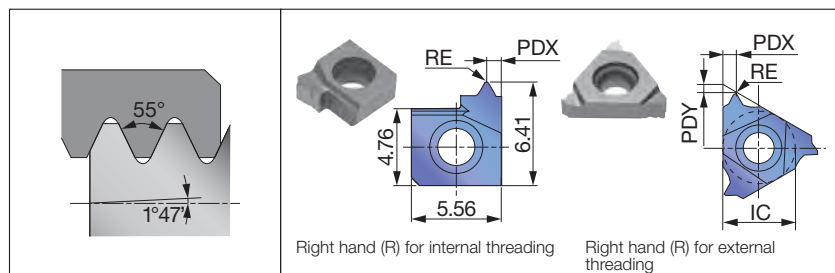
M
(Metric)

55°

UN
(Unified)

W
(Whitworth)

BSPT
(R, PT)



Applicable toolholder

| Insert size | External | Internal |
|-------------|--|---|
| 6 | | SNR/L000*K06SC... SNR/L000*H06... |
| 11 | SER**11... | SNR/L**11... |
| 16 | CER/L**16... JSER**16 JSE**SEL16 B-SER/L**16 B-CER/L**16 BC-SER/L**16 | TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16... |

Full-profile insert

| Insert size | Pitch (Reference) | TPI | Hand of cut | External insert | | | | | Internal insert | | | | | | | | |
|-------------|-------------------|-----|-------------|-----------------|--------|----------|-------|----------|-----------------|------|-------------|--------|----------|-------|------|-----|------|
| | | | | Designation | Grade | | IC | PDX | PDY | RE | Designation | Grade | | IC | PDX | PDY | RE |
| | | | | | Coated | Uncoated | | | | | | Coated | Uncoated | | | | |
| | | | | | AH725 | T313V | | | | | | TH10 | AH725 | | | | |
| 6 (1.337) | 19 | R | | | | | | | 61R19PT | ● | ● | - | 0.9 | - | 0.14 | | |
| 11 (1.337) | 19 | R | | | | | | 111R19PT | ● | ● | ● | 6.35 | 0.9 | 0.7 | 0.14 | | |
| 11 (1.814) | 14 | R | | | | | | 111R14PT | ● | ● | ● | 6.35 | 0.9 | 0.7 | 0.16 | | |
| 16 (0.907) | 28 | R | | 16ER28PT | ● | ● | 9.525 | 0.9 | 0.7 | 0.09 | | | | | | | |
| 16 (1.337) | 19 | R | | 16ER19PT | ● | ● | 9.525 | 0.9 | 0.7 | 0.14 | 161R19PT | ● | | 9.525 | 0.9 | 0.7 | 0.14 |
| 16 (1.814) | 14 | R | | 16ER14PT | ● | ● | 9.525 | 1.6 | 1.2 | 0.16 | 161R14PT | ● | ● | 9.525 | 1.6 | 1.2 | 0.16 |
| 16 (2.309) | 11 | R | | 16ER11PT | ● | ● | 9.525 | 1.6 | 1.2 | 0.26 | 161R11PT | ● | ● | 9.525 | 1.6 | 1.2 | 0.26 |

Full-profile insert with chipbreaker

| Insert size | Pitch (Reference) | TPI | Hand of cut | External insert | | | | | Internal insert | | | | | | | | |
|-------------|-------------------|-----|-------------|-----------------|--------|--------|-----|-----|-----------------|------------|-------------|--------|--------|-----|-----|------|----|
| | | | | Designation | Grade | | IC | PDX | PDY | RE | Designation | Grade | | IC | PDX | PDY | RE |
| | | | | | Coated | Cermet | | | | | | Coated | Cermet | | | | |
| | | | | | AH725 | NS9530 | | | | | | AH725 | NS9530 | | | | |
| 16 (1.337) | 19 | R | 16ER19PT-M | ● | | 9.525 | 0.9 | 0.7 | 0.18 | 161R19PT-M | ● | | 9.525 | 0.9 | 0.7 | 0.18 | |
| 16 (1.814) | 14 | R | 16ER14PT-B | ●* | | 9.525 | 1.2 | 1 | 0.21 | 161R14PT-B | ●* | | 9.525 | 1 | 1.2 | 0.21 | |
| 16 (1.814) | 14 | R | 16ER14PT-M | ● | | 9.525 | 1.6 | 1.2 | 0.25 | 161R14PT-M | ● | | 9.525 | 1.6 | 1.2 | 0.25 | |
| 16 (2.309) | 11 | R | 16ER11PT-B | ●* | | 9.525 | 1.5 | 1.1 | 0.28 | 161R11PT-B | ●* | | 9.525 | 1.5 | 1.1 | 0.28 | |
| 16 (2.309) | 11 | R | 16ER11PT-M | ● | | 9.525 | 1.6 | 1.2 | 0.32 | 161R11PT-M | ● | | 9.525 | 1.6 | 1.2 | 0.32 | |

The adjustment of the cutting edge position will be needed as the dimensions of PDX and PDY are different from other inserts.

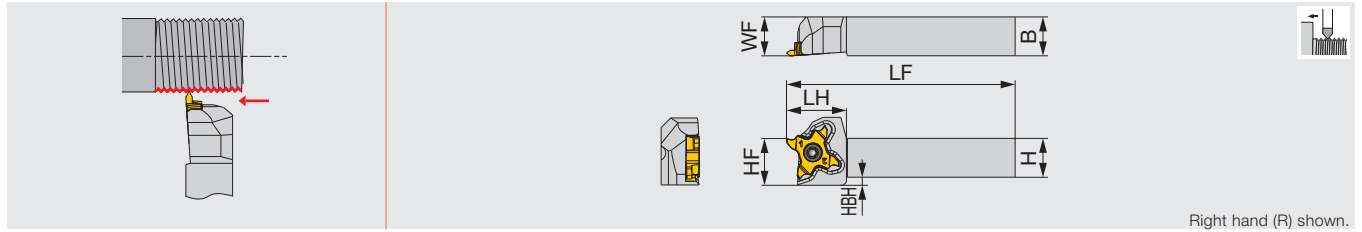
●* highlighted item requires changing shims.

When using a new AH725 with chipbreaker, the conventional shim may need to be replaced with a new standard shim. Please refer to the page 5-27.



Inappropriate example

External threading toolholder



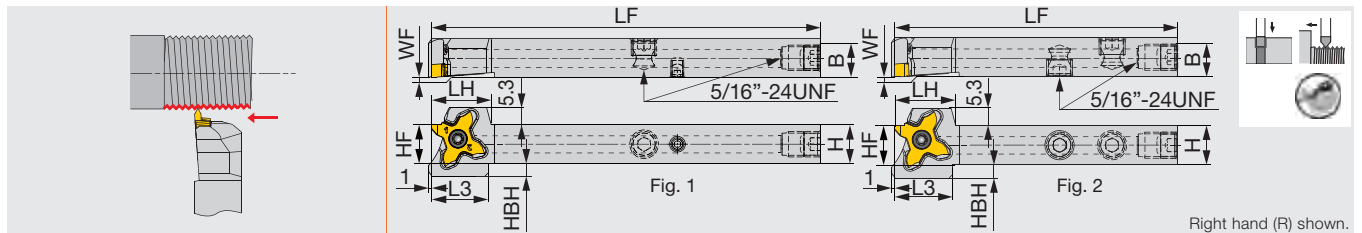
| Designation | H | B | LF | LH | HF | WF | HBH | Insert |
|---------------|----|----|-----|------|----|----|-----|----------|
| STCR/L1010X18 | 10 | 10 | 120 | 18.5 | 10 | 10 | 4.5 | TC*18... |
| STCR/L1212F18 | 12 | 12 | 85 | 18.5 | 12 | 12 | 2.5 | TC*18... |
| STCR/L1212X18 | 12 | 12 | 120 | 18.5 | 12 | 12 | 2.5 | TC*18... |
| STCR/L1616X18 | 16 | 16 | 120 | 18.5 | 16 | 16 | - | TC*18... |
| STCR/L2020X18 | 20 | 20 | 120 | 23 | 20 | 25 | - | TC*18... |

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| STCR... | CSTC-4L100DL | T-1008/5 |
| STCL... | CSTC-4L100DR | T-1008/5 |

External threading toolholder, with high pressure coolant capability



| Designation | H | B | LF | LH | L3 | HF | WF | HBH | Fig. | Insert | Torque* |
|----------------------------------|----|----|-----|------|------|----|------|-----|------|----------|---------|
| STCR/L1212F18-CHP | 12 | 12 | 85 | 18.5 | 17.5 | 12 | 0/12 | 4 | 2 | TC*18... | 1.2 |
| STCR/L1212X18-CHP ⁽¹⁾ | 12 | 12 | 120 | 18.5 | 17.5 | 12 | 0/12 | 4 | 1 | TC*18... | 1.2 |
| STCR/L1616X18-CHP ⁽¹⁾ | 16 | 16 | 120 | 18.5 | - | 16 | 0/16 | 0 | 1 | TC*18... | 1.2 |

This toolholder can be used with threading and grooving inserts.

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L)

⁽¹⁾ Compatible to the direct internal coolant supply system without the use of external coolant hose.

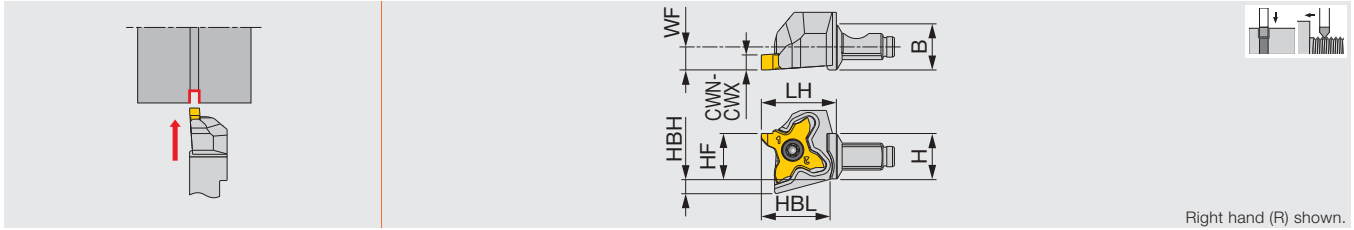
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|----------|
| STCL**18-CHP | CSTC-4L100DR | T-1008/5 |
| STCR**18-CHP | CSTC-4L100DL | T-1008/5 |

Groove width : 0.33 ~ 3 mm
Pitch : 0.8 ~ 3 mm

External grooving and threading head



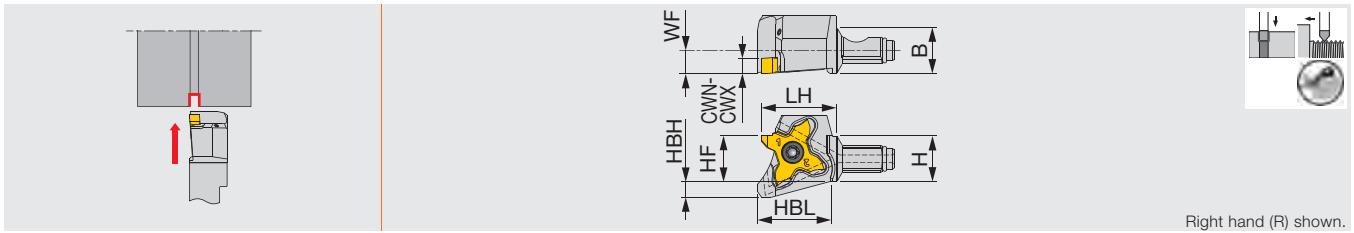
| Designation | CWN | CWX | H | B | LH | HF | HBH | HBL | WF | Insert | Torque* |
|-------------|------|-----|----|----|------|----|-----|------|----|-----------|---------|
| QC12-STCR18 | 0.33 | 3 | 12 | 12 | 19.5 | 12 | 3.9 | 17.9 | 6 | TC*18R... | 1.2 |
| QC12-STCL18 | 0.33 | 3 | 12 | 12 | 21 | 12 | 3.9 | 18.3 | 9 | TC*18L... | 1.2 |

The right hand insert (R) is used for the right hand toolholder (R). The left hand insert (L) is used for the left hand toolholder (L).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| QC12-STCR18 | CSTC-4L100DL | T-1008/5 |
| QC12-STCL18 | CSTC-4L100DR | T-1008/5 |

External grooving and threading head, with high pressure coolant capability



| Designation | CWN | CWX | H | B | LH | HF | HBH | HBL | WF | Insert | Torque* |
|-----------------|------|-----|----|----|------|----|-----|------|----|-----------|---------|
| QC12-STCR18-CHP | 0.33 | 3 | 12 | 12 | 19.5 | 12 | 4.2 | 19.3 | 6 | TC*18R... | 1.2 |
| QC12-STCL18-CHP | 0.33 | 3 | 12 | 12 | 21 | 12 | 4.2 | 19.3 | 9 | TC*18L... | 1.2 |

The right hand insert (R) is used for the right hand toolholder (R). The left hand insert (L) is used for the left hand toolholder (L).
Through-coolant head
*Torque: Recommended clamping torque (N·m)

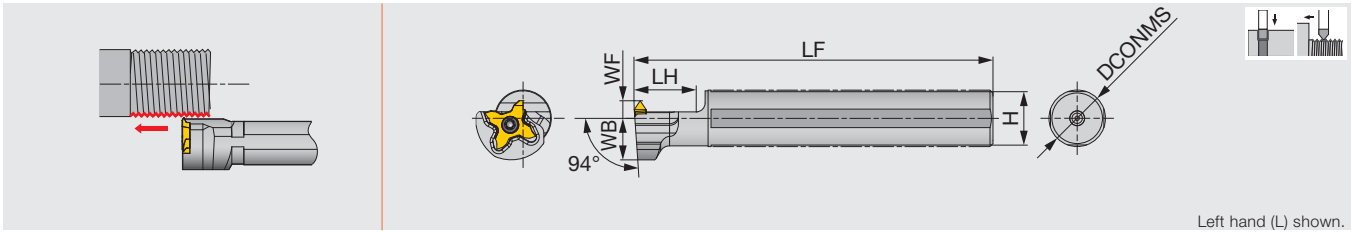
SPARE PARTS

| Designation | Clamping screw | Wrench | O-ring |
|-----------------|----------------|----------|-------------------------|
| QC12-STCR18-CHP | CSTC-4L100DL | T-1008/5 | OR SS-045 4.5X1.0 NBR70 |
| QC12-STCL18-CHP | CSTC-4L100DR | T-1008/5 | OR SS-045 4.5X1.0 NBR70 |

TETRAMCUT

JS-STCL18

External threading toolholder with round shank



| Designation | DCONMS | LF | LH | H | WB | WF | Insert |
|---------------|--------|-----|----|----|-------|----|-----------|
| JS14H-STCL18 | 14 | 100 | 20 | 13 | 14 | 6 | TC*18R... |
| JS159F-STCL18 | 15.875 | 85 | 20 | 15 | 14 | 6 | TC*18R... |
| JS16F-STCL18 | 16 | 85 | 20 | 15 | 14 | 6 | TC*18R... |
| JS19G-STCL18 | 19.05 | 90 | 20 | 18 | 14 | 6 | TC*18R... |
| JS19X-STCL18 | 19.05 | 120 | 20 | 18 | 14 | 6 | TC*18R... |
| JS20G-STCL18 | 20 | 90 | 20 | 19 | 14 | 6 | TC*18R... |
| JS20X-STCL18 | 20 | 120 | 20 | 19 | 14 | 6 | TC*18R... |
| JS22X-STCL18 | 22 | 120 | 20 | 21 | 12.25 | 10 | TC*18R... |
| JS25H-STCL18 | 25 | 100 | 20 | 24 | 12.25 | 10 | TC*18R... |
| JS254X-STCL18 | 25.4 | 120 | 20 | 24 | 12.25 | 10 | TC*18R... |

Use left-hand toolholders (L) with right-hand inserts (R).

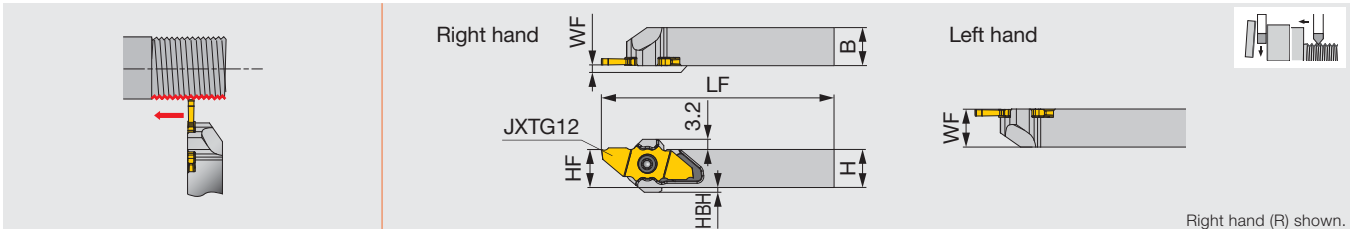
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| JS**STCL18 | CSTC-4L100DL | T-1008/5 |

DUOJUST CUT

JSXXR/L

Threading toolholder, for Swiss lathes



| Designation | H | B | WF (R/L) | LF* | HF | HBH | Insert |
|----------------|----|----|-----------|-----|----|-----|--------|
| JSXXR/L1010X09 | 10 | 10 | 0.2 / 9.8 | 118 | 10 | 3 | JX... |
| JSXXR/L1212F09 | 12 | 12 | 0.2 / 9.8 | 83 | 12 | 1.5 | JX... |
| JSXXR/L1212X09 | 12 | 12 | 0.2 / 9.8 | 118 | 12 | 1.5 | JX... |
| JSXXR/L1616X09 | 16 | 16 | 0.2 / 9.8 | 118 | 16 | 0 | JX... |
| JSXXR/L2020H09 | 20 | 20 | 0.2 / 9.8 | 98 | 20 | 0 | JX... |

*This toolholder can be used with threading and grooving inserts. With parting inserts, the dimension of LF will be different depending on the insert shape. Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| JSXXR... | CSTC-4L100DL | T-1008/5 |
| JSXXL... | CSTC-4L100DR | T-1008/5 |

Reference pages: TetraMini-Cut: Inserts → 5-4, Standard cutting conditions → 5-25
 DuoJust-Cut: Inserts → 5-5, Standard cutting conditions → 5-26

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

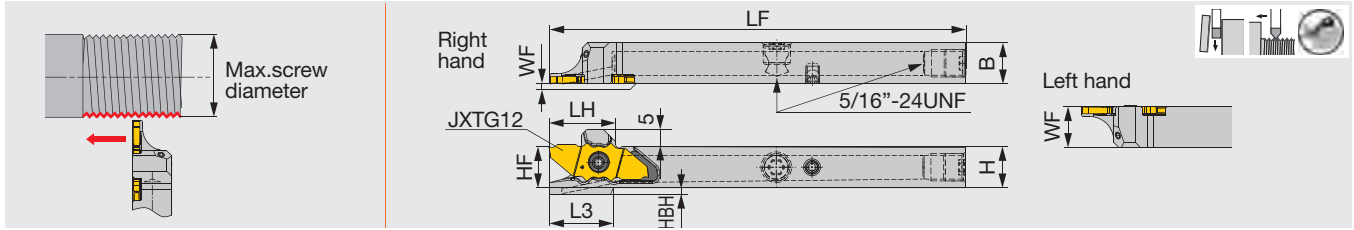
Grooving

Endmill

Drilling Tool

Technical Reference

Threading toolholder, with high pressure coolant capability



| Designation | H | B | WF (R/L) | LF* | HF | HBH | LH* | L3 | Insert |
|-----------------------------------|----|----|----------|-----|----|-----|--------|------|-----------------------|
| JSXXR/L1212X09-CHP ⁽¹⁾ | 12 | 12 | 0.2/11.8 | 118 | 12 | 2 | ≤ 19.4 | 18.8 | JX**06...,12...,16... |
| JSXXR/L1616X09-CHP ⁽¹⁾ | 16 | 16 | 0.2/15.8 | 118 | 16 | 2.5 | ≤ 19.4 | 18.7 | JX**06...,12...,16... |

*This toolholder can be used with threading and grooving inserts. With parting inserts, the dimensions of LF and LH will be different depending on the insert shape.
Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L)
(1) Compatible to the direct internal coolant supply system without the use of external coolant hose.

SPARE PARTS

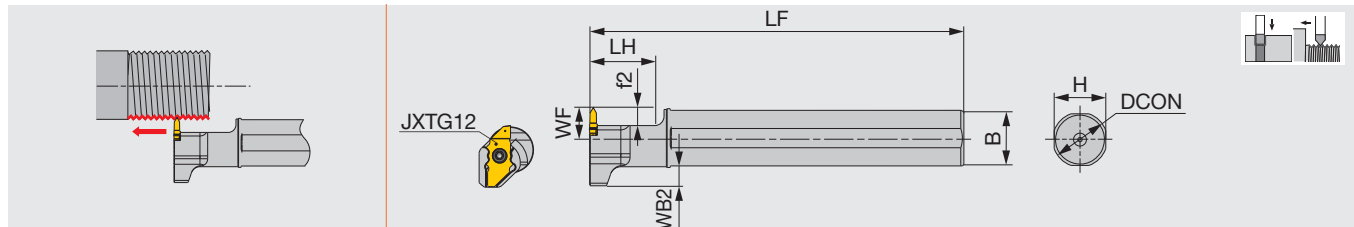
| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| JSXXR... | CSTC-4L100DL | T-1008/5 |
| JSXXL... | CSTC-4L100DR | T-1008/5 |

Parting-off widths : 1, 1.5 mm (Max. parting dia. ø6)
: 1.5, 2 mm (Max. parting dia. ø12, ø16)
Pitch : 0.2 ~ 1.5 mm

Range of threads machined pitch

| Designation | Pitch | Max. screw diameter |
|--------------------|-----------|------------------------------|
| JXTG12FR/L-60A-000 | 0.2 - 0.4 | Metric: M26, Unified: 1" |
| JXTG12FR/L-60B-000 | 0.2 - 0.4 | Metric: M26, Unified: 1" |
| JXTG12FR/L-60A-005 | 0.4 - 1 | Metric: M24, Unified: 15/16" |
| JXTG12FR/L-60B-005 | 0.4 - 1 | Metric: M24, Unified: 15/16" |
| JXTG12FR/L-60N-010 | 1 - 1.5 | Metric: M22, Unified: 7/8" |

External threading toolholder with round shank



| Designation | DCON | H | B | WB2 | LF | LH | WF** | f2** | Insert |
|---------------|-------|----|----|-----|-----|----|------|------|-------------|
| JS19G-SXXL09 | 19.05 | 18 | 18 | 5.9 | 90 | 21 | 10 | 6 | JX*G06,12*R |
| JS19X-SXXL09 | 19.05 | 18 | 18 | 5.9 | 120 | 21 | 10 | 6 | JX*G06,12*R |
| JS20G-SXXL09 | 20 | 19 | 19 | 5.4 | 90 | 21 | 10 | 6 | JX*G06,12*R |
| JS20X-SXXL09 | 20 | 19 | 19 | 5.4 | 120 | 21 | 10 | 6 | JX*G06,12*R |
| JS22X-SXXL09 | 22 | 21 | 21 | 4.4 | 120 | 21 | 10 | 6 | JX*G06,12*R |
| JS25H-SXXL09 | 25 | 24 | 24 | 2.9 | 100 | 21 | 10 | 6 | JX*G06,12*R |
| JS254X-SXXL09 | 25.4 | 24 | 24 | 2.7 | 120 | 21 | 10 | 6 | JX*G06,12*R |

This toolholder can be used with threading and parting inserts.
**When using JXPG06 insert, WF and f2 will be shortened by 2 mm.

SPARE PARTS

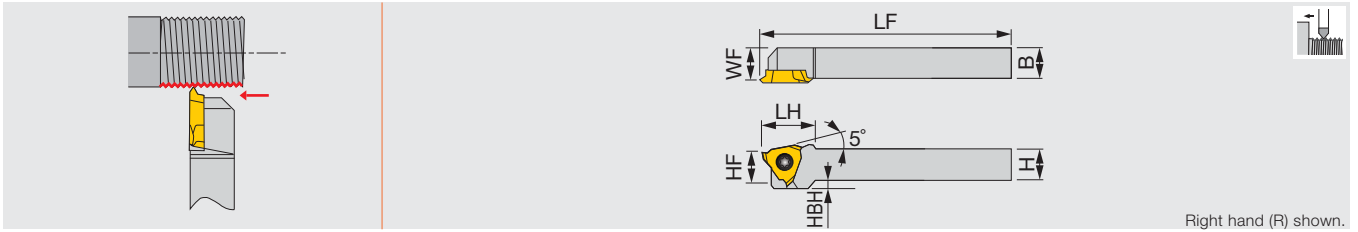
| Designation | Clamping screw | Wrench |
|--------------|----------------|----------|
| JS***-SXXL09 | CSTC-4L055L | T-1008/5 |

Reference pages: Inserts → 5-5, Standard cutting conditions → 5-26
Parts for coolant hose → 3-61

J-SERIES

JSTTR/L

External threading toolholder for Swiss lathes



Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | HBH | Insert |
|---------------|----|----|-----|------|----|------|-----|-------------|
| JSTTR/L1010X3 | 10 | 10 | 120 | 18.5 | 10 | 9.5 | 2 | JTTR/L30... |
| JSTTR/L1212F3 | 12 | 12 | 85 | 18.5 | 12 | 11.5 | - | JTTR/L30... |
| JSTTR/L1212X3 | 12 | 12 | 120 | 18.5 | 12 | 11.5 | - | JTTR/L30... |
| JSTTR/L1616X3 | 16 | 16 | 120 | 16.5 | 16 | 15.5 | - | JTTR/L30... |

Recommended clamping torque: 1.2 N·m

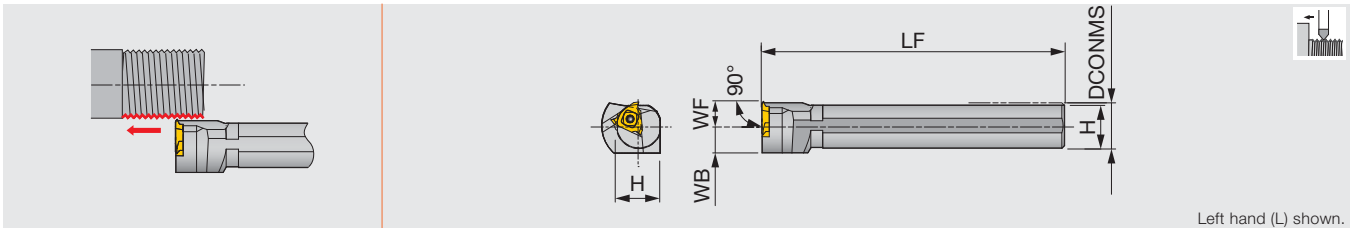
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSTTR/L... | CSTB-4SD | T-8F |

J-SERIES

JS-TTL3

External threading toolholder with round shank



Left hand (L) shown.

| Designation | DCONMS | WF | LF | H | WB | Insert |
|-------------|--------|----|-----|----|------|-----------|
| JS19K-TTL3 | 19.05 | 10 | 125 | 18 | 11.5 | JTTR30... |
| JS20K-TTL3 | 20 | 10 | 125 | 19 | 11.5 | JTTR30... |
| JS22K-TTL3 | 22 | 10 | 125 | 21 | 11.5 | JTTR30... |
| JS25K-TTL3 | 25.4 | 10 | 125 | 24 | 12.7 | JTTR30... |

Recommended clamping torque: 3.5 N·m

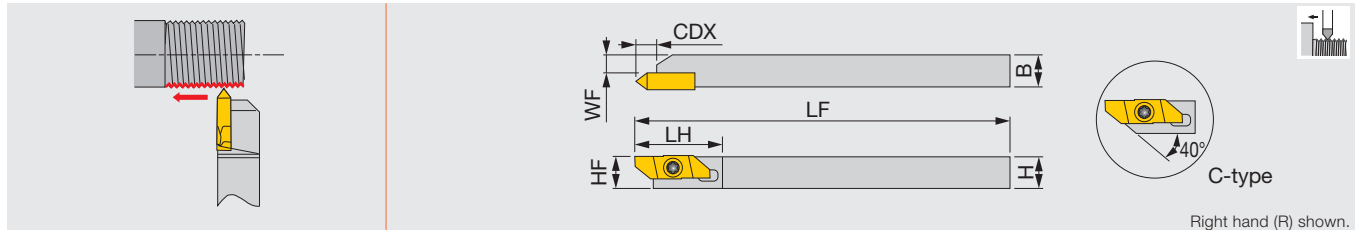
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JS*-TTL3 | CSTB-4S | T-15F |

Reference pages: Inserts → 5-10

Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

External threading toolholder for Swiss lathes



Right hand (R) shown.

| Designation | H | B | LF | LH | CDX | HF | WF | Insert |
|---------------|----|----|-----|----|-----|----|------|----------|
| JSXBR1010K8-C | 10 | 10 | 125 | 29 | 6.4 | 10 | 5.7 | JXT*R... |
| JSXBR1212K8-C | 12 | 12 | 125 | 29 | 6.4 | 12 | 7.7 | JXT*R... |
| JSXBR1616K8 | 16 | 16 | 125 | 29 | 6.4 | 16 | 11.7 | JXT*R... |
| JSXBR2020K8 | 20 | 20 | 125 | 29 | 6.4 | 20 | 15.7 | JXT*R... |

SPARE PARTS



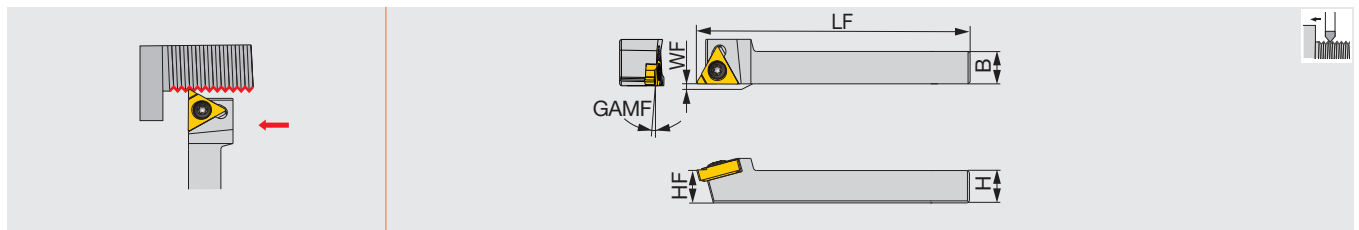
Can be wrenched also from the back with a double-head screw.
This toolholder can be used for JXB back-turning insert and JXT threading insert.

| Designation | Clamping screw | Wrench 1 | Wrench 2 (Optional parts) |
|-------------|----------------|----------|---------------------------|
| JSXBR... | CSTB-4SD | T-8F | (T-8L) |

TUNGTHREAD

SER

Screw-on external threading toolholder



| Designation | H | B | LF | HF | WF | GAMF | Insert |
|-------------|----|----|-----|----|----|------|---------|
| SER0808H11 | 8 | 8 | 100 | 8 | 0 | 1.5° | 11ER... |
| SER1010H11 | 10 | 10 | 100 | 10 | 0 | 1.5° | 11ER... |

SPARE PARTS



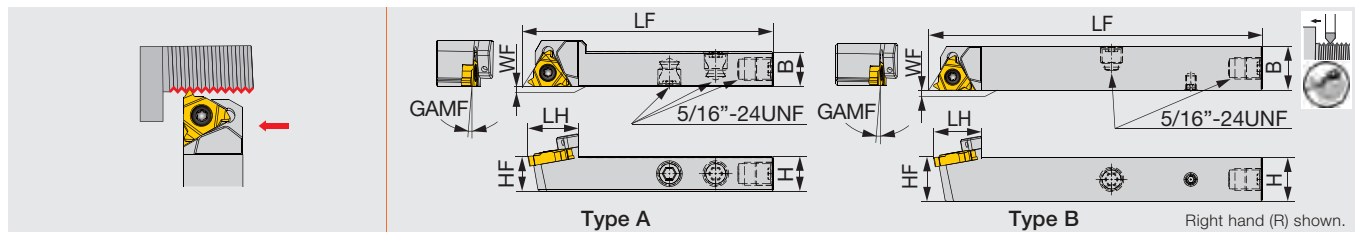
| Designation | Clamping screw | Wrench |
|-------------|------------------|--------|
| SER**H11 | SR M2.6-L6.7-S11 | T-8/5 |

TUNGTHREAD

JSE2R16-CHP



External threading toolholder with direct connection, with high pressure coolant capability



Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | GAMF | Type | Insert |
|---------------------------------|----|----|-----|----|----|----|------|------|---------|
| JSE2R1212F16-CHP | 12 | 12 | 85 | 19 | 12 | 0 | 1° | A | 16ER... |
| JSE2R1212X16-CHP ⁽¹⁾ | 12 | 12 | 120 | 19 | 12 | 0 | 1° | B | 16ER... |
| JSE2R1616X16-CHP ⁽¹⁾ | 16 | 16 | 120 | 19 | 16 | 0 | 1° | B | 16ER... |

(1) Compatible to the direct internal coolant supply system without the use of external coolant hose.

SPARE PARTS

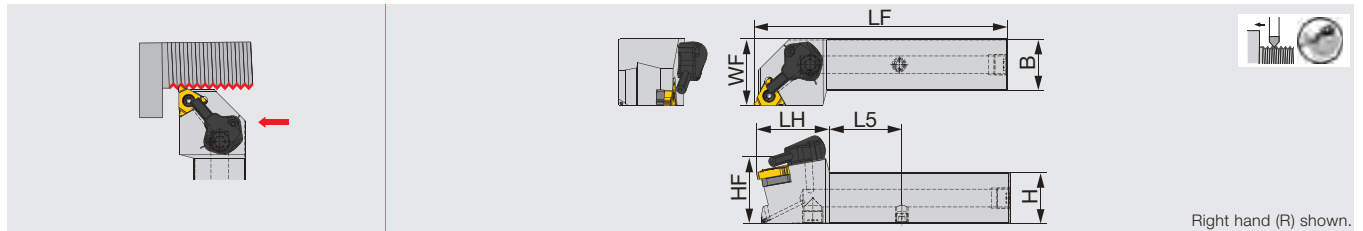


| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| JSE2R**16-CHP | CSTB-3.5 | T-15F |

Reference pages: J-Series: Inserts → 5-10

TungThread: Inserts → 5-7 - 5-14, Standard cutting conditions → 5-25,

Parts for coolant hose → 3-61

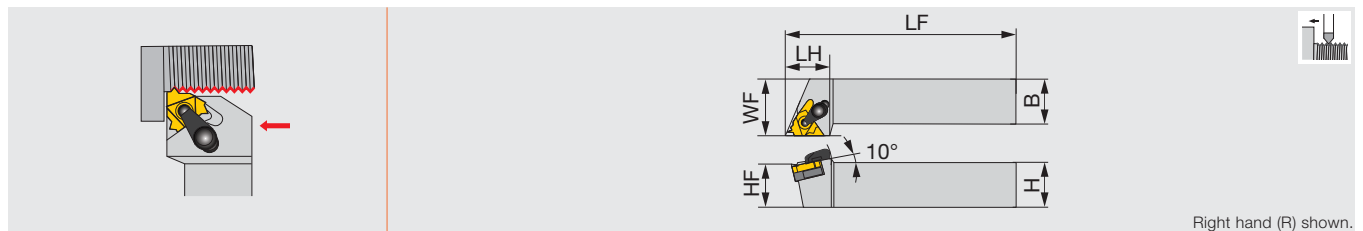


Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | L5 | Insert |
|-------------------|----|----|-----|----|----|----|------|---------|
| SER2020X16-CHP-MC | 20 | 20 | 107 | 36 | 20 | 25 | 27.9 | 16ER... |

SPARE PARTS

| Designation | Clamping screw | Wrench | Shim screw | Shim | Coolant unit | Coolant plug | Wrench |
|-----------------|----------------|--------|------------|---------|--------------|-------------------|--------|
| SER**X16-CHP-MC | CSTB-3.5ST | T-15F | DTS5-3.5 | A16-1DT | CU-V-CHP | PLUGG1/8-6.5TL360 | P-3.5 |



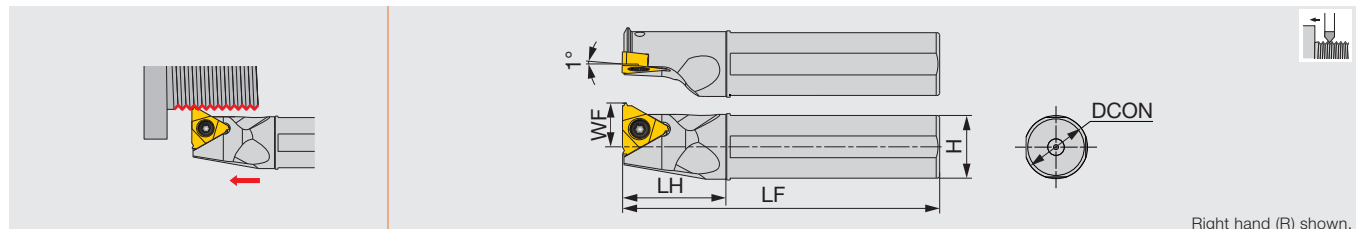
Right hand (R) shown.

| Designation | H | B | LF | LH | HF | WF | Insert |
|----------------|----|----|-----|----|----|----|-----------|
| CER/L1212H16DT | 12 | 12 | 100 | 24 | 12 | 16 | 16ER/L... |
| CER/L1616H16DT | 16 | 16 | 100 | 24 | 16 | 20 | 16ER/L... |
| CER/L2020K16DT | 20 | 20 | 125 | 24 | 20 | 25 | 16ER/L... |

A clamp set consists of a clamp and a clamping screw. A shim set consists of a shim and a shim screw to secure the shim to the shank. Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand. When using DT type, please remove either the clamp set or the insert clamping screw.

SPARE PARTS

| Designation | Clamp set | Clamping screw | Shim screw | Shim | Wrench 1 | Wrench 2 |
|-------------|-----------|----------------|------------|---------|----------|----------|
| CER/L**16DT | CSP16 | CSTB-3.5ST | DTS5-3.5 | A16-1DT | P-3.5 | T-15F |



Right hand (R) shown.

| Designation | DCON | H | LF | LH | WF | Insert |
|--------------|-------|----|-----|----|------|---------|
| JS16F-SEL16 | 16 | 15 | 85 | 25 | 11 | 16ER... |
| JS19G-SEL16 | 19.05 | 18 | 90 | 30 | 12.5 | 16ER... |
| JS19X-SEL16 | 19.05 | 18 | 120 | 30 | 12.5 | 16ER... |
| JS20G-SEL16 | 20 | 19 | 90 | 30 | 13 | 16ER... |
| JS20X-SEL16 | 20 | 19 | 120 | 30 | 13 | 16ER... |
| JS25HSEL16 | 25 | 24 | 100 | 30 | 15.5 | 16ER... |
| JS254X-SEL16 | 25.4 | 24 | 120 | 30 | 15.7 | 16ER... |

SPARE PARTS

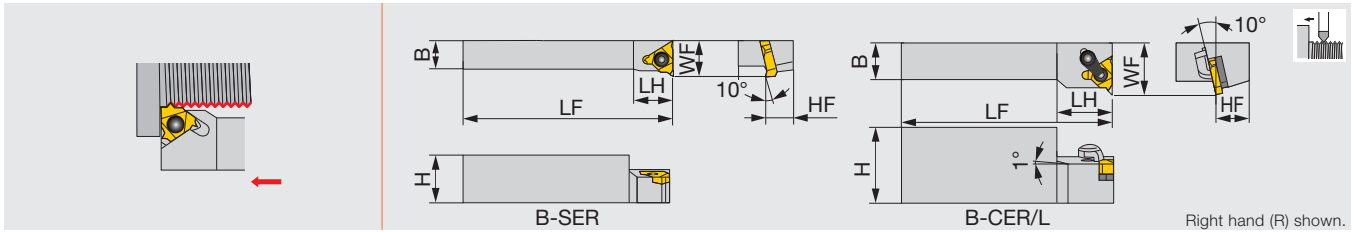
| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JS***-SEL16 | CSTB-3.5 | T-15F |

Use left-hand toolholders (L) with right-hand inserts (R).

TUNGTHREAD

B-S/CER/L

External threading toolholder for Swiss lathes



| Designation | H | B | LF | LH | HF | WF | Insert |
|--------------|----|----|-----|----|----|----|-----------|
| B-SER10H16 | 20 | 10 | 100 | 15 | 10 | 16 | 16ER... |
| B-SER12K16 | 24 | 12 | 125 | 18 | 12 | 18 | 16ER... |
| B-CER/L16M16 | 32 | 16 | 150 | 24 | 16 | 22 | 16ER/L... |

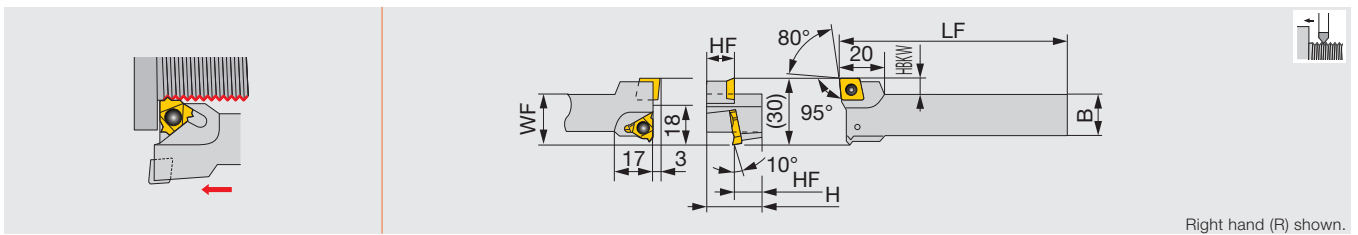
SPARE PARTS

| Designation | Clamp set | Shim set | Clamping screw | Wrench |
|--------------|-----------|----------|----------------|--------|
| B-SER**16 | - | - | CSTB-3.5 | T-15F |
| B-CER/L16M16 | CSP16 | A16-1 | - | T-15F |

TUNGTHREAD

BC-SER/L

External threading toolholder for multi-functional Swiss lathes

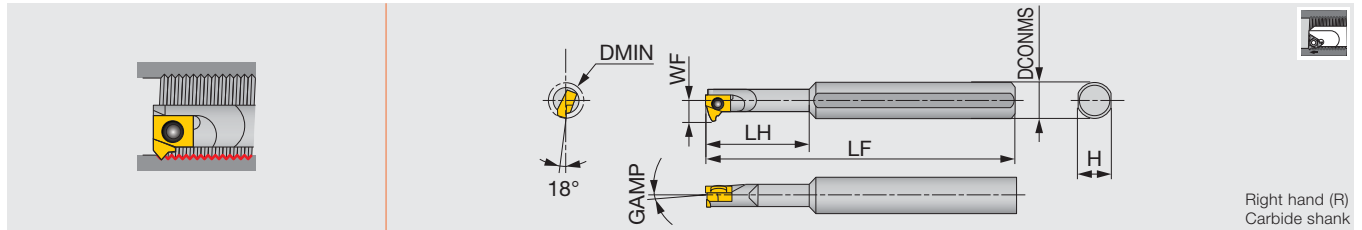


| Designation | H | B | LF | HF | WF | HBKW | Insert |
|-------------|----|----|-----|----|----|------|----------------------|
| BC-SER12K16 | 24 | 16 | 125 | 12 | 23 | 7 | 16ER..., CC*T09T3... |

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| BC-SER12K16 | CSTB-3.5 | T-15F |

Reference pages: Inserts → [5-7](#) - [5-14](#), Standard cutting conditions → [5-25](#)

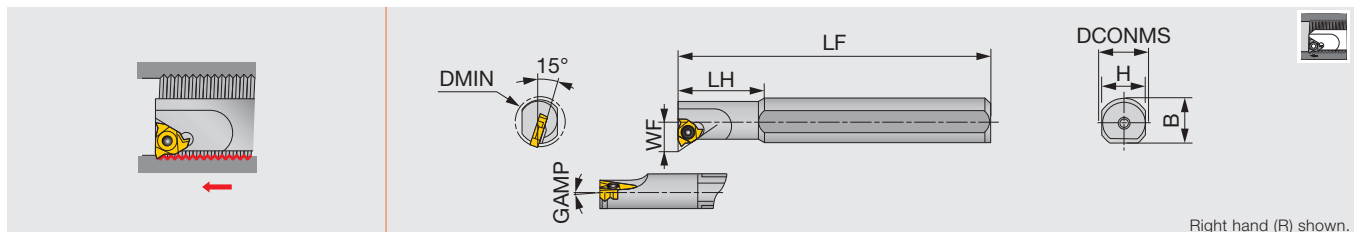


| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | GAMP | Insert |
|----------------|----------|------|--------|-----|-----|----|---|------|--------|
| SNR0006H06-2 | Steel | 8 | 8 | 4.7 | 100 | 18 | 7 | 2° | 6IR... |
| SNR0006H06-3 | Steel | 8 | 8 | 4.7 | 100 | 18 | 7 | 3° | 6IR... |
| SNR0008H06-2 | Steel | 10 | 8 | 5.7 | 100 | 18 | 7 | 2° | 6IR... |
| SNR0008H06-3 | Steel | 10 | 8 | 5.7 | 100 | 18 | 7 | 3° | 6IR... |
| SNR0006K06SC-2 | Carbide | 8 | 8 | 4.7 | 125 | 30 | 7 | 2° | 6IR... |
| SNR0006K06SC-3 | Carbide | 8 | 8 | 4.7 | 125 | 30 | 7 | 3° | 6IR... |
| SNR0008K06SC-2 | Carbide | 10 | 8 | 5.7 | 125 | 18 | 7 | 2° | 6IR... |
| SNR0008K06SC-3 | Carbide | 10 | 8 | 5.7 | 125 | 18 | 7 | 3° | 6IR... |

Use right-hand toolholders (R) with right-hand inserts (R).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-----------------|----------------|--------|
| SNR0006H06... | CSTB-2L040 | T-6F |
| SNR0008H06... | CSTB-2L | T-6F |
| SNR0006K06SC... | CSTB-2L040 | T-6F |
| SNR0008K06SC... | CSTB-2L | T-6F |



| Designation | Material | DMIN | DCONMS | WF | LF | LH | H | B | GAMP | Coolant hole | Insert |
|--------------|----------|------|--------|-----|-----|----|----|---|------|--------------|---------|
| SIR0005H06 | Steel | 6.4 | 12 | 4.3 | 100 | 12 | 11 | - | 1.5° | Without | 06IR... |
| SIR0007K08 | Steel | 7.8 | 16 | 5.3 | 125 | 18 | 15 | - | 1.5° | Without | 08IR... |
| SIR0005H06CB | Carbide | 6.4 | 6 | 4.3 | 100 | 25 | 5 | - | 1.5° | With | 06IR... |
| SIR0007K08CB | Carbide | 8 | 8 | 5.3 | 125 | 30 | 7 | - | 1.5° | With | 08IR... |

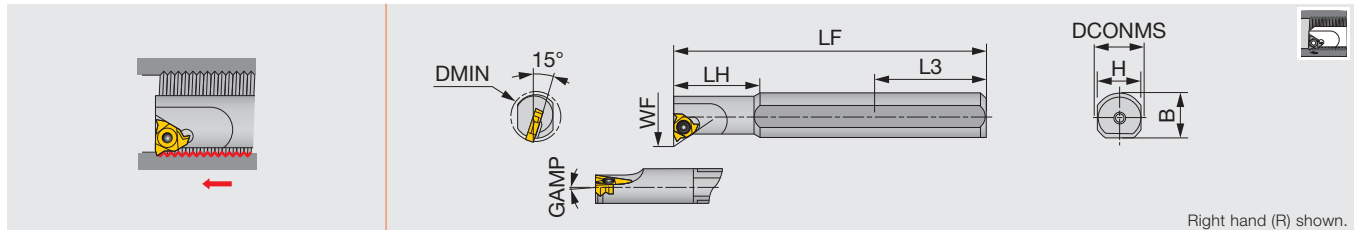
The right hand insert (**IR...type) is used for the right hand toolholders (SIR...type).
Recommend over 1 mm clearance between internal diameter of thread and each tools DMIN.

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|--------|
| SIR0005H06... | SR 14-552 | T-6F-S |
| SIR0007K08... | SR 14-558 | T-6F-S |

Applicable thread size

| Description | ISO metric | Unified IRA60 Insert | Parallel pipe IRA55 Insert |
|---------------|------------|-------------------------|-------------------------------|
| SIR0005H06... | ≥ M9 | 3/8-24 UNF | G1/8 |
| SIR0007K08... | M11 | 7/16-20 UNF | G1/4 |



Right hand (R) shown.

| Designation | Material | DMIN | DCONMS | WF | LF | LH | L3 | H | B | GAMP | Insert |
|----------------|----------|------|--------|------|-----|------|----|----|------|------|-----------|
| SNR/L0010K11 | Steel | 12 | 16 | 6.6 | 125 | 25 | - | 15 | 15.5 | 1° | 11IR/L... |
| SNR0010K11-2 | Steel | 12 | 16 | 6.6 | 125 | 25 | - | 15 | 15.5 | 2° | 11IR... |
| SNR0010K11-3 | Steel | 12 | 16 | 6.6 | 125 | 25 | - | 15 | 15.5 | 3° | 11IR... |
| SNR/L0013L11 | Steel | 15 | 16 | 8.2 | 140 | 32.5 | - | 15 | 15.5 | 1° | 11IR/L... |
| SNR0013L11-2 | Steel | 15 | 16 | 8.2 | 140 | 32.5 | - | 15 | 15.5 | 2° | 11IR... |
| SNR0013L11-3 | Steel | 15 | 16 | 8.2 | 140 | 32.5 | - | 15 | 15.5 | 3° | 11IR... |
| SNR/L0016M16 | Steel | 19 | 16 | 10.6 | 150 | 40 | - | 15 | 15.5 | 1° | 16IR/L... |
| SNR0016M16-2 | Steel | 19 | 16 | 10.6 | 150 | 40 | - | 15 | 15.5 | 2° | 16IR... |
| SNR0016M16-3 | Steel | 19 | 16 | 10.6 | 150 | 40 | - | 15 | 15.5 | 3° | 16IR... |
| SNR0010M11SC | Carbide | 13 | 10 | 7.4 | 150 | 24 | - | 9 | - | 1° | 11IR... |
| SNR0010M11SC-2 | Carbide | 13 | 10 | 7.4 | 150 | 24 | - | 9 | - | 2° | 11IR... |
| SNR0010M11SC-3 | Carbide | 13 | 10 | 7.4 | 150 | 24 | - | 9 | - | 3° | 11IR... |
| SNR0012P11SC | Carbide | 15 | 12 | 8.5 | 170 | 28 | - | 11 | - | 1° | 11IR... |
| SNR0012P11SC-2 | Carbide | 15 | 12 | 8.5 | 170 | 28 | - | 11 | - | 2° | 11IR... |
| SNR0012P11SC-3 | Carbide | 15 | 12 | 8.5 | 170 | 28 | - | 11 | - | 3° | 11IR... |

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

SPARE PARTS

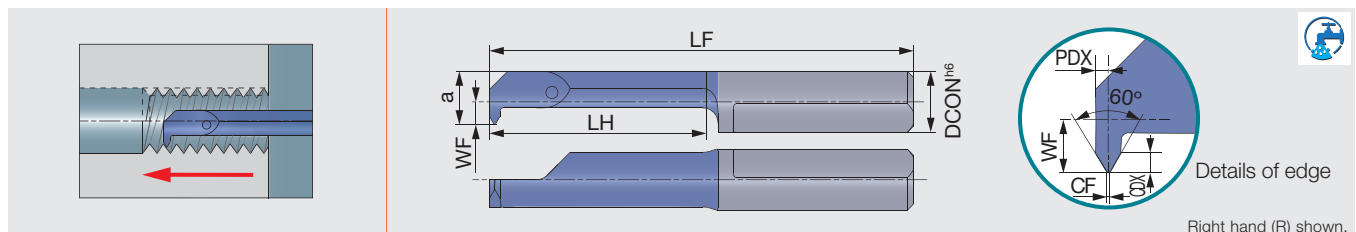


| Designation | Clamping screw | Wrench |
|-----------------|----------------|--------|
| SNR/L00**11... | CSTB-2.5 | T-8F |
| SNR/L0016M16... | CSTB-3.5 | T-15F |
| SNR00**11SC... | CSTB-2.5 | T-8F |

TINYMINI TURN

JBIR

Solid boring bar for internal threading



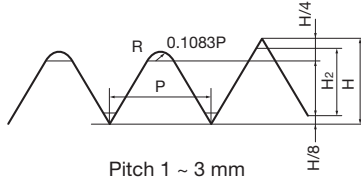
Right hand (R) shown.

| Designation | SH730 | Pitch | DMIN | CF ^{0-0.02} | DCON | WF | a | LF | LH | CDX | PDX |
|-------------------|-------|-------|------|----------------------|------|-----|-----|----|----|-----|------|
| JBIR04140050-D040 | ● | 0.5 | 4 | 0.06 | 4 | 1.5 | 3.5 | 30 | 14 | 0.3 | 0.35 |
| JBIR07140050-D050 | ● | 0.5 | 5 | 0.06 | 7 | 0.9 | 4.4 | 30 | 14 | 0.3 | 0.35 |
| JBIR07140075-D050 | ● | 0.75 | 5 | 0.09 | 7 | 0.9 | 4.4 | 30 | 14 | 0.4 | 0.45 |
| JBIR07140100-D048 | ● | 1.0 | 4.8 | 0.12 | 7 | 0.9 | 4.4 | 30 | 14 | 0.6 | 0.55 |
| JBIR07140100-D060 | ● | 1.0 | 6 | 0.12 | 7 | 1.8 | 5.3 | 30 | 14 | 0.6 | 0.55 |
| JBIR07140125-D060 | ● | 1.25 | 6 | 0.15 | 7 | 1.8 | 5.3 | 30 | 14 | 0.7 | 0.65 |
| JBIR07140150-D060 | ● | 1.5 | 6 | 0.18 | 7 | 1.8 | 5.3 | 30 | 14 | 0.8 | 0.75 |
| JBIR07140150-D070 | ● | 1.5 | 7 | 0.18 | 7 | 2.8 | 6.3 | 30 | 14 | 0.8 | 0.75 |

Reference pages: TungThread: Inserts → 5-7 - 5-14, Standard cutting conditions → 5-25, Sleeve → 4-31
 TinyMini-Turn: Standard cutting conditions → 5-26, Sleeve → 4-10

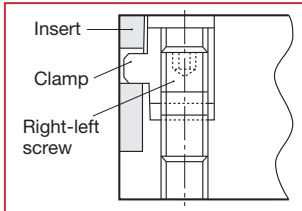
Technical Guide

- Relationship between pitch, depth of cut and number of passes for external metric threading



Note: Maximum machinable pitch is 3 mm.

Part assembly



| | P | 1 | 1.25 | 1.5 | 1.75 | 2 | 2.5 | 3 |
|------------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| | H ₂ | 0.6 | 0.76 | 0.92 | 1.09 | 1.25 | 1.57 | 1.9 |
| | H | 0.866 | 1.083 | 1.299 | 1.516 | 1.732 | 2.165 | 2.598 |
| Number of passes | 1 | 0.25 | 0.3 | 0.3 | 0.3 | 0.35 | 0.4 | 0.4 |
| | 2 | 0.15 | 0.2 | 0.25 | 0.25 | 0.25 | 0.3 | 0.35 |
| | 3 | 0.1 | 0.1 | 0.15 | 0.2 | 0.2 | 0.25 | 0.28 |
| | 4 | 0.05 | 0.06 | 0.1 | 0.1 | 0.16 | 0.2 | 0.2 |
| | 5 | 0.05 | 0.06 | 0.05 | 0.1 | 0.1 | 0.15 | 0.2 |
| | 6 | | 0.06 | 0.05 | 0.07 | 0.07 | 0.1 | 0.13 |
| | 7 | | | 0.02 | 0.05 | 0.05 | 0.07 | 0.1 |
| | 8 | | | | 0.02 | 0.02 | 0.05 | 0.1 |
| | 9 | | | | | 0.02 | 0.03 | 0.05 |
| | 10 | | | | | | 0.02 | 0.05 |
| | 11 | | | | | | | 0.02 |
| | 12 | | | | | | | 0.02 |

STANDARD CUTTING CONDITIONS

TUNGTHREAD

| ISO | Workpiece material | Hardness | Cutting speed: Vc (m/min) | | | |
|----------|--|------------|---------------------------|-----------|-----------|-----------|
| | | | AH725 | T313V | NS9530 | TH10 |
| P | High carbon steel / Alloy steel S45C, SCM440, etc. C45, 42CrMoS4, etc. | < 200HB | 80 - 180 | 100 - 200 | 150 - 200 | - |
| | | > 200HB | 60 - 160 | 100 - 150 | 100 - 170 | - |
| M | Stainless steel SUS304, etc. X5CrNi18-9, etc. | - | 50 - 130 | 70 - 130 | - | - |
| N | Non-ferrous metals | - | - | - | - | 100 - 500 |
| S | Heat-resisting alloys Ti-6Al-4V, Inconel718, etc. | - | - | - | - | 10 - 40 |
| H | Hard materials | 50 ~ 60HRC | - | - | - | 10 - 30 |

TETRAMCUT

TCT18R/L, TCT18FR

| ISO | Workpiece material | Priority | Grade | Cutting speed Vc (m/min) | Pitch (mm) | Threads per inch (TPI) |
|----------|--|---------------------|-------|--------------------------|------------|------------------------|
| P | Low carbon steels S15C, SS400, etc. C15, St42-1, etc. | First choice | SH725 | 60 - 150 | 0.4 - 2 | 64 - 12 |
| | | Fracture resistance | AH725 | 60 - 150 | 0.8 - 3 | 32 - 8 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4, etc. | First choice | SH725 | 60 - 150 | 0.4 - 2 | 64 - 12 |
| | | Fracture resistance | AH725 | 60 - 150 | 0.8 - 3 | 32 - 8 |
| M | Prehardened steels NAK80, PX5, etc. | First choice | SH725 | 60 - 150 | 0.4 - 2 | 64 - 12 |
| | | Fracture resistance | AH725 | 60 - 150 | 0.8 - 3 | 32 - 8 |
| | Stainless steel SUS304, etc. X5CrNi18-9, etc. | First choice | SH725 | 50 - 80 | 0.4 - 2 | 64 - 12 |
| | | Fracture resistance | AH725 | 50 - 80 | 0.8 - 3 | 32 - 8 |
| S | Titanium alloys Ti-6Al-4V, etc. | First choice | SH725 | 30 - 100 | 0.4 - 2 | 64 - 12 |
| | | Fracture resistance | AH725 | 30 - 100 | 0.8 - 3 | 32 - 8 |
| | Heat-resisting alloys Inconel718, etc. | First choice | SH725 | 30 - 100 | 0.4 - 2 | 64 - 12 |
| | | Fracture resistance | AH725 | 30 - 100 | 0.8 - 3 | 32 - 8 |

Reference pages: TungThread: Inserts → 5-7 - 5-14, Toolholders → 5-20 - 5-24
 TetraMini-Cut: Inserts → 5-4, Toolholders → 5-15 - 5-17

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

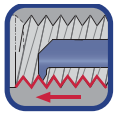
Technical Guide

STANDARD CUTTING CONDITIONS

DUOJUST CUT

| ISO | Workpiece material | Grade | Cutting speed Vc (m/min) | Pitch (mm) | Threads per inch (TPI) |
|----------|--|-------|--------------------------|------------|------------------------|
| P | Low carbon steels S15C, SS400, etc. C15, St42-1, etc. | SH725 | 50 - 200 | 0.2 - 1.5 | 127 - 16 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4, etc. | SH725 | 50 - 200 | 0.2 - 1.5 | 127 - 16 |
| | Free cutting steel SUH22, SUH23, etc. | SH725 | 50 - 200 | 0.2 - 1.5 | 127 - 16 |
| M | Stainless steel SUS304, etc. X5CrNi18-9, etc. | SH725 | 50 - 200 | 0.2 - 1.5 | 127 - 16 |
| N | Aluminium alloys A5056, A6061, etc. | SH725 | 150 - 200 | 0.2 - 1.5 | 127 - 16 |
| | Copper alloy C2600, C280C, etc. | SH725 | 100 - 200 | 0.2 - 1.5 | 127 - 16 |
| S | Titanium alloys Ti-6Al-4V, etc. | SH725 | 30 - 80 | 0.2 - 1.5 | 127 - 16 |
| | Heat-resisting alloys Inconel718, etc. | SH725 | 30 - 80 | 0.2 - 1.5 | 127 - 16 |

TINYMINI TURN



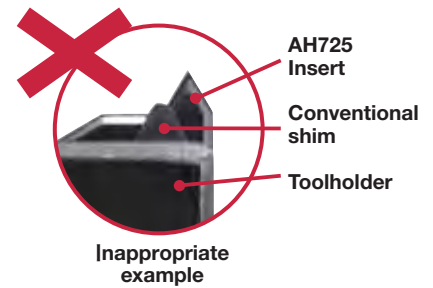
Internal threading

| ISO | Workpiece materia | Grade | Cutting speed Vc (m/min) | Number of passes Pitch (mm) | | | | |
|----------|--|-------|--------------------------|-----------------------------|--------|---------|---------|---------|
| | | | | 0.5 | 0.75 | 1 | 1.25 | 1.5 |
| P | Low carbon steels S15C, S20C, etc. C15, C20, etc. | SH730 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMoS4, etc. | SH730 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| | Prehardened steels NAK80, PX5, etc. | SH730 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| M | Stainless steel SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | SH730 | 40 - 140 | 8 | 10 | 12 | 15 | 18 |
| N | Aluminium alloys, copper alloys Si < 12% | SH730 | 90 - 200 | 6 | 8 | 10 | 12 | 15 |

Reference pages: DuoJust-Cut: Inserts → 5-5, Toolholders → 5-17 - 5-18
 TinyMini-Turn: Toolholders → 5-24

IMPORTANT - Replacement of shim

AH 725 insert has 2 types of shims according to the chipbreaker geometry. Please find an appropriate shim in the table below. When using a wrong shim, the insert seating may become unstable or the tool life may be shortened.



Interchangeable shim (Insert size: 16)

| Toolholder screw type | Lead angle | External | | Internal | |
|--|---------------|---------------------|------------------|---------------------|------------------|
| | | ① Conventional shim | ① Standard (New) | ② Conventional shim | ② Standard (New) |
| Dual clamping methods of screw-on and clamp-on | 4° | GXE16-4DT | AE16-4DT | GXN16-4DT | AN16-4DT |
| | 3° | GXE16-3DT | AE16-3DT | GXN16-3DT | AN16-3DT |
| | 2° | GXE16-2DT | AE16-2DT | GXN16-2DT | AN16-2DT |
| | 1° (Standard) | GX16-1DT | A16-1DT | GX16-1DT | A16-1DT |
| | 0° | GXE16-0DT | AE16-0DT | GXN16-0DT | AN16-0DT |
| | -1° | GXE16-99DT | AE16-99DT | GXN16-99DT | AN16-99DT |
| | -2° | GXE16-98DT | AE16-98DT | GXN16-98DT | AN16-98DT |
| Clamp-on | 4° | GXE16-4 | AE16-4 | GXN16-4 | AN16-4 |
| | 3° | GXE16-3 | AE16-3 | GXN16-3 | AN16-3 |
| | 2° | GXE16-2 | AE16-2 | GXN16-2 | AN16-2 |
| | 1° (Standard) | GXE16-1 | A16-1 | GXN16-1 | A16-1 |
| | 0° | GXE16-0 | AE16-0 | GXN16-0 | AN16-0 |
| | -1° | GXE16-99 | AE16-99 | GXN16-99 | AN16-99 |
| | -2° | GXE16-98 | AE16-98 | GXN16-98 | AN16-98 |

Shim to be replaced (Insert size: 16)

| Thread | External | | | Internal | | |
|--------|-------------|-------|---|-------------|-------|---|
| | Designation | Grade | Replacement | Designation | Grade | Replacement |
| ISO | | | ① Conventional shim ① Standard (New) | 16IR15ISO-B | AH725 | ② Conventional shim ② Standard (New) |
| | | | | 16IR17ISO-B | AH725 | |
| | | | | 16IR20ISO-B | AH725 | |
| 55° | 16ERAG55-B | AH725 | | 16IRAG55-B | AH725 | |
| | | | | 16IRG55-B | AH725 | |
| 60° | 16ERA60-B | AH725 | | 16IRAG60-B | AH725 | |
| | | | | 16IRA60-B | AH725 | |
| | | | | 16IRG60-B | AH725 | |
| UN | | | | 16IR18UN-B | AH725 | |
| | | | | 16IR16UN-B | AH725 | |
| | | | | 16IR14UN-B | AH725 | |
| W | | | | 16IR16W-B | AH725 | |
| | | | | 16IR14W-B | AH725 | |
| PT | | | | 16IR14PT-B | AH725 | |
| NPT | 16ER8NPT-B | AH725 | | 16IR14NPT-B | AH725 | |
| | | | 16IR115NPT-B | AH725 | | |

6. Parting, Grooving

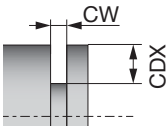
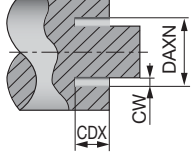
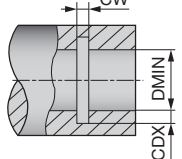











Main products

| | | |
|---|--|------|
|  | <p>DUO^{JUST}CUT</p> <p> Innovative clamping system for high rigidity in parting CW = 1 - 2 mm</p> | 6-7 |
|  | <p>TUNG^{CUT}</p> <p> Multi-functional tool series for various grooving operations CW = 1.4 - 6 mm</p> | 6-12 |
|  | <p>TETRA^MCUT</p> <p> Unique insert pocket geometry for grooving with high quality and precision CW = 0.33 - 3 mm</p> | 6-32 |
|  | <p>TETRA^{FORCE}CUT</p> <p> 4-cornered insert with good clamping rigidity for highly precise grooving and parting CW = 0.5 - 3.18 mm</p> | 6-41 |
|  | <p>J-SERIES JSTG</p> <p>Tool series with 3-cornered inserts. CW = 0.33 - 3 mm</p> | 6-47 |
|  | <p>J-SERIES JSVG</p> <p>Tool series with 2-cornered inserts CW = 0.33 - 2 mm</p> | 6-53 |
|  | <p>J-SERIES JSXG</p> <p>Tool series with 2-cornered inserts for parting CW = 0.7- 2 mm</p> | 6-31 |
|  | <p>J-SERIES JCCWS</p> <p>Tool series with 2-cornered inserts for parting CW = 2 mm</p> | 6-29 |
|  | <p>J-SERIES JCGWS</p> <p>Tool series with 2-cornered inserts for parting CW = 2 mm</p> | 6-30 |
|  | <p>TUNG^{HEAVY}GROOVE</p> <p> Highly rigid clamping for wide grooving and profiling in one pass CW = 10 - 20 mm</p> | 6-54 |
|  | <p>SNG</p> <p> Internal grooving CW = 1 - 3.5 mm</p> | 6-56 |

Parting, Grooving - Quick Guide

| Max. parting off dia. CUTDIA | | Shape | | | |
|------------------------------|--|--|--|--|--|
| ~ $\phi 6$ | | DUO^{UST}CUT JSXXR/L Insert : JXPG06R/L 6-7 | TETRAM^{UST}CUT STCR/L-18 Insert : TC*18 6-32 | | |
| ~ $\phi 12$ | | DUO^{UST}CUT JSXXR/L Insert : JXPG12R/L 6-7 | J-SERIES JSXGR/L Insert : JXGR/L 6-31 | | |
| ~ $\phi 12.8$ | | TETRA^{FCUT} STCR/L-27 Insert : TC*27 6-41 | | | |
| ~ $\phi 16$ | | DUO^{UST}CUT JSXXR/L Insert : JXPG16R/L 6-7 | TUNG^{UST}CUT JCTER/L Insert : DG*/DT* 6-12 | | |
| ~ $\phi 20$ | | DUO^{UST}CUT JSXXR/L Insert : JXPG20R/L 6-7 | TUNG^{UST}CUT JCTER/L Insert : DG*/DT* 6-12 | J-SERIES JCCWSR/L Insert : JCC 6-29 | J-SERIES JCGWSR/L Insert : JCG 6-30 |
| ~ $\phi 32$ | | TUNG^{UST}CUT JCTER/L Insert : DGS/M 6-12 | | | |
| ~ $\phi 38$ | | TUNG^{UST}CUT CGER/L Insert : DGS/M 6-14 | TUNG^{UST}CUT JCTER/L2012 Insert : DGS/M 6-12 | | |
| ~ $\phi 55$ | | TUNG^{UST}CUT CGER/L Insert : SGS/M 6-14 | TUNG^{UST}CUT CGP Insert : SGS/M 6-16 | | |

| Series | Insert | External grooving | Face grooving | Internal grooving |
|--------------------------------|---|---|--|---|
| | |  |  |  |
| TETRAMCUT STCR/L-18 |  | CW: 0.33 - 3 mm CDX: 3.5 mm 6-32 | | |
| TETRAFCUT STCR/L-27 |  | CW: 0.5 - 3.18 mm CDX: 6.4 mm 6-41 | | |
| J-SERIES JSTG |  | CW: 0.33 - 3 mm CDX: 2.6 mm 6-47 | | |
| TUNGCUT JCTER/L |  | CW: 1.4 - 6 mm CDX: 25 mm 6-12 | CW: 3 - 6 mm CDX: 5.5 mm DAXN: 26 mm 6-12 | |
| J-SERIES JSVG |  | CW: 0.33 - 2 mm CDX: 5.5 mm 6-53 | | |
| GBR/L |  | CW: 0.33 - 4.5 mm CDX: 5 mm 6-51 | | |
| TUNGHGROOVE SPGN |  | CW: 10 - 20 mm 6-54 | | |
| TINYM^{INI}TURN |  | | CW: 1 - 3 mm CDX: 1.5 - 30 mm DAXN: 6 mm 4-9 | CW: 0.5 - 2 mm CDX: 0.4 - 2.5 mm DMIN: 2 mm 4-8 |
| SNGR/L |  | | | CW: 1 - 3.5 mm CDX: 1.5 - 3 mm DMIN: 8 mm 6-56 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

1

2

3

4

5

6

7

8

9

TUNG CUT

Multi-functional grooving tool series with excellent versatility

New modular holder system enhances versatility of existing monoblock holder and TungCap (PSC) lines. High-pressure coolant system improves chip flow and tool life.



■ High clamping rigidity

For stable tool life and accuracy

Clamping system

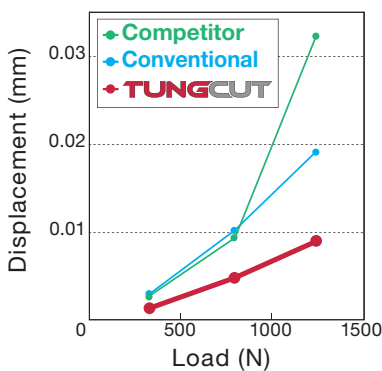


Stable and safe contact areas



High repeatability and durability due to long pocket!

Minimizes cutting edge displacement



Measuring point

Innovative clamping system ensures stability in **parting-off operations**

Double-edged parting insert with **3D chipbreaker** and secure insert clamping enables parting up to 20 mm diameter with **superior surface integrity**



■ **4 types of inserts** are available for various parting-off diameters and can be mounted **in the same pocket of the toolholder**.

- Optimized overhang length for **stable machining**

Regular-type toolholder



Toolholder for sub-spindle



Max. parting dia.

• $\varnothing 6$ mm

• $\varnothing 12$ mm

• $\varnothing 16$ mm

• $\varnothing 20$ mm



New

3D chipbreaker

-

New JXPS12

New JXPS16

New JXPS20

Ground chipbreaker JXPG06

JXPG12

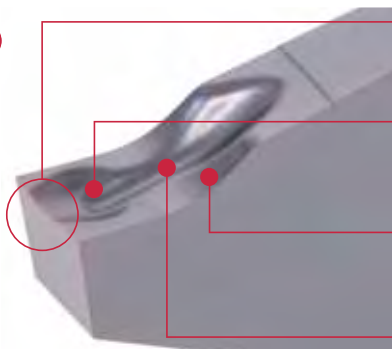
JXPG16

JXPG20

■ **Innovative dual-rake JXPS chipbreaker enables effective chip control**

- Chip entanglement and other unwanted chip issues are eliminated
- **Excellent surface integrity** is achieved as chips are compressed, curled and effectively removed away from the surface

New



Concave cutting edge

Rolls up and compresses the chip at the entry of the cut

Dimple

Curles the chip allowing effective chip evacuation

Prime chipbreaker

Directs the chip away from the surface ensuring good surface finishing

Coolant route

TETRAMCUT

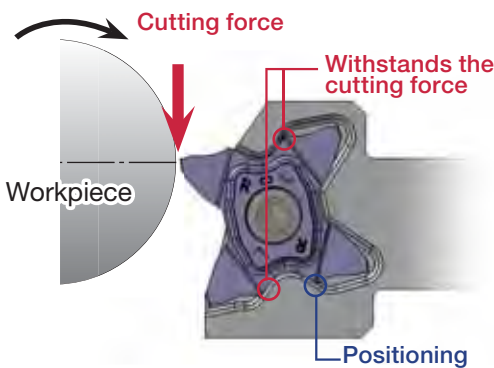
Multi-purpose grooving insert with economical 4-cutting edges

Influential grooving lines, **TetraMini-Cut** and **TetraForce-Cut** offer ground inserts with a robust clamping structure for exceptional stability and repeatability



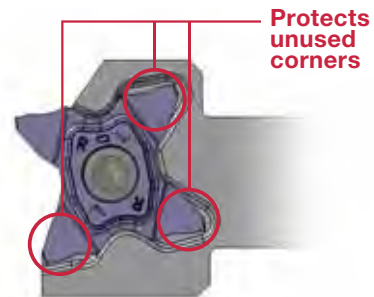
Unique 3-point clamping system

The unique pocket design provides accurate indexing repeatability of the cutting edge height.



The insert pocket protects all unused cutting edges

Strong and stable clamping design protects unused insert corners from damage during operation.

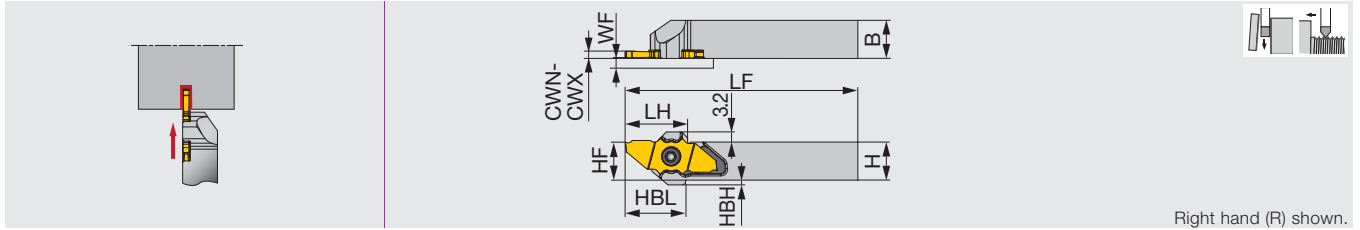


- TCL-style chipbreaker for improved chip control at low feed rates
- Full profile threading inserts are added. Thread pitch : 0.5 mm to 1.5 mm
- 3 different types of chipbreakers each with dedicated edge preparation
- Through-coolant supply system (tool code suffix "-CHP") to ensure high efficient machining
- Toolholders featuring a hose-free, direct through-coolant supply system



Reference pages: [6-41](#), [5-4](#)

Parting toolholder, for Swiss lathes



| Designation | CWN | CWX | H | B | LF** | LH** | HF | WF | HBL** | HBH | Insert | Torque* |
|----------------|-----|-----|----|----|------|-------|----|-----|-------|-----|-----------------------------|---------|
| JSXXR/L1010X09 | 1 | 2 | 10 | 10 | 120 | 19.65 | 10 | 0.2 | 19 | 3 | JX*G06...,12...,16...,20... | 1.2 |
| JSXXR/L1212F09 | 1 | 2 | 12 | 12 | 85 | 19.65 | 12 | 0.2 | 19 | 1.5 | JX*G06...,12...,16...,20... | 1.2 |
| JSXXR/L1212X09 | 1 | 2 | 12 | 12 | 120 | 19.65 | 12 | 0.2 | 19 | 1.5 | JX*G06...,12...,16...,20... | 1.2 |
| JSXXR/L1616X09 | 1 | 2 | 16 | 16 | 120 | 19.65 | 16 | 0.2 | - | - | JX*G06...,12...,16...,20... | 1.2 |
| JSXXR/L2020H09 | 1 | 2 | 20 | 20 | 100 | 22.5 | 20 | 0.2 | - | - | JX*G06...,12...,16...,20... | 1.2 |

*Torque: Recommended clamping torque (N·m)

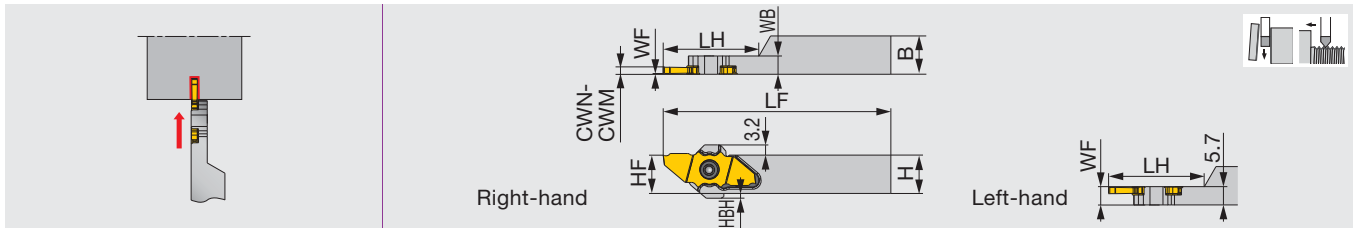
**LF (Functional Length) LH (Head Length), and HBL (Head-Bottom offset Length) values shown above are true with JXPG16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX*G12... and JXPG20...inserts, and 4 mm shorter for JXPG06... insert.

Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| JSXXR... | CSTC-4L100DL | T-1008/5 |
| JSXXL... | CSTC-4L100DR | T-1008/5 |

Parting toolholder, for Swiss lathes (for sub spindle)



| Designation | CWN | CWM | H | B | LF** | LH** | HF | WF | HBH | Insert | Torque* |
|------------------|-----|-----|----|----|------|------|----|---------|-----|-----------------------------|---------|
| JSXXR/L1010X09-S | 1 | 2 | 10 | 10 | 120 | 26 | 10 | 0.2/5.5 | 3 | JX*G06...,12...,16... | 1.2 |
| JSXXR/L1212F09-S | 1 | 2 | 12 | 12 | 85 | 26 | 12 | 0.2/5.5 | 1.5 | JX*G06...,12...,16... | 1.2 |
| JSXXR/L1212X09-S | 1 | 2 | 12 | 12 | 120 | 30 | 12 | 0.2/5.5 | 1.5 | JX*G06...,12...,16... | 1.2 |
| JSXXR/L1616X09-S | 1 | 2 | 16 | 16 | 120 | 30 | 16 | 0.2/5.5 | - | JX*G06...,12...,16...,20... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**LF (Functional Length) and LH (Head Length) values shown above are true with JXPG16... insert. LF and LH will be 2 mm shorter than the above values with JX*G12... insert, and 4 mm shorter for JXPG06... insert. LF, LH will all be 2 mm shorter with JXPG20... insert.

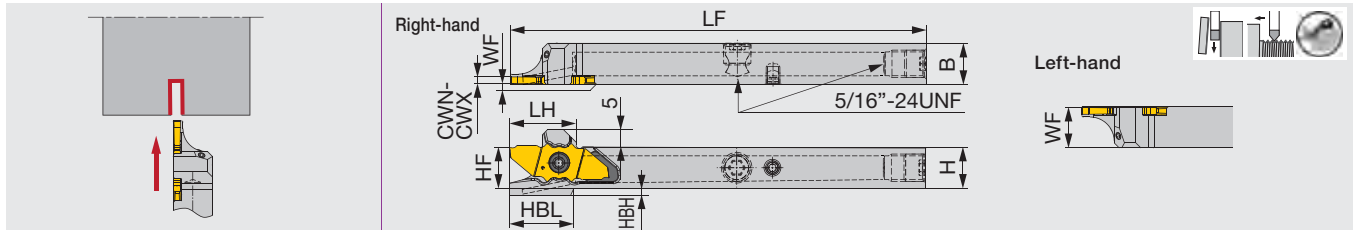
***JXPG20... insert will not fit.

Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|----------|
| JSXXR****09-S | CSTC-4L055DL | T-1008/5 |
| JSXXL****09-S | CSTC-4L055DR | T-1008/5 |

Parting tool with high pressure coolant capability for swiss lathes



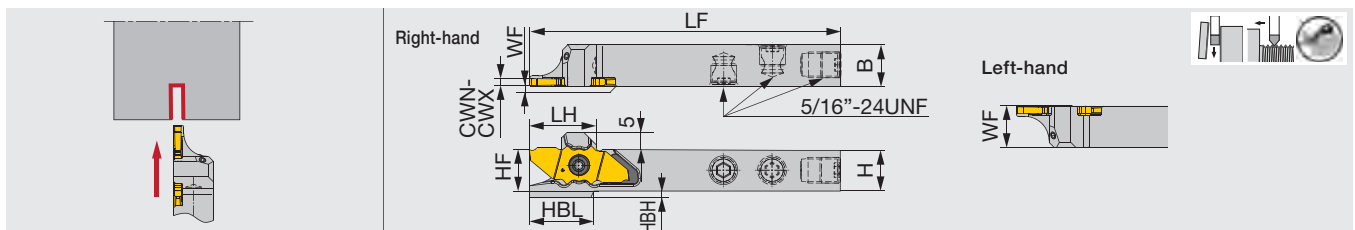
| Designation | CWN | CWX | H | B | LF** | LH** | HF | WF | HBL** | HBH | Insert | Torque* |
|---------------------|-----|-----|----|----|----------|-------|----|-----|--------|------|------------------------------|---------|
| JSXXR/L1012H09-CHP | 1 | 2 | 10 | 12 | 0.2/11.8 | ≤ 102 | 10 | 3 | ≤ 19.2 | 18.7 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR/L1212X09-CHP | 1 | 2 | 12 | 12 | 0.2/11.8 | ≤ 120 | 12 | 2 | ≤ 19.4 | 18.8 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR1616X09-CHP*** | 1 | 2 | 16 | 16 | 0.2/15.8 | ≤ 120 | 16 | 2.5 | ≤ 19.4 | 18.7 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR/L1616X09B-CHP | 1 | 2 | 16 | 16 | 0.2/15.8 | ≤ 120 | 16 | - | ≤ 19.4 | 18.7 | JX*G06...,12...,16..., 20... | 1.2 |

*Torque: Recommended clamping torque (N·m)
 LF (Functional Length) LH (Head Length), and HBL (Head-Bottom offset Length) values shown above are true with JX16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.
 ***To be replaced with the new design
 Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).
 Compatible to the direct internal coolant supply system without the use of external coolant hose.

| Designation | Clamping screw | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench 3 |
|-------------|----------------|----------|----------------|----------|----------------|----------|
| JSXXR... | CSTC-4L100DL | T-1008/5 | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |
| JSXXL... | CSTC-4L100DR | T-1008/5 | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Parting-off widths : 1 mm and 1.5 mm (for a max parting diameter of ø6 mm)
 : 1.5 mm and 2 mm (for max parting diameters of ø12 mm, ø16 mm and ø20 mm)
 Threading pitch range : 0.2 mm - 1.5 mm

Parting tool with high pressure coolant capability for swiss lathes



| Designation | CWN | CWX | H | B | LF** | LH** | HF | WF | HBL** | HBH | Insert | Torque* |
|--------------------|-----|-----|----|----|------|--------|----|----------|-------|-----|------------------------------|---------|
| JSXXR/L1212F09-CHP | 1 | 2 | 12 | 12 | 85 | ≤ 19.4 | 12 | 0.2/11.8 | - | 2 | JX*G06...,12...,16..., 20... | 1.2 |

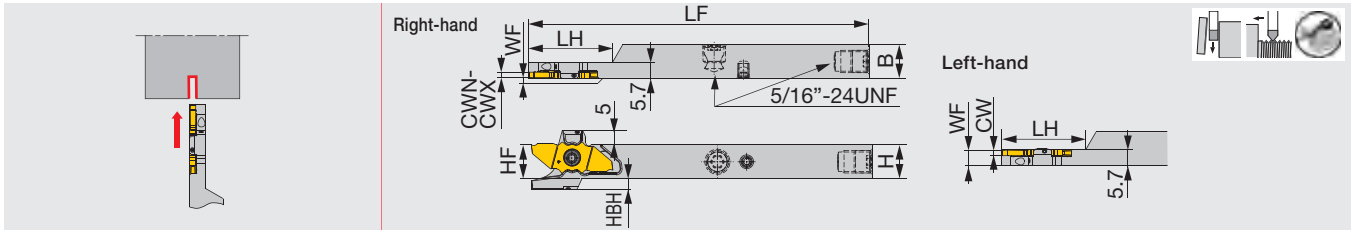
*Torque: Recommended clamping torque (N·m)
 **LF (Functional Length) LH (Head Length), and HBL (Head-Bottom offset Length) values shown above are true with JXPG16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX*G12... and JXPG20... inserts, and 4 mm shorter for JXPG06... insert.
 Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

| Designation | Clamping screw | Wrench 1 | Coolant plug | Wrench 2 |
|-------------|----------------|----------|----------------|----------|
| JSXXR... | CSTC-4L100DL | T-1008/5 | SR5/16UNFTL360 | P-4 |
| JSXXL... | CSTC-4L100DR | T-1008/5 | SR5/16UNFTL360 | P-4 |

Parting-off widths : 1 mm and 1.5 mm (for a max parting diameter of ø6 mm)
 : 1.5 mm and 2 mm (for max parting diameters of ø12 mm, ø16 mm and ø20 mm)
 Threading pitch range : 0.2 mm - 1.5 mm

Referent pages : Inserts, Standard cutting conditions → **6-10**
 Parts for coolant hose → **3-61**

Parting toolholder with high pressure coolant capability, for Swiss lathes (for sub spindle)



| Designation | CWN | CWX | H | B | LF** | LH** | HF | WF | HBH | Insert | Torque* |
|-------------------------|-----|-----|----|----|------|------|----|---------|-----|------------------------------|---------|
| JSXXR/L1212X09-S-CHP*** | 1 | 2 | 12 | 12 | 120 | 30 | 12 | 0.2/5.5 | 4 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR/L1212X09B-S-CHP | 1 | 2 | 12 | 12 | 120 | 30 | 12 | 0.2/5.5 | 2 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR/L1616X09-S-CHP*** | 1 | 2 | 16 | 16 | 120 | 30 | 16 | 0.2/5.5 | 1.5 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR/L1616X09B-S-CHP | 1 | 2 | 16 | 16 | 120 | 30 | 16 | 0.2/5.5 | - | JX*G06...,12...,16..., 20... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**LF (Overall Tool Length) and LH (Head Length) values shown above are true with JXPG16... insert. Both LF and LH will be 2 mm shorter than the above value with JX*G12... and JXPG20... inserts; 4 mm shorter with JXPG06... insert.

***To be replaced with the new design

Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

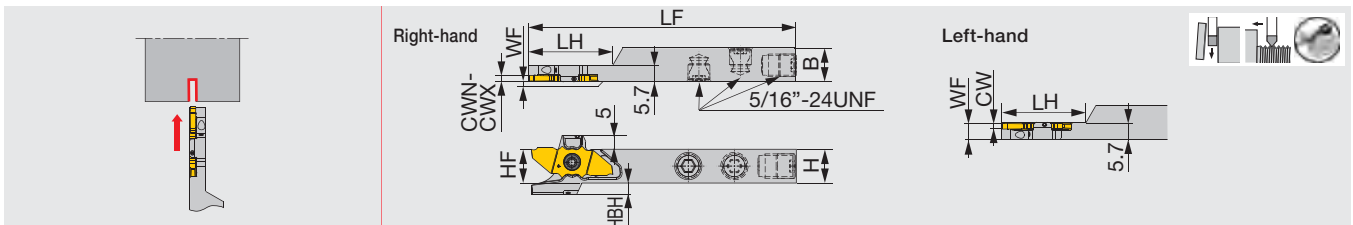
Compatible to the direct internal coolant supply system without the use of external coolant hose.

| Designation | Clamping screw | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench 3 |
|----------------|----------------|----------|----------------|----------|----------------|----------|
| JSXXR***-S-CHP | CSTC-4L055DL | T-1008/5 | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |
| JSXXL***-S-CHP | CSTC-4L055DR | T-1008/5 | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

Parting-off widths : 1 mm and 1.5 mm (for a max parting diameter of ø6 mm)

: 1.5 mm and 2 mm (for max parting diameters of ø12 mm, ø16 mm and ø20 mm)

Parting toolholder with high pressure coolant capability, for Swiss lathes (for sub spindle)



| Designation | CWN | CWX | H | B | LF** | LH** | HF | WF | HBH | Insert | Torque* |
|-------------------------|-----|-----|----|----|------|------|----|---------|-----|------------------------------|---------|
| JSXXR/L1212F09-S-CHP*** | 1 | 2 | 12 | 12 | 85 | 26 | 12 | 0.2/5.5 | 4 | JX*G06...,12...,16..., 20... | 1.2 |
| JSXXR/L1212F09B-S-CHP | 1 | 2 | 12 | 12 | 85 | 30 | 12 | 0.2/5.5 | 2 | JX*G06...,12...,16..., 20... | 1.2 |

*Torque: Recommended clamping torque (N·m)

**LF (Overall Tool Length) and LH (Head Length) values shown above are true with JXPG16... insert. Both LF and LH will be 2 mm shorter than the above value with JX*G12... and JXPG20... inserts; 4 mm shorter with JXPG06... insert.

***To be replaced with the new design

Use the right-hand insert (JX***R...) for a right-hand holder (JSXXR...); the left-hand insert (JX***L...) for a left-hand holder (JSXXL...).

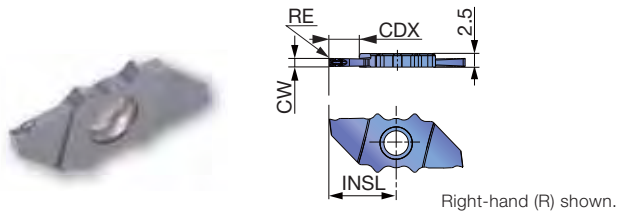
| Designation | Clamping screw | Wrench 1 | Coolant plug | Wrench 2 |
|----------------|----------------|----------|----------------|----------|
| JSXXR***-S-CHP | CSTC-4L055DL | T-1008/5 | SR5/16UNFTL360 | P-4 |
| JSXXL***-S-CHP | CSTC-4L055DR | T-1008/5 | SR5/16UNFTL360 | P-4 |

Parting-off widths : 1 mm and 1.5 mm (for a max parting diameter of ø6 mm)

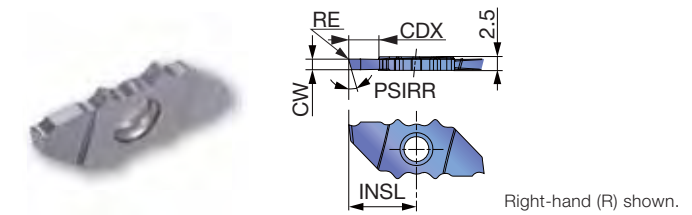
: 1.5 mm and 2 mm (for max parting diameters of ø12 mm, ø16 mm and ø20 mm)

INSERT

JXPS**R/L-F (with 3D chipbreaker, sharp edge)



JXPG**R/L-F (Sharp edge)



| Designation | CW ±0.025 | RE | SH725 | | CUTDIA | CDX* | INSL |
|--------------|--------------|------|-------|---|--------|------|------|
| | | | R | L | | | |
| JXPS12R/L10F | 1 | 0.05 | ● | ● | 12 | 6.5 | 12.5 |
| JXPS12R/L15F | 1.5 | 0.05 | ● | ● | 12 | 6.5 | 12.5 |
| JXPS16R/L15F | 1.5 | 0.05 | ● | ● | 16 | 8.5 | 14.5 |
| JXPS20R/L20F | 2 | 0.05 | ● | ● | 20 | 10.5 | 16.5 |

*Max grooving depth (CDX) varies depending on workpiece diameters. (Refer to the table on p.14 (TR504-G) for details)

● : Line up
CUTDIA: Max. parting-off dia.
Package quantity = 5 pcs.

| Designation | CW ±0.025 | RE | SH725 | | CUTDIA | CDX* | INSL | PSIRR/L |
|-----------------|--------------|------|-------|---|--------|------|------|---------|
| | | | R | L | | | | |
| JXPG06R/L10F | 1 | 0.05 | ● | ● | 6 | 3.5 | 10.5 | 0° |
| JXPG06R/L15F | 1.5 | 0.05 | ● | ● | 6 | 3.5 | 10.5 | 0° |
| JXPG06R/L10F-15 | 1 | 0.05 | ● | ● | 6 | 3.5 | 10.5 | 15° |
| JXPG06R/L15F-15 | 1.5 | 0.05 | ● | ● | 6 | 3.5 | 10.5 | 15° |
| JXPG12R/L15F | 1.5 | 0.05 | ● | ● | 12 | 6.5 | 12.5 | 0° |
| JXPG12R/L20F | 2 | 0.05 | ● | ● | 12 | 6.5 | 12.5 | 0° |
| JXPG12R/L15F-15 | 1.5 | 0.05 | ● | ● | 12 | 6.5 | 12.5 | 15° |
| JXPG12R/L20F-15 | 2 | 0.05 | ● | ● | 12 | 6.5 | 12.5 | 15° |
| JXPG16R/L15F | 1.5 | 0.05 | ● | ● | 16 | 8.5 | 14.5 | 0° |
| JXPG16R/L20F | 2 | 0.05 | ● | ● | 16 | 8.5 | 14.5 | 0° |
| JXPG16R/L15F-15 | 1.5 | 0.05 | ● | ● | 16 | 8.5 | 14.5 | 15° |
| JXPG16R/L20F-15 | 2 | 0.05 | ● | ● | 16 | 8.5 | 14.5 | 15° |
| JXPG20R/L15F | 1.5 | 0.05 | ● | ● | 20 | 10.5 | 16.5 | 0° |
| JXPG20R/L20F | 2 | 0.05 | ● | ● | 20 | 10.5 | 16.5 | 0° |
| JXPG20R/L15F-15 | 1.5 | 0.05 | ● | ● | 20 | 10.5 | 16.5 | 15° |
| JXPG20R/L20F-15 | 2 | 0.05 | ● | ● | 20 | 10.5 | 16.5 | 15° |

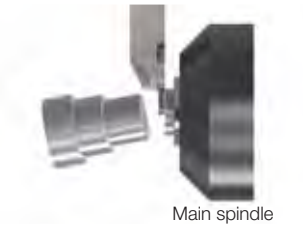
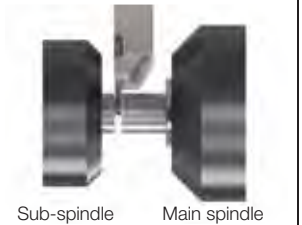
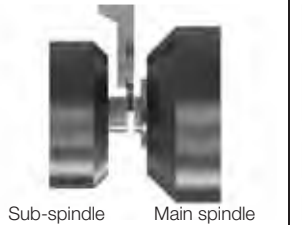
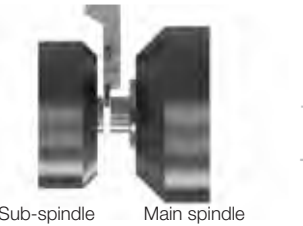
*Max grooving depth (CDX) varies depending on workpiece diameters. (Refer to the table on p.14 (TR504-G) for details)

● : Line up
CUTDIA: Max. parting-off dia.
Package quantity = 5 pcs.

STANDARD CUTTING CONDITIONS (Parting-off)

| ISO | Workpiece materials | Grades | Cutting speed Vc (m/min) | Feed f (mm/rev) |
|-----|---|--------|-----------------------------|--------------------|
| P | Low carbon steels S15C, SS400, etc. C15, C20, etc. | SH725 | 50 - 200 | 0.01 - 0.05 |
| | Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMo4, etc. | SH725 | 50 - 200 | 0.01 - 0.05 |
| | Free cutting steels SUH22, SUH23, etc. | SH725 | 50 - 200 | 0.01 - 0.05 |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc. | SH725 | 50 - 200 | 0.01 - 0.05 |
| N | Aluminium alloys A5056, A6061, etc. | SH725 | 150 - 200 | 0.01 - 0.05 |
| | Copper alloy C2600, C280C, etc. | SH725 | 100 - 200 | 0.01 - 0.05 |
| S | Titanium alloys Ti-6Al-4V, etc. | SH725 | 30 - 80 | 0.01 - 0.05 |
| | Superalloys Inconel718, etc. | SH725 | 30 - 80 | 0.01 - 0.05 |

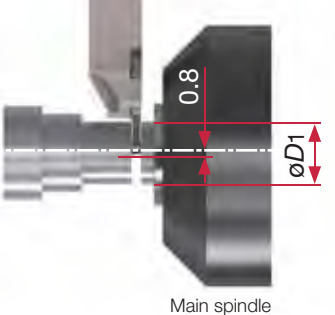
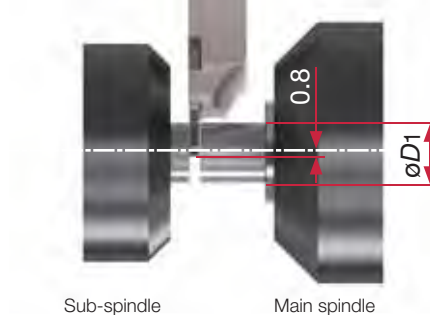
HOW TO SELECT TOOLS

| Application | Large-diameter machining of workpiece with rigidity | | Small-diameter machining of workpiece with short overhang | |
|--|---|---|---|------------------------------------|
| | Main-spindle tooling | Sub-spindle tooling | Sub-spindle tooling | |
| | | | Workpiece with long overhang at the side of sub-spindle for the process after parting-off | Short workpiece with low rigidity |
|  <p>Main spindle Position of parting-off is at the side of the main spindle</p> |  <p>Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle</p> |  <p>Sub-spindle Main spindle Position of parting-off is at the side of the main spindle</p> |  <p>Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle</p> | |
| Toolholder | R-hand (JSXXR type) | L-hand (JSXXL type) | R-hand (JSXXR-S type) | L-hand (JSXXL-S type) |
| Insert | Right-hand insert with lead angle to remove center core (JXPG**R***-15 type) | Left-hand insert (JXPG**L*** type) | Right-hand insert (JXPG**R*** type) | Left-hand insert (JXPG**L*** type) |

HOW TO SELECT TOOLHOLDERS FOR SUB-SPINDLE

| Sub-spindle dia. | Parting-off dia. | B | LF | Insert | Toolholder |
|------------------|------------------|----|-----|---------|-----------------------|
| ø40 | ~ ø6 | 10 | 116 | JXPG06* | JSXXR/L1010X09-S |
| ø40 | ~ ø6 | 12 | 81 | JXPG06* | JSXXR/L1212F09-S |
| ø40 | ~ ø12 | 10 | 118 | JXPG12* | JSXXR/L1010X09-S |
| ø40 | ~ ø12 | 12 | 83 | JXPG12* | JSXXR/L1212F09-S |
| ø40 | ~ ø16 | 10 | 120 | JXPG16* | JSXXR/L1010X09-S |
| ø40 | ~ ø16 | 12 | 85 | JXPG16* | JSXXR/L1212F09-S |
| ø40 | ~ ø20 | 12 | 87 | JXPG20* | JSXXR/L1212F09B-S-CHP |
| ø50 | ~ ø6 | 12 | 116 | JXPG06* | JSXXR/L1212X09-S |
| ø50 | ~ ø6 | 16 | 116 | JXPG06* | JSXXR/L1616X09-S |
| ø50 | ~ ø12 | 12 | 118 | JXPG12* | JSXXR/L1212X09-S |
| ø50 | ~ ø12 | 16 | 118 | JXPG12* | JSXXR/L1616X09-S |
| ø50 | ~ ø16 | 12 | 85 | JXPG16* | JSXXR/L1212F09-S |
| ø50 | ~ ø16 | 12 | 120 | JXPG16* | JSXXR/L1212X09-S |
| ø50 | ~ ø16 | 16 | 120 | JXPG16* | JSXXR/L1616X09-S |
| ø50 | ~ ø20 | 12 | 87 | JXPG20* | JSXXR/L1212F09B-S-CHP |
| ø50 | ~ ø20 | 12 | 122 | JXPG20* | JSXXR/L1212X09B-S-CHP |
| ø50 | ~ ø20 | 16 | 122 | JXPG20* | JSXXR/L1616X09-S |

MAX. PARTING-OFF DIA. & DEPTH

| Main-spindle tooling | Sub-spindle tooling |
|---|--|
|  <p>Main spindle</p> |  <p>Sub-spindle Main spindle</p> |

There will be no tool-workpiece interference when parting off the workpiece with the cutting edge position apart from the workpiece center by 0.8 mm or more.

Grade 1

Insert 2

Ext. Toolholder 3

Int. Toolholder 4

Threading 5

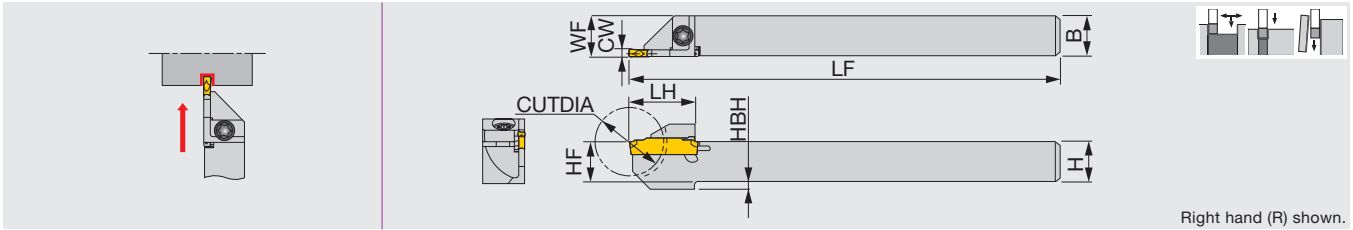
Grooving 6

Endmill 7

Drilling Tool 8

Technical Reference 9

External grooving and parting toolholder, for Swiss lathes



| Designation | CW | Seat size | CUTDIA | H | B | LF | LH | HF | WF ⁽¹⁾ | HBH | Torque* |
|--------------------|-----|-----------|--------|----|----|-----|------|----|-------------------|-----|---------|
| JCTER/L1010X1.4T10 | 1.4 | 1 | 20 | 10 | 10 | 120 | 18 | 10 | 10.2 | - | 3 |
| JCTER/L1010-1.4T10 | 1.4 | 1 | 20 | 10 | 10 | 125 | 18 | 10 | 10.2 | - | 3 |
| JCTER/L1212F1.4T12 | 1.4 | 1 | 24 | 12 | 12 | 85 | 19.5 | 12 | 12.2 | - | 3 |
| JCTER/L1212X1.4T12 | 1.4 | 1 | 24 | 12 | 12 | 120 | 19.5 | 12 | 12.2 | - | 3 |
| JCTER/L1212-1.4T12 | 1.4 | 1 | 24 | 12 | 12 | 125 | 19.5 | 12 | 12.2 | - | 3 |
| JCTER/L1414-1.4T12 | 1.4 | 1 | 24 | 14 | 14 | 125 | 19.5 | 14 | 14.2 | - | 3 |
| JCTER/L1616X1.4T16 | 1.4 | 1 | 32 | 16 | 16 | 120 | 24 | 16 | 16.2 | - | 3 |
| JCTER/L1010X2T10 | 2 | 2 | 20 | 10 | 10 | 120 | 19 | 10 | 10.1 | 2 | 3 |
| JCTER/L1212F2T12 | 2 | 2 | 24 | 12 | 12 | 85 | 19 | 12 | 12.1 | 2 | 3 |
| JCTER/L1212X2T12 | 2 | 2 | 24 | 12 | 12 | 120 | 19 | 12 | 12.1 | 2 | 3 |
| JCTER/L1414-2T12 | 2 | 2 | 24 | 14 | 14 | 125 | 19 | 14 | 14.1 | - | 3 |
| JCTER/L1616X2T16 | 2 | 2 | 32 | 16 | 16 | 120 | 24 | 16 | 16.1 | - | 3 |
| JCTER/L1212F3T12 | 3 | 3 | 24 | 12 | 12 | 85 | 19 | 12 | 12.3 | 2 | 3 |
| JCTER/L1212X3T12 | 3 | 3 | 24 | 12 | 12 | 120 | 19 | 12 | 12.3 | 2 | 3 |
| JCTER/L1616X3T16 | 3 | 3 | 32 | 16 | 16 | 120 | 24 | 16 | 16.3 | - | 3 |
| JCTER/L2020H3T16 | 3 | 3 | 32 | 20 | 20 | 100 | 24 | 20 | 20.3 | - | 3 |

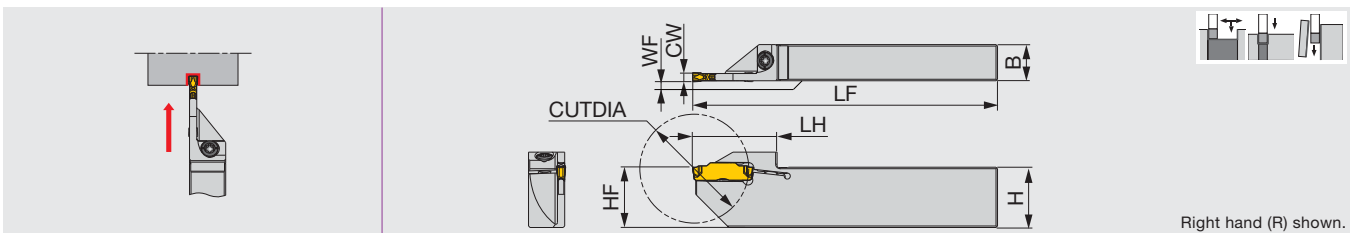
(1) "WF" value is calculated with groove width "CW" shown in the table.
 CUTDIA: Max. parting diameter
 *Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JCTER/L... | CSHB-4-A | T-15F |

JCTER/L2012

External grooving and parting toolholder, for Swiss lathes



| Designation | CW | Seat size | CUTDIA | H | B | LF | LH | HF | WF ⁽¹⁾ | Torque* |
|------------------|----|-----------|--------|----|----|-----|----|----|-------------------|---------|
| JCTER/L2012H2T18 | 2 | 2 | 36 | 20 | 12 | 100 | 25 | 20 | 0.1 | 3 |
| JCTER/L2012H3T21 | 3 | 3 | 42 | 20 | 12 | 100 | 28 | 20 | 0.3 | 3 |

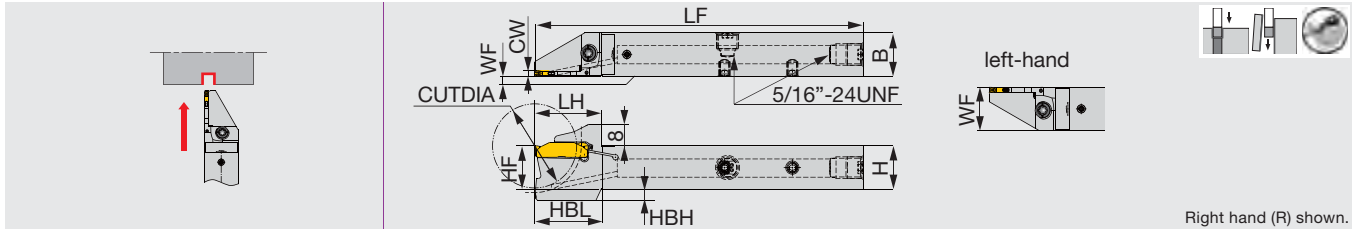
(1) "WF" value is calculated with groove width "CW" shown in the table.
 CUTDIA: Max. parting diameter
 *Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| JCTER/L2012... | CSHB-4-A | T-15F |

Reference pages: Inserts → 6-17 - 6-25, Standard cutting conditions → 6-26

External grooving and parting toolholder with high pressure coolant capability



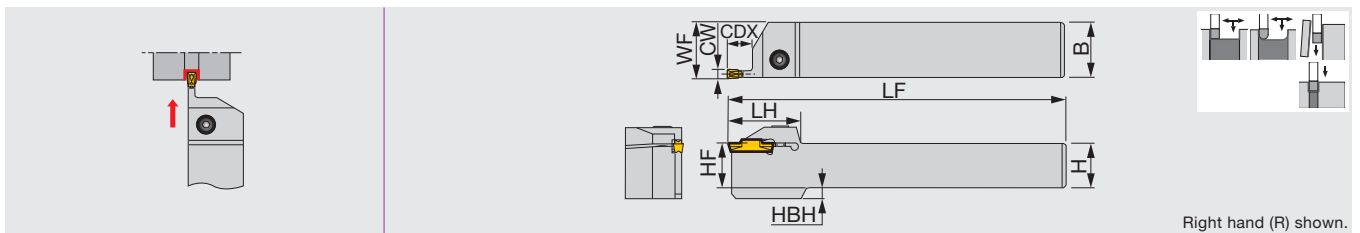
| Designation | CW | Seat size | CUTDIA | H | B | LF | LH | HF | WF ⁽¹⁾ | HBH | HBL | Torque* |
|----------------------|----|-----------|--------|----|----|-----|------|----|-------------------|-----|------|---------|
| JCTER/L1212X2T12-CHP | 2 | 2 | 25 | 12 | 12 | 120 | 24.7 | 12 | 0/12 | 5 | 24.7 | 3 |
| JCTER/L1616X2T12-CHP | 2 | 2 | 25 | 16 | 16 | 120 | 24.7 | 16 | 0/16 | 1 | 24.5 | 3 |
| JCTER/L1616X2T16-CHP | 2 | 2 | 32 | 16 | 16 | 120 | 24.7 | 16 | 0/16 | 4 | 24.7 | 3 |
| JCTER/L2020X2T16-CHP | 2 | 2 | 32 | 20 | 20 | 120 | 24.7 | 20 | 0/20 | - | - | 3 |

(1) "WF" value is calculated with groove width "CW" shown in the table. "WF" value depends on the tool hand. With 0/12, WF is 0 for the right hand and 12 for the left hand.
 CUTDIA: Max. parting diameter *Torque: Recommended clamping torque (N-m)
 Compatible to the direct internal coolant supply system without the use of external coolant hose.

SPARE PARTS

| Designation | Clamping screw | Wrench 1 | Coolant plug | Wrench 2 | DirectJet plug | Wrench 3 |
|-------------|----------------|----------|----------------|----------|----------------|----------|
| JCTER/L... | C5HB-4-A | T-15F | SR5/16UNFTL360 | P-4 | SSHM4-6-TB | P-2 |

External grooving, parting and turning toolholder



| Designation | CW | Seat size | CDX | H | B | LF | LH | HF | WF ⁽¹⁾ | HBH | Torque* |
|-----------------|----|-----------|-----|----|----|-----|------|----|-------------------|-----|---------|
| CTER/L1616-2T08 | 2 | 2 | 8 | 16 | 16 | 110 | 33 | 16 | 16.1 | 4 | 5 |
| CTER/L2020-2T08 | 2 | 2 | 8 | 20 | 20 | 125 | 33 | 20 | 20.1 | - | 5 |
| CTER/L1616-2T12 | 2 | 2 | 12 | 16 | 16 | 110 | 32 | 16 | 16.1 | 4 | 5 |
| CTER/L2020-2T12 | 2 | 2 | 12 | 20 | 20 | 125 | 32 | 20 | 20.1 | - | 5 |
| CTER/L1616-2T17 | 2 | 2 | 17 | 16 | 16 | 110 | 37 | 16 | 16.1 | 4 | 5 |
| CTER/L2020-2T17 | 2 | 2 | 17 | 20 | 20 | 125 | 37 | 20 | 20.1 | - | 5 |
| CTER/L1616-3T09 | 3 | 3 | 9 | 16 | 16 | 110 | 32 | 16 | 16.3 | 4 | 5 |
| CTER/L2020-3T09 | 3 | 3 | 9 | 20 | 20 | 125 | 32 | 20 | 20.3 | - | 5 |
| CTER/L1616-3T12 | 3 | 3 | 12 | 16 | 16 | 110 | 32 | 16 | 16.3 | 4 | 5 |
| CTER/L2020-3T12 | 3 | 3 | 12 | 20 | 20 | 125 | 32 | 20 | 20.3 | - | 5 |
| CTER/L1616-3T20 | 3 | 3 | 20 | 16 | 16 | 110 | 38.5 | 16 | 16.3 | 4 | 5 |
| CTER/L2020-3T20 | 3 | 3 | 20 | 20 | 20 | 125 | 38.5 | 20 | 20.3 | - | 5 |
| CTER/L1616-4T10 | 4 | 4 | 10 | 16 | 16 | 110 | 32 | 16 | 16.5 | 4 | 8.5 |
| CTER/L2020-4T10 | 4 | 4 | 10 | 20 | 20 | 125 | 32 | 20 | 20.5 | - | 8.5 |
| CTER/L2020-4T15 | 4 | 4 | 15 | 20 | 20 | 125 | 33 | 20 | 20.5 | - | 8.5 |
| CTER/L1616-4T25 | 4 | 4 | 25 | 16 | 16 | 110 | 45 | 16 | 16.5 | 4 | 8.5 |
| CTER/L2020-4T25 | 4 | 4 | 25 | 20 | 20 | 125 | 45 | 20 | 20.5 | - | 8.5 |
| CTER/L2020-5T12 | 5 | 5 | 12 | 20 | 20 | 125 | 37 | 20 | 20.6 | - | 8.5 |
| CTER/L2020-6T12 | 6 | 6 | 12 | 20 | 20 | 125 | 37 | 20 | 20.6 | - | 12 |

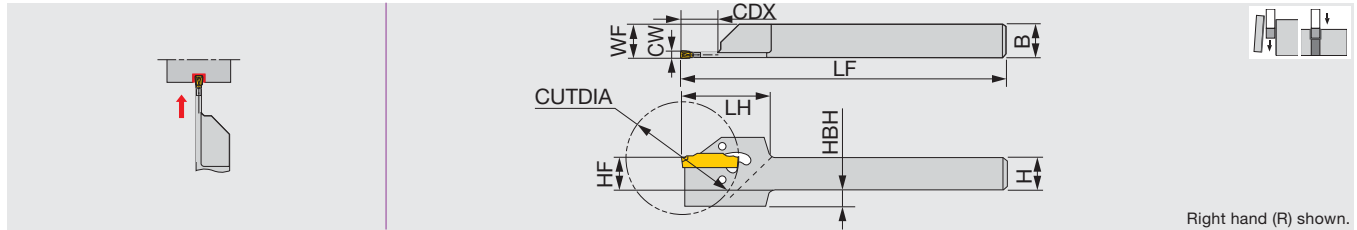
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-----------------------------|----------------|--------|
| CTER/L1616-2T08 / T12 / T17 | CM5X0.8X16-A | P-4 |
| CTER/L2020-2T08 / T12 / T17 | CM5X0.8X20-A | P-4 |
| CTER/L1616-3T09 / T20 | CM5X0.8X16-A | P-4 |
| CTER/L2020-3T09 / T12 / T20 | CM5X0.8X20-A | P-4 |
| CTER/L1616-4T10 / T25 | CM6X1X16-A | P-5 |
| CTER/L2020-4T10 / T15 / T25 | CM6X1X20-A | P-5 |
| CTER/L2020-5T12 | CM6X1X20-A | P-5 |
| CTER/L2020-6T12 | CM8X1.25X20-A | P-6 |

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
 (1) "WF" value is calculated with groove width "CW" shown in the table.
 *Torque: Recommended clamping torque (N-m)

Reference pages: Inserts → **6-17 - 6-25**
 Standard cutting conditions → **6-26**
 Parts for coolant hose → **3-61**

External deep grooving and parting toolholder, for Swiss lathes



Right hand (R) shown.

| Designation | CW | Seat size | CUTDIA ⁽¹⁾ | CDX | H | B | LF | LH | HF | WF ⁽²⁾ | HBH |
|-------------------|-----|-----------|-----------------------|------|----|----|-----|----|----|-------------------|-----|
| CGER/L2020-1.4T14 | 1.4 | 1 | 29/29 | 9.7 | 20 | 20 | 125 | 31 | 20 | 20.2 | - |
| CGER/L1212-2T17 | 2 | 2 | 35/35 | 11.8 | 12 | 12 | 150 | 31 | 12 | 12.1 | 6 |
| CGER/L1616-2T17 | 2 | 2 | 35/35 | 11.8 | 16 | 16 | 150 | 31 | 16 | 16.1 | 2 |
| CGER/L2020-2T17 | 2 | 2 | 35/35 | 9.8 | 20 | 20 | 125 | 31 | 20 | 20.1 | - |
| CGER/L1212-3T19 | 3 | 3 | 38/40 | 12 | 12 | 12 | 150 | 31 | 12 | 12.3 | 6 |
| CGER/L1616-3T19 | 3 | 3 | 38/45 | 14.9 | 16 | 16 | 150 | 31 | 16 | 16.3 | 2 |
| CGER/L2020-3T19 | 3 | 3 | 38/45 | 13.2 | 20 | 20 | 125 | 31 | 20 | 20.3 | - |
| CGER/L2020-4T19 | 4 | 4 | 38/55 | 20.3 | 20 | 20 | 125 | 33 | 20 | 20.4 | - |

Wrench (CRW**) is not included. Please order it separately. Insert is clamped by the elastic deformation of the upper jaw.

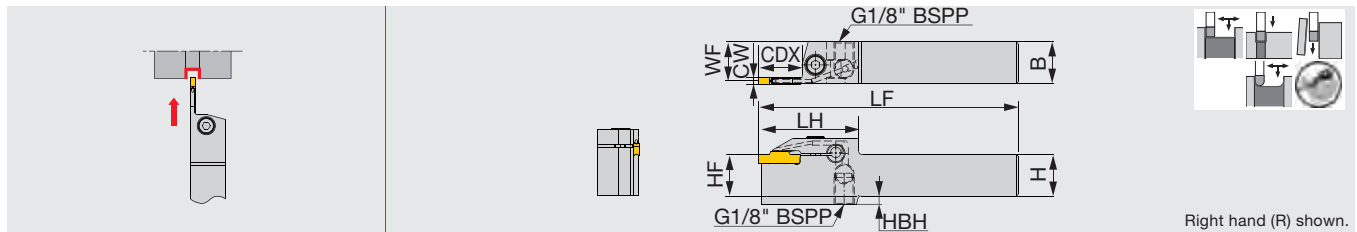
(1) DG*/SG* maximum parting diameter will depend on the insert.

(2) *WF* value is calculated with groove width *CW* shown in the table.

SPARE PARTS

| Designation | Wrench (Option) |
|------------------------|-----------------|
| CGER/L2020-1.4T14 | CRW23 |
| CGER/L****-2T17 - 4T19 | CRW33 |

Mono-block external grooving and parting toolholder, with high pressure coolant capability



Right hand (R) shown.

| Designation | CW | Seat size | CDX | H | B | LF | LH | HF | WF | HBH | Torque* |
|---------------------|----|-----------|-----|----|----|-----|----|----|------|-----|---------|
| CTER/L2020-2T17-CHP | 2 | 2 | 17 | 20 | 20 | 125 | 45 | 20 | 19.1 | 4 | 5.5 |
| CTER/L2020-3T20-CHP | 3 | 3 | 20 | 20 | 20 | 125 | 48 | 20 | 18.8 | 4 | 5.5 |

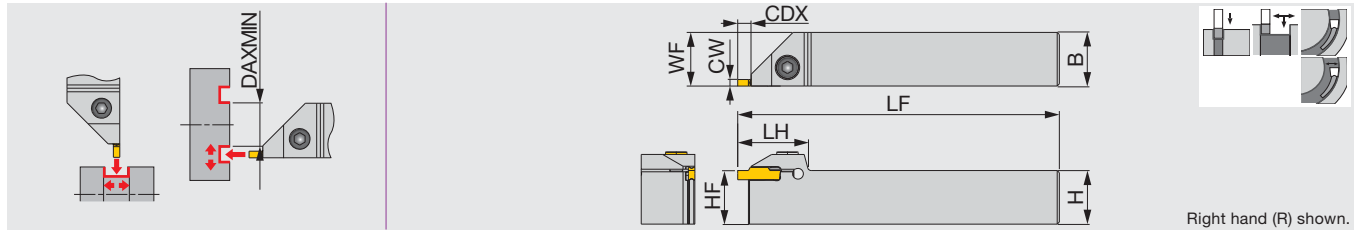
When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------------|----------------|--------|
| CTER/L2020-2T17-CHP | CM5x0.8x20-A | P-4 |
| CTER/L2020-3T20-CHP | CM5x0.8x20-A | P-4 |

External face grooving and turning toolholder



| Designation | CW | Seat size | CDX | H | B | LF | LH | HF | WF ⁽¹⁾ | Torque* |
|------------------|----|-----------|-----|----|----|-----|----|----|-------------------|---------|
| CTEFR/L2020-4T04 | 4 | 2, 3, 4 | 4.8 | 20 | 20 | 125 | 33 | 20 | 20.5 | 8.5 |
| CTEFR/L2020-6T04 | 6 | 5, 6 | 4.8 | 20 | 20 | 125 | 37 | 20 | 20.6 | 8.5 |

SPARE PARTS

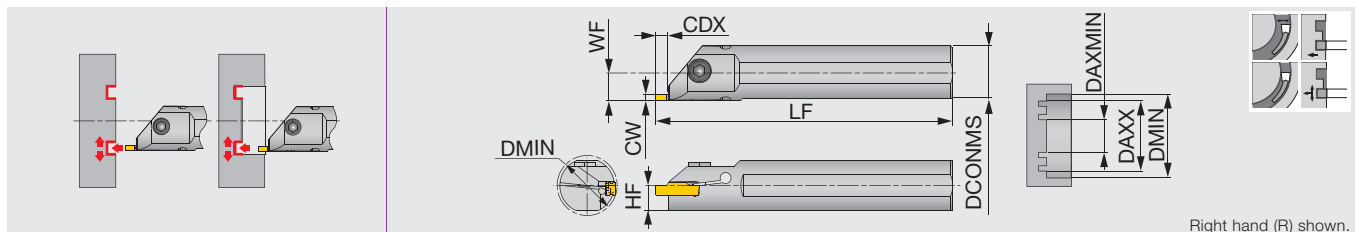
| Designation | Clamping screw | Wrench |
|------------------|----------------|--------|
| CTEFR/L2020-4T04 | CM6X1X20-A | P-5 |
| CTEFR/L2020-6T04 | CM6X1X20-A | P-5 |

| Insert | Groove width | Face grooving |
|-----------------------|--------------|----------------------------|
| | CW | Min. machining dia. DAXMIN |
| DGM / DGS / SGN | 2 | 295 |
| DGM / DGS / SGN / DGL | 3 | 92 |
| DGM / DGS / SGN / DGL | 4 | 37 |
| DGM / DGS / DGL | 5 | 60 |
| DGM / DGS / DGL | 6 | 57 |
| DTE / DGG / DTM | 3 | 62 |
| DTE / DGG / DTM | 4 | 42 |
| DTE / DGG / DTM | 5 | 64 |
| DTE / DGG / DTM | 6 | 61 |

| Insert | Groove width | Face grooving |
|--------|--------------|----------------------------|
| | CW | Min. machining dia. DAXMIN |
| DTR | 3 | 44 |
| DTR | 4 | 32 |
| DTR | 5 | 48 |
| DTR | 6 | 48 |
| DTX | 3 | 22 |
| DTX | 4 | 20 |
| DTX | 5 | 20 |
| DTX | 6 | 23 |
| DTF | 3 | 20 |
| DTF | 4 | 20 |

(1) "WF" value is calculated with groove width "CW" shown in the table.
*Torque: Recommended clamping torque (N·m)

External/Internal face grooving and turning toolholder



| Designation | CW | Seat size | CDX | DCONMS | LF | HF | WF ⁽¹⁾ | Torque* |
|---------------------|----|-----------|-----|--------|-----|------|-------------------|---------|
| CTIFR/L25-4T05-D270 | 4 | 3, 4 | 5.5 | 25 | 200 | 11.5 | 13.3 | 5 |
| CTIFR/L25-5T05-D270 | 6 | 5, 6 | 5.5 | 25 | 200 | 11.5 | 13.3 | 5 |

(1) WF is calculated with the groove width CW in the above table.
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

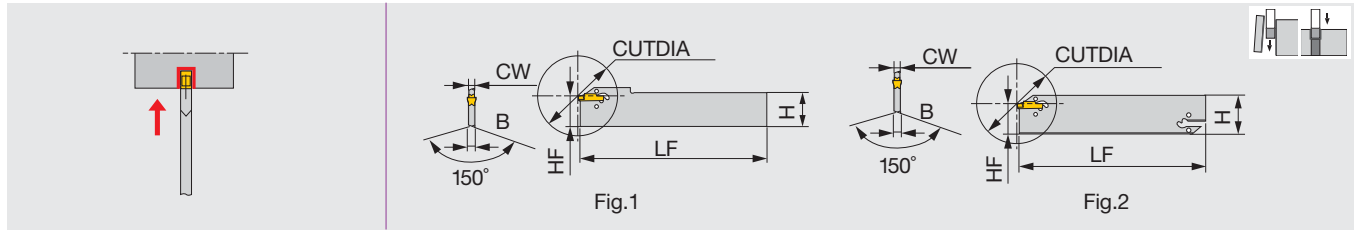
| Designation | Clamping screw | Wrench | Seal cap |
|---------------------|----------------|--------|----------|
| CTIFR/L25-4T05-D270 | CM6X1X16-A | P-5 | CA-25 |
| CTIFR/L25-5T05-D270 | CM6X1X16-A | P-5 | CA-25 |

| Seat size | Min. machining dia |
|-----------|--------------------|
| | DCONMS = 25 mm |
| 3 | 26.3 |
| 4 | 26.8 |
| 5 | 26.3 |
| 6 | 26.8 |

| Insert | Groove width | Face grooving |
|-----------------------|--------------|----------------------------|
| | CW | Min. machining dia. DAXMIN |
| DGM / DGS / SGN / DGL | 3 | 92 |
| DGM / DGS / SGN / DGL | 4 | 37 |
| DGM / DGS / DGL | 5 | 60 |
| DGM / DGS / DGL | 6 | 57 |
| DTE / DGG / DTM | 3 | 62 |
| DTE / DGG / DTM | 4 | 42 |
| DTE / DGG / DTM | 5 | 64 |
| DTE / DGG / DTM | 6 | 61 |

| Insert | Groove width | Face grooving |
|--------|--------------|----------------------------|
| | CW | Min. machining dia. DAXMIN |
| DTR | 3 | 44 |
| DTR | 4 | 32 |
| DTR | 5 | 48 |
| DTR | 6 | 48 |
| DTX | 3 | 22 |
| DTX | 4 | 20 |
| DTX | 5 | 20 |
| DTX | 6 | 23 |
| DTF | 3 | 20 |
| DTF | 4 | 20 |

Reference pages: Inserts → 6-17 - 6-25, Standard cutting conditions → 6-26



| Designation | CW | Seat size | CUTDIA | H | B | LF | HF | Fig. |
|-------------|-----|-----------|--------|----|-----|-----|------|------|
| CGP26-1.4S | 1.4 | 1 | 26 | 26 | 1 | 150 | 21.4 | 1 |
| CGP32-1.4D | 1.4 | 1 | 26 | 32 | 1 | 150 | 24.8 | 2 |
| CGP26-2S | 2 | 2 | 40 | 26 | 1.8 | 150 | 21.4 | 1 |
| CGP32-2D | 2 | 2 | 50 | 32 | 1.8 | 150 | 24.8 | 2 |
| CGP26-3S | 3 | 3 | 50 | 26 | 2.4 | 150 | 21.4 | 1 |
| CGP32-3D | 3 | 3 | 100 | 32 | 2.4 | 150 | 24.8 | 2 |
| CGP26-4S | 4 | 4 | 80 | 26 | 3.2 | 150 | 21.4 | 1 |
| CGP32-4D | 4 | 4 | 100 | 32 | 3.2 | 150 | 24.9 | 2 |
| CGP32-5D | 5 | 5 | 120 | 32 | 4 | 150 | 24.9 | 2 |
| CGP32-6D | 6 | 6 | 120 | 32 | 5.2 | 150 | 24.9 | 2 |

When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.
 CUTDIA: Max. parting dia.
 Wrench (CRW...) is not included. Please order it separately.



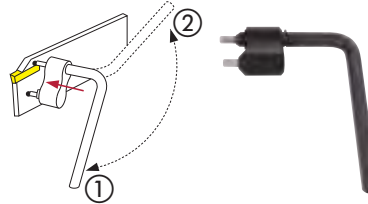
SPARE PARTS

| Designation | Wrench (Optional) |
|-----------------|-------------------|
| CGP**-1.4* | CRW23 |
| CGP**-2/3/4/5/6 | CRW33 |

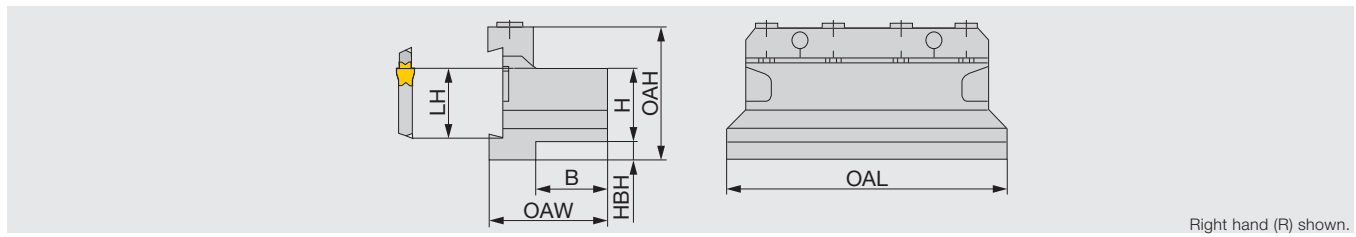
Caution

Newly developed clamp

Insert is clamped by the elastic deformation of upper jaw. Low clamping stress increases the stability and tool life.



① → ② : unclamp
 ② → ① : clamp



| Designation | H | B | OAL | LH | HBH | OAH | OAW | Blade (Optional) |
|-------------|----|----|-----|------|-----|-----|-----|------------------|
| CTBU20-26 | 20 | 21 | 86 | 21.4 | 9 | 43 | 38 | CGP26... |
| CTBU20-32 | 20 | 19 | 100 | 24.8 | 13 | 50 | 38 | CGP32... |

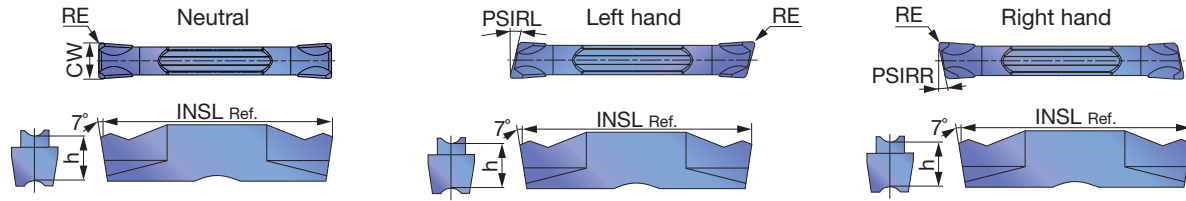
| Designation | Clamp | Clamping screw | Wrench |
|-------------|--------|----------------|--------|
| CTBU20-26 | CT-86 | CM6X30-S | P-5 |
| CTBU20-32 | CT-100 | CM6X30-S | P-5 |

Reference pages: Inserts → 6-17 - 6-25, Standard cutting conditions → 6-26

INSERT

DGM

External grooving and parting, 2 corners



| | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|--|--|---|--|---|--|--|
| P Steel | ★ | ★ | ☆ | ☆ | | | | | ★ | | | | |
| M Stainless | ★ | ★ | ☆ | ★ | ☆ | | | | | | | | |
| K Cast iron | ☆ | ★ | | ☆ | ☆ | ☆ | | | ☆ | | ☆ | | |
| N Non-ferrous | | | | | | | | | | | ☆ | | |
| S Superalloys | | ★ | ☆ | ★ | | ★ | | | | | ★ | | |
| H Hard materials | | | | | | | | | | | | | |

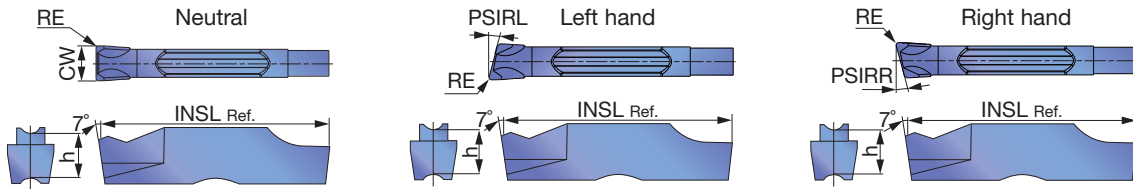
★ : First choice
☆ : Second choice

| Designation | Seat size | HAND | CW±0.05 | RE | Coated | | | | | | Cermet | Uncoated | INSL | h | PSIRL | PSIRR |
|--------------|-----------|------|---------|------|--------|--------|-------|-------|-------|--------|--------|----------|-------|-----|-------|-------|
| | | | | | T9225 | AH7025 | AH725 | AH905 | GH130 | AH8005 | NS9530 | KS05F | | | | |
| DGM2-020 | 2 | N | 2 | 0.2 | ● | ● | ● | ● | ● | ● | ● | ● | 20 | 5 | 0° | 0° |
| DGM2-020-6R | 2 | R | 2 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 0° | 6° |
| DGM2-020-6L | 2 | L | 2 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 6° | 0° |
| DGM2-020-8R | 2 | R | 2 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 0° | 8° |
| DGM2-020-8L | 2 | L | 2 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 8° | 0° |
| DGM2-020-15R | 2 | R | 2 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 0° | 15° |
| DGM2-020-15L | 2 | L | 2 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 15° | 0° |
| DGM2-002-15R | 2 | R | 2 | 0.02 | | | ● | ● | ● | | | | 19.35 | 5 | 0° | 15° |
| DGM2-002-15L | 2 | L | 2 | 0.02 | | | ● | ● | ● | | | | 19.35 | 5 | 15° | 0° |
| DGM3-020 | 3 | N | 3 | 0.2 | ● | ● | ● | ● | ● | ● | ● | ● | 20 | 5 | 0° | 0° |
| DGM3-020-6R | 3 | R | 3 | 0.2 | | ● | ● | ● | ● | ● | | | 20 | 5 | 0° | 6° |
| DGM3-020-6L | 3 | L | 3 | 0.2 | | ● | ● | ● | ● | ● | | | 20 | 5 | 6° | 0° |
| DGM3-002-6R | 3 | R | 3 | 0.02 | | | ● | ● | ● | | | | 19.45 | 5 | 0° | 6° |
| DGM3-002-6L | 3 | L | 3 | 0.02 | | | ● | ● | ● | | | | 19.45 | 5 | 6° | 0° |
| DGM3-020-15R | 3 | R | 3 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 0° | 15° |
| DGM3-020-15L | 3 | L | 3 | 0.2 | | ● | ● | ● | ● | | | | 20 | 5 | 15° | 0° |
| DGM4-030 | 4 | N | 4 | 0.3 | ● | ● | ● | ● | ● | ● | ● | ● | 20 | 5 | 0° | 0° |
| DGM4-030-4R | 4 | R | 4 | 0.3 | | ● | ● | ● | ● | | | | 20 | 5 | 0° | 4° |
| DGM4-030-4L | 4 | L | 4 | 0.3 | | ● | ● | ● | ● | | | | 20 | 5 | 4° | 0° |
| DGM4-030-15R | 4 | R | 4 | 0.3 | | ● | ● | ● | ● | | | | 20 | 5 | 0° | 15° |
| DGM4-030-15L | 4 | L | 4 | 0.3 | | ● | ● | ● | ● | | | | 20 | 5 | 15° | 0° |
| DGM5-030 | 5 | N | 5 | 0.3 | ● | ● | ● | ● | ● | ● | ● | ● | 25 | 5.5 | 0° | 0° |
| DGM5-030-4R | 5 | R | 5 | 0.3 | | ● | ● | ● | ● | | | | 25 | 5.5 | 0° | 4° |
| DGM6-030 | 6 | N | 6 | 0.3 | ● | ● | ● | ● | ● | ● | ● | ● | 25 | 5.5 | 0° | 0° |

● : Line up

SGM

External deep grooving and parting, 1 corner



| | P | M | K | N | S | H |
|----------------|---|---|---|---|---|---|
| Steel | ★ | ☆ | ☆ | | | |
| Stainless | ★ | ☆ | ★ | ☆ | | |
| Cast iron | ★ | | ☆ | ☆ | ☆ | |
| Non-ferrous | | | | | ☆ | |
| Superalloys | ★ | ☆ | ★ | | ★ | |
| Hard materials | | | | | | |

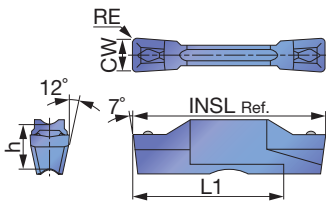
★ : First choice
☆ : Second choice

| Designation | Seat size | HAND | CW±0.05 | RE | Coated | | | | Uncoated | INSL | h | PSIRL | PSIRR |
|--------------|-----------|------|---------|-----|--------|-------|-------|--------|----------|------|-----|-------|-------|
| | | | | | AH7025 | AH725 | GH130 | AH8005 | KS05F | | | | |
| SGM2-020 | 2 | N | 2 | 0.2 | ● | ● | ● | ● | ● | 20 | 5 | 0° | 0° |
| SGM2-020-6R | 2 | R | 2 | 0.2 | ● | ● | ● | | | 20 | 5 | 0° | 6° |
| SGM2-020-6L | 2 | L | 2 | 0.2 | ● | ● | ● | | | 20 | 5 | 6° | 0° |
| SGM3-020 | 3 | N | 3 | 0.2 | ● | ● | ● | ● | ● | 20 | 5 | 0° | 0° |
| SGM3-020-6R | 3 | R | 3 | 0.2 | ● | ● | ● | | | 20 | 5 | 0° | 6° |
| SGM3-020-6L | 3 | L | 3 | 0.2 | ● | ● | ● | | | 20 | 5 | 6° | 0° |
| SGM3-020-15R | 3 | R | 3 | 0.2 | ● | ● | ● | | | 20 | 5 | 0° | 15° |
| SGM3-020-15L | 3 | L | 3 | 0.2 | ● | ● | ● | | | 20 | 5 | 15° | 0° |
| SGM4-030 | 4 | N | 4 | 0.3 | ● | ● | ● | ● | ● | 20 | 5 | 0° | 0° |
| SGM4-030-4R | 4 | R | 4 | 0.3 | ● | ● | ● | | | 20 | 5 | 0° | 4° |
| SGM4-030-4L | 4 | L | 4 | 0.3 | ● | ● | ● | | | 20 | 5 | 4° | 0° |
| SGM5-030 | 5 | N | 5 | 0.3 | ● | ● | ● | ● | ● | 25 | 5.5 | 0° | 0° |
| SGM6-030 | 6 | N | 6 | 0.3 | ● | ● | ● | | ● | 25 | 5.5 | 0° | 0° |

●: Line up

DTF

Face grooving and turning



| | P | M | K | N | S | H |
|----------------|---|---|---|---|---|---|
| Steel | ★ | ★ | ☆ | ☆ | | ★ |
| Stainless | ★ | ★ | ☆ | ★ | | |
| Cast iron | ☆ | ★ | ☆ | ☆ | | ☆ |
| Non-ferrous | | | | | | |
| Superalloys | ★ | ☆ | | | | |
| Hard materials | | | | | | |

★ : First choice
☆ : Second choice

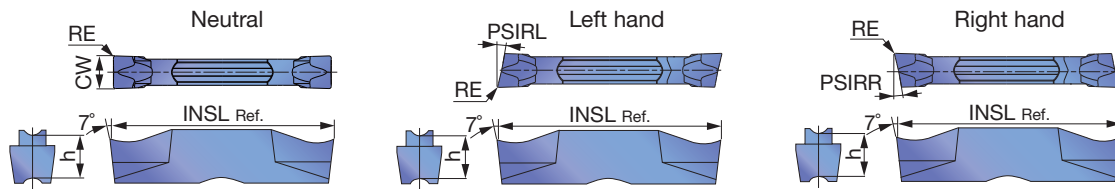
| Designation | Seat size | HAND | CW±0.05 | RE | Coated | | | | Cermet | INSL | h | L1 |
|-------------|-----------|------|---------|-----|--------|--------|-------|-------|--------|------|---|----|
| | | | | | T9225 | AH7025 | AH725 | GH130 | NS9530 | | | |
| DTF3-040-R | 3 | R | 3 | 0.4 | ● | ● | ● | ● | ● | 20 | 5 | 16 |
| DTF3-040-L | 3 | L | 3 | 0.4 | ● | ● | ● | ● | ● | 20 | 5 | 16 |
| DTF4-040-R | 4 | R | 4 | 0.4 | ● | ● | ● | ● | ● | 20 | 5 | 16 |
| DTF4-040-L | 4 | L | 4 | 0.4 | ● | ● | ● | ● | ● | 20 | 5 | 16 |

●: Line up

Reference pages: Toolholders → [6-12](#) - [6-16](#), Standard cutting conditions → [6-26](#)

DGS

External grooving and parting, 2 corners



| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|--|--|---|--|---|--|--|
| P Steel | ★ | ★ | ☆ | ☆ | | | | ★ | | | | |
| M Stainless | ★ | ★ | ☆ | ★ | ☆ | | | | | | | |
| K Cast iron | ☆ | ★ | ☆ | ☆ | ☆ | | | ☆ | | ☆ | | |
| N Non-ferrous | | | | | | | | | | ☆ | | |
| S Superalloys | | ★ | ☆ | | ★ | | | | | ★ | | |
| H Hard materials | | | | | | | | | | | | |

★ : First choice
☆ : Second choice

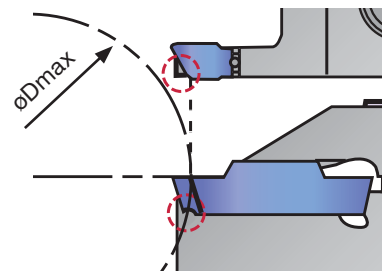
| Designation | Seat size | HAND | CW±0.05 | RE | Coated | | | | | Cermet | | Uncoated | | INSL | h | PSIRL | PSIRR |
|--------------|-----------|------|---------|------|--------|--------|-------|-------|--------|--------|-------|----------|--|-------|-----|-------|-------|
| | | | | | T9225 | AH7025 | AH725 | GH130 | AH8005 | NS9530 | KS05F | | | | | | |
| DGS1.4-005 | 1 | N | 1.4 | 0.05 | | | ● | | | | | | | 16 | 4.3 | 0° | 0° |
| DGS1.4-010 | 1 | N | 1.4 | 0.1 | | | ● | | | | | | | 16 | 4.3 | 0° | 0° |
| DGS1.4-016 | 1 | N | 1.4 | 0.16 | | ● | ● | ● | | | | | | 16 | 4.3 | 0° | 0° |
| DGS2-005 | 2 | N | 2 | 0.05 | | | ● | | | | | | | 20 | 5 | 0° | 0° |
| DGS2-010 | 2 | N | 2 | 0.1 | | | ● | | | | | | | 20 | 5 | 0° | 0° |
| DGS2-020 | 2 | N | 2 | 0.2 | ● | ● | ● | ● | ● | ● | ● | ● | | 20 | 5 | 0° | 0° |
| DGS2-020-6R | 2 | R | 2 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 0° | 6° |
| DGS2-020-6L | 2 | L | 2 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 6° | 0° |
| DGS2-002-6R | 2 | R | 2 | 0.02 | | | ● | ● | | | | | | 19.5 | 5 | 0° | 6° |
| DGS2-002-6L | 2 | L | 2 | 0.02 | | | ● | ● | | | | | | 19.5 | 5 | 6° | 0° |
| DGS2-020-15R | 2 | R | 2 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 0° | 15° |
| DGS2-020-15L | 2 | L | 2 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 15° | 0° |
| DGS2-002-15R | 2 | R | 2 | 0.02 | | | ● | ● | | | | | | 19.5 | 5 | 0° | 15° |
| DGS2-002-15L | 2 | L | 2 | 0.02 | | | ● | ● | | | | | | 19.5 | 5 | 15° | 0° |
| DGS3-020 | 3 | N | 3 | 0.2 | ● | ● | ● | ● | ● | ● | ● | ● | | 20 | 5 | 0° | 0° |
| DGS3-020-6R | 3 | R | 3 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 0° | 6° |
| DGS3-020-6L | 3 | L | 3 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 6° | 0° |
| DGS3-002-6R | 3 | R | 3 | 0.02 | | | ● | ● | | | | | | 19.45 | 5 | 0° | 6° |
| DGS3-002-6L | 3 | L | 3 | 0.02 | | | ● | ● | | | | | | 19.45 | 5 | 6° | 0° |
| DGS3-020-15R | 3 | R | 3 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 0° | 15° |
| DGS3-020-15L | 3 | L | 3 | 0.2 | | ● | ● | ● | | | | | | 20 | 5 | 15° | 0° |
| DGS3-002-15R | 3 | R | 3 | 0.02 | | | ● | ● | | | | | | 19.45 | 5 | 0° | 15° |
| DGS3-002-15L | 3 | L | 3 | 0.02 | | | ● | ● | | | | | | 19.45 | 5 | 15° | 0° |
| DGS4-030 | 4 | N | 4 | 0.3 | ● | ● | ● | ● | ● | ● | ● | ● | | 20 | 5 | 0° | 0° |
| DGS4-030-4R | 4 | R | 4 | 0.3 | | ● | ● | ● | | | | | | 20 | 5 | 0° | 4° |
| DGS4-030-4L | 4 | L | 4 | 0.3 | | ● | ● | ● | | | | | | 20 | 5 | 4° | 0° |
| DGS5-030 | 5 | N | 5 | 0.3 | ● | ● | ● | ● | ● | ● | ● | ● | | 25 | 5.5 | 0° | 0° |
| DGS6-030 | 6 | N | 6 | 0.3 | ● | ● | ● | ● | ● | ● | ● | ● | | 25 | 5.5 | 0° | 0° |

● : Line up

Caution

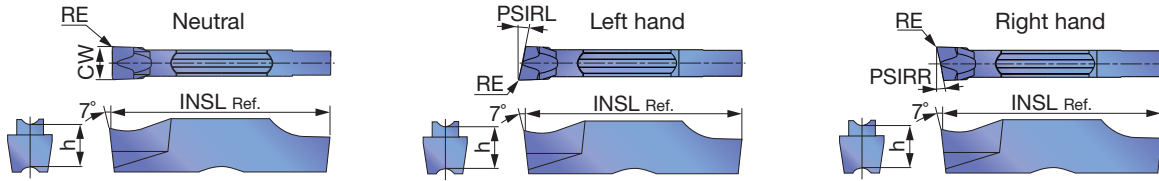
The tool will interfere with the workpiece when grooving larger diameter than $\varnothing D_{max}$.

| Designation | $\varnothing D_{max}$ (mm) | Designation | $\varnothing D_{max}$ (mm) |
|----------------|----------------------------|----------------|----------------------------|
| DGM2-002-15R/L | 28 | DGS2-002-15R/L | 28 |
| DGM3-002-15R/L | 29 | DGS3-002-15R/L | 29 |
| DGM4-030-15R/L | 30 | SGS3-020-15R/L | 103 |
| SGM3-020-15R/L | 103 | SGS3-002-15R/L | 34 |



SGS

External deep grooving and parting, 1 corner



| | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|--|---|---|--|--|--|--|--|
| P Steel | ★ | ☆ | ☆ | | | | | | | | | | |
| M Stainless | ★ | ☆ | ★ | ☆ | | | | | | | | | |
| K Cast iron | ★ | | ☆ | ☆ | | | ☆ | | | | | | |
| N Non-ferrous | | | | | | | | ☆ | | | | | |
| S Superalloys | ★ | ☆ | | ★ | ★ | | | | | | | | |
| H Hard materials | | | | | | | | | | | | | |

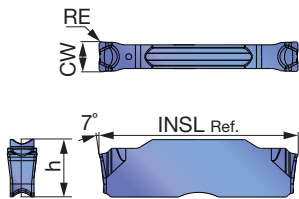
★ : First choice
☆ : Second choice

| Designation | Seat size | HAND | CW±0.05 | RE | Coated | | | | | Uncoated | | INSL | h | PSIRL | PSIRR |
|--------------|-----------|------|---------|------|--------|-------|-------|--------|-------|----------|--|------|-----|-------|-------|
| | | | | | AH7025 | AH725 | GH130 | AH8005 | KS05F | | | | | | |
| SGS2-020 | 2 | N | 2 | 0.2 | ● | ● | ● | ● | ● | | | 20 | 5 | 0° | 0° |
| SGS2-020-6R | 2 | R | 2 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 0° | 6° |
| SGS2-020-6L | 2 | L | 2 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 6° | 0° |
| SGS2-020-15R | 2 | R | 2 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 0° | 15° |
| SGS2-020-15L | 2 | L | 2 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 15° | 0° |
| SGS3-020 | 3 | N | 3 | 0.2 | ● | ● | ● | ● | ● | | | 20 | 5 | 0° | 0° |
| SGS3-020-6R | 3 | R | 3 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 0° | 6° |
| SGS3-020-6L | 3 | L | 3 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 6° | 0° |
| SGS3-002-6R | 3 | R | 3 | 0.02 | | ● | ● | | | | | 19.8 | 5 | 0° | 6° |
| SGS3-002-6L | 3 | L | 3 | 0.02 | | ● | ● | | | | | 19.8 | 5 | 6° | 0° |
| SGS3-020-15R | 3 | R | 3 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 0° | 15° |
| SGS3-020-15L | 3 | L | 3 | 0.2 | ● | ● | ● | | | | | 20 | 5 | 15° | 0° |
| SGS3-002-15R | 3 | R | 3 | 0.02 | | ● | ● | | | | | 19.8 | 5 | 0° | 15° |
| SGS3-002-15L | 3 | L | 3 | 0.02 | | ● | ● | | | | | 19.8 | 5 | 15° | 0° |
| SGS4-030 | 4 | N | 4 | 0.3 | ● | ● | ● | ● | ● | | | 20 | 5 | 0° | 0° |
| SGS5-030 | 5 | N | 5 | 0.3 | ● | ● | ● | ● | ● | | | 25 | 5.5 | 0° | 0° |
| SGS6-030 | 6 | N | 6 | 0.3 | ● | ● | ● | | ● | | | 25 | 5.5 | 0° | 0° |

● : Line up

DGL

External grooving and parting



| | | | | | | | | | | | | | |
|-------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|
| P Steel | ★ | | | | | | | | | | | | |
| M Stainless | ★ | | | | | | | | | | | | |
| K Cast iron | ★ | | | | | | | | | | | | |
| N Non-ferrous | | | | | | | | | | | | | |
| S Superalloys | ★ | | | | | | | | | | | | |
| H Hard materials | | | | | | | | | | | | | |

★ : First choice
☆ : Second choice

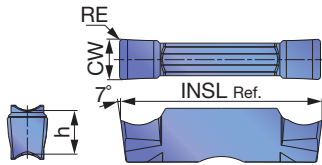
| Designation | Seat size | CW±0.05 | RE | Coated | | | | | INSL | h | |
|-------------|-----------|---------|------|--------|--|--|--|--|------|----|-----|
| | | | | AH7025 | | | | | | | |
| DGL3-025 | 3 | 3 | 0.25 | ● | | | | | | 20 | 5 |
| DGL4-030 | 4 | 4 | 0.3 | ● | | | | | | 20 | 5 |
| DGL5-030 | 5 | 5 | 0.3 | ● | | | | | | 25 | 5.5 |
| DGL6-080 | 6 | 6 | 0.8 | ● | | | | | | 25 | 5.5 |

● : Line up

Reference pages: Toolholders → 6-12 - 6-16, Standard cutting conditions → 6-26

DGG

External grooving (for high precision)



| | | | | | | | | | | | |
|----------|----------------|---|--|---|--|---|---|--|--|--|--|
| P | Steel | ★ | | ★ | | | | | | | |
| M | Stainless | ★ | | | | | | | | | |
| K | Cast iron | ★ | | ☆ | | ☆ | | | | | |
| N | Non-ferrous | | | | | | ★ | | | | |
| S | Superalloys | ★ | | | | | ☆ | | | | |
| H | Hard materials | | | | | | | | | | |

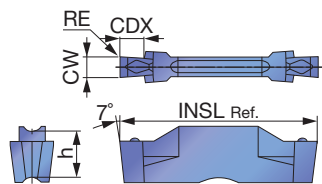
★ : First choice
☆ : Second choice

| Designation | Seat size | CW±0.02 | RE | Coated | | | Cermet | | | Uncoated | | | INSL | h |
|-------------|-----------|---------|-----|--------|--|--|--------|--|--|----------|--|--|------|-----|
| | | | | AH7025 | | | NS9530 | | | KS05F | | | | |
| DGG200-020 | 2 | 2 | 0.2 | ● | | | ● | | | ● | | | 20 | 5 |
| DGG300-020 | 3 | 3 | 0.2 | ● | | | ● | | | ● | | | 20 | 5 |
| DGG400-040 | 4 | 4 | 0.4 | ● | | | ● | | | ● | | | 20 | 5 |
| DGG500-040 | 5 | 5 | 0.4 | ● | | | ● | | | ● | | | 25 | 5.5 |
| DGG600-040 | 6 | 6 | 0.4 | ● | | | ● | | | ● | | | 25 | 5.5 |

● : Line up

DGE

External grooving (for high precision)



| | | | | | | | | | | | |
|----------|----------------|---|---|---|--|---|--|--|--|--|--|
| P | Steel | ★ | ☆ | ☆ | | ★ | | | | | |
| M | Stainless | ★ | ☆ | ★ | | | | | | | |
| K | Cast iron | ★ | | ☆ | | ☆ | | | | | |
| N | Non-ferrous | | | | | | | | | | |
| S | Superalloys | ★ | ☆ | | | | | | | | |
| H | Hard materials | | | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | Seat size | CW±0.02 | RE | Coated | | | Cermet | | | CDX | INSL | h |
|-------------|-----------|---------|------|--------|-------|-------|--------|---|--|-----|------|---|
| | | | | AH7025 | AH725 | GH130 | NS9530 | | | | | |
| DGE100-000 | 2 | 1 | 0 | | ● | ● | | ● | | 2.5 | 20 | 5 |
| DGE130-000 | 2 | 1.3 | 0 | | ● | ● | | ● | | 2.5 | 20 | 5 |
| DGE160-010 | 2 | 1.6 | 0.1 | ● | ● | ● | | ● | | 2.5 | 20 | 5 |
| DGE185-010 | 2 | 1.85 | 0.1 | ● | ● | ● | | ● | | 3.5 | 20 | 5 |
| DGE215-015 | 2 | 2.15 | 0.15 | ● | ● | ● | | ● | | 3.5 | 20 | 5 |

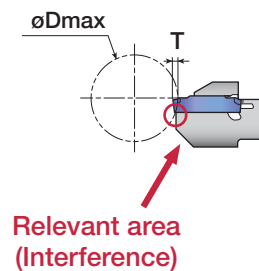
● : Line up

Caution

øDmax is limited as shown in the picture to the right according to the groove depth, T. Please refer to the following table.

T = Groove depth

| Designation | Max. groove depth (mm) | øDmax (mm) | | | | |
|-------------|------------------------|------------|---------|-------|---------|-------|
| | | T = 1 | T = 1.5 | T = 2 | T = 2.5 | T = 3 |
| DGE100-000 | 2 | ∞ | 18.6 | 11.5 | - | - |
| DGE130-000 | | | | | - | - |
| DGE160-010 | | | | | - | - |
| DGE185-010 | 3 | ∞ | 18.6 | 11.5 | 8.8 | 7 |
| DGE215-015 | | | | | 8.8 | 7 |



Relevant area (Interference)

Reference pages: Toolholders → 6-12 - 6-16, Standard cutting conditions → 6-26

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

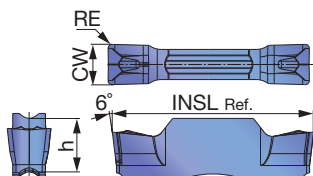
Endmill

Drilling Tool

Technical Reference

DTM

External face grooving and turning



| | | | | | | | | | | |
|----------|----------------|---|---|--|--|--|--|--|--|--|
| P | Steel | ★ | | | | | | | | |
| M | Stainless | ★ | ☆ | | | | | | | |
| K | Cast iron | ★ | ☆ | | | | | | | |
| N | Non-ferrous | | | | | | | | | |
| S | Superalloys | ★ | ★ | | | | | | | |
| H | Hard materials | | | | | | | | | |

★ : First choice
☆ : Second choice

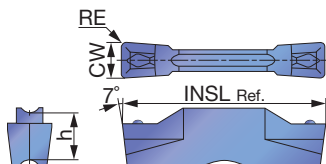
| Designation | Seat size | CW±0.05 | RE | Coated | | | | | | | INSL | h |
|-------------|-----------|---------|-----|--------|--------|--|--|--|--|--|------|-----|
| | | | | AH7025 | AH8005 | | | | | | | |
| DTM3-030 | 3 | 3 | 0.3 | ● | ● | | | | | | 20 | 5 |
| DTM4-040 | 4 | 4 | 0.4 | ● | ● | | | | | | 20 | 5 |
| DTM4-080 | 4 | 4 | 0.8 | ● | ● | | | | | | 20 | 5 |
| DTM5-080 | 5 | 5 | 0.8 | ● | ● | | | | | | 25 | 5.5 |
| DTM6-080 | 6 | 6 | 0.8 | ● | ● | | | | | | 25 | 5.5 |

● : Line up



DTE

External face grooving and turning (for high precision)



| | | | | | | | | | | | | |
|----------|----------------|---|---|---|---|--|--|--|--|---|--|--|
| P | Steel | ★ | ★ | ☆ | ☆ | | | | | ★ | | |
| M | Stainless | ★ | ★ | ☆ | ★ | | | | | | | |
| K | Cast iron | ☆ | ★ | ☆ | ☆ | | | | | | | |
| N | Non-ferrous | | | | | | | | | | | |
| S | Superalloys | | ★ | ☆ | | | | | | | | |
| H | Hard materials | | | | | | | | | | | |

★ : First choice
☆ : Second choice

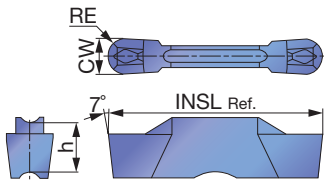
| Designation | Seat size | CW±0.02 | RE | Coated | | | | Cermet | INSL | h |
|-------------|-----------|---------|------|--------|--------|-------|-------|--------|------|-----|
| | | | | T9225 | AH7025 | AH725 | GH130 | NS9530 | | |
| DTE265-015 | 3 | 2.65 | 0.15 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE300-020 | 3 | 3 | 0.2 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE300-040 | 3 | 3 | 0.4 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE315-015 | 3 | 3.15 | 0.15 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE400-040 | 4 | 4 | 0.4 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE400-080 | 4 | 4 | 0.8 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE415-015 | 4 | 4.15 | 0.15 | ● | ● | ● | ● | ● | 20 | 5 |
| DTE478-055 | 5 | 4.78 | 0.55 | ● | ● | ● | ● | ● | 25 | 5.5 |
| DTE500-040 | 5 | 5 | 0.4 | ● | ● | ● | ● | ● | 25 | 5.5 |
| DTE500-080 | 5 | 5 | 0.8 | ● | ● | ● | ● | ● | 25 | 5.5 |
| DTE515-015 | 5 | 5.15 | 0.15 | ● | ● | ● | ● | | 25 | 5.5 |
| DTE600-080 | 6 | 6 | 0.8 | ● | ● | ● | ● | | 25 | 5.5 |
| DTE600-120 | 6 | 6 | 1.2 | ● | ● | ● | ● | | 25 | 5.5 |

● : Line up

Reference pages: Toolholders → 6-12 - 6-16, Standard cutting conditions → 6-26

DTR

Profiling and undercutting (for high precision)



| | | | | | | | | | | | | | |
|----------|----------------|---|---|---|---|--|--|--|---|--|--|--|--|
| P | Steel | ★ | ★ | ☆ | ☆ | | | | ★ | | | | |
| M | Stainless | ★ | ★ | ☆ | ★ | | | | | | | | |
| K | Cast iron | ☆ | ★ | | ☆ | | | | ☆ | | | | |
| N | Non-ferrous | | | | | | | | | | | | |
| S | Superalloys | | ★ | ☆ | | | | | | | | | |
| H | Hard materials | | | | | | | | | | | | |

★ : First choice
☆ : Second choice

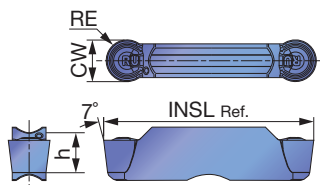
| Designation | Seat size | CW±0.02 | RE | Coated | | | | Cermet | | INSL | h |
|-------------|-----------|---------|------|--------|--------|-------|-------|--------|--|------|-----|
| | | | | T9225 | AH7025 | AH725 | GH130 | NS9530 | | | |
| DTR300-150 | 3 | 3 | 1.5 | ● | ● | ● | ● | ● | | 20 | 5 |
| DTR400-200 | 4 | 4 | 2 | ● | ● | ● | ● | ● | | 20 | 5 |
| DTR478-239 | 5 | 4.78 | 2.39 | ● | ● | ● | ● | ● | | 25 | 5.5 |
| DTR500-250 | 5 | 5 | 2.5 | ● | ● | ● | ● | ● | | 25 | 5.5 |
| DTR600-300 | 6 | 6 | 3 | ● | ● | ● | ● | | | 25 | 5.5 |

● : Line up



DTR

Profiling and undercutting



| | | | | | | | | | | | | | |
|----------|----------------|---|---|---|---|---|---|--|---|--|---|--|--|
| P | Steel | ★ | ★ | ☆ | ☆ | | | | ★ | | | | |
| M | Stainless | ★ | ★ | ☆ | ★ | ☆ | | | | | | | |
| K | Cast iron | ☆ | ★ | | ☆ | ☆ | ☆ | | ☆ | | ☆ | | |
| N | Non-ferrous | | | | | | | | | | ☆ | | |
| S | Superalloys | | ★ | ☆ | ★ | ★ | | | | | ★ | | |
| H | Hard materials | | | | | | | | | | | | |

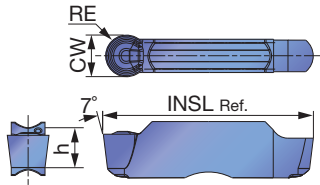
★ : First choice
☆ : Second choice

| Designation | Seat size | CW±0.05 | RE | Coated | | | | | Cermet | | Uncoated | | INSL | h | |
|-------------|-----------|---------|-----|--------|--------|-------|-------|-------|--------|--------|----------|-------|------|----|-----|
| | | | | T9225 | AH7025 | AH725 | AH905 | GH130 | AH8005 | NS9530 | | KS05F | | | |
| DTR3-150 | 3 | 3 | 1.5 | ● | ● | ● | ● | ● | ● | ● | | ● | | 20 | 5 |
| DTR4-200 | 4 | 4 | 2 | ● | ● | ● | ● | ● | ● | ● | | ● | | 20 | 5 |
| DTR5-250 | 5 | 5 | 2.5 | ● | ● | ● | ● | ● | ● | ● | | ● | | 25 | 5.5 |
| DTR6-300 | 6 | 6 | 3 | ● | ● | ● | | ● | ● | | | ● | | 25 | 5.5 |

● : Line up

STR

Profiling and undercutting



| | | | | | | | | | | | | | | | | | | | | | |
|----------|----------------|---|---|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|
| P | Steel | ★ | | | | | | | | | | | | | | | | | | | |
| M | Stainless | ★ | ☆ | | | | | | | | | | | | | | | | | | |
| K | Cast iron | ★ | ☆ | | | | | | ☆ | | | | | | | | | | | | |
| N | Non-ferrous | | | | | | | | ☆ | | | | | | | | | | | | |
| S | Superalloys | ★ | ★ | | | | | | ★ | | | | | | | | | | | | |
| H | Hard materials | | | | | | | | | | | | | | | | | | | | |

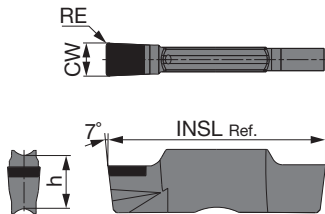
★ : First choice
☆ : Second choice

| Designation | Seat size | CW±0.05 | RE | Coated | | Uncoated | | | | | | | INSL | h |
|-------------|-----------|---------|-----|--------|--------|----------|--|--|--|--|--|--|------|-----|
| | | | | AH7025 | AH8005 | KS05F | | | | | | | | |
| STR3-150 | 3 | 3 | 1.5 | ● | ● | ● | | | | | | | 20 | 5 |
| STR4-200 | 4 | 4 | 2 | ● | ● | ● | | | | | | | 20 | 5 |
| STR5-250 | 5 | 5 | 2.5 | ● | ● | ● | | | | | | | 25 | 5.5 |
| STR6-300 | 6 | 6 | 3 | ● | ● | ● | | | | | | | 25 | 5.5 |

● : Line up

SGN

External grooving of hardened steel



| | | | | | | | | | | | | | | | | | | | | | | |
|----------|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P | Steel | | | | | | | | | | | | | | | | | | | | | |
| M | Stainless | | | | | | | | | | | | | | | | | | | | | |
| K | Cast iron | | | | | | | | | | | | | | | | | | | | | |
| N | Non-ferrous | | | | | | | | | | | | | | | | | | | | | |
| S | Superalloys | | | | | | | | | | | | | | | | | | | | | |
| H | Hard materials | ★ | | | | | | | | | | | | | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | Seat size | CW±0.025 | RE | CBN | | | | | | | | | INSL | h | Edge prep. | | | |
|--------------|-----------|----------|-----|-------|--|--|--|--|--|--|--|--|------|----|------------|---|---|---|
| | | | | BX360 | | | | | | | | | | | No symbol | S | H | |
| SGN200-020 | 2 | 2 | 0.2 | ● | | | | | | | | | | 20 | 5 | ○ | | |
| SGN200-020-S | 2 | 2 | 0.2 | ● | | | | | | | | | | 20 | 5 | | ○ | |
| SGN200-020-H | 2 | 2 | 0.2 | ● | | | | | | | | | | 20 | 5 | | | ○ |
| SGN300-020 | 3 | 3 | 0.2 | ● | | | | | | | | | | 20 | 5 | ○ | | |
| SGN300-020-S | 3 | 3 | 0.2 | ● | | | | | | | | | | 20 | 5 | | ○ | |
| SGN300-020-H | 3 | 3 | 0.2 | ● | | | | | | | | | | 20 | 5 | | | ○ |
| SGN400-020 | 4 | 4 | 0.2 | ● | | | | | | | | | | 20 | 5 | ○ | | |
| SGN400-020-S | 4 | 4 | 0.2 | ● | | | | | | | | | | 20 | 5 | | ○ | |
| SGN400-020-H | 4 | 4 | 0.2 | ● | | | | | | | | | | 20 | 5 | | | ○ |
| SGN500-020-S | 5 | 5 | 0.2 | ● | | | | | | | | | | 25 | 5.5 | | ○ | |
| SGN500-020-H | 5 | 5 | 0.2 | ● | | | | | | | | | | 25 | 5.5 | | | ○ |

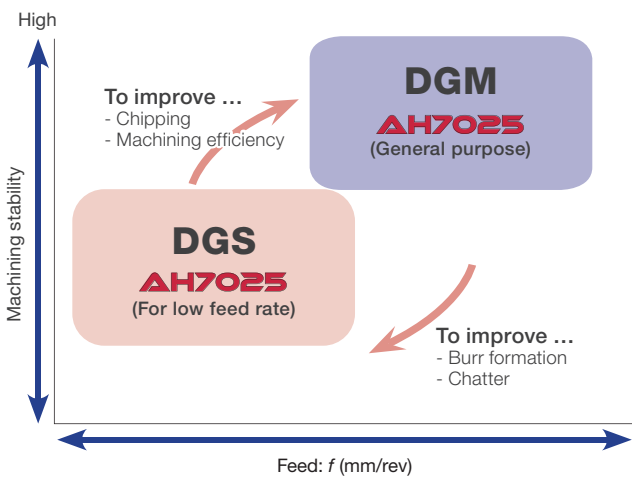
● : Line up

STANDARD CUTTING CONDITIONS

| ISO | Workpiece material | Hardness | Priority | Grade | Cutting speed Vc (m/min) |
|----------|---------------------------------------|----------|--------------------------------|---------------|-----------------------------|
| P | Steels C45, 34CrMo4, etc. | < 300 HB | First choice | AH7025, AH725 | 50 - 180 |
| | | < 300 HB | Priority for wear resistance | T9225 | 80 - 300 |
| | | < 300 HB | Priority for wear resistance | T9125 | 80 - 200 |
| | | < 300 HB | Priority for impact resistance | GH130 | 50 - 120 |
| | | < 300 HB | Priority for surface finish | NS9530 | 80 - 220 |
| M | Stainless steel X10CrNiS18-9, etc. | < 200 HB | First choice | AH7025, AH725 | 50 - 120 |
| | | < 200 HB | Priority for impact resistance | GH130 | 50 - 120 |
| N | Aluminium alloys Si < 12% | - | First choice | TH10 | 100 - 500 |
| | | - | First choice | KS05F | 100 - 600 |
| S | Superalloys Inconel718, etc. | < HRC 40 | First choice | AH7025 | 20 - 60 |
| | | < HRC 40 | Priority for wear resistance | AH905 | 20 - 80 |
| | Titanium alloys Ti-6Al-4V, etc. | < HRC 40 | First choice | AH905 | 20 - 80 |
| | | < HRC 40 | Priority for impact resistance | AH7025, AH725 | 20 - 80 |
| | | < HRC 40 | Priority for surface finish | KS05F | 20 - 60 |
| H | Hardened steels 34CrMo4, etc. | > HRC 50 | First choice | BX360 | 80 - 150 |

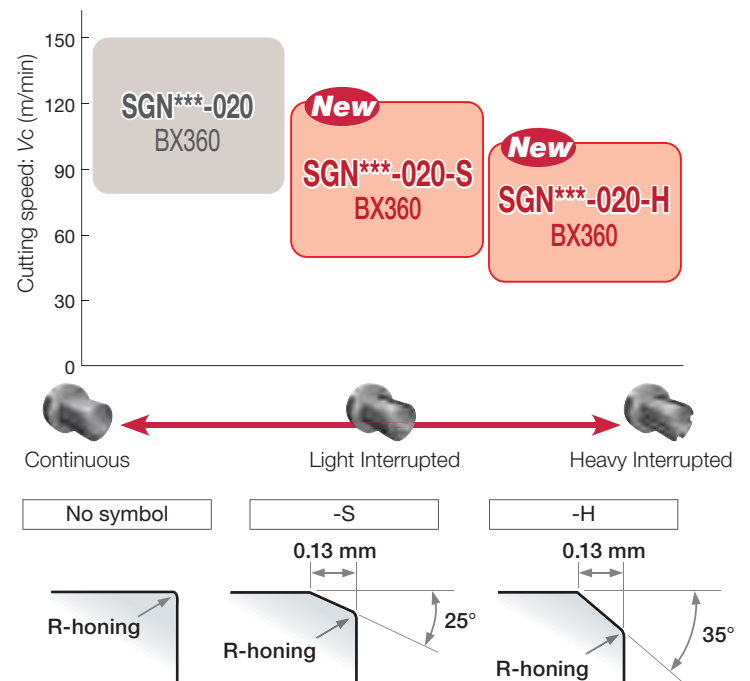
Please see the page 6-27 - 6-29 for feed: f (mm/rev).

New selection system for parting




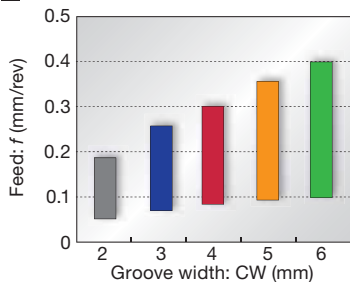

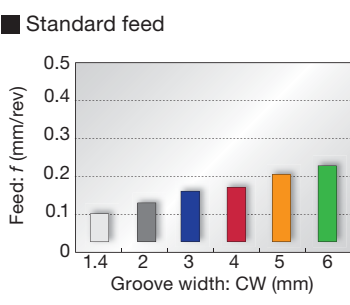

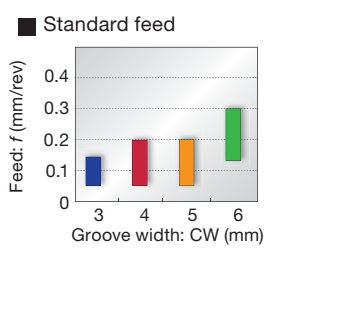

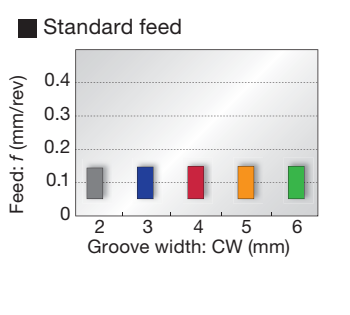

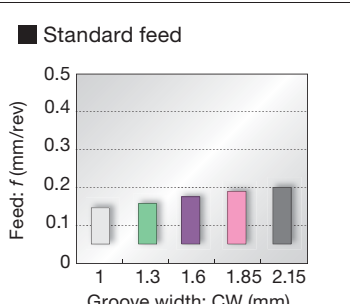
- 2 styles of 3D chipbreakers are available as standard for reliable chip control.
- DGM: general-purpose chipbreaker, DGS: for applications where low cutting force is essential

Edge preparations for SNG


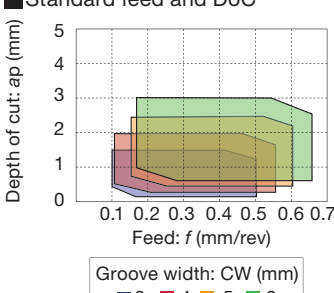
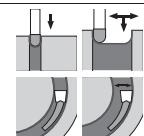


Reference pages: Toolholders → 6-12


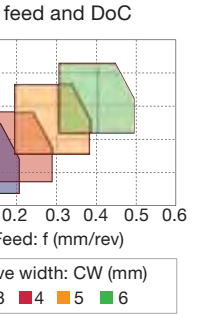
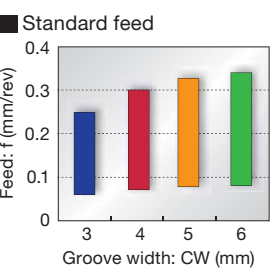

External grooving and parting


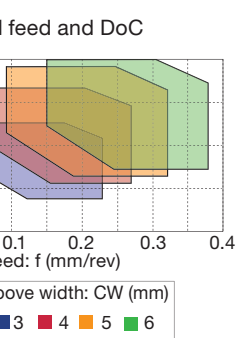
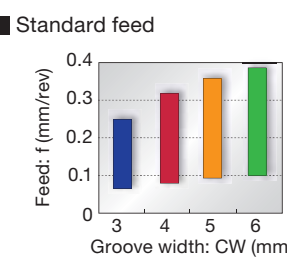
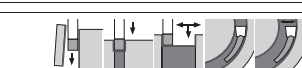
| | | | |
|---|--|---|---|
| <p>DGM type (2 corners) SGM type (1 corner)</p>  <p>6-17, 6-18</p> | <p>1st choice for grooving and parting</p> <p>Smooth chip evacuation Well-designed edge with high strength Handed insert available CW = 2 - 6 mm</p> | <p>■ Standard feed</p>  | <p>Grade 1</p> <p>Insert 2</p> |
| <p>DGS type (2 corners) SGS type (1 corner)</p>  <p>6-19, 6-20</p> | <p>Lower cutting force and superior sharpness</p> <p>Unique-designed edge and chipbreaker Handed insert available CW = 1.4 - 6 mm</p> | <p>■ Standard feed</p>  | <p>Ext. Toolholder 3</p> <p>Int. Toolholder 4</p> |
| <p>DGL type (2 corners)</p>  <p>6-20</p> | <p>1st choice for mild steel</p> <p>Chipbreaker with excellent chip control at low feed Suitable for mild steel that often gives difficulties in chip control CW = 3 - 6 mm</p> | <p>■ Standard feed</p>  | <p>Threading 5</p> |
| <p>DGG type (2 corners)</p>  <p>6-21</p> | <p>For non-ferrous materials and titanium</p> <p>Chipbreaker with low cutting force Sharp cutting edge that prevents vibration and delivers fine surface finish CW = 2 - 6 mm</p> | <p>■ Standard feed</p>  | <p>Grooving 6</p> |
| <p>DGE type (2 corners)</p>  <p>6-21</p> | <p>For high accurate and shallow groove</p> <p>Excellent chip control CW = 1 - 2.15 mm</p> | <p>■ Standard feed</p>  | <p>Endmill 7</p> <p>Drilling Tool 8</p> |


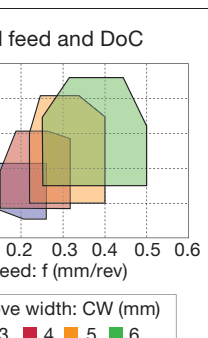
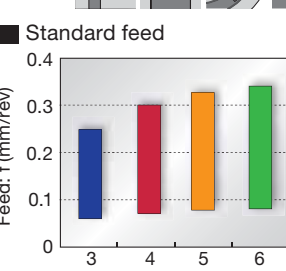
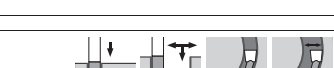
Profiling and undercutting

| | | |
|--|--|---|
| <p>DTR type (2 corners) STR type (1 corners)</p> <p>Molded</p>  <p>Ground</p>  <p>6-24, 6-25</p> | <p>Full radius type</p> <p>Excellent chip control Molded and ground inserts available CW = 3 - 6 mm</p> | <p>Standard feed and DoC</p>   |
|--|--|---|

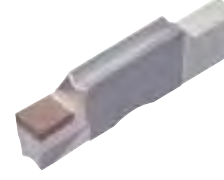
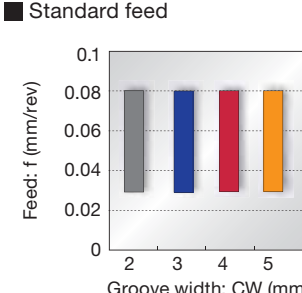

External grooving and turning

| | | |
|--|---|--|
| <p>DTM type (2 corners)</p>  <p>6-22</p> | <p>General purpose</p> <p>1st choice for grooving and turning Suitable for light to medium cutting Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy CW = 3 - 6 mm</p> | <p>Standard feed and DoC</p>  <p>Standard feed</p>   |
|--|---|--|

| | | |
|--|---|---|
| <p>DTX type (2 corners)</p>  <p>6-23</p> | <p>Multi-functional type</p> <p>Well balanced sharpness and strength Multi-functional insert CW = 3 - 6 mm</p> | <p>Standard feed and DoC</p>  <p>Standard feed</p>   |
|--|---|---|

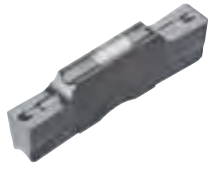
| | | |
|--|--|--|
| <p>DTE type (2 corners)</p>  <p>6-22, 6-23</p> | <p>General purpose</p> <p>Unique chipbreaker makes chips shorter Molded and ground insert available CW = 3 - 6 mm</p> | <p>Standard feed and DoC</p>  <p>Standard feed</p>   |
|--|--|--|

External grooving of hardened steel

| | | |
|---|--|---|
| <p>SGN-CBN type (1 corner)</p>  <p>6-25</p> | <p>For hardened steel cutting</p> <p>Optimum cutting edge shape for grooving of hardened steels High tolerance width for finishing CW = 2 - 5 mm (CW = ±0.025 mm)</p> | <p>Standard feed</p>   |
|---|--|---|

Face grooving and turning

DTF type (2 corners)



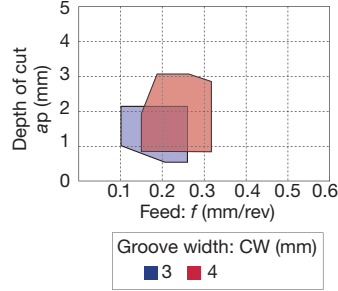
6-18

1st choice for face grooving

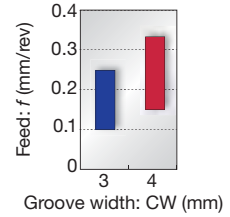
Unique chipbreaker makes chips shorter
Molded and ground insert available

CW = 3 - 4 mm

Standard feed and DoC

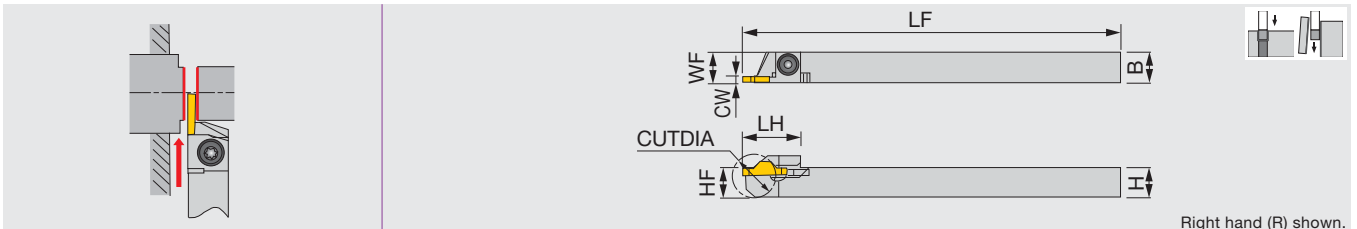


Standard feed



J-SERIES JCCWSR/L

External grooving and parting toolholder, for Swiss lathes



Right hand (R) shown.

| Designation | CW | CUTDIA | H | B | LF | LH | HF | WF | Insert | Torque* |
|----------------|----|--------|----|----|-----|----|----|----|------------|---------|
| JCCWSR/L1010K2 | 2 | 20 | 10 | 10 | 125 | 19 | 10 | 10 | JCC*200... | 3.5 |
| JCCWSR/L1212K2 | 2 | 20 | 12 | 12 | 125 | 19 | 12 | 12 | JCC*200... | 3.5 |
| JCCWSR/L1616K2 | 2 | 20 | 16 | 16 | 125 | 19 | 16 | 16 | JCC*200... | 3.5 |
| JCCWSR/L2020K2 | 2 | 20 | 20 | 20 | 125 | 19 | 20 | 20 | JCC*200... | 3.5 |
| JCCWSR/L2525K2 | 2 | 20 | 25 | 25 | 125 | 19 | 25 | 25 | JCC*200... | 3.5 |

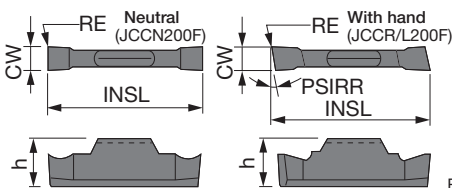
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JCCWSR/L... | CSTB-4S | T-15F |

INSERT

JCC (Sharp edge)



Right hand (R) shown.

| | P | M | K | N | S | H |
|----------------|---|---|---|---|---|---|
| Steel | ★ | | | ☆ | | |
| Stainless | ★ | | | | | |
| Cast iron | | | ☆ | | | |
| Non-ferrous | | | | ★ | | |
| Superalloys | | | | | ★ | |
| Hard materials | | | | | | |

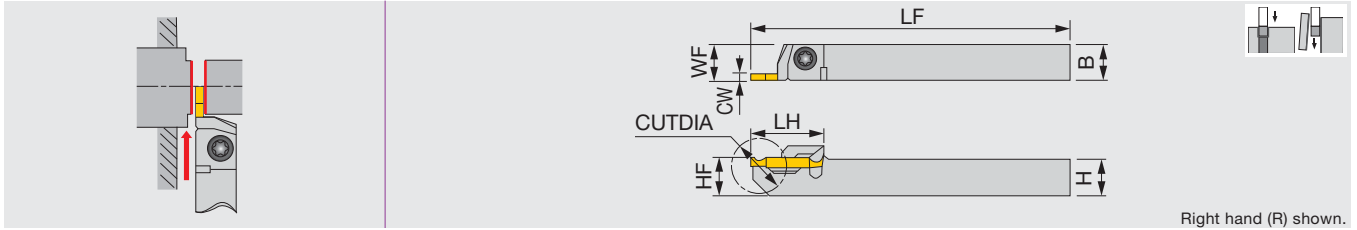
★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.025 | RE | Coated | | Uncoated | | PSIRR | INSL | h |
|--------------|------|----------|------|--------|------|----------|------|-------|------|-----|
| | | | | J740 | TH10 | J740 | TH10 | | | |
| JCCN200F | N | 2 | 0 | ● | ● | | | 0° | 15 | 4.8 |
| JCCN200F-005 | N | 2 | 0.05 | ● | | | | 0° | 15 | 4.8 |
| JCCR200F | R | 2 | 0 | ● | ● | | | 15° | 15 | 4.8 |
| JCCL200F | L | 2 | 0 | ● | ● | | | 15° | 15 | 4.8 |
| JCCR200F-005 | R | 2 | 0.05 | ● | | | | 15° | 15 | 4.8 |
| JCCL200F-005 | L | 2 | 0.05 | ● | | | | 15° | 15 | 4.8 |

● : Line up

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

External grooving and parting toolholder, for Swiss lathes



| Designation | CW | CUTDIA | H | B | LF | LH | HF | WF | Insert | Torque* |
|----------------|----|--------|----|----|-----|----|----|----|-------------|---------|
| JCGWSR/L1010K2 | 2 | 20 | 10 | 10 | 125 | 20 | 10 | 10 | JCGN200F... | 3.5 |
| JCGWSR/L1212K2 | 2 | 20 | 12 | 12 | 125 | 20 | 12 | 12 | JCGN200F... | 3.5 |
| JCGWSR/L1616K2 | 2 | 20 | 16 | 16 | 125 | 20 | 16 | 16 | JCGN200F... | 3.5 |

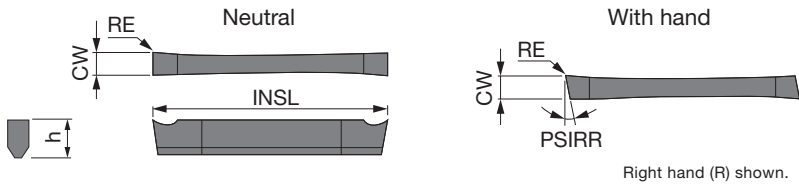
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JCGWSR/L... | CSTB-4S | T-15F |

INSERT

JCGN (Sharp edge)



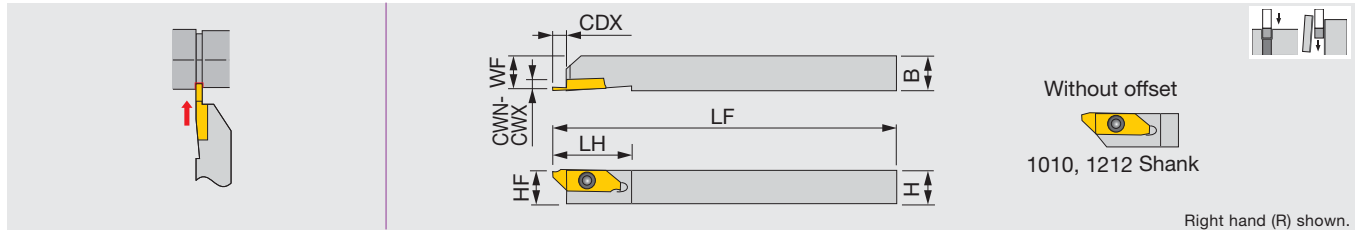
| | | | | | | | | |
|-------------------------|---|--|---|--|--|--|--|--|
| P Steel | ★ | | ☆ | | | | | |
| M Stainless | ★ | | | | | | | |
| K Cast iron | | | ☆ | | | | | |
| N Non-ferrous | | | ★ | | | | | |
| S Superalloys | | | ★ | | | | | |
| H Hard materials | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.025 | RE | Coated | | Uncoated | | PSIRR | INSL | h |
|-------------|------|----------|------|--------|------|----------|--|-------|------|---|
| | | | | J740 | TH10 | | | | | |
| JCGN200F | N | 2 | 0.05 | ● | ● | | | 0° | 20 | 3 |
| JCGN200FR | R | 2 | 0.05 | ● | ● | | | 8° | 20 | 3 |
| JCGN200FL | L | 2 | 0.05 | ● | ● | | | 8° | 20 | 3 |

● : Line up

Screw-on toolholder for external grooving and parting for Swiss lathes



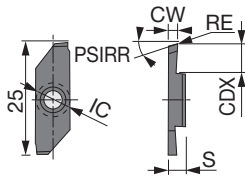
| Designation | CWN | CWX | CDX | H | B | LF | LH | HF | WF | Insert | Torque* |
|-----------------|-----|-----|---------|----|----|-----|----|----|------|--------|---------|
| JSXGR/L1010K8-C | 0.7 | 2 | 4.5 - 6 | 10 | 10 | 125 | 29 | 10 | 9.9 | JXG... | 1.3 |
| JSXGR/L1212K8-C | 0.7 | 2 | 4.5 - 6 | 12 | 12 | 125 | 29 | 12 | 11.9 | JXG... | 1.3 |
| JSXGR/L1616K8 | 0.7 | 2 | 4.5 - 6 | 16 | 16 | 125 | 29 | 16 | 15.9 | JXG... | 1.3 |
| JSXGR/L2020K8 | 0.7 | 2 | 4.5 - 6 | 20 | 20 | 125 | 29 | 20 | 19.9 | JXG... | 1.3 |
| JSXGR/L2525K8 | 0.7 | 2 | 4.5 - 6 | 25 | 25 | 125 | 29 | 25 | 24.9 | JXG... | 1.3 |

Can be wrenched also from the back with a double-head screw.
 This toolholder can be used for JXF front-turning insert, JXR reverse-turning insert, and JXG parting and grooving insert.
 *Torque: Recommended clamping torque (N·m)

| SPARE PARTS | | |
|-------------|----------------|--------|
| Designation | Clamping screw | Wrench |
| JSXGR/L... | CSTB-4SD | T-8F |

INSERT

JXG (with hand, sharp edge)



Right hand (R) shown.

| | | | | | | | | | |
|-------------------------|---|--|---|---|--|--|--|--|--|
| P Steel | ★ | | ☆ | | | | | | |
| M Stainless | ★ | | | | | | | | |
| K Cast iron | | | ☆ | | | | | | |
| N Non-ferrous | | | | ★ | | | | | |
| S Superalloys | | | | ★ | | | | | |
| H Hard materials | | | | | | | | | |

★ : First choice
 ☆ : Second choice

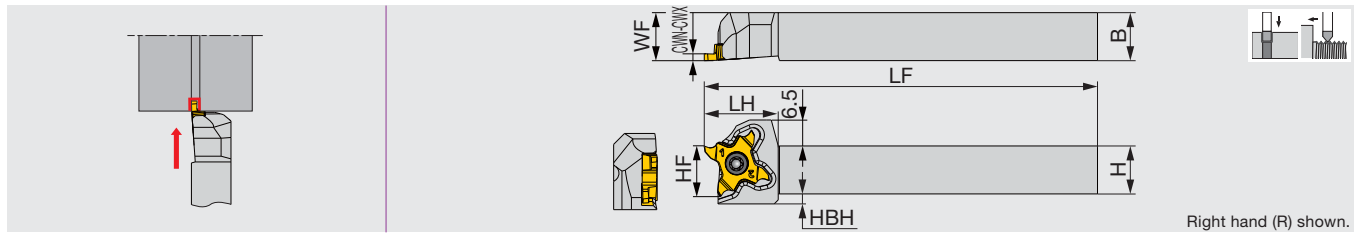
| Designation | HAND | CW±0.025 | RE | Coated | | Uncoated | | CDX | IC | PSIRR | S |
|------------------|------|----------|------|--------|------|----------|--|-----|----|-------|------|
| | | | | J740 | TH10 | | | | | | |
| JXGR8070FA | R | 0.7 | 0 | ● | ● | | | 4.5 | 8 | 15° | 3.97 |
| JXGL8070FA | L | 0.7 | 0 | ● | ● | | | 4.5 | 8 | 15° | 3.97 |
| JXGR8070FA-005 | R | 0.7 | 0.05 | ● | | | | 4.5 | 8 | 15° | 3.97 |
| JXGR8100FA | R | 1 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGL8100FA | L | 1 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGR8100FA-005 | R | 1 | 0.05 | ● | | | | 6 | 8 | 15° | 3.97 |
| JXGR8100FA45 | R | 1 | 0 | ● | ● | | | 4.5 | 8 | 15° | 3.97 |
| JXGR8100FA45-005 | R | 1 | 0.05 | ● | | | | 4.5 | 8 | 15° | 3.97 |
| JXGR8150FA | R | 1.5 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGL8150FA | L | 1.5 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGR8150FA-005 | R | 1.5 | 0.05 | ● | | | | 6 | 8 | 15° | 3.97 |
| JXGR8150FA50 | R | 1.5 | 0 | ● | ● | | | 5 | 8 | 15° | 3.97 |
| JXGR8150FA50-005 | R | 1.5 | 0.05 | ● | | | | 5 | 8 | 15° | 3.97 |
| JXGR8180FA | R | 1.8 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGR8180FA-005 | R | 1.8 | 0.05 | ● | | | | 6 | 8 | 15° | 3.97 |
| JXGR8200FA | R | 2 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGL8200FA | L | 2 | 0 | ● | ● | | | 6 | 8 | 15° | 3.97 |
| JXGR8200FA-005 | R | 2 | 0.05 | ● | | | | 6 | 8 | 15° | 3.97 |
| JXGR8200FN | R | 2 | 0 | ● | ● | | | 6 | 8 | 0° | 3.97 |
| JXGL8200FN | L | 2 | 0 | ● | ● | | | 6 | 8 | 0° | 3.97 |
| JXGR8200FN-005 | R | 2 | 0.05 | ● | | | | 6 | 8 | 0° | 3.97 |

● : Line up

TETRAMCUT

STCR/L-18

External grooving and threading toolholder



Right hand (R) shown.

| Designation | CWN | CWX | H | B | LF | LH | HF | WF | HBH | Insert | Torque* |
|---------------|------|-----|----|----|-----|------|----|----|-----|----------|---------|
| STCR/L1010X18 | 0.33 | 3 | 10 | 10 | 120 | 18.5 | 10 | 10 | 4.5 | TC*18... | 1.2 |
| STCR/L1212F18 | 0.33 | 3 | 12 | 12 | 85 | 18.5 | 12 | 12 | 2.5 | TC*18... | 1.2 |
| STCR/L1212X18 | 0.33 | 3 | 12 | 12 | 120 | 18.5 | 12 | 12 | 2.5 | TC*18... | 1.2 |
| STCR/L1616X18 | 0.33 | 3 | 16 | 16 | 120 | 18.5 | 16 | 16 | - | TC*18... | 1.2 |
| STCR/L2020H18 | 0.33 | 3 | 20 | 20 | 100 | 18.5 | 20 | 20 | - | TC*18... | 1.2 |
| STCR/L2020X18 | 0.33 | 3 | 20 | 20 | 120 | 23 | 20 | 25 | - | TC*18... | 1.2 |

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

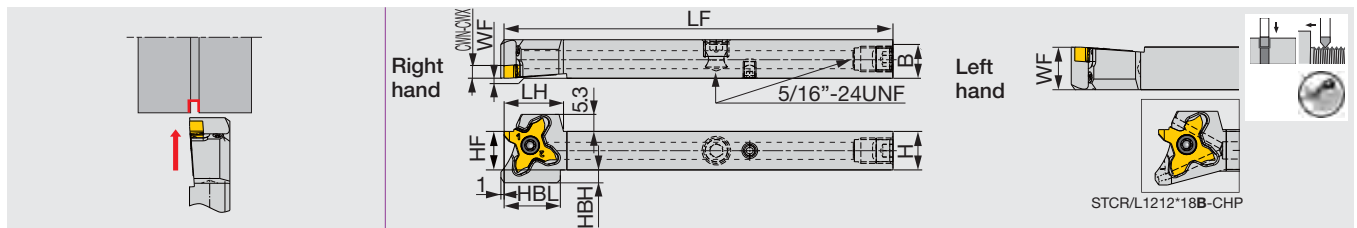
| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| STCR****18 | CSTC-4L100DL | T-1008/5 |
| STCL****18 | CSTC-4L100DR | T-1008/5 |

TETRAMCUT

STCR/L-X18-CHP

TUNG TJET

External grooving and threading toolholder with high pressure coolant capability



STCR/L1212*18B-CHP

| Designation | CWN | CWX | H | B | LF | LH | HF | WF | HBL | HBH | Insert | Torque* |
|-------------------------------------|------|-----|----|----|-----|------|------|------|------|-----|----------|---------|
| STCR/L1012H18-CHP | 0.33 | 3 | 10 | 12 | 100 | 17.1 | 17.1 | 10 | 0/12 | 4 | TC**18 | 1.2 |
| STCR/L1212X18-CHP*** ⁽¹⁾ | 0.33 | 3 | 12 | 12 | 120 | 18.5 | 12 | 0/12 | 17.5 | 4 | TC*18... | 1.2 |
| STCR/L1212X18B-CHP ⁽¹⁾ | 0.33 | 3 | 12 | 12 | 120 | 18.5 | 12 | 0/12 | 17.5 | 4 | TC*18... | 1.2 |
| STCR/L1616X18-CHP ⁽¹⁾ | 0.33 | 3 | 16 | 16 | 120 | 18.5 | 16 | 0/16 | - | - | TC*18... | 1.2 |

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

⁽¹⁾ Compatible to the direct internal coolant supply system without the use of external coolant hose.

*Torque: Recommended clamping torque (N·m)

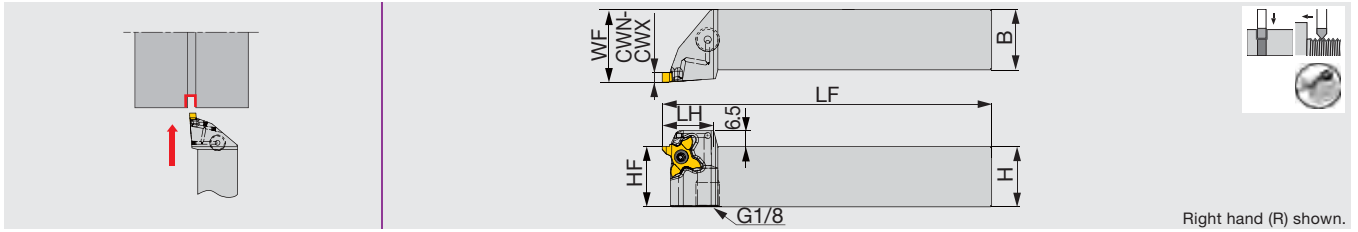
***: This item will be replaced with a new product in the future.

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|----------|
| STCL**18-CHP | CSTC-4L100DR | T-1008/5 |
| STCR**18-CHP | CSTC-4L100DL | T-1008/5 |

Reference pages: Inserts → 6-36, Standard cutting conditions → 6-40, Parts for coolant hose → 3-61

Threading tool - for external threading with high pressure coolant capability



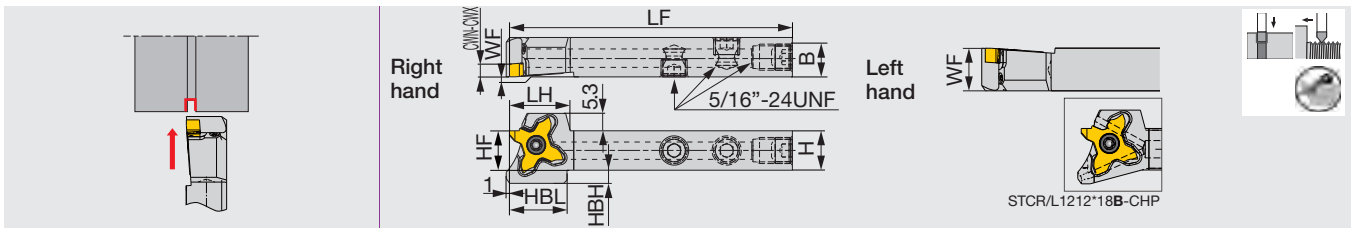
| Designation | CWN | CWX | H | B | LF | LH | HBL | HF | WF | HBH | Insert | Torque* |
|-------------------|------|-----|----|----|-----|----|-----|----|----|-----|----------|---------|
| STCR/L2020X18-CHP | 0.33 | 3 | 20 | 20 | 120 | 23 | - | 20 | 25 | - | TC*18... | 1.2 |

Use the right hand insert (TC*18R...) with the right hand toolholders (STCR...). Use the left hand insert (TC*18L...) with the left hand holder (STCL...).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|----------|
| STCL**18-CHP | CSTC-4L100DR | T-1008/5 |
| STCR**18-CHP | CSTC-4L100DL | T-1008/5 |

External grooving and threading toolholder, with high pressure coolant capability



| Designation | CWN | CWX | H | B | LF | LH | HF | WF | HBL | HBH | Insert | Torque* |
|----------------------|------|-----|----|----|-----|------|----|------|------|-----|----------|---------|
| STCR/L1212F18-CHP*** | 0.33 | 3 | 12 | 12 | 85 | 18.5 | 12 | 0/12 | 17.5 | 4 | TC*18... | 1.2 |
| STCR/L1212F18B-CHP | 0.33 | 3 | 12 | 12 | 120 | 18.5 | 12 | 0/12 | 17.5 | 4 | TC*18... | 1.2 |

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

*Torque: Recommended clamping torque (N·m)

***: This item will be replaced with a new product in the future.

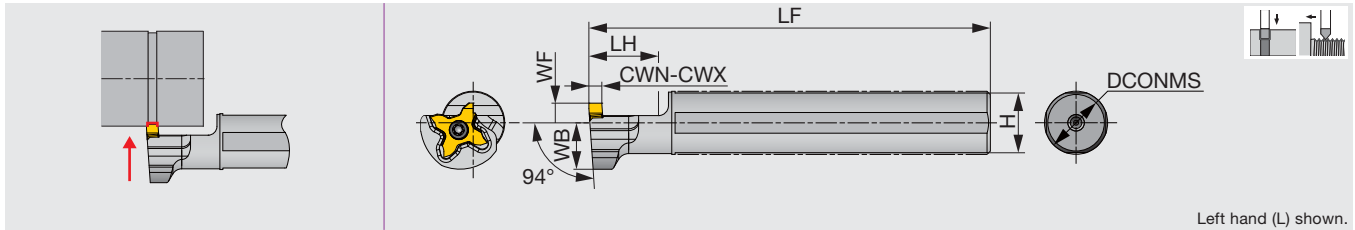
SPARE PARTS

| Designation | Clamping screw | Wrench |
|--------------|----------------|----------|
| STCL**18-CHP | CSTC-4L100DR | T-1008/5 |
| STCR**18-CHP | CSTC-4L100DL | T-1008/5 |

TETRAMCUT

JS-STCL18

External grooving and threading toolholder with round shank, for Swiss lathes



| Designation | CWN | CWX | DCONMS | H | LF | LH | WB | WF | Insert | Torque* |
|---------------|------|-----|--------|----|-----|----|-------|----|-----------|---------|
| JS14H-STCL18 | 0.33 | 3 | 14 | 13 | 100 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS159F-STCL18 | 0.33 | 3 | 15.875 | 15 | 85 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS16F-STCL18 | 0.33 | 3 | 16 | 15 | 85 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS19G-STCL18 | 0.33 | 3 | 19.05 | 18 | 90 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS19X-STCL18 | 0.33 | 3 | 19.05 | 18 | 120 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS20G-STCL18 | 0.33 | 3 | 20 | 19 | 90 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS20X-STCL18 | 0.33 | 3 | 20 | 19 | 120 | 20 | 14 | 6 | TC*18R... | 1.2 |
| JS22X-STCL18 | 0.33 | 3 | 22 | 21 | 120 | 20 | 12.25 | 10 | TC*18R... | 1.2 |
| JS25H-STCL18 | 0.33 | 3 | 25 | 24 | 100 | 20 | 12.25 | 10 | TC*18R... | 1.2 |
| JS254X-STCL18 | 0.33 | 3 | 25.4 | 24 | 120 | 20 | 12.25 | 10 | TC*18R... | 1.2 |

Please use right-hand inserts.

*Torque: Recommended clamping torque (N·m)

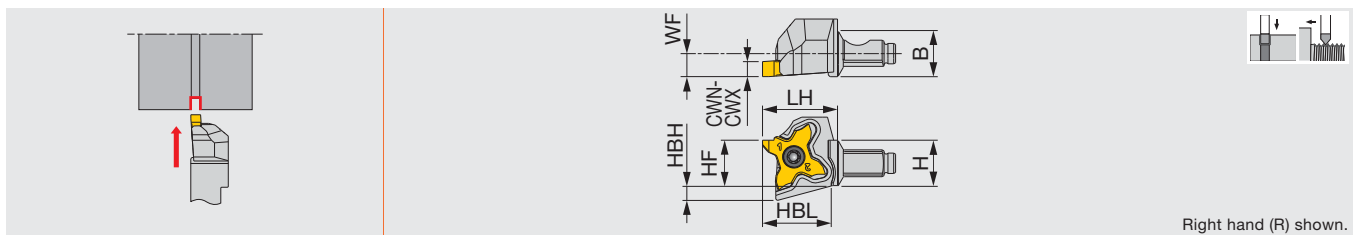
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---------------|----------------|----------|
| JS****-STCL18 | CSTC-4L100DL | T-1008/5 |

TETRAMCUT

QC12-STCR/L

External grooving and threading head



| Designation | CWN | CWX | H | B | LH | HF | HBH | HBL | WF | Insert | Torque* |
|-------------|------|-----|----|----|------|----|-----|------|----|-----------|---------|
| QC12-STCR18 | 0.33 | 3 | 12 | 12 | 19.5 | 12 | 3.9 | 17.9 | 6 | TC*18R... | 1.2 |
| QC12-STCL18 | 0.33 | 3 | 12 | 12 | 21 | 12 | 3.9 | 18.3 | 9 | TC*18L... | 1.2 |

The right hand insert (R) is used for the right hand toolholder (R)., The left hand insert (L) is used for the left hand toolholder (L).

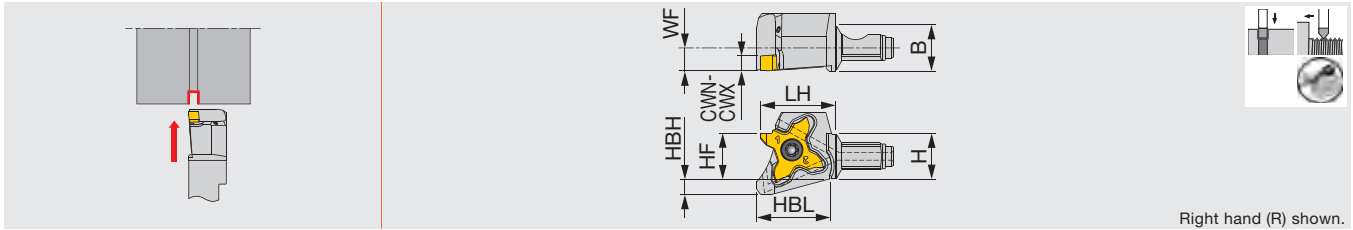
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|----------|
| QC12-STCR18 | CSTC-4L100DL | T-1008/5 |
| QC12-STCL18 | CSTC-4L100DR | T-1008/5 |

Reference pages: Inserts → [6-36](#), QC-Shanks → [3-60](#), Standard cutting conditions → [6-40](#)
Parts for coolant hose → [3-61](#)

External grooving and threading head, with high pressure coolant capability



| Designation | CWN | CWX | H | B | LH | HF | HBH | HBL | WF | Insert | Torque* |
|-----------------|------|-----|----|----|------|----|-----|------|----|-----------|---------|
| QC12-STCR18-CHP | 0.33 | 3 | 12 | 12 | 19.5 | 12 | 4.2 | 19.3 | 6 | TC*18R... | 1.2 |
| QC12-STCL18-CHP | 0.33 | 3 | 12 | 12 | 21 | 12 | 4.2 | 19.3 | 9 | TC*18L... | 1.2 |

The right hand insert (R) is used for the right hand toolholder (R). The left hand insert (L) is used for the left hand toolholder (L).
Through-coolant head

*Torque: Recommended clamping torque (N-m)

SPARE PARTS

| Designation | Clamping screw | Wrench | O-ring |
|-----------------|----------------|----------|----------------------|
| QC12-STCR18-CHP | CSTC-4L100DL | T-1008/5 | ORSS-0454.5X1.0NBR70 |
| QC12-STCL18-CHP | CSTC-4L100DR | T-1008/5 | ORSS-0454.5X1.0NBR70 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

Reference pages: Inserts → [6-36](#), QC-Shanks → [3-60](#), Standard cutting conditions → [6-40](#)
Parts for coolant hose → [3-61](#)

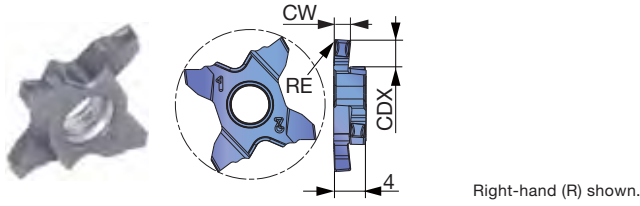
Standard lineup of TetraMini-Cut grooving inserts

| Groove width CW (mm) | Corner rad. RE (mm) | TCL18R (P.6-37) | TCS18R (P.6-37) | TCG18R/L (P.6-39) | TCP18R/L (P.6-38) | TCP18R/L-F (P.6-38) |
|-------------------------|------------------------|-----------------|-----------------|-------------------|--------------------|---------------------|
| | | AH7025 | AH7025 | AH7025 | AH725 | SH725 |
| | | Honed edge | Honed edge | Honed edge | Lightly honed edge | Sharp edge |
| 0.33 | 0.05 | | | | ● | ● |
| 0.43 | 0.05 | | | | ● | ● |
| 0.5 | 0.05 | | | | ● | ● |
| 0.75 | 0.05 | | | | ● | ● |
| 0.95 | 0.05 | | | | ● | ● |
| 1 | 0.05 | | | | | ● |
| | 0.1 | | ● | ● | ● | ● |
| 1.2 | 0.05 | | | | | ● |
| | 0.1 | | ● | ● | ● | ● |
| 1.25 | 0.05 | | | | | ● |
| | 0.1 | | ● | ● | ● | ● |
| | 0.2 | | ● | ● | | |
| 1.3 | 0.2 | | ● | ● | | |
| 1.4 | 0.1 | | ● | ● | ● | ● |
| | 0.2 | | ● | ● | | |
| 1.45 | 0.05 | | | | | ● |
| | 0.1 | | ● | ● | ● | ● |
| | 0.2 | | | ● | | |
| 1.5 | 0.05 | | | | | ● |
| | 0.1 | ● | ● | ● | ● | ● |
| | 0.2 | ● | ● | ● | | |
| 1.58 | 0.79 | | | ● | | |
| 1.6 | 0.2 | | ● | ● | | |
| 1.7 | 0.2 | | ● | ● | | |
| 1.75 | 0.05 | | | | | ● |
| | 0.1 | | ● | ● | ● | ● |
| | 0.2 | ● | ● | ● | | |
| 1.85 | 0.2 | | ● | ● | | |
| 1.95 | 0.2 | | ● | ● | | |
| 2 | 0.05 | | | | | ● |
| | 0.1 | ● | ● | ● | ● | ● |
| | 0.2 | ● | ● | ● | | |
| 2.25 | 1.0 | | | ● | | |
| | 2.25 | 0.2 | ● | ● | | |
| 2.3 | 0.2 | | ● | ● | | |
| 2.39 | 1.2 | | | ● | | |
| 2.5 | 0.1 | | ● | ● | ● | ● |
| | 0.2 | | ● | ● | ● | |
| | 0.3 | ● | ● | ● | | |
| 2.65 | 0.3 | | ● | ● | | |
| 2.8 | 0.3 | | ● | ● | | |
| 3 | 0.1 | ● | ● | ● | ● | ● |
| | 0.2 | ● | ● | ● | | |
| | 0.3 | ● | ● | ● | | |
| | 1.5 | | | ● | | |
| 3.18 | 1.59 | | | ● | | |

● : New
● : Line up

INSERT

TCL18R (3D chipbreaker, honed edge)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

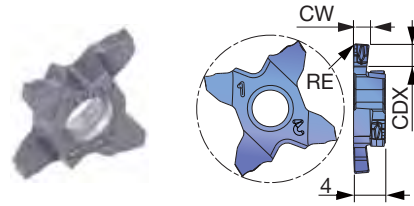
★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|---------------|------|---------|-----|--------|--|-----|
| | | | | AH7025 | | |
| TCL18R150-010 | R | 1.5 | 0.1 | ● | | 3.5 |
| TCL18R150-020 | R | 1.5 | 0.2 | ● | | 3.5 |
| TCL18R175-020 | R | 1.75 | 0.2 | ● | | 3.5 |
| TCL18R200-010 | R | 2 | 0.1 | ● | | 3.5 |
| TCL18R200-020 | R | 2 | 0.2 | ● | | 3.5 |
| TCL18R250-030 | R | 2.5 | 0.3 | ● | | 3.5 |
| TCL18R300-010 | R | 3 | 0.1 | ● | | 3.5 |
| TCL18R300-020 | R | 3 | 0.2 | ● | | 3.5 |
| TCL18R300-030 | R | 3 | 0.3 | ● | | 3.5 |

Please see the page 6-40 for precautions of processing.

5 pieces per package
● : New
● : Line up

TCS18R (3D chipbreaker, honed edge)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

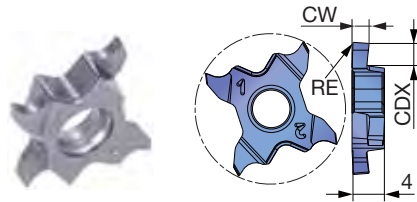
| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|---------------|------|---------|-----|--------|--|-----|
| | | | | AH7025 | | |
| TCS18R100-010 | R | 1 | 0.1 | ● | | 2 |
| TCS18R120-010 | R | 1.2 | 0.1 | ● | | 2 |
| TCS18R125-010 | R | 1.25 | 0.1 | ● | | 2 |
| TCS18R125-020 | R | 1.25 | 0.2 | ● | | 2 |
| TCS18R130-020 | R | 1.3 | 0.2 | ● | | 3.5 |
| TCS18R140-010 | R | 1.4 | 0.1 | ● | | 3.5 |
| TCS18R140-020 | R | 1.4 | 0.2 | ● | | 3.5 |
| TCS18R145-010 | R | 1.45 | 0.1 | ● | | 3.5 |
| TCS18R150-010 | R | 1.5 | 0.1 | ● | | 3.5 |
| TCS18R150-020 | R | 1.5 | 0.2 | ● | | 3.5 |
| TCS18R160-020 | R | 1.6 | 0.2 | ● | | 3.5 |
| TCS18R170-020 | R | 1.7 | 0.2 | ● | | 3.5 |
| TCS18R175-010 | R | 1.75 | 0.1 | ● | | 3.5 |
| TCS18R175-020 | R | 1.75 | 0.2 | ● | | 3.5 |
| TCS18R185-020 | R | 1.85 | 0.2 | ● | | 3.5 |
| TCS18R195-020 | R | 1.95 | 0.2 | ● | | 3.5 |
| TCS18R200-010 | R | 2 | 0.1 | ● | | 3.5 |
| TCS18R200-020 | R | 2 | 0.2 | ● | | 3.5 |
| TCS18R225-020 | R | 2.25 | 0.2 | ● | | 3.5 |
| TCS18R230-020 | R | 2.3 | 0.2 | ● | | 3.5 |
| TCS18R250-010 | R | 2.5 | 0.2 | ● | | 3.5 |
| TCS18R250-020 | R | 2.5 | 0.2 | ● | | 3.5 |
| TCS18R250-030 | R | 2.5 | 0.3 | ● | | 3.5 |
| TCS18R265-030 | R | 2.65 | 0.3 | ● | | 3.5 |
| TCS18R280-030 | R | 2.8 | 0.3 | ● | | 3.5 |
| TCS18R300-010 | R | 3 | 0.1 | ● | | 3.5 |
| TCS18R300-020 | R | 3 | 0.2 | ● | | 3.5 |
| TCS18R300-030 | R | 3 | 0.3 | ● | | 3.5 |

Please see the page 6-40 for precautions of processing.

5 pieces per package
● : Line up

INSERT

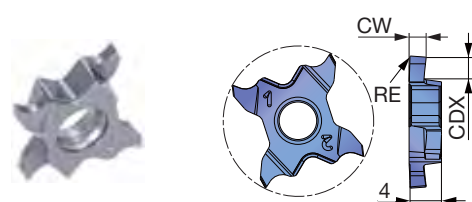
TCP18R/L-F (sharp edge)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

TCP18R/L (lightly honed edge)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice



| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|-------------------|------|---------|------|--------|--|-----|
| | | | | SH725 | | |
| TCP18R033F-005 | R | 0.33 | 0.05 | ● | | 0.8 |
| TCP18L033F-005 | L | 0.33 | 0.05 | ● | | 0.8 |
| TCP18R043F-005 | R | 0.43 | 0.05 | ● | | 1.2 |
| TCP18L043F-005 | L | 0.43 | 0.05 | ● | | 1.2 |
| TCP18R050F-005 | R | 0.5 | 0.05 | ● | | 1.2 |
| TCP18L050F-005 | L | 0.5 | 0.05 | ● | | 1.2 |
| TCP18R075F-005 | R | 0.75 | 0.05 | ● | | 2 |
| TCP18L075F-005 | L | 0.75 | 0.05 | ● | | 2 |
| TCP18R095F-005 | R | 0.95 | 0.05 | ● | | 2 |
| TCP18L095F-005 | L | 0.95 | 0.05 | ● | | 2 |
| TCP18R100F-005 | R | 1 | 0.05 | ● | | 2 |
| TCP18R100F-010 | R | 1 | 0.1 | ● | | 2 |
| TCP18L100F-010 | L | 1 | 0.1 | ● | | 2 |
| TCP18R120F-005 | R | 1.2 | 0.05 | ● | | 2 |
| TCP18R120F-010 | R | 1.2 | 0.1 | ● | | 2 |
| TCP18L120F-010 | L | 1.2 | 0.1 | ● | | 2 |
| TCP18R125F-005 | R | 1.25 | 0.05 | ● | | 2 |
| TCP18R125F-010 | R | 1.25 | 0.1 | ● | | 2 |
| TCP18L125F-010 | L | 1.25 | 0.1 | ● | | 2 |
| TCP18R140F-010-35 | R | 1.4 | 0.1 | ● | | 3.5 |
| TCP18R145F-005-35 | R | 1.45 | 0.05 | ● | | 3.5 |
| TCP18R145F-010 | R | 1.45 | 0.1 | ● | | 2 |
| TCP18L145F-010 | L | 1.45 | 0.1 | ● | | 2 |
| TCP18R145F-010-35 | R | 1.45 | 0.1 | ● | | 3.5 |
| TCP18L145F-010-35 | L | 1.45 | 0.1 | ● | | 3.5 |
| TCP18R150F-005-35 | R | 1.5 | 0.05 | ● | | 3.5 |
| TCP18R150F-010 | R | 1.5 | 0.1 | ● | | 2 |
| TCP18L150F-010 | L | 1.5 | 0.1 | ● | | 2 |
| TCP18R150F-010-35 | R | 1.5 | 0.1 | ● | | 3.5 |
| TCP18L150F-010-35 | L | 1.5 | 0.1 | ● | | 3.5 |
| TCP18R175F-005-35 | R | 1.75 | 0.05 | ● | | 3.5 |
| TCP18R175F-010 | R | 1.75 | 0.1 | ● | | 2 |
| TCP18L175F-010 | L | 1.75 | 0.1 | ● | | 2 |
| TCP18R175F-010-35 | R | 1.75 | 0.1 | ● | | 3.5 |
| TCP18L175F-010-35 | L | 1.75 | 0.1 | ● | | 3.5 |
| TCP18R200F-010 | R | 2 | 0.1 | ● | | 2.5 |
| TCP18L200F-010 | L | 2 | 0.1 | ● | | 2.5 |
| TCP18R200F-010-35 | R | 2 | 0.1 | ● | | 3.5 |
| TCP18L200F-010-35 | L | 2 | 0.1 | ● | | 3.5 |
| TCP18R250F-010 | R | 2.5 | 0.1 | ● | | 2.5 |
| TCP18L250F-010 | L | 2.5 | 0.1 | ● | | 2.5 |
| TCP18R250F-010-35 | R | 2.5 | 0.1 | ● | | 3.5 |
| TCP18L250F-010-35 | L | 2.5 | 0.1 | ● | | 3.5 |
| TCP18R300F-010 | R | 3 | 0.1 | ● | | 2.5 |
| TCP18L300F-010 | L | 3 | 0.1 | ● | | 2.5 |
| TCP18R300F-010-35 | R | 3 | 0.1 | ● | | 3.5 |
| TCP18L300F-010-35 | L | 3 | 0.1 | ● | | 3.5 |

Please see the page 6-40 for precautions of processing.

| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|------------------|------|---------|------|--------|--|-----|
| | | | | AH725 | | |
| TCP18R033-005 | R | 0.33 | 0.05 | ● | | 0.8 |
| TCP18L033-005 | L | 0.33 | 0.05 | ● | | 0.8 |
| TCP18R043-005 | R | 0.43 | 0.05 | ● | | 1.2 |
| TCP18L043-005 | L | 0.43 | 0.05 | ● | | 1.2 |
| TCP18R050-005 | R | 0.50 | 0.05 | ● | | 1.2 |
| TCP18L050-005 | L | 0.50 | 0.05 | ● | | 1.2 |
| TCP18R075-005 | R | 0.75 | 0.05 | ● | | 2 |
| TCP18L075-005 | L | 0.75 | 0.05 | ● | | 2 |
| TCP18R095-005 | R | 0.95 | 0.05 | ● | | 2 |
| TCP18L095-005 | L | 0.95 | 0.05 | ● | | 2 |
| TCP18R100-010 | R | 1 | 0.1 | ● | | 2 |
| TCP18L100-010 | L | 1 | 0.1 | ● | | 2 |
| TCP18R120-010 | R | 1.2 | 0.1 | ● | | 2 |
| TCP18L120-010 | L | 1.2 | 0.1 | ● | | 2 |
| TCP18R125-010 | R | 1.25 | 0.1 | ● | | 2 |
| TCP18L125-010 | L | 1.25 | 0.1 | ● | | 2 |
| TCP18R140-010-35 | R | 1.4 | 0.1 | ● | | 3.5 |
| TCP18L140-010-35 | L | 1.4 | 0.1 | ● | | 3.5 |
| TCP18R145-010 | R | 1.45 | 0.1 | ● | | 2 |
| TCP18L145-010 | L | 1.45 | 0.1 | ● | | 2 |
| TCP18R145-010-35 | R | 1.45 | 0.1 | ● | | 3.5 |
| TCP18L145-010-35 | L | 1.45 | 0.1 | ● | | 3.5 |
| TCP18R150-010 | R | 1.5 | 0.1 | ● | | 2 |
| TCP18L150-010 | L | 1.5 | 0.1 | ● | | 2 |
| TCP18R150-010-35 | R | 1.5 | 0.1 | ● | | 3.5 |
| TCP18L150-010-35 | L | 1.5 | 0.1 | ● | | 3.5 |
| TCP18R175-010 | R | 1.75 | 0.1 | ● | | 2 |
| TCP18L175-010 | L | 1.75 | 0.1 | ● | | 2 |
| TCP18R175-010-35 | R | 1.75 | 0.1 | ● | | 3.5 |
| TCP18L175-010-35 | L | 1.75 | 0.1 | ● | | 3.5 |
| TCP18R200-010 | R | 2 | 0.1 | ● | | 2.5 |
| TCP18L200-010 | L | 2 | 0.1 | ● | | 2.5 |
| TCP18R200-010-35 | R | 2 | 0.1 | ● | | 3.5 |
| TCP18L200-010-35 | L | 2 | 0.1 | ● | | 3.5 |
| TCP18R250-010 | R | 2.5 | 0.1 | ● | | 2.5 |
| TCP18L250-010 | L | 2.5 | 0.1 | ● | | 2.5 |
| TCP18R250-010-35 | R | 2.5 | 0.1 | ● | | 3.5 |
| TCP18L250-010-35 | L | 2.5 | 0.1 | ● | | 3.5 |
| TCP18R300-010 | R | 3 | 0.1 | ● | | 2.5 |
| TCP18L300-010 | L | 3 | 0.1 | ● | | 2.5 |
| TCP18R300-010-35 | R | 3 | 0.1 | ● | | 3.5 |
| TCP18L300-010-35 | L | 3 | 0.1 | ● | | 3.5 |

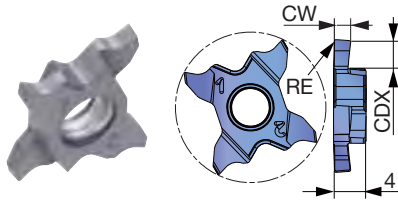
Please see the page 6-40 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → 6-32, Standard cutting conditions → 6-40

INSERT

TCG18R/L (with edge preparation)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

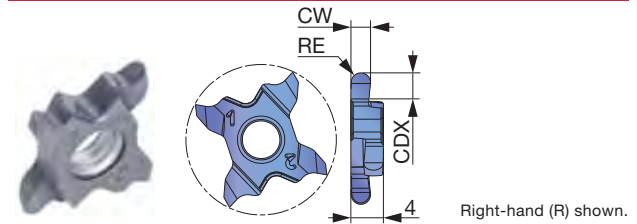
| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|---------------|------|---------|-----|--------|--|-----|
| | | | | AH7025 | | |
| TCG18R100-010 | R | 1 | 0.1 | ● | | 2 |
| TCG18L100-010 | L | 1 | 0.1 | ● | | 2 |
| TCG18R120-010 | R | 1.2 | 0.1 | ● | | 2 |
| TCG18L120-010 | L | 1.2 | 0.1 | ● | | 2 |
| TCG18R125-010 | R | 1.25 | 0.1 | ● | | 2 |
| TCG18L125-010 | L | 1.25 | 0.1 | ● | | 2 |
| TCG18R125-020 | R | 1.25 | 0.2 | ● | | 2 |
| TCG18L125-020 | L | 1.25 | 0.2 | ● | | 2 |
| TCG18R130-020 | R | 1.3 | 0.2 | ● | | 2 |
| TCG18L130-020 | L | 1.3 | 0.2 | ● | | 2 |
| TCG18R140-010 | R | 1.4 | 0.1 | ● | | 3.5 |
| TCG18L140-010 | L | 1.4 | 0.1 | ● | | 3.5 |
| TCG18R140-020 | R | 1.4 | 0.2 | ● | | 3.5 |
| TCG18L140-020 | L | 1.4 | 0.2 | ● | | 3.5 |
| TCG18R145-010 | R | 1.45 | 0.1 | ● | | 3.5 |
| TCG18L145-010 | L | 1.45 | 0.1 | ● | | 3.5 |
| TCG18R145-020 | R | 1.45 | 0.2 | ● | | 3.5 |
| TCG18L145-020 | L | 1.45 | 0.2 | ● | | 3.5 |
| TCG18R150-010 | R | 1.5 | 0.1 | ● | | 3.5 |
| TCG18L150-010 | L | 1.5 | 0.1 | ● | | 3.5 |
| TCG18R150-020 | R | 1.5 | 0.2 | ● | | 3.5 |
| TCG18L150-020 | L | 1.5 | 0.2 | ● | | 3.5 |
| TCG18R160-020 | R | 1.6 | 0.2 | ● | | 3.5 |
| TCG18L160-020 | L | 1.6 | 0.2 | ● | | 3.5 |
| TCG18R170-020 | R | 1.7 | 0.2 | ● | | 3.5 |
| TCG18L170-020 | L | 1.7 | 0.2 | ● | | 3.5 |
| TCG18R175-010 | R | 1.75 | 0.1 | ● | | 3.5 |
| TCG18L175-010 | L | 1.75 | 0.1 | ● | | 3.5 |
| TCG18R175-020 | R | 1.75 | 0.2 | ● | | 3.5 |
| TCG18L175-020 | L | 1.75 | 0.2 | ● | | 3.5 |
| TCG18R185-020 | R | 1.85 | 0.2 | ● | | 3.5 |
| TCG18L185-020 | L | 1.85 | 0.2 | ● | | 3.5 |
| TCG18R195-020 | R | 1.95 | 0.2 | ● | | 3.5 |
| TCG18L195-020 | L | 1.95 | 0.2 | ● | | 3.5 |
| TCG18R200-010 | R | 2 | 0.1 | ● | | 3.5 |
| TCG18L200-010 | L | 2 | 0.1 | ● | | 3.5 |
| TCG18R200-020 | R | 2 | 0.2 | ● | | 3.5 |
| TCG18L200-020 | L | 2 | 0.2 | ● | | 3.5 |
| TCG18R225-020 | R | 2.25 | 0.2 | ● | | 3.5 |
| TCG18L225-020 | L | 2.25 | 0.2 | ● | | 3.5 |
| TCG18R230-020 | R | 2.3 | 0.2 | ● | | 3.5 |
| TCG18L230-020 | L | 2.3 | 0.2 | ● | | 3.5 |
| TCG18R250-010 | R | 2.5 | 0.1 | ● | | 3.5 |
| TCG18L250-010 | L | 2.5 | 0.1 | ● | | 3.5 |
| TCG18R250-020 | R | 2.5 | 0.2 | ● | | 3.5 |
| TCG18L250-020 | L | 2.5 | 0.2 | ● | | 3.5 |
| TCG18R250-030 | R | 2.5 | 0.3 | ● | | 3.5 |
| TCG18L250-030 | L | 2.5 | 0.3 | ● | | 3.5 |
| TCG18R265-030 | R | 2.65 | 0.3 | ● | | 3.5 |
| TCG18L265-030 | L | 2.65 | 0.3 | ● | | 3.5 |

| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|---------------|------|---------|-----|--------|--|-----|
| | | | | AH7025 | | |
| TCG18R280-030 | R | 2.8 | 0.3 | ● | | 3.5 |
| TCG18L280-030 | L | 2.8 | 0.3 | ● | | 3.5 |
| TCG18R300-010 | R | 3 | 0.1 | ● | | 3.5 |
| TCG18L300-010 | L | 3 | 0.1 | ● | | 3.5 |
| TCG18R300-020 | R | 3 | 0.2 | ● | | 3.5 |
| TCG18L300-020 | L | 3 | 0.2 | ● | | 3.5 |
| TCG18R300-030 | R | 3 | 0.3 | ● | | 3.5 |
| TCG18L300-030 | L | 3 | 0.3 | ● | | 3.5 |

Please see the page 6-40 for precautions of processing.

5 pieces per package
● : Line up

TCG18R/L (Full R)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.02 | RE | Coated | | CDX |
|---------------|------|---------|------|--------|--|-----|
| | | | | AH7025 | | |
| TCG18R100-050 | R | 1 | 0.5 | ● | | 2 |
| TCG18L100-050 | L | 1 | 0.5 | ● | | 2 |
| TCG18R158-079 | R | 1.58 | 0.79 | ● | | 3.5 |
| TCG18L158-079 | L | 1.58 | 0.79 | ● | | 3.5 |
| TCG18R200-100 | R | 2 | 1 | ● | | 3.5 |
| TCG18L200-100 | L | 2 | 1 | ● | | 3.5 |
| TCG18R239-120 | R | 2.39 | 1.2 | ● | | 3.5 |
| TCG18L239-120 | L | 2.39 | 1.2 | ● | | 3.5 |
| TCG18R300-150 | R | 3 | 1.5 | ● | | 3.5 |
| TCG18L300-150 | L | 3 | 1.5 | ● | | 3.5 |
| TCG18R318-159 | R | 3.18 | 1.59 | ● | | 3.5 |
| TCG18L318-159 | L | 3.18 | 1.59 | ● | | 3.5 |

Please see the page 6-40 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → 6-32, Standard cutting conditions → 6-40

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

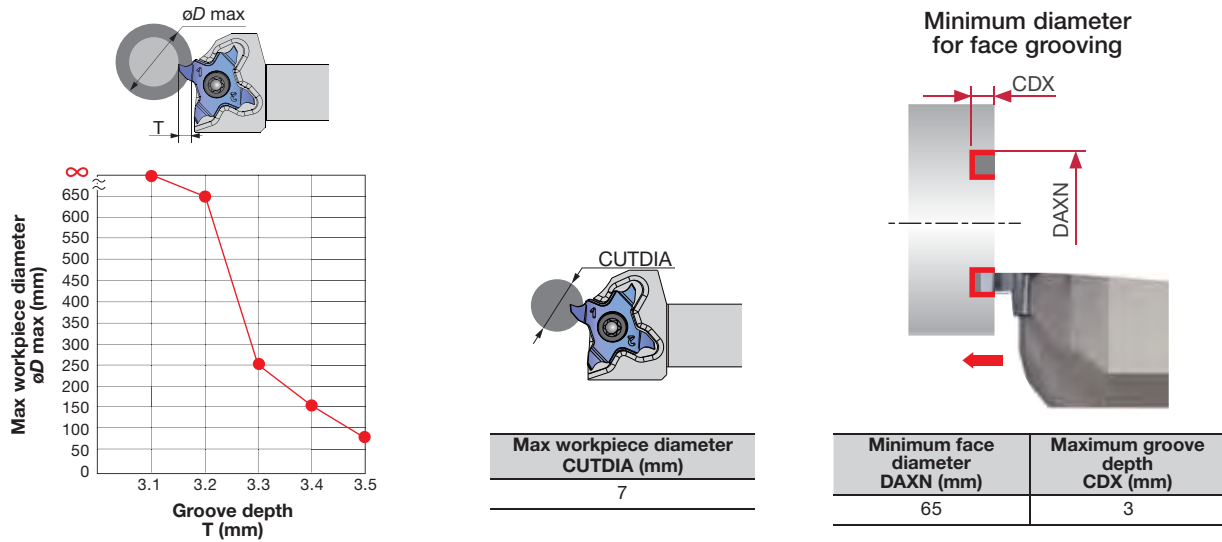
Grooving

Endmill

Drilling Tool

Technical Reference

Precautions of processing (TCL, TCS, TCP, TCG)



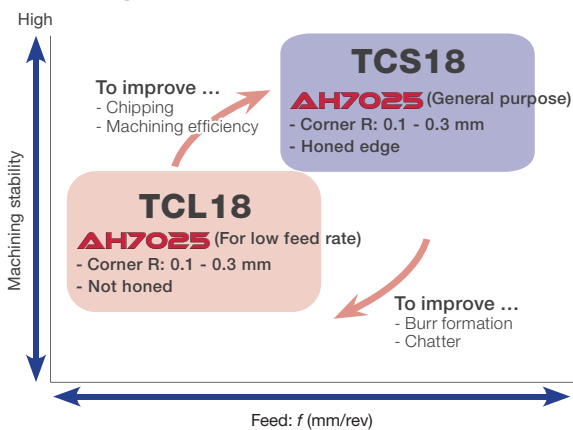
*Groove depth and max workpiece diameter (ϕD_{max})
 Maximum workpiece diameter is limited relative to depth of cut in order to avoid collision between insert and workpiece.

STANDARD CUTTING CONDITIONS

| ISO | Workpiece material | Cutting speed V_c (m/min) | Feed: f (mm/rev) | | | |
|----------|---|-----------------------------|-----------------------------|--------------|--------------|--------------|
| | | | TCP / TCP-F (AH725 / SH725) | TCS (AH7025) | TCL (AH7025) | TCG (AH7025) |
| P | Low carbon steel S15C, S20C, etc C15, C20, etc. | 80 - 180 | 0.03 - 0.1 | 0.03 - 0.15 | 0.03 - 0.12 | 0.04 - 0.14 |
| | Carbon steels, Alloy steel S55C, SCM440, etc C55, 42CrMoS4, etc. | 80 - 180 | 0.03 - 0.1 | 0.03 - 0.15 | 0.03 - 0.12 | 0.04 - 0.14 |
| | Prehardened steel NAK80, PX5 etc. | 80 - 180 | 0.03 - 0.1 | 0.03 - 0.15 | 0.03 - 0.12 | 0.04 - 0.14 |
| M | Stainless steel SUS304, etc X5CrNi18-9, X5CrNiMo17-12-2, etc | 50 - 120 | 0.03 - 0.1 | 0.03 - 0.15 | 0.03 - 0.12 | 0.04 - 0.14 |
| S | Titanium alloys Ti-6Al-4V etc. | 30 - 80 | 0.03 - 0.1 | 0.03 - 0.15 | 0.03 - 0.12 | 0.04 - 0.14 |
| | Superalloys Inconel718 etc. | 20 - 60 | 0.03 - 0.1 | 0.03 - 0.15 | 0.03 - 0.12 | 0.04 - 0.14 |

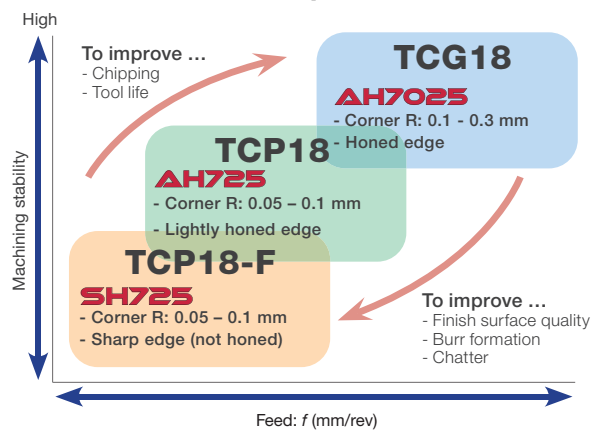
New selection system

3D chipbreakers



- 2 styles of 3D chipbreakers are available as standard for reliable chip control.
- TCS: general-purpose chipbreaker, TCL: for applications where low cutting force is essential

Ground-to-form chipbreakers

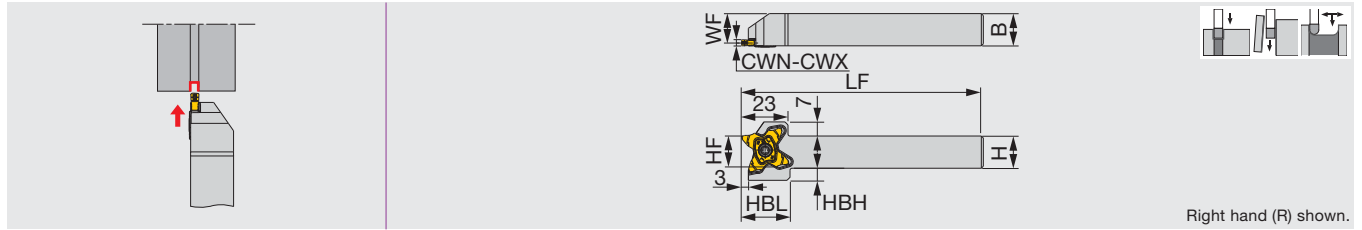


- Choose the best of all three insert types according to the machining requirements
- A variety of widths and corner radii are available in all three insert types

TETRAFORCE

STCR/L-27

External grooving toolholder



| Designation | CWN | CWX | H | B | LF | HF | WF | HBH | HBL | Insert | Torque* |
|---------------|-----|------|----|----|-----|----|------|-----|-----|----------|---------|
| STCR/L1010-27 | 0.5 | 3.18 | 10 | 10 | 120 | 10 | 8.5 | 9.5 | 24 | TC*27... | 2.5 |
| STCR/L1212-27 | 0.5 | 3.18 | 12 | 12 | 120 | 12 | 10.5 | 8 | 24 | TC*27... | 2.5 |
| STCR/L1616-27 | 0.5 | 3.18 | 16 | 16 | 120 | 16 | 14.5 | 6 | 24 | TC*27... | 2.5 |
| STCR/L2020-27 | 0.5 | 3.18 | 20 | 20 | 120 | 20 | 18.5 | 2 | 24 | TC*27... | 2.5 |

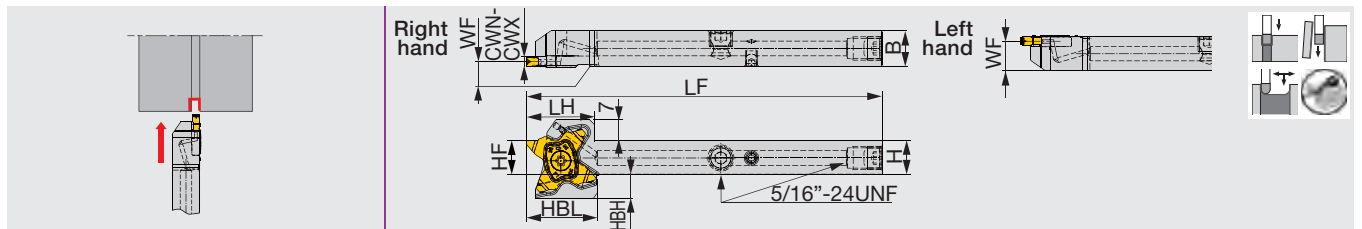
*Torque: Recommended clamping torque (N·m)

TETRAFORCE

STCR/L-27-CHP

TUNG TUN

Grooving and parting-off toolholder. High pressure coolant capability.



| Designation | CWN | CWX | H | B | LF | LH | HF | WF ⁽¹⁾ | HBH | HBL | Insert | Torque* |
|-------------------|-----|------|----|----|-----|----|----|-------------------|-----|-----|----------|---------|
| STCR/L1212-27-CHP | 0.5 | 3.18 | 12 | 12 | 120 | 23 | 12 | 1.5/10.5 | 8 | 24 | TC*27... | 2.5 |

Make sure to avoid tool interferences when used on Swiss machines

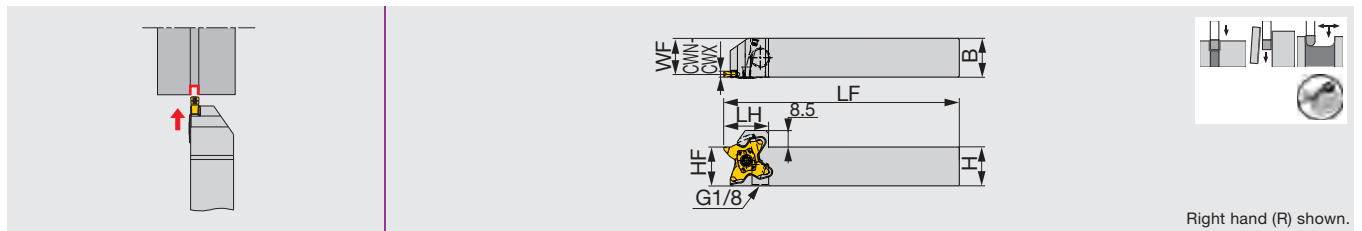
*Torque: Recommended clamping torque (N·m)

(1) The above WF value is valid when an insert width of CW=3 is mounted.

TETRAFORCE

STCR/L-CHP

Precision grooving tools with uniquely shaped insert with 4 cutting edges and channel for high pressure coolant supply



| Designation | CWN | CWX | H | B | LF | LH | HF | WF | Insert | Torque* |
|-------------------|-----|------|----|----|-----|----|----|------|----------|---------|
| STCR/L2020-27-CHP | 0.5 | 3.18 | 20 | 20 | 120 | 23 | 20 | 18.5 | TC*27... | 2.5 |

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Screw | Wrench |
|-------------|-----------------|----------|
| STCR****-27 | SR16-212-01397L | T-2010/5 |
| STCL****-27 | SR16-212-01397 | T-2010/5 |

Reference pages: Inserts → 6-42, Standard cutting conditions → 6-46
Parts for coolant hose → 3-61

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

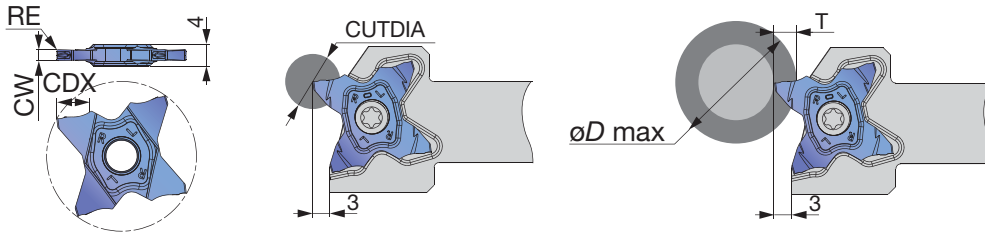
Endmill

Drilling Tool

Technical Reference

INSERT - FOR GROOVING AND PARTING OFF

TCS27



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

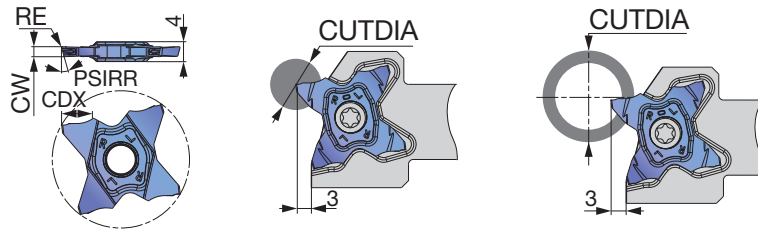


| Designation | CW±0.02 | RE | Coated | | CDX | CUTDIA | Relation of groove depth (T) and Max. diameter (øD max) | | | | | | | | | | | | | | | |
|---------------|---------|------|--------|--|-----|--------|---|-----|-----|-------|-----|-------|-----|-------|-------|-----|-------|-------|---|---|---|--|
| | | | AH725 | | | | T≤1 | T≤2 | T≤3 | T≤3.5 | T≤4 | T≤4.5 | T≤5 | T≤5.5 | T≤5.7 | T≤6 | T≤6.2 | T≤6.4 | | | | |
| | | | | | | | ● | ☆ | ∞ | - | - | - | - | - | - | - | - | - | - | - | - | |
| TCS27-050-000 | 0.5 | 0 | ● | | 1 | 2 | ∞ | - | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-050-004 | 0.5 | 0.04 | ● | | 2.5 | 5 | ∞ | ∞ | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-075-010 | 0.75 | 0.1 | ● | | 2.5 | 5 | ∞ | ∞ | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-080-000 | 0.8 | 0 | ● | | 1.6 | 3.2 | ∞ | - | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-100-006 | 1 | 0.06 | ● | | 3.5 | 7 | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - | | | | |
| TCS27-100-010 | 1 | 0.1 | ● | | 3.5 | 7 | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - | | | | |
| TCS27-104-000 | 1.04 | 0 | ● | | 2 | 4 | ∞ | ∞ | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-120-000 | 1.2 | 0 | ● | | 2 | 4 | ∞ | ∞ | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-125-010 | 1.25 | 0.1 | ● | | 3.5 | 7 | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - | | | | |
| TCS27-125-020 | 1.25 | 0.2 | ● | | 3.5 | 7 | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - | | | | |
| TCS27-140-000 | 1.4 | 0 | ● | | 2 | 4 | ∞ | ∞ | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-147-000 | 1.47 | 0 | ● | | 2.5 | 5 | ∞ | ∞ | - | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-150-010 | 1.5 | 0.1 | ● | | 5.7 | 11.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | | | |
| TCS27-150-020 | 1.5 | 0.2 | ● | | 5.7 | 11.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | | | |
| TCS27-157-015 | 1.57 | 0.15 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-170-010 | 1.7 | 0.1 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-175-010 | 1.75 | 0.1 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-175-020 | 1.75 | 0.2 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-178-018 | 1.78 | 0.18 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-185-020 | 1.85 | 0.2 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-196-015 | 1.96 | 0.15 | ● | | 3 | 6 | ∞ | ∞ | ∞ | - | - | - | - | - | - | - | - | - | | | | |
| TCS27-200-010 | 2 | 0.1 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | | | | |
| TCS27-200-020 | 2 | 0.2 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | | | | |
| TCS27-222-015 | 2.22 | 0.15 | ● | | 3.5 | 7 | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - | | | | |
| TCS27-230-020 | 2.3 | 0.2 | ● | | 3.5 | 7 | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - | | | | |
| TCS27-239-015 | 2.39 | 0.15 | ● | | 5.7 | 11.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | | | |
| TCS27-247-020 | 2.47 | 0.2 | ● | | 5.7 | 11.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | | | |
| TCS27-250-010 | 2.5 | 0.1 | ● | | 5.7 | 11.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | | | |
| TCS27-250-030 | 2.5 | 0.3 | ● | | 5.7 | 11.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | | | |
| TCS27-270-010 | 2.7 | 0.1 | ● | | 6.2 | 12.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | | | | |
| TCS27-287-020 | 2.87 | 0.2 | ● | | 6.2 | 12.4 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | | | | |
| TCS27-300-000 | 3 | 0 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | | | |
| TCS27-300-020 | 3 | 0.2 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | | | |
| TCS27-300-030 | 3 | 0.3 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | | | |
| TCS27-300-040 | 3 | 0.4 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | | | |
| TCS27-315-015 | 3.15 | 0.15 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | | | | |
| TCS27-318-020 | 3.18 | 0.2 | ● | | 6.4 | 12.8 | ∞ | ∞ | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | | | | |

5 pieces per package
● : Line up

INSERT- FOR PARTING OFF

TCS27-R/L



Right hand (R) shown.

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

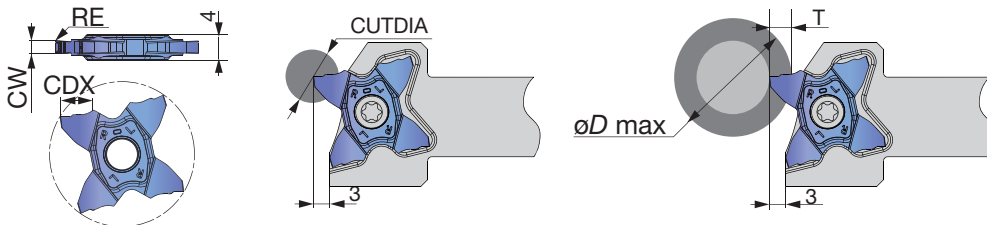
★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.02 | RE | Coated | | CDX | PSIRL | PSIRR | Max. parting off dia. CUTDIA | |
|---------------|------|---------|------|--------|--|-----|-------|-------|------------------------------|------|
| | | | | AH725 | | | | | Solid bar | Tube |
| | | | | | | | | | | |
| TCS27-100-15R | R | 1 | 0.06 | ● | | 3.5 | 0° | 15° | 7 | 600 |
| TCS27-100-15L | L | 1 | 0.06 | ● | | 3.5 | 15° | 0° | 7 | 600 |
| TCS27-150-6R | R | 1.5 | 0.06 | ● | | 5.7 | 0° | 6° | 11.4 | 35 |
| TCS27-150-6L | L | 1.5 | 0.06 | ● | | 5.7 | 6° | 0° | 11.4 | 35 |
| TCS27-150-15R | R | 1.5 | 0.06 | ● | | 5.7 | 0° | 15° | 11.4 | 35 |
| TCS27-150-15L | L | 1.5 | 0.06 | ● | | 5.7 | 15° | 0° | 11.4 | 35 |
| TCS27-200-6R | R | 2 | 0.1 | ● | | 6.4 | 0° | 6° | 12.8 | 30 |
| TCS27-200-6L | L | 2 | 0.1 | ● | | 6.4 | 6° | 0° | 12.8 | 30 |
| TCS27-200-15R | R | 2 | 0.1 | ● | | 6.4 | 0° | 15° | 12.8 | 30 |
| TCS27-200-15L | L | 2 | 0.1 | ● | | 6.4 | 15° | 0° | 12.8 | 30 |

5 pieces per package
● : Line up

INSERT- FOR GROOVING AND PROFILING

TCL27



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

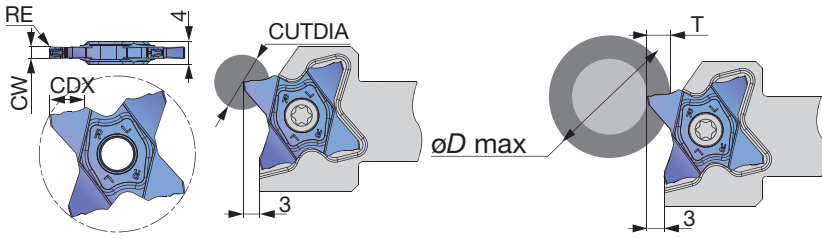
★ : First choice
☆ : Second choice

| Designation | CW±0.02 | RE | Coated | | CDX | CUTDIA | Relation of groove depth (T) and Max. diameter (øD max) | | | | | | | | | | | |
|---------------|---------|------|--------|--|-----|--------|---|-------|-------|---------|-------|---------|-------|---------|---------|-------|---------|---------|
| | | | AH725 | | | | T ≤ 1 | T ≤ 2 | T ≤ 3 | T ≤ 3.5 | T ≤ 4 | T ≤ 4.5 | T ≤ 5 | T ≤ 5.5 | T ≤ 5.7 | T ≤ 6 | T ≤ 6.2 | T ≤ 6.4 |
| | | | | | | | | | | | | | | | | | | |
| TCL27-150-015 | 1.5 | 0.15 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCL27-200-020 | 2.0 | 0.2 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | | |
| TCL27-250-020 | 2.5 | 0.2 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | | |
| TCL27-300-020 | 3 | 0.2 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | |

5 pieces per package
● : Line up

INSERT- FOR GROOVING AND PARTING OFF

TCM27



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

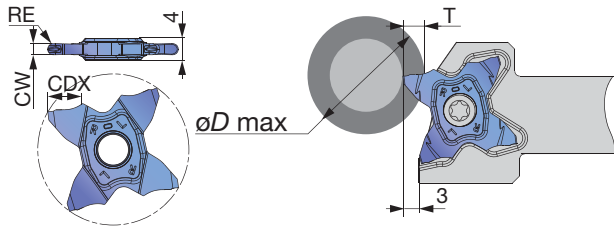


| Designation | CW±0.02 | RE | Coated | | CDX | CUTDIA | Relation of groove depth (T) and Max. diameter (øD max) | | | | | | | | | | | |
|---------------|---------|------|--------|--|-----|--------|---|-------|-------|---------|-------|---------|-------|---------|---------|-------|---------|---------|
| | | | AH725 | | | | T ≤ 1 | T ≤ 2 | T ≤ 3 | T ≤ 3.5 | T ≤ 4 | T ≤ 4.5 | T ≤ 5 | T ≤ 5.5 | T ≤ 5.7 | T ≤ 6 | T ≤ 6.2 | T ≤ 6.4 |
| | | | | | | | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| TCM27-150-010 | 1.5 | 0.1 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCM27-150-020 | 1.5 | 0.2 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCM27-157-015 | 1.57 | 0.15 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-170-010 | 1.7 | 0.1 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-175-010 | 1.75 | 0.1 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-175-020 | 1.75 | 0.2 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-178-018 | 1.78 | 0.18 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-185-020 | 1.85 | 0.2 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-196-015 | 1.96 | 0.15 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | | |
| TCM27-200-010 | 2 | 0.1 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | | |
| TCM27-200-020 | 2 | 0.2 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 130 | 105 | 85 | 60 | 50 | 30 | | |
| TCM27-222-015 | 2.22 | 0.15 | ● | | 3.5 | 7 | ∞ | 600 | - | - | - | - | - | - | - | - | | |
| TCM27-230-020 | 2.3 | 0.2 | ● | | 3.5 | 7 | ∞ | 600 | - | - | - | - | - | - | - | - | | |
| TCM27-239-015 | 2.39 | 0.15 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCM27-247-020 | 2.47 | 0.2 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCM27-250-010 | 2.5 | 0.1 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCM27-250-030 | 2.5 | 0.3 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | | |
| TCM27-270-010 | 2.7 | 0.1 | ● | | 6.2 | 12.4 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | | |
| TCM27-287-020 | 2.87 | 0.2 | ● | | 6.2 | 12.4 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | - | | |
| TCM27-300-000 | 3 | 0 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | |
| TCM27-300-020 | 3 | 0.2 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | |
| TCM27-300-030 | 3 | 0.3 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | |
| TCM27-300-040 | 3 | 0.4 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | | |
| TCM27-315-015 | 3.15 | 0.15 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | | |
| TCM27-318-020 | 3.18 | 0.2 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 68 | | |

5 pieces per package
● : Line up

INSERT - FOR GROOVING AND PROFILING

TCM27 (Full R)



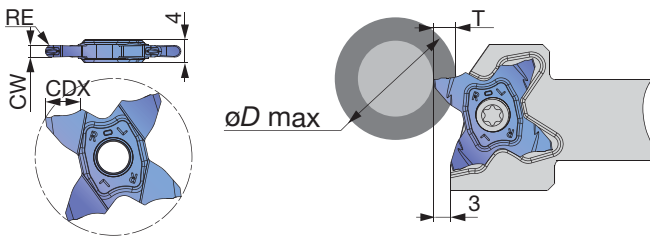
| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

★ : First choice
☆ : Second choice

| Designation | CW±0.02 | RE | Coated | | CDX | CUTDIA | Relation of groove depth (T) and Max. diameter (øD max) | | | | | | | | | | | |
|---------------|---------|------|--------|--|-----|--------|---|-----|-----|-------|-----|-------|-----|-------|-------|-----|-------|-------|
| | | | AH725 | | | | T≤1 | T≤2 | T≤3 | T≤3.5 | T≤4 | T≤4.5 | T≤5 | T≤5.5 | T≤5.7 | T≤6 | T≤6.2 | T≤6.4 |
| | | | | | | | ∞ | ∞ | ∞ | 600 | - | - | - | - | - | - | - | - |
| TCM27-157-079 | 1.57 | 0.79 | ● | | 3 | 6 | ∞ | - | - | - | - | - | - | - | - | - | - | |
| TCM27-200-100 | 2 | 1 | ● | | 3 | 6 | ∞ | 600 | - | - | - | - | - | - | - | - | - | |
| TCM27-239-120 | 2.39 | 1.2 | ● | | 5.7 | 11.4 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | |
| TCM27-300-150 | 3 | 1.5 | ● | | 6.4 | 12.8 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | |

5 pieces per package
● : Line up

TCS27 (Full R)



| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | | | |
| S | Superalloys | ★ | | |
| H | Hard materials | | | |

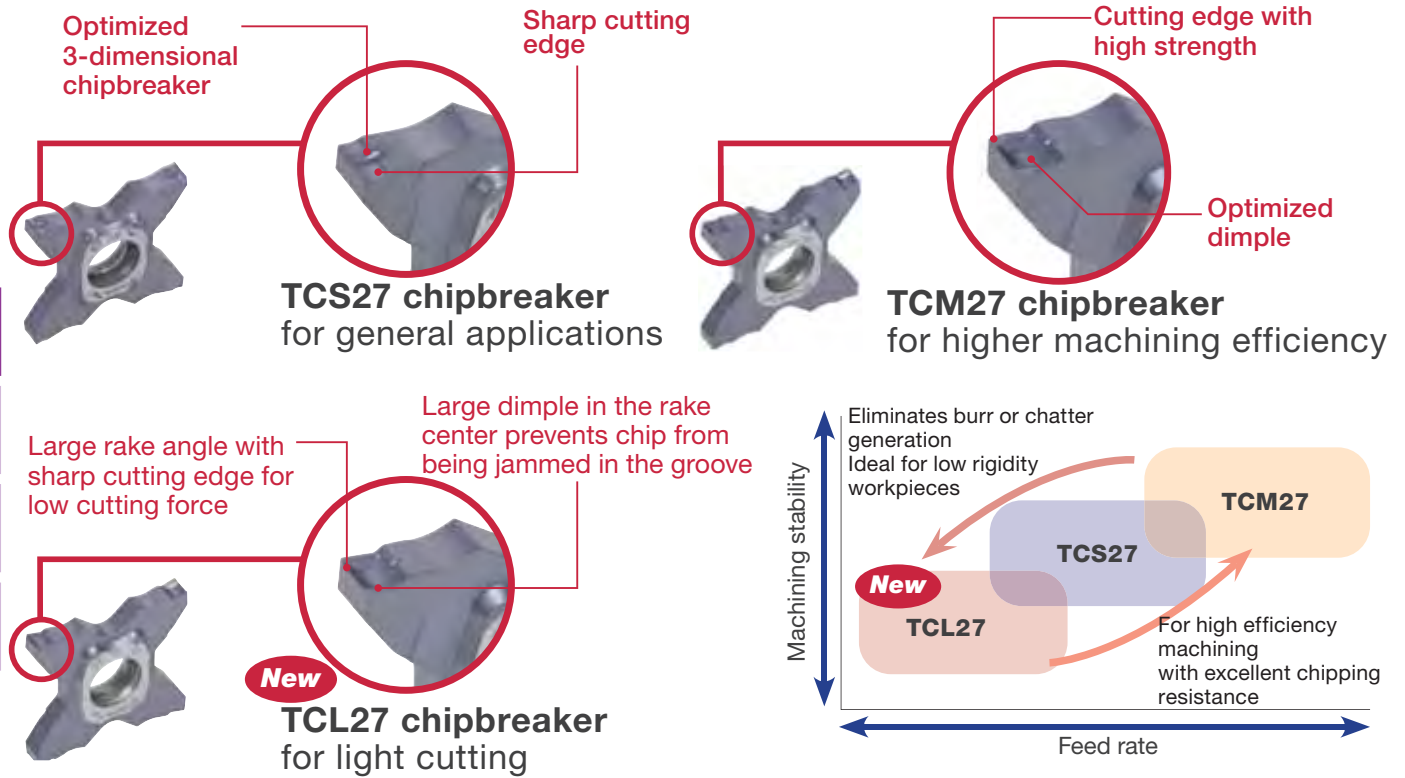
★ : First choice
☆ : Second choice

| Designation | CW±0.02 | RE | Coated | | CDX | Relation of groove depth (T) and Max. diameter (øD max) | | | | | | | | | | | |
|---------------|---------|------|--------|--|-----|---|-----|-----|-------|-----|-------|-----|-------|-------|-----|-------|-------|
| | | | AH725 | | | T≤1 | T≤2 | T≤3 | T≤3.5 | T≤4 | T≤4.5 | T≤5 | T≤5.5 | T≤5.7 | T≤6 | T≤6.2 | T≤6.4 |
| | | | | | | ∞ | ∞ | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - |
| TCS27-157-079 | 1.57 | 0.79 | ● | | 3 | ∞ | - | - | - | - | - | - | - | - | - | - | - |
| TCS27-200-100 | 2 | 1 | ● | | 3 | ∞ | - | - | - | - | - | - | - | - | - | - | - |
| TCS27-239-120 | 2.39 | 1.2 | ● | | 5.7 | ∞ | 600 | 280 | 180 | 130 | 50 | 35 | - | - | - | - | - |
| TCS27-300-150 | 3 | 1.5 | ● | | 6.4 | ∞ | 600 | 280 | 180 | 135 | 105 | 95 | 85 | 78 | 55 | - | - |

5 pieces per package
● : Line up

INNOVATIVE INSERTS

- Suitable for precision grooving or parting-off in general machining including small parts
- Three types of chipbreakers available for TC*27 inserts



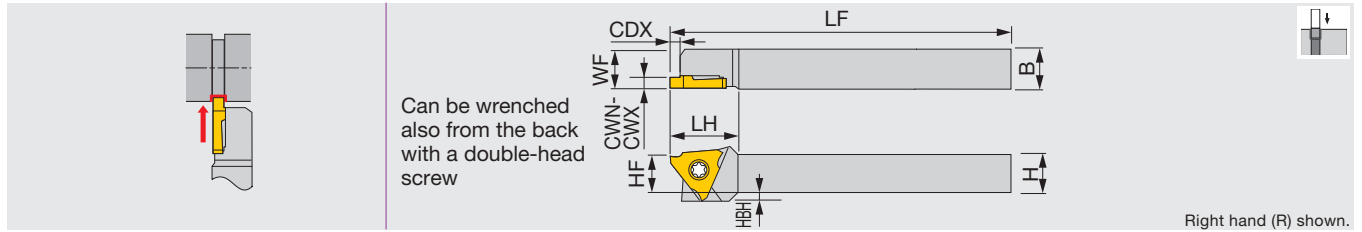
STANDARD CUTTING CONDITIONS

| ISO | Workpiece materials | Grades | Cutting speed V_c (m/min) | Feed: f (mm/rev) | | | | | | Depth of cut for profiling (with full radius insert) |
|----------|---|--------|-----------------------------|--------------------|-----------------------|-------------------------|-------------------------------------|------------|-------------|--|
| | | | | New TCS27 | Grooving, parting-off | Parting-off (with hand) | Profiling (with full radius insert) | | | |
| | | | | TCL27 | TCS27 | TCM27 | TCS27 | TCS27 | TCM27 | |
| P | Carbon steel S45C / C45, etc. | AH725 | 100 - 200 | 0.03 - 0.12 | 0.05 - 0.15 | 0.05 - 0.25 | 0.04 - 0.12 | 0.05 - 0.1 | 0.05 - 0.15 | 0.5 |
| | Alloy steel SCM435 / 34CrMo4, etc. | AH725 | 50 - 180 | 0.03 - 0.12 | 0.05 - 0.15 | 0.05 - 0.25 | 0.04 - 0.12 | 0.05 - 0.1 | 0.05 - 0.15 | 0.5 |
| M | Stainless steel SUS304 / X5CrNi18-9, etc. | AH725 | 100 - 150 | 0.03 - 0.12 | 0.05 - 0.15 | 0.05 - 0.2 | 0.04 - 0.12 | 0.05 - 0.1 | 0.05 - 0.15 | 0.5 |
| S | Titanium alloys Ti-6Al-4V, etc. | AH725 | 30 - 60 | 0.03 - 0.12 | 0.05 - 0.15 | 0.05 - 0.15 | 0.04 - 0.12 | 0.05 - 0.1 | 0.05 - 0.1 | 0.5 |
| | Superalloys Inconel718, etc. | AH725 | 20 - 50 | 0.03 - 0.12 | 0.05 - 0.15 | 0.05 - 0.15 | 0.04 - 0.12 | 0.05 - 0.1 | 0.05 - 0.1 | 0.5 |

J-SERIES

JSTGR/L

External grooving toolholder, for Swiss lathes



| Designation | CWN | CWX | CDX | H | B | LF | LH | HF | WF | HBH | Insert | Torque* |
|---------------|------|-----|-----------|----|----|-----|------|----|----|-----|------------|---------|
| JSTGR/L1010X3 | 0.33 | 3 | 0.7 - 2.6 | 10 | 10 | 120 | 18.5 | 10 | 10 | 2 | JTGR/L3... | 1.2 |
| JSTGR/L1212F3 | 0.33 | 3 | 0.7 - 2.6 | 12 | 12 | 85 | 18.5 | 12 | 12 | - | JTGR/L3... | 1.2 |
| JSTGR/L1212X3 | 0.33 | 3 | 0.7 - 2.6 | 12 | 12 | 120 | 18.5 | 12 | 12 | - | JTGR/L3... | 1.2 |
| JSTGR/L1616X3 | 0.33 | 3 | 0.7 - 2.6 | 16 | 16 | 120 | 18.5 | 16 | 16 | - | JTGR/L3... | 1.2 |
| JSTGL1616K3 | 0.33 | 3 | 0.7 - 2.6 | 16 | 16 | 125 | 18.5 | 16 | 16 | - | JTGR/L3... | 1.2 |

*Torque: Recommended clamping torque (N·m)

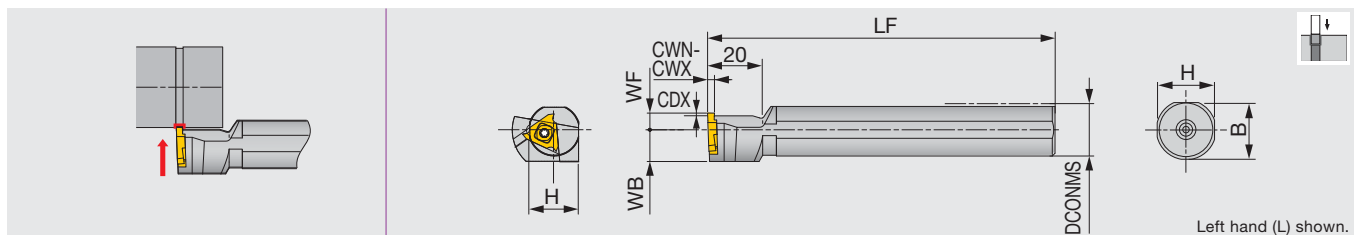
SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JSTGR/L... | CSTB-4SD | T-8F |

J-SERIES

JS-TGL3

External grooving toolholder, for Swiss lathes



| Designation | CWN | CWX | CDX | DCONMS | H | B | LF | WF | WB | Insert | Torque* |
|-------------|------|-----|-----------|--------|----|----|-----|----|------|----------|---------|
| JS19K-TGL3 | 0.33 | 3 | 0.7 - 2.6 | 19.05 | 18 | 18 | 125 | 6 | 11.5 | JTGR3... | 3 |
| JS20K-TGL3 | 0.33 | 3 | 0.7 - 2.6 | 20 | 19 | 19 | 125 | 6 | 11.5 | JTGR3... | 3 |
| JS22K-TGL3 | 0.33 | 3 | 0.7 - 2.6 | 22 | 21 | 21 | 125 | 6 | 11.5 | JTGR3... | 3 |
| JS25K-TGL3 | 0.33 | 3 | 0.7 - 2.6 | 25.4 | 24 | 24 | 125 | 10 | 12.7 | JTGR3... | 3 |

Use left-hand toolholders (L) with right-hand inserts (R).

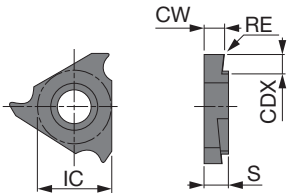
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|--------|
| JS***-TGL3 | CSTB-4S | T-15F |

INSERT

JTG (Sharp edge)



Right hand (R) shown.

| | | | | | | | | | | |
|---|----------------|---|---|--|---|---|---|---|--|--|
| P | Steel | ★ | ★ | | ★ | | ☆ | | | |
| M | Stainless | ★ | ★ | | | | | | | |
| K | Cast iron | | | | | ☆ | | ★ | | |
| N | Non-ferrous | | | | | | | ★ | | |
| S | Superalloys | | | | | | | ★ | | |
| H | Hard materials | | | | | | | | | |

★ : First choice
☆ : Second choice



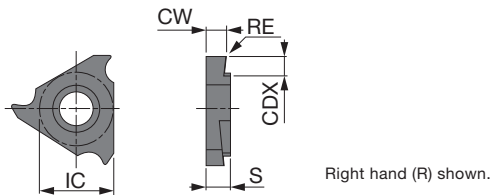
| Designation | HAND | CW ^{+0.05} | RE | Coated | | Cermet | Uncoated | | CDX | IC | S |
|---------------|------|---------------------|------|--------|------|--------|----------|---|-----|------|------|
| | | | | SH725 | J740 | NS9530 | TH10 | | | | |
| JTGR3033F | R | 0.33 | 0.03 | ● | ● | | | ● | 0.7 | 9.53 | 3.18 |
| JTGL3033F | L | 0.33 | 0.03 | | ● | | | ● | 0.7 | 9.53 | 3.18 |
| JTGR3033F-005 | R | 0.33 | 0.05 | ● | | | | | 0.7 | 9.53 | 3.18 |
| JTGR3043F | R | 0.43 | 0.03 | ● | ● | | | | 1.1 | 9.53 | 3.18 |
| JTGR3050F | R | 0.5 | 0.03 | ● | ● | ● | | ● | 1.1 | 9.53 | 3.18 |
| JTGL3050F | L | 0.5 | 0.03 | ● | ● | | | ● | 1.1 | 9.53 | 3.18 |
| JTGR3050F-005 | R | 0.5 | 0.05 | ● | | | | | 1.1 | 9.53 | 3.18 |
| JTGL3050F-005 | L | 0.5 | 0.05 | ● | | | | | 1.1 | 9.53 | 3.18 |
| JTGR3065F | R | 0.65 | 0.03 | ● | ● | | | | 1.9 | 9.53 | 3.18 |
| JTGR3065F-010 | R | 0.65 | 0.1 | ● | | | | | 1.9 | 9.53 | 3.18 |
| JTGR3075F | R | 0.75 | 0.03 | ● | ● | ● | | ● | 1.9 | 9.53 | 3.18 |
| JTGL3075F | L | 0.75 | 0.03 | ● | ● | ● | | ● | 1.9 | 9.53 | 3.18 |
| JTGR3075F-010 | R | 0.75 | 0.1 | ● | | | | | 1.9 | 9.53 | 3.18 |
| JTGL3075F-010 | L | 0.75 | 0.1 | ● | | | | | 1.9 | 9.53 | 3.18 |
| JTGR3080F | R | 0.8 | 0.03 | ● | ● | | | | 1.9 | 9.53 | 3.18 |
| JTGR3080F-010 | R | 0.8 | 0.1 | ● | | | | | 1.9 | 9.53 | 3.18 |
| JTGR3085F | R | 0.85 | 0.03 | ● | ● | | | | 1.9 | 9.53 | 3.18 |
| JTGR3095F | R | 0.95 | 0.03 | ● | ● | ● | | ● | 1.9 | 9.53 | 3.18 |
| JTGL3095F | L | 0.95 | 0.03 | ● | ● | | | ● | 1.9 | 9.53 | 3.18 |
| JTGR3095F-010 | R | 0.95 | 0.1 | ● | | | | | 1.9 | 9.53 | 3.18 |
| JTGL3095F-010 | L | 0.95 | 0.1 | ● | | | | | 1.9 | 9.53 | 3.18 |
| JTGR3100F | R | 1 | 0.05 | ● | ● | ● | | ● | 2.1 | 9.53 | 3.18 |
| JTGL3100F | L | 1 | 0.05 | ● | ● | | | ● | 2.1 | 9.53 | 3.18 |
| JTGR3100F-010 | R | 1 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGL3100F-010 | L | 1 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGR3110F | R | 1.1 | 0.05 | ● | ● | | | | 2.1 | 9.53 | 3.18 |
| JTGR3120F | R | 1.2 | 0.05 | ● | ● | | | | 2.1 | 9.53 | 3.18 |
| JTGR3120F-010 | R | 1.2 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGR3125F | R | 1.25 | 0.05 | ● | ● | ● | | ● | 2.1 | 9.53 | 3.18 |
| JTGL3125F | L | 1.25 | 0.05 | ● | ● | | | ● | 2.1 | 9.53 | 3.18 |
| JTGR3125F-010 | R | 1.25 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGL3125F-010 | L | 1.25 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGR3130F | R | 1.3 | 0.05 | ● | ● | | | | 2.1 | 9.53 | 3.18 |
| JTGR3140F | R | 1.4 | 0.05 | ● | ● | | | | 2.1 | 9.53 | 3.18 |
| JTGR3140F-010 | R | 1.4 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGR3145F | R | 1.45 | 0.05 | ● | ● | ● | | ● | 2.1 | 9.53 | 3.18 |
| JTGL3145F | L | 1.45 | 0.05 | | ● | | | ● | 2.1 | 9.53 | 3.18 |
| JTGR3145F-010 | R | 1.45 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGR3150F | R | 1.5 | 0.05 | ● | ● | ● | | ● | 2.1 | 9.53 | 3.18 |
| JTGL3150F | L | 1.5 | 0.05 | ● | ● | | | ● | 2.1 | 9.53 | 3.18 |
| JTGR3150F-010 | R | 1.5 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |
| JTGL3150F-010 | L | 1.5 | 0.1 | ● | | | | | 2.1 | 9.53 | 3.18 |

● : Line up

Reference pages: Toolholders → 6-47, Standard cutting conditions → 6-49

INSERT

JTG (Sharp edge)



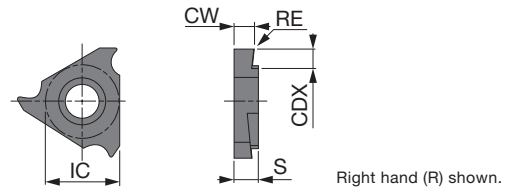
| | | | | | | |
|---|----------------|---|---|---|---|--|
| P | Steel | ★ | ★ | ★ | ☆ | |
| M | Stainless | ★ | ★ | | | |
| K | Cast iron | | | ☆ | ★ | |
| N | Non-ferrous | | | | ★ | |
| S | Superalloys | | | | ★ | |
| H | Hard materials | | | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW _{+0.05} 0 | RE | Coated | | | | CDX | IC | S |
|---------------|------|-----------------------------|------|--------|------|--------|------|-----|------|------|
| | | | | SH725 | J740 | NS9530 | TH10 | | | |
| JTGR3175F | R | 1.75 | 0.05 | ● | ● | ● | ● | 2.1 | 9.53 | 3.18 |
| JTGL3175F | L | 1.75 | 0.05 | ● | ● | ● | ● | 2.1 | 9.53 | 3.18 |
| JTGR3175F-010 | R | 1.75 | 0.1 | ● | ● | ● | ● | 2.1 | 9.53 | 3.18 |
| JTGR3180F | R | 1.8 | 0.05 | ● | ● | ● | ● | 2.1 | 9.53 | 3.18 |
| JTGR3200F | R | 2 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGL3200F | L | 2 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3200F-010 | R | 2 | 0.1 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGL3200F-010 | L | 2 | 0.1 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3225F | R | 2.25 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3250F | R | 2.5 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGL3250F | L | 2.5 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3250F-010 | R | 2.5 | 0.1 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGL3250F-010 | L | 2.5 | 0.1 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3275F | R | 2.75 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3300F | R | 3 | 0.05 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |
| JTGR3300F-010 | R | 3 | 0.1 | ● | ● | ● | ● | 2.6 | 9.53 | 3.18 |

● : Line up

JTG (honed edge)



| | | | | | |
|---|----------------|---|--|--|--|
| P | Steel | ★ | | | |
| M | Stainless | | | | |
| K | Cast iron | ☆ | | | |
| N | Non-ferrous | | | | |
| S | Superalloys | | | | |
| H | Hard materials | | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW _{+0.05} 0 | RE | Coated cermet | | CDX | IC | S |
|-------------|------|-----------------------------|------|---------------|--|-----|------|------|
| | | | | J9530 | | | | |
| JTGR3100 | R | 1 | 0.05 | ● | | 2.1 | 9.53 | 3.18 |
| JTGR3125 | R | 1.25 | 0.05 | ● | | 2.1 | 9.53 | 3.18 |
| JTGR3150 | R | 1.5 | 0.05 | ● | | 2.1 | 9.53 | 3.18 |
| JTGR3200 | R | 2 | 0.05 | ● | | 2.6 | 9.53 | 3.18 |

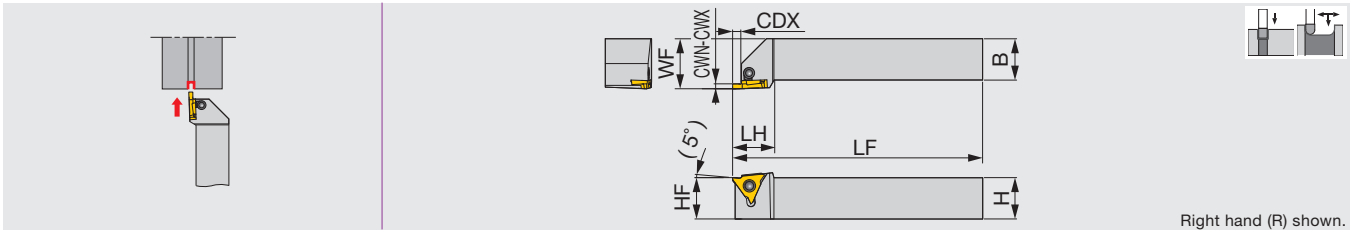
● : Line up

STANDARD CUTTING CONDITIONS (J-Series grooving tool)

| ISO | Workpiece material | Grade | Cutting Speed V _c (m/min) | Feed f (mm/rev) |
|-----|---|--------|---|--------------------|
| P | General steels, Free-cutting steels, etc. | J740 | 10 - 100 | 0.01 - 0.1 |
| | | SH725 | 50 - 150 | 0.01 - 0.1 |
| | | NS9530 | 50 - 150 | 0.01 - 0.1 |
| | | J9530 | 50 - 150 | 0.01 - 0.1 |
| M | Stainless steels, etc. | J740 | 10 - 100 | 0.01 - 0.1 |
| | | SH725 | 50 - 150 | 0.01 - 0.1 |
| N | Aluminium alloys, copper alloys, etc. | TH10 | 10 - 200 | 0.01 - 0.1 |
| S | Difficult-to-cut materials, titanium alloys, etc. | TH10 | 10 - 30 | 0.01 - 0.1 |

TGTSR/L

External grooving toolholder, for 3 corner inserts



| Designation | CWN | CWX | CDX | H | B | LF | LH | HF | WF | Torque* |
|------------------|------|------|-----|----|----|-----|----|----|----|---------|
| TGTSR/L2020K16 | 0.33 | 2.5 | 2.5 | 20 | 20 | 125 | 25 | 20 | 25 | 3 |
| TGTSR/L2020K22-1 | 1 | 1.45 | 2 | 20 | 20 | 125 | 25 | 20 | 25 | 3 |
| TGTSR/L2020K22-2 | 1.5 | 2.3 | 3.5 | 20 | 20 | 125 | 25 | 20 | 25 | 3 |
| TGTSR/L2020K22-3 | 2.5 | 4.5 | 5 | 20 | 20 | 125 | 25 | 20 | 25 | 3 |

Use right-hand toolholders (TGTSR) with right-hand inserts (GBR); and left-hand toolholders (TGTSL) with left-hand inserts (GBL).

*Torque: Recommended clamping torque (N·m)

| Designation | Insert |
|------------------|-------------------------------------|
| TGTSR/L2020K16 | GBR/L32... |
| TGTSR/L2020K22-1 | GBR/L43125 ~ 145 GBR/L43050R |
| TGTSR/L2020K22-2 | GBR/L43150 ~ 230 GBR/L43075R ~ 100R |
| TGTSR/L2020K22-3 | GBR/L43250 ~ 450 GBR/L43125R ~ 200R |

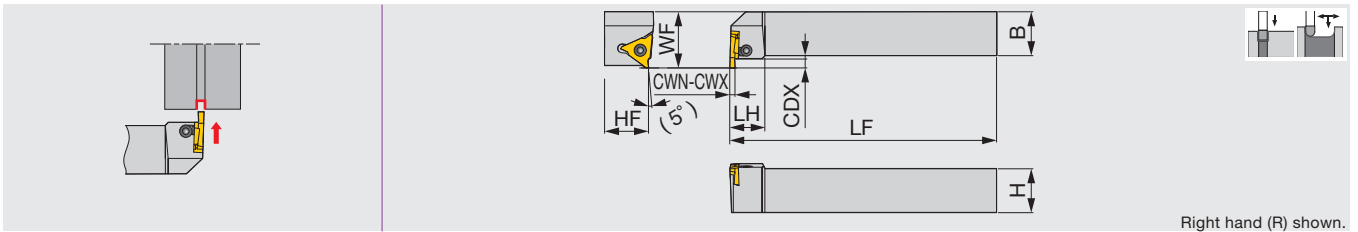
SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|------------------|-------|----------------|--------|
| TGTSR/L****16 | CP900 | MCS520-2.5 | P-2.5 |
| TGTSR/L****22... | CP910 | MCS520-2.5 | P-2.5 |



TGTTR/L

Perpendicular toolholder for external grooving, for 3 corner inserts



| Designation | CWN | CWX | CDX | H | B | LF | LH | HF | WF | Torque* |
|------------------|------|------|-----|----|----|-----|----|----|----|---------|
| TGTTR/L2020K16 | 0.33 | 2.5 | 2.5 | 20 | 20 | 125 | 20 | 20 | 27 | 3 |
| TGTTR/L2020K22-1 | 1 | 1.45 | 2 | 20 | 20 | 125 | 20 | 20 | 27 | 3 |
| TGTTR/L2020K22-2 | 1.5 | 2.3 | 3.5 | 20 | 20 | 125 | 20 | 20 | 27 | 3 |
| TGTTR/L2020K22-3 | 2.5 | 4.5 | 5 | 20 | 20 | 125 | 20 | 20 | 27 | 3 |

Use right-hand toolholders (TGTTR) with left-hand inserts (GBL); and left-hand toolholders (TGTTL) with right-hand inserts (GBR).

*Torque: Recommended clamping torque (N·m)

| Designation | Insert |
|------------------|-------------------------------------|
| TGTTR/L2020K16 | GBL/R32... |
| TGTTR/L2020K22-1 | GBL/R43125 ~ 145 GBL/R43050R |
| TGTTR/L2020K22-2 | GBL/R43150 ~ 230 GBL/R43075R ~ 100R |
| TGTTR/L2020K22-3 | GBL/R43250 ~ 450 GBL/R43125R ~ 200R |

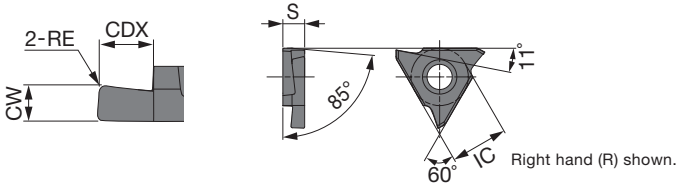
SPARE PARTS

| Designation | Clamp | Clamping screw | Wrench |
|------------------|-------|----------------|--------|
| TGTTR/L****16 | CP900 | MCS520-2.5 | P-2.5 |
| TGTTR/L****22... | CP910 | MCS520-2.5 | P-2.5 |

Reference pages: Inserts → [6-51](#), Standard cutting conditions → [6-52](#)

INSERT

GBR/L32



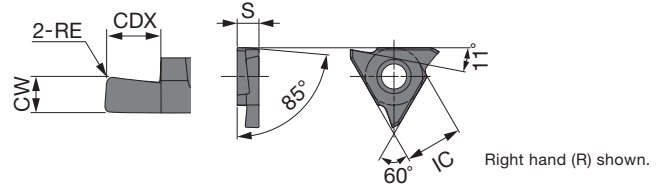
| | | | | | |
|---|----------------|---|---|--|---|
| P | Steel | ★ | ★ | | |
| M | Stainless | ★ | | | |
| K | Cast iron | ★ | ☆ | | |
| N | Non-ferrous | | | | ★ |
| S | Superalloys | ☆ | | | ☆ |
| H | Hard materials | | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW ±0.025 | RE | Coated | | | CDX | IC | S |
|-------------|------|--------------|------|--------|--------|-------|-----|------|------|
| | | | | AH710 | NS9530 | KS05F | | | |
| GBR32033 | R | 0.33 | 0.03 | ● | ● | ● | 0.8 | 9.53 | 3.18 |
| GBL32033 | L | 0.33 | 0.03 | ● | ● | ● | 0.8 | 9.53 | 3.18 |
| GBR32050 | R | 0.5 | 0.05 | ● | ● | ● | 1.2 | 9.53 | 3.18 |
| GBL32050 | L | 0.5 | 0.05 | ● | ● | ● | 1.2 | 9.53 | 3.18 |
| GBR32075 | R | 0.75 | 0.05 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBL32075 | L | 0.75 | 0.05 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBR32095 | R | 0.95 | 0.05 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBL32095 | L | 0.95 | 0.05 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBR32100 | R | 1 | 0.05 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBL32100 | L | 1 | 0.05 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBR32125 | R | 1.25 | 0.2 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBL32125 | L | 1.25 | 0.2 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBR32145 | R | 1.45 | 0.2 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBL32145 | L | 1.45 | 0.2 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBR32150 | R | 1.5 | 0.2 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBL32150 | L | 1.5 | 0.2 | ● | ● | ● | 2 | 9.53 | 3.18 |
| GBR32200 | R | 2 | 0.2 | ● | ● | ● | 2.5 | 9.53 | 3.18 |
| GBL32200 | L | 2 | 0.2 | ● | ● | ● | 2.5 | 9.53 | 3.18 |
| GBR32250 | R | 2.5 | 0.2 | ● | ● | ● | 2.5 | 9.53 | 3.18 |
| GBL32250 | L | 2.5 | 0.2 | ● | ● | ● | 2.5 | 9.53 | 3.18 |

● : Line up

GBR/L43



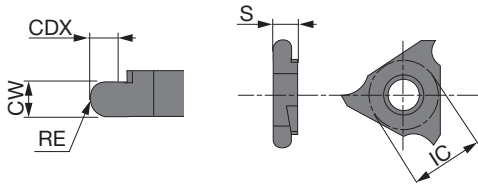
| | | | | | |
|---|----------------|---|---|--|---|
| P | Steel | ★ | ★ | | |
| M | Stainless | ★ | | | |
| K | Cast iron | ★ | ☆ | | |
| N | Non-ferrous | | | | ★ |
| S | Superalloys | ☆ | | | ☆ |
| H | Hard materials | | | | |

| Designation | HAND | CW ±0.025 | RE | Coated | | | CDX | IC | S |
|-------------|------|--------------|-----|--------|--------|-------|-----|------|------|
| | | | | AH710 | NS9530 | KS05F | | | |
| GBR43125 | R | 1.25 | 0.2 | ● | ● | ● | 2 | 12.7 | 4.76 |
| GBL43125 | L | 1.25 | 0.2 | ● | ● | ● | 2 | 12.7 | 4.76 |
| GBR43145 | R | 1.45 | 0.2 | ● | ● | ● | 2 | 12.7 | 4.76 |
| GBL43145 | L | 1.45 | 0.2 | ● | ● | ● | 2 | 12.7 | 4.76 |
| GBR43150 | R | 1.50 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBL43150 | L | 1.50 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBR43175 | R | 1.75 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBL43175 | L | 1.75 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBR43185 | R | 1.85 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBL43185 | L | 1.85 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBR43200 | R | 2 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBL43200 | L | 2 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBR43230 | R | 2.3 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBL43230 | L | 2.3 | 0.2 | ● | ● | ● | 3.5 | 12.7 | 4.76 |
| GBR43250 | R | 2.5 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43250 | L | 2.5 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43265 | R | 2.65 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43265 | L | 2.65 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43280 | R | 2.8 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43280 | L | 2.8 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43300 | R | 3 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43300 | L | 3 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43330 | R | 3.3 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43330 | L | 3.3 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43350 | R | 3.5 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43350 | L | 3.5 | 0.3 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43400 | R | 4 | 0.4 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43400 | L | 4 | 0.4 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43430 | R | 4.3 | 0.4 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43430 | L | 4.3 | 0.4 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBR43450 | R | 4.5 | 0.4 | ● | ● | ● | 5 | 12.7 | 4.76 |
| GBL43450 | L | 4.5 | 0.4 | ● | ● | ● | 5 | 12.7 | 4.76 |

● : Line up

INSERT

GBR/L43-R (full radius)



Right hand (R) shown.

| | | | | | | | | | | |
|---|----------------|---|--|---|--|--|---|--|--|--|
| P | Steel | ★ | | ★ | | | | | | |
| M | Stainless | ★ | | | | | | | | |
| K | Cast iron | ★ | | ☆ | | | | | | |
| N | Non-ferrous | | | | | | ★ | | | |
| S | Superalloys | ☆ | | | | | ☆ | | | |
| H | Hard materials | | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.025 | RE | Coated | | | Cermet | | | Uncoated | | | CDX | IC | S |
|-------------|------|----------|------|--------|--------|-------|--------|--|--|----------|--|--|-----|------|------|
| | | | | AH710 | NS9530 | KS05F | | | | | | | | | |
| GBR43050R | R | 1 | 0.5 | ● | ● | ● | | | | | | | 2 | 12.7 | 4.76 |
| GBL43050R | L | 1 | 0.5 | ● | | | ● | | | | | | 2 | 12.7 | 4.76 |
| GBR43075R | R | 1.5 | 0.75 | ● | ● | ● | | | | | | | 3.5 | 12.7 | 4.76 |
| GBL43075R | L | 1.5 | 0.75 | ● | | | ● | | | | | | 3.5 | 12.7 | 4.76 |
| GBR43100R | R | 2 | 1 | ● | ● | ● | | | | | | | 3.5 | 12.7 | 4.76 |
| GBL43100R | L | 2 | 1 | ● | | | ● | | | | | | 3.5 | 12.7 | 4.76 |
| GBR43125R | R | 2.5 | 1.25 | ● | ● | ● | | | | | | | 5 | 12.7 | 4.76 |
| GBL43125R | L | 2.5 | 1.25 | ● | | | ● | | | | | | 5 | 12.7 | 4.76 |
| GBR43150R | R | 3 | 1.5 | ● | ● | ● | | | | | | | 5 | 12.7 | 4.76 |
| GBL43150R | L | 3 | 1.5 | ● | | | ● | | | | | | 5 | 12.7 | 4.76 |
| GBR43200R | R | 4 | 2 | ● | ● | ● | | | | | | | 5 | 12.7 | 4.76 |
| GBL43200R | L | 4 | 2 | ● | | | ● | | | | | | 5 | 12.7 | 4.76 |

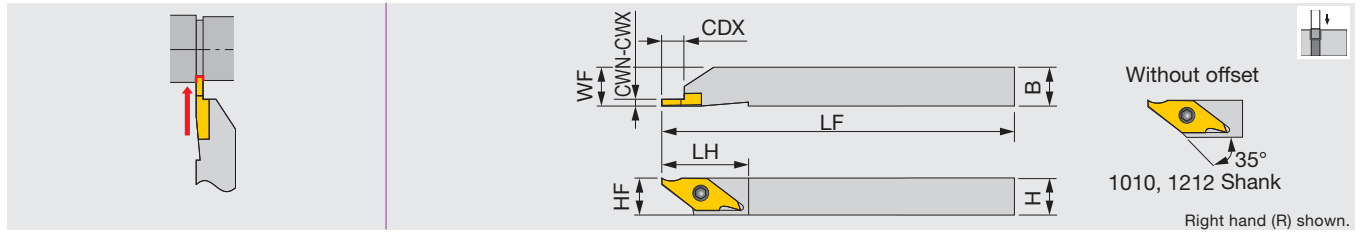
● : Line up

STANDARD CUTTING CONDITIONS

| ISO | Workpiece material | Hardness | Grade | Cutting Speed Vc (m/min) | Feed f (mm/rev) |
|----------|---|-------------|--------|--------------------------|-----------------|
| P | Carbon steels, Alloy steels S45C, SCM415, etc. C45, 18CrMo4, etc. | 150 - 240HB | NS9530 | 100 - 200 | 0.02 - 0.25 |
| | | 150 - 240HB | AH710 | 60 - 150 | 0.05 - 0.25 |
| M | Stainless steel SUS304, etc. X5CrNi18-9, etc. | ≤ 240HB | AH710 | 60 - 150 | 0.05 - 0.15 |
| N | Non-ferrous metal Aluminum, etc. | - | KS05F | 200 - 300 | 0.05 - 0.15 |

Reference pages: Toolholders → [6-50](#)

External grooving toolholder, for Swiss lathes



| Designation | CWN | CWX | CDX | H | B | LF | LH | HF | WF | Insert | Torque* |
|---------------|------|-----|-----------|----|----|-----|----|----|----|-----------|---------|
| JSVGRL1010K-C | 0.33 | 2 | 0.7 - 5.5 | 10 | 10 | 125 | 23 | 10 | 10 | JVGR/L... | 2.3 |
| JSVGRL1212K-C | 0.33 | 2 | 0.7 - 5.5 | 12 | 12 | 125 | 23 | 12 | 12 | JVGR/L... | 2.3 |
| JSVGRL1616K | 0.33 | 2 | 0.7 - 5.5 | 16 | 16 | 125 | 23 | 16 | 16 | JVGR/L... | 2.3 |

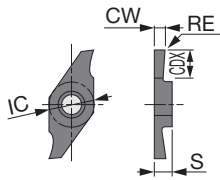
*Torque: Recommended clamping torque (N-m)

SPARE PARTS

| Designation | Clamping screw | Wrench |
|-------------|----------------|---------------------|
| JSVGRL... | CSTB-3S | T-9F Option T-9L |

INSERT

JVG (with hand, sharp edge)



Right hand (R) shown.

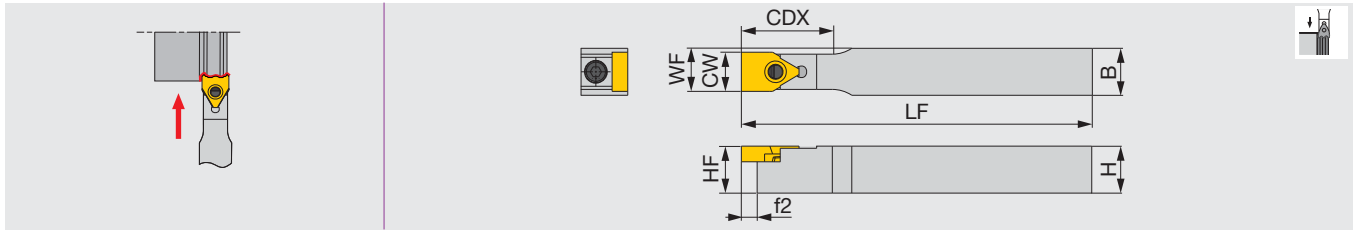
| | | | | | | | | | | |
|---|----------------|---|---|--|---|--|---|--|--|--|
| P | Steel | ★ | ★ | | ★ | | ☆ | | | |
| M | Stainless | ★ | ★ | | | | | | | |
| K | Cast iron | | | | ☆ | | ☆ | | | |
| N | Non-ferrous | | | | | | ★ | | | |
| S | Superalloys | | | | | | ★ | | | |
| H | Hard materials | | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | HAND | CW ^{+0.05} | RE | Coated | | Cermet | Uncoated | CDX | IC | S |
|-------------|------|---------------------|----|--------|------|--------|----------|-----|------|------|
| | | | | SH725 | J740 | NS9530 | TH10 | | | |
| JVGR033F | R | 0.33 | 0 | ● | ● | | ● | 0.7 | 7.94 | 3.18 |
| JVGL033F | L | 0.33 | 0 | ● | | | | 0.7 | 7.94 | 3.18 |
| JVGR050F | R | 0.5 | 0 | ● | ● | | ● | 1.1 | 7.94 | 3.18 |
| JVGL050F | L | 0.5 | 0 | ● | | | | 1.1 | 7.94 | 3.18 |
| JVGR075F | R | 0.75 | 0 | ● | ● | | ● | 1.9 | 7.94 | 3.18 |
| JVGL075F | L | 0.75 | 0 | ● | | | | 1.9 | 7.94 | 3.18 |
| JVGR095F | R | 0.95 | 0 | ● | ● | | ● | 1.9 | 7.94 | 3.18 |
| JVGL095F | L | 0.95 | 0 | ● | | | | 1.9 | 7.94 | 3.18 |
| JVGR100F | R | 1 | 0 | ● | ● | ● | ● | 5.5 | 7.94 | 3.18 |
| JVGL100F | L | 1 | 0 | ● | | ● | ● | 5.5 | 7.94 | 3.18 |
| JVGR125F | R | 1.25 | 0 | ● | ● | | ● | 5 | 7.94 | 3.18 |
| JVGL125F | L | 1.25 | 0 | ● | | | | 5 | 7.94 | 3.18 |
| JVGR150F | R | 1.5 | 0 | ● | ● | ● | ● | 5.5 | 7.94 | 3.18 |
| JVGL150F | L | 1.5 | 0 | ● | | ● | ● | 5.5 | 7.94 | 3.18 |
| JVGR200F | R | 2 | 0 | ● | ● | ● | ● | 5.5 | 7.94 | 3.18 |
| JVGL200F | L | 2 | 0 | ● | | | | 5.5 | 7.94 | 3.18 |

● : Line up

Lever-lock external wide profile grooving toolholder



| Designation | CW | CDX | H | B | LF | HF | WF | f2 | Insert | Torque* |
|-----------------|----|-----|----|----|-----|----|------|-----|--------|---------|
| FPGN1212X-10T20 | 10 | 20 | 12 | 12 | 120 | 12 | 11 | 0.5 | PSGB10 | 2.2 |
| FPGN1616X-10T20 | 10 | 20 | 16 | 16 | 120 | 16 | 13 | 0.5 | PSGB10 | 2.2 |
| FPGN2020K-10T20 | 10 | 20 | 20 | 20 | 125 | 20 | 15 | 0.5 | PSGB10 | 2.2 |
| FPGN1616X-15T25 | 15 | 25 | 16 | 16 | 120 | 16 | 15.5 | 0.4 | PSGB15 | 2.2 |
| FPGN2020K-15T25 | 15 | 25 | 20 | 20 | 125 | 20 | 17.5 | 0.4 | PSGB15 | 2.2 |
| FPGN2020K-20T32 | 20 | 32 | 20 | 20 | 125 | 20 | 20 | 0.4 | PSGB20 | 8.5 |

PSGB insert blank is available for tailored inserts.

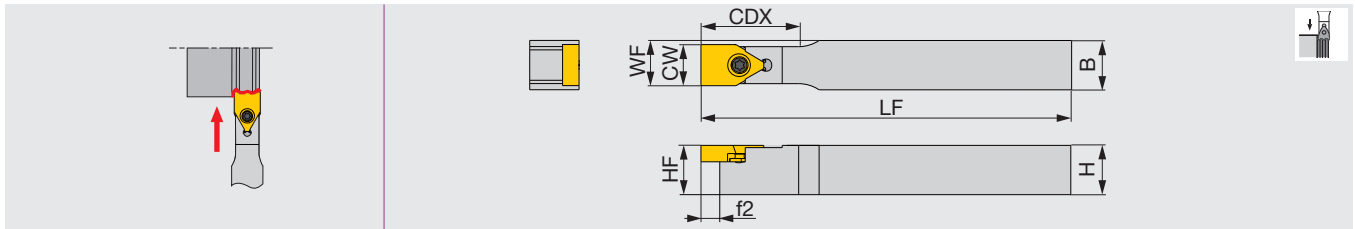
*Torque: Recommended clamping torque (N-m)

SPARE PARTS

| Designation | Lever | Clamping screw | Spring | Wrench |
|-----------------------|-------|----------------|--------|--------|
| FPGN****-10T20, 15T25 | FCL4 | FCS3 | BP-5 | P-2.5 |
| FPGN****-20T32 | FCL8 | FCS6 | BP-9 | P-5 |

SPGN

Screw-on external wide profile grooving toolholder



| Designation | CW | CDX | H | B | LF | HF | WF | f2 | Insert | Torque* |
|-----------------|----|-----|----|----|-----|----|------|-----|--------|---------|
| SPGN1212X-10T20 | 10 | 25 | 12 | 12 | 125 | 12 | 11 | 5.5 | PSGB10 | 1.3 |
| SPGN1616X-10T20 | 10 | 25 | 16 | 16 | 125 | 16 | 13 | 5.5 | PSGB10 | 1.3 |
| SPGN2020K-10T20 | 10 | 25 | 20 | 20 | 130 | 20 | 15 | 5.5 | PSGB10 | 1.3 |
| SPGN1616X-15T25 | 15 | 30 | 16 | 16 | 125 | 16 | 15.5 | 5.5 | PSGB15 | 3.5 |
| SPGN2020K-15T25 | 15 | 30 | 20 | 20 | 130 | 20 | 17.5 | 5.5 | PSGB15 | 3.5 |
| SPGN2020K-20T32 | 20 | 37 | 20 | 20 | 130 | 20 | 20 | 5.5 | PSGB20 | 5 |

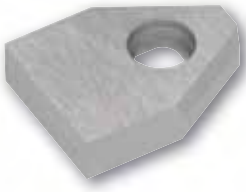
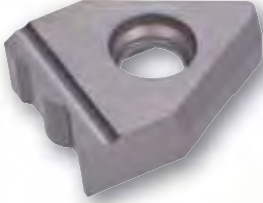

PSGB insert blank is available for tailored inserts.

*Torque: Recommended clamping torque (N-m)

SPARE PARTS

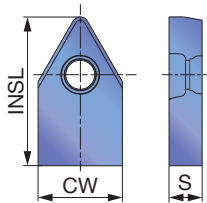
| Designation | Clamping screw | Wrench |
|----------------|----------------|--------|
| SPGN****-10T20 | CSTB-3L081 | T-8F |
| SPGN****-15T25 | CSTB-4 | T-15F |
| SPGN****-20T32 | CSTB-5 | T-20F |

TUNG^{HEAVY}GROOVE - Chipbreaker Guide

| | | | |
|--|--|--|---|
| <p>PSGB</p>  | <p>Blank for wide profile grooving inserts Can be prepared for various insert shapes Shortened cutting time and improved productivity with one-pass operations CW = 10 - 20 mm</p> | <p>Specially tailored profile insert (example)</p>  |  |
|--|--|--|---|

INSERT

PSGB (Blank for wide profile grooving inserts*)



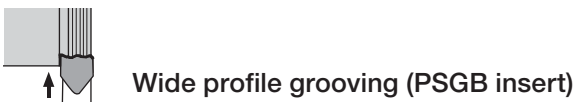
| | | | | | | | | | | |
|-------------------------|-----|---|--|--|--|--|--|--|--|--|
| P Steel | ☆ ★ | | | | | | | | | |
| M Stainless | | ★ | | | | | | | | |
| K Cast iron | ★ | | | | | | | | | |
| N Non-ferrous | ★ | | | | | | | | | |
| S Superalloys | ☆ | | | | | | | | | |
| H Hard materials | | | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | CW±0.025 | Uncoated | | | | | | | | INSL | S |
|-------------|----------|----------|------|--|--|--|--|--|--|------|-----|
| | | TH10 | UX30 | | | | | | | | |
| PSGB10 | 10.2 | ● | ● | | | | | | | 18 | 4 |
| PSGB15 | 15.2 | ● | ● | | | | | | | 20 | 5 |
| PSGB20 | 20.2 | ● | ● | | | | | | | 27 | 6.5 |

*These are blanks (semi-finished products) for wide profile grooving inserts that can be tailored. Package quantity = 5pcs.
● : Line up

STANDARD CUTTING CONDITIONS



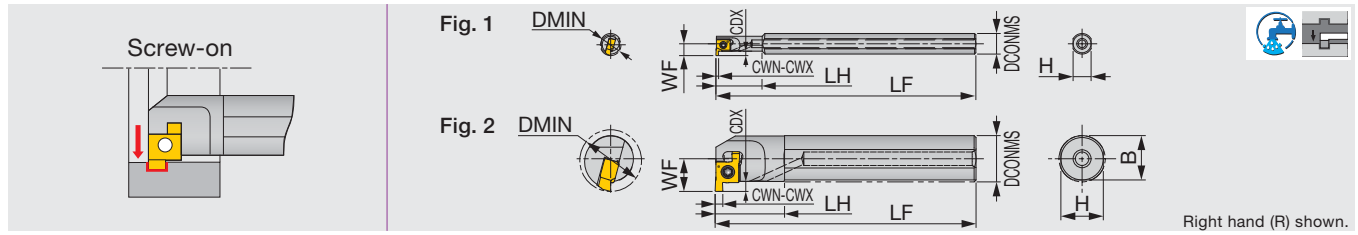
| ISO | Workpiece material | Hardness (HB) | Grade | Cutting Speed Vc (m/min) |
|----------|---|---------------|-------|--------------------------|
| P | Carbon steel S45C, etc. C45, etc. | < 200 | UX30 | 50 - 150 |
| | Alloy steel SCM440, etc. 42CrMo4, etc. | < 300 | UX30 | 50 - 120 |
| M | Stainless steel SUS303, etc. X10CrNiS18-9, etc. | < 200 | UX30 | 50 - 120 |
| N | Aluminium alloy Si < 12%, etc. | - | TH10 | 100 - 500 |

Reference pages: Toolholders → 6-54

Grade 1
Insert 2
Ext. Toolholder 3
Int. Toolholder 4
Threading 5
Grooving 6
Endmill 7
Drilling Tool 8
Technical Reference 9

A/E-SNGR

Toolholders for internal grooving, coolant-through

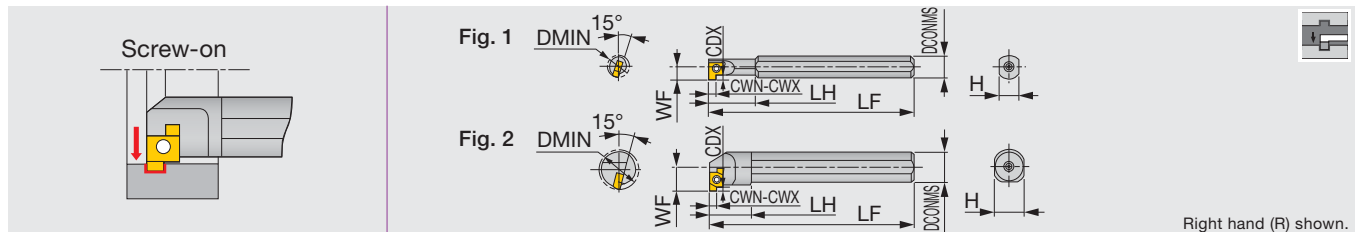


| Designation | Material | CWN | CWX | DMIN | CDX | DCONMS | H | B | LF | LH | WF | Insert | Torque* | Fig. |
|------------------|----------|-----|-----|------|-----|--------|-----|------|-------|----|------|-----------------|---------|------|
| A08H-SNGR06-D080 | Steel | 1 | 2 | 8 | 1.5 | 8 | 7 | - | 100 | 18 | 4.73 | 6GMR..., 6GR... | 0.7 | 1 |
| A08H-SNGR07-D100 | Steel | 1 | 2 | 10 | 1.5 | 8 | 7 | - | 100 | 23 | 5.8 | 7GMR..., 7GR... | 1 | 1 |
| A10K-SNGR07-D120 | Steel | 1 | 2 | 12 | 1.5 | 10 | 9 | - | 125 | 29 | 6.8 | 7GMR..., 7GR... | 1 | 1 |
| A10K-SNGR08-D140 | Steel | 1.5 | 3.5 | 14 | 2 | 10 | 9 | - | 125 | 15 | 7.6 | 8GMR..., 8GR... | 1 | 2 |
| A12M-SNGR08-D160 | Steel | 1.5 | 3.5 | 16 | 2 | 12 | 11 | 11.5 | 150 | 18 | 8.6 | 8GMR..., 8GR... | 1 | 2 |
| A16Q-SNGR09-D200 | Steel | 1.5 | 3.5 | 20 | 3 | 16 | 15 | 15.5 | 180 | 20 | 11.6 | 9GMR..., 9GR... | 1.3 | 2 |
| A20R-SNGR09-D240 | Steel | 1.5 | 3.5 | 24 | 3 | 20 | 18 | 19 | 200 | 25 | 13.6 | 9GMR..., 9GR... | 1.3 | 2 |
| E08X-SNGR07-D100 | Carbide | 1 | 2 | 10 | 1.5 | 8 | 7.5 | - | 120.5 | 35 | 5.8 | 7GMR..., 7GR... | 1 | 1 |
| E10X-SNGR07-D120 | Carbide | 1 | 2 | 12 | 1.5 | 10 | 9 | - | 143.5 | 45 | 6.8 | 7GMR..., 7GR... | 1 | 1 |
| E10X-SNGR08-D140 | Carbide | 1.5 | 3.5 | 14 | 2 | 10 | 9 | - | 146 | - | 7.6 | 8GMR..., 8GR... | 1 | 2 |
| E12X-SNGR08-D160 | Carbide | 1.5 | 3.5 | 16 | 2 | 12 | 11 | - | 174.8 | - | 8.6 | 8GMR..., 8GR... | 1 | 2 |
| E16X-SNGR09-D200 | Carbide | 1.5 | 3.5 | 20 | 3 | 16 | 15 | - | 194.6 | - | 11.6 | 9GMR..., 9GR... | 1.5 | 2 |

Use the right-hand insert (□GR) with the right-hand holder (□NGR).
*Torque: Recommended clamping torque (N·m)

SNGR/L

Toolholders for internal grooving



| Designation | Material | CWN | CWX | DMIN | CDX | DCONMS | H | LF | LH | WF | Insert | Torque* | Fig. |
|---------------|----------|-----|-----|------|-----|--------|----|-----|----|------|-------------------|---------|------|
| SNGR/L08H06 | Steel | 1 | 2 | 8 | 1.5 | 8 | 7 | 100 | 18 | 4.7 | 6GMR..., 6GR/L... | 0.7 | 1 |
| SNGR/L08H07 | Steel | 1 | 2 | 10 | 1.5 | 8 | 7 | 100 | 23 | 5.8 | 7GMR..., 7GR/L... | 1 | 1 |
| SNGR/L10K07 | Steel | 1 | 2 | 12 | 1.5 | 10 | 9 | 125 | 29 | 6.8 | 7GMR..., 7GR/L... | 1 | 1 |
| SNGR/L10K08 | Steel | 1.5 | 3.5 | 14 | 2 | 10 | 9 | 125 | 15 | 7.6 | 8GMR..., 8GR/L... | 1 | 2 |
| SNGR/L12M08 | Steel | 1.5 | 3.5 | 16 | 2 | 12 | 11 | 150 | 18 | 8.6 | 8GMR..., 8GR/L... | 1 | 2 |
| SNGR/L16Q09 | Steel | 1.5 | 3.5 | 20 | 3 | 16 | 15 | 180 | 20 | 11.6 | 9GMR..., 9GR/L... | 1.3 | 2 |
| SNGR/L20R09 | Steel | 1.5 | 3.5 | 24 | 3 | 20 | 18 | 200 | 25 | 13.6 | 9GMR..., 9GR/L... | 1.3 | 2 |
| SNGR/L08K06SC | Carbide | 1 | 2 | 8 | 1.5 | 8 | 7 | 125 | 28 | 4.7 | 6GMR..., 6GR/L... | 0.7 | 1 |
| SNGR/L08K07SC | Carbide | 1 | 2 | 10 | 1.5 | 8 | 7 | 125 | 35 | 5.8 | 7GMR..., 7GR/L... | 1 | 1 |
| SNGR/L10M07SC | Carbide | 1 | 2 | 12 | 1.5 | 10 | 9 | 150 | 45 | 6.8 | 7GMR..., 7GR/L... | 1 | 1 |
| SNGR/L10M08SC | Carbide | 1.5 | 3.5 | 14 | 2 | 10 | 9 | 150 | 45 | 7.6 | 8GMR..., 8GR/L... | 1 | 2 |
| SNGR/L12Q08SC | Carbide | 1.5 | 3.5 | 16 | 2 | 12 | 11 | 180 | - | 8.6 | 8GMR..., 8GR/L... | 1 | 2 |
| SNGR/L16R09SC | Carbide | 1.5 | 3.5 | 20 | 3 | 16 | 15 | 200 | - | 11.6 | 9GMR..., 9GR/L... | 1.5 | 2 |

Use the right-hand insert (□GR) with the right-hand holder (□NGR), and use the left-hand insert (□GL) with the left-hand holder (□NGL).
*Torque: Recommended clamping torque (N·m)

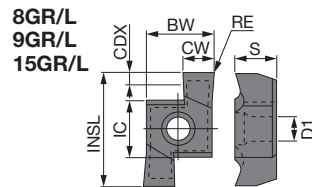
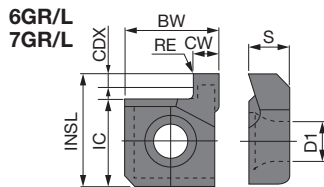
SPARE PARTS

| Designation | Clamping screw | Wrench |
|---|----------------|--------|
| A**-SNGR06-D..., SNGR/L***06, SNGR/L***06SC | CSTB-2L040 | T-6F |
| A**-SNGR07-D..., SNGR/L***07 | CSTB-2.2S | T-7F |
| A**-SNGR08-D..., SNGR/L***08 | CSTB-2.2 | T-7F |
| A**-SNGR09-D..., SNGR/L***09 | CSTB-2.5L080 | T-8F |
| E**-SNGR07-D..., SNGR/L***07SC | CSTB-2.2S | T-7F |
| E**-SNGR08-D..., SNGR/L***08SC | CSTB-2.2 | T-7F |
| E**-SNGR09-D..., SNGR/L***09SC | CSTB-2.5L080 | T-8F |

Reference pages: Inserts → 6-57, Standard cutting conditions → 6-59

INSERT

**GR/L



Right hand (R) shown.

| | | | | | | | | | | | | | |
|---|----------------|---|--|--|--|---|--|--|--|--|--|--|--|
| P | Steel | ★ | | | | ★ | | | | | | | |
| M | Stainless | | | | | ★ | | | | | | | |
| K | Cast iron | ☆ | | | | ★ | | | | | | | |
| N | Non-ferrous | | | | | ★ | | | | | | | |
| S | Superalloys | | | | | ☆ | | | | | | | |
| H | Hard materials | | | | | | | | | | | | |

★ : First choice
☆ : Second choice

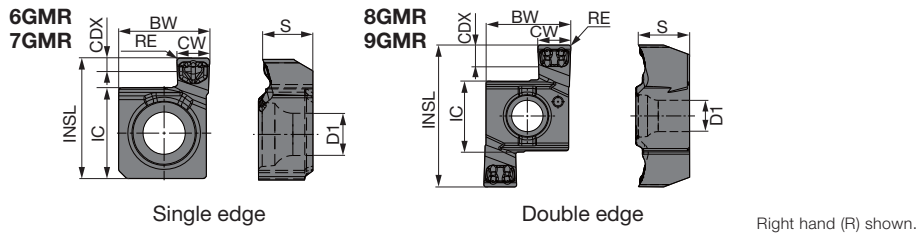
| Designation | HAND | CW±0.025 | RE | Cermet | | Uncoated | | CDX | BW | S | IC | INSL | D1 |
|-------------|------|----------|-----|--------|--|----------|------|-----|-----|------|------|-------|------|
| | | | | NS9530 | | TH10 | UX30 | | | | | | |
| 6GR100 | R | 1 | 0.2 | ● | | ● | ● | 1.5 | 5.6 | 2.34 | 4.76 | 6.44 | 2.3 |
| 6GL100 | L | 1 | 0.2 | | | ● | | 1.5 | 5.6 | 2.34 | 4.76 | 6.44 | 2.3 |
| 6GR150 | R | 1.5 | 0.2 | ● | | ● | ● | 1.5 | 5.6 | 2.34 | 4.76 | 6.44 | 2.3 |
| 6GL150 | L | 1.5 | 0.2 | | | ● | ● | 1.5 | 5.6 | 2.34 | 4.76 | 6.44 | 2.3 |
| 6GR200 | R | 2 | 0.2 | ● | | ● | ● | 1.5 | 5.6 | 2.34 | 4.76 | 6.44 | 2.3 |
| 6GL200 | L | 2 | 0.2 | | | ● | ● | 1.5 | 5.6 | 2.34 | 4.76 | 6.44 | 2.3 |
| 7GR100 | R | 1 | 0.2 | ● | | ● | ● | 1.5 | 5.6 | 3.08 | 5.56 | 7.36 | 2.58 |
| 7GR150 | R | 1.5 | 0.2 | ● | | ● | ● | 1.5 | 5.6 | 3.08 | 5.56 | 7.36 | 2.58 |
| 7GR200 | R | 2 | 0.2 | ● | | ● | ● | 1.5 | 5.6 | 3.08 | 5.56 | 7.36 | 2.58 |
| 7GL200 | L | 2 | 0.2 | | | ● | ● | 1.5 | 5.6 | 3.08 | 5.56 | 7.36 | 2.58 |
| 8GR150 | R | 1.5 | 0.2 | ● | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GR200 | R | 2 | 0.2 | ● | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GL200 | L | 2 | 0.2 | | | ● | | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GR250 | R | 2.5 | 0.2 | ● | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GL250 | L | 2.5 | 0.2 | | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GR300 | R | 3 | 0.2 | ● | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GL300 | L | 3 | 0.2 | | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 8GR350 | R | 3.5 | 0.2 | | | ● | ● | 2 | 6.2 | 3.87 | 5.56 | 10.16 | 2.58 |
| 9GR150 | R | 1.5 | 0.2 | ● | | ● | ● | 2 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GL150 | L | 1.5 | 0.2 | ● | | | ● | 2 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GR200 | R | 2 | 0.2 | ● | | ● | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GL200 | L | 2 | 0.2 | ● | | ● | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GR250 | R | 2.5 | 0.2 | ● | | ● | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GL250 | L | 2.5 | 0.2 | ● | | | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GR300 | R | 3 | 0.2 | ● | | ● | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GL300 | L | 3 | 0.2 | ● | | ● | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GR350 | R | 3.5 | 0.2 | ● | | ● | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GL350 | L | 3.5 | 0.2 | ● | | | ● | 3 | 7.7 | 4.66 | 6.35 | 12.95 | 2.86 |

Use right-hand holder (□NGR ~) with right-hand insert (□GR ~); and left-hand holder (□NGL ~) with left-hand insert (□GL ~).

●: Line up

INSERT

**GMR/L



| | | |
|---|----------------|---|
| P | Steel | ★ |
| M | Stainless | ★ |
| K | Cast iron | ★ |
| N | Non-ferrous | |
| S | Superalloys | ★ |
| H | Hard materials | |

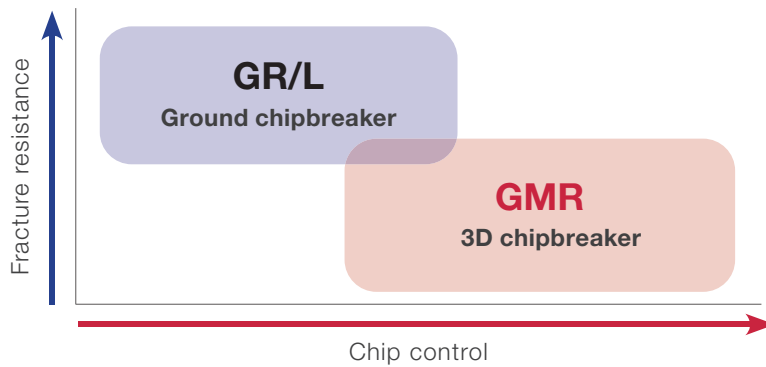
★ : First choice
☆ : Second choice

| Designation | HAND | CW±0.025 | RE | Coated | | | | | CDX | BW | S | IC | INSL | D1 |
|-------------|------|----------|------|--------|--|--|--|--|-----|------|------|------|-------|------|
| | | | | AH7025 | | | | | | | | | | |
| 6GMR100-015 | R | 1 | 0.15 | ● | | | | | 1.5 | 5.56 | 2.34 | 4.76 | 6.44 | 2.3 |
| 7GMR200-020 | R | 2 | 0.2 | ● | | | | | 1.5 | 5.56 | 3.08 | 5.56 | 7.36 | 2.58 |
| 8GMR150-020 | R | 1.5 | 0.2 | ● | | | | | 2 | 6.15 | 3.87 | 5.56 | 10.16 | 2.58 |
| 9GMR200-020 | R | 2 | 0.2 | ● | | | | | 3 | 7.74 | 4.66 | 6.35 | 12.95 | 2.86 |
| 9GMR300-020 | R | 3 | 0.2 | ● | | | | | 3 | 7.74 | 4.66 | 6.35 | 12.95 | 2.86 |

● : Line up



CHIPBREAKER SELECTION



CHATTER STABILITY

| Hole diameter ø8 mm | Feed rate (mm/rev) | 3D chipbreaker | Ground chipbreaker | |
|------------------------|-----------------------|-----------------|--------------------|------------|
| | | New chipbreaker | Conventional | Competitor |
| ø8 mm | 0.1 | ✓ | Fractured | Fractured |
| | 0.05 | ✓ | ✓ | Chatter |
| | 0.03 | — | — | ✓ |

✓ = Stable

P Steel

Workpiece material : S45C / C45
Pilot hole diameter (thru hole) : ø8 mm
Cutting speed : Vc = 80 m/min
Groove depth : 1.5 mm
Coolant : Wet
(External coolant)

Reference pages: Toolholders → 6-56, Standard cutting conditions → 6-59

STANDARD CUTTING CONDITIONS

| ISO | Workpiece material | Grade | Cutting speed Vc (m/min) | Feed rate: f (mm/rev) | |
|----------|---|--------|-----------------------------|-----------------------|-------------|
| | | | | **GMR... | **GR/L... |
| P | Carbon steel S45C, C45, etc. | AH7025 | 80 - 180 | 0.03 - 0.12 | - |
| | | NS9530 | 80 - 200 | - | 0.05 - 0.15 |
| | | UX30 | 40 - 150 | - | 0.05 - 0.15 |
| | Alloy steel SCM435, 34CrMo4, etc. | AH7025 | 80 - 180 | 0.03 - 0.12 | - |
| | | NS9530 | 80 - 200 | - | 0.05 - 0.15 |
| | | UX30 | 40 - 150 | - | 0.05 - 0.15 |
| M | Stainless steel SUS304, X5CrNi18-9, etc. | AH7025 | 50 - 120 | 0.03 - 0.12 | - |
| | | UX30 | 40 - 100 | - | 0.03 - 0.1 |
| S | Titanium alloys Ti-6Al-4V, etc. | AH7025 | 30 - 80 | 0.03 - 0.12 | - |
| | | TH10 | 20 - 50 | - | 0.05 - 0.08 |
| | Superalloys Inconel718, etc. | AH7025 | 20 - 60 | 0.03 - 0.12 | - |
| | | TH10 | 10 - 30 | - | 0.03 - 0.08 |

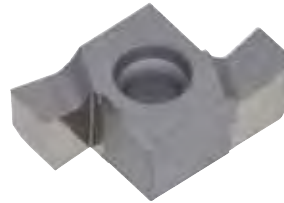
****GMR...**
For excellent chip control

- Optimized chip former removes chips out of the groove
- Forms 10° rake angle when set on the holder



Groove widths : CW = 1.5 - 3 mm
Corner radius : RE = 0.15 - 0.2 mm

****GR/L...**
Universal geometry



Groove widths : CW = 1 - 5 mm
Corner radius : RE = 0.2 mm

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

7. Endmill



Endmill



TUNGMEISTER


Endmills with exchangeable heads for reduced tool change time
ø6 mm - ø20 mm

7-2

P M N S H



TUNGFORCE

Mini square shoulder milling cutters for high productivity
 ø8 - ø12 mm

7-14

P M N S H

Choose the best head-shank combination **for more efficiency!**
 Minimize setup time while **maximizing productivity!**



Others

Reduces tool changeover times drastically!!

- Machine downtime is decreased considerably.
- Enables users to only change cutting head, simplifying set-ups.

Increases productivity by 90% Exchange Time / Piece
TUNGMEISTER **less than 1 minute**
 Solid endmill **10 minutes**

The weight of the tool to be disposed is reduced

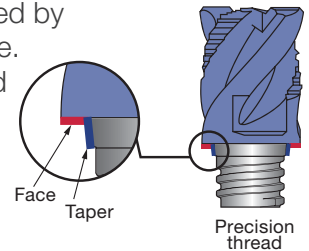
- Reduces tool disposal

For example: $\phi 12$ mm / square endmill

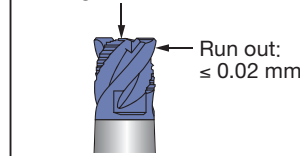
TUNGMEISTER: OAL 20 mm \rightarrow weight 20 g
 Conventional solid endmill: OAL 80 mm \rightarrow weight 140 g

Highly accurate repeatability

- Accuracy can be maintained by touching the taper and face.
- Repeatability is guaranteed and is not a concern for machine operators.



■ Head exchange accuracy
 Height: ± 0.02 mm



No regrinding cost

- No laborious endmill regrinding required.
- Easily replaceable heads eliminate the use of worn cutting edges.
- All tools can be used to breakage point or maximum wear point as no regrinding is necessary.

ER collet conversion adaptor

Wide application area by integration design of holder and collet

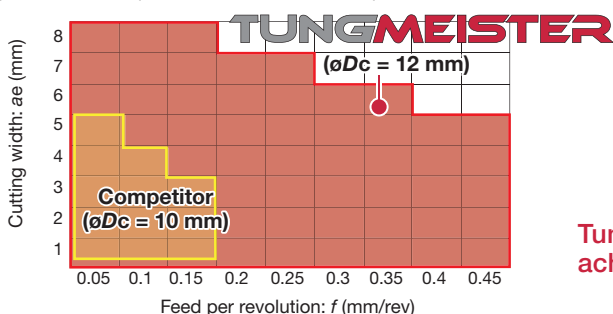
- Larger tool diameter is available than conventional one! Robust connection make expanded application area and high rigidity!

Optimized tool overhang for improved chatter stability

- Tool overhang is designed to ensure maximum rigidity, while eliminating tooling interference, making it ideal for the use in Swiss-type machines.



Application area (Stainless steel, SUS304)



Head : VEE120L09.0R00-03S08 AH725
 Shank : VER16CL006S05-S
 Cutting speed : $Vc = 40$ m/min
 Depth of cut : $ap = 3$ mm
 Machine : Automatic lathe
 Coolant : Wet

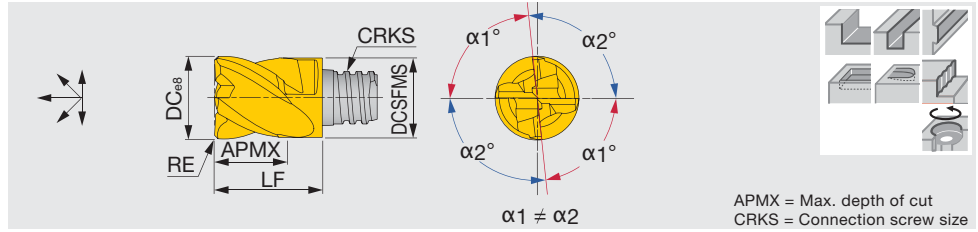
TungMeister connection make larger diameter available, achieved wider application area than solid carbide end mill!

Reference pages: **7-3 - 7-13**

TUNGMEISTER

VEH...

4 flute square head, for general purpose (TungMeister)



| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | RE | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|---------|----|--------|------|-----|------|------|----------|---------|
| VEH080L05.0R05I04S05 | ● | 4 | 35 - 39 | 8 | 7.7 | 5 | 0.5 | S05 | 10 | KEYV-S05 | 7 |
| VEH080L05.0R10I04S05 | ● | 4 | 35 - 39 | 8 | 7.7 | 5 | 1 | S05 | 10 | KEYV-S05 | 7 |
| VEH100L07.0R05I04S06 | ● | 4 | 35 - 39 | 10 | 9.7 | 7 | 0.5 | S06 | 13 | KEYV-S06 | 10 |
| VEH100L07.0R10I04S06 | ● | 4 | 35 - 39 | 10 | 9.7 | 7 | 1 | S06 | 13 | KEYV-S06 | 10 |
| VEH120L09.0R05I04S08 | ● | 4 | 35 - 39 | 12 | 11.7 | 9 | 0.5 | S08 | 16.5 | KEYV-S08 | 15 |
| VEH120L09.0R10I04S08 | ● | 4 | 35 - 39 | 12 | 11.7 | 9 | 1 | S08 | 16.5 | KEYV-S08 | 15 |

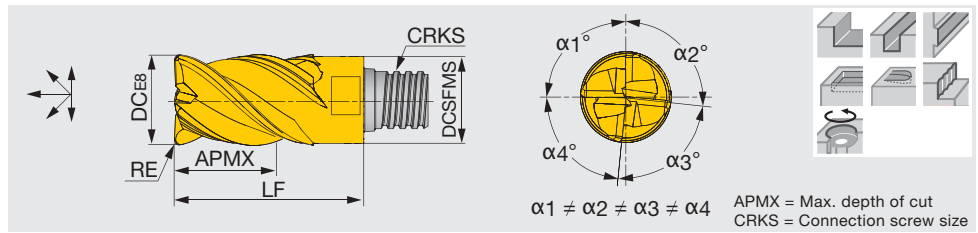
*Torque: Recommended clamping torque (N·m)
2 pieces per package

●: Line up

TUNGMEISTER

VEH...

4 flute square head, long cutting edge, for general purpose (TungMeister)



| Designation | AH715 | NOF | FHA | DC | DCSFMS | APMX | RE | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|----------|----|--------|------|-----|------|----|----------|---------|
| VEH080L12.0R05I04S05 | ● | 4 | 41 - 45° | 8 | 7.7 | 12 | 0.5 | S05 | 18 | KEYV-S05 | 7 |
| VEH080L12.0R10I04S05 | ● | 4 | 41 - 45° | 8 | 7.7 | 12 | 1 | S05 | 18 | KEYV-S05 | 7 |
| VEH100L15.0R05I04S06 | ● | 4 | 41 - 45° | 10 | 9.7 | 15 | 0.5 | S06 | 22 | KEYV-S06 | 10 |
| VEH100L15.0R10I04S06 | ● | 4 | 41 - 45° | 10 | 9.7 | 15 | 1 | S06 | 22 | KEYV-S06 | 10 |
| VEH120L18.0R05I04S08 | ● | 4 | 41 - 45° | 12 | 11.7 | 18 | 0.5 | S08 | 27 | KEYV-S08 | 15 |
| VEH120L18.0R10I04S08 | ● | 4 | 41 - 45° | 12 | 11.7 | 18 | 1 | S08 | 27 | KEYV-S08 | 15 |

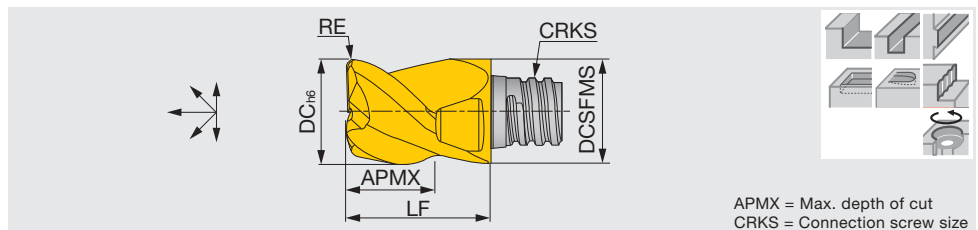
*Torque: Recommended clamping torque (N·m)
2 pieces per package

●: Line up

TUNGMEISTER

VEE**-03...

3 flute square head, for general purpose (TungMeister)



| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|----|--------|------|------|------|----------|---------|
| VEE080L05.0R00-03S05 | ● | 3 | 45° | 8 | 7.7 | 5 | S05 | 10 | KEYV-S05 | 7 |
| VEE100L07.0R00-03S06 | ● | 3 | 45° | 10 | 9.7 | 7 | S06 | 13 | KEYV-S06 | 10 |
| VEE120L09.0R00-03S08 | ● | 3 | 45° | 12 | 11.7 | 9 | S08 | 16.5 | KEYV-S08 | 15 |

*Torque: Recommended clamping torque (N·m)
2 pieces per package

●: Line up

Reference pages: Standard cutting conditions → 7-5, Shank → 7-11, Wrench → 7-13

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

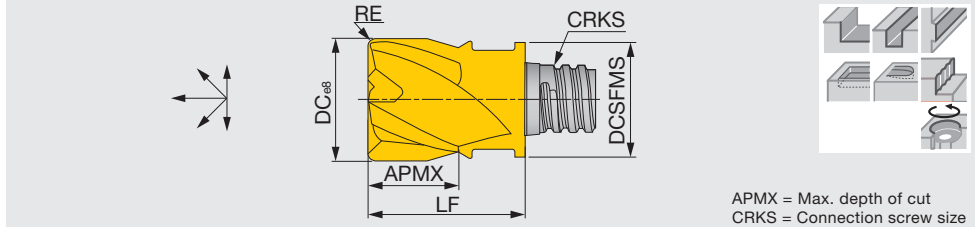
Drilling Tool

Technical Reference

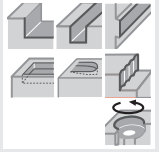
TUNGMEISTER

VEE**-04..., VED**-04...

4 flute square head, for general purpose (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size



| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | RE | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|----|--------|------|-----|------|------|----------|---------|
| VEE060L05.0R00-04S05 | ● | 4 | 45° | 6 | 8 | 5 | - | S05 | 10 | KEYV-S05 | 7 |
| VEE080L05.0R00-04S05 | ● | 4 | 45° | 8 | 7.7 | 5 | - | S05 | 10 | KEYV-S05 | 7 |
| VED080L05.0R05-04S05 | ● | 4 | 30° | 8 | 7.7 | 5 | 0.5 | S05 | 10 | KEYV-S05 | 7 |
| VED080L05.0R10-04S05 | ● | 4 | 30° | 8 | 7.7 | 5 | 1 | S05 | 10 | KEYV-S05 | 7 |
| VED080L05.0R15-04S05 | ● | 4 | 30° | 8 | 7.7 | 5 | 1.5 | S05 | 10 | KEYV-S05 | 7 |
| VEE100L07.0R00-04S06 | ● | 4 | 45° | 10 | 9.7 | 7 | - | S06 | 13 | KEYV-S06 | 10 |
| VED100L07.0R05-04S06 | ● | 4 | 30° | 10 | 9.7 | 7 | 0.5 | S06 | 13 | KEYV-S06 | 10 |
| VEE100L07.0R05-04S06 | ● | 4 | 45° | 10 | 9.7 | 7 | 0.5 | S06 | 13 | KEYV-S06 | 10 |
| VED100L07.0R10-04S06 | ● | 4 | 30° | 10 | 9.7 | 7 | 1 | S06 | 13 | KEYV-S06 | 10 |
| VEE100L07.0R10-04S06 | ● | 4 | 45° | 10 | 9.7 | 7 | 1 | S06 | 13 | KEYV-S06 | 10 |
| VEE120L09.0R00-04S08 | ● | 4 | 45° | 12 | 11.7 | 9 | - | S08 | 16.5 | KEYV-S08 | 15 |
| VED120L09.0R05-04S08 | ● | 4 | 30° | 12 | 11.7 | 9 | 0.5 | S08 | 16.5 | KEYV-S08 | 15 |
| VEE120L09.0R05-04S08 | ● | 4 | 45° | 12 | 11.7 | 9 | 0.5 | S08 | 16.5 | KEYV-S08 | 15 |
| VED120L09.0R10-04S08 | ● | 4 | 30° | 12 | 11.7 | 9 | 1 | S08 | 16.5 | KEYV-S08 | 15 |
| VEE120L09.0R10-04S08 | ● | 4 | 45° | 12 | 11.7 | 9 | 1 | S08 | 16.5 | KEYV-S08 | 15 |

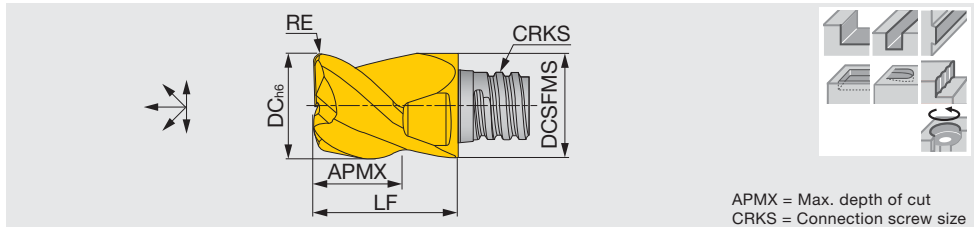
*Torque: Recommended clamping torque (N-m)
2 pieces per package

●: Line up

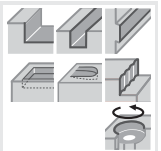
TUNGMEISTER

VEE**-03...

3 flute square head, for key way (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size



| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | RE | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|------|--------|------|-----|------|------|----------|---------|
| VEE077L04.0R02-03S05 | ● | 3 | 38° | 7.7 | 7.7 | 4 | 0.2 | S05 | 10 | KEYV-S05 | 7 |
| VEE097L05.0R03-03S06 | ● | 3 | 38° | 9.7 | 9.7 | 5 | 0.3 | S06 | 13 | KEYV-S06 | 10 |
| VEE117L07.0R03-03S08 | ● | 3 | 38° | 11.7 | 11.7 | 7 | 0.3 | S08 | 16.5 | KEYV-S08 | 15 |

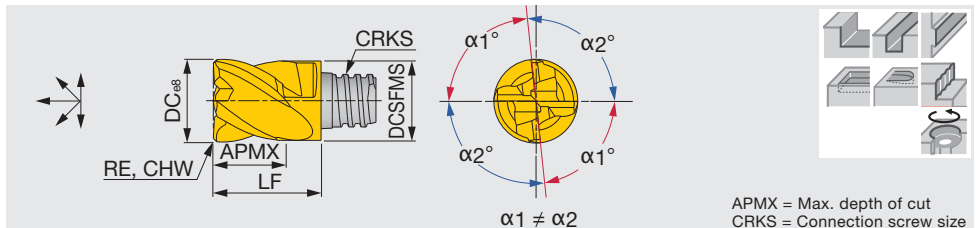
*Torque: Recommended clamping torque (N-m)
2 pieces per package

●: Line up

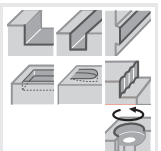
TUNGMEISTER

VEE**I...

4 flute square head, variable pitch, for chatter damping (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size



| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | RE | CHW | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|----|--------|------|----|-----|------|------|----------|---------|
| VEE080L05.0C30I04S05 | ● | 4 | 38° | 8 | 7.7 | 5 | - | 0.3 | S05 | 10 | KEYV-S05 | 7 |
| VEE100L07.0C40I04S06 | ● | 4 | 38° | 10 | 9.7 | 7 | - | 0.4 | S06 | 13 | KEYV-S06 | 10 |
| VEE120L09.0C50I04S08 | ● | 4 | 38° | 12 | 11.7 | 9 | - | 0.5 | S08 | 16.5 | KEYV-S08 | 15 |

*Torque: Recommended clamping torque (N-m)
2 pieces per package

●: Line up

Reference pages: Standard cutting conditions → 7-5, Shank → 7-11, Wrench → 7-13

STANDARD CUTTING CONDITIONS

Shoulder milling (VEH: 4 flutes, VEE: 3 flutes, VED/VEE: 4 flutes, VEE-I)

| ISO | Workpiece material | Hardness | Cutting speed Vc (m/min) | Feed per tooth: fz (mm/t) | | | | Depth of cut ap (mm) | Pick feed Pf (mm) |
|-----|---|-------------|-----------------------------|---------------------------|-------------|-------------|-------------|-------------------------|----------------------|
| | | | | Tool diameter: DC (mm) | | | | | |
| | | | | 6 | 8 | 10 | 12 | | |
| P | Low carbon steels S45C, S55C, etc. C45, C55, etc. | - 300 HB | 80 - 180 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.25 x DC |
| | High carbon steels SCM440, SCr415, etc. 42CrMo4, 15Cr3, etc. | - 300 HB | 60 - 140 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.25 x DC |
| | Prehardened steel PX5, NAK80, etc. | 30 - 40 HRC | 60 - 120 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.25 x DC |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | - 200 HB | 40 - 100 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.25 x DC |
| N | Aluminium alloys Si < 13% | - | 200 - 700 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.25 x DC |
| | Aluminium alloys Si ≥ 13% | - | 100 - 300 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.25 x DC |
| S | Titanium alloys Ti-6Al-4V, etc. | - | 40 - 80 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.05 x DC |
| | Heat-resistant alloys Inconel 718, etc. | - | 20 - 40 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.05 x DC |
| H | Hardened steel SKD61, SKT4, etc. X40CrMoV5 1, 55NiCrMoV6, etc. | 40 - 50 HRC | 40 - 80 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.05 x DC |
| | Hardened steel SKD11, SKH, etc. X153CrMoV12, HS18-0-1, etc. | 50 - 60 HRC | 20 - 60 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.6 x DC | 0.05 x DC |

Slot milling (VEH: 4 flutes, VEE: 3 flutes, VED/VEE: 4 flutes, VEE-I)

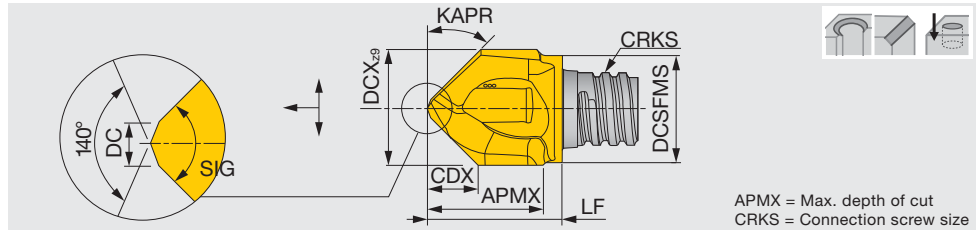
| ISO | Workpiece material | Hardness | Cutting speed Vc (m/min) | Feed per tooth: fz (mm/t) | | | | Depth of cut ap (mm) |
|-----|---|-------------|-----------------------------|---------------------------|-------------|-------------|-------------|-------------------------|
| | | | | Tool diameter: DC (mm) | | | | |
| | | | | 6 | 8 | 10 | 12 | |
| P | Low carbon steels S45C, S55C, etc. C45, C55, etc. | - 300 HB | 80 - 180 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| | High carbon steels SCM440, SCr415, etc. 42CrMo4, 15Cr3, etc. | - 300 HB | 60 - 140 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| | Prehardened steel PX5, NAK80, etc. | 30 - 40 HRC | 60 - 120 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | - 200 HB | 40 - 100 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| N | Aluminium alloys Si < 13% | - | 200 - 700 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| | Aluminium alloys Si ≥ 13% | - | 100 - 300 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| S | Titanium alloys Ti-6Al-4V, etc. | - | 40 - 80 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| | Heat-resistant alloys Inconel 718, etc. | - | 20 - 40 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.5 x DC |
| H | Hardened steel SKD61, SKT4, etc. X40CrMoV5 1, 55NiCrMoV6, etc. | 40 - 50 HRC | 40 - 80 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.2 x DC |
| | Hardened steel SKD11, SKH, etc. X153CrMoV12, HS18-0-1, etc. | 50 - 60 HRC | 20 - 60 | 0.03 - 0.07 | 0.05 - 0.09 | 0.07 - 0.12 | 0.08 - 0.13 | 0.2 x DC |

Grade
1
Insert
2
Ext. Toolholder
3
Int. Toolholder
4
Threading
5
Grooving
6
Endmill
7
Drilling Tool
8
Technical Reference
9

TUNGMEISTER

VCP**-02...

2 flute head, for spot drilling and chamfering (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size



Others

2

Minimum hole diameter: $\phi 1.5$ mm
*Torque: Recommended clamping torque (N·m)
2 pieces per package

●: Line up

3

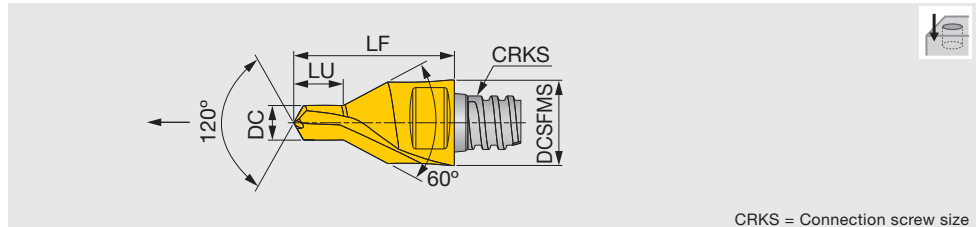
4

5

TUNGMEISTER

VDP**-02...

2 flute head, with chamfered edge, for spot drilling (TungMeister)



CRKS = Connection screw size

| Designation | AH725 | NOF | FHA | DC | DCSFMS | LU | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|------|--------|-----|------|----|----------|---------|
| VDP328L04.6A30-02S05 | ● | 2 | 0° | 3.28 | 8 | 4.6 | S05 | 15 | KEYV-S05 | 7 |
| VDP412L05.9A30-02S06 | ● | 2 | 0° | 4.12 | 10 | 5.9 | S06 | 19 | KEYV-S06 | 10 |
| VDP513L07.2A30-02S08 | ● | 2 | 0° | 5.13 | 12 | 7.2 | S08 | 23 | KEYV-S08 | 15 |

*Torque: Recommended clamping torque (N·m)
2 pieces per package

●: Line up

Reference pages: Standard cutting conditions → 7-7, Shank → 7-11, Wrench → 7-13

STANDARD CUTTING CONDITIONS

Drilling (VCP, VDP)

| ISO | Workpiece material | Hardness | Cutting speed Vc (m/min) | Feed: f (mm/rev) | | | |
|-----|---|---|-----------------------------|------------------|-------------|-------------|-------------|
| | | | | VDP328 | VDP412 | VDP513 | VCP |
| P | Low carbon steels S45C, S55C, etc. C45, C55, etc. | - 300 HB | 40 - 80 | 0.04 - 0.08 | 0.05 - 0.1 | 0.05 - 0.1 | 0.06 - 0.12 |
| | High carbon steels SCM440, SCr415, etc. 42CrMo4, 15Cr3, etc. | - 300 HB | 30 - 50 | 0.04 - 0.08 | 0.05 - 0.1 | 0.05 - 0.1 | 0.06 - 0.12 |
| M | Prehardened steel PX5, NAK80, etc. | 30 - 40 HRC | 20 - 30 | 0.04 - 0.08 | 0.05 - 0.1 | 0.05 - 0.1 | 0.06 - 0.12 |
| | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | - 200 HB | 15 - 25 | 0.04 - 0.08 | 0.05 - 0.1 | 0.05 - 0.1 | 0.06 - 0.12 |
| S | Titanium alloys Ti-6Al-4V, etc. | - | 15 - 25 | 0.04 - 0.07 | 0.04 - 0.07 | 0.04 - 0.07 | 0.04 - 0.07 |
| | Heat-resistant alloys Inconel 718, etc. | - | 10 - 20 | 0.03 - 0.06 | 0.03 - 0.06 | 0.03 - 0.06 | 0.03 - 0.06 |
| H | Hardened steel | SKD61, SKT4, etc. X40CrMoV5 1, 55NiCrMoV6, etc. | 40 - 50 HRC | 15 - 25 | 0.04 - 0.07 | 0.04 - 0.07 | 0.04 - 0.07 |
| | | SKD11, SKH, etc. X153CrMoV12, HS18-0-1, etc. | 50 - 60 HRC | 10 - 20 | 0.03 - 0.06 | 0.03 - 0.06 | 0.03 - 0.06 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

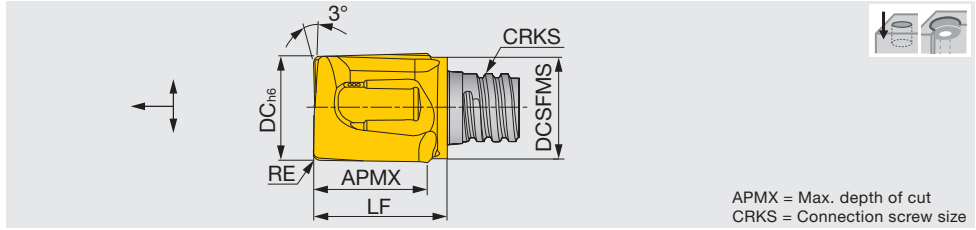
Drilling Tool

Technical Reference

TUNGMEISTER

VGC**-02...

2 flute head, for counterboring (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size



Others



| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | RE | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|------|--------|------|-----|------|------|----------|---------|
| VGC078L08.0R02-02S05 | ● | 2 | 10° | 7.8 | 7.6 | 7.7 | 0.2 | S05 | 10 | KEYV-S05 | 7 |
| VGC080L08.0R04-02S05 | ● | 2 | 10° | 8 | 7.6 | 7.7 | 0.4 | S05 | 10 | KEYV-S05 | 7 |
| VGC080L08.0R10-02S05 | ● | 2 | 10° | 8 | 7.6 | 7.7 | 1 | S05 | 10 | KEYV-S05 | 7 |
| VGC080L08.0R20-02S05 | ● | 2 | 10° | 8 | 7.6 | 7.7 | 2 | S05 | 10 | KEYV-S05 | 7 |
| VGC098L09.0R03-02S06 | ● | 2 | 10° | 9.8 | 9.5 | 9 | 0.3 | S06 | 12.4 | KEYV-S06 | 10 |
| VGC100L09.0R04-02S06 | ● | 2 | 10° | 10 | 9.5 | 9 | 0.4 | S06 | 12.4 | KEYV-S06 | 10 |
| VGC100L09.0R10-02S06 | ● | 2 | 10° | 10 | 9.5 | 9 | 1 | S06 | 12.4 | KEYV-S06 | 10 |
| VGC100L09.0R20-02S06 | ● | 2 | 10° | 10 | 9.5 | 9 | 2 | S06 | 12.4 | KEYV-S06 | 10 |
| VGC117L10.0R03-02S08 | ● | 2 | 10° | 11.7 | 11.5 | 10 | 0.3 | S08 | 14.2 | KEYV-S08 | 15 |
| VGC120L10.0R04-02S08 | ● | 2 | 10° | 12 | 11.5 | 10 | 0.4 | S08 | 14.2 | KEYV-S08 | 15 |
| VGC120L10.0R10-02S08 | ● | 2 | 10° | 12 | 11.5 | 10 | 1 | S08 | 14.2 | KEYV-S08 | 15 |
| VGC120L10.0R20-02S08 | ● | 2 | 10° | 12 | 11.5 | 10 | 2 | S08 | 14.2 | KEYV-S08 | 15 |

Also capable of drilling with step feed (Max. depth = ap x 0.5)

*Torque: Recommended clamping torque (N·m)

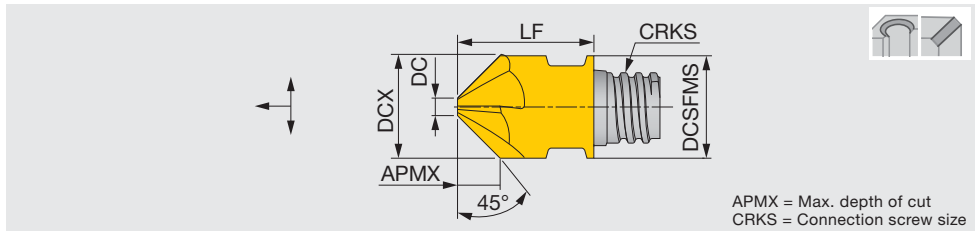
2 pieces per package

●: Line up

TUNGMEISTER

VCA**-04...

4 flute head, without center cutting edge, for countersinking and chamfering (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size

| Designation | AH725 | NOF | FHA | DCX | DCSFMS | APMX | DC | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|------|--------|------|------|------|------|----------|---------|
| VCA100L04.0A45-04S06 | ● | 4 | 0° | 10 | 10 | 4 | 1.95 | S06 | 13 | KEYV-S06 | 10 |
| VCA120L05.0A45-04S08 | ● | 4 | 0° | 12 | 12 | 5 | 1.95 | S08 | 16.5 | KEYV-S08 | 15 |
| VCA127L05.3A45-04S08 | ● | 4 | 0° | 12.7 | 12.7 | 5.3 | 1.98 | S08 | 16.5 | KEYV-S08 | 15 |

*Torque: Recommended clamping torque (N·m)

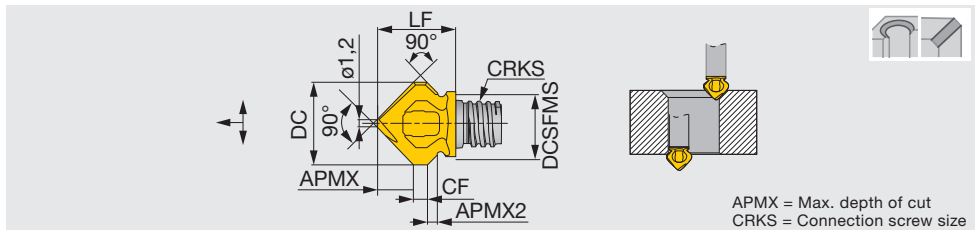
2 pieces per package

●: Line up

TUNGMEISTER

VCW**-02...

2 flute head, for front and back chamfering (TungMeister)



APMX = Max. depth of cut
CRKS = Connection screw size

| Designation | AH725 | NOF | FHA | DC | DCSFMS | APMX | APMX2 | CF | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|------|--------|------|-------|----|------|------|----------|---------|
| VCW118L05.0A45-02S06 | ● | 2 | 0° | 11.8 | 9.3 | 5 | 1.2 | 2 | S06 | 11.2 | KEYV-S08 | 10 |

Also capable of reverse chamfering

The wrench size for these heads is different from the ones for the other head types.

*Torque: Recommended clamping torque (N·m)

2 pieces per package

●: Line up

Reference pages: Standard cutting conditions → 7-9, Shank → 7-11, Wrench → 7-13

STANDARD CUTTING CONDITIONS

Chamfering and countersinking (VCA, VCW)

| ISO | Workpiece material | Hardness | Cutting speed Vc (m/min) | Feed f (mm/rev) |
|-----|---|--|-----------------------------|--------------------|
| P | Low carbon steels S45C, S55C, etc. C45, C55, etc. | - 300 HB | 60 - 100 | 0.06 - 0.12 |
| | High carbon steels SCM440, SCr415, etc. 42CrMo4, 15Cr3, etc. | - 300 HB | 50 - 80 | 0.06 - 0.12 |
| | Prehardened steel PX5, NAK80, etc. | 30 - 40 HRC | 40 - 70 | 0.06 - 0.12 |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | - 200 HB | 30 - 50 | 0.06 - 0.12 |
| N | Aluminium alloys | - | 100 - 200 | 0.08 - 0.15 |
| S | Titanium alloys Ti-6Al-4V, etc. | - | 30 - 50 | 0.05 - 0.1 |
| | Heat-resistant alloys Inconel 718, etc. | - | 20 - 40 | 0.04 - 0.08 |
| H | Hardened steel | SKD61, SKT4, etc. X40CrMoV5 1, 55NiCrMoV6, etc. | 40 - 50 HRC | 0.05 - 0.1 |
| | | SKD11, SKH, etc. X153CrMoV12, HS18-0-1, etc. | 50 - 60 HRC | 0.04 - 0.08 |

Counter boring (VGC)

| ISO | Workpiece material | Hardness | Cutting speed Vc (m/min) | Feed per tooth fz (mm/t) |
|-----|---|--|-----------------------------|-----------------------------|
| P | Low carbon steels S45C, S55C, etc. C45, C55, etc. | - 300 HB | 40 - 80 | 0.04 - 0.08 |
| | High carbon steels SCM440, SCr415, etc. 42CrMo4, 15Cr3, etc. | - 300 HB | 30 - 50 | 0.04 - 0.08 |
| | Prehardened steel PX5, NAK80, etc. | 30 - 40 HRC | 20 - 30 | 0.04 - 0.08 |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | - 200 HB | 15 - 25 | 0.04 - 0.08 |
| S | Titanium alloys Ti-6Al-4V, etc. | - | 15 - 25 | 0.04 - 0.07 |
| | Heat-resistant alloys Inconel 718, etc. | - | 10 - 20 | 0.03 - 0.06 |
| H | Hardened steel | SKD61, SKT4, etc. X40CrMoV5 1, 55NiCrMoV6, etc. | 40 - 50 HRC | 0.04 - 0.07 |
| | | SKD11, SKH, etc. X153CrMoV12, HS18-0-1, etc. | 50 - 60 HRC | 0.03 - 0.06 |

When drilling, the step feed (pecking) operation should be applied with the depth of 0.3 - 0.5 mm per step.
Apply the same cutting conditions as the VEE type head when conducting shoulder milling or slotting operations.

TOLERANCE OF TOOL DIAMETER

| Basic dimensions (mm) | | Permissible dimensional deviations (µm) | | | | | | |
|-----------------------|----|---|------------|----------|----------|----------|----------|------------|
| > | ≤ | e8 | e9 | h6 | h7 | h9 | h10 | z9 |
| 6 | 10 | -25 -47 | -25 -61 | 0 -9 | 0 -15 | 0 -36 | 0 -58 | +78 +42 |
| 10 | 12 | -32 -59 | -32 -75 | 0 -11 | 0 -18 | 0 -43 | 0 -70 | +93 +50 |

JISB0401-2: 1998 (ISO286-2: 1988) extract

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

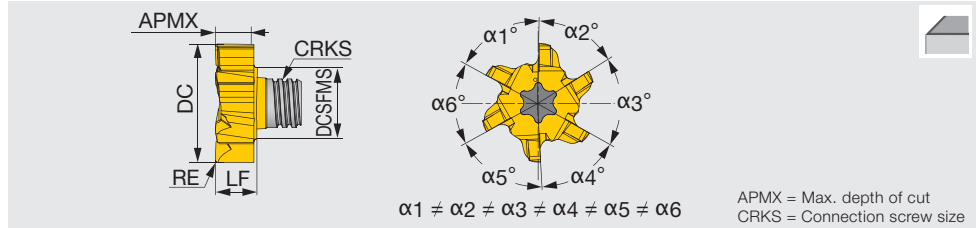
Grooving

Endmill

Drilling Tool

Technical Reference

6 flute face milling head



| Designation | AH715 | NOF | FHA | DC | DCSFMS | APMX | RE | CRKS | LF | Wrench | Torque* |
|----------------------|-------|-----|-----|----|--------|------|-----|------|-----|-----------|---------|
| VFM120L03.6R02I06S05 | ● | 6 | 10° | 12 | 7.7 | 3.6 | 0.2 | S05 | 4.4 | KEYV-T25 | 7 |
| VFM160L04.8R04I06S06 | ● | 6 | 10° | 16 | 9.7 | 4.8 | 0.4 | S06 | 5.6 | KEYV-T25 | 10 |
| VFM200L06.0R04I06S08 | ● | 6 | 10° | 20 | 11.7 | 6 | 0.4 | S08 | 7 | KEYV-T40L | 15 |

*Torque: Recommended clamping torque (N·m)
2 pieces per package

●: Line up

- Square
- chamfering
- Others

STANDARD CUTTING CONDITIONS

Shoulder milling (VFM)

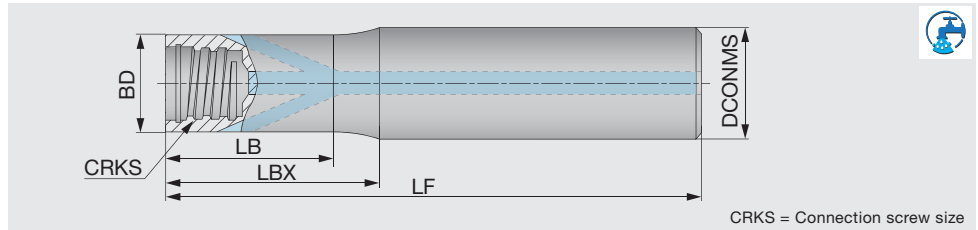
| ISO | Workpiece material | Hardness | Cutting speed Vc (m/min) | Feed per tooth: fz (mm/t) | | | Depth of cut ap (mm) | Pick feed Pf (mm) |
|----------|---|----------------|-----------------------------|---------------------------|-------------|-------------|-------------------------|----------------------|
| | | | | Tool diameter: DC (mm) | | | | |
| | | | | 12 | 16 | 20 | | |
| P | Low carbon steels S45C, S55C, etc. C45, C55, etc. | - 300 HB | 80 - 180 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.25 x øDc |
| | High carbon steels SCM440, SCr415, etc. 42CrMo4, 15Cr3, etc. | - 300 HB | 60 - 140 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.25 x øDc |
| | Prehardened steel PX5, NAK80, etc. | 30 - 40 HRC | 60 - 120 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.25 x øDc |
| M | Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | - 200 HB | 40 - 100 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.25 x øDc |
| N | Aluminium alloys Si < 13% | - | 200 - 700 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.25 x øDc |
| | Aluminium alloys Si ≥ 13% | - | 100 - 300 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.25 x øDc |
| S | Titanium alloys Ti-6Al-4V, etc. | - | 40 - 80 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.05 x øDc |
| | Heat-resistant alloys Inconel 718, etc. | - | 20 - 40 | 0.08 - 0.13 | 0.09 - 0.15 | 0.10 - 0.17 | 1 x øDc | 0.05 x øDc |
| H | Hardened steel SKD61, SKT4, etc. | 40 - 50 HRC | 40 - 80 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.05 x øDc |
| | Hardened steel X40CrMoV5 1, 55NiCrMoV6, etc. | 50 - 60 HRC | 20 - 60 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.05 x øDc |
| | Hardened steel SKD11, SKH, etc. X153CrMoV12, HS18-0-1, etc. | 50 - 60 HRC | 20 - 60 | 0.08 - 0.13 | 0.09 - 0.15 | 0.1 - 0.17 | 1 x øDc | 0.05 x øDc |

Reference pages: Shank → 7-11, Wrench → 7-13

TUNGMEISTER

VSSD**-W-A

Cylindrical shank + straight neck, with coolant hole (TungMeister)



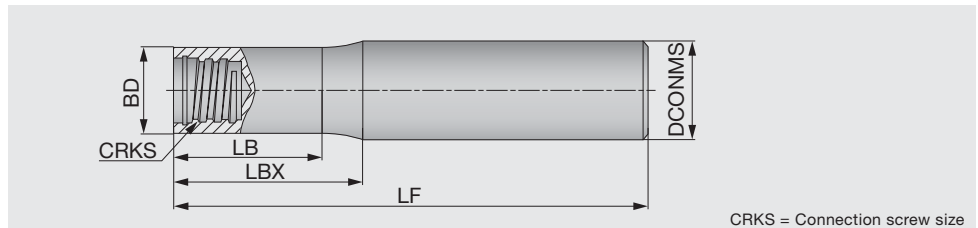
CRKS = Connection screw size

| Designation | DCONMS | BD | LF | LBX | LB | CRKS | Type | Material |
|-------------------|--------|------|-----|-----|----|------|-------------|----------|
| VSSD10L070S06-W-A | 10 | 9.6 | 70 | 20 | 19 | S06 | Cylindrical | Tungsten |
| VSSD10L090S06-W-A | 10 | 9.6 | 90 | 40 | 39 | S06 | Cylindrical | Tungsten |
| VSSD10L110S06-W-A | 10 | 9.6 | 110 | 60 | 59 | S06 | Cylindrical | Tungsten |
| VSSD12L070S08-W-A | 12 | 11.5 | 70 | 20 | 19 | S08 | Cylindrical | Tungsten |
| VSSD12L090S08-W-A | 12 | 11.5 | 90 | 40 | 39 | S08 | Cylindrical | Tungsten |
| VSSD12L110S08-W-A | 12 | 11.5 | 110 | 60 | 59 | S08 | Cylindrical | Tungsten |
| VSSD12L130S08-W-A | 12 | 11.5 | 130 | 80 | 79 | S08 | Cylindrical | Tungsten |

TUNGMEISTER

VSSD...

Cylindrical shank + straight neck (TungMeister)



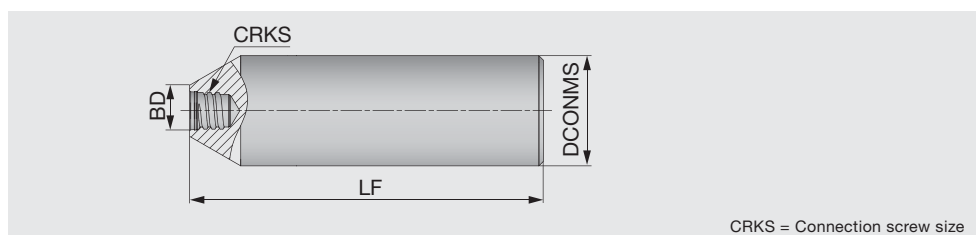
CRKS = Connection screw size

| Designation | DCONMS | BD | LF | LBX | LB | CRKS | Type | Material |
|-----------------|--------|------|-----|-----|------|------|-------------|----------|
| VSSD08L060S05-S | 8 | 7.6 | 60 | 15 | 12.5 | S05 | Cylindrical | Steel |
| VSSD08L070S05-C | 8 | 7.6 | 70 | 20 | 18.5 | S05 | Cylindrical | Carbide |
| VSSD08L090S05-C | 8 | 7.6 | 90 | 40 | 38.5 | S05 | Cylindrical | Carbide |
| VSSD08L110S05-C | 8 | 7.6 | 110 | 60 | 58.5 | S05 | Cylindrical | Carbide |
| VSSD10L070S06-C | 10 | 9.6 | 70 | 20 | 18.5 | S06 | Cylindrical | Carbide |
| VSSD10L075S06-S | 10 | 9.6 | 75 | 20 | 17.5 | S06 | Cylindrical | Steel |
| VSSD10L090S06-C | 10 | 9.6 | 90 | 40 | 38.5 | S06 | Cylindrical | Carbide |
| VSSD10L110S06-C | 10 | 9.6 | 110 | 60 | 58.5 | S06 | Cylindrical | Carbide |
| VSSD10L150S06-C | 10 | 9.6 | 150 | 100 | 98.5 | S06 | Cylindrical | Carbide |
| VSSD12L070S08-C | 12 | 11.5 | 70 | 20 | 17 | S08 | Cylindrical | Carbide |
| VSSD12L090S08-C | 12 | 11.5 | 90 | 40 | 38 | S08 | Cylindrical | Carbide |
| VSSD12L090S08-S | 12 | 11.5 | 90 | 16 | 13.5 | S08 | Cylindrical | Steel |
| VSSD12L110S08-C | 12 | 11.5 | 110 | 60 | 58 | S08 | Cylindrical | Carbide |
| VSSD12L130S08-C | 12 | 11.5 | 130 | 80 | 78 | S08 | Cylindrical | Carbide |

TUNGMEISTER

VSSD...

High rigidity shank



CRKS = Connection screw size

| Designation | DCONMS | BD | LF | CRKS | Type | Material |
|-----------------|--------|-----|----|------|-------------|----------|
| VSSD10L055S05-S | 10 | 7.6 | 55 | S05 | Cylindrical | Steel |
| VSSD12L065S06-S | 12 | 9.6 | 65 | S06 | Cylindrical | Steel |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

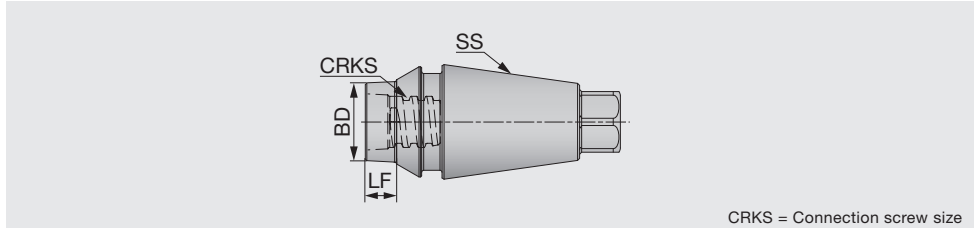
Drilling Tool

Technical Reference

TUNGMEISTER

VER...

Adapter for ER collect chucks



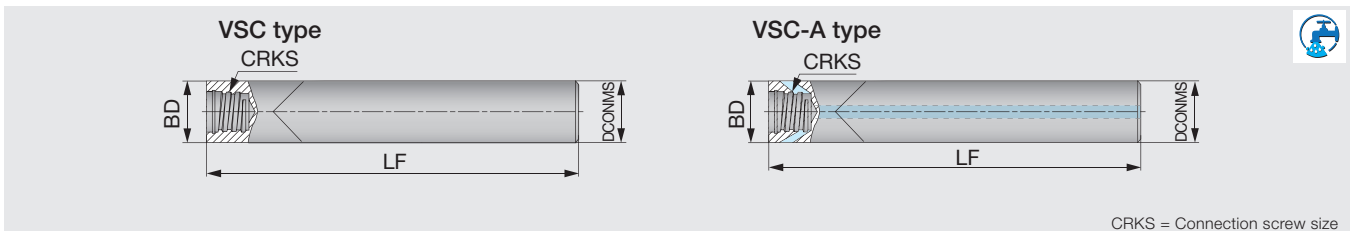
CRKS = Connection screw size

| Designation | SS | BD | LF | CRKS |
|-----------------|------|------|----|------|
| VER11CL006S05-S | ER11 | 7.92 | 6 | S05 |
| VER11CL020S05-S | ER11 | 7.92 | 20 | S05 |
| VER16CL012S05-S | ER16 | 7.92 | 12 | S05 |
| VER16CL020S05-S | ER16 | 7.92 | 20 | S05 |
| VER16CL010S06-S | ER16 | 9.92 | 10 | S06 |
| VER16CL020S06-S | ER16 | 9.92 | 20 | S06 |
| VER16CL006S08-S | ER16 | 11.6 | 6 | S08 |
| VER16CL020S08-S | ER16 | 11.6 | 20 | S08 |

TUNGMEISTER

VSC...

TungMeister, straight shank for VST type slotting heads



CRKS = Connection screw size

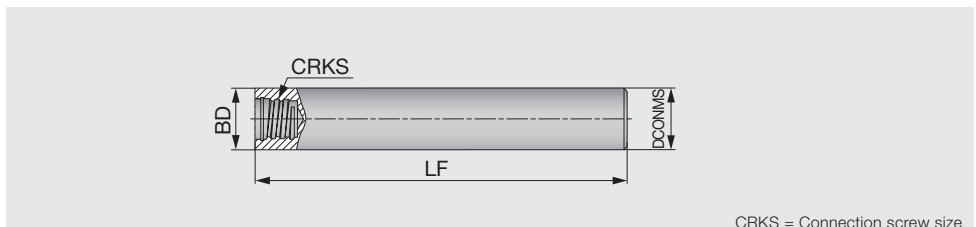
| Designation | DCONMS | BD | LF | CRKS | Air hole | Material |
|-------------------|--------|----|-----|------|----------|----------|
| VSC100L100S06-C | 10 | 10 | 100 | S06 | without | CARBIDE |
| VSC120L100S08-C-A | 12 | 12 | 100 | S08 | with | CARBIDE |

The VSC-C type shank does not have external clearance, so the shank may interfere with the work piece.

TUNGMEISTER

VSTD...

TungMeister, straight shank for VTB type slotting heads








CRKS = Connection screw size

| Designation | DCONMS | BD | LF | CRKS | Material |
|-----------------|--------|----|----|------|----------|
| VSTD08L070S05-S | 8 | 8 | 70 | S05 | STEEL |
| VSTD10L080S06-S | 10 | 10 | 80 | S06 | STEEL |
| VSTD12L090S08-S | 12 | 12 | 90 | S08 | STEEL |



The VSTD type shank does not have external clearance, so the shank may interfere with the work piece.

TORQUE WRENCHES

| Appearance | | Designation | Stock | Connection screw size | TM Head description | Torque (N·m) |
|-------------------------------------|---|------------------------|-------|-----------------------|------------------------------------|--------------|
| Handle |  | TORQUEWRENCH5-50NM9x12 | ● | - | - | - |
| Open wrenches for cylindrical heads |  | TM-WRENCH-6-05 | ● | S05 | VEH, VED VEE, VEE-I VDP, VCA | 7 |
| | | TM-WRENCH-8-06 | ● | S06 | | 10 |
| | | TM-WRENCH-10-08 | ● | S08 | | 15 |
| Open wrenches for 2 flute heads |  | TM-WRENCH-4E-05 | ● | S05 | VCP, VGC VCW | 7 |
| | | TM-WRENCH-5E-06 | ● | S06 | | 10 |
| | | TM-WRENCH-7E-08 | ● | S08 | | 15 |
| 90° adaptor for Torx bits |  | INSERT-TOOL-9X12MM | ● | - | - | - |
| Torx bits sockets |  | BIT-SOCKET-T25-DRIVE | ● | S05, S06 | VFM | 10 |
| | | BIT-SOCKET-T40-DRIVE | ● | S08 | VFM | 15, 28 |

WRENCH

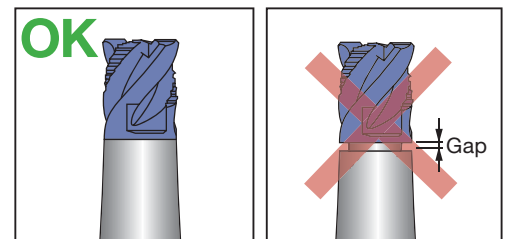
KEYV-S..., KEYV-T..., KEYV-T**L

| Appearance | Designation | Connection screw size | Torque (N·m) | Applicable head |
|---|-------------|-----------------------|--------------|--|
|  | KEYV-S05 | S05 | 7 | Square Drilling Chamfering Counter boring |
| | KEYV-S06 | S06 | 10 | |
| | KEYV-S08 | S08 | 15 | |
|  | KEYV-T40L | S08 | 15 | VFM type |
| | KEYV-T25 | S05, S06 | 7, 10 | |

Note: Wrenches are sold separately.

CAUTIONARY POINTS IN USE

- The cutting heads specified by Tungaloy must be used. Avoid using alternate heads that are not Tungaloy products as this will damage the shank and can cause severe accident or injury.
- Before setting the head, clean the connection screw with an air blast or a wiping cloth to remove chips and other foreign matter that may remain.
- Do not apply the lubricant to the connection screw.
- Please use the correct "Wrench" with the correct cutting head. Tighten the head slowly until the face of the head contacts the shank. (Please refer to the picture shown on the right.) Do not re-tightening or over-tightening. Excessive tightening may cause the cutting head to break.
- Do not apply excessive force or a hammer when tightening or exchanging the cutting heads.

Grade

Insert

Toolholder

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

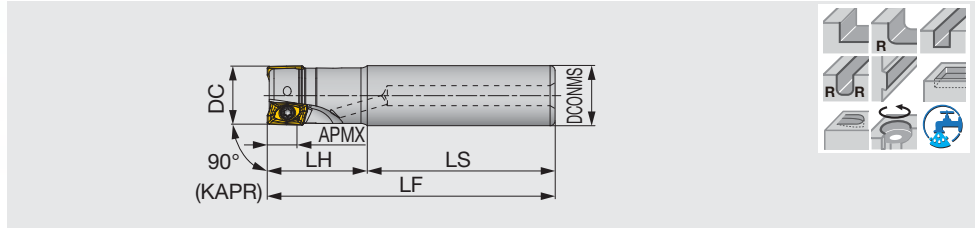
Drilling Tool

Technical Reference

7-13

Mini square shoulder endmill, shank type, with screw clamp system

GAMP = +6.0°~ +7.6°, GAMF = -37.1°~ -32.4°



| Designation | APMX | DC | CICT | DCONMS | LS | LH | LF | WT(kg) | Air hole | Insert |
|---------------------|------|----|------|--------|-----|----|-----|--------|----------|-----------|
| EPAV06M008C10.0R01 | 6 | 8 | 1 | 10 | 60 | 20 | 80 | 0.04 | With | AVGT06... |
| EPAV06M010C10.0R02 | 6 | 10 | 2 | 10 | 60 | 20 | 80 | 0.04 | With | AVGT06... |
| EPAV06M010C10.0R02L | 6 | 10 | 2 | 10 | 65 | 35 | 100 | 0.06 | With | AVGT06... |
| EPAV06M010C08.0R02L | 6 | 10 | 2 | 8 | 80 | 20 | 100 | 0.04 | With | AVGT06... |
| EPAV06M012C12.0R02 | 6 | 12 | 2 | 12 | 60 | 20 | 80 | 0.06 | With | AVGT06... |
| EPAV06M012C12.0R03 | 6 | 12 | 3 | 12 | 60 | 20 | 80 | 0.06 | With | AVGT06... |
| EPAV06M012C12.0R02L | 6 | 12 | 2 | 12 | 85 | 35 | 120 | 0.09 | With | AVGT06... |
| EPAV06M012C10.0R02L | 6 | 12 | 2 | 10 | 100 | 20 | 120 | 0.07 | With | AVGT06... |
| EPAV06M012C10.0R03 | 6 | 12 | 3 | 10 | 60 | 20 | 80 | 0.04 | With | AVGT06... |

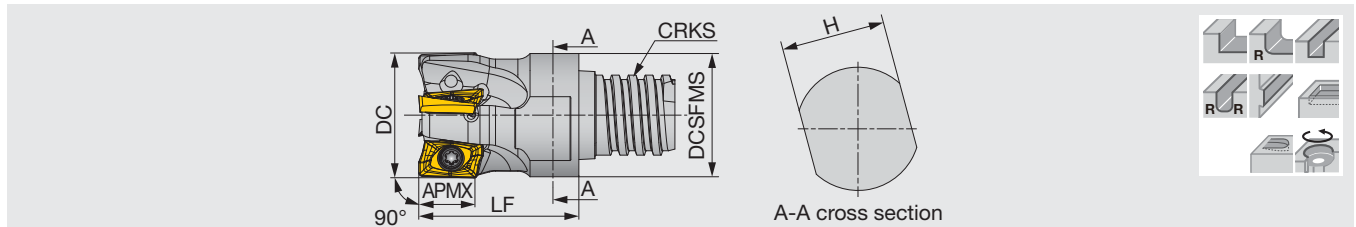
SPARE PARTS



| Designation | Clamping screw | Lubricant | Wrench |
|-------------|----------------|-----------|--------|
| EPAV06M... | CSPB-2H | M-1000 | IP-6DB |

*Recommended clamping torque: CSPB-2H=0.7 N·m

Mini square shoulder endmill, modular type (TungMeister)



| Designation | APMX | DC | CICT | LF | H | DCSFMS | CRKS | WT (kg) | Air hole | Insert |
|------------------|------|----|------|----|----|--------|------|---------|----------|-----------|
| HPAV06M010S05R02 | 6 | 10 | 2 | 10 | 8 | 8 | S05 | 0.01 | Without | AVGT06... |
| HPAV06M010S06R02 | 6 | 10 | 2 | 16 | 8 | 9.8 | S06 | 0.01 | Without | AVGT06... |
| HPAV06M012S08R02 | 6 | 12 | 2 | 18 | 10 | 11.7 | S08 | 0.02 | Without | AVGT06... |
| HPAV06M012S08R03 | 6 | 12 | 3 | 18 | 10 | 11.7 | S08 | 0.02 | Without | AVGT06... |

Applicable shank: VSSD, VTSD, VSC, VSTD, VER

Please see the page 7-11 - 7-12 for the types and the selection of TungMeister shank.

Please use VAD-M adapter to connect TungMeister with a metric thread shank.

| Spanner* | Designation | Connection screw size |
|----------|-------------|-----------------------|
| | KEYV-S05 | S05 |
| | KEYV-S06 | S06 |
| | KEYV-S08 | S08 |
| | KEYV-S10 | S10 |

*sold separately

SPARE PARTS



| Designation | Clamping screw | Lubricant | Wrench |
|-------------|----------------|-----------|--------|
| HPAV06M... | CSPB-2H | M-1000 | IP-6DB |

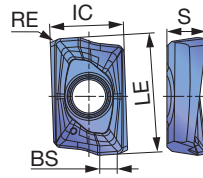
*Recommended clamping torque: CSPB-2H=0.7 N·m

Reference pages: Inserts, Standard cutting conditions → 7-15

INSERT

AVGT-MJ

AVGT-AJ



| | | | | | | | | | |
|---|----------------|---|---|---|---|--|--|--|--|
| P | Steel | ★ | | ★ | | | | | |
| M | Stainless | | ☆ | ★ | | | | | |
| K | Cast iron | ★ | | | | | | | |
| N | Non-ferrous | | | | ★ | | | | |
| S | Superalloys | ★ | ★ | ☆ | | | | | |
| H | Hard materials | ★ | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | RE | APMX | Coated | | | | Uncoated | | | | LE | IC | S | BS | | |
|-------------------|-----|------|--------|-------|--------|-------|----------|--|--|--|----|----|---|----|-----|-----|
| | | | AH120 | AH130 | AH3135 | KS05F | | | | | | | | | | |
| AVGT060300PBER-MJ | 0.0 | 6 | | | ● | | | | | | | | 8 | 5 | 2.7 | 1.6 |
| AVGT060302PBER-MJ | 0.2 | 6 | ● | ● | ● | | | | | | | | 8 | 5 | 2.7 | 1.5 |
| AVGT060304PBER-MJ | 0.4 | 6 | ● | ● | ● | | | | | | | | 8 | 5 | 2.7 | 1.3 |
| AVGT060308PBER-MJ | 0.8 | 6 | ● | ● | ● | | | | | | | | 8 | 5 | 2.6 | 0.9 |
| AVGT060300PBFR-AJ | 0.0 | 6 | | | | ● | | | | | | | 8 | 5 | 2.7 | 1.6 |
| AVGT060302PBFR-AJ | 0.2 | 6 | | | | ● | | | | | | | 8 | 5 | 2.7 | 1.5 |
| AVGT060304PBFR-AJ | 0.4 | 6 | | | | ● | | | | | | | 8 | 5 | 2.7 | 1.3 |
| AVGT060308PBFR-AJ | 0.8 | 6 | | | | ● | | | | | | | 8 | 5 | 2.6 | 0.9 |

● : Line up

STANDARD CUTTING CONDITIONS

| ISO | Workpiece materials | Hardness | Priority | Grades | Cutting speed Vc (m/min) | Feed per tooth fz (mm/t) | |
|----------------------------------|--|----------------|----------------------------------|--------------|--------------------------|--------------------------|-------------|
| P | Low carbon steel S15C, SS400, etc. C15E, E275A, etc. | - 200 HB | First choice | AH3135 | 230 - 430 | 0.07 - 0.12 | |
| | Carbon steel and alloy steel S55C, SCM440, etc. C55, 42CrMo4, etc. | - 300 HB | First choice | AH3135 | 150 - 350 | 0.07 - 0.12 | |
| | Prehardend steel NAK80, PX5, etc. | 30 - 40 HRC | First choice | AH3135 | 100 - 230 | 0.07 - 0.12 | |
| M | Stainless steel SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc. | - | First choice | AH3135 | 150 - 220 | 0.06 - 0.1 | |
| | Aluminium alloys Si < 13% | - | First choice | KS05F | 650 - 1000 | 0.07 - 0.12 | |
| N | Aluminium alloys Si ≥ 13% | - | First choice | KS05F | 100 - 230 | 0.04 - 0.12 | |
| | Titanium alloys Ti-6Al-4V, etc. | - | First choice | AH130 | 40 - 90 | 0.04 - 0.1 | |
| S | Superalloys Inconel718, etc. | - | First choice | AH130 | 45 - 65 | 0.04 - 0.09 | |
| | H | Hardened steel | SKD61, etc. X40CrMoV5-1, etc. | 40 - 50 HRC | First choice | AH120 | 45 - 70 |
| SKD11, etc. X153CrMoV12, etc. | | | 50 - 60 HRC | First choice | AH120 | 40 - 65 | 0.04 - 0.06 |

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

8. Drilling Tool



Drilling Tool

Head changeable drill



DRILLMEISTER

Head changeable drill series



ø6 mm - ø22.9 mm / L/D = 1.5, 3, 3.5

8-3

Solid drill



SOLIDDRILL

High performance solid carbide drill

8-16



DSM / DSM-CP

ø0.1 mm - ø3 mm / L/D = 5, 10, 15

8-16, 8-18



DSW

 ø3 mm - ø12 mm / L/D = 3, 5

8-20

Indexable drill



TUNGDRILLTWISTED

Indexable drill with 4-corner inserts for various drilling applications



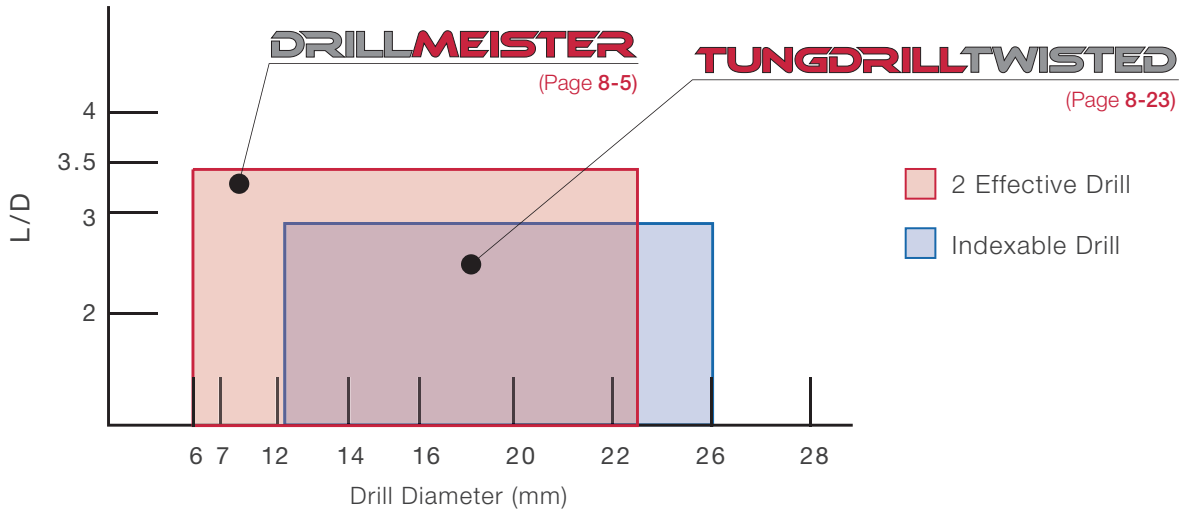
ø12.5 mm - ø26 mm / L/D = 2, 3

8-23

Basic Selection of Drilling Tools

Application ranges of drilling tools

Indexable & Head-Changeable Drills



Hole diameter tolerance*

TUNGDRILLTWISTED

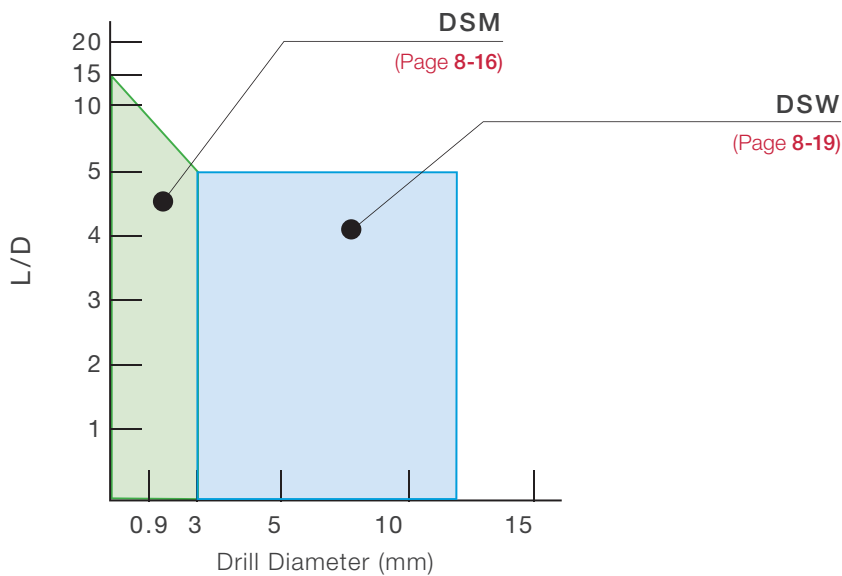
| L/D | Tool diameter | Hole diameter tolerance* |
|-----|---------------|--------------------------|
| 2 | ø12.5 - ø17 | + 0.25 / 0 |
| | ø17.5 - ø26 | + 0.3 / 0 |
| 3 | ø12.5 - ø17 | + 0.25 / 0 |
| | ø17.5 - ø26 | + 0.3 / 0 |

DRILLMEISTER

| L/D | Tool diameter | Hole diameter tolerance* |
|------------|---------------|--------------------------|
| TID 1.5 | ø6 - ø22.9 | + 0.05 / 0 |
| TID/TIDC 3 | ø6 - ø22.9 | + 0.05 / 0 |
| TID 3.5 | ø10 - ø17.9 | + 0.08 / 0 |
| | ø18 - ø19.9 | + 0.095 / 0 |

*Just for reference

Solid Drills





Exchangeable head system for easy operation

High accuracy, rigidity, and productivity

- Unique clamping structure provides high repeatability and reliability
- One-action head changing reduces tool set up time
- No re-grinding cost and reduced tool inventory requirements

Drill head



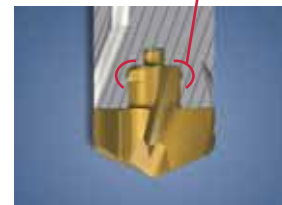
Drill body



■ Contact area that supports the drill head against cutting force

■ Contact area that maintains the accurate drill position

Groove to prevent the head from falling off



Increased body durability

- The new clamping mechanism greatly reduces the damage on cutting edges due to less holding power as seen with the competitors, which leads to long tool life.
- The unique clamping design prevents the head from falling off.



Reference pages: [8-5](#) - [8-15](#)

Grade

1

Insert

2

Ext. Toolholder

3

Int. Toolholder

4

Threading

5

Grooving

6

Endmill

7

Drilling Tool

8

Technical Reference

9

Enhanced drill head variations for higher performance

● DMP Drill head - general purpose



- Versatile drill head
- Suited for various materials and applications
- Light cutting due to sharp cutting edge

Unique edge preparation

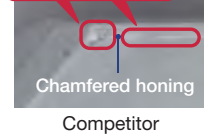
Close-up of edges (new head)



No peeling-off



Peeling-off

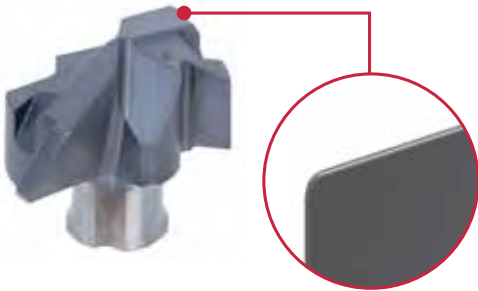


Effectively improves adhesion strength

Chamfered honing

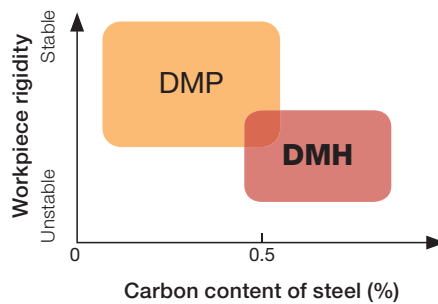
Competitor

● DMH with optimized edge preparation for edge toughness



Strong cutting edge design

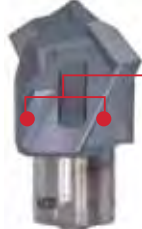
Application range of DMH



- Strong cutting edge design prevents the drill edge from fracturing during demanding processes
- Versatile and wear-resistant AH9130 grade provides extended tool life

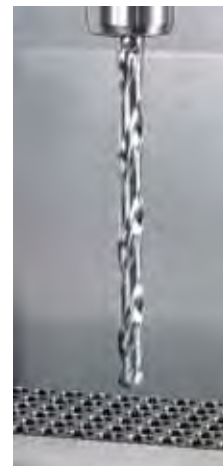
● DMC Drill head - high accuracy drilling

Quick-centering profile

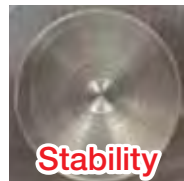


Double margins

- Innovative chiseled edge for smooth drill entry. No pre-drilling needed in 12xD drilling operation
- Superior hole diameter accuracy and circularity
- Double margins provides superior surface finish and hole drilling straightness



DRILLMEISTER DMC



Stability

Competitor

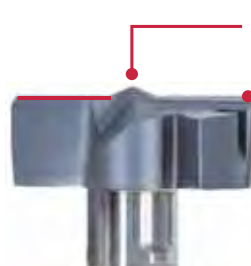


Chatter

Parameters : $V_c = 100$ m/min, $f = 0.3$ mm/rev
Drill diameter : $\phi 13$, L/D = 12 (No pilot hole)
Materials : S55C

● DMF DrillMeister flat head

180° flat cutting edges produces holes with flat bottom. Ideal for counterboring for bolt heads.



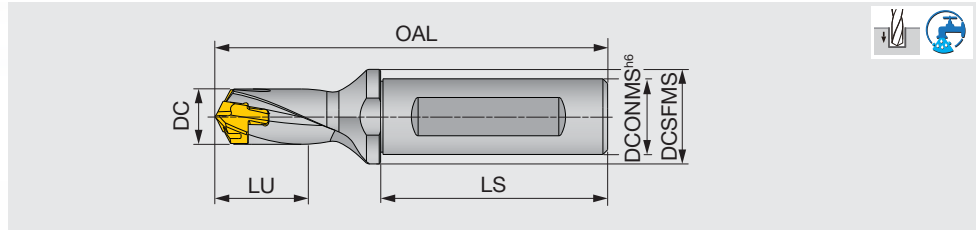
Pilot edge

supports smooth entry to work piece

Shoulder chamfer

prevents premature fracture

- Flat edge design with pilot edge performs balanced drill entry
- Significantly reduced radial forces promise stable drilling for complex surfaces at drill entry and exit
- Stable drilling with long overhang up to L/D = 8 without pre-hole



| Designation | DC | DCONMS | DCSFMS | LU | LS | OAL | | | Pocket size | Head |
|---------------|-----------|--------|--------|----|----|---------|-------|-------|-------------|-----------------|
| | | | | | | DMP/DMH | DMC | DMF | | |
| TID060F12-1.5 | 6 - 6.4 | 12 | 16 | 10 | 45 | 68 | 68.2 | - | 6 | DM*060 - DM*064 |
| TID065F12-1.5 | 6.5 - 6.9 | 12 | 16 | 11 | 45 | 69.1 | 69.6 | - | 6 | DM*065 - DM*069 |
| TID070F12-1.5 | 7 - 7.4 | 12 | 16 | 12 | 45 | 70.1 | 70.3 | - | 7 | DM*070 - DM*074 |
| TID075F12-1.5 | 7.5 - 7.9 | 12 | 16 | 13 | 45 | 70.9 | 71.1 | - | 7 | DM*075 - DM*079 |
| TID080F12-1.5 | 8 - 8.9 | 12 | 16 | 14 | 45 | 72.4 | 73 | - | 8 | DM*080 - DM*089 |
| TID090F12-1.5 | 9 - 9.9 | 12 | 16 | 16 | 45 | 74.3 | 74.9 | - | 9 | DM*090 - DM*099 |
| TID100F16-1.5 | 10 - 10.9 | 16 | 20 | 17 | 48 | 79.2 | 79.8 | 77.8 | 10 | DM*100 - DM*109 |
| TID110F16-1.5 | 11 - 11.9 | 16 | 20 | 19 | 48 | 81.1 | 81.7 | 79.5 | 11 | DM*110 - DM*119 |
| TID120F16-1.5 | 12 - 12.9 | 16 | 20 | 20 | 48 | 83 | 83.6 | 81.4 | 12 | DM*120 - DM*129 |
| TID130F16-1.5 | 13 - 13.9 | 16 | 20 | 22 | 48 | 85.1 | 85.9 | 83.2 | 13 | DM*130 - DM*139 |
| TID140F16-1.5 | 14 - 14.9 | 16 | 20 | 24 | 48 | 89.1 | 89.9 | 87.1 | 14 | DM*140 - DM*149 |
| TID150F20-1.5 | 15 - 15.9 | 20 | 25 | 26 | 50 | 96.2 | 97.1 | 94.1 | 15 | DM*150 - DM*159 |
| TID160F20-1.5 | 16 - 16.9 | 20 | 25 | 27 | 50 | 99.3 | 100.3 | 97 | 16 | DM*160 - DM*169 |
| TID170F20-1.5 | 17 - 17.9 | 20 | 25 | 29 | 50 | 102.4 | 103.4 | 99.9 | 17 | DM*170 - DM*179 |
| TID180F25-1.5 | 18 - 18.9 | 25 | 32 | 30 | 56 | 111.5 | 112.6 | 108.7 | 18 | DM*180 - DM*189 |
| TID190F25-1.5 | 19 - 19.9 | 25 | 32 | 33 | 56 | 114.5 | 115.6 | 111.5 | 19 | DM*190 - DM*199 |
| TID200F25-1.5 | 20 - 20.9 | 25 | 32 | 34 | 56 | 117.6 | 118.8 | - | 20 | DM*200 - DM*209 |
| TID210F25-1.5 | 21 - 21.9 | 25 | 32 | 36 | 56 | 120.7 | 121.9 | - | 21 | DM*210 - DM*219 |
| TID220F25-1.5 | 22 - 22.9 | 25 | 32 | 37 | 56 | 123.8 | 125.1 | - | 22 | DM*220 - DM*229 |

| Tool diameter | Hole diameter tolerance* | An overall length (OAL) differs for when the DMP/DMH insert are mounted and when the DMC/DMF are mounted. (No difference for the drill shoulder) |
|---------------|--------------------------|--|
| ø6 - ø22.9 | +0.05 / 0 | |

*Just for reference

SPARE PARTS



| Designation | Clamping key |
|-------------|---------------|
| TID060-090 | K-TID6-9.99 |
| TID100-190 | K-TID10-19.99 |
| TID200-220 | K-TID20-26.99 |

Reference pages: Head → **8-9 - 8-14**
Standard cutting conditions → **8-15**

Grade

Insert

Ext. Toolholder

Int. Toolholder

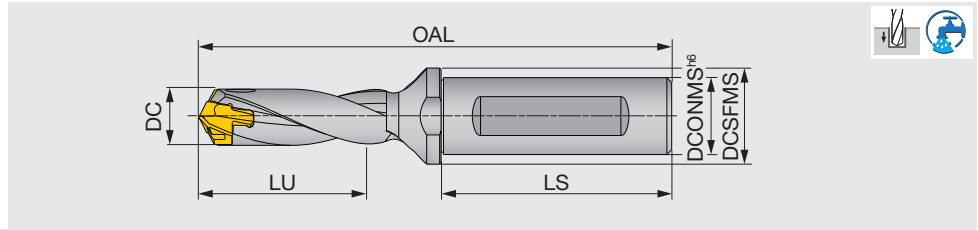
Threading

Grooving

Endmill

Drilling Tool

Technical Reference



| Designation | DC | DCONMS | DCSFMS | LU | LS | OAL | | | Pocket size | Head |
|-------------|-------------|--------|--------|----|----|---------|-------|-------|-------------|-----------------|
| | | | | | | DMP/DMH | DMC | DMF | | |
| TID060F12-3 | 6 - 6.4 | 12 | 16 | 19 | 45 | 77 | 77.2 | - | 6 | DM*060 - DM*064 |
| TID065F12-3 | 6.5 - 6.9 | 12 | 16 | 21 | 45 | 78.8 | 79 | - | 6 | DM*065 - DM*069 |
| TID070F12-3 | 7 - 7.4 | 12 | 16 | 22 | 45 | 80.6 | 81.1 | - | 7 | DM*070 - DM*074 |
| TID075F12-3 | 7.5 - 7.9 | 12 | 16 | 24 | 45 | 82.1 | 82.6 | - | 7 | DM*075 - DM*079 |
| TID080F12-3 | 8 - 8.4 | 12 | 16 | 26 | 45 | 84.4 | 84.6 | - | 8 | DM*080 - DM*084 |
| TID085F12-3 | 8.5 - 8.9 | 12 | 16 | 28 | 45 | 85.9 | 86.1 | - | 8 | DM*085 - DM*089 |
| TID090F12-3 | 9 - 9.4 | 12 | 16 | 29 | 45 | 87.8 | 88 | - | 9 | DM*090 - DM*094 |
| TID095F12-3 | 9.5 - 9.9 | 12 | 16 | 31 | 45 | 89.3 | 89.5 | - | 9 | DM*095 - DM*099 |
| TID100F16-3 | 10 - 10.4 | 16 | 20 | 32 | 48 | 94.2 | 94.8 | 92.8 | 10 | DM*100 - DM*104 |
| TID105F16-3 | 10.5 - 10.9 | 16 | 20 | 34 | 48 | 95.7 | 96.3 | 94.3 | 10 | DM*105 - DM*109 |
| TID110F16-3 | 11 - 11.4 | 16 | 20 | 35 | 48 | 97.6 | 98.2 | 96 | 11 | DM*110 - DM*114 |
| TID115F16-3 | 11.5 - 11.9 | 16 | 20 | 37 | 48 | 99.1 | 99.7 | 97.5 | 11 | DM*115 - DM*119 |
| TID120F16-3 | 12 - 12.4 | 16 | 20 | 38 | 48 | 101 | 101.6 | 99.4 | 12 | DM*120 - DM*124 |
| TID125F16-3 | 12.5 - 12.9 | 16 | 20 | 39 | 48 | 102.5 | 103.1 | 100.9 | 12 | DM*125 - DM*129 |
| TID130F16-3 | 13 - 13.4 | 16 | 20 | 41 | 48 | 104.6 | 105.4 | 102.7 | 13 | DM*130 - DM*134 |
| TID135F16-3 | 13.5 - 13.9 | 16 | 20 | 44 | 48 | 106.1 | 106.9 | 104.2 | 13 | DM*135 - DM*139 |
| TID140F16-3 | 14 - 14.4 | 16 | 20 | 45 | 48 | 110.1 | 110.9 | 108.1 | 14 | DM*140 - DM*144 |
| TID145F16-3 | 14.5 - 14.9 | 16 | 20 | 47 | 48 | 111.6 | 112.4 | 109.6 | 14 | DM*145 - DM*149 |
| TID150F20-3 | 15 - 15.9 | 20 | 25 | 48 | 50 | 118.7 | 119.6 | 116.6 | 15 | DM*150 - DM*159 |
| TID160F20-3 | 16 - 16.9 | 20 | 25 | 51 | 50 | 123.3 | 124.3 | 121 | 16 | DM*160 - DM*169 |
| TID170F20-3 | 17 - 17.9 | 20 | 25 | 54 | 50 | 127.9 | 128.9 | 125.4 | 17 | DM*170 - DM*179 |
| TID180F25-3 | 18 - 18.9 | 25 | 32 | 57 | 56 | 138.5 | 139.6 | 135.7 | 18 | DM*180 - DM*189 |
| TID190F25-3 | 19 - 19.9 | 25 | 32 | 61 | 56 | 143 | 144.1 | 140 | 19 | DM*190 - DM*199 |
| TID200F25-3 | 20 - 20.9 | 25 | 32 | 64 | 56 | 147.6 | 148.8 | - | 20 | DM*200 - DM*209 |
| TID210F25-3 | 21 - 21.9 | 25 | 32 | 67 | 56 | 152.2 | 153.4 | - | 21 | DM*210 - DM*219 |
| TID220F25-3 | 22 - 22.9 | 25 | 32 | 70 | 56 | 156.8 | 158.1 | - | 22 | DM*220 - DM*229 |

| Tool diameter | Hole diameter tolerance* |
|---------------|--------------------------|
| ø6 - ø22.9 | +0.05 / 0 |

An overall length (OAL) differs for when the DMP/DMH insert are mounted and when the DMC/DMF are mounted.
(No difference for the drill shoulder)

*Just for reference

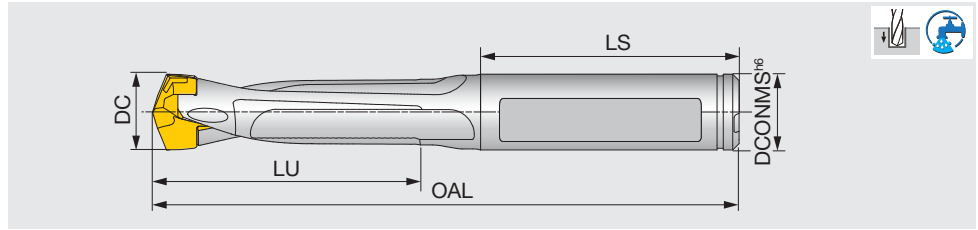
SPARE PARTS



| Designation | Clamping key |
|-------------|---------------|
| TID060-095 | K-TID6-9.99 |
| TID100-190 | K-TID10-19.99 |
| TID200-220 | K-TID20-26.99 |

Reference pages: Head → **8-9 - 8-14**

Standard cutting conditions → **8-15**



| Designation | DC | DCONMS | LU | LS | OAL | | | Pocket size | Head |
|--------------|-------------|--------|----|----|---------|-------|-------|-------------|-----------------|
| | | | | | DMP/DMH | DMC | DMF | | |
| TIDC075C8-3 | 7.5 - 7.9 | 8 | 23 | 36 | 70.1 | 70.6 | - | 7 | DM*075-DM*079 |
| TIDC080C8-3 | 8 - 8.4 | 8 | 24 | 36 | 70.6 | 71.1 | - | 8 | DM*080-DM*084 |
| TIDC085C9-3 | 8.5 - 8.9 | 9 | 26 | 36 | 72.8 | 73 | - | 8 | DM*085-DM*089 |
| TIDC090C9-3 | 9 - 9.4 | 9 | 27 | 36 | 74.7 | 74.9 | - | 9 | DM*090-DM*094 |
| TIDC095C10-3 | 9.5 - 9.9 | 10 | 29 | 36 | 76.2 | 76.4 | - | 9 | DM*095-DM*099 |
| TIDC100C10-3 | 10 - 10.4 | 10 | 32 | 41 | 86.1 | 86.7 | 84.7 | 10 | DM*100 - DM*104 |
| TIDC105C11-3 | 10.5 - 10.9 | 11 | 33 | 41 | 87.6 | 88.2 | 86.2 | 10 | DM*105 - DM*109 |
| TIDC110C11-3 | 11 - 11.4 | 11 | 35 | 41 | 89.5 | 90.1 | 87.9 | 11 | DM*110 - DM*114 |
| TIDC115C12-3 | 11.5 - 11.9 | 12 | 37 | 41 | 91 | 91.6 | 89.4 | 11 | DM*115 - DM*119 |
| TIDC120C12-3 | 12 - 12.4 | 12 | 38 | 41 | 92.8 | 93.4 | 91.2 | 12 | DM*120 - DM*124 |
| TIDC125C13-3 | 12.5 - 12.9 | 13 | 40 | 46 | 98.3 | 98.9 | 96.7 | 12 | DM*125 - DM*129 |
| TIDC130C13-3 | 13 - 13.4 | 13 | 41 | 47 | 102.4 | 103.2 | 100.5 | 13 | DM*130 - DM*134 |
| TIDC135C14-3 | 13.5 - 13.9 | 14 | 43 | 43 | 99.9 | 100.7 | 98 | 13 | DM*135 - DM*139 |
| TIDC140C14-3 | 14 - 14.4 | 14 | 45 | 44 | 103 | 103.8 | 101 | 14 | DM*140 - DM*144 |
| TIDC145C15-3 | 14.5 - 14.9 | 15 | 46 | 45 | 105.5 | 106.3 | 103.5 | 14 | DM*145 - DM*149 |
| TIDC150C15-3 | 15 - 15.9 | 15 | 48 | 45 | 107.5 | 108.4 | 105.4 | 15 | DM*150 - DM*159 |
| TIDC160C16-3 | 16 - 16.9 | 16 | 51 | 48 | 117.5 | 118.5 | 115.2 | 16 | DM*160 - DM*169 |
| TIDC170C17-3 | 17 - 17.9 | 17 | 54 | 48 | 119.7 | 120.7 | 117.2 | 17 | DM*170 - DM*179 |
| TIDC180C18-3 | 18 - 18.9 | 18 | 57 | 48 | 123.3 | 124.4 | 120.5 | 18 | DM*180 - DM*189 |
| TIDC190C19-3 | 19 - 19.9 | 19 | 61 | 54 | 132.4 | 133.5 | 129.4 | 19 | DM*190 - DM*199 |

| Tool diameter | Hole diameter tolerance* | |
|---------------|--------------------------|--|
| ø10 - ø19.9 | +0.05 / 0 | An overall length (OAL) differs for when the DMP/DMH insert are mounted and when the DMC/DMF are mounted. (No difference for the drill shoulder) |

*Just for reference

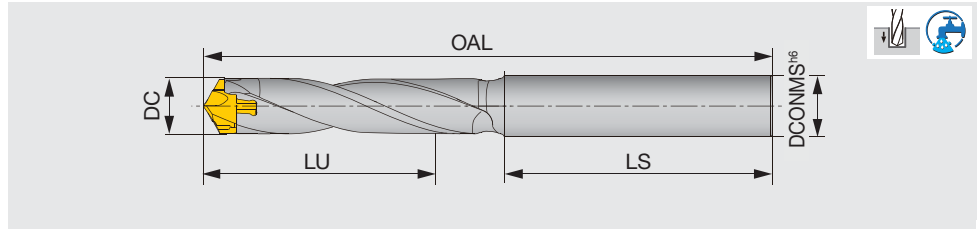
SPARE PARTS

| Designation | Clamping key |
|-------------|---------------|
| TIDC075-095 | K-TID6-9.99 |
| TIDC100-190 | K-TID10-19.99 |



Reference pages: Head → **8-9 - 8-14**
 Standard cutting conditions → **8-15**

Grade 1
 Insert 2
 Ext. Toolholder 3
 Int. Toolholder 4
 Threading 5
 Grooving 6
 Endmill 7
 Drilling Tool 8
 Technical Reference 9



| Designation | DC | DCONMS | LU | LS | OAL | | | Pocket size | Head |
|---------------|-------------|--------|----|----|---------|-------|-------|-------------|---------------|
| | | | | | DMP/DMH | DMC | DMF | | |
| TID100R12-3.5 | 10 - 10.4 | 12 | 42 | 60 | 114 | 114.6 | 112.6 | 10 | DM*100-DM*104 |
| TID105R12-3.5 | 10.5 - 10.9 | 12 | 44 | 60 | 115.7 | 116.3 | 114.3 | 10 | DM*105-DM*109 |
| TID110R12-3.5 | 11 - 11.4 | 12 | 46 | 65 | 123.1 | 123.7 | 121.5 | 11 | DM*110-DM*114 |
| TID115R12-3.5 | 11.5 - 11.9 | 12 | 48 | 65 | 124.8 | 125.4 | 123.2 | 11 | DM*115-DM*119 |
| TID120R14-3.5 | 12 - 12.4 | 14 | 50 | 65 | 127.2 | 127.8 | 125.6 | 12 | DM*120-DM*124 |
| TID125R14-3.5 | 12.5 - 12.9 | 14 | 52 | 65 | 128.8 | 129.4 | 127.2 | 12 | DM*125-DM*129 |
| TID130R14-3.5 | 13 - 13.4 | 14 | 54 | 65 | 132.7 | 133.5 | 130.8 | 13 | DM*130-DM*134 |
| TID135R14-3.5 | 13.5 - 13.9 | 14 | 56 | 65 | 134.4 | 135.2 | 132.5 | 13 | DM*135-DM*139 |
| TID140R16-3.5 | 14 - 14.4 | 16 | 58 | 70 | 142.2 | 143 | 140.2 | 14 | DM*140-DM*144 |
| TID145R16-3.5 | 14.5 - 14.9 | 16 | 60 | 70 | 143.8 | 144.6 | 141.8 | 14 | DM*145-DM*149 |
| TID150R16-3.5 | 15 - 15.9 | 16 | 64 | 70 | 148.4 | 149.3 | 146.3 | 15 | DM*150-DM*159 |
| TID160R18-3.5 | 16 - 16.9 | 18 | 68 | 70 | 153.9 | 154.9 | 151.6 | 16 | DM*160-DM*169 |
| TID170R18-3.5 | 17 - 17.9 | 18 | 72 | 70 | 158.5 | 159.5 | 156 | 17 | DM*170-DM*179 |
| TID180R20-3.5 | 18 - 18.9 | 20 | 76 | 70 | 164 | 165.1 | 161.2 | 18 | DM*180-DM*189 |
| TID190R20-3.5 | 19 - 19.9 | 20 | 80 | 70 | 168.4 | 169.5 | 165.4 | 19 | DM*190-DM*199 |

| Tool diameter | Hole diameter tolerance* |
|---------------|--------------------------|
| ø10 - ø17.9 | +0.08 / 0 |
| ø18 - ø19.9 | +0.095 / 0 |

*Just for reference

An overall length (OAL) differs for when the DMP/DMH insert are mounted and when the DMC/DMF are mounted.
 (No difference for the drill shoulder)
 When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
 When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

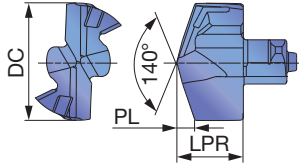
SPARE PARTS



| Designation | Clamping key |
|-------------|---------------|
| TID100-190 | K-TID10-19.99 |

DRILL HEAD

DMP General purpose



| Tool diameter | Head diameter tolerance |
|---------------|-------------------------|
| ø6 - ø17.9 | +0.018 / 0 |
| ø18 - ø22.9 | +0.021 / 0 |

| | | | | |
|---|----------------|---|---|--|
| P | Steel | ★ | ★ | |
| M | Stainless | ★ | ★ | |
| K | Cast iron | ★ | ★ | |
| N | Non-ferrous | ☆ | ☆ | |
| S | Superalloys | ★ | ★ | |
| H | Hard materials | ★ | ★ | |

★ : First choice
☆ : Second choice

| | | | | |
|---|----------------|---|---|--|
| P | Steel | ★ | ★ | |
| M | Stainless | ★ | ★ | |
| K | Cast iron | ★ | ★ | |
| N | Non-ferrous | ☆ | ☆ | |
| S | Superalloys | ★ | ★ | |
| H | Hard materials | ★ | ★ | |

★ : First choice
☆ : Second choice

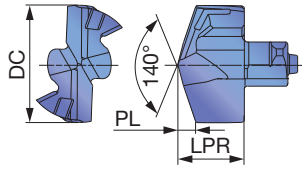
| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--------|------|-----|-------------|------------|
| | | | AH725 | AH9130 | | | | |
| DMP060 | 6 | 4 | ● | | 1.09 | 6 | 6 | TID*060... |
| DMP061 | 6.1 | 4 | ● | | 1.11 | 6 | 6 | TID*060... |
| DMP062 | 6.2 | 4 | ● | | 1.13 | 6 | 6 | TID*060... |
| DMP063 | 6.3 | 4 | ● | | 1.15 | 6 | 6 | TID*060... |
| DMP064 | 6.4 | 4 | ● | | 1.16 | 6 | 6 | TID*060... |
| DMP065 | 6.5 | 4.3 | ● | | 1.18 | 6 | 6 | TID*065... |
| DMP066 | 6.6 | 4.3 | ● | | 1.2 | 6 | 6 | TID*065... |
| DMP067 | 6.7 | 4.3 | ● | | 1.22 | 6 | 6 | TID*065... |
| DMP068 | 6.8 | 4.3 | ● | | 1.24 | 6 | 6 | TID*065... |
| DMP069 | 6.9 | 4.3 | ● | | 1.26 | 6 | 6 | TID*065... |
| DMP070 | 7 | 4.6 | ● | | 1.27 | 7 | 7 | TID*070... |
| DMP071 | 7.1 | 4.6 | ● | | 1.29 | 7 | 7 | TID*070... |
| DMP072 | 7.2 | 4.6 | ● | | 1.31 | 7 | 7 | TID*070... |
| DMP073 | 7.3 | 4.6 | ● | | 1.33 | 7 | 7 | TID*070... |
| DMP074 | 7.4 | 4.6 | ● | | 1.35 | 7 | 7 | TID*070... |
| DMP075 | 7.5 | 4.6 | ● | | 1.36 | 7 | 7 | TID*075... |
| DMP076 | 7.6 | 4.6 | ● | | 1.38 | 7 | 7 | TID*075... |
| DMP077 | 7.7 | 4.6 | ● | | 1.4 | 7 | 7 | TID*075... |
| DMP078 | 7.8 | 4.6 | ● | | 1.42 | 7 | 7 | TID*075... |
| DMP079 | 7.9 | 4.6 | ● | | 1.44 | 7 | 7 | TID*075... |
| DMP080 | 8 | 5.4 | ● | | 1.46 | 8 | 8 | TID*080... |
| DMP081 | 8.1 | 5.4 | ● | | 1.47 | 8 | 8 | TID*080... |
| DMP082 | 8.2 | 5.4 | ● | | 1.49 | 8 | 8 | TID*080... |
| DMP083 | 8.3 | 5.4 | ● | | 1.51 | 8 | 8 | TID*080... |
| DMP084 | 8.4 | 5.4 | ● | | 1.53 | 8 | 8 | TID*080... |
| DMP085 | 8.5 | 5.4 | ● | | 1.55 | 8 | 8 | TID*085... |
| DMP086 | 8.6 | 5.4 | ● | | 1.57 | 8 | 8 | TID*085... |
| DMP087 | 8.7 | 5.4 | ● | | 1.58 | 8 | 8 | TID*085... |
| DMP088 | 8.8 | 5.4 | ● | | 1.6 | 8 | 8 | TID*085... |
| DMP089 | 8.9 | 5.4 | ● | | 1.62 | 8 | 8 | TID*085... |
| DMP090 | 9 | 5.8 | ● | | 1.64 | 9 | 9 | TID*090... |
| DMP091 | 9.1 | 5.8 | ● | | 1.66 | 9 | 9 | TID*090... |
| DMP092 | 9.2 | 5.8 | ● | | 1.67 | 9 | 9 | TID*090... |
| DMP093 | 9.3 | 5.8 | ● | | 1.69 | 9 | 9 | TID*090... |
| DMP094 | 9.4 | 5.8 | ● | | 1.71 | 9 | 9 | TID*090... |
| DMP095 | 9.5 | 5.8 | ● | | 1.73 | 9 | 9 | TID*095... |
| DMP096 | 9.6 | 5.8 | ● | | 1.75 | 9 | 9 | TID*095... |
| DMP097 | 9.7 | 5.8 | ● | | 1.77 | 9 | 9 | TID*095... |
| DMP098 | 9.8 | 5.8 | ● | | 1.78 | 9 | 9 | TID*095... |
| DMP099 | 9.9 | 5.8 | ● | | 1.8 | 9 | 9 | TID*095... |
| DMP100 | 10 | 6.05 | ● | ● | 6.05 | 10 | 10 | TID*100... |
| DMP101 | 10.1 | 6.05 | ● | | 6.05 | 10 | 10 | TID*100... |
| DMP102 | 10.2 | 6.05 | ● | | 6.05 | 10 | 10 | TID*100... |
| DMP103 | 10.3 | 6.05 | ● | ● | 6.05 | 10 | 10 | TID*100... |
| DMP104 | 10.4 | 6.05 | ● | ● | 6.05 | 10 | 10 | TID*100... |

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--------|------|-----|-------------|------------|
| | | | AH725 | AH9130 | | | | |
| DMP105 | 10.5 | 6.05 | ● | ● | 6.05 | 10 | 10 | TID*105... |
| DMP106 | 10.6 | 6.05 | ● | | 6.05 | 10 | 10 | TID*105... |
| DMP107 | 10.7 | 6.05 | ● | ● | 6.05 | 10 | 10 | TID*105... |
| DMP108 | 10.8 | 6.05 | ● | ● | 6.05 | 10 | 10 | TID*105... |
| DMP109 | 10.9 | 6.05 | ● | | 6.05 | 10 | 10 | TID*105... |
| DMP110 | 11 | 6.45 | ● | ● | 6.45 | 11 | 11 | TID*110... |
| DMP111 | 11.1 | 6.45 | ● | | 6.45 | 11 | 11 | TID*110... |
| DMP112 | 11.2 | 6.45 | ● | | 6.45 | 11 | 11 | TID*110... |
| DMP113 | 11.3 | 6.45 | ● | ● | 6.45 | 11 | 11 | TID*110... |
| DMP114 | 11.4 | 6.45 | ● | | 6.45 | 11 | 11 | TID*110... |
| DMP115 | 11.5 | 6.45 | ● | ● | 6.45 | 11 | 11 | TID*115... |
| DMP116 | 11.6 | 6.45 | ● | | 6.45 | 11 | 11 | TID*115... |
| DMP117 | 11.7 | 6.45 | ● | | 6.45 | 11 | 11 | TID*115... |
| DMP118 | 11.8 | 6.45 | ● | | 6.45 | 11 | 11 | TID*115... |
| DMP119 | 11.9 | 6.45 | ● | | 6.45 | 11 | 11 | TID*115... |
| DMP120 | 12 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*120... |
| DMP121 | 12.1 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*120... |
| DMP122 | 12.2 | 6.8 | ● | | 6.8 | 12 | 12 | TID*120... |
| DMP123 | 12.3 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*120... |
| DMP124 | 12.4 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*120... |
| DMP125 | 12.5 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*125... |
| DMP126 | 12.6 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*125... |
| DMP127 | 12.7 | 6.8 | ● | ● | 6.8 | 12 | 12 | TID*125... |
| DMP128 | 12.8 | 6.8 | ● | | 6.8 | 12 | 12 | TID*125... |
| DMP129 | 12.9 | 6.8 | ● | | 6.8 | 12 | 12 | TID*125... |
| DMP130 | 13 | 7.4 | ● | ● | 7.4 | 13 | 13 | TID*130... |
| DMP131 | 13.1 | 7.4 | ● | | 7.4 | 13 | 13 | TID*130... |
| DMP132 | 13.2 | 7.4 | ● | | 7.4 | 13 | 13 | TID*130... |
| DMP133 | 13.3 | 7.4 | ● | ● | 7.4 | 13 | 13 | TID*130... |
| DMP134 | 13.4 | 7.4 | ● | | 7.4 | 13 | 13 | TID*130... |
| DMP135 | 13.5 | 7.4 | ● | ● | 7.4 | 13 | 13 | TID*135... |
| DMP136 | 13.6 | 7.4 | ● | | 7.4 | 13 | 13 | TID*135... |
| DMP137 | 13.7 | 7.4 | ● | | 7.4 | 13 | 13 | TID*135... |
| DMP138 | 13.8 | 7.4 | ● | ● | 7.4 | 13 | 13 | TID*135... |
| DMP139 | 13.9 | 7.4 | ● | ● | 7.4 | 13 | 13 | TID*135... |
| DMP140 | 14 | 7.95 | ● | ● | 2.55 | 14 | 14 | TID*140... |
| DMP141 | 14.1 | 7.95 | ● | | 2.57 | 14 | 14 | TID*140... |
| DMP142 | 14.2 | 7.95 | ● | ● | 2.58 | 14 | 14 | TID*140... |
| DMP143 | 14.3 | 7.95 | ● | ● | 2.6 | 14 | 14 | TID*140... |
| DMP144 | 14.4 | 7.95 | ● | | 2.62 | 14 | 14 | TID*140... |
| DMP145 | 14.5 | 7.95 | ● | ● | 2.64 | 14 | 14 | TID*145... |
| DMP146 | 14.6 | 7.95 | ● | | 2.66 | 14 | 14 | TID*145... |
| DMP147 | 14.7 | 7.95 | ● | | 2.68 | 14 | 14 | TID*145... |

ø6 - ø19.9 = 2 pieces per package

● : Line up

DMP General purpose



| Tool diameter | Head diameter tolerance |
|---------------|-------------------------|
| ø6 - ø17.9 | +0.018 / 0 |
| ø18 - ø22.9 | +0.021 / 0 |

| | | | | |
|----------|----------------|---|---|--|
| P | Steel | ★ | ★ | |
| M | Stainless | ★ | ★ | |
| K | Cast iron | ★ | ★ | |
| N | Non-ferrous | ☆ | ☆ | |
| S | Superalloys | ★ | ★ | |
| H | Hard materials | ★ | ★ | |

★ : First choice
☆ : Second choice

| | | | | |
|----------|----------------|---|---|--|
| P | Steel | ★ | ★ | |
| M | Stainless | ★ | ★ | |
| K | Cast iron | ★ | ★ | |
| N | Non-ferrous | ☆ | ☆ | |
| S | Superalloys | ★ | ★ | |
| H | Hard materials | ★ | ★ | |

★ : First choice
☆ : Second choice

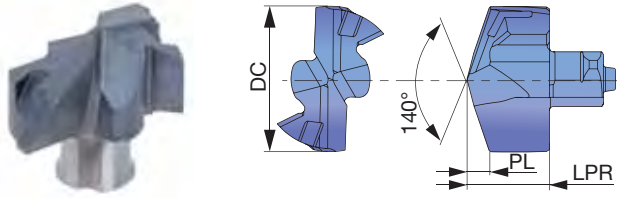
| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--------|------|-----|-------------|------------|
| | | | AH725 | AH9130 | | | | |
| DMP148 | 14.8 | 7.95 | ● | | 2.69 | 14 | 14 | TID*145... |
| DMP149 | 14.9 | 7.95 | ● | | 2.71 | 14 | 14 | TID*145... |
| DMP150 | 15 | 8.53 | ● | ● | 2.73 | 15 | 15 | TID*150... |
| DMP151 | 15.1 | 8.53 | ● | | 2.75 | 15 | 15 | TID*150... |
| DMP152 | 15.2 | 8.53 | ● | ● | 2.77 | 15 | 15 | TID*150... |
| DMP153 | 15.3 | 8.53 | ● | ● | 2.78 | 15 | 15 | TID*150... |
| DMP154 | 15.4 | 8.53 | ● | | 2.8 | 15 | 15 | TID*150... |
| DMP155 | 15.5 | 8.53 | ● | ● | 2.82 | 15 | 15 | TID*150... |
| DMP156 | 15.6 | 8.53 | ● | | 2.84 | 15 | 15 | TID*150... |
| DMP157 | 15.7 | 8.53 | ● | | 2.86 | 15 | 15 | TID*150... |
| DMP158 | 15.8 | 8.53 | ● | ● | 2.88 | 15 | 15 | TID*150... |
| DMP159 | 15.9 | 8.53 | ● | | 2.89 | 15 | 15 | TID*150... |
| DMP160 | 16 | 9.1 | ● | ● | 2.91 | 16 | 16 | TID*160... |
| DMP161 | 16.1 | 9.1 | ● | ● | 2.93 | 16 | 16 | TID*160... |
| DMP162 | 16.2 | 9.1 | ● | | 2.95 | 16 | 16 | TID*160... |
| DMP163 | 16.3 | 9.1 | ● | ● | 2.97 | 16 | 16 | TID*160... |
| DMP164 | 16.4 | 9.1 | ● | | 2.98 | 16 | 16 | TID*160... |
| DMP165 | 16.5 | 9.1 | ● | ● | 3 | 16 | 16 | TID*160... |
| DMP166 | 16.6 | 9.1 | ● | ● | 3.02 | 16 | 16 | TID*160... |
| DMP167 | 16.7 | 9.1 | ● | ● | 3.04 | 16 | 16 | TID*160... |
| DMP168 | 16.8 | 9.1 | ● | | 3.06 | 16 | 16 | TID*160... |
| DMP169 | 16.9 | 9.1 | ● | | 3.08 | 16 | 16 | TID*160... |
| DMP170 | 17 | 9.7 | ● | ● | 3.09 | 17 | 17 | TID*170... |
| DMP171 | 17.1 | 9.7 | ● | | 3.11 | 17 | 17 | TID*170... |
| DMP172 | 17.2 | 9.7 | ● | | 3.13 | 17 | 17 | TID*170... |
| DMP173 | 17.3 | 9.7 | ● | | 3.15 | 17 | 17 | TID*170... |
| DMP174 | 17.4 | 9.7 | ● | | 3.17 | 17 | 17 | TID*170... |
| DMP175 | 17.5 | 9.7 | ● | ● | 3.18 | 17 | 17 | TID*170... |
| DMP176 | 17.6 | 9.7 | ● | | 3.2 | 17 | 17 | TID*170... |
| DMP177 | 17.7 | 9.7 | ● | | 3.22 | 17 | 17 | TID*170... |
| DMP178 | 17.8 | 9.7 | ● | | 3.24 | 17 | 17 | TID*170... |
| DMP179 | 17.9 | 9.7 | ● | ● | 3.26 | 17 | 17 | TID*170... |
| DMP180 | 18 | 10.3 | ● | ● | 3.28 | 18 | 18 | TID*180... |
| DMP181 | 18.1 | 10.3 | ● | | 3.29 | 18 | 18 | TID*180... |
| DMP182 | 18.2 | 10.3 | ● | | 3.31 | 18 | 18 | TID*180... |
| DMP183 | 18.3 | 10.3 | ● | | 3.33 | 18 | 18 | TID*180... |
| DMP184 | 18.4 | 10.3 | ● | | 3.35 | 18 | 18 | TID*180... |
| DMP185 | 18.5 | 10.3 | ● | ● | 3.37 | 18 | 18 | TID*180... |
| DMP186 | 18.6 | 10.3 | ● | | 3.38 | 18 | 18 | TID*180... |
| DMP187 | 18.7 | 10.3 | ● | | 3.4 | 18 | 18 | TID*180... |
| DMP188 | 18.8 | 10.3 | ● | | 3.42 | 18 | 18 | TID*180... |
| DMP189 | 18.9 | 10.3 | ● | | 3.44 | 18 | 18 | TID*180... |
| DMP190 | 19 | 10.8 | ● | ● | 3.46 | 19 | 19 | TID*190... |
| DMP191 | 19.1 | 10.8 | ● | | 3.48 | 19 | 19 | TID*190... |

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|-------|--------|--------|------|-----|-------------|------------|
| | | | AH725 | AH9130 | | | | |
| DMP192 | 19.2 | 10.8 | ● | | 3.49 | 19 | 19 | TID*190... |
| DMP193 | 19.3 | 10.8 | ● | ● | 3.51 | 19 | 19 | TID*190... |
| DMP194 | 19.4 | 10.8 | ● | ● | 3.53 | 19 | 19 | TID*190... |
| DMP195 | 19.5 | 10.8 | ● | ● | 3.55 | 19 | 19 | TID*190... |
| DMP196 | 19.6 | 10.8 | ● | | 3.57 | 19 | 19 | TID*190... |
| DMP197 | 19.7 | 10.8 | ● | | 3.59 | 19 | 19 | TID*190... |
| DMP198 | 19.8 | 10.8 | ● | ● | 3.6 | 19 | 19 | TID*190... |
| DMP199 | 19.9 | 10.8 | ● | | 3.62 | 19 | 19 | TID*190... |
| DMP200 | 20 | 11.4 | ● | | 3.64 | 20 | 20 | TID*200... |
| DMP201 | 20.1 | 11.4 | ● | | 3.66 | 20 | 20 | TID*200... |
| DMP202 | 20.2 | 11.4 | ● | | 3.68 | 20 | 20 | TID*200... |
| DMP203 | 20.3 | 11.4 | ● | | 3.69 | 20 | 20 | TID*200... |
| DMP204 | 20.4 | 11.4 | ● | | 3.71 | 20 | 20 | TID*200... |
| DMP205 | 20.5 | 11.4 | ● | | 3.73 | 20 | 20 | TID*200... |
| DMP206 | 20.6 | 11.4 | ● | | 3.75 | 20 | 20 | TID*200... |
| DMP207 | 20.7 | 11.4 | ● | | 3.77 | 20 | 20 | TID*200... |
| DMP208 | 20.8 | 11.4 | ● | | 3.79 | 20 | 20 | TID*200... |
| DMP209 | 20.9 | 11.4 | ● | | 3.8 | 20 | 20 | TID*200... |
| DMP210 | 21 | 11.98 | ● | | 3.82 | 21 | 21 | TID*210... |
| DMP211 | 21.1 | 11.98 | ● | | 3.84 | 21 | 21 | TID*210... |
| DMP212 | 21.2 | 11.98 | ● | | 3.86 | 21 | 21 | TID*210... |
| DMP213 | 21.3 | 11.98 | ● | | 3.88 | 21 | 21 | TID*210... |
| DMP214 | 21.4 | 11.98 | ● | | 3.89 | 21 | 21 | TID*210... |
| DMP215 | 21.5 | 11.98 | ● | | 3.91 | 21 | 21 | TID*210... |
| DMP216 | 21.6 | 11.98 | ● | | 3.93 | 21 | 21 | TID*210... |
| DMP217 | 21.7 | 11.98 | ● | | 3.95 | 21 | 21 | TID*210... |
| DMP218 | 21.8 | 11.98 | ● | | 3.97 | 21 | 21 | TID*210... |
| DMP219 | 21.9 | 11.98 | ● | | 3.99 | 21 | 21 | TID*210... |
| DMP220 | 22 | 12.56 | ● | | 4 | 22 | 22 | TID*220... |
| DMP221 | 22.1 | 12.56 | ● | | 4.02 | 22 | 22 | TID*220... |
| DMP222 | 22.2 | 12.56 | ● | | 4.04 | 22 | 22 | TID*220... |
| DMP223 | 22.3 | 12.56 | ● | | 4.06 | 22 | 22 | TID*220... |
| DMP224 | 22.4 | 12.56 | ● | | 4.08 | 22 | 22 | TID*220... |
| DMP225 | 22.5 | 12.56 | ● | | 4.09 | 22 | 22 | TID*220... |
| DMP226 | 22.6 | 12.56 | ● | | 4.11 | 22 | 22 | TID*220... |
| DMP227 | 22.7 | 12.56 | ● | | 4.13 | 22 | 22 | TID*220... |
| DMP228 | 22.8 | 12.56 | ● | | 4.15 | 22 | 22 | TID*220... |
| DMP229 | 22.9 | 12.56 | ● | | 4.17 | 22 | 22 | TID*220... |

ø6 - ø19.9 = 2 pieces per package
ø20 - ø22.9 = 1 pieces per package

● : Line up

DMH Tough edges head



| Tool diameter | Head diameter tolerance |
|---------------|-------------------------|
| ø10 - ø19.5 | ±0.01 |

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ☆ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|-----|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMH100 | 10 | 6.1 | ● | | 1.47 | 10 | 19 | TID*100... |
| DMH103 | 10.3 | 6.1 | ● | | 1.52 | 10 | 19 | TID*100... |
| DMH105 | 10.5 | 6.1 | ● | | 1.56 | 10 | 19 | TID*105... |
| DMH108 | 10.8 | 6.1 | ● | | 1.62 | 10 | 19 | TID*105... |
| DMH110 | 11 | 6.5 | ● | | 1.67 | 11 | 19 | TID*110... |
| DMH115 | 11.5 | 6.5 | ● | | 1.76 | 11 | 19 | TID*115... |
| DMH120 | 12 | 6.8 | ● | | 1.82 | 12 | 19 | TID*120... |
| DMH125 | 12.5 | 6.8 | ● | | 1.91 | 12 | 19 | TID*125... |
| DMH126 | 12.6 | 6.8 | ● | | 1.93 | 12 | 20 | TID*125... |
| DMH130 | 13 | 7.4 | ● | | 1.96 | 13 | 20 | TID*130... |
| DMH133 | 13.3 | 7.4 | ● | | 2.01 | 13 | 20 | TID*130... |
| DMH135 | 13.5 | 7.4 | ● | | 2.05 | 13 | 20 | TID*135... |
| DMH137 | 13.7 | 7.4 | ● | | 2.09 | 13 | 20 | TID*135... |
| DMH138 | 13.8 | 7.4 | ● | | 2.11 | 13 | 20 | TID*135... |
| DMH139 | 13.9 | 7.4 | ● | | 2.12 | 13 | 20 | TID*135... |

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ☆ | | |
| H | Hard materials | ★ | | |

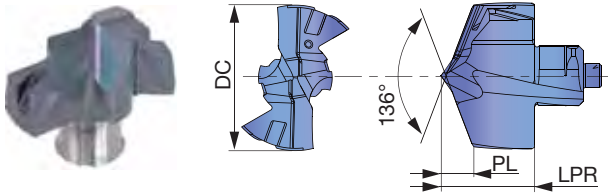
★ : First choice
☆ : Second choice

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMH140 | 14 | 8 | ● | | 2.12 | 14 | 14 | TID*140... |
| DMH142 | 14.2 | 8 | ● | | 2.16 | 14 | 14 | TID*142... |
| DMH145 | 14.5 | 8 | ● | | 2.21 | 14 | 14 | TID*145... |
| DMH150 | 15 | 8.5 | ● | | 2.27 | 15 | 15 | TID*150... |
| DMH152 | 15.2 | 8.5 | ● | | 2.31 | 15 | 15 | TID*150... |
| DMH155 | 15.5 | 8.5 | ● | | 2.36 | 15 | 15 | TID*150... |
| DMH160 | 16 | 9.1 | ● | | 2.42 | 16 | 16 | TID*160... |
| DMH165 | 16.5 | 9.1 | ● | | 2.51 | 16 | 16 | TID*160... |
| DMH170 | 17 | 9.7 | ● | | 2.59 | 17 | 17 | TID*170... |
| DMH175 | 17.5 | 9.7 | ● | | 2.68 | 17 | 17 | TID*170... |
| DMH180 | 18 | 10.3 | ● | | 2.73 | 18 | 18 | TID*180... |
| DMH185 | 18.5 | 10.3 | ● | | 2.82 | 18 | 18 | TID*180... |
| DMH190 | 19 | 10.8 | ● | | 2.88 | 19 | 19 | TID*190... |
| DMH194 | 19.4 | 10.8 | ● | | 2.95 | 19 | 19 | TID*190... |
| DMH195 | 19.5 | 10.8 | ● | | 2.97 | 19 | 19 | TID*190... |

ø10 - ø19.5 = 2 pieces per package

● : Line up

DMC High precision machining



| Tool diameter | Head diameter tolerance |
|---------------|-------------------------|
| ø6 - ø17.9 | +0.018 / 0 |
| ø18 - ø19.9 | +0.021 / 0 |

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ★ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ★ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

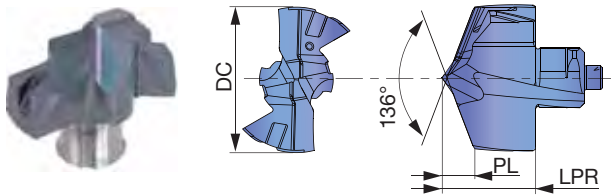
| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMC060 | 6 | 4 | ● | | 1.24 | 6 | 6 | TID*060... |
| DMC061 | 6.1 | 4 | ● | | 1.26 | 6 | 6 | TID*060... |
| DMC062 | 6.2 | 4 | ● | | 1.28 | 6 | 6 | TID*060... |
| DMC063 | 6.3 | 4 | ● | | 1.3 | 6 | 6 | TID*060... |
| DMC064 | 6.4 | 4 | ● | | 1.32 | 6 | 6 | TID*060... |
| DMC065 | 6.5 | 4.3 | ● | | 1.43 | 6.5 | 6.5 | TID*065... |
| DMC066 | 6.6 | 4.3 | ● | | 1.45 | 6.5 | 6.5 | TID*065... |
| DMC067 | 6.7 | 4.3 | ● | | 1.47 | 6.5 | 6.5 | TID*065... |
| DMC068 | 6.8 | 4.3 | ● | | 1.49 | 6.5 | 6.5 | TID*065... |
| DMC069 | 6.9 | 4.3 | ● | | 1.51 | 6.5 | 6.5 | TID*065... |
| DMC070 | 7 | 4.9 | ● | | 1.5 | 7 | 7 | TID*070... |
| DMC071 | 7.1 | 4.9 | ● | | 1.52 | 7 | 7 | TID*070... |
| DMC072 | 7.2 | 4.9 | ● | | 1.54 | 7 | 7 | TID*070... |
| DMC073 | 7.3 | 4.9 | ● | | 1.56 | 7 | 7 | TID*070... |
| DMC074 | 7.4 | 4.9 | ● | | 1.58 | 7 | 7 | TID*070... |
| DMC075 | 7.5 | 4.9 | ● | | 1.6 | 7 | 7 | TID*075... |
| DMC076 | 7.6 | 4.9 | ● | | 1.62 | 7 | 7 | TID*075... |
| DMC077 | 7.7 | 4.9 | ● | | 1.64 | 7 | 7 | TID*075... |
| DMC078 | 7.8 | 4.9 | ● | | 1.66 | 7 | 7 | TID*075... |
| DMC079 | 7.9 | 4.9 | ● | | 1.68 | 7 | 7 | TID*075... |
| DMC080 | 8 | 5.4 | ● | | 1.62 | 8 | 8 | TID*080... |
| DMC081 | 8.1 | 5.4 | ● | | 1.64 | 8 | 8 | TID*080... |
| DMC082 | 8.2 | 5.4 | ● | | 1.66 | 8 | 8 | TID*080... |
| DMC083 | 8.3 | 5.4 | ● | | 1.68 | 8 | 8 | TID*080... |
| DMC084 | 8.4 | 5.4 | ● | | 1.7 | 8 | 8 | TID*080... |
| DMC085 | 8.5 | 5.4 | ● | | 1.72 | 8 | 8 | TID*085... |
| DMC086 | 8.6 | 5.4 | ● | | 1.74 | 8 | 8 | TID*085... |
| DMC087 | 8.7 | 5.4 | ● | | 1.76 | 8 | 8 | TID*085... |
| DMC088 | 8.8 | 5.4 | ● | | 1.78 | 8 | 8 | TID*085... |
| DMC089 | 8.9 | 5.4 | ● | | 1.8 | 8 | 8 | TID*085... |
| DMC090 | 9 | 5.8 | ● | | 1.91 | 9 | 9 | TID*090... |
| DMC091 | 9.1 | 5.8 | ● | | 1.93 | 9 | 9 | TID*090... |
| DMC092 | 9.2 | 5.8 | ● | | 1.95 | 9 | 9 | TID*090... |
| DMC093 | 9.3 | 5.8 | ● | | 1.97 | 9 | 9 | TID*090... |
| DMC094 | 9.4 | 5.8 | ● | | 1.99 | 9 | 9 | TID*090... |
| DMC095 | 9.5 | 5.8 | ● | | 2.01 | 9 | 9 | TID*095... |
| DMC096 | 9.6 | 5.8 | ● | | 2.03 | 9 | 9 | TID*095... |
| DMC097 | 9.7 | 5.8 | ● | | 2.05 | 9 | 9 | TID*095... |
| DMC098 | 9.8 | 5.8 | ● | | 2.07 | 9 | 9 | TID*095... |
| DMC099 | 9.9 | 5.8 | ● | | 2.09 | 9 | 9 | TID*095... |
| DMC100 | 10 | 6.67 | ● | | 2.09 | 10 | 10 | TID*100... |
| DMC101 | 10.1 | 6.67 | ● | | 2.11 | 10 | 10 | TID*100... |
| DMC102 | 10.2 | 6.67 | ● | | 2.13 | 10 | 10 | TID*100... |
| DMC103 | 10.3 | 6.67 | ● | | 2.15 | 10 | 10 | TID*100... |
| DMC104 | 10.4 | 6.67 | ● | | 2.17 | 10 | 10 | TID*100... |

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMC105 | 10.5 | 6.67 | ● | | 2.19 | 10 | 10 | TID*105... |
| DMC106 | 10.6 | 6.67 | ● | | 2.21 | 10 | 10 | TID*105... |
| DMC107 | 10.7 | 6.67 | ● | | 2.23 | 10 | 10 | TID*105... |
| DMC108 | 10.8 | 6.67 | ● | | 2.25 | 10 | 10 | TID*105... |
| DMC109 | 10.9 | 6.67 | ● | | 2.27 | 10 | 10 | TID*105... |
| DMC110 | 11 | 7.1 | ● | | 2.32 | 11 | 11 | TID*110... |
| DMC111 | 11.1 | 7.1 | ● | | 2.34 | 11 | 11 | TID*110... |
| DMC112 | 11.2 | 7.1 | ● | | 2.36 | 11 | 11 | TID*110... |
| DMC113 | 11.3 | 7.1 | ● | | 2.38 | 11 | 11 | TID*110... |
| DMC114 | 11.4 | 7.1 | ● | | 2.4 | 11 | 11 | TID*110... |
| DMC115 | 11.5 | 7.1 | ● | | 2.42 | 11 | 11 | TID*115... |
| DMC116 | 11.6 | 7.1 | ● | | 2.44 | 11 | 11 | TID*115... |
| DMC117 | 11.7 | 7.1 | ● | | 2.46 | 11 | 11 | TID*115... |
| DMC118 | 11.8 | 7.1 | ● | | 2.48 | 11 | 11 | TID*115... |
| DMC119 | 11.9 | 7.1 | ● | | 2.5 | 11 | 11 | TID*115... |
| DMC120 | 12 | 7.43 | ● | | 2.45 | 12 | 12 | TID*120... |
| DMC121 | 12.1 | 7.43 | ● | | 2.47 | 12 | 12 | TID*120... |
| DMC122 | 12.2 | 7.43 | ● | | 2.49 | 12 | 12 | TID*120... |
| DMC123 | 12.3 | 7.43 | ● | | 2.51 | 12 | 12 | TID*120... |
| DMC124 | 12.4 | 7.43 | ● | | 2.53 | 12 | 12 | TID*120... |
| DMC125 | 12.5 | 7.43 | ● | | 2.55 | 12 | 12 | TID*125... |
| DMC126 | 12.6 | 7.43 | ● | | 2.57 | 12 | 12 | TID*125... |
| DMC127 | 12.7 | 7.43 | ● | | 2.59 | 12 | 12 | TID*125... |
| DMC128 | 12.8 | 7.43 | ● | | 2.61 | 12 | 12 | TID*125... |
| DMC129 | 12.9 | 7.43 | ● | | 2.63 | 12 | 12 | TID*125... |
| DMC130 | 13 | 8.15 | ● | | 2.71 | 13 | 13 | TID*130... |
| DMC131 | 13.1 | 8.15 | ● | | 2.73 | 13 | 13 | TID*130... |
| DMC132 | 13.2 | 8.15 | ● | | 2.75 | 13 | 13 | TID*130... |
| DMC133 | 13.3 | 8.15 | ● | | 2.77 | 13 | 13 | TID*130... |
| DMC134 | 13.4 | 8.15 | ● | | 2.79 | 13 | 13 | TID*130... |
| DMC135 | 13.5 | 8.15 | ● | | 2.81 | 13 | 13 | TID*135... |
| DMC136 | 13.6 | 8.15 | ● | | 2.83 | 13 | 13 | TID*135... |
| DMC137 | 13.7 | 8.15 | ● | | 2.85 | 13 | 13 | TID*135... |
| DMC138 | 13.8 | 8.15 | ● | | 2.87 | 13 | 13 | TID*135... |
| DMC139 | 13.9 | 8.15 | ● | | 2.89 | 13 | 13 | TID*135... |
| DMC140 | 14 | 8.76 | ● | | 2.93 | 14 | 14 | TID*140... |
| DMC141 | 14.1 | 8.76 | ● | | 2.95 | 14 | 14 | TID*140... |
| DMC142 | 14.2 | 8.76 | ● | | 2.97 | 14 | 14 | TID*140... |
| DMC143 | 14.3 | 8.76 | ● | | 2.99 | 14 | 14 | TID*140... |
| DMC144 | 14.4 | 8.76 | ● | | 3.01 | 14 | 14 | TID*140... |
| DMC145 | 14.5 | 8.76 | ● | | 3.03 | 14 | 14 | TID*145... |
| DMC146 | 14.6 | 8.76 | ● | | 3.05 | 14 | 14 | TID*145... |
| DMC147 | 14.7 | 8.76 | ● | | 3.07 | 14 | 14 | TID*145... |
| DMC148 | 14.8 | 8.76 | ● | | 3.09 | 14 | 14 | TID*145... |
| DMC149 | 14.9 | 8.76 | ● | | 3.11 | 14 | 14 | TID*145... |

ø6 - ø19.9 = 2 pieces per package

● : Line up

DMC High precision machining



| Tool diameter | Head diameter tolerance |
|---------------|-------------------------|
| ø6 - ø17.9 | +0.018 / 0 |
| ø18 - ø22.5 | +0.021 / 0 |

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ★ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ★ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|-------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMC150 | 15 | 9.44 | ● | | 3.18 | 15 | 15 | TID*150... |
| DMC151 | 15.1 | 9.44 | ● | | 3.2 | 15 | 15 | TID*150... |
| DMC152 | 15.2 | 9.44 | ● | | 3.22 | 15 | 15 | TID*150... |
| DMC153 | 15.3 | 9.44 | ● | | 3.24 | 15 | 15 | TID*150... |
| DMC154 | 15.4 | 9.44 | ● | | 3.26 | 15 | 15 | TID*150... |
| DMC155 | 15.5 | 9.44 | ● | | 3.28 | 15 | 15 | TID*150... |
| DMC156 | 15.6 | 9.44 | ● | | 3.3 | 15 | 15 | TID*150... |
| DMC157 | 15.7 | 9.44 | ● | | 3.32 | 15 | 15 | TID*150... |
| DMC158 | 15.8 | 9.44 | ● | | 3.34 | 15 | 15 | TID*150... |
| DMC159 | 15.9 | 9.44 | ● | | 3.36 | 15 | 15 | TID*150... |
| DMC160 | 16 | 10.07 | ● | | 3.39 | 16 | 16 | TID*160... |
| DMC161 | 16.1 | 10.07 | ● | | 3.41 | 16 | 16 | TID*160... |
| DMC162 | 16.2 | 10.07 | ● | | 3.43 | 16 | 16 | TID*160... |
| DMC163 | 16.3 | 10.07 | ● | | 3.45 | 16 | 16 | TID*160... |
| DMC164 | 16.4 | 10.07 | ● | | 3.47 | 16 | 16 | TID*160... |
| DMC165 | 16.5 | 10.07 | ● | | 3.49 | 16 | 16 | TID*160... |
| DMC166 | 16.6 | 10.07 | ● | | 3.51 | 16 | 16 | TID*160... |
| DMC167 | 16.7 | 10.07 | ● | | 3.53 | 16 | 16 | TID*160... |
| DMC168 | 16.8 | 10.07 | ● | | 3.55 | 16 | 16 | TID*160... |
| DMC169 | 16.9 | 10.07 | ● | | 3.57 | 16 | 16 | TID*160... |
| DMC170 | 17 | 10.68 | ● | | 3.57 | 17 | 17 | TID*170... |
| DMC171 | 17.1 | 10.68 | ● | | 3.59 | 17 | 17 | TID*170... |
| DMC172 | 17.2 | 10.68 | ● | | 3.61 | 17 | 17 | TID*170... |
| DMC173 | 17.3 | 10.68 | ● | | 3.63 | 17 | 17 | TID*170... |
| DMC174 | 17.4 | 10.68 | ● | | 3.65 | 17 | 17 | TID*170... |
| DMC175 | 17.5 | 10.68 | ● | | 3.67 | 17 | 17 | TID*170... |
| DMC176 | 17.6 | 10.68 | ● | | 3.69 | 17 | 17 | TID*170... |
| DMC177 | 17.7 | 10.68 | ● | | 3.71 | 17 | 17 | TID*170... |
| DMC178 | 17.8 | 10.68 | ● | | 3.73 | 17 | 17 | TID*170... |
| DMC179 | 17.9 | 10.68 | ● | | 3.75 | 17 | 17 | TID*170... |
| DMC180 | 18 | 11.35 | ● | | 3.78 | 18 | 18 | TID*180... |
| DMC181 | 18.1 | 11.35 | ● | | 3.8 | 18 | 18 | TID*180... |
| DMC182 | 18.2 | 11.35 | ● | | 3.82 | 18 | 18 | TID*180... |
| DMC183 | 18.3 | 11.35 | ● | | 3.84 | 18 | 18 | TID*180... |
| DMC184 | 18.4 | 11.35 | ● | | 3.86 | 18 | 18 | TID*180... |
| DMC185 | 18.5 | 11.35 | ● | | 3.88 | 18 | 18 | TID*180... |
| DMC186 | 18.6 | 11.35 | ● | | 3.9 | 18 | 18 | TID*180... |
| DMC187 | 18.7 | 11.35 | ● | | 3.92 | 18 | 18 | TID*180... |
| DMC188 | 18.8 | 11.35 | ● | | 3.94 | 18 | 18 | TID*180... |
| DMC189 | 18.9 | 11.35 | ● | | 3.96 | 18 | 18 | TID*180... |
| DMC190 | 19 | 11.91 | ● | | 3.99 | 19 | 19 | TID*190... |
| DMC191 | 19.1 | 11.91 | ● | | 4.01 | 19 | 19 | TID*190... |
| DMC192 | 19.2 | 11.91 | ● | | 4.03 | 19 | 19 | TID*190... |
| DMC193 | 19.3 | 11.91 | ● | | 4.05 | 19 | 19 | TID*190... |
| DMC194 | 19.4 | 11.91 | ● | | 4.07 | 19 | 19 | TID*190... |

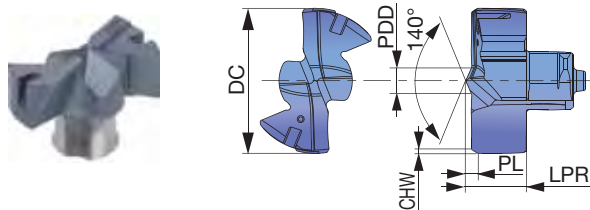
| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|-------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMC195 | 19.5 | 11.91 | ● | | 4.09 | 19 | 19 | TID*190... |
| DMC196 | 19.6 | 11.91 | ● | | 4.11 | 19 | 19 | TID*190... |
| DMC197 | 19.7 | 11.91 | ● | | 4.13 | 19 | 19 | TID*190... |
| DMC198 | 19.8 | 11.91 | ● | | 4.15 | 19 | 19 | TID*190... |
| DMC199 | 19.9 | 11.91 | ● | | 4.17 | 19 | 19 | TID*190... |
| DMC200 | 20 | 12.6 | ● | | 4.2 | 20 | 20 | TID*200... |
| DMC205 | 20.5 | 12.6 | ● | | 4.31 | 20 | 20 | TID*200... |
| DMC210 | 21 | 13.2 | ● | | 4.41 | 21 | 21 | TID*210... |
| DMC215 | 21.5 | 13.2 | ● | | 4.52 | 21 | 21 | TID*210... |
| DMC220 | 22 | 13.8 | ● | | 4.62 | 22 | 22 | TID*220... |
| DMC225 | 22.5 | 13.8 | ● | | 4.72 | 22 | 22 | TID*220... |

ø6 - ø19.9 = 2 pieces per package
ø20 - ø22.5 = 1 pieces per package

● : Line up

Grade
Insert
Ext. Toolholder
Int. Toolholder
Threading
Grooving
Endmill
Drilling Tool
Technical Reference

DMF Flat geometry head



| Tool diameter | Head diameter tolerance |
|---------------|-------------------------|
| ø10 - ø17.9 | +0.018 / 0 |
| ø18 - ø19.8 | +0.021 / 0 |

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ☆ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

| | | | | |
|---|----------------|---|--|--|
| P | Steel | ★ | | |
| M | Stainless | ★ | | |
| K | Cast iron | ★ | | |
| N | Non-ferrous | ☆ | | |
| S | Superalloys | ☆ | | |
| H | Hard materials | ★ | | |

★ : First choice
☆ : Second choice

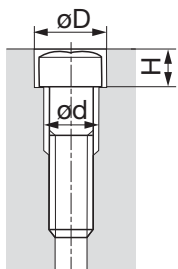
| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMF100 | 10 | 4.72 | ● | | 1.17 | 10 | 10 | TID*100... |
| DMF101 | 10.1 | 4.72 | ● | | 1.17 | 10 | 10 | TID*100... |
| DMF103 | 10.3 | 4.72 | ● | | 1.17 | 10 | 10 | TID*100... |
| DMF104 | 10.4 | 4.72 | ● | | 1.17 | 10 | 10 | TID*100... |
| DMF105 | 10.5 | 4.72 | ● | | 1.17 | 10 | 10 | TID*105... |
| DMF106 | 10.6 | 4.72 | ● | | 1.17 | 10 | 10 | TID*105... |
| DMF107 | 10.7 | 4.72 | ● | | 1.17 | 10 | 10 | TID*105... |
| DMF108 | 10.8 | 4.72 | ● | | 1.17 | 10 | 10 | TID*105... |
| DMF110 | 11 | 4.9 | ● | | 1.25 | 11 | 11 | TID*110... |
| DMF115 | 11.5 | 4.9 | ● | | 1.25 | 11 | 11 | TID*115... |
| DMF117 | 11.7 | 4.9 | ● | | 1.25 | 11 | 11 | TID*115... |
| DMF120 | 12 | 5.21 | ● | | 1.26 | 12 | 12 | TID*120... |
| DMF121 | 12.1 | 5.21 | ● | | 1.26 | 12 | 12 | TID*120... |
| DMF122 | 12.2 | 5.21 | ● | | 1.26 | 12 | 12 | TID*120... |
| DMF123 | 12.3 | 5.21 | ● | | 1.26 | 12 | 12 | TID*120... |
| DMF124 | 12.4 | 5.21 | ● | | 1.26 | 12 | 12 | TID*120... |
| DMF125 | 12.5 | 5.21 | ● | | 1.26 | 12 | 12 | TID*125... |
| DMF126 | 12.6 | 5.21 | ● | | 1.26 | 12 | 12 | TID*125... |
| DMF127 | 12.7 | 5.21 | ● | | 1.26 | 12 | 12 | TID*125... |
| DMF130 | 13 | 5.53 | ● | | 1.28 | 13 | 13 | TID*130... |
| DMF131 | 13.1 | 5.53 | ● | | 1.28 | 13 | 13 | TID*130... |
| DMF133 | 13.3 | 5.53 | ● | | 1.28 | 13 | 13 | TID*130... |
| DMF135 | 13.5 | 5.53 | ● | | 1.28 | 13 | 13 | TID*135... |
| DMF137 | 13.7 | 5.53 | ● | | 1.28 | 13 | 13 | TID*135... |
| DMF138 | 13.8 | 5.53 | ● | | 1.28 | 13 | 13 | TID*135... |

| Designation | DC | LPR | Coated | | PL | SSC | Pocket Size | Body |
|-------------|------|------|--------|--|------|-----|-------------|------------|
| | | | AH9130 | | | | | |
| DMF139 | 13.9 | 5.53 | ● | | 1.28 | 13 | 13 | TID*135... |
| DMF140 | 14 | 5.96 | ● | | 1.31 | 14 | 14 | TID*140... |
| DMF141 | 14.1 | 5.96 | ● | | 1.31 | 14 | 14 | TID*140... |
| DMF142 | 14.2 | 5.96 | ● | | 1.31 | 14 | 14 | TID*140... |
| DMF143 | 14.3 | 5.96 | ● | | 1.31 | 14 | 14 | TID*140... |
| DMF144 | 14.4 | 5.96 | ● | | 1.31 | 14 | 14 | TID*140... |
| DMF145 | 14.5 | 5.96 | ● | | 1.31 | 14 | 14 | TID*145... |
| DMF150 | 15 | 6.43 | ● | | 1.35 | 15 | 15 | TID*150... |
| DMF152 | 15.2 | 6.43 | ● | | 1.35 | 15 | 15 | TID*150... |
| DMF155 | 15.5 | 6.43 | ● | | 1.35 | 15 | 15 | TID*150... |
| DMF157 | 15.7 | 6.43 | ● | | 1.35 | 15 | 15 | TID*150... |
| DMF158 | 15.8 | 6.43 | ● | | 1.35 | 15 | 15 | TID*150... |
| DMF160 | 16 | 6.84 | ● | | 1.39 | 16 | 16 | TID*160... |
| DMF161 | 16.1 | 6.84 | ● | | 1.39 | 16 | 16 | TID*160... |
| DMF165 | 16.5 | 6.84 | ● | | 1.39 | 16 | 16 | TID*160... |
| DMF167 | 16.7 | 6.84 | ● | | 1.39 | 16 | 16 | TID*160... |
| DMF170 | 17 | 7.15 | ● | | 7.15 | 17 | 17 | TID*170... |
| DMF175 | 17.5 | 7.15 | ● | | 7.15 | 17 | 17 | TID*170... |
| DMF179 | 17.9 | 7.15 | ● | | 7.15 | 17 | 17 | TID*170... |
| DMF180 | 18 | 7.45 | ● | | 7.45 | 18 | 18 | TID*180... |
| DMF185 | 18.5 | 7.45 | ● | | 7.45 | 18 | 18 | TID*180... |
| DMF190 | 19 | 7.79 | ● | | 7.79 | 19 | 19 | TID*190... |
| DMF195 | 19.5 | 7.79 | ● | | 7.79 | 19 | 19 | TID*190... |
| DMF198 | 19.8 | 7.79 | ● | | 7.79 | 19 | 19 | TID*190... |

ø10 - ø19.8 = 2 pieces per package

● : Line up

Recommended dimensions for metric bolt heads



| Screw size | M6 | M8 | M10 |
|------------|------------|------------|------------|
| øD (mm) | 11 | 14 | 17.5 |
| H (mm) | 6.5 | 8.6 | 10.8 |
| ød (mm) | 6 | 9 | 11 |
| Head | DMF110 | DMF140 | DMF175 |
| Tool | TID*110... | TID*140... | TID*170... |

STANDARD CUTTING CONDITIONS (DMP, DMH, DMC, DMF)

| ISO | Workpiece materials | Priority | Grade | Cutting speed Vc (m/min) | Feed: f (mm/rev) | | | | | | | |
|----------|---|-----------------|-----------------|-----------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| | | | | | DC (mm) | | | | | | | |
| | | | | | ø6 - ø7.9 | ø8 - ø9.9 | ø10 - ø11.9 | ø12 - ø13.9 | ø14 - ø15.9 | ø16 - ø19.9 | ø20 - ø22.9 | |
| P | Low carbon steel (C < 0.3) SS400, SM490, S25C, etc. St42-1, St52-3, C25, etc. | First choice | AH725 | 80 - 140 | 0.09 - 0.13 | 0.12 - 0.25 | 0.15 - 0.28 | 0.18 - 0.3 | 0.2 - 0.35 | 0.25 - 0.45 | 0.25 - 0.45 | |
| | | Wear resistance | AH9130 | | | | | | | | | |
| | High carbon steel (C > 0.3) S45C, S55C, etc. C45, C55, etc. | First choice | AH725 | 70 - 120 | 0.09 - 0.13 | 0.12 - 0.25 | 0.15 - 0.28 | 0.18 - 0.3 | 0.2 - 0.35 | 0.25 - 0.45 | 0.25 - 0.45 | |
| | | Wear resistance | AH9130 | | | | | | | | | |
| | Low alloy steel SCM415, etc. | First choice | AH725 | 70 - 120 | 0.08 - 0.13 | 0.11 - 0.25 | 0.14 - 0.28 | 0.16 - 0.32 | 0.18 - 0.35 | 0.23 - 0.4 | 0.25 - 0.45 | |
| | | Wear resistance | AH9130 | | | | | | | | | |
| | Alloy steel SCM440, SCr420, etc. 42CrMo4, 20Cr4, etc. | First choice | AH725 | 40 - 90 | 0.08 - 0.13 | 0.11 - 0.25 | 0.14 - 0.28 | 0.16 - 0.32 | 0.18 - 0.35 | 0.23 - 0.4 | 0.25 - 0.45 | |
| | | Wear resistance | AH9130 | | | | | | | | | |
| M | Stainless steel SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | First choice | AH725 | 30 - 70 | 0.08 - 0.1 | 0.1 - 0.15 | 0.12 - 0.18 | 0.14 - 0.2 | 0.16 - 0.24 | 0.16 - 0.26 | 0.18 - 0.3 | |
| | | Wear resistance | AH9130 | | | | | | | | | |
| N | Aluminium alloys ADC12, etc. | First choice | AH725 | 80 - 220 | 0.1 - 0.2 | 0.2 - 0.35 | 0.25 - 0.4 | 0.3 - 0.45 | 0.35 - 0.5 | 0.4 - 0.6 | 0.5 - 0.75 | |
| | | | Wear resistance | | | | | | | | | AH9130 |
| S | Titanium alloys Ti-6Al-4V, etc. | First choice | AH725 | 20 - 50 | 0.05 - 0.07 | 0.06 - 0.12 | 0.08 - 0.15 | 0.1 - 0.18 | 0.12 - 0.2 | 0.14 - 0.22 | 0.18 - 0.27 | |
| | | | Wear resistance | | | | | | | | | AH9130 |
| | Nickel-based alloys | First choice | AH725 | 20 - 50 | 0.05 - 0.07 | 0.06 - 0.11 | 0.08 - 0.13 | 0.1 - 0.15 | 0.12 - 0.18 | 0.12 - 0.22 | 0.14 - 0.25 | |
| | | | Wear resistance | | | | | | | | | AH9130 |
| H | Hardened steel | First choice | AH725 | 20 - 50 | 0.05 - 0.07 | 0.06 - 0.12 | 0.08 - 0.15 | 0.1 - 0.18 | 0.12 - 0.2 | 0.14 - 0.22 | 0.16 - 0.25 | |
| | | | Wear resistance | | | | | | | | | AH9130 |

- Cutting conditions in the above table show standard cutting conditions.
- Cutting conditions may change due to the rigidity and power of the machine and the workpiece material.
- Machined hole diameter may change depending upon the rigidity of the machine tool or cutting conditions.

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

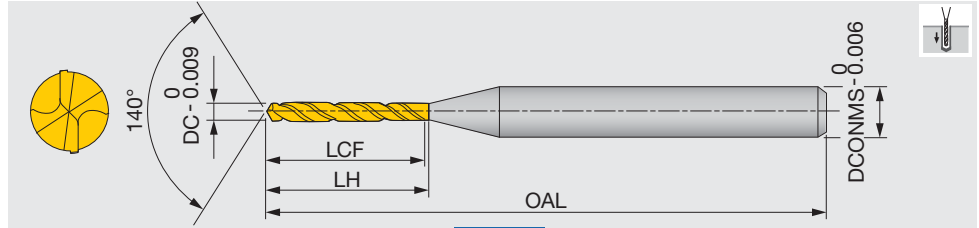
Drilling Tool

Technical Reference

GIGAMINIDRILL

DSM

Micro solid drill, 140° point angle, without coolant hole, shank diameter ø3 mm, L/D = 5 - 15, tool diameter ø0.1 - ø3 mm



| Designation | DC | Coated | | DCONMS | LCF | LH | OAL | Designation | DC | Coated | | DCONMS | LCF | LH | OAL |
|-------------|------|--------|-------|--------|------|-----|-----|-------------|------|--------|-------|--------|------|------|-----|
| | | YH170 | YH180 | | | | | | | YH170 | YH180 | | | | |
| DSM0010G10 | 0.1 | ● | | 3 | 1.15 | 1.4 | 38 | DSM0075G10 | 0.75 | ● | | 3 | 9.2 | 9.8 | 38 |
| DSM0011G10 | 0.11 | ● | | 3 | 1.25 | 1.5 | 38 | DSM0076G10 | 0.76 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0012G10 | 0.12 | ● | | 3 | 1.35 | 1.6 | 38 | DSM0077G10 | 0.77 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0013G10 | 0.13 | ● | | 3 | 1.55 | 1.8 | 38 | DSM0078G10 | 0.78 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0014G10 | 0.14 | ● | | 3 | 1.65 | 1.9 | 38 | DSM0079G10 | 0.79 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0015G10 | 0.15 | ● | | 3 | 1.75 | 2 | 38 | DSM0080G10 | 0.8 | ● | | 3 | 9.9 | 10.5 | 38 |
| DSM0016G10 | 0.16 | ● | | 3 | 1.85 | 2.1 | 38 | DSM0081G10 | 0.81 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0017G10 | 0.17 | ● | | 3 | 1.95 | 2.2 | 38 | DSM0082G10 | 0.82 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0018G10 | 0.18 | ● | | 3 | 2.15 | 2.4 | 38 | DSM0083G10 | 0.83 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0019G10 | 0.19 | ● | | 3 | 2.25 | 2.5 | 38 | DSM0084G10 | 0.84 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0020G10 | 0.2 | ● | | 3 | 2.35 | 2.6 | 38 | DSM0085G10 | 0.85 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0021G10 | 0.21 | ● | | 3 | 2.45 | 2.7 | 38 | DSM0086G10 | 0.86 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0022G10 | 0.22 | ● | | 3 | 2.55 | 2.8 | 38 | DSM0087G10 | 0.87 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0023G10 | 0.23 | ● | | 3 | 2.75 | 3 | 38 | DSM0088G10 | 0.88 | ● | | 3 | 9.9 | 10.5 | 38 |
| DSM0024G10 | 0.24 | ● | | 3 | 2.85 | 3.1 | 38 | DSM0089G10 | 0.89 | | | 3 | 9.9 | 10.5 | 38 |
| DSM0025G10 | 0.25 | ● | | 3 | 3 | 3.3 | 38 | DSM0090G10 | 0.9 | ● | | 3 | 9.9 | 10.5 | 38 |
| DSM0026G10 | 0.26 | ● | | 3 | 3.1 | 3.4 | 38 | DSM0091G10 | 0.91 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0027G10 | 0.27 | ● | | 3 | 3.2 | 3.5 | 38 | DSM0092G10 | 0.92 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0028G10 | 0.28 | ● | | 3 | 3.4 | 3.7 | 38 | DSM0093G10 | 0.93 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0029G10 | 0.29 | ● | | 3 | 3.5 | 3.8 | 38 | DSM0094G10 | 0.94 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0030G10 | 0.3 | ● | | 3 | 3.9 | 4.2 | 38 | DSM0095G10 | 0.95 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0031G15 | 0.31 | ● | | 3 | 5.6 | 5.9 | 38 | DSM0096G10 | 0.96 | | | 3 | 11 | 11.6 | 38 |
| DSM0032G15 | 0.32 | ● | | 3 | 5.6 | 5.9 | 38 | DSM0097G10 | 0.97 | ● | | 3 | 11 | 11.6 | 38 |
| DSM0033G15 | 0.33 | ● | | 3 | 5.6 | 5.9 | 38 | DSM0098G10 | 0.98 | | | 3 | 11 | 11.6 | 38 |
| DSM0034G15 | 0.34 | ● | | 3 | 5.6 | 5.9 | 38 | DSM0099G10 | 0.99 | | | 3 | 11 | 11.6 | 38 |
| DSM0035G15 | 0.35 | ● | | 3 | 5.6 | 5.9 | 38 | DSM0100G10 | 1 | ● | | 3 | 11.5 | 12.1 | 38 |
| DSM0036G15 | 0.36 | ● | | 3 | 6.5 | 6.8 | 38 | DSM0101G05 | 1.01 | | | 3 | 8 | 8.6 | 38 |
| DSM0037G15 | 0.37 | ● | | 3 | 6.5 | 6.8 | 38 | DSM0102G05 | 1.02 | | | 3 | 8 | 8.6 | 38 |
| DSM0038G15 | 0.38 | ● | | 3 | 6.5 | 6.8 | 38 | DSM0103G05 | 1.03 | | | 3 | 8 | 8.6 | 38 |
| DSM0039G15 | 0.39 | ● | | 3 | 6.5 | 6.8 | 38 | DSM0104G05 | 1.04 | | | 3 | 8 | 8.6 | 38 |
| DSM0040G15 | 0.4 | ● | | 3 | 6.5 | 6.8 | 38 | DSM0105G05 | 1.05 | | | 3 | 8 | 8.6 | 38 |
| DSM0041G15 | 0.41 | ● | | 3 | 7.4 | 7.7 | 38 | DSM0106G05 | 1.06 | | | 3 | 8 | 8.6 | 38 |
| DSM0042G15 | 0.42 | ● | | 3 | 7.4 | 7.7 | 38 | DSM0107G05 | 1.07 | | | 3 | 8 | 8.6 | 38 |
| DSM0043G15 | 0.43 | ● | | 3 | 7.4 | 7.7 | 38 | DSM0108G05 | 1.08 | ● | | 3 | 8 | 8.6 | 38 |
| DSM0044G15 | 0.44 | ● | | 3 | 7.4 | 7.7 | 38 | DSM0109G05 | 1.09 | | | 3 | 8 | 8.6 | 38 |
| DSM0045G15 | 0.45 | ● | | 3 | 7.4 | 7.7 | 38 | DSM0110G05 | 1.1 | ● | | 3 | 8 | 8.6 | 38 |
| DSM0046G15 | 0.46 | ● | | 3 | 8.1 | 8.7 | 38 | DSM0111G05 | 1.11 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0047G15 | 0.47 | ● | | 3 | 8.1 | 8.7 | 38 | DSM0112G05 | 1.12 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0048G15 | 0.48 | ● | | 3 | 8.1 | 8.7 | 38 | DSM0113G05 | 1.13 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0049G15 | 0.49 | ● | | 3 | 8.1 | 8.7 | 38 | DSM0114G05 | 1.14 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0050G15 | 0.5 | ● | | 3 | 8.1 | 8.7 | 38 | DSM0115G05 | 1.15 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0051G10 | 0.51 | | | 3 | 6.6 | 7.2 | 38 | DSM0116G05 | 1.16 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0052G10 | 0.52 | | | 3 | 6.6 | 7.2 | 38 | DSM0117G05 | 1.17 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0053G10 | 0.53 | | | 3 | 6.6 | 7.2 | 38 | DSM0118G05 | 1.18 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0054G10 | 0.54 | | | 3 | 6.6 | 7.2 | 38 | DSM0119G05 | 1.19 | | | 3 | 8.9 | 9.5 | 38 |
| DSM0055G10 | 0.55 | ● | | 3 | 6.6 | 7.2 | 38 | DSM0120G05 | 1.2 | ● | | 3 | 8.9 | 9.5 | 38 |
| DSM0056G10 | 0.56 | | | 3 | 7.3 | 7.9 | 38 | DSM0121G05 | 1.21 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0057G10 | 0.57 | | | 3 | 7.3 | 7.9 | 38 | DSM0122G05 | 1.22 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0058G10 | 0.58 | | | 3 | 7.3 | 7.9 | 38 | DSM0123G05 | 1.23 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0059G10 | 0.59 | | | 3 | 7.3 | 7.9 | 38 | DSM0124G05 | 1.24 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0060G10 | 0.6 | ● | | 3 | 7.3 | 7.9 | 38 | DSM0125G05 | 1.25 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0061G10 | 0.61 | | | 3 | 7.9 | 8.5 | 38 | DSM0126G05 | 1.26 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0062G10 | 0.62 | | | 3 | 7.9 | 8.5 | 38 | DSM0127G05 | 1.27 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0063G10 | 0.63 | | | 3 | 7.9 | 8.5 | 38 | DSM0128G05 | 1.28 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0064G10 | 0.64 | | | 3 | 7.9 | 8.5 | 38 | DSM0129G05 | 1.29 | | | 3 | 9.7 | 10.3 | 38 |
| DSM0065G10 | 0.65 | ● | | 3 | 7.9 | 8.5 | 38 | DSM0130G05 | 1.3 | ● | | 3 | 9.7 | 10.3 | 38 |
| DSM0066G10 | 0.66 | | | 3 | 8.6 | 9.2 | 38 | DSM0131G05 | 1.31 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0067G10 | 0.67 | | | 3 | 8.6 | 9.2 | 38 | DSM0132G05 | 1.32 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0068G10 | 0.68 | | | 3 | 8.6 | 9.2 | 38 | DSM0133G05 | 1.33 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0069G10 | 0.69 | | | 3 | 8.6 | 9.2 | 38 | DSM0134G05 | 1.34 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0070G10 | 0.7 | ● | | 3 | 8.6 | 9.2 | 38 | DSM0135G05 | 1.35 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0071G10 | 0.71 | | | 3 | 9.2 | 9.8 | 38 | DSM0136G05 | 1.36 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0072G10 | 0.72 | | | 3 | 9.2 | 9.8 | 38 | DSM0137G05 | 1.37 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0073G10 | 0.73 | | | 3 | 9.2 | 9.8 | 38 | DSM0138G05 | 1.38 | | | 3 | 10.5 | 11.1 | 38 |
| DSM0074G10 | 0.74 | | | 3 | 9.2 | 9.8 | 38 | DSM0139G05 | 1.39 | | | 3 | 10.5 | 11.1 | 38 |

Reference pages: Standard cutting conditions → 8-18

● : Line up

| Designation | DC | Coated | | DCONMS | LCF | LH | OAL | Designation | DC | Coated | | DCONMS | LCF | LH | OAL |
|-------------|------|--------|-------|--------|------|------|-----|-------------|------|--------|-------|--------|------|------|-----|
| | | YH170 | YH180 | | | | | | | YH170 | YH180 | | | | |
| DSM0140G05 | 1.4 | ● | | 3 | 10.5 | 11.1 | 38 | DSM0219G05 | 2.19 | | | 3 | 16.9 | 17.5 | 45 |
| DSM0141G05 | 1.41 | | | 3 | 11.3 | 11.9 | 38 | DSM0220G05 | 2.2 | ● | | 3 | 16.9 | 17.5 | 45 |
| DSM0142G05 | 1.42 | | | 3 | 11.3 | 11.9 | 38 | DSM0221G05 | 2.21 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0143G05 | 1.43 | | | 3 | 11.3 | 11.9 | 38 | DSM0222G05 | 2.22 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0144G05 | 1.44 | | | 3 | 11.3 | 11.9 | 38 | DSM0223G05 | 2.23 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0145G05 | 1.45 | ● | | 3 | 11.3 | 11.9 | 38 | DSM0224G05 | 2.24 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0146G05 | 1.46 | | | 3 | 11.3 | 11.9 | 38 | DSM0225G05 | 2.25 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0147G05 | 1.47 | | | 3 | 11.3 | 11.9 | 38 | DSM0226G05 | 2.26 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0148G05 | 1.48 | | | 3 | 11.3 | 11.9 | 38 | DSM0227G05 | 2.27 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0149G05 | 1.49 | | | 3 | 11.3 | 11.9 | 38 | DSM0228G05 | 2.28 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0150G05 | 1.5 | ● | | 3 | 11.3 | 11.9 | 38 | DSM0229G05 | 2.29 | | | 3 | 17.7 | 18.3 | 45 |
| DSM0151G05 | 1.51 | | | 3 | 12.1 | 12.7 | 45 | DSM0230G05 | 2.3 | ● | | 3 | 17.7 | 18.3 | 45 |
| DSM0152G05 | 1.52 | | | 3 | 12.1 | 12.7 | 45 | DSM0231G05 | 2.31 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0153G05 | 1.53 | ● | | 3 | 12.1 | 12.7 | 45 | DSM0232G05 | 2.32 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0154G05 | 1.54 | | | 3 | 12.1 | 12.7 | 45 | DSM0233G05 | 2.33 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0155G05 | 1.55 | ● | | 3 | 12.1 | 12.7 | 45 | DSM0234G05 | 2.34 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0156G05 | 1.56 | | | 3 | 12.1 | 12.7 | 45 | DSM0235G05 | 2.35 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0157G05 | 1.57 | | | 3 | 12.1 | 12.7 | 45 | DSM0236G05 | 2.36 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0158G05 | 1.58 | | | 3 | 12.1 | 12.7 | 45 | DSM0237G05 | 2.37 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0159G05 | 1.59 | | | 3 | 12.1 | 12.7 | 45 | DSM0238G05 | 2.38 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0160G05 | 1.6 | ● | | 3 | 12.1 | 12.7 | 45 | DSM0239G05 | 2.39 | | | 3 | 18.5 | 19.1 | 55 |
| DSM0161G05 | 1.61 | | | 3 | 12.9 | 13.6 | 45 | DSM0240G05 | 2.4 | ● | | 3 | 18.5 | 19.1 | 55 |
| DSM0162G05 | 1.62 | | | 3 | 12.9 | 13.6 | 45 | DSM0241G05 | 2.41 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0163G05 | 1.63 | | | 3 | 12.9 | 13.6 | 45 | DSM0242G05 | 2.42 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0164G05 | 1.64 | | | 3 | 12.9 | 13.6 | 45 | DSM0243G05 | 2.43 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0165G05 | 1.65 | ● | | 3 | 12.9 | 13.6 | 45 | DSM0244G05 | 2.44 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0166G05 | 1.66 | | | 3 | 12.9 | 13.6 | 45 | DSM0245G05 | 2.45 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0167G05 | 1.67 | | | 3 | 12.9 | 13.6 | 45 | DSM0246G05 | 2.46 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0168G05 | 1.68 | | | 3 | 12.9 | 13.6 | 45 | DSM0247G05 | 2.47 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0169G05 | 1.69 | | | 3 | 12.9 | 13.6 | 45 | DSM0248G05 | 2.48 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0170G05 | 1.7 | ● | | 3 | 12.9 | 13.6 | 45 | DSM0249G05 | 2.49 | | | 3 | 19.3 | 19.9 | 55 |
| DSM0171G05 | 1.71 | | | 3 | 13.7 | 14.3 | 45 | DSM0250G05 | 2.5 | ● | | 3 | 19.3 | 19.9 | 55 |
| DSM0172G05 | 1.72 | | | 3 | 13.7 | 14.3 | 45 | DSM0251G05 | 2.51 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0173G05 | 1.73 | | | 3 | 13.7 | 14.3 | 45 | DSM0252G05 | 2.52 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0174G05 | 1.74 | | | 3 | 13.7 | 14.3 | 45 | DSM0253G05 | 2.53 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0175G05 | 1.75 | | | 3 | 13.7 | 14.3 | 45 | DSM0254G05 | 2.54 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0176G05 | 1.76 | | | 3 | 13.7 | 14.3 | 45 | DSM0255G05 | 2.55 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0177G05 | 1.77 | | | 3 | 13.7 | 14.3 | 45 | DSM0256G05 | 2.56 | ● | | 3 | 20.1 | 20.7 | 55 |
| DSM0178G05 | 1.78 | | | 3 | 13.7 | 14.3 | 45 | DSM0257G05 | 2.57 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0179G05 | 1.79 | | | 3 | 13.7 | 14.3 | 45 | DSM0258G05 | 2.58 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0180G05 | 1.8 | ● | | 3 | 13.7 | 14.3 | 45 | DSM0259G05 | 2.59 | | | 3 | 20.1 | 20.7 | 55 |
| DSM0181G05 | 1.81 | | | 3 | 14.5 | 15.1 | 45 | DSM0260G05 | 2.6 | ● | | 3 | 20.1 | 20.7 | 55 |
| DSM0182G05 | 1.82 | ● | | 3 | 14.5 | 15.1 | 45 | DSM0261G05 | 2.61 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0183G05 | 1.83 | | | 3 | 14.5 | 15.1 | 45 | DSM0262G05 | 2.62 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0184G05 | 1.84 | | | 3 | 14.5 | 15.1 | 45 | DSM0263G05 | 2.63 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0185G05 | 1.85 | ● | | 3 | 14.5 | 15.1 | 45 | DSM0264G05 | 2.64 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0186G05 | 1.86 | | | 3 | 14.5 | 15.1 | 45 | DSM0265G05 | 2.65 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0187G05 | 1.87 | | | 3 | 14.5 | 15.1 | 45 | DSM0266G05 | 2.66 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0188G05 | 1.88 | | | 3 | 14.5 | 15.1 | 45 | DSM0267G05 | 2.67 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0189G05 | 1.89 | | | 3 | 14.5 | 15.1 | 45 | DSM0268G05 | 2.68 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0190G05 | 1.9 | ● | | 3 | 14.5 | 15.1 | 45 | DSM0269G05 | 2.69 | | | 3 | 20.9 | 21.5 | 55 |
| DSM0191G05 | 1.91 | | | 3 | 15.3 | 15.9 | 45 | DSM0270G05 | 2.7 | ● | | 3 | 20.9 | 21.5 | 55 |
| DSM0192G05 | 1.92 | | | 3 | 15.3 | 15.9 | 45 | DSM0271G05 | 2.71 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0193G05 | 1.93 | | | 3 | 15.3 | 15.9 | 45 | DSM0272G05 | 2.72 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0194G05 | 1.94 | | | 3 | 15.3 | 15.9 | 45 | DSM0273G05 | 2.73 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0195G05 | 1.95 | ● | | 3 | 15.3 | 15.9 | 45 | DSM0274G05 | 2.74 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0196G05 | 1.96 | | | 3 | 15.3 | 15.9 | 45 | DSM0275G05 | 2.75 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0197G05 | 1.97 | | | 3 | 15.3 | 15.9 | 45 | DSM0276G05 | 2.76 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0198G05 | 1.98 | | | 3 | 15.3 | 15.9 | 45 | DSM0277G05 | 2.77 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0199G05 | 1.99 | | | 3 | 15.3 | 15.9 | 45 | DSM0278G05 | 2.78 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0200G05 | 2 | | ● | 3 | 15.3 | 15.9 | 45 | DSM0279G05 | 2.79 | | | 3 | 21.7 | 22.3 | 55 |
| DSM0201G05 | 2.01 | | | 3 | 16.1 | 16.7 | 45 | DSM0280G05 | 2.8 | ● | | 3 | 21.7 | 22.3 | 55 |
| DSM0202G05 | 2.02 | | | 3 | 16.1 | 16.7 | 45 | DSM0281G05 | 2.81 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0203G05 | 2.03 | | ● | 3 | 16.1 | 16.7 | 45 | DSM0282G05 | 2.82 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0204G05 | 2.04 | | | 3 | 16.1 | 16.7 | 45 | DSM0283G05 | 2.83 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0205G05 | 2.05 | | | 3 | 16.1 | 16.7 | 45 | DSM0284G05 | 2.84 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0206G05 | 2.06 | | | 3 | 16.1 | 16.7 | 45 | DSM0285G05 | 2.85 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0207G05 | 2.07 | | | 3 | 16.1 | 16.7 | 45 | DSM0286G05 | 2.86 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0208G05 | 2.08 | | | 3 | 16.1 | 16.7 | 45 | DSM0287G05 | 2.87 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0209G05 | 2.09 | | | 3 | 16.1 | 16.7 | 45 | DSM0288G05 | 2.88 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0210G05 | 2.1 | | ● | 3 | 16.1 | 16.7 | 45 | DSM0289G05 | 2.89 | | | 3 | 22.5 | 23.1 | 55 |
| DSM0211G05 | 2.11 | | | 3 | 16.9 | 17.5 | 45 | DSM0290G05 | 2.9 | ● | | 3 | 22.5 | 23.1 | 55 |
| DSM0212G05 | 2.12 | | | 3 | 16.9 | 17.5 | 45 | DSM0291G05 | 2.91 | | | 3 | 23.3 | 23.9 | 55 |
| DSM0213G05 | 2.13 | | | 3 | 16.9 | 17.5 | 45 | DSM0292G05 | 2.92 | | | 3 | 23.3 | 23.9 | 55 |
| DSM0214G05 | 2.14 | | | 3 | 16.9 | 17.5 | 45 | DSM0293G05 | 2.93 | | | 3 | 23.3 | 23.9 | 55 |
| DSM0215G05 | 2.15 | | | 3 | 16.9 | 17.5 | 45 | DSM0294G05 | 2.94 | | | 3 | 23.3 | 23.9 | 55 |
| DSM0216G05 | 2.16 | | | 3 | 16.9 | 17.5 | 45 | DSM0295G05 | 2.95 | | | 3 | 23.3 | 23.9 | 55 |
| DSM0217G05 | 2.17 | | | 3 | 16.9 | 17.5 | 45 | DSM0296G05 | 2.96 | | | 3 | 23.3 | 23.9 | 55 |
| DSM0218G05 | 2.18 | | | 3 | 16.9 | 17.5 | 45 | DSM0297G05 | 2.97 | | | 3 | 23.3 | 23.9 | 55 |
| | | | | | | | | DSM0298G05 | 2.98 | | | 3 | 23.3 | 23.9 | 55 |
| | | | | | | | | DSM0299G05 | 2.99 | | | 3 | 23.3 | 23.9 | 55 |
| | | | | | | | | DSM0300G05 | 3 | ● | | 3 | 23.3 | 23.9 | 55 |

Reference pages: Standard cutting conditions → 8-18

● : Line up



STANDARD CUTTING CONDITIONS

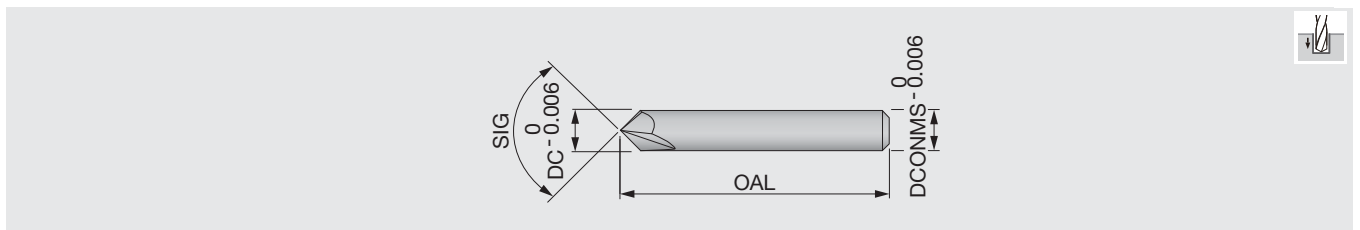
| ISO | Workpiece material | Cutting speed: Vc (m/min) | | | Feed: f (mm/rev) | | | | |
|----------|--------------------------------|---------------------------|-------------|-----------|------------------|---------------|---------------|---------------|-----------------|
| | | ø0.1 ~ ø0.3 | ø0.3 ~ ø0.5 | ø0.5 ~ ø3 | ø0.1 ~ ø0.3 | ø0.3 ~ ø0.5 | ø0.5 ~ ø1 | ø1 ~ ø2 | ø2 ~ ø3 |
| P | Carbon steels, Alloy steels | 5 - 20 | 15 - 30 | 25 - 60 | 0.001 - 0.004 | 0.002 - 0.01 | 0.005 - 0.05 | 0.03 - 0.09 | 0.05 - 0.1 |
| M | Stainless steels | 2 - 12 | 6 - 18 | 10 - 20 | 0.0005 - 0.004 | 0.002 - 0.008 | 0.005 - 0.03 | 0.01 - 0.04 | 0.02 - 0.05 |
| N | Aluminium alloys | 10 - 20 | 10 - 30 | 20 - 50 | 0.001 - 0.01 | 0.005 - 0.03 | 0.01 - 0.05 | 0.04 - 0.15 | 0.06 - 0.2 |
| | Copper / Brass | 10 - 20 | 10 - 30 | 20 - 50 | 0.001 - 0.01 | 0.005 - 0.03 | 0.01 - 0.05 | 0.04 - 0.15 | 0.06 - 0.2 |
| S | Heat-resistant alloys | 2 - 6 | 5 - 10 | 8 - 20 | 0.0005 - 0.003 | 0.002 - 0.004 | 0.002 - 0.004 | 0.002 - 0.004 | Not recommended |
| H | High hardened steels | 4 - 8 | 6 - 10 | 6 - 16 | 0.0005 - 0.002 | 0.001 - 0.005 | 0.005 - 0.02 | 0.01 - 0.03 | 0.02 - 0.06 |

When the drilling depth is deeper than L/D = 5, use drill pecking every 10 to 50% of the drill diameter.

The above cutting conditions are applied to when a water soluble cutting fluid is used. For drilling a hole smaller than ø0.3 mm, use of a starting drill is recommended. When setting the drill, the drill run out should be within 0.002 mm on the taper. (Especially for the drill diameter smaller than ø0.5 mm)

GIGAMINIDRILL DSM-CP

Centering drill for DSM drill



| Designation | DC | YH170 | DCONMS | OAL | SIG |
|-------------|----|-------|--------|------|------|
| DSM-CP90 | 3 | ● | 3 | 38.1 | 90° |
| DSM-CP140 | 3 | ● | 3 | 38.1 | 140° |

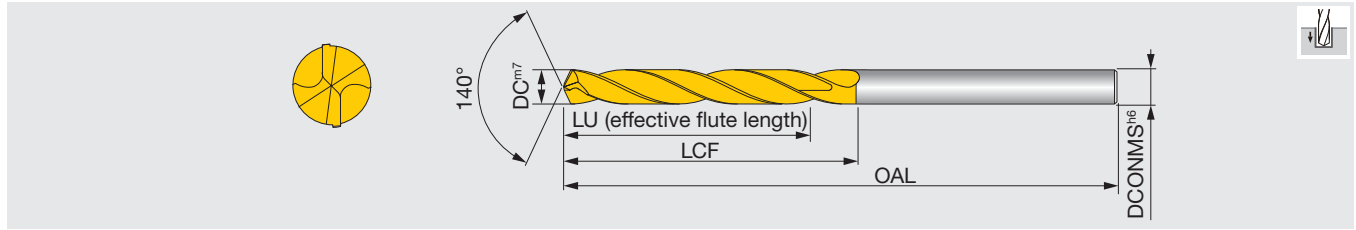
● : Line up

STANDARD CUTTING CONDITIONS

| ISO | Workpiece material | Cutting speed: Vc (m/min) | Feed: f (mm/rev) | |
|----------|-------------------------------|------------------------------|------------------|-------------|
| | | | DSM-CP90 | DSM-CP140 |
| P | Carbon, Mild and Alloy steels | 30 - 80 | 0.01 - 0.06 | 0.03 - 0.08 |
| N | Aluminium alloys | 60 - 120 | 0.02 - 0.1 | 0.05 - 0.15 |
| M | Stainless steels | 15 - 40 | 0.01 - 0.03 | 0.02 - 0.06 |
| H | High hardened steels (~45HRC) | 10 - 40 | Not recommended | 0.01 - 0.05 |

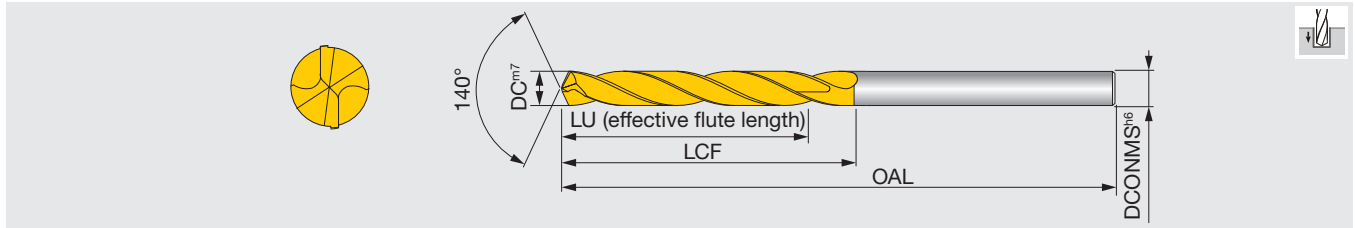
For hard materials and stainless steels which have work-hardening nature, DSM-CP140 is recommended.

Above cutting conditions are of using a water-soluble cutting fluid. When using a water-insoluble type, set the cutting speed to lower side.



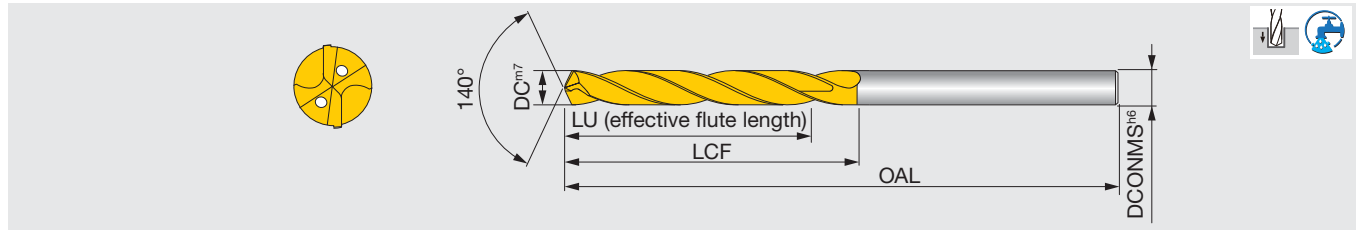
| Designation | DC | AH725 | DCONMS | LU | LCF | OAL | Designation | DC | AH725 | DCONMS | LU | LCF | OAL |
|------------------|-----|-------|--------|----|-----|-----|------------------|------|-------|--------|----|-----|-----|
| DSW030-014-06DE3 | 3 | ● | 6 | 14 | 20 | 62 | DSW080-029-08DE3 | 8 | ● | 8 | 29 | 41 | 79 |
| DSW031-014-06DE3 | 3.1 | ● | 6 | 14 | 20 | 62 | DSW081-035-10DE3 | 8.1 | ● | 10 | 35 | 47 | 89 |
| DSW032-014-06DE3 | 3.2 | ● | 6 | 14 | 20 | 62 | DSW082-035-10DE3 | 8.2 | ● | 10 | 35 | 47 | 89 |
| DSW033-014-06DE3 | 3.3 | ● | 6 | 14 | 20 | 62 | DSW083-035-10DE3 | 8.3 | ● | 10 | 35 | 47 | 89 |
| DSW034-014-06DE3 | 3.4 | ● | 6 | 14 | 20 | 62 | DSW084-035-10DE3 | 8.4 | ● | 10 | 35 | 47 | 89 |
| DSW035-014-06DE3 | 3.5 | ● | 6 | 14 | 20 | 62 | DSW085-035-10DE3 | 8.5 | ● | 10 | 35 | 47 | 89 |
| DSW036-014-06DE3 | 3.6 | ● | 6 | 14 | 20 | 62 | DSW086-035-10DE3 | 8.6 | ● | 10 | 35 | 47 | 89 |
| DSW037-014-06DE3 | 3.7 | ● | 6 | 14 | 20 | 62 | DSW087-035-10DE3 | 8.7 | ● | 10 | 35 | 47 | 89 |
| DSW038-017-06DE3 | 3.8 | ● | 6 | 17 | 24 | 66 | DSW088-035-10DE3 | 8.8 | ● | 10 | 35 | 47 | 89 |
| DSW039-017-06DE3 | 3.9 | ● | 6 | 17 | 24 | 66 | DSW089-035-10DE3 | 8.9 | ● | 10 | 35 | 47 | 89 |
| DSW040-017-06DE3 | 4 | ● | 6 | 17 | 24 | 66 | DSW090-035-10DE3 | 9 | ● | 10 | 35 | 47 | 89 |
| DSW041-017-06DE3 | 4.1 | ● | 6 | 17 | 24 | 66 | DSW091-035-10DE3 | 9.1 | ● | 10 | 35 | 47 | 89 |
| DSW042-017-06DE3 | 4.2 | ● | 6 | 17 | 24 | 66 | DSW092-035-10DE3 | 9.2 | ● | 10 | 35 | 47 | 89 |
| DSW043-017-06DE3 | 4.3 | ● | 6 | 17 | 24 | 66 | DSW093-035-10DE3 | 9.3 | ● | 10 | 35 | 47 | 89 |
| DSW044-017-06DE3 | 4.4 | ● | 6 | 17 | 24 | 66 | DSW094-035-10DE3 | 9.4 | ● | 10 | 35 | 47 | 89 |
| DSW045-017-06DE3 | 4.5 | ● | 6 | 17 | 24 | 66 | DSW095-035-10DE3 | 9.5 | ● | 10 | 35 | 47 | 89 |
| DSW046-017-06DE3 | 4.6 | ● | 6 | 17 | 24 | 66 | DSW096-035-10DE3 | 9.6 | ● | 10 | 35 | 47 | 89 |
| DSW047-017-06DE3 | 4.7 | ● | 6 | 17 | 24 | 66 | DSW097-035-10DE3 | 9.7 | ● | 10 | 35 | 47 | 89 |
| DSW048-020-06DE3 | 4.8 | ● | 6 | 20 | 28 | 66 | DSW098-035-10DE3 | 9.8 | ● | 10 | 35 | 47 | 89 |
| DSW049-020-06DE3 | 4.9 | ● | 6 | 20 | 28 | 66 | DSW099-035-10DE3 | 9.9 | ● | 10 | 35 | 47 | 89 |
| DSW050-020-06DE3 | 5 | ● | 6 | 20 | 28 | 66 | DSW100-035-10DE3 | 10 | ● | 10 | 35 | 47 | 89 |
| DSW051-020-06DE3 | 5.1 | ● | 6 | 20 | 28 | 66 | DSW101-040-12DE3 | 10.1 | ● | 12 | 40 | 55 | 102 |
| DSW052-020-06DE3 | 5.2 | ● | 6 | 20 | 28 | 66 | DSW102-040-12DE3 | 10.2 | ● | 12 | 40 | 55 | 102 |
| DSW053-020-06DE3 | 5.3 | ● | 6 | 20 | 28 | 66 | DSW103-040-12DE3 | 10.3 | ● | 12 | 40 | 55 | 102 |
| DSW054-020-06DE3 | 5.4 | ● | 6 | 20 | 28 | 66 | DSW104-040-12DE3 | 10.4 | ● | 12 | 40 | 55 | 102 |
| DSW055-020-06DE3 | 5.5 | ● | 6 | 20 | 28 | 66 | DSW105-040-12DE3 | 10.5 | ● | 12 | 40 | 55 | 102 |
| DSW056-020-06DE3 | 5.6 | ● | 6 | 20 | 28 | 66 | DSW106-040-12DE3 | 10.6 | ● | 12 | 40 | 55 | 102 |
| DSW057-020-06DE3 | 5.7 | ● | 6 | 20 | 28 | 66 | DSW107-040-12DE3 | 10.7 | ● | 12 | 40 | 55 | 102 |
| DSW058-020-06DE3 | 5.8 | ● | 6 | 20 | 28 | 66 | DSW108-040-12DE3 | 10.8 | ● | 12 | 40 | 55 | 102 |
| DSW059-020-06DE3 | 5.9 | ● | 6 | 20 | 28 | 66 | DSW109-040-12DE3 | 10.9 | ● | 12 | 40 | 55 | 102 |
| DSW060-020-06DE3 | 6 | ● | 6 | 20 | 28 | 66 | DSW110-040-12DE3 | 11 | ● | 12 | 40 | 55 | 102 |
| DSW061-024-08DE3 | 6.1 | ● | 8 | 24 | 34 | 79 | DSW111-040-12DE3 | 11.1 | ● | 12 | 40 | 55 | 102 |
| DSW062-024-08DE3 | 6.2 | ● | 8 | 24 | 34 | 79 | DSW112-040-12DE3 | 11.2 | ● | 12 | 40 | 55 | 102 |
| DSW063-024-08DE3 | 6.3 | ● | 8 | 24 | 34 | 79 | DSW113-040-12DE3 | 11.3 | ● | 12 | 40 | 55 | 102 |
| DSW064-024-08DE3 | 6.4 | ● | 8 | 24 | 34 | 79 | DSW114-040-12DE3 | 11.4 | ● | 12 | 40 | 55 | 102 |
| DSW065-024-08DE3 | 6.5 | ● | 8 | 24 | 34 | 79 | DSW115-040-12DE3 | 11.5 | ● | 12 | 40 | 55 | 102 |
| DSW066-024-08DE3 | 6.6 | ● | 8 | 24 | 34 | 79 | DSW116-040-12DE3 | 11.6 | ● | 12 | 40 | 55 | 102 |
| DSW067-024-08DE3 | 6.7 | ● | 8 | 24 | 34 | 79 | DSW117-040-12DE3 | 11.7 | ● | 12 | 40 | 55 | 102 |
| DSW068-024-08DE3 | 6.8 | ● | 8 | 24 | 34 | 79 | DSW118-040-12DE3 | 11.8 | ● | 12 | 40 | 55 | 102 |
| DSW069-024-08DE3 | 6.9 | ● | 8 | 24 | 34 | 79 | DSW119-040-12DE3 | 11.9 | ● | 12 | 40 | 55 | 102 |
| DSW070-024-08DE3 | 7 | ● | 8 | 24 | 34 | 79 | DSW120-040-12DE3 | 12 | ● | 12 | 40 | 55 | 102 |
| DSW071-029-08DE3 | 7.1 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW072-029-08DE3 | 7.2 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW073-029-08DE3 | 7.3 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW074-029-08DE3 | 7.4 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW075-029-08DE3 | 7.5 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW076-029-08DE3 | 7.6 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW077-029-08DE3 | 7.7 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW078-029-08DE3 | 7.8 | ● | 8 | 29 | 41 | 79 | | | | | | | |
| DSW079-029-08DE3 | 7.9 | ● | 8 | 29 | 41 | 79 | | | | | | | |

● : Line up



| Designation | DC | AH725 | DCONMS | LU | LCF | OAL | Designation | DC | AH725 | DCONMS | LU | LCF | OAL |
|------------------|-----|-------|--------|----|-----|-----|------------------|------|-------|--------|----|-----|-----|
| DSW030-023-06DE5 | 3 | ● | 6 | 23 | 28 | 66 | DSW080-043-08DE5 | 8 | ● | 8 | 43 | 53 | 91 |
| DSW031-023-06DE5 | 3.1 | ● | 6 | 23 | 28 | 66 | DSW081-049-10DE5 | 8.1 | ● | 10 | 49 | 61 | 103 |
| DSW032-023-06DE5 | 3.2 | ● | 6 | 23 | 28 | 66 | DSW082-049-10DE5 | 8.2 | ● | 10 | 49 | 61 | 103 |
| DSW033-023-06DE5 | 3.3 | ● | 6 | 23 | 28 | 66 | DSW083-049-10DE5 | 8.3 | ● | 10 | 49 | 61 | 103 |
| DSW034-023-06DE5 | 3.4 | ● | 6 | 23 | 28 | 66 | DSW084-049-10DE5 | 8.4 | ● | 10 | 49 | 61 | 103 |
| DSW035-023-06DE5 | 3.5 | ● | 6 | 23 | 28 | 66 | DSW085-049-10DE5 | 8.5 | ● | 10 | 49 | 61 | 103 |
| DSW036-023-06DE5 | 3.6 | ● | 6 | 23 | 28 | 66 | DSW086-049-10DE5 | 8.6 | ● | 10 | 49 | 61 | 103 |
| DSW037-023-06DE5 | 3.7 | ● | 6 | 23 | 28 | 66 | DSW087-049-10DE5 | 8.7 | ● | 10 | 49 | 61 | 103 |
| DSW038-029-06DE5 | 3.8 | ● | 6 | 29 | 36 | 74 | DSW088-049-10DE5 | 8.8 | ● | 10 | 49 | 61 | 103 |
| DSW039-029-06DE5 | 3.9 | ● | 6 | 29 | 36 | 74 | DSW089-049-10DE5 | 8.9 | ● | 10 | 49 | 61 | 103 |
| DSW040-029-06DE5 | 4 | ● | 6 | 29 | 36 | 74 | DSW090-049-10DE5 | 9 | ● | 10 | 49 | 61 | 103 |
| DSW041-029-06DE5 | 4.1 | ● | 6 | 29 | 36 | 74 | DSW091-049-10DE5 | 9.1 | ● | 10 | 49 | 61 | 103 |
| DSW042-029-06DE5 | 4.2 | ● | 6 | 29 | 36 | 74 | DSW092-049-10DE5 | 9.2 | ● | 10 | 49 | 61 | 103 |
| DSW043-029-06DE5 | 4.3 | ● | 6 | 29 | 36 | 74 | DSW093-049-10DE5 | 9.3 | ● | 10 | 49 | 61 | 103 |
| DSW044-029-06DE5 | 4.4 | ● | 6 | 29 | 36 | 74 | DSW094-049-10DE5 | 9.4 | ● | 10 | 49 | 61 | 103 |
| DSW045-029-06DE5 | 4.5 | ● | 6 | 29 | 36 | 74 | DSW095-049-10DE5 | 9.5 | ● | 10 | 49 | 61 | 103 |
| DSW046-029-06DE5 | 4.6 | ● | 6 | 29 | 36 | 74 | DSW096-049-10DE5 | 9.6 | ● | 10 | 49 | 61 | 103 |
| DSW047-029-06DE5 | 4.7 | ● | 6 | 29 | 36 | 74 | DSW097-049-10DE5 | 9.7 | ● | 10 | 49 | 61 | 103 |
| DSW048-035-06DE5 | 4.8 | ● | 6 | 35 | 44 | 82 | DSW098-049-10DE5 | 9.8 | ● | 10 | 49 | 61 | 103 |
| DSW049-035-06DE5 | 4.9 | ● | 6 | 35 | 44 | 82 | DSW099-049-10DE5 | 9.9 | ● | 10 | 49 | 61 | 103 |
| DSW050-035-06DE5 | 5 | ● | 6 | 35 | 44 | 82 | DSW100-049-10DE5 | 10 | ● | 10 | 49 | 61 | 103 |
| DSW051-035-06DE5 | 5.1 | ● | 6 | 35 | 44 | 82 | DSW101-056-12DE5 | 10.1 | ● | 12 | 56 | 71 | 118 |
| DSW052-035-06DE5 | 5.2 | ● | 6 | 35 | 44 | 82 | DSW102-056-12DE5 | 10.2 | ● | 12 | 56 | 71 | 118 |
| DSW053-035-06DE5 | 5.3 | ● | 6 | 35 | 44 | 82 | DSW103-056-12DE5 | 10.3 | ● | 12 | 56 | 71 | 118 |
| DSW054-035-06DE5 | 5.4 | ● | 6 | 35 | 44 | 82 | DSW104-056-12DE5 | 10.4 | ● | 12 | 56 | 71 | 118 |
| DSW055-035-06DE5 | 5.5 | ● | 6 | 35 | 44 | 82 | DSW105-056-12DE5 | 10.5 | ● | 12 | 56 | 71 | 118 |
| DSW056-035-06DE5 | 5.6 | ● | 6 | 35 | 44 | 82 | DSW106-056-12DE5 | 10.6 | ● | 12 | 56 | 71 | 118 |
| DSW057-035-06DE5 | 5.7 | ● | 6 | 35 | 44 | 82 | DSW107-056-12DE5 | 10.7 | ● | 12 | 56 | 71 | 118 |
| DSW058-035-06DE5 | 5.8 | ● | 6 | 35 | 44 | 82 | DSW108-056-12DE5 | 10.8 | ● | 12 | 56 | 71 | 118 |
| DSW059-035-06DE5 | 5.9 | ● | 6 | 35 | 44 | 82 | DSW109-056-12DE5 | 10.9 | ● | 12 | 56 | 71 | 118 |
| DSW060-035-06DE5 | 6 | ● | 6 | 35 | 44 | 82 | DSW110-056-12DE5 | 11 | ● | 12 | 56 | 71 | 118 |
| DSW061-043-08DE5 | 6.1 | ● | 8 | 43 | 53 | 91 | DSW111-056-12DE5 | 11.1 | ● | 12 | 56 | 71 | 118 |
| DSW062-043-08DE5 | 6.2 | ● | 8 | 43 | 53 | 91 | DSW112-056-12DE5 | 11.2 | ● | 12 | 56 | 71 | 118 |
| DSW063-043-08DE5 | 6.3 | ● | 8 | 43 | 53 | 91 | DSW113-056-12DE5 | 11.3 | ● | 12 | 56 | 71 | 118 |
| DSW064-043-08DE5 | 6.4 | ● | 8 | 43 | 53 | 91 | DSW114-056-12DE5 | 11.4 | ● | 12 | 56 | 71 | 118 |
| DSW065-043-08DE5 | 6.5 | ● | 8 | 43 | 53 | 91 | DSW115-056-12DE5 | 11.5 | ● | 12 | 56 | 71 | 118 |
| DSW066-043-08DE5 | 6.6 | ● | 8 | 43 | 53 | 91 | DSW116-056-12DE5 | 11.6 | ● | 12 | 56 | 71 | 118 |
| DSW067-043-08DE5 | 6.7 | ● | 8 | 43 | 53 | 91 | DSW117-056-12DE5 | 11.7 | ● | 12 | 56 | 71 | 118 |
| DSW068-043-08DE5 | 6.8 | ● | 8 | 43 | 53 | 91 | DSW118-056-12DE5 | 11.8 | ● | 12 | 56 | 71 | 118 |
| DSW069-043-08DE5 | 6.9 | ● | 8 | 43 | 53 | 91 | DSW119-056-12DE5 | 11.9 | ● | 12 | 56 | 71 | 118 |
| DSW070-043-08DE5 | 7 | ● | 8 | 43 | 53 | 91 | DSW120-056-12DE5 | 12 | ● | 12 | 56 | 71 | 118 |
| DSW071-043-08DE5 | 7.1 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW072-043-08DE5 | 7.2 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW073-043-08DE5 | 7.3 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW074-043-08DE5 | 7.4 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW075-043-08DE5 | 7.5 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW076-043-08DE5 | 7.6 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW077-043-08DE5 | 7.7 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW078-043-08DE5 | 7.8 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW079-043-08DE5 | 7.9 | ● | 8 | 43 | 53 | 91 | | | | | | | |

● : Line up



| Designation | DC | AH725 | DCONMS | LU | LCF | OAL | Designation | DC | AH725 | DCONMS | LU | LCF | OAL |
|------------------|-----|-------|--------|----|-----|-----|------------------|------|-------|--------|----|-----|-----|
| DSW030-023-06DI5 | 3 | ● | 6 | 23 | 28 | 66 | DSW080-043-08DI5 | 8 | ● | 8 | 43 | 53 | 91 |
| DSW031-023-06DI5 | 3.1 | ● | 6 | 23 | 28 | 66 | DSW081-049-10DI5 | 8.1 | ● | 10 | 49 | 61 | 103 |
| DSW032-023-06DI5 | 3.2 | ● | 6 | 23 | 28 | 66 | DSW082-049-10DI5 | 8.2 | ● | 10 | 49 | 61 | 103 |
| DSW033-023-06DI5 | 3.3 | ● | 6 | 23 | 28 | 66 | DSW083-049-10DI5 | 8.3 | ● | 10 | 49 | 61 | 103 |
| DSW034-023-06DI5 | 3.4 | ● | 6 | 23 | 28 | 66 | DSW084-049-10DI5 | 8.4 | ● | 10 | 49 | 61 | 103 |
| DSW035-023-06DI5 | 3.5 | ● | 6 | 23 | 28 | 66 | DSW085-049-10DI5 | 8.5 | ● | 10 | 49 | 61 | 103 |
| DSW036-023-06DI5 | 3.6 | ● | 6 | 23 | 28 | 66 | DSW086-049-10DI5 | 8.6 | ● | 10 | 49 | 61 | 103 |
| DSW037-023-06DI5 | 3.7 | ● | 6 | 23 | 28 | 66 | DSW087-049-10DI5 | 8.7 | ● | 10 | 49 | 61 | 103 |
| DSW038-029-06DI5 | 3.8 | ● | 6 | 29 | 36 | 74 | DSW088-049-10DI5 | 8.8 | ● | 10 | 49 | 61 | 103 |
| DSW039-029-06DI5 | 3.9 | ● | 6 | 29 | 36 | 74 | DSW089-049-10DI5 | 8.9 | ● | 10 | 49 | 61 | 103 |
| DSW040-029-06DI5 | 4 | ● | 6 | 29 | 36 | 74 | DSW090-049-10DI5 | 9 | ● | 10 | 49 | 61 | 103 |
| DSW041-029-06DI5 | 4.1 | ● | 6 | 29 | 36 | 74 | DSW091-049-10DI5 | 9.1 | ● | 10 | 49 | 61 | 103 |
| DSW042-029-06DI5 | 4.2 | ● | 6 | 29 | 36 | 74 | DSW092-049-10DI5 | 9.2 | ● | 10 | 49 | 61 | 103 |
| DSW043-029-06DI5 | 4.3 | ● | 6 | 29 | 36 | 74 | DSW093-049-10DI5 | 9.3 | ● | 10 | 49 | 61 | 103 |
| DSW044-029-06DI5 | 4.4 | ● | 6 | 29 | 36 | 74 | DSW094-049-10DI5 | 9.4 | ● | 10 | 49 | 61 | 103 |
| DSW045-029-06DI5 | 4.5 | ● | 6 | 29 | 36 | 74 | DSW095-049-10DI5 | 9.5 | ● | 10 | 49 | 61 | 103 |
| DSW046-029-06DI5 | 4.6 | ● | 6 | 29 | 36 | 74 | DSW096-049-10DI5 | 9.6 | ● | 10 | 49 | 61 | 103 |
| DSW047-029-06DI5 | 4.7 | ● | 6 | 29 | 36 | 74 | DSW097-049-10DI5 | 9.7 | ● | 10 | 49 | 61 | 103 |
| DSW048-035-06DI5 | 4.8 | ● | 6 | 35 | 44 | 82 | DSW098-049-10DI5 | 9.8 | ● | 10 | 49 | 61 | 103 |
| DSW049-035-06DI5 | 4.9 | ● | 6 | 35 | 44 | 82 | DSW099-049-10DI5 | 9.9 | ● | 10 | 49 | 61 | 103 |
| DSW050-035-06DI5 | 5 | ● | 6 | 35 | 44 | 82 | DSW100-049-10DI5 | 10 | ● | 10 | 49 | 61 | 103 |
| DSW051-035-06DI5 | 5.1 | ● | 6 | 35 | 44 | 82 | DSW101-056-12DI5 | 10.1 | ● | 12 | 56 | 71 | 118 |
| DSW052-035-06DI5 | 5.2 | ● | 6 | 35 | 44 | 82 | DSW102-056-12DI5 | 10.2 | ● | 12 | 56 | 71 | 118 |
| DSW053-035-06DI5 | 5.3 | ● | 6 | 35 | 44 | 82 | DSW103-056-12DI5 | 10.3 | ● | 12 | 56 | 71 | 118 |
| DSW054-035-06DI5 | 5.4 | ● | 6 | 35 | 44 | 82 | DSW104-056-12DI5 | 10.4 | ● | 12 | 56 | 71 | 118 |
| DSW055-035-06DI5 | 5.5 | ● | 6 | 35 | 44 | 82 | DSW105-056-12DI5 | 10.5 | ● | 12 | 56 | 71 | 118 |
| DSW056-035-06DI5 | 5.6 | ● | 6 | 35 | 44 | 82 | DSW106-056-12DI5 | 10.6 | ● | 12 | 56 | 71 | 118 |
| DSW057-035-06DI5 | 5.7 | ● | 6 | 35 | 44 | 82 | DSW107-056-12DI5 | 10.7 | ● | 12 | 56 | 71 | 118 |
| DSW058-035-06DI5 | 5.8 | ● | 6 | 35 | 44 | 82 | DSW108-056-12DI5 | 10.8 | ● | 12 | 56 | 71 | 118 |
| DSW059-035-06DI5 | 5.9 | ● | 6 | 35 | 44 | 82 | DSW109-056-12DI5 | 10.9 | ● | 12 | 56 | 71 | 118 |
| DSW060-035-06DI5 | 6 | ● | 6 | 35 | 44 | 82 | DSW110-056-12DI5 | 11 | ● | 12 | 56 | 71 | 118 |
| DSW061-043-08DI5 | 6.1 | ● | 8 | 43 | 53 | 91 | DSW111-056-12DI5 | 11.1 | ● | 12 | 56 | 71 | 118 |
| DSW062-043-08DI5 | 6.2 | ● | 8 | 43 | 53 | 91 | DSW112-056-12DI5 | 11.2 | ● | 12 | 56 | 71 | 118 |
| DSW063-043-08DI5 | 6.3 | ● | 8 | 43 | 53 | 91 | DSW113-056-12DI5 | 11.3 | ● | 12 | 56 | 71 | 118 |
| DSW064-043-08DI5 | 6.4 | ● | 8 | 43 | 53 | 91 | DSW114-056-12DI5 | 11.4 | ● | 12 | 56 | 71 | 118 |
| DSW065-043-08DI5 | 6.5 | ● | 8 | 43 | 53 | 91 | DSW115-056-12DI5 | 11.5 | ● | 12 | 56 | 71 | 118 |
| DSW066-043-08DI5 | 6.6 | ● | 8 | 43 | 53 | 91 | DSW116-056-12DI5 | 11.6 | ● | 12 | 56 | 71 | 118 |
| DSW067-043-08DI5 | 6.7 | ● | 8 | 43 | 53 | 91 | DSW117-056-12DI5 | 11.7 | ● | 12 | 56 | 71 | 118 |
| DSW068-043-08DI5 | 6.8 | ● | 8 | 43 | 53 | 91 | DSW118-056-12DI5 | 11.8 | ● | 12 | 56 | 71 | 118 |
| DSW069-043-08DI5 | 6.9 | ● | 8 | 43 | 53 | 91 | DSW119-056-12DI5 | 11.9 | ● | 12 | 56 | 71 | 118 |
| DSW070-043-08DI5 | 7 | ● | 8 | 43 | 53 | 91 | DSW120-056-12DI5 | 12 | ● | 12 | 56 | 71 | 118 |
| DSW071-043-08DI5 | 7.1 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW072-043-08DI5 | 7.2 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW073-043-08DI5 | 7.3 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW074-043-08DI5 | 7.4 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW075-043-08DI5 | 7.5 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW076-043-08DI5 | 7.6 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW077-043-08DI5 | 7.7 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW078-043-08DI5 | 7.8 | ● | 8 | 43 | 53 | 91 | | | | | | | |
| DSW079-043-08DI5 | 7.9 | ● | 8 | 43 | 53 | 91 | | | | | | | |

● : Line up

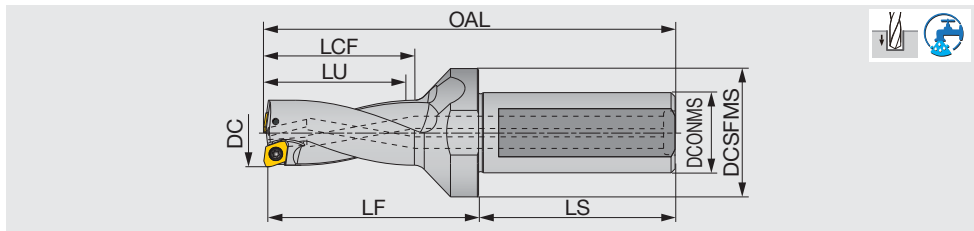
STANDARD CUTTING CONDITIONS

DSW-DE

| ISO | Workpiece material | Brinell hardness (HB) | DE (External) or DI (Internal) | Cutting speed: Vc (m/min) | | | Feed: f (mm/rev) | | |
|-----|--|-----------------------|--------------------------------|---------------------------|----------|-----------|------------------|-------------|-------------|
| | | | | ø3 ~ ø6 | ø6 ~ ø10 | ø10 ~ ø12 | ø3 ~ ø6 | ø6 ~ ø10 | ø10 ~ ø12 |
| P | Low carbon steels (C < 0.3) SS400, SM490, S25C, etc. C15E4, E275A, E355D, etc. | ~ 180 | DE | 40 - 100 | 60 - 120 | 60 - 130 | 0.15 - 0.3 | 0.15 - 0.35 | 0.2 - 0.5 |
| | | | DI | 70 - 140 | 80 - 160 | 90 - 190 | 0.15 - 0.3 | 0.15 - 0.35 | 0.2 - 0.5 |
| | Carbon steels (C > 0.3) S45C, S55C, , etc. C45, C55, etc. | 180 ~ 300 | DE | 40 - 90 | 50 - 120 | 60 - 130 | 0.15 - 0.3 | 0.15 - 0.35 | 0.2 - 0.4 |
| | | | DI | 50 - 130 | 70 - 160 | 80 - 170 | 0.15 - 0.3 | 0.15 - 0.35 | 0.2 - 0.4 |
| | High alloy steels SCM440, etc. 42CrMo4, etc. | 250 ~ 350 | DE | 40 - 80 | 50 - 100 | 50 - 100 | 0.1 - 0.2 | 0.15 - 0.3 | 0.15 - 0.35 |
| | | | DI | 40 - 100 | 60 - 140 | 60 - 160 | 0.1 - 0.2 | 0.15 - 0.3 | 0.15 - 0.35 |
| M | Stainless steels SUS304, etc. X5CrNi18-9, etc. | ~ 200 | DE | 20 - 40 | 30 - 50 | 30 - 60 | 0.05 - 0.2 | 0.1 - 0.25 | 0.1 - 0.3 |
| | | | DI | 25 - 75 | 50 - 100 | 50 - 120 | 0.05 - 0.2 | 0.1 - 0.25 | 0.1 - 0.3 |
| N | Aluminium alloys ADC12, etc. AlSi11Cu3, etc. | - | DE | 40 - 90 | 50 - 100 | 50 - 100 | 0.15 - 0.3 | 0.2 - 0.4 | 0.2 - 0.5 |
| | | | DI | 60 - 200 | 60 - 200 | 60 - 200 | 0.15 - 0.3 | 0.2 - 0.4 | 0.2 - 0.5 |
| S | Titanium alloys Ti-6Al-4V, etc. | - | DE | 20 - 40 | 20 - 40 | 20 - 40 | 0.1 - 0.2 | 0.15 - 0.25 | 0.15 - 0.4 |
| | | | DI | 20 - 60 | 30 - 80 | 30 - 80 | 0.1 - 0.2 | 0.1 - 0.25 | 0.15 - 0.4 |
| | Heat-resistant alloys, Inconel Inconel 718, etc. | 250 ~ | DE | 10 - 30 | 10 - 30 | 10 - 30 | 0.03 - 0.07 | 0.05 - 0.1 | 0.07 - 0.12 |
| | | | DI | 10 - 30 | 10 - 40 | 10 - 40 | 0.03 - 0.07 | 0.05 - 0.1 | 0.07 - 0.15 |
| H | High hardened steels SKD11, etc. X153CrMoV12, etc. | ~ 40HRC | DE | 20 - 40 | 20 - 40 | 20 - 40 | 0.05 - 0.15 | 0.05 - 0.15 | 0.05 - 0.2 |
| | | | DI | 20 - 50 | 30 - 60 | 30 - 60 | 0.05 - 0.15 | 0.05 - 0.15 | 0.05 - 0.2 |

The cutting parameters shown in the table are merely a starting guideline for general machining. Values should be varied depending on the power or rigidity of the machine to be used. Optimum conditions should be selected depending on the actual chip control or damage on edges. When using the smaller diameter tools in each range, set the feed "f" to the lower recommended values.

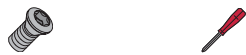
The coolant supply is critical for the provision of stable machining conditions and enhanced tool life. A large coolant volume should be supplied, especially when drilling difficult-to-cut materials. When drilling stainless steel with low machinability such as austenitic stainless steel with a depth deeper than L/D = 3, a pecking cycle or internal coolant supply is recommended.



| Designation | DC | DCONMS | DCSFMS | LU | LS | LCF | LF | OAL | Max. offset (radial) | WT(kg) | Insert |
|-------------|------|--------|--------|------|----|------|------|-------|----------------------|--------|----------------|
| TDX125F20-2 | 12.5 | 20 | 25 | 25.4 | 49 | 28.4 | 41 | 90.4 | 0.8 | 0.2 | XPMT040104R-D* |
| TDX130F20-2 | 13 | 20 | 25 | 26.4 | 49 | 29.4 | 42 | 91.4 | 0.7 | 0.2 | XPMT040104R-D* |
| TDX135F20-2 | 13.5 | 20 | 25 | 27.4 | 49 | 30.4 | 43 | 92.4 | 0.6 | 0.2 | XPMT040104R-D* |
| TDX140F20-2 | 14 | 20 | 25 | 28.4 | 49 | 31.4 | 44 | 93.4 | 0.5 | 0.2 | XPMT040104R-D* |
| TDX145F20-2 | 14.5 | 20 | 25 | 29.4 | 49 | 32.4 | 46 | 95.4 | 0.4 | 0.2 | XPMT040104R-D* |
| TDX150F20-2 | 15 | 20 | 25 | 30.5 | 49 | 33.5 | 47 | 96.5 | 0.9 | 0.2 | XPMT050204R-D* |
| TDX155F20-2 | 15.5 | 20 | 32 | 31.5 | 49 | 34.5 | 49 | 98.5 | 0.8 | 0.2 | XPMT050204R-D* |
| TDX160F20-2 | 16 | 20 | 32 | 32.5 | 49 | 35.5 | 51 | 100.5 | 0.6 | 0.2 | XPMT050204R-D* |
| TDX165F20-2 | 16.5 | 20 | 32 | 33.5 | 49 | 36.5 | 52 | 101.5 | 0.5 | 0.2 | XPMT050204R-D* |
| TDX170F20-2 | 17 | 20 | 32 | 34.5 | 49 | 37.5 | 53 | 102.5 | 0.4 | 0.2 | XPMT050204R-D* |
| TDX175F25-2 | 17.5 | 25 | 32 | 35.5 | 54 | 38.5 | 55 | 109.5 | 1.2 | 0.3 | XPMT06X308R-D* |
| TDX180F25-2 | 18 | 25 | 32 | 36.5 | 54 | 39.5 | 56 | 110.5 | 1.1 | 0.3 | XPMT06X308R-D* |
| TDX185F25-2 | 18.5 | 25 | 32 | 37.5 | 54 | 40.5 | 57 | 111.5 | 0.9 | 0.3 | XPMT06X308R-D* |
| TDX190F25-2 | 19 | 25 | 32 | 38.5 | 54 | 41.5 | 58 | 112.5 | 0.8 | 0.3 | XPMT06X308R-D* |
| TDX195F25-2 | 19.5 | 25 | 32 | 39.5 | 54 | 42.5 | 60 | 114.5 | 0.7 | 0.3 | XPMT06X308R-D* |
| TDX200F25-2 | 20 | 25 | 32 | 40.5 | 54 | 45.5 | 61 | 115.5 | 0.5 | 0.3 | XPMT06X308R-D* |
| TDX205F25-2 | 20.5 | 25 | 32 | 41.5 | 54 | 46.5 | 62.5 | 117 | 0.4 | 0.3 | XPMT06X308R-D* |
| TDX210F25-2 | 21 | 25 | 32 | 42.5 | 54 | 47.5 | 64 | 118.5 | 0.3 | 0.3 | XPMT06X308R-D* |
| TDX215F25-2 | 21.5 | 25 | 32 | 43.5 | 54 | 48.5 | 65 | 119.5 | 0.2 | 0.3 | XPMT06X308R-D* |
| TDX220F25-2 | 22 | 25 | 32 | 44.6 | 54 | 49.6 | 66 | 120.6 | 1.2 | 0.3 | XPMT07H308R-D* |
| TDX225F25-2 | 22.5 | 25 | 37 | 45.6 | 54 | 50.6 | 67.5 | 122.1 | 1.1 | 0.3 | XPMT07H308R-D* |
| TDX230F25-2 | 23 | 25 | 37 | 46.6 | 54 | 51.6 | 69 | 123.6 | 0.9 | 0.4 | XPMT07H308R-D* |
| TDX235F25-2 | 23.5 | 25 | 37 | 47.6 | 54 | 52.6 | 70 | 124.6 | 0.8 | 0.4 | XPMT07H308R-D* |
| TDX240F25-2 | 24 | 25 | 37 | 48.6 | 54 | 53.6 | 71 | 125.6 | 0.7 | 0.4 | XPMT07H308R-D* |
| TDX245F25-2 | 24.5 | 25 | 37 | 49.6 | 54 | 54.6 | 72.5 | 127.1 | 0.5 | 0.4 | XPMT07H308R-D* |
| TDX250F25-2 | 25 | 25 | 37 | 50.6 | 54 | 55.6 | 74 | 128.6 | 0.4 | 0.4 | XPMT07H308R-D* |
| TDX255F25-2 | 25.5 | 25 | 37 | 51.6 | 54 | 56.6 | 75.5 | 130.1 | 0.3 | 0.4 | XPMT07H308R-D* |
| TDX260F25-2 | 26 | 25 | 37 | 52.6 | 54 | 57.6 | 77 | 131.6 | 0.2 | 0.4 | XPMT07H308R-D* |

| Tool diameter | Tool diameter tolerance | Hole diameter tolerance |
|-----------------------|-------------------------|-------------------------|
| $\phi 12.5 - \phi 17$ | + 0.1 / 0 | + 0.25 / 0 |
| $\phi 17.5 - \phi 26$ | + 0.2 / 0 | + 0.3 / 0 |

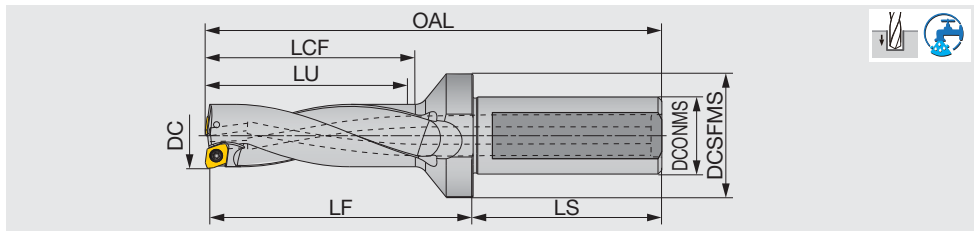
SPARE PARTS



| Designation | Clamping screw | Wrench |
|--------------|----------------|--------|
| TDX125 - 145 | CSPB-2H | IP-6DB |
| TDX150 - 170 | CSPB-2L043 | IP-6DB |
| TDX175 - 215 | CSPB-2.2 | IP-7D |
| TDX220 - 260 | CSPB-2.5 | IP-8D |

Recommended clamping torque (N·m): CSPB-2H/CSPB-2L043=0.7, CSPB-2.2=1, CSPB-2.5=1.3

Reference pages: Inserts → 8-25
Standard cutting conditions → 8-26



| Designation | DC | DCONMS | DCSFMS | LU | LS | LCF | LF | OAL | Max. offset (radial) | WT(kg) | Insert |
|-------------|------|--------|--------|------|----|------|-----|-------|----------------------|--------|----------------|
| TDX125F20-3 | 12.5 | 20 | 25 | 37.9 | 49 | 40.9 | 53 | 102.4 | 0.8 | 0.2 | XPMT040104R-D* |
| TDX130F20-3 | 13 | 20 | 25 | 39.4 | 49 | 42.4 | 55 | 104.4 | 0.7 | 0.2 | XPMT040104R-D* |
| TDX135F20-3 | 13.5 | 20 | 25 | 40.9 | 49 | 43.9 | 56 | 105.4 | 0.6 | 0.2 | XPMT040104R-D* |
| TDX140F20-3 | 14 | 20 | 25 | 42.4 | 49 | 45.4 | 58 | 107.4 | 0.5 | 0.2 | XPMT040104R-D* |
| TDX145F20-3 | 14.5 | 20 | 25 | 43.9 | 49 | 46.9 | 60 | 109.4 | 0.4 | 0.2 | XPMT040104R-D* |
| TDX150F20-3 | 15 | 20 | 25 | 45.4 | 49 | 48.4 | 62 | 111.4 | 0.9 | 0.2 | XPMT050204R-D* |
| TDX155F20-3 | 15.5 | 20 | 32 | 46.9 | 49 | 49.9 | 64 | 113.4 | 0.8 | 0.2 | XPMT050204R-D* |
| TDX160F20-3 | 16 | 20 | 32 | 48.4 | 49 | 51.4 | 66 | 115.4 | 0.6 | 0.2 | XPMT050204R-D* |
| TDX165F20-3 | 16.5 | 20 | 32 | 49.9 | 49 | 52.9 | 68 | 117.4 | 0.5 | 0.2 | XPMT050204R-D* |
| TDX170F20-3 | 17 | 20 | 32 | 51.4 | 49 | 54.4 | 69 | 118.4 | 0.4 | 0.2 | XPMT050204R-D* |
| TDX175F25-3 | 17.5 | 25 | 32 | 53 | 54 | 56 | 72 | 126.5 | 1.2 | 0.3 | XPMT06X308R-D* |
| TDX180F25-3 | 18 | 25 | 32 | 54.5 | 54 | 57.5 | 73 | 127.5 | 1.1 | 0.3 | XPMT06X308R-D* |
| TDX185F25-3 | 18.5 | 25 | 32 | 56 | 54 | 59 | 75 | 129.5 | 0.9 | 0.3 | XPMT06X308R-D* |
| TDX190F25-3 | 19 | 25 | 32 | 57.5 | 54 | 60.5 | 76 | 130.5 | 0.8 | 0.3 | XPMT06X308R-D* |
| TDX195F25-3 | 19.5 | 25 | 32 | 59 | 54 | 62 | 79 | 133.5 | 0.7 | 0.3 | XPMT06X308R-D* |
| TDX200F25-3 | 20 | 25 | 32 | 60.5 | 54 | 65.5 | 81 | 135.5 | 0.5 | 0.3 | XPMT06X308R-D* |
| TDX205F25-3 | 20.5 | 25 | 32 | 62 | 54 | 67 | 82 | 136.5 | 0.4 | 0.3 | XPMT06X308R-D* |
| TDX210F25-3 | 21 | 25 | 32 | 63.5 | 54 | 68.5 | 84 | 138.5 | 0.3 | 0.3 | XPMT06X308R-D* |
| TDX215F25-3 | 21.5 | 25 | 32 | 65 | 54 | 70 | 86 | 140.5 | 0.2 | 0.4 | XPMT06X308R-D* |
| TDX220F25-3 | 22 | 25 | 32 | 66.6 | 54 | 71.6 | 87 | 141.6 | 1.2 | 0.4 | XPMT07H308R-D* |
| TDX225F25-3 | 22.5 | 25 | 37 | 68.1 | 54 | 73.1 | 90 | 144.6 | 1.1 | 0.4 | XPMT07H308R-D* |
| TDX230F25-3 | 23 | 25 | 37 | 69.6 | 54 | 74.6 | 91 | 145.6 | 0.9 | 0.4 | XPMT07H308R-D* |
| TDX235F25-3 | 23.5 | 25 | 37 | 71.1 | 54 | 76.1 | 93 | 147.6 | 0.8 | 0.4 | XPMT07H308R-D* |
| TDX240F25-3 | 24 | 25 | 37 | 72.6 | 54 | 77.6 | 95 | 149.6 | 0.7 | 0.4 | XPMT07H308R-D* |
| TDX245F25-3 | 24.5 | 25 | 37 | 74.1 | 54 | 79.1 | 97 | 151.6 | 0.5 | 0.5 | XPMT07H308R-D* |
| TDX250F25-3 | 25 | 25 | 37 | 75.6 | 54 | 80.6 | 99 | 153.6 | 0.4 | 0.5 | XPMT07H308R-D* |
| TDX255F25-3 | 25.5 | 25 | 37 | 77.1 | 54 | 82.1 | 100 | 154.6 | 0.3 | 0.5 | XPMT07H308R-D* |
| TDX260F25-3 | 26 | 25 | 37 | 78.6 | 54 | 83.6 | 102 | 156.6 | 0.2 | 0.5 | XPMT07H308R-D* |

| Tool diameter | Tool diameter tolerance | Hole diameter tolerance |
|-----------------------|-------------------------|-------------------------|
| $\phi 12.5 - \phi 17$ | + 0.1 / 0 | + 0.25 / 0 |
| $\phi 17.5 - \phi 26$ | + 0.2 / 0 | + 0.3 / 0 |

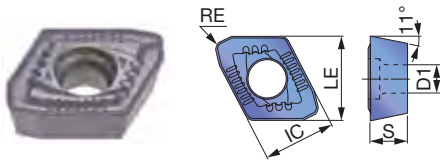
| SPARE PARTS | | |
|--------------|----------------|--------|
| Designation | Clamping screw | Wrench |
| TDX125 - 145 | CSPB-2H | IP-6DB |
| TDX150 - 170 | CSPB-2L043 | IP-6DB |
| TDX175 - 215 | CSPB-2.2 | IP-7D |
| TDX220 - 260 | CSPB-2.5 | IP-8D |

Recommended clamping torque (N·m): CSPB-2H/CSPB-2L043=0.7, CSPB-2.2=1, CSPB-2.5=1.3

Reference pages: Inserts → **8-25**
Standard cutting conditions → **8-26**

INSERT

DJ



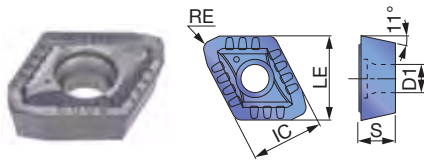
| | | | | | | | | | | | |
|---|----------------|---|---|---|---|--|--|--|--|--|--|
| P | Steel | | | ★ | ☆ | | | | | | |
| M | Stainless | | ☆ | ★ | | | | | | | |
| K | Cast iron | | ☆ | ★ | ★ | | | | | | |
| N | Non-ferrous | ★ | | ☆ | | | | | | | |
| S | Superalloys | ☆ | | ★ | ☆ | | | | | | |
| H | Hard materials | ☆ | | ★ | ☆ | | | | | | |

★ : First choice
☆ : Second choice

| Designation | IC | LE | Coated | | | | S | D1 | RE | DCN | DCX | AN |
|----------------|-----|-----|--------|-------|--------|--------|------|-----|-----|------|------|----|
| | | | AH725 | T1115 | AH6030 | AH9030 | | | | | | |
| XPMT040104R-DJ | 4.3 | 4.5 | ● | ● | ● | ● | 1.59 | 2.3 | 0.4 | 12.5 | 14.5 | 11 |
| XPMT050204R-DJ | 5.2 | 5.4 | ● | ● | ● | ● | 2.38 | 2.3 | 0.4 | 15 | 17 | 11 |
| XPMT06X308R-DJ | 6 | 7 | ● | ● | ● | ● | 3 | 2.5 | 0.8 | 17.5 | 21.5 | 11 |
| XPMT07H308R-DJ | 7 | 8.2 | ● | ● | ● | ● | 3.6 | 2.8 | 0.8 | 22 | 26 | 11 |

● : Line up

DS



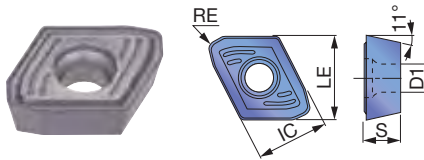
| | | | | | | | | | | | |
|---|----------------|---|---|--|--|--|--|--|--|--|--|
| P | Steel | ☆ | ★ | | | | | | | | |
| M | Stainless | ☆ | ★ | | | | | | | | |
| K | Cast iron | | | | | | | | | | |
| N | Non-ferrous | ☆ | | | | | | | | | |
| S | Superalloys | ☆ | ★ | | | | | | | | |
| H | Hard materials | | | | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | IC | LE | Coated | | S | D1 | RE | DCN | DCX | AN |
|----------------|-----|-----|--------|--------|------|-----|-----|------|------|----|
| | | | AH725 | AH6030 | | | | | | |
| XPMT040104R-DS | 4.3 | 4.5 | ● | ● | 1.59 | 2.3 | 0.4 | 12.5 | 14.5 | 11 |
| XPMT050204R-DS | 5.2 | 5.4 | ● | ● | 2.38 | 2.3 | 0.4 | 15 | 17 | 11 |
| XPMT06X308R-DS | 6 | 7 | ● | ● | 3 | 2.5 | 0.8 | 17.5 | 21.5 | 11 |
| XPMT07H308R-DS | 7 | 8.2 | ● | ● | 3.6 | 2.8 | 0.8 | 22 | 26 | 11 |

● : Line up

DW



| | | | | | | | | | | | |
|---|----------------|---|---|---|--|--|--|--|--|--|--|
| P | Steel | ☆ | ★ | ☆ | | | | | | | |
| M | Stainless | ☆ | ★ | ☆ | | | | | | | |
| K | Cast iron | | ☆ | ★ | | | | | | | |
| N | Non-ferrous | ☆ | ★ | | | | | | | | |
| S | Superalloys | ☆ | ★ | ☆ | | | | | | | |
| H | Hard materials | ☆ | ★ | ☆ | | | | | | | |

★ : First choice
☆ : Second choice

| Designation | IC | LE | Coated | | | S | D1 | RE | DCN | DCX | AN |
|----------------|-----|-----|--------|--------|--------|------|-----|-----|------|------|----|
| | | | AH725 | AH6030 | AH9030 | | | | | | |
| XPMT040104R-DW | 4.3 | 4.5 | ● | ● | ● | 1.59 | 2.3 | 0.4 | 12.5 | 14.5 | 11 |
| XPMT050204R-DW | 5.2 | 5.4 | ● | ● | ● | 2.38 | 2.3 | 0.4 | 15 | 17 | 11 |
| XPMT06X308R-DW | 6 | 7 | ● | ● | ● | 3 | 2.5 | 0.8 | 17.5 | 21.5 | 11 |
| XPMT07H308R-DW | 7 | 8.2 | ● | ● | ● | 3.6 | 2.8 | 0.8 | 22 | 26 | 11 |

● : Line up

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

RECOMMENDED INSERT

| ISO | Workpiece material | First choice | High feed | High speed | Troubleshooting | | | |
|-----|--|--------------|------------|------------|---------------------|-----------------|----------------|--------------|
| | | | | | Chipping resistance | Wear resistance | Surface finish | Chip control |
| P | Low carbon steels (C ≤ 0.3%) | DS, AH6030 | - | - | DS, AH725 | - | DW, AH6030 | DG, AH725 |
| | Carbon steels (C > 0.3%) Alloy steels | DJ, AH6030 | DW, AH6030 | DJ, AH9030 | DW, AH725 | DJ, AH9030 | DW, AH6030 | - |
| | Low alloy steels | DS, AH6030 | - | - | DS, AH725 | - | DW, AH6030 | - |
| M | Stainless steel | DS, AH6030 | - | - | DS, AH725 | - | DW, AH6030 | DG, AH725 |
| N | Aluminium alloy | DJ, AH725 | DW, AH725 | DS, AH6030 | - | - | DW, AH725 | DG, AH725 |
| S | Titanium alloys Heat-resistant alloys | DS, AH6030 | - | - | DW, AH725 | - | DW, AH725 | DG, AH725 |
| H | Hardened steel | DJ, AH9030 | DW, AH9030 | - | DW, AH725 | - | DW, AH9030 | - |

STANDARD CUTTING CONDITIONS

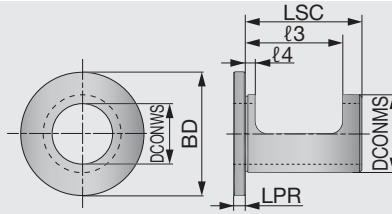
| ISO | Workpiece material | Cutting speed Vc (m/min) | Series L/D | Feed: f (mm/rev) | | |
|-----|--|-----------------------------|---------------|------------------|-------------|-------------|
| | | | | ø12.5 ~ ø14.5 | ø15 ~ ø17 | ø17.5 ~ ø26 |
| P | Low carbon steels (C < 0.3) SS400, SM490, S25C, etc. st42-1, St52-3, C25, etc. | 160 - 320 | 2D, 3D | 0.02 - 0.06 | 0.02 - 0.06 | 0.04 - 0.1 |
| | Carbon steels (C > 0.3) S45C, S55C, etc. C45, C55, etc. | 80 - 250 | 2D, 3D | 0.04 - 0.1 | 0.04 - 0.12 | 0.06 - 0.13 |
| | Low alloy steels SCM415, etc. | 160 - 250 | 2D, 3D | 0.04 - 0.08 | 0.04 - 0.08 | 0.06 - 0.12 |
| | Alloy steels SCM440, SCR420, etc. 42CrMo4, 20Cr4, etc. | 80 - 200 | 2D, 3D | 0.04 - 0.1 | 0.04 - 0.12 | 0.06 - 0.13 |
| M | Stainless steels (Austenitic) SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc. | 100 - 200 | 2D, 3D | 0.02 - 0.08 | 0.02 - 0.08 | 0.04 - 0.1 |
| | Stainless steels (Martensitic and ferritic) SUS430, SUS416, etc. X6Cr17, X20Cr13, etc. | 100 - 220 | 2D, 3D | 0.02 - 0.08 | 0.02 - 0.08 | 0.04 - 0.1 |
| | Stainless steels (Precipitation hardening) SUS630, etc. X5CrNiCuNb16-4, etc. | 80 - 120 | 2D, 3D | 0.04 - 0.08 | 0.04 - 0.08 | 0.04 - 0.08 |
| N | Aluminium alloy A2017, ADC12, etc. AlCu4SiMg, AlSi11Cu3, etc. | 200 - 400 | 2D, 3D | 0.1 - 0.12 | 0.1 - 0.15 | 0.15 - 0.2 |
| S | Heat-resistant alloys Inconel 718, etc. | 20 - 60 | 2D, 3D | 0.04 - 0.08 | 0.04 - 0.08 | 0.04 - 0.1 |
| | Titanium alloys Ti-6Al-4V, etc. | 40 - 120 | 2D, 3D | 0.06 - 0.1 | 0.06 - 0.1 | 0.06 - 0.12 |
| H | Hardened steel ≥ 40HRC | 40 - 100 | 2D, 3D | 0.04 - 0.08 | 0.04 - 0.08 | 0.04 - 0.1 |

When using the smaller side of the diameter range, the feed rate should be set lower.
 When using DW insert for work materials of 40 HRC, the feed rate should be set below 50%.
 For difficult-to-cut materials (heat-resistant alloys, etc.), the cutting speed should be set 25% below that of carbon steels.
 High speed machining means cutting speeds over 150 m/min.

For high-feed machining, apply a feed rate that is approximately 1.5 times the standard feed conditions.
 When using DW insert for troubleshooting, use it within the range of standard cutting conditions.
 DG type chipbreaker is suitable for heavy machines that have low-rpm spindles. If chatter occurs, a lower feed rate is recommended.

EZ sleeve

Eccentric sleeve for TungDrillTwisted



| Designation | DCONWS | DCONMS | BD | LSC | LPR | l3 | l4 | Hole diameter adjustment | Cutting edge height adjustment |
|-------------|--------|--------|----|-----|-----|------|----|--------------------------|--------------------------------|
| EZ2025 | 20 | 25 | 46 | 49 | 5 | 32.5 | 4 | +0.4 ~ -0.2 | +0.2 ~ -0.15 |
| EZ2532 | 25 | 32 | 51 | 52 | 5 | 38 | 4 | +0.4 ~ -0.2 | +0.2 ~ -0.15 |

SPARE PARTS

| Designation | Wrench |
|-------------|--------|
| EZ... | P-2.5 |

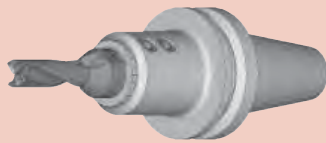
Use EZ sleeves for the following purposes

Hole diameter adjustment on the milling machine

Adjusting the finishing diameter when milling

Adjusting the finishing diameter in tool-rotating applications such as on machining centres and milling machines:

By using **EZ sleeve**, the finishing diameter can be adjusted in the range from **+0.6 mm to -0.2 mm**.



Scale for adjusting finishing diameter in milling (Periphery of sleeve)

Adjusting cutting edge height on lathe

Lathe

Adjusting of the cutting edge height in work rotating applications such as on lathes:

By using **EZ sleeve**, the cutting edge height can be adjusted in the range from **+0.3 mm to -0.2 mm**. It results in eliminating troubles caused by improper cutting-edge height.

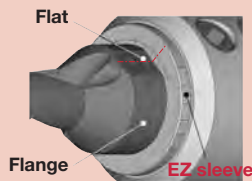


Scale for adjusting cutting edge height in turning (Front face of sleeve)

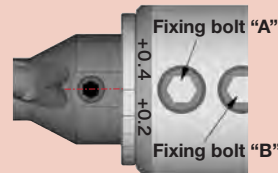
Setting of EZ sleeve

Hole diameter adjustment on the milling machine

As shown in the Figure right, set the EZ sleeve between the drill shank and the toolholder.

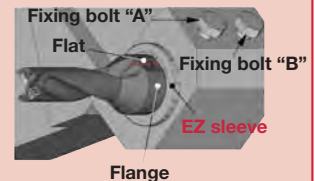


Align the graduated scale on the periphery of the EZ sleeve with the center of the flat of the drill flange. In the Figure shown right, the sleeve is set so that the finishing diameter will be increased by 0.4 mm.

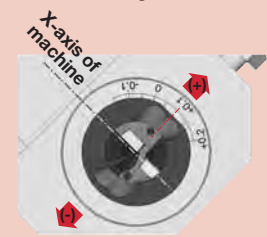


Adjusting cutting edge height on lathe

As shown in the Figure right, set the EZ sleeve between the drill shank and the toolblock.



Align the graduated scale on the front face of the Esleeve with the center of the flat of the drill flange. In the Figure shown right, the sleeve is set so that the center of the drill will shift by 0.1 mm to the plus (+) direction.



When rotating the EZ sleeve, insert the wrench into the hole at the flange periphery and rotate the EZ sleeve. Screws A + B have to be loosened. Secure the drill by screw A. Secure the EZ sleeve by lightly tightening screw B. Tighten screw B only lightly otherwise EZ sleeve can be damaged!

Cautious points

- The scale is only a rough guide, so be sure to measure the actual drilling diameter to confirm the result. Especially in turning, test machining is recommended as the drilling diameter will vary according to thread adjustment.
- Can not be used for collect chuck holders.
- For smaller adjustment, the drill itself will interfere with the hole diameter. It is recommended that hole diameter should be adjusted to a larger diameter than the drill diameter.

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference



Technical Reference

Technical Reference

The information of toolholder size and CNC Automatic lathes in Machine tool Builders

● CITIZEN MACHINERY CO., LTD. (Cincom)

| Machine type | Mountable tool post | | Turret tool post | | Front/Opposite sleeve tool post | Max. machining dia. |
|--------------|-------------------------|-------|------------------|------|---------------------------------|---------------------|
| | Tool holder size | QTY | Tool holder size | QTY | Sleeve size | |
| A12/16 | 10x10x120(60) | 5 | - | - | ø19.05(ø20) | ø12/ø16 |
| A20 | 12(13)x12(13)x120 | 5 | - | - | ø25/ø25.4 | ø20 |
| | 16x16x150 (Parting) | 1 | - | - | | |
| A20VII | 12x12x120 | 5 | - | - | ø25.4 | ø20 |
| | 16x16x150 (Parting) | 1 | - | - | | |
| A32 | 16x16x150 | 6 | - | - | ø25.4 | ø32 |
| B12 | 10x10x100 | 5 | - | - | ø19.05(ø20) | ø12 |
| B12E/B16E | 10x10x120(60) | 5 | - | - | ø19.05(ø20) | ø12/ø16 |
| B20 | 12(13)x12(13)x120 | 6 | - | - | ø19.05/ø20 | ø20 |
| BL12 | 10x10x60~120 | 5 | - | - | ø20(ø19.05) | ø12 |
| BL20/25 | 12(13)x12(13)x120 | 4~7 | - | - | ø20(ø19.05) | ø20/ø25 |
| C12/16 | 10x10x120 | 6 | - | - | ø19.05 | ø12/ø16 |
| C32 | 16x16x130 | 5 | - | - | ø25.4 | ø32 |
| D25 | 16x16x150 | 6 | - | - | ø25.4 | ø25 |
| | 20x20x150 (Parting) | 1 | - | - | | |
| F10 | - | - | 10x10x60 | 8 | ø19.05 | ø10 |
| F12 | - | - | 10x10x60 | 10 | ø19.05 | ø12 |
| F16 | - | - | 10x10x60 | 10 | ø19.05 | ø16 |
| F20 | - | - | 16(19)x16(13)x90 | 10 | ø25.4 | ø20 |
| F25 | - | - | 16(19)x16(13)x90 | 10 | ø25.4 | ø25 |
| FL25 | - | - | 16x16x90 | 12 | - | ø25 |
| FL42 | - | - | 16x16x90 | 12 | - | ø42 |
| G32 | - | - | 16(19)x16(19)x90 | 10 | - | ø32 |
| K12/16 | 12(10)x12(10)x100 | 6(7) | - | - | ø19.05(ø20) | ø12/ø16 |
| K12E/K16E | 12(10)x12(10)x130 | 6 | - | - | ø19.05(ø20) | ø12/ø16 |
| L10 | 8x8x100~130 | 5 | - | - | ø15.875 | ø10 |
| L12 | 10x10x100 | 6 | - | - | ø19.05 | ø12 |
| L16 | 12(10)x12(10)x130 | 5 | - | - | ø19.05 | ø16 |
| L20, L20E | 12x12x120 | 4 | - | - | ø19.05 | ø20 |
| | 16x16x150 (Parting) | 1 | - | - | | |
| L20X, L220 | 12(13,16)x12(13,16)x120 | 4~6 | - | - | ø19.05/ø25 | ø20 |
| | 16x16x150 (Parting) | 1 | - | - | | |
| L25 | 16x16x130 | 5 | - | - | ø25.4 | ø25 |
| L32 | 16x16x130 | 5 | - | - | ø25.4 | ø32 |
| M12 | 10x10x120 | 5 | 10x10x60 | 10+α | ø19.05 | ø12 |
| M16 | 10x10x120 | 5 | 10x10x60 | 10+α | ø19.05 | ø16 |
| M20 | 16x16x130 | 5 | 16x16x90 | 10+α | ø25.4 | ø20 |
| M32 | 16x16x130 | 5 | 16x16x90 | 10+α | ø25.4 | ø32 |
| MC20 | 13X13X120 | 2+2+2 | - | - | ø19.05/ø20 | ø20 |
| MSL12 | 10x10x120 | *) | - | - | - | ø12 |
| R04 | 8x8x120 | 5 | - | - | ø15.875 | ø4 |
| R07 | 8x8x120 | 5 | - | - | ø15.875 | ø7 |
| RL01 | 10(8)x10(8)x90 | *) | - | - | ø16(ø20) | ø10 |
| RL02 | 16x16x90 | *) | - | - | ø20 | ø20 |
| RL21 | 10(12)x10(12)x90 | *) | - | - | ø19.05 | ø35 |

*) Need teh specifications for machine

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Endmill

Drilling Tool

Technical Reference

Technical Reference

The information of toolholder size and CNC Automatic lathes in Machine tool Builders

● **CITIZEN MACHINERY CO., LTD. (Miyano)**

| Machine type | Mountable tool post | | Turret tool post | | Front/Opposite sleeve tool post | | Max. machining dia. |
|------------------|----------------------|-----|------------------|--------|---------------------------------|-------|---------------------|
| | Tool holder size | QTY | Tool holder size | QTY | Sleeve size | QTY | |
| ABX-51SY2+A2:A34 | - | - | 20x20x100 | 24 | ø25 | 48 | ø51 |
| ABX-51SYY2 | - | - | 20x20x100 | 24 | ø25 | 48 | ø51 |
| ABX-51TH5 | - | - | 20x20x100 | 36 | ø25 | 72 | ø51 |
| ABX-51THY2 | - | - | 20x20x100 | 36 | ø25 | 72 | ø51 |
| ABX-64SY2 | - | - | 20x20x100 | 24 | ø25 | 48 | ø64 |
| ABX-64SYY2 | - | - | 20x20x100 | 24 | ø25 | 48 | ø64 |
| ABX-64TH5 | - | - | 20x20x100 | 36 | ø25 | 72 | ø64 |
| ABX-64THY2 | - | - | 20x20x100 | 36 | ø25 | 72 | ø64 |
| BNA-34C | - | - | 20x20x100 | 8(16) | ø25 | 24 | ø34 |
| BNA-34DHY | - | - | 20x20x100 | 14(22) | ø25 | 27 | ø34 |
| BNA-34S | - | - | 20x20x100 | 8(16) | ø25 | 24 | ø34 |
| BNA-42C/C2 | - | - | 20x20x100 | 8(16) | ø25 | 24 | ø42 |
| BNA-42DHY | - | - | 20x20x100 | 14(22) | ø25 | 27 | ø42 |
| BNA-42DHY2 | - | - | 20x20x100 | 14(22) | ø25 | 27 | ø42 |
| BNA-42DHY3 | - | - | 20x20x100 | 14(22) | ø25 | 27 | ø42 |
| BNA-42GTY | 20 x 20 x | 3 | 20x20x100 | 8(16) | ø25 | 24(7) | ø42 |
| BNA-42MSY2 | - | - | 20x20x100 | 8(16) | ø25 | 24 | ø42 |
| BNA-42S/S2 | - | - | 20x20x100 | 8(16) | ø25 | 24 | ø42 |
| BNA-42C5/SY5 | - | - | 20x20x100 | 12(24) | ø25 | 24 | ø42 |
| BNC-42C7 | - | - | 20x20x100 | 8(16) | ø25 | 24 | ø42 |
| BND-51C2 | - | - | 20x20x100 | 12 | ø25 | 24 | ø51 |
| BND-51S2 | - | - | 20x20x100 | 12 | ø25 | 24 | ø51 |
| BND-51SY2 | - | - | 20x20x100 | 12 | ø25 | 24 | ø51 |
| BNE-42S6 | - | - | 20x20x100 | 24 | ø25 | 48 | ø42 |
| BNE-42SY6 | - | - | 20x20x100 | 24 | ø25 | 48 | ø42 |
| BNE-51S6 | - | - | 20x20x100 | 24 | ø25 | 48 | ø51 |
| BNE-51SY6 | - | - | 20x20x100 | 24 | ø25 | 48 | ø51 |
| BNE-51MSY | - | - | 20x20x100 | 24 | ø25 | 48 | ø51 |
| BNJ-34S3/S5 | - | - | 20x20x100 | 18 | ø25 | 30 | ø34 |
| BNJ-34SY3/SY5 | - | - | 20x20x100 | 18 | ø25 | 30 | ø34 |
| BNJ-42S3/S5 | - | - | 20x20x100 | 18 | ø25 | 30 | ø42 |
| BNJ-42S6 | - | - | 20x20x100 | 20 | ø25 | 40 | ø42 |
| BNJ-42SY3 | - | - | 20x20x100 | 18 | ø25 | 30 | ø42 |
| BNJ-42SY5 | - | - | 20x20x100 | 18 | ø25 | 30 | ø42 |
| BNJ-42SY6 | - | - | 20x20x100 | 20 | ø25 | 30 | ø42 |
| BNJ-51S3/S5 | - | - | 20x20x100 | *) | ø25 | 30 | ø51 |
| BNJ-51SY3/SY5 | - | - | 20x20x100 | *) | ø20 | 40 | ø51 |
| BNJ-51SY6 | - | - | 20x20x100 | *) | ø20 | 40 | ø51 |
| GN-3200 | 12(16)x12(16)x70~120 | 4~5 | - | - | ø20 | 4~5 | ø40 |
| GN-3200W | 12(16)x12(16)x70~120 | 4~5 | - | - | ø20 | 4~5 | ø40 |
| GN-4200 | 12(16)x12(16)x70~120 | 7~8 | - | - | ø20 | 7~8 | ø40 |
| LX-06E2 | - | - | 20x20x100 | 8 | ø32 | *) | 6 inch chuck |
| LX-06E3 | - | - | 20x20x100 | 8 | ø32 | *) | 6 inch chuck |
| LX-08C | - | - | 25x25x150 | 10 | ø40 | *) | 8 inch chuck |
| LX-08E2 | - | - | 25x25x150 | 8 | ø40 | *) | 8 inch chuck |
| LX-08E3 | - | - | 25x25x150 | 8 | ø40 | *) | 8 inch chuck |
| LX-08R | - | - | 20x20x100 | 10 | ø25 | *) | 8 inch chuck |
| LZ-01R2 | - | - | 20x20x100 | 12 | ø25 | *) | 6 inch chuck |
| LZ-01RY2 | - | - | 20x20x100 | 12 | ø25 | *) | 6 inch chuck |
| LZ-02R2 | - | - | 20x20x100 | 10 | ø25 | *) | 8 inch chuck |
| LZ-02RY2 | - | - | 20x20x100 | 10 | ø25 | *) | 8 inch chuck |
| RL01 III | 10x10x70~120 | 2~3 | - | - | ø16 | 2~3 | ø10 |
| RL01 V | 10x10x70~120 | 2~3 | - | - | ø16 | 2~3 | ø10 |
| RL03 | 12(16)x12(16)x70~120 | 4~5 | - | - | ø20 | 4~5 | ø40 |
| VC03 | 12(16)x12(16)x70~120 | 4~5 | - | - | ø20 | 4~5 | ø40 |

*) Need teh specifications for machine

Technical Reference

● STAR MICRONICS CO., LTD.

| Machine type | Mountable tool post | | Turret tool post | | Front/Opposite sleeve tool post | | Max. machining dia. | Note |
|------------------|-------------------------------|-----|----------------------------|----------|---------------------------------|-----|---------------------|---|
| | Tool holder size | QTY | Tool holder size | QTY | Sleeve size | QTY | | |
| ECAS-12 | 10x10x95~150 | 6 | - | - | ø22 | 4/4 | ø13 | |
| ECAS-20T | - | - | 16x16x60~78 16x16x80~88 | *) | ø22/ø32 | *) | ø20 | |
| ECAS-32T | - | - | 16x16x60~78 16x16x80~88 | 10 10 | ø22/ø32 | *) | ø32 | |
| JNC-10 | - | - | 8x8x65 | 6 | - | - | ø10 | |
| JNC-16 | - | - | 10x10x80 | 6 | - | - | ø16 | |
| JNC-25/32 | - | - | 10x10x78~120 | 10 | ø22 | *) | ø25/ø32 | |
| KJR-16B/25B | - | - | 16x16x78 | 12/16 | ø22/ø32 | *) | ø16/ø25 | |
| KNC-16/20 | - | - | 16x16x68 | 16 | ø22 | *) | ø16/ø20 | |
| KNC-25II / 32II | - | - | 16x16x78 | 20 | ø22/ø32 | *) | ø25/ø32 | |
| RNC-10 | 10x10x80~120 | 5 | - | - | ø22 | 3 | ø10/ø10 | |
| RNC-16 | 10x10x80~120 | 5 | - | - | ø22 | 3 | ø16 | |
| SA-16R | 10x10x95~120 | 6 | - | - | ø22 | 4/4 | ø16 | |
| SB-16 (A/C/D/E) | 12x12x95~130 | 5 | - | - | ø22/(ø22) | 4/4 | ø16 | The back sleeve D / E only |
| | 10x10x95~130 | 6 | - | - | | | | |
| SB-12 II (C/E) | 12x12x95~130 | 6 | - | - | ø22/(ø22) | 4/4 | ø13 | |
| SB-16 II (C/E) | 12x12x95~130 | 6 | - | - | ø22/(ø22) | 4/4 | ø16 | The back sleeve E only |
| | 10x10x95~130 | 6 | - | - | | | | |
| SB-20 A/C/E | 12x12x95~130 | 6 | - | - | ø22/ø22 | 4/4 | ø20 | |
| SB-12R TypeG | 12x12x95~130 | 6 | - | - | ø22/ø22 | 4/4 | ø13 | |
| | 10x10x95~130 | 7 | - | - | | | | |
| SB-16 III | 12x12x95~130 | 5 | - | - | ø22/ø22 | 4/4 | ø16 | |
| | 10x10x95~130 | 6 | - | - | | | | |
| SB16R/20R TypeN | 12x12x95~130 | 6 | - | - | ø22/ø22 | 4/4 | ø16/ø23 | |
| | 10x10x95~130 | 7 | - | - | | | | |
| SB16R/20R TypeG | 12x12x95~130 | 6 | - | - | ø22/ø22 | 4/4 | ø16/ø23 | |
| | 10x10x95~130 | 7 | - | - | | | | |
| SB16R/20R TypeGB | 12x12x95~130 | 6 | - | - | ø22/ø22 | 4/4 | ø16/ø23 | |
| | 10x10x95~130 | 7 | - | - | | | | |
| SC20 | 12x12x95~130 | 5 | - | - | ø22/- | 4/4 | ø20 | |
| | 10x10x95~130 | 6 | - | - | | | | |
| SE-12B/16B | 10x10x95~120 | 5 | - | - | ø22 | 3/3 | ø13/ø16 | |
| SG-42 | - | - | 16x16x84~88 | *) | ø22/ø32 | *) | ø42 | |
| | | | 16x16x71~82 | *) | | | ø42 | |
| | | | 20x20x84~88 | *) | | | ø42 | |
| SH-7 | 8x8x95~120 | 5 | - | - | ø22 | 3 | ø7 | |
| SH-12/16 | 10x10x95~120 | 5 | - | - | ø22 | 3 | ø13/ø16 | |
| SR-10J | 8x8x67~110 Spacer required | 6 | - | - | ø16 | 4 | ø10 | |
| SR-20R II | 12x12x100~135 | 6 | - | - | ø22/ø22 | 4/4 | ø23 | As a front side correspondence For deep hole machining 2 can be supported |
| SR-20R III | 12x12x95~135 | 6 | - | - | ø22/ø22 | 6/4 | ø23 | |
| SR-20J TypeC | 12x12x95~135 | 6 | - | - | ø22/ø22 | 6/4 | ø23 | |
| SR-20J TypeN | 12x12x95~135 | 6 | - | - | ø22/ø22 | 6/4 | ø23 | |
| SR-20J II TypeA | 12x12x100~135 | 6 | - | - | ø22/ø22 | 7/4 | ø23 | |
| SR-20J II TypeB | 12x12x100~135 | 6 | - | - | ø22/ø22 | 7/8 | ø23 | |
| SR-20 IV TypeA | 12x12x100~130 | 7 | - | - | ø22/ø22 | 6/8 | ø23 | |
| SR-20 IV TypeB | 12x12x100~130 | 7 | - | - | ø22/ø22 | 6/8 | ø23 | |
| SR-25J/32J | 16x16x95~155 | 6 | - | - | ø22+ø32/ø22 | 4/4 | ø32 | |
| SR-32J II TypeA | 16x16x95~165 | 6 | - | - | ø22+ø32/ø22 | 5/8 | ø34 | |
| SR-32J II TypeB | 16x16x95~165 | 6 | - | - | ø22+ø32/ø22 | 5/8 | ø34 | |
| SR-38 TypeA | 16x16x95~135 | 4 | - | - | ø22+ø32 | 5/8 | ø38 | |
| | 16x16x100 | 2 | - | - | | | | |
| | 20x20x105~135 (Parting) | 1 | - | - | | | | |
| SR-38 TypeB | 16x16x95~135 | 4 | - | - | ø22+ø32 | 5/8 | ø38 | |
| | 16x16x100 | 2 | - | - | | | | |

*) Need teh specifications for machine

Technical Reference

The information of toolholder size and CNC Automatic lathes in Machine tool Builders

● STAR MICRONICS CO., LTD.

| Machine type | Mountable tool post | | Turret tool post | | Front/Opposite sleeve tool post | | Max. machining dia. | Note |
|--------------|-------------------------|-----|-----------------------|-----|---------------------------------|-----|---------------------|------|
| | Tool holder size | QTY | Tool holder size | QTY | Sleeve size | QTY | | |
| SR-38 TypeB | 20x20x105~135 (Parting) | 1 | - | - | ø22+ø32 | 5/8 | ø38 | |
| SR-38J | 16x16x95~135 | 4 | - | - | ø22+ø32 | 5/4 | ø38 | |
| | 16x16x95~135 (Option) | 3 | | | | | | |
| | 20x20x105~135 (Parting) | 1 | | | | | | |
| ST-20 | - | - | 12x12x73~79(3POST) | *) | ø22/ø32 | *) | ø20 | |
| | | | 12x12x65~73 (Parting) | *) | | | | |
| | | | 16x16x64~73 | *) | | | | |
| | | | 16x16x65~73 (Parting) | *) | | | | |
| ST-38 | - | - | 16x16x83~88(2POST) | *) | ø22/ø32 | *) | ø38 | |
| | | | 16x16x71~82 | *) | | | | |
| | | | 16x16x84~88 (Parting) | *) | | | | |
| | | | 20x20x84~88 | *) | | | | |
| SV-20R | 12x12x95~135 | 7 | 12x12x70~78 | *) | ø22/ø32 | -/8 | ø23 | |
| | 16x16x95~135 | 6 | 16x16x65~70 | *) | | | | |
| SV-38R | 16x16x105~135 | 4 | 16x16x84~88 | *) | ø22/ø32 | -/8 | ø38 | |
| | 20x20x105~135 (Parting) | 1 | 16x16x71~82 | *) | | | | |
| SX-38 TypeA | - | - | 20x20x84~88 | *) | ø22/ø32 | -/8 | ø38 | |
| | 16x16x95~135 | 4 | 16x16x84~88 | *) | | | | |
| | 20x20x105~135 (Parting) | 1 | 16x16x71~82 | *) | | | | |
| SX-38 TypeB | - | - | 20x20x84~88 | *) | ø22/ø32 | -/8 | ø38 | |
| | 16x16x95~135 | 4 | 16x16x84~88 | *) | | | | |
| SV-12/20 | 12x12x95~135 | | 12x12x70~78 | *) | ø22/ø32 | | ø12/ø20 | |
| | 16x16x95~135 | | 16x16x65~70 | *) | | | | |
| SV-32 | 16x16x95~135 | 4 | 16x16x60~78 | *) | ø22/ø32 | | ø32 | |
| | | | 16x16x80~88 | *) | | | | |
| SW-7 | 8x8x80~120 | 6 | - | - | | 4/4 | ø7 | |
| SW-12R II | 10x10x95~115 | 7 | - | - | ø16/ø16+ø22 | 4/8 | ø13 | |
| SW-20 | 12x12x80~150 | 6 | - | - | ø22 | 4/8 | ø23 | |
| | 16x16x80~144 | 6 | - | - | | | | |

*) Need teh specifications for machine

● TSUGAMI CORPORATION

| Machine type | Mountable tool post | | Turret tool post | | Front/Opposite sleeve tool post | | Max. machining dia. |
|---------------------------|---------------------|-----|------------------|-----|---------------------------------|--------|---------------------|
| | Tool holder size | QTY | Tool holder size | QTY | Sleeve size | QTY | |
| B073-II/B073-III | 8x8x85 | 9 | - | - | ø20/- | 4/- | ø7 |
| B074-II/B074-III/B075-III | 8x8x85 | 9 | - | - | ø20/ø20 | 4/4(8) | ø7 |
| B0123-II/B0123-III | 12x12x85 | 9 | - | - | ø20/- | 4/- | ø12 |
| B0124/125/126-II, III | 12x12x85 | 9 | - | - | ø20/ø20 | 4/4(8) | ø12 |
| B0128W | 12x12x85 | 9 | - | - | ø20/ø20 | 4/8 | ø12 |
| B0203-II/B0203-III | 12x12x85 | 9 | - | - | ø20/- | 4/- | ø20 |
| B0204/205/206-II, III | 12x12x85 | 9 | - | - | ø20/ø20 | 4/4(8) | ø20 |
| B0208W | 12x12x85 | 9 | - | - | ø20/ø20 | 4/8 | ø20 |
| BM163-III | 12x12x85 | 9 | - | - | ø20/- | 4/- | ø16 |
| BM164/165III | 12x12x85 | 9 | - | - | ø20/ø20 | 4/4(8) | ø16 |
| BW127J- I/II | 12x12x85 | 7 | - | - | ø20/ø20 | 3/9 | ø20 |
| BW128J- I/II | 12x12x85 | 7 | - | - | ø20/ø20 | 3/9 | ø20 |
| BW128ZJ- I/II | 12x12x85 | 7 | - | - | ø20/ø20 | 3/9 | ø20 |
| BW129ZJ- I/II | 12x12x85 | 7 | - | - | ø20/ø20 | 3/9 | ø20 |

*) Need teh specifications for machine

Technical Reference

● TSUGAMI CORPORATION

| Machine type | Mountable tool post | | Turret tool post | | Front/Opposite sleeve tool post | | Max. machining dia. |
|--------------------------------|---------------------|------|------------------|-----------|---------------------------------|--------|---------------------|
| | Tool holder size | QTY | Tool holder size | QTY | Sleeve size | QTY | |
| BW207J- I/II | 12x12x85/16X16X85 | 5/2 | - | - | ø20/ø20 | 3/9 | ø20 |
| BW208J- I/II | 12x12x85/16X16X85 | 5/2 | - | - | ø20/ø20 | 3/9 | ø20 |
| BW208ZJ- I/II | 12x12x85/16X16X85 | 5/2 | - | - | ø20/ø20 | 3/9 | ø20 |
| BW209ZJ- I/II | 12x12x85/16X16X85 | 5/2 | - | - | ø20/ø20 | 3/9 | ø20 |
| B0265/266-II, III | 16x16x100 | 12 | - | - | ø25/ø25 | 5/4 | ø26 |
| B0325/326-II, III | 16x16x100 | 12 | - | - | ø25/ø25 | 5/4 | ø32 |
| B0385/385L | 20x20x125 | 8 | - | - | ø32/ø32 | 3/5 | ø38 |
| B0265/266-III, B0266/326-III | 16x16x100 | 12 | - | - | ø25/ø25 | 5/4 | ø26/ø32 |
| B0265/325V-III, B0266/326V-III | 16x16x100 | 6 | - | - | ø25/ø25 | 5/4 | ø26/ø32 |
| B0385/385L/386/386L-III | 16x16x100/20x20x125 | 11/1 | - | - | ø32,ø25/ø32 | 3,2/5 | ø38 |
| B0385/6(L)V-III | 16x16x100/20x20x125 | 5/1 | - | - | ø32,ø25/ø32 | 3,2/5 | ø38 |
| B038T | - | - | 20x20x125 | 8 sides | ø32/ø25 | *) | ø38 |
| BH20/BH20Z | 12x12x85 | 4 | 12x12x85 | 12 sides | ø25/ø32 | *) | ø20 |
| BH38 | 16x16x125 | 5 | 20x20x125 | 12 sides | ø25/ø32 | *) | ø38.1 |
| C150/CH154 | 12x12x60~100 | 4~6 | - | - | - | - | ø80 |
| C180 | 12x12x60~100 | 4~6 | - | - | - | - | ø120 |
| C220/220T | 12x12x60~100 | 6~8 | - | - | - | - | ø120 |
| C300-IV | 16x16x100~130 | 6~10 | - | - | - | - | ø165 |
| C300H | 16x16x100~130 | 6~10 | - | - | - | - | ø165 |
| P013 | 8x8x100~120 | 6 | - | - | ø16/- | 3/- | ø1 |
| P014 | 8x8x100~120 | 6 | - | - | ø16/ø16 | 3/3 | ø1 |
| P033 | 8x8x100~120 | 6 | - | - | ø16/- | 3/- | ø3 |
| P034 | 8x8x100~120 | 6 | - | - | ø16/ø16 | 3/3 | ø3 |
| S205/206/SS207 | 12x12x100 | 8 | - | - | ø22/ø20 | 5/4 | ø20 |
| S205/206- II | 12x12x100 | 9 | - | - | ø25/ø25 | 7/4(8) | ø20 |
| SS207/SS207-5AX | 12x12x100 | 8 | - | - | ø22/ø20 | 4/4 | ø20 |
| SS26 | 16x16x100 | 7 | - | - | ø22/ø20 | 5/3 | ø26 |
| SS32/32L | 16x16x100 | 7 | - | - | ø22/ø20 | 5/3 | ø32 |
| SS267/SS267-5AX | 16x16x100 | 8 | - | - | ø25/ø25 | 4/4 | ø26 |
| SS327/SS327-5AX | 16x16x100 | 8 | - | - | ø25/ø25 | 4/4 | ø32 |
| BW269ZJ | 16x16x100 | 7 | - | - | ø25/ø25 | 5/(8) | ø26 |
| BW329ZJ | 16x16x100 | 7 | - | - | ø25/ø25 | 5/(8) | ø32 |
| MB25 | - | - | 20x20x90 | 2x8 sides | ø20/ø32 | 5/4 | ø25 |
| M06JC-II | - | - | 20x20x125 | 8 sides | ø25 | *) | ø220/ø42 |
| M06J-II | - | - | 20x20x150 | 8 sides | ø32/ø40 | *) | ø280/ø51 |
| M08J-II | - | - | 20x20x150 | 8 sides | ø32/ø40 | *) | ø280/ø85 |
| M08JL5-II | - | - | 20x20x150 | 8 sides | ø32/ø40 | *) | ø280/ø85 |
| M08JL8-II | - | - | 20x20x150 | 8 sides | ø32/ø40 | *) | ø280/ø85 |
| M06D-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø51 |
| M08D-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø85 |
| M06DY-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø51 |
| M08DY-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø85 |
| M06SJ-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø51 |
| M08SJ-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø85 |
| M06SD-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø51 |
| M08SD-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø85 |
| M06SY-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø51 |
| M08SY-II | - | - | 20x20x150 | 12 sides | ø40 | *) | ø280/ø85 |
| TMU1 | 20x20x100~125 | 1 | 20x20x125 | 16 sides | ø32/ø32 | *) | ø38 |
| TMB2 | 20x20x100~125 | 1 | 20x20x125 | 16 sides | ø32/ø32 | *) | ø51 |
| TMA8F | 20x20x100~125 | 1 | - | - | ø32/ø32 | *) | ø85 |
| TMA8J | 20x20x100~125 | 1 | - | - | ø32/ø32 | *) | ø85 |
| TMA8H | 20x20x100~125 | 1 | - | - | ø32/ø32 | *) | ø85 |

*) Need teh specifications for machine

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