

**DORMER PRAMET**

**GL GROOVING  
AND PARTING-OFF**

2023.2





# NEW HSS PRODUCTS

Discover the Tools of Tomorrow: Unveiling our Next Brochure Filled with Cutting-Edge HSS Drills, Taps, and Broken Screw Extractors.

**DORMER PRAMET**

**NEW HSS PRODUCTS 2023.2**

**GL AN**

**DORMER**

*HSS Spiral Point Power Tool Tap, Metric, ISO Standard*  
Ideal for hand held tapping with the use of Power Tools. Suited for through holes only the spiral point prevents the outer ahead of the cutting edge, thus reducing loading and chipping in the flutes. The bright finish improves the chip flow and prevents chip welding.

*HSS Spiral Flute Power Tool Tap, Metric, ISO Standard*  
Ideal for hand held tapping with the use of Power Tools. Tapping typically produces long stringy chips which, when not cleared, causes serious problems especially when threading blind holes. The spiral flute design counters this problem as it breaks...

**Values for cutting speed (m/min).**

| P2.2 | P3.1 | P3.2    |      |      |
|------|------|---------|------|------|
| 9    | 8    | 5       |      |      |
| OAL  | THL  | DCON MS | WSC  | LSC  |
| (mm) | (mm) | (mm)    | (mm) | (mm) |
| 10   | 11   | 3.15    | 2.50 | 5    |
| 12   | 13   | 4.00    | 3.15 | 6    |
| 14   | 16   | 5.00    | 4.00 | 7    |
| 16   | 19   | 6.30    | 5.00 | 8    |
| 18   | 22   | 8.00    | 6.30 | 9    |
| 20   | 24   | 10.00   | 8.00 | 11   |
| 22   | 29   | 9.00    | 7.10 | 10   |

**Values for cutting speed (m/min).**

| P3.1 | P3.2    |      |
|------|---------|------|
| 8    | 5       |      |
| THL  | DCON MS | WSC  |
| (mm) | (mm)    | (mm) |
| 6    | 3.15    |      |
| 8    | 4.00    |      |
| 10   | 5.00    |      |
| 12   | 6.30    |      |
| 15   | 8.00    |      |
| 18   | 10.00   |      |
| 21   | 9       |      |

|    |                      |  |  |
|----|----------------------|--|--|
| 2  | <b>NEWS</b>          | <b>GLAF</b>                            | <b>HIGH-PRESSURE COOLANT TOOLS</b>             |
| 5  |                      | <b>GLAG</b>                            | <b>INTERNAL GROOVING TOOLS</b>                 |
| 6  |                      | <b>GLSF L-R/R-L</b><br><b>GLSG R-R</b> | <b>FACE GROOVING TOOLS</b>                     |
| 7  |                      | <b>GL. S</b>                           | <b>SINGLE SIDED INSERTS</b>                    |
| 8  | <b>PRODUCT PAGES</b> |  | <b>EXTERNAL GROOVING AND PARTING-OFF TOOLS</b> |
| 20 |                      |  | <b>PARTING-OFF BLADES</b>                      |
| 26 |                      |  | <b>INTERNAL GROOVING TOOLS</b>                 |
| 26 |                      |  | <b>FACE GROOVING TOOLS</b>                     |
| 34 |                      |  | <b>INSERTS</b>                                 |
| 39 |                      |  | <b>CODES &amp; INSTRUCTIONS</b>                |
| 43 |                      |  | <b>TECHNICAL SECTION</b>                       |



**GLAF**

## HIGH-PRESSURE COOLANT TOOLS

### INTRODUCTION



The Pramet GL assortment for parting and grooving applications has been expanded with a range of high-pressure capable internal coolant tools. Additions include external tools GLAF and tools for sliding head machines GLAF-S, providing further options for highly productive machining. Always consider influence of coolant pressure (max. up to 140 Bar), generally speaking: the higher the pressure, the more increased tool life and improved chip-forming.





**GLAF**

- Productive parting & grooving
- Shank sizes: 20 × 20, 25 × 25 mm
- Insert range: GL2 – GL6




**GLAF-S**

- For sliding head machines
- Shank sizes: 12 × 12, 16 × 16 mm
- Insert range: GL2 – GL4



## PARTING & GROOVING TOOLS

### FEATURES AND BENEFITS

GLAF tools available with shank sizes  
12 × 12 – 25 × 25 mm for pocket sizes GL2 – GL6.



**WIDE PRODUCT RANGE**  
with top performance pocket design.

Maximum cutting depth (CDX) up to 40 mm  
for extra reach.



**DEEP PARTING,**  
available with versatile GL range.

Top and bottom internal coolant supply aimed  
precisely to the cutting edge reduce friction and heat.



**LONG AND STABLE TOOL LIFE**  
with reliable cutting edge wear progress.

Delivers higher coolant pressure for demanding  
operations. (max. 140 Bar)



**HIGH PRODUCTIVITY,**  
short chips and improved evacuation.

Variable coolant connections available.



**SIMPLE AND VERSATILE**  
for all types of machines.

### COMPARISON OF INTERNAL / EXTERNAL COOLING

Workpiece: Tube (D = 30 mm, wall thickness 6 mm)  
Material: X2CrNiMo 17-2-2 / 316L (170 HB)  
Cutter: GL3-D300M02-PM:G8330  
Coolant: Yes (external/internal)



WMG M3.1

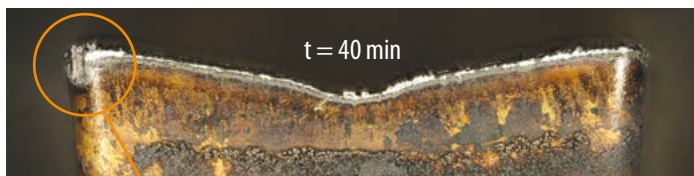
#### Cutting conditions

| $v_c$ | $f_n$ | CW | CD |
|-------|-------|----|----|
| 130   | 0.11  | 3  | 6  |

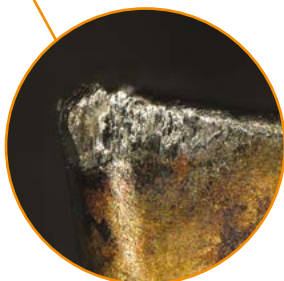
$v_c$  = cutting speed (m/min),  $f_n$  = feed per revolution (mm), CW = cutting width (mm), CD = cutting depth (mm)

Tool: GL3-S2525PFR-32-80

External hose coolant 15 bar

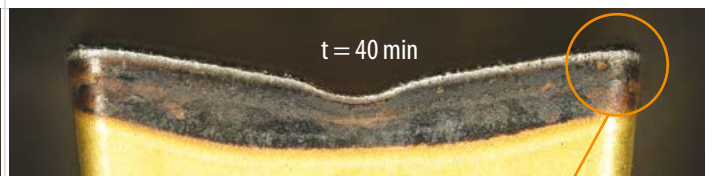


t = 40 min

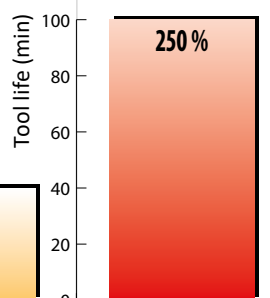
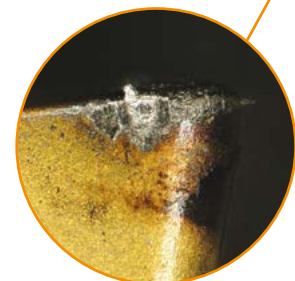


Tool: GL3-A2525PFR-32-80

Internal coolant 15 bar



t = 40 min





## SUCCESS STORIES – GLAF

|                          |  |
|--------------------------|--|
| <b>Machine:</b>          | Doosan Puma GT2100N  |
| <b>Component:</b>        | Hydraulic sealant cover  |
| <b>Material:</b>         | 1.4305 / M3.1 (Stainless steel, 165 HB)  |
| <b>Coolant:</b>          | Internal and external,<br>9 Bar soluble oil emulsion (~ 10%)   |
| <b>Application:</b>      | External radial grooving<br>and finishing turning ( $a_p = 0.1$ mm)  |
| <b>Previous results:</b> | Customer had two separate operations for grooving<br>and finishing turning. Grooving tool had tool life of<br>one cutting edge ~ 22 pieces |

**Result with GLAF:** Applying the new technology of high-pressure coolant and Pramet GL inserts, the customer was able to finish 30 pieces, while also lowering idle time by replacing finishing operation by the Pramet GL tools.

| Dormer Pramet solution |                      |    |      |
|------------------------|----------------------|----|------|
| Tool:                  | GL3-A2525MFR-20-80   |    |      |
| Insert:                | GL3-D300M02-PM:G8330 |    |      |
| Machining data         |                      |    |      |
| $v_c$                  | $f_n$                | CW | CD   |
| 140                    | 0.1                  | 3  | 10.5 |



WMG M3.1

|                          |  |
|--------------------------|--|
| <b>Machine:</b>          | Sliding head machine Tornos  |
| <b>Component:</b>        | Special screw  |
| <b>Material:</b>         | Inconel A286 / S2.2 (Fe-based super alloy, 270 HB)   |
| <b>Coolant:</b>          | Internal and External, Oil cooling / lubrication   |
| <b>Application:</b>      | External grooving and parting-off  |
| <b>Previous results:</b> | With competitors high pressure coolant tool and<br>double-sided grooving insert, customer was able to<br>finish 30 screws by one cutting edge. |

**Result with GLAF:** Customer increased tool life with Pramet GL up to 40 pieces (+33%) compared to previous competitor solution.

| Dormer Pramet solution |                      |    |     |
|------------------------|----------------------|----|-----|
| Tool:                  | GL3-A1616KFL-16-45   |    |     |
| Insert:                | GL3-D300M02-PM:G8330 |    |     |
| Machining data         |                      |    |     |
| $v_c$                  | $f_n$                | CW | CD  |
| 35                     | 0.1                  | 3  | 7.5 |



WMG S2.2

|                          |   |
|--------------------------|---|
| <b>Machine:</b>          | Sliding head machine Manhurin KMX 532   |
| <b>Component:</b>        | Guiding roll  |
| <b>Material:</b>         | 1.4301 / M3.1 (Stainless steel, 160 HB)   |
| <b>Coolant:</b>          | Internal, 50 Bar soluble oil emulsion (~ 10%)   |
| <b>Application:</b>      | Longitudinal turning, grooving and parting-off  |
| <b>Previous results:</b> | Customer complaint was of inconsistent chip<br>control which led to excessive machine downtime. |

**Result with GLAF:** Pramet GL solution improved tool life by 65% and also improved chip forming to increase machine uptime.

| Dormer Pramet solution |                      |    |     |
|------------------------|----------------------|----|-----|
| Tool:                  | GL4-A1616KFR-16-45   |    |     |
| Insert:                | GL4-D400M02-GM:G8330 |    |     |
| Machining data         |                      |    |     |
| $v_c$                  | $f_n$                | CW | CD  |
| 220                    | 0.12                 | 4  | 3.5 |



WMG M3.1



GLAG

## INTERNAL GROOVING TOOLS WITH COOLANT

### INTRODUCTION



A new line of boring bars for internal grooving with GL inserts was released. The reinforced design of the blade ensures excellent stability during cutting and provides high precision even at high cutting speeds. The GL seating place is compatible with multiple insert styles, offering customers versatility and flexibility in their operations. The grooving diameter range starts from 32 mm, making it suitable for a wide range of applications.

 **PRAMET**



GLAG

- Internal grooving
- Shank diameters:  
25, 32, 40 mm
- Insert range: GL2 – GL4



GLSF L-R/R-L  
GLSG R-R

## FACE GROOVING TOOLS

### INTRODUCTION



Dormer Pramet has expanded its range of Pramet GL grooving tools with three new families of tools for face grooving. The new tools include two axial types for right-hand or left-hand lathe rotation, and a radial 90° type for left-hand lathe rotation. All tools feature a reinforced blade and a robust design of the seating place, ensuring reliable security during demanding deep face grooving operations.

 **PRAMET**





**GLSF-R**

- Right handed, axial tool
- Shank sizes:  
20 × 20, 25 × 25, 32 × 32 mm
- Insert range: GL3 – GL6




**GLSF-L**

- Left handed, axial tool
- Shank sizes:  
25 × 25, 32 × 32 mm
- Insert range: GL3 – GL6




**GLSG-R**

- Right handed, 90° tool
- Shank sizes: 25 × 25 mm
- Insert range: GL3 – GL4





GL. S

## SINGLE SIDED INSERTS

### INTRODUCTION



The range of Pramet GL inserts was expanded by single-sided long inserts GL. S, designed for extra deep grooving and parting-off operations. Featuring a single cutting edge, these inserts are particularly useful in applications where surface quality on the face of the parted-off bar is critical. The absence of a secondary cutting edge prevents unintentional scratching of the surface while grooving deeper than 24 mm.

 **PRAMET**



GL. S-PM

- Sharp geometry
- Deep parting-off
- Soft steels, stainless steels
- Stable cutting



GL. S-PR

- Strong geometry
- Deep grooving
- Steels, cast irons
- Unstable cutting



EXTERNAL TOOLS NAVIGATOR

| INSERT SEAT  | GL1                          | GL2               | GL3                               | GL4                               | GL5               | GL6               |                      |
|--|------------------------------|-------------------|-----------------------------------|-----------------------------------|-------------------|-------------------|----------------------|
| <b>NEW</b><br><b>GLAF(RL)EXT</b><br>                           |                              | <br>CDX 20mm      | <br>CDX 20 - 40mm                 | <br>CDX 20 - 32mm                 | <br>CDX 24 - 32mm | <br>CDX 24 - 32mm |                      |
| <b>NEW</b><br><b>GLAF(RL)EXT-S</b><br>                         |                              | <br>CDX 12 - 16mm | <br>CDX 12 - 16mm                 | <br>CDX 16mm                      |                   |                   |                      |
| <b>GLSF(RL)EXT</b><br>   | <br>CDX 16mm <b>NEW</b>      | <br>CDX 20 - 24mm | <br>CDX 20 - 32mm                 | <br>CDX 20 - 32mm                 | <br>CDX 20 - 32mm | <br>CDX 20 - 32mm |                      |
| <b>GLSF(RL)EXT-S</b><br>                                       | <br>CDX 12 - 16mm <b>NEW</b> | <br>CDX 12 - 16mm | <br>CDX 12 - 16mm                 | <br>CDX 16mm                      |                   |                   |                      |
| <b>GLSF(RL)EXT-G</b><br>                                       |                              | <br>CDX 10mm      | <br>CDX 10 - 20mm                 | <br>CDX 12 - 24mm                 | <br>CDX 12 - 32mm | <br>CDX 12 - 32mm |                      |
| <b>Cutting width (mm)</b>                                      | 1.5                          | 2                 | 3 (2.5)                           | 4                                 | 5                 | 6                 | 8                    |
| <b>NEW</b><br><b>Deep parting-off</b><br>(single sided insert) |                              |                   | <br>SINGLE SIDED INSERT<br>PM  PR | <br>SINGLE SIDED INSERT<br>PM  PR |                   |                   |                      |
| <b>Parting-off</b><br>(tube / full bar)                        | <br><b>NEW</b><br>PM         | <br>PM  PR        | <br>CW = 2.5 / 3<br>PM  PR        | <br>PM  PR                        | <br>PM  PR        | <br>PM  PR        |                      |
| <b>Grooving</b><br>(deep / shallow)                            |                              | <br>PR  GM        | <br>PR  GM                        | <br>PR  GM                        | <br>PR  GM        | <br>GM            | <br><b>NEW</b><br>GM |
| <b>Turning</b><br>(longitudinal)                               |                              | <br>GM            | <br>GM                            | <br>GM                            | <br>GM            | <br>GM            | <br><b>NEW</b><br>GM |
| <b>Profiling</b><br>(multiaxial)                               |                              | <br>MM            | <br>MM                            | <br>MM                            | <br>MM            | <br>MM            |                      |

**NEW**



**GLAF(RL) EXT**



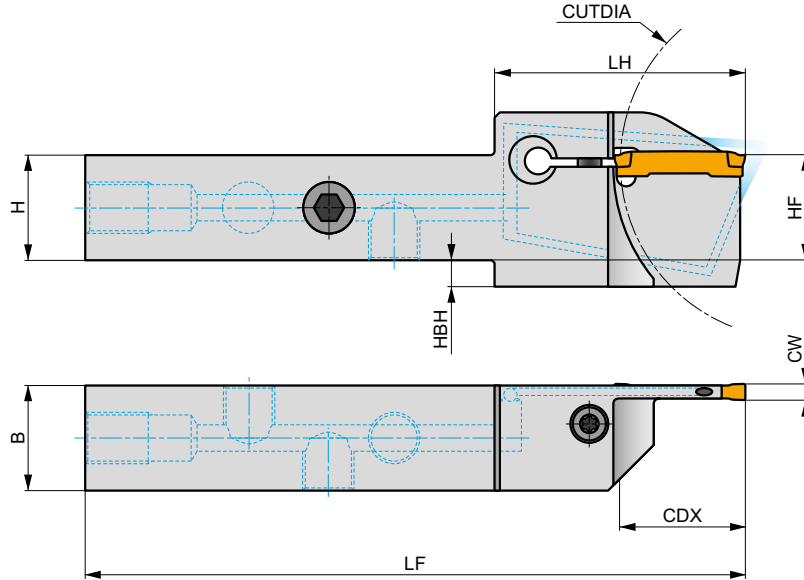
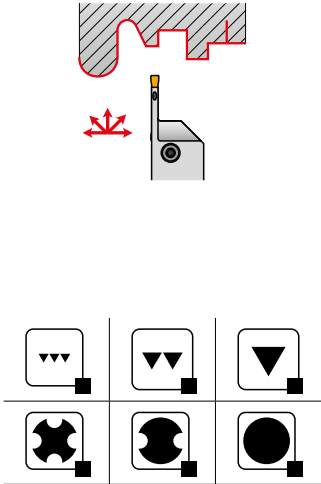
PRAMET

G



**Grooving and Parting-Off tool with internal coolant for GL Inserts**

External Right/Left handed tool holder with internal coolant for GL inserts. Suited for radial grooving, parting-off, turning and profiling applications. Reinforced body design for longer tool life and low vibrations. Body treated for longer tool life.



| Product                             | HF   | HBH  | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA |   | kg   |       |      |      |
|-------------------------------------|------|------|------|------|------|------|------|------|--------|---|------|-------|------|------|
|                                     | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |   |      |       |      |      |
| <b>GL2-A2020KFR-20-80</b>           | 20   | 5    | 20   | 20   | 125  | 43.5 | 2.00 | 20   | 80     | ✓ | 0.33 | GI334 | GL11 | CC01 |
| <b>GL2-A2525MFR-20-80</b>           | 25   | —    | 25   | 25   | 150  | 43.5 | 2.00 | 20   | 80     | ✓ | 0.65 | GI334 | GL11 | CC01 |
| <b>GL3-A2020KFR-20-80</b>           | 20   | 5    | 20   | 20   | 125  | 43.5 | 3.00 | 20   | 80     | ✓ | 0.33 | GI335 | GL11 | CC01 |
| <b>GL3-A2020KFR-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.5 | 3.00 | 24   | 80     | ✓ | 0.32 | GI335 | GL11 | CC01 |
| <b>GL3-A2525MFR-20-80</b>           | 25   | —    | 25   | 25   | 150  | 43.5 | 3.00 | 20   | 80     | ✓ | 0.66 | GI335 | GL11 | CC01 |
| <b>GL3-A2525PFR-32-80</b>           | 25   | 5    | 25   | 25   | 170  | 55.5 | 3.00 | 32   | 80     | ✓ | 0.73 | GI335 | GL11 | CC01 |
| <b>GL3-A2525PFR-40-100</b>          | 25   | 7    | 25   | 25   | 170  | 63.5 | 3.00 | 40   | 100    | ✓ | 0.70 | GI335 | GL11 | CC01 |
| <b>R</b> <b>GL4-A2020KFR-20-80</b>  | 20   | 5    | 20   | 20   | 125  | 43.6 | 4.00 | 20   | 80     | ✓ | 0.38 | GI336 | GL11 | CC01 |
| <b>GL4-A2020KFR-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.6 | 4.00 | 24   | 80     | ✓ | 0.37 | GI336 | GL11 | CC01 |
| <b>GL4-A2525MFR-20-80</b>           | 25   | —    | 25   | 25   | 150  | 43.6 | 4.00 | 20   | 80     | ✓ | 0.58 | GI336 | GL11 | CC01 |
| <b>GL4-A2525PFR-32-80</b>           | 25   | 5    | 25   | 25   | 170  | 55.6 | 4.00 | 32   | 80     | ✓ | 0.67 | GI336 | GL11 | CC01 |
| <b>GL5-A2020KFR-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.6 | 5.00 | 24   | 80     | ✓ | 0.32 | GI337 | GL11 | CC01 |
| <b>GL5-A2525PFR-32-100</b>          | 25   | 5    | 25   | 25   | 170  | 55.6 | 5.00 | 32   | 100    | ✓ | 0.67 | GI337 | GL11 | CC01 |
| <b>GL6-A2020KFR-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.6 | 6.00 | 24   | 80     | ✓ | 0.37 | GI338 | GL11 | CC01 |
| <b>GL6-A2525PFR-32-100</b>          | 25   | 5    | 25   | 25   | 170  | 55.6 | 6.00 | 32   | 100    | ✓ | 0.68 | GI338 | GL11 | CC01 |
| <b>GL2-A2020KFL-20-80</b>           | 20   | 5    | 20   | 20   | 125  | 43.5 | 2.00 | 20   | 80     | ✓ | 0.38 | GI334 | GL11 | CC01 |
| <b>GL2-A2525MFL-20-80</b>           | 25   | —    | 25   | 25   | 150  | 43.5 | 2.00 | 20   | 80     | ✓ | 0.65 | GI334 | GL11 | CC01 |
| <b>GL3-A2020KFL-20-80</b>           | 20   | 5    | 20   | 20   | 125  | 43.5 | 3.00 | 20   | 80     | ✓ | 0.33 | GI335 | GL11 | CC01 |
| <b>GL3-A2020KFL-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.5 | 3.00 | 24   | 80     | ✓ | 0.32 | GI335 | GL11 | CC01 |
| <b>GL3-A2525MFL-20-80</b>           | 25   | —    | 25   | 25   | 150  | 43.5 | 3.00 | 20   | 80     | ✓ | 0.65 | GI335 | GL11 | CC01 |
| <b>GL3-A2525PFL-32-80</b>           | 25   | 5    | 25   | 25   | 170  | 55.5 | 3.00 | 32   | 80     | ✓ | 0.67 | GI335 | GL11 | CC01 |
| <b>L</b> <b>GL3-A2525PFL-40-100</b> | 25   | 7    | 25   | 25   | 170  | 63.5 | 3.00 | 40   | 100    | ✓ | 0.70 | GI335 | GL11 | CC01 |
| <b>GL4-A2020KFL-20-80</b>           | 20   | 5    | 20   | 20   | 125  | 43.6 | 4.00 | 20   | 80     | ✓ | 0.33 | GI336 | GL11 | CC01 |
| <b>GL4-A2020KFL-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.6 | 4.00 | 24   | 80     | ✓ | 0.37 | GI336 | GL11 | CC01 |
| <b>GL4-A2525MFL-20-80</b>           | 25   | —    | 25   | 25   | 150  | 43.6 | 4.00 | 20   | 80     | ✓ | 0.65 | GI336 | GL11 | CC01 |
| <b>GL4-A2525PFL-32-80</b>           | 25   | 5    | 25   | 25   | 170  | 55.6 | 4.00 | 32   | 80     | ✓ | 0.73 | GI336 | GL11 | CC01 |
| <b>GL5-A2020KFL-24-80</b>           | 20   | 5    | 20   | 20   | 125  | 47.6 | 5.00 | 24   | 80     | ✓ | 0.32 | GI337 | GL11 | CC01 |



| Product                      | HF   | HBH  | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA |   |      |       |      |      |
|------------------------------|------|------|------|------|------|------|------|------|--------|---|------|-------|------|------|
|                              | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |   |      |       |      |      |
| <b>L</b> GL5-A2525PFL-32-100 | 25   | 5    | 25   | 25   | 170  | 55.6 | 5.00 | 32   | 100    | ✓ | 0.67 | G1337 | GL11 | CC01 |
| GL6-A2020KFL-24-80           | 20   | 5    | 20   | 20   | 125  | 47.6 | 6.00 | 24   | 80     | ✓ | 0.33 | G1338 | GL11 | CC01 |
| GL6-A2525PFL-32-100          | 25   | 5    | 25   | 25   | 170  | 55.6 | 6.00 | 32   | 100    | ✓ | 0.68 | G1338 | GL11 | CC01 |

| G1334 | GL2..      | -          |
|-------|------------|------------|
| G1335 | GL3..      | -          |
| G1336 | GL4..      | -          |
| G1337 | GL5..      | -          |
| G1338 | GL6-D600.. | GL6-D800.. |

Cutting depths on machined diameter on page 43.

| GL11 | US 5018-T20P | 5.0 | M 5 | 18.2 | LKT20P |
|------|--------------|-----|-----|------|--------|

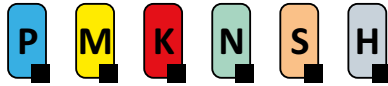
| CC01 | CHP-P1/8 | G1/8" | HXK 4 |
|------|----------|-------|-------|

Coolant accessories can be found on page 13.



**NEW**

**GLAF(RL) EXT-S**



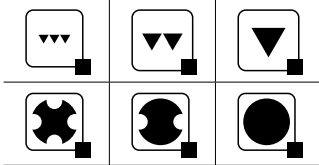
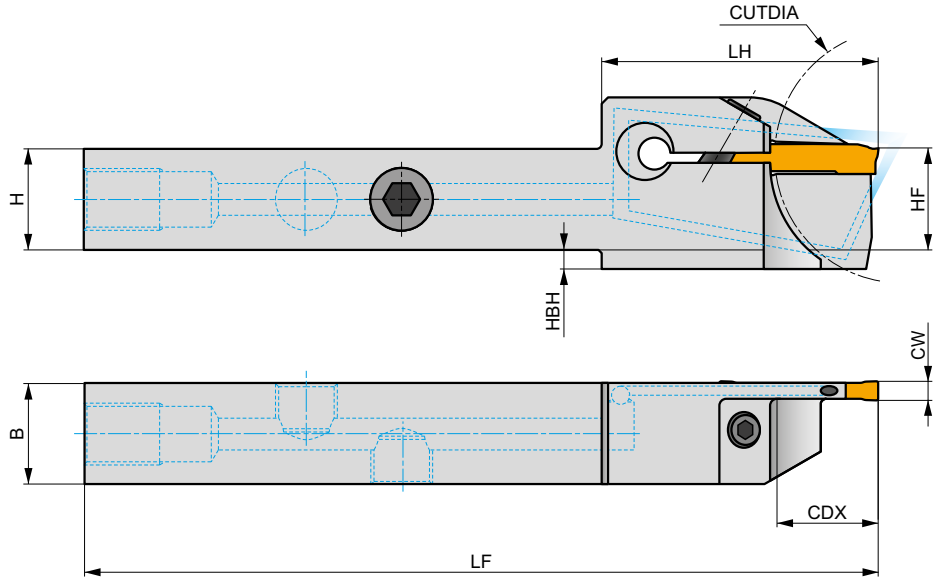
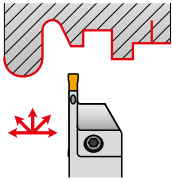
PRAMET

G



**Grooving tool with internal coolant for GL Inserts, for Sliding head machines**

External Right/Left handed tool holder with internal coolant for GL inserts, designed for sliding head machines and easy access to insert clamping. Suited for radial grooving, parting-off, turning and profiling applications. Body treated for longer tool life.



| Product                     | HF   | HBH  | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA | Icons | kg   | GI334 | GL13 | CC02 |
|-----------------------------|------|------|------|------|------|------|------|------|--------|-------|------|-------|------|------|
|                             | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |       |      |       |      |      |
| <b>R</b> GL2-A1212HFR-12-40 | 12   | 3    | 12   | 12   | 100  | 33.0 | 2.00 | 12   | 40     | ✓     | 0.09 | GI334 | GL13 | CC02 |
| GL2-A1616KFR-16-45          | 16   | 3    | 16   | 16   | 125  | 43.5 | 2.00 | 16   | 45     | ✓     | 0.21 | GI334 | GL12 | CC01 |
| GL3-A1212HFR-12-40          | 12   | 3    | 12   | 12   | 100  | 33.0 | 3.00 | 12   | 40     | ✓     | 0.11 | GI335 | GL13 | CC02 |
| GL3-A1616KFR-16-45          | 16   | 3    | 16   | 16   | 125  | 43.5 | 3.00 | 16   | 45     | ✓     | 0.21 | GI335 | GL12 | CC01 |
| GL4-A1616KFR-16-45          | 16   | 4    | 16   | 16   | 125  | 43.6 | 4.00 | 16   | 45     | ✓     | 0.21 | GI336 | GL12 | CC01 |
| <b>L</b> GL2-A1212HFL-12-40 | 12   | 3    | 12   | 12   | 100  | 33.0 | 2.00 | 12   | 40     | ✓     | 0.11 | GI334 | GL13 | CC02 |
| GL2-A1616KFL-16-45          | 16   | 3    | 16   | 16   | 125  | 43.5 | 2.00 | 16   | 45     | ✓     | 0.21 | GI334 | GL12 | CC01 |
| GL3-A1212HFL-12-40          | 12   | 3    | 12   | 12   | 100  | 33.0 | 3.00 | 12   | 40     | ✓     | 0.12 | GI335 | GL13 | CC02 |
| GL3-A1616KFL-16-45          | 16   | 3    | 16   | 16   | 125  | 43.5 | 3.00 | 16   | 45     | ✓     | 0.25 | GI335 | GL12 | CC01 |
| GL4-A1616KFL-16-45          | 16   | 4    | 16   | 16   | 125  | 43.6 | 4.00 | 16   | 45     | ✓     | 0.21 | GI336 | GL12 | CC01 |

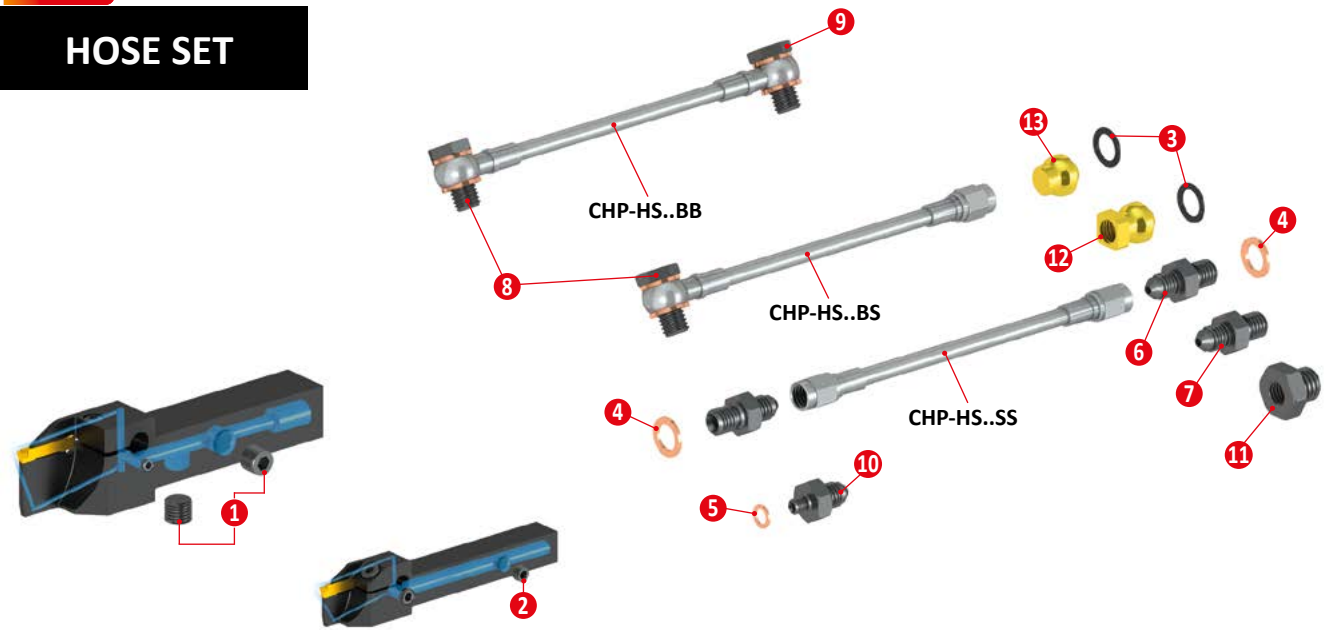
| GI334 | GI335 | GI336 | GL2.. | GL3.. | GL4.. |
|-------|-------|-------|-------|-------|-------|
|       |       |       |       |       |       |

Cutting depths on machined diameter on page 43.

| GL12 | HS 0516 | 5.0 | M 5 | 16 | HXX 4 |
|------|---------|-----|-----|----|-------|
| GL13 | HS 0412 | 5.0 | M 4 | 12 | HXX 3 |

| CC01 | CHP-P1/8 | -      | G1/8" | HXX 4 | -       | -          |
|------|----------|--------|-------|-------|---------|------------|
| CC02 | -        | CHP-P6 | M6    | HXX 3 | CHP-G06 | CHP-R1/8-6 |

Coolant accessories can be found on page 13.

**NEW****HOSE SET**

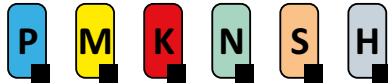
|    |  |  | length       |                     |                     |                     |
|----|--|--|--------------|---------------------|---------------------|---------------------|
|    |  |  | 150 mm       | <b>CHP-HS150 SS</b> | <b>CHP-HS150 BS</b> | <b>CHP-HS150 BB</b> |
|    |  |  | 250 mm       | <b>CHP-HS250 SS</b> | <b>CHP-HS250 BS</b> | <b>CHP-HS250 BB</b> |
|    |  |  | 300 mm       | <b>CHP-HS300 SS</b> | <b>CHP-HS300 BS</b> | <b>CHP-HS300 BB</b> |
|    |  | Designation                                      |              |                     |                     |                     |
| 1  |  | Plug G $\frac{1}{8}$ "                           | CHP-P1/8     | 1 x                 | 1 x                 | 1 x                 |
| 2  |  | Plug 6*  | CHP-P6       | –                   | –                   | –                   |
| 3  |  | O-ring   | CHP-O10x1    | 2 x                 | 2 x                 | 2 x                 |
| 4  |  | Copper gasket                                    | CHP-G10      | 2 x                 | 3 x                 | 4 x                 |
| 5  |  | Copper gasket*                                   | CHP-G06      | –                   | –                   | –                   |
| 6  |  | Conector straight G $\frac{1}{8}$ "              | CHP-CS1/8    | 2 x                 | 1 x                 | –                   |
| 7  |  | Conector straight M10                            | CHP-CS10     | 1 x                 | –                   | –                   |
| 8  |  | Conector banjo G $\frac{1}{8}$ "                 | CHP-CB1/8    | –                   | 1 x                 | 2 x                 |
| 9  |  | Conector banjo M10                               | CHP-CB10     | –                   | 1 x                 | 1 x                 |
| 10 |  | Reduction G $\frac{1}{8}$ " to M6*               | CHP-R1/8-6   | –                   | –                   | –                   |
| 11 |  | Reduction G $\frac{1}{4}$ " to G $\frac{1}{8}$ " | CHP-R1/4-1/8 | –                   | 1 x                 | 1 x                 |
| 12 |  | Coolant nozzle G $\frac{1}{8}$ "                 | CHP-PV1/8-12 | 1 x                 | 1 x                 | 1 x                 |
| 13 |  | Coolant nozzle plug                              | CHP-PV14     | 1 x                 | 1 x                 | 1 x                 |

\* included in tool shank 12 x 12 delivery

More information in the package leaflet

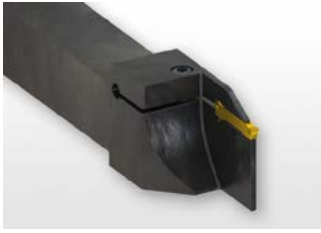


# GLSF(RL) EXT



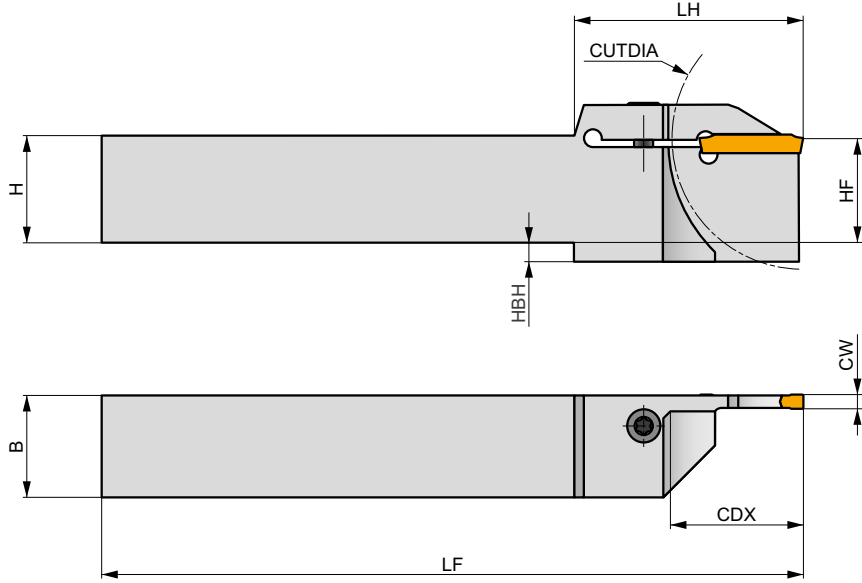
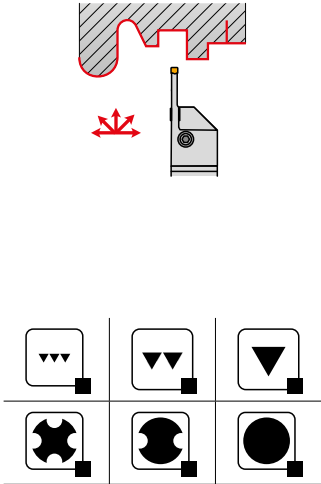
PRAMET

G



## Grooving and Parting-Off tool for GL Inserts

External Right/Left handed tool holder for GL inserts. Suited for radial grooving, parting-off, turning and profiling applications. Reinforced body design for longer tool life and low vibrations. Body treated for longer tool life.



| Product                                | HF   | HBH  | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA | kg   | Icon 1  | Icon 2 |
|--|------|------|------|------|------|------|------|------|--------|------|---------|--------|
|  | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |      |         |        |
| <b>R</b> GL1-S2020KFR-16-60 <b>NEW</b> | 20   | -    | 20   | 20   | 125  | 34.2 | 1.50 | 16   | 60     | 0.35 | GI333   | GL11   |
| GL2-S2020KFR-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 2.00 | 20   | 80     | 0.38 | GI334   | GL11   |
| GL2-S2020KFR-24-80                     | 20   | 5    | 20   | 20   | 125  | 48.5 | 2.00 | 24   | 80     | 0.36 | GI334   | GL11   |
| GL2-S2525MFR-20-80                     | 25   | -    | 25   | 25   | 150  | 43.5 | 2.00 | 20   | 80     | 0.68 | GI334   | GL11   |
| GL2-S2525MFR-24-80                     | 25   | -    | 25   | 25   | 150  | 47.5 | 2.00 | 24   | 80     | 0.64 | GI334   | GL11   |
| GL3-S2020KFR-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 3.00 | 20   | 80     | 0.38 | GI335   | GL11   |
| GL3-S2020KFR-24-80                     | 20   | 5    | 20   | 20   | 125  | 47.5 | 3.00 | 24   | 80     | 0.36 | GI335   | GL11   |
| GL3-S2525MFR-20-80                     | 25   | -    | 25   | 25   | 150  | 43.5 | 3.00 | 20   | 80     | 0.68 | GI335   | GL11   |
| GL3-S2525MFR-24-80                     | 25   | -    | 25   | 25   | 150  | 47.5 | 3.00 | 24   | 80     | 0.65 | GI335   | GL11   |
| GL3-S2525PFR-32-80                     | 25   | 5    | 25   | 25   | 170  | 55.5 | 3.00 | 32   | 80     | 0.72 | GI335   | GL11   |
| GL4-S2020KFR-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 4.00 | 20   | 80     | 0.38 | GI336   | GL11   |
| GL4-S2020KFR-24-80                     | 20   | 5    | 20   | 20   | 125  | 47.5 | 4.00 | 24   | 80     | 0.37 | GI336   | GL11   |
| GL4-S2525MFR-20-80                     | 25   | -    | 25   | 25   | 150  | 43.5 | 4.00 | 20   | 80     | 0.68 | GI336   | GL11   |
| GL4-S2525MFR-24-80                     | 25   | -    | 25   | 25   | 150  | 47.5 | 4.00 | 24   | 80     | 0.65 | GI336   | GL11   |
| GL4-S2525PFR-32-80                     | 25   | 5    | 25   | 25   | 170  | 55.5 | 4.00 | 32   | 80     | 0.78 | GI336   | GL11   |
| GL5-S2020KFR-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 5.00 | 20   | 80     | 0.38 | GI337   | GL11   |
| GL5-S2525MFR-20-80                     | 25   | -    | 25   | 25   | 150  | 43.5 | 5.00 | 20   | 80     | 0.68 | GI337   | GL11   |
| GL5-S2525PFR-32-100                    | 25   | 5    | 25   | 25   | 170  | 55.5 | 5.00 | 32   | 100    | 0.75 | GI337   | GL11   |
| GL6-S2020KFR-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 6.00 | 20   | 80     | 0.39 | GI338-1 | GL11   |
| GL6-S2525MFR-20-80                     | 25   | -    | 25   | 25   | 150  | 43.5 | 6.00 | 20   | 80     | 0.68 | GI338-1 | GL11   |
| GL6-S2525PFR-32-100                    | 25   | 5    | 25   | 25   | 170  | 55.5 | 6.00 | 32   | 100    | 0.75 | GI338   | GL11   |
| <b>L</b> GL1-S2020KFL-16-60 <b>NEW</b> | 20   | -    | 20   | 20   | 125  | 34.2 | 1.50 | 16   | 60     | 0.35 | GI333   | GL11   |
| GL2-S2020KFL-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 2.00 | 20   | 80     | 0.38 | GI334   | GL11   |
| GL2-S2020KFL-24-80                     | 20   | 5    | 20   | 20   | 125  | 47.5 | 2.00 | 24   | 80     | 0.36 | GI334   | GL11   |
| GL2-S2525MFL-20-80                     | 25   | -    | 25   | 25   | 150  | 43.5 | 2.00 | 20   | 80     | 0.70 | GI334   | GL11   |
| GL2-S2525MFL-24-80                     | 25   | -    | 25   | 25   | 150  | 47.5 | 2.00 | 24   | 80     | 0.64 | GI334   | GL11   |
| GL3-S2020KFL-20-80                     | 20   | -    | 20   | 20   | 125  | 43.5 | 3.00 | 20   | 80     | 0.38 | GI335   | GL11   |





| Product                    | HF   | HBH  | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA | kg   |         |      |
|----------------------------|------|------|------|------|------|------|------|------|--------|------|---------|------|
|                            | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |      |         |      |
| <b>GL3-S2020KFL-24-80</b>  | 20   | 5    | 20   | 20   | 125  | 47.5 | 3.00 | 24   | 80     | 0.36 | GI335   | GL11 |
| <b>GL3-S2525MFL-20-80</b>  | 25   | –    | 25   | 25   | 150  | 43.5 | 3.00 | 20   | 80     | 0.68 | GI335   | GL11 |
| <b>GL3-S2525MFL-24-80</b>  | 25   | –    | 25   | 25   | 150  | 47.5 | 3.00 | 24   | 80     | 0.65 | GI335   | GL11 |
| <b>GL3-S2525PFL-32-80</b>  | 25   | 5    | 25   | 25   | 170  | 55.5 | 3.00 | 32   | 80     | 0.78 | GI335   | GL11 |
| <b>GL4-S2020KFL-20-80</b>  | 20   | –    | 20   | 20   | 125  | 43.5 | 4.00 | 20   | 80     | 0.38 | GI336   | GL11 |
| <b>GL4-S2020KFL-24-80</b>  | 20   | 5    | 20   | 20   | 125  | 47.5 | 4.00 | 24   | 80     | 0.37 | GI336   | GL11 |
| <b>GL4-S2525MFL-20-80</b>  | 25   | –    | 25   | 25   | 150  | 43.5 | 4.00 | 20   | 80     | 0.68 | GI336   | GL11 |
| <b>GL4-S2525MFL-24-80</b>  | 25   | –    | 25   | 25   | 150  | 47.5 | 4.00 | 24   | 80     | 0.65 | GI336   | GL11 |
| <b>GL4-S2525PFL-32-80</b>  | 25   | 5    | 25   | 25   | 170  | 55.5 | 4.00 | 32   | 80     | 0.72 | GI336   | GL11 |
| <b>GL5-S2020KFL-20-80</b>  | 20   | –    | 20   | 20   | 125  | 43.5 | 5.00 | 20   | 80     | 0.38 | GI337   | GL11 |
| <b>GL5-S2525MFL-20-80</b>  | 25   | –    | 25   | 25   | 150  | 43.5 | 5.00 | 20   | 80     | 0.71 | GI337   | GL11 |
| <b>GL5-S2525PFL-32-100</b> | 25   | 5    | 25   | 25   | 170  | 55.5 | 5.00 | 32   | 100    | 0.75 | GI337   | GL11 |
| <b>GL6-S2020KFL-20-80</b>  | 20   | –    | 20   | 20   | 125  | 43.5 | 6.00 | 20   | 80     | 0.39 | GI338-1 | GL11 |
| <b>GL6-S2525MFL-20-80</b>  | 25   | –    | 25   | 25   | 150  | 43.5 | 6.00 | 20   | 80     | 0.71 | GI338-1 | GL11 |
| <b>GL6-S2525PFL-32-100</b> | 25   | 5    | 25   | 25   | 170  | 55.5 | 6.00 | 32   | 100    | 0.75 | GI338   | GL11 |

L

| GI333   | GL1..      | –          |
|---------|------------|------------|
| GI334   | GL2..      | –          |
| GI335   | GL3..      | –          |
| GI336   | GL4..      | –          |
| GI337   | GL5..      | –          |
| GI338   | GL6-D600.. | GL6-D800.. |
| GI338_1 | GL6-D600.. | –          |

Cutting depths on machined diameter on page 44.

| GL11 | US 5018-T20P | 5.0 | M 5 | 18.2 | LK T20P |
|------|--------------|-----|-----|------|---------|



# GLSF(RL) EXT-S



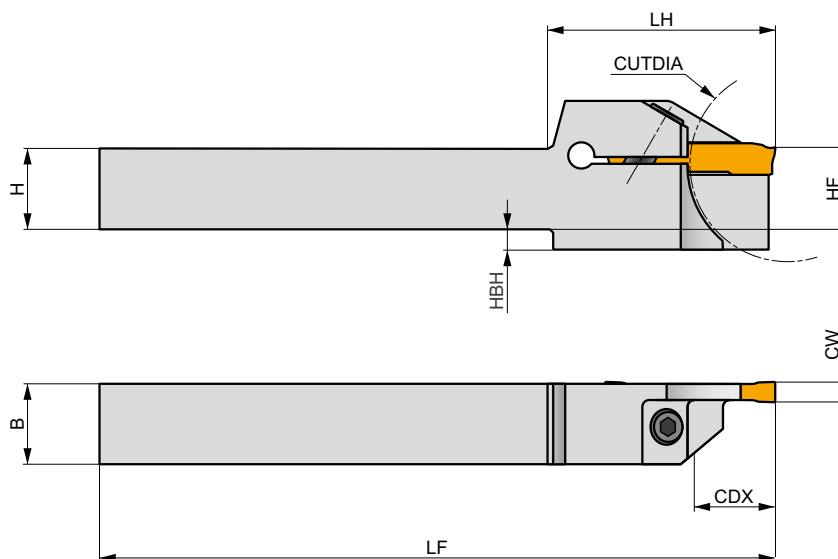
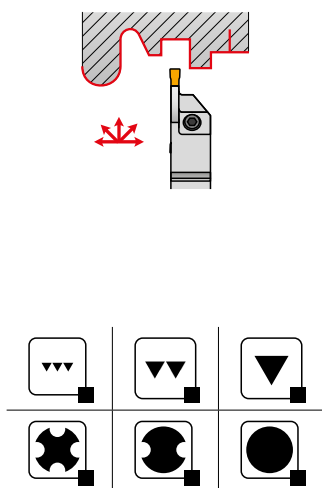
PRAMET

G



## Grooving and Parting-Off tool for GL Inserts, for Sliding head machines

External Right/Left handed tool holder for GL inserts, designed for sliding head machines and easy access to insert clamping. Suited for radial grooving, parting-off, turning and profiling applications. Body treated for longer tool life.



| Product                                | HF   | HBH  | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA | kg   | GI333 | GI334 | GI335 | GI336 |
|--|------|------|------|------|------|------|------|------|--------|------|-------|-------|-------|-------|
|  | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |      |       |       |       |       |
| <b>R</b> GL1-S1212HFR-12-40 <b>NEW</b> | 12   | -    | 12   | 12   | 100  | 30.2 | 1.50 | 12   | 40     | 0.10 | GI333 | GL13  |       |       |
| GL1-S1616KFR-16-45 <b>NEW</b>          | 16   | -    | 16   | 16   | 125  | 34.2 | 1.50 | 16   | 45     | 0.23 | GI333 | GL12  |       |       |
| GL2-S1212HFR-12-40                     | 12   | 3    | 12   | 12   | 100  | 33.0 | 2.00 | 12   | 40     | 0.11 | GI334 | GL13  |       |       |
| GL2-S1616KFR-16-45                     | 16   | 3    | 16   | 16   | 125  | 39.5 | 2.00 | 16   | 45     | 0.23 | GI334 | GL12  |       |       |
| GL3-S1212HFR-12-40                     | 12   | 3    | 12   | 12   | 100  | 33.0 | 3.00 | 12   | 40     | 0.11 | GI335 | GL13  |       |       |
| GL3-S1616KFR-16-45                     | 16   | 3    | 16   | 16   | 125  | 39.5 | 3.00 | 16   | 45     | 0.23 | GI335 | GL12  |       |       |
| GL4-S1616KFR-16-45                     | 16   | 4    | 16   | 16   | 125  | 39.5 | 4.00 | 16   | 45     | 0.26 | GI336 | GL12  |       |       |
| <b>L</b> GL1-S1212HFL-12-40 <b>NEW</b> | 12   | -    | 12   | 12   | 100  | 30.2 | 1.50 | 12   | 40     | 0.10 | GI333 | GL13  |       |       |
| GL1-S1616KFL-16-45 <b>NEW</b>          | 16   | -    | 16   | 16   | 125  | 34.2 | 1.50 | 16   | 45     | 0.23 | GI333 | GL12  |       |       |
| GL2-S1212HFL-12-40                     | 12   | 3    | 12   | 12   | 100  | 33.0 | 2.00 | 12   | 40     | 0.11 | GI334 | GL13  |       |       |
| GL2-S1616KFL-16-45                     | 16   | 3    | 16   | 16   | 125  | 39.5 | 2.00 | 16   | 45     | 0.23 | GI334 | GL12  |       |       |
| GL3-S1212HFL-12-40                     | 12   | 3    | 12   | 12   | 100  | 33.0 | 3.00 | 12   | 40     | 0.11 | GI335 | GL13  |       |       |
| GL3-S1616KFL-16-45                     | 16   | 3    | 16   | 16   | 125  | 39.5 | 3.00 | 16   | 45     | 0.23 | GI335 | GL12  |       |       |
| GL4-S1616KFL-16-45                     | 16   | 4    | 16   | 16   | 125  | 39.5 | 4.00 | 16   | 45     | 0.24 | GI336 | GL12  |       |       |

| GI333 | GI334 | GI335 | GI336 |
|-------|-------|-------|-------|
|       |       |       |       |
|       |       |       |       |
|       |       |       |       |

Cutting depths on machined diameter on page 44.

| GL12 | HS 0516 | 5.0 | M 5 | 16 | HXK 4 |
|------|---------|-----|-----|----|-------|
| GL13 | HS 0412 | 5.0 | M 4 | 12 | HXK 3 |

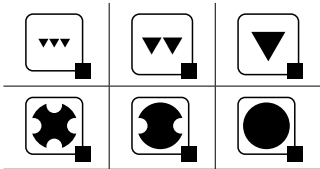
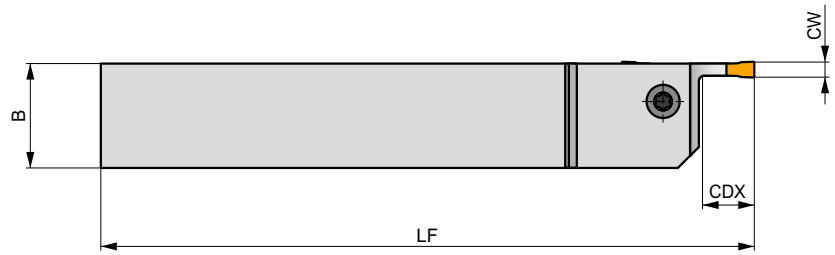
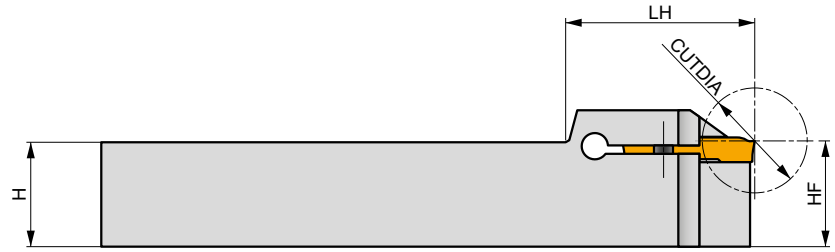
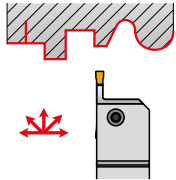


# GLSF(RL) EXT-G






## Grooving and Turning tool for GL Inserts







External Right/Left handed tool holder for GL inserts. Best suited for longitudinal turning and profiling applications, usable also for grooving and parting-off. Body treated for longer tool life.



| Product   | ≠    | H    | B    | LF   | LH   | CW   | CDX  | CUTDIA | kg   | Code    | Code |
|---|------|------|------|------|------|------|------|--------|------|---------|------|
|   | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)   |      |         |      |
| <b>GL2-S2020KFR-10</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 2.00 | 10   | 20     | 0.38 | GI334   | GL11 |
| <b>GL2-S2525MFR-10</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 2.00 | 10   | 20     | 0.69 | GI334   | GL11 |
| <b>GL3-S2020KFR-10</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 3.00 | 10   | 20     | 0.36 | GI335   | GL11 |
| <b>GL3-S2525MFR-10</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 3.00 | 10   | 20     | 0.69 | GI335   | GL11 |
| <b>GL3-S3232MFR-20</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 150  | 46.0 | 3.00 | 20   | 40     | 1.06 | GI335   | GL15 |
| <b>GL4-S2020KFR-12</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 4.00 | 12   | 24     | 0.37 | GI336   | GL11 |
| <b>GL4-S2525MFR-12</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 4.00 | 12   | 24     | 0.69 | GI336   | GL11 |
| <b>GL4-S3232MFR-24</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 150  | 50.0 | 4.00 | 24   | 48     | 1.04 | GI336   | GL15 |
| <b>GL5-S2020KFR-12</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 5.00 | 12   | 24     | 0.36 | GI337   | GL11 |
| <b>GL5-S2525MFR-12</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 5.00 | 12   | 24     | 0.70 | GI337   | GL11 |
| <b>GL5-S3232PFR-32</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 170  | 58.0 | 5.00 | 32   | 64     | 1.15 | GI337   | GL15 |
| <b>GL6-S2020KFR-12</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 6.00 | 12   | 24     | 0.36 | GI338-1 | GL11 |
| <b>GL6-S2525MFR-12</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 6.00 | 12   | 24     | 0.68 | GI338-1 | GL11 |
| <b>GL6-S3232PFR-32</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 170  | 58.0 | 6.00 | 32   | 64     | 1.15 | GI338   | GL15 |
| <b>GL2-S2020KFL-10</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 2.00 | 10   | 20     | 0.37 | GI334   | GL11 |
| <b>GL2-S2525MFL-10</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 2.00 | 10   | 20     | 0.70 | GI334   | GL11 |
| <b>GL3-S2020KFL-10</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 3.00 | 10   | 20     | 0.36 | GI335   | GL11 |
| <b>GL3-S2525MFL-10</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 3.00 | 10   | 20     | 0.70 | GI335   | GL11 |
| <b>GL3-S3232MFL-20</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 150  | 46.0 | 3.00 | 20   | 40     | 1.06 | GI335   | GL15 |
| <b>GL4-S2020KFL-12</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 4.00 | 12   | 24     | 0.37 | GI336   | GL11 |
| <b>GL4-S2525MFL-12</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 4.00 | 12   | 24     | 0.69 | GI336   | GL11 |
| <b>GL4-S3232MFL-24</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 150  | 50.0 | 4.00 | 24   | 48     | 1.04 | GI336   | GL15 |
| <b>GL5-S2020KFL-12</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 5.00 | 12   | 24     | 0.36 | GI337   | GL11 |
| <b>GL5-S2525MFL-12</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 5.00 | 12   | 24     | 0.69 | GI337   | GL11 |
| <b>GL5-S3232PFL-32</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 170  | 58.0 | 5.00 | 32   | 64     | 1.15 | GI337   | GL15 |
| <b>GL6-S2020KFL-12</b>                                    | 20   | 20   | 20   | 125  | 36.0 | 6.00 | 12   | 24     | 0.36 | GI338-1 | GL11 |
| <b>GL6-S2525MFL-12</b>                                    | 25   | 25   | 25   | 150  | 36.0 | 6.00 | 12   | 24     | 0.68 | GI338-1 | GL11 |
| <b>GL6-S3232PFL-32</b> <span style="color:red">NEW</span> | 32   | 32   | 32   | 170  | 58.0 | 6.00 | 32   | 64     | 1.15 | GI338   | GL15 |



|  |  |  |
|---|---|---|
| GI334   | GL2..   | -   |
| GI335   | GL3..   | -   |
| GI336   | GL4..   | -   |
| GI337   | GL5..   | -   |
| GI338   | GL6-D600..  | GL6-D800..  |
| GI338_1   | GL6-D600..  | -   |

|  |  | <br>Nm |  |  |  |
|---|---|---|---|---|---|
| GL11  | US 5018-T20P  | 5.0   | M 5   | 18.2  | LKT20P  |
| GL15  | SR 88026-T30P   | 5.0   | M8  | 26  | LKT30P  |





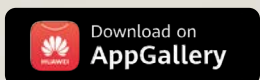
# DORMER PRAMET



# ALL IN ONE



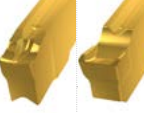


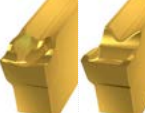







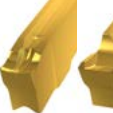





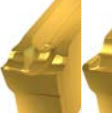





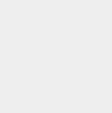



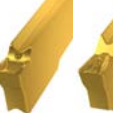


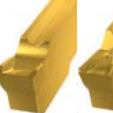





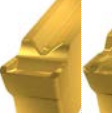







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BLADES & ACCESSORIES NAVIGATOR

| INSERT SEAT   | GL1  | GL2  | GL3   | GL4   | GL5  | GL6  |   |
|---|--|--|---|---|--|--|---|
| Blades<br>H = 26; 32 mm   | CDX 16mm <b>NEW</b>  | CDX 35-50mm  | CDX 35-50mm   | CDX 50mm  | CDX 60mm   | CDX 60mm   |   |
| <b>NEW</b><br>MS Blades   |  | CDX 24 mm  | CDX 24 mm   | CDX 24 mm   | CDX 24 mm  | CDX 24 mm  |   |
| Cutting width (mm)                                       | 1.5  | 2  | 3 (2.5)   | 4   | 5  | 6  | 8   |
| <b>NEW</b><br>Deep parting-off (single sided insert)<br> |  |  | <br>SINGLE SIDED INSERT<br>PM  PR  | <br>SINGLE SIDED INSERT<br>PM  PR  |  |  |   |
| Parting-off (tube / full bar)<br>                       | <b>NEW</b><br><br>PM | <br>PM  PR   | <br>CW = 2.5 / 3<br>PM  PR    | <br>PM  PR                    | <br>PM  PR   | <br>PM  PR   | <br>PM  PR  |
| Grooving (deep / shallow)<br>                          |  | <br>PR  GM  | <br>PR  GM                   | <br>PR  GM                   | <br>PR  GM  | <br>PR  GM  | <br><b>NEW</b><br>GM    |



MS-EN

- Modular Tool Holder
- Shank sizes:  
20 × 20, 25 × 25, 32 × 32 mm

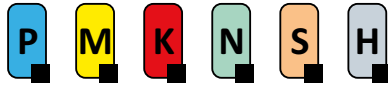


DU, D

- Tool Holder Block
- Shank sizes:  
20 × 20, 25 × 23, 25 × 32, 32 × 29, 25 × 30 mm



# GLS B

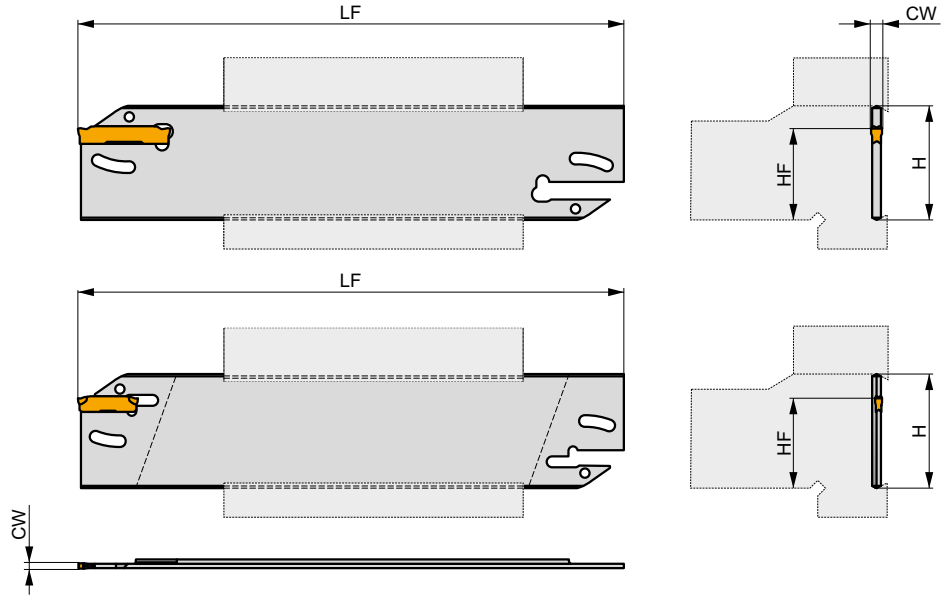
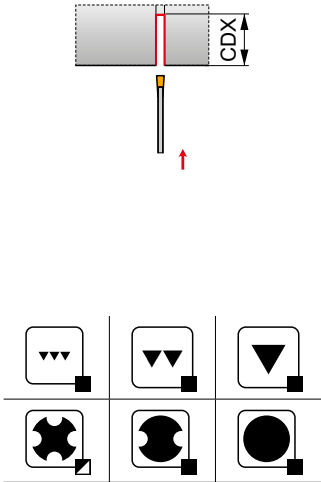


PRAMET



## Double-Ended Parting-off and Grooving Blade for GL Inserts

Blade for GL inserts, suited for parting-off and grooving applications. Easy inserts replacement by specific key (included in package). Can be fitted into the DU, D tool holder block. Body treated for longer tool life.



| Product                           | ⌀                        | H    | LF   | CW   | CDX  | kg   |       |     |
|-----------------------------------|--------------------------|------|------|------|------|------|-------|-----|
|                                   | (mm)                     | (mm) | (mm) | (mm) | (mm) |      |       |     |
| <b>R</b> GL1-S26KBR-16 <b>NEW</b> | 21.4                     | 26   | 125  | 1.50 | 16   | 0.05 | GI333 | KV2 |
|                                   | GL1-S32MBR-16 <b>NEW</b> | 32   | 32   | 150  | 1.50 | 0.07 | GI333 | KV2 |
| <b>L</b> GL1-S26KBL-16 <b>NEW</b> | 21.4                     | 26   | 125  | 1.50 | 16   | 0.05 | GI333 | KV2 |
|                                   | GL1-S32MBL-16 <b>NEW</b> | 32   | 32   | 150  | 1.50 | 0.07 | GI333 | KV2 |
|                                   | GL2-S26KB                | 21.4 | 26   | 125  | 2.00 | 0.13 | GI334 | KV2 |
|                                   | GL2-S32MB                | 25   | 32   | 150  | 2.00 | 0.15 | GI334 | KV2 |
| <b>N</b>                          | GL3-S26KB                | 21.4 | 26   | 125  | 3.00 | 0.15 | GI335 | KV2 |
|                                   | GL3-S32MB                | 25   | 32   | 150  | 3.00 | 0.15 | GI335 | KV2 |
|                                   | GL4-S32MB                | 25   | 32   | 150  | 4.00 | 0.16 | GI336 | KV2 |
|                                   | GL5-S32MB                | 25   | 32   | 150  | 5.00 | 0.22 | GI337 | KV2 |
|                                   | GL6-S32MB                | 25   | 32   | 150  | 6.00 | 0.25 | GI338 | KV2 |

| GI333 | GL1..      | -          |
|-------|------------|------------|
| GI334 | GL2..      | -          |
| GI335 | GL3..      | -          |
| GI336 | GL4..      | -          |
| GI337 | GL5..      | -          |
| GI338 | GL6-D600.. | GL6-D800.. |

| KV2 | KV 15x150 |
|-----|-----------|



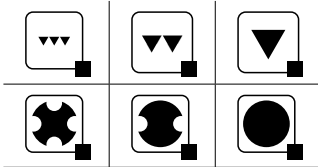
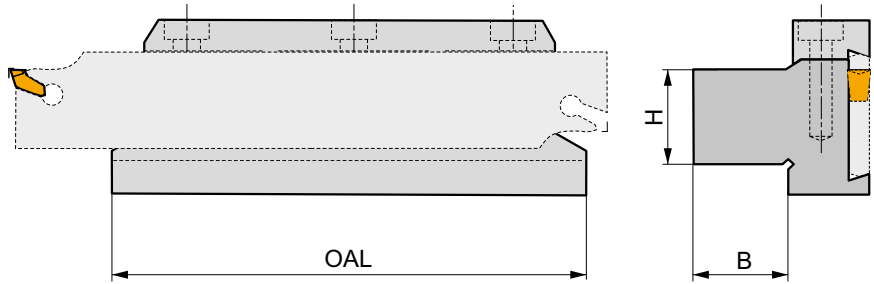
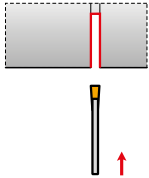


# DU, D



## Tool Holder Block for Grooving and Parting-off Blades

Tool holder to fit blades for grooving and parting-off. Body treated for longer tool life.



| Product    | H<br>(mm) | B<br>(mm) | OAL<br>(mm) | kg   |       |     |
|------------|-----------|-----------|-------------|------|-------|-----|
| 26-DU 2020 | 20        | 20        | 90          | 0.70 | GI007 | ND2 |
| 26-D 2020  | 20        | 20        | 100         | 0.82 | GI007 | ND2 |
| 32-DU 2523 | 25        | 23        | 110         | 1.02 | GI008 | ND2 |
| 32-DU 2532 | 25        | 32        | 110         | 1.10 | GI008 | ND2 |
| 32-DU 3229 | 32        | 29        | 110         | 1.25 | GI008 | ND2 |
| 32-D 2530  | 25        | 30        | 115         | 1.30 | GI008 | ND2 |
| 45-DU 3229 | 32        | 29        | 110         | 1.50 | GI009 | ND7 |
| 45-DU 4036 | 40        | 36        | 110         | 2.05 | GI009 | ND7 |
| 47-D 4040  | 40        | 40        | 150         | 3.88 | GI091 | ND3 |

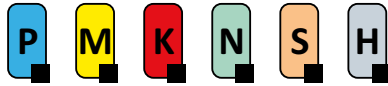
| GI007 | XLC.N 26.. | GL.-S26.B. |
|-------|------------|------------|
| GI008 | XLC.N 32.. | GL.-S32.B. |
| GI009 | XLC.N 45.. | -          |
| GI091 | XLC.N 47.. | -          |

| ND2 | HS 0625 | 6.0 | M 6  | 25 | HXK 5 |
|-----|---------|-----|------|----|-------|
| ND3 | HS 1030 | 8.0 | M 10 | 30 | HXK 8 |
| ND7 | HS 0630 | 6.0 | M 6  | 30 | HXK 5 |

**NEW**



**GLS BS**



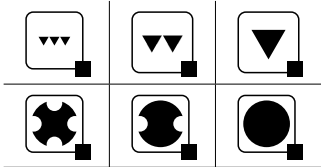
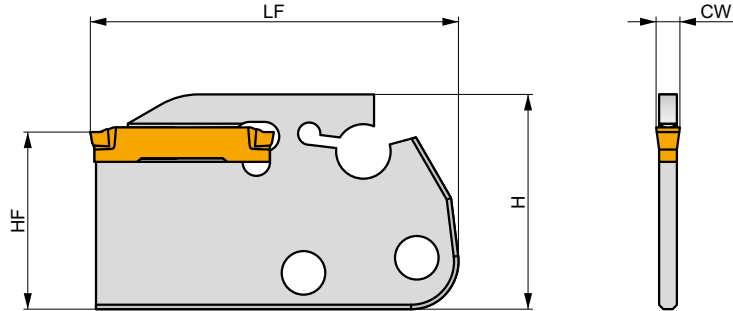
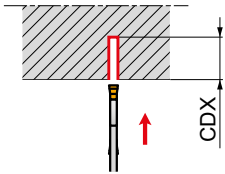
**PRAMET**

**G**



**Grooving and Parting-off Blade for GL Inserts, for MS-EN Tool Holder**

Blade for modular tool holder MS-EN, designed for GL inserts. Suited for grooving and parting-off applications. Blades treated for longer tool life.



| Product           | ≡<br>(mm) | H<br>(mm) | LF<br>(mm) | CW<br>(mm) | CDX<br>(mm) | kg   |       |   |
|-------------------|-----------|-----------|------------|------------|-------------|------|-------|---|
| <b>GL2-S29CBS</b> | 24        | 29        | 50         | 2.00       | 24          | 0.01 | GI334 | - |
| <b>GL3-S29CBS</b> | 24        | 29        | 50         | 3.00       | 24          | 0.02 | GI335 | - |
| <b>GL4-S29CBS</b> | 24        | 29        | 50         | 4.00       | 24          | 0.02 | GI336 | - |
| <b>GL5-S29CBS</b> | 24        | 29        | 50         | 5.00       | 24          | 0.03 | GI337 | - |
| <b>GL6-S29CBS</b> | 24        | 29        | 50         | 6.00       | 24          | 0.04 | GI338 | - |

| GI334 | GL2..      | -          |
|-------|------------|------------|
| GI335 | GL3..      | -          |
| GI336 | GL4..      | -          |
| GI337 | GL5..      | -          |
| GI338 | GL6-D600.. | GL6-D800.. |

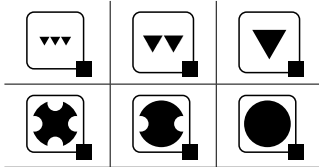
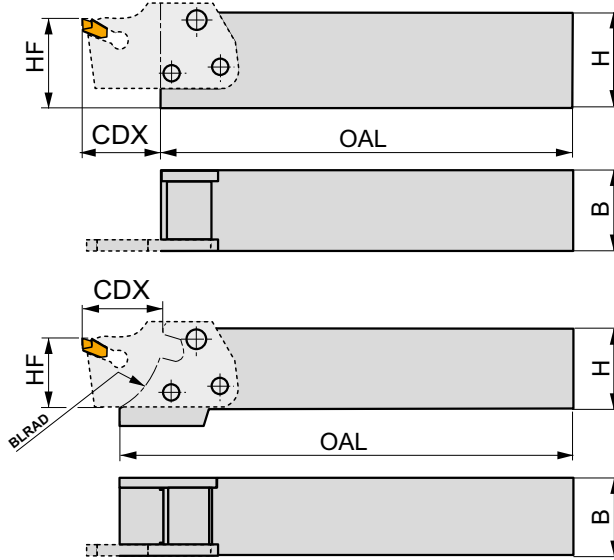
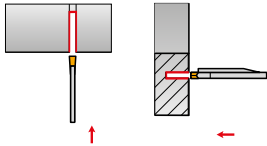


# MS-EN



## Modular Tool Holder for Grooving and Parting-off Blades

Modular tool holder for BS type grooving and parting-off blades. Body treated for longer tool life.



| Product       | HF<br>(mm) | H<br>(mm) | B<br>(mm) | OAL<br>(mm) | BLRAD<br>(mm) | kg   |       |     |
|---------------|------------|-----------|-----------|-------------|---------------|------|-------|-----|
| MS-EN-1212 F  | 12         | 12        | 12        | 75          | -             | 0.13 | GI006 | ND4 |
| MS-EN-1616 H  | 16         | 16        | 16        | 90          | -             | 0.20 | GI006 | ND4 |
| MS-EN-2020 K  | 20         | 20        | 20        | 115         | -             | 0.23 | GI003 | ND5 |
| MS-EN-2020 KS | 20         | 20        | 20        | 129         | 25            | 0.42 | GI060 | ND5 |
| MS-EN-2525 M  | 25         | 25        | 25        | 140         | -             | 0.65 | GI003 | ND5 |
| MS-EN-2525 MS | 25         | 25        | 25        | 153         | 25            | 0.74 | GI060 | ND5 |
| MS-EN-3225 P  | 32         | 32        | 25        | 160         | -             | 0.95 | GI003 | ND5 |
| MS-EN-3225 PS | 32         | 32        | 25        | 174         | 25            | 1.00 | GI060 | ND5 |

| GI003 | XLC.. 25..15... | XLC.. 25..25... | GL.BS | XLXFL 25... |
|-------|-----------------|-----------------|-------|-------------|
| GI006 | XLCF. 16..15... | XLCF. 16..20... | -     | -           |
| GI060 | XLC.. 25..15... | XLC.. 25..25... | GL.BS | -           |

| ND4 | US 4011-T15P  | 3.5 | M 4 | 10.6 | -             | -   | -  | -  | FLAG T15P |
|-----|---------------|-----|-----|------|---------------|-----|----|----|-----------|
| ND5 | US 45013-T20P | 5.0 | M 5 | 13   | US 46017-T20P | 5.0 | M6 | 17 | FLAG T15P |



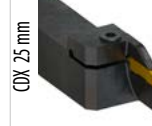










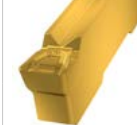



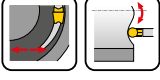





ND4 = 3 x US 4011-T15P; ND5 = 2 x US 45013-T20P



GROOVING BORING BARS

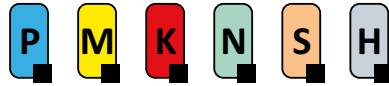
| INSERT SEAT  | GL1 | GL2  | GL3  | GL4  | GL5 | GL6 |   |
|--|-----|--|--|--|-----|-----|---|
| <p><b>NEW</b></p> <p><b>GLAG (RL)INT</b></p> <p>DCON MS = 25 – 40 mm<br/>DMIN = 32 mm</p>                                      |     | <p>CDX 6 – 10 mm</p>  | <p>CDX 6 – 12 mm</p>  | <p>CDX 6 – 20 mm</p>  |     |     |   |
| <p><b>Cutting width (mm)</b></p>              | 1.5 | 2  | 3  | 4  | 5   | 6   | 8 |
| <p><b>Grooving (internal)</b></p>             |     |  <p>GM</p>            |  <p>GM</p>            |  <p>GM</p>            |     |     |   |
| <p><b>Turning / Profiling (internal)</b></p>  |     |  <p>GM MM</p>         |  <p>GM MM</p>         |  <p>GM MM</p>         |     |     |   |

FACE GROOVING TOOLS

| INSERT SEAT  | GL1 | GL2 | GL3  | GL4   | GL5   | GL6   |  |
|--|-----|-----|--|---|---|---|--|
| <p><b>NEW</b></p> <p><b>Face axial, Right</b></p> <p>20 × 20<br/>32 × 32</p>   |     |     | <p>CDX 12 mm</p>  | <p>CDX 20 – 25 mm</p>  | <p>CDX 25 mm</p>  | <p>CDX 25 – 32 mm</p>  |  |
| <p><b>NEW</b></p> <p><b>Face axial, Left</b></p> <p>25 × 25<br/>32 × 32</p>  |     |     | <p>CDX 12 mm</p>  | <p>CDX 20 – 25 mm</p>  | <p>CDX 25 mm</p>  | <p>CDX 25 – 32 mm</p>  |  |
| <p><b>NEW</b></p> <p><b>Face 90°, Right</b></p> <p>25 × 25</p>   |     |     | <p>CDX 15 mm</p>  | <p>CDX 20 – 25 mm</p>  |   |   |  |
| <p><b>Cutting width (mm)</b></p>                      | 1.5 | 2   | 3  | 4   | 5   | 6   | 8  |
| <p><b>Face grooving</b></p>                           |     |     |  <p>GM</p>        |  <p>GM</p>             |  <p>GM</p>        |  <p>GM</p>             | <p><b>NEW</b></p>  <p>GM</p>    |
| <p><b>Face turning</b><br/><b>Face profiling</b></p>  |     |     |  <p>GM MM</p>     |  <p>GM MM</p>          |  <p>GM MM</p>     |  <p>GM MM</p>          | <p><b>NEW</b></p>  <p>GM MM</p> |

**NEW**

**GLAG (RL) INT**



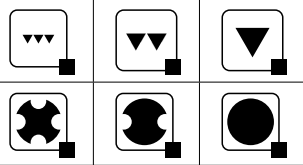
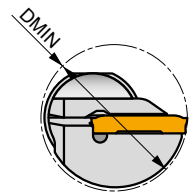
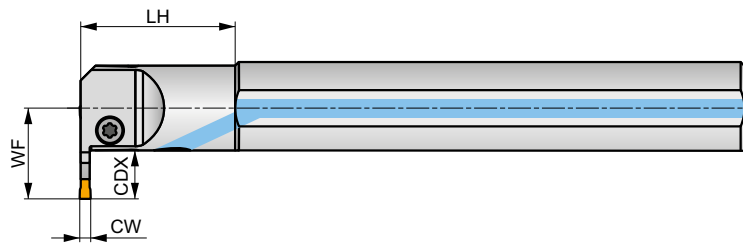
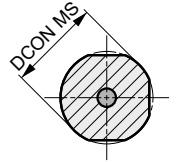
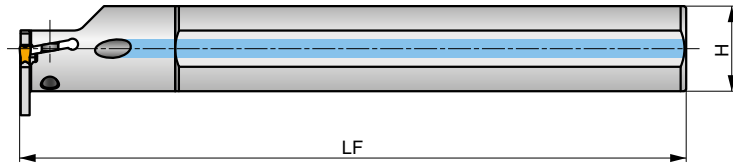
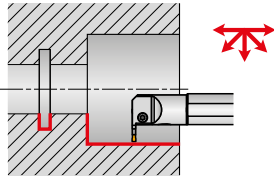
PRAMET

G



**Internal Grooving tool for GL inserts**

Internal Right/Left handed tool holder with internal coolant for GL inserts, designed with reinforced seating and blade for security. Suited for internal grooving, turning and profiling applications. Body treated for longer tool life.



| Product                   | DCON MS<br>(mm) | H<br>(mm) | WF<br>(mm) | LF<br>(mm) | LH<br>(mm) | CW<br>(mm) | CDX<br>(mm) | DMIN<br>(mm) | ✓ | kg   | GI360 | GI361 | GI362 | GL14 |
|---------------------------|-----------------|-----------|------------|------------|------------|------------|-------------|--------------|---|------|-------|-------|-------|------|
| GL2-A25QGR-06-32          | 25              | 23        | 18.5       | 180        | 41.2       | 2.00       | 6           | 32           | ✓ | 0.60 | GI360 |       |       | GL14 |
| GL2-A25QGR-10-38          | 25              | 23        | 22.5       | 180        | 41.2       | 2.00       | 10          | 38           | ✓ | 0.60 | GI360 |       |       | GL14 |
| GL3-A25QGR-06-32          | 25              | 23        | 18.5       | 180        | 42.0       | 3.00       | 6           | 32           | ✓ | 0.60 | GI361 |       |       | GL14 |
| GL3-A25QGR-12-38          | 25              | 23        | 24.5       | 180        | 42.0       | 3.00       | 12          | 38           | ✓ | 0.60 | GI361 |       |       | GL14 |
| GL4-A25QGR-06-40          | 25              | 23        | 18.6       | 180        | 43.0       | 4.00       | 6           | 40           | ✓ | 0.60 | GI362 |       |       | GL14 |
| GL4-A25QGR-12-40          | 25              | 23        | 24.6       | 180        | 43.0       | 4.00       | 12          | 40           | ✓ | 0.60 | GI362 |       |       | GL14 |
| <b>R</b> GL2-A32SGR-06-40 | 32              | 30        | 22         | 250        | 51.2       | 2.00       | 6           | 40           | ✓ | 1.40 | GI360 |       |       | GL14 |
| GL2-A32SGR-10-45          | 32              | 30        | 26         | 250        | 51.2       | 2.00       | 10          | 45           | ✓ | 1.40 | GI360 |       |       | GL14 |
| GL3-A32SGR-06-40          | 32              | 30        | 22         | 250        | 52.0       | 3.00       | 6           | 40           | ✓ | 1.40 | GI361 |       |       | GL14 |
| GL3-A32SGR-12-45          | 32              | 30        | 28         | 250        | 52.0       | 3.00       | 12          | 45           | ✓ | 1.40 | GI361 |       |       | GL14 |
| GL4-A32SGR-06-40          | 32              | 30        | 22.1       | 250        | 53.0       | 4.00       | 6           | 40           | ✓ | 1.40 | GI362 |       |       | GL14 |
| GL4-A32SGR-12-45          | 32              | 30        | 28.1       | 250        | 53.0       | 4.00       | 12          | 45           | ✓ | 1.40 | GI362 |       |       | GL14 |
| GL3-A40TGR-12-54          | 40              | 38        | 32         | 300        | 52.0       | 3.00       | 12          | 54           | ✓ | 2.70 | GI361 |       |       | GL14 |
| GL4-A40TGR-12-56          | 40              | 38        | 32.1       | 300        | 53.0       | 4.00       | 12          | 56           | ✓ | 2.70 | GI362 |       |       | GL14 |
| GL4-A40TGR-20-62          | 40              | 38        | 40.1       | 300        | 53.0       | 4.00       | 20          | 62           | ✓ | 2.70 | GI362 |       |       | GL14 |
| <b>L</b> GL2-A25QGL-06-32 | 25              | 23        | 18.5       | 180        | 41.2       | 2.00       | 6           | 32           | ✓ | 0.60 | GI360 |       |       | GL14 |
| GL2-A25QGL-10-38          | 25              | 23        | 22.5       | 180        | 41.2       | 2.00       | 10          | 38           | ✓ | 0.60 | GI360 |       |       | GL14 |
| GL3-A25QGL-06-32          | 25              | 23        | 18.5       | 180        | 42.0       | 3.00       | 6           | 32           | ✓ | 0.60 | GI361 |       |       | GL14 |
| GL3-A25QGL-12-38          | 25              | 23        | 24.5       | 180        | 42.0       | 3.00       | 12          | 38           | ✓ | 0.60 | GI361 |       |       | GL14 |
| GL4-A25QGL-06-40          | 25              | 23        | 18.6       | 180        | 43.0       | 4.00       | 6           | 40           | ✓ | 0.60 | GI362 |       |       | GL14 |
| GL4-A25QGL-12-40          | 25              | 23        | 24.6       | 180        | 43.0       | 4.00       | 12          | 40           | ✓ | 0.60 | GI362 |       |       | GL14 |
| GL2-A32SGL-06-40          | 32              | 30        | 22         | 250        | 51.2       | 2.00       | 6           | 40           | ✓ | 1.40 | GI360 |       |       | GL14 |
| GL2-A32SGL-10-45          | 32              | 30        | 26         | 250        | 51.2       | 2.00       | 10          | 45           | ✓ | 1.40 | GI360 |       |       | GL14 |
| GL3-A32SGL-06-40          | 32              | 30        | 22         | 250        | 52.0       | 3.00       | 6           | 40           | ✓ | 1.40 | GI361 |       |       | GL14 |
| GL3-A32SGL-12-45          | 32              | 30        | 28         | 250        | 52.0       | 3.00       | 12          | 45           | ✓ | 1.40 | GI361 |       |       | GL14 |
| GL4-A32SGL-06-40          | 32              | 30        | 22.1       | 250        | 53.0       | 4.00       | 6           | 40           | ✓ | 1.40 | GI362 |       |       | GL14 |
| GL4-A32SGL-12-45          | 32              | 30        | 28.1       | 250        | 53.0       | 4.00       | 12          | 45           | ✓ | 1.40 | GI362 |       |       | GL14 |



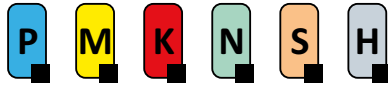
| Product                 | DCON MS | H    | WF   | LF   | LH   | CW   | CDX  | DMIN |   |      |       |      |
|-------------------------|---------|------|------|------|------|------|------|------|---|------|-------|------|
|                         | (mm)    | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) |   |      |       |      |
| <b>GL3-A40TGL-12-54</b> | 40      | 38   | 32   | 300  | 52.0 | 3.00 | 12   | 54   | ✓ | 2.70 | GI361 | GL14 |
| <b>GL4-A40TGL-12-56</b> | 40      | 38   | 32.1 | 300  | 53.0 | 4.00 | 12   | 56   | ✓ | 2.70 | GI362 | GL14 |
| <b>GL4-A40TGL-20-62</b> | 40      | 38   | 40.1 | 300  | 53.0 | 4.00 | 20   | 62   | ✓ | 2.70 | GI362 | GL14 |

| GI360 | GL2-GM | GL2-MM |
|-------|--------|--------|
| GI361 | GL3-GM | GL3-MM |
| GI362 | GL4-GM | GL4-MM |

| GL14 | US 5015-T20P | 5.0 | M 5 | 15 | LK T20P |
|------|--------------|-----|-----|----|---------|

**NEW**

**GLSF L-R AXIAL**



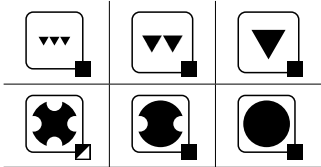
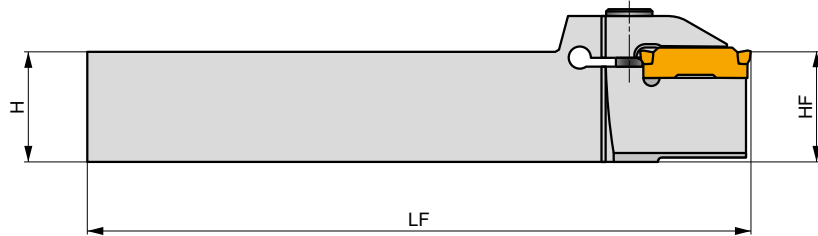
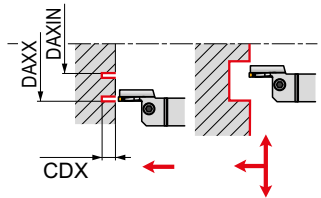
PRAMET

G



**Axial Face Grooving tool for GL inserts**

Left handed axial face grooving tool holder for GL inserts. Suited for face grooving, turning and profiling applications. Body treated for longer tool life.



| Product                          | ⌀    | H    | B    | WF   | LF   | CW   | CDX  | DAXX | DAXIN | kg   |       |      |
|----------------------------------|------|------|------|------|------|------|------|------|-------|------|-------|------|
|                                  | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)  |      |       |      |
| <b>GL3-S2525MFL-12-R035027</b>   | 25   | 25   | 25   | 26   | 150  | 3.00 | 12   | 35   | 27    | 0.69 | GI361 | GL16 |
| <b>GL3-S2525MFL-15-R044033</b>   | 25   | 25   | 25   | 26   | 150  | 3.00 | 15   | 44   | 33    | 0.68 | GI361 | GL16 |
| <b>GL3-S2525MFL-15-R055040</b>   | 25   | 25   | 25   | 26   | 150  | 3.00 | 15   | 55   | 40    | 0.68 | GI361 | GL16 |
| <b>GL3-S2525MFL-20-R080051</b>   | 25   | 25   | 25   | 26   | 150  | 3.00 | 20   | 80   | 51    | 0.65 | GI361 | GL16 |
| <b>GL3-S2525MFL-25-R110076</b>   | 25   | 25   | 25   | 26   | 150  | 3.00 | 25   | 110  | 76    | 0.63 | GI361 | GL16 |
| <b>GL4-S2525MFL-20-R065050</b>   | 25   | 25   | 25   | 26   | 150  | 4.00 | 20   | 65   | 50    | 0.71 | GI362 | GL16 |
| <b>GL4-S2525MFL-20-R095060</b>   | 25   | 25   | 25   | 26   | 150  | 4.00 | 20   | 95   | 60    | 0.65 | GI362 | GL16 |
| <b>L GL4-S2525MFL-25-R160090</b> | 25   | 25   | 25   | 26   | 150  | 4.00 | 25   | 160  | 90    | 0.63 | GI362 | GL16 |
| <b>GL4-S2525MFL-25-R400150</b>   | 25   | 25   | 25   | 25.7 | 150  | 4.00 | 25   | 400  | 150   | 0.63 | GI362 | GL16 |
| <b>GL4-S2525MFL-25-R950380</b>   | 25   | 25   | 25   | 25.7 | 150  | 4.00 | 25   | 950  | 380   | 0.63 | GI362 | GL16 |
| <b>GL5-S2525MFL-25-R095060</b>   | 25   | 25   | 25   | 25.3 | 150  | 5.00 | 25   | 95   | 60    | 0.63 | GI363 | GL16 |
| <b>GL5-S2525MFL-25-R200090</b>   | 25   | 25   | 25   | 25.3 | 150  | 5.00 | 25   | 200  | 90    | 0.63 | GI363 | GL16 |
| <b>GL5-S2525MFL-25-R950180</b>   | 25   | 25   | 25   | 25.3 | 150  | 5.00 | 25   | 950  | 180   | 0.63 | GI363 | GL16 |
| <b>GL6-S2525MFL-25-R095060</b>   | 25   | 25   | 25   | 25.4 | 150  | 6.00 | 25   | 95   | 60    | 0.64 | GI364 | GL16 |
| <b>GL6-S2525MFL-25-R200090</b>   | 25   | 25   | 25   | 25.4 | 150  | 6.00 | 25   | 200  | 90    | 0.64 | GI364 | GL16 |
| <b>L GL6-S2525MFL-25-R950180</b> | 25   | 25   | 25   | 25.4 | 150  | 6.00 | 25   | 950  | 180   | 0.64 | GI364 | GL16 |
| <b>L GL6-S3232PFL-32-R200090</b> | 32   | 32   | 32   | 32.4 | 170  | 6.00 | 32   | 200  | 90    | 1.20 | GI364 | GL17 |
| <b>GL6-S3232PFL-32-R950180</b>   | 32   | 32   | 32   | 32.4 | 170  | 6.00 | 32   | 950  | 180   | 1.20 | GI364 | GL17 |

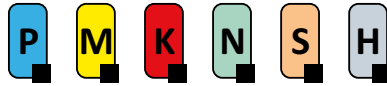
| GI361 | GL3-GM | GL3-MM |
|-------|--------|--------|
| GI362 | GL4-GM | GL4-MM |
| GI363 | GL5-GM | GL5-MM |
| GI364 | GL6-GM | GL6-MM |

| GL16 | HS 0620 | 6.0 | HXK 5 |
|------|---------|-----|-------|
| GL17 | HS 0825 | 8.0 | HXK 6 |



**NEW**

**GLSF R-L AXIAL**



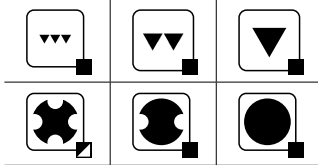
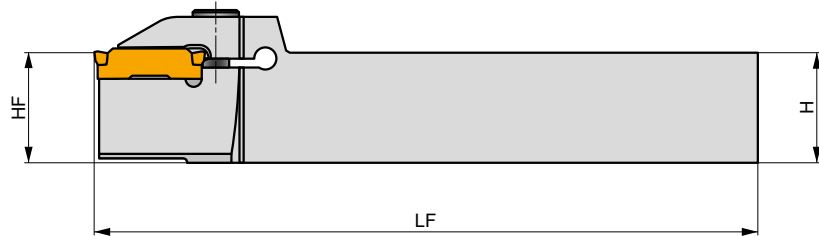
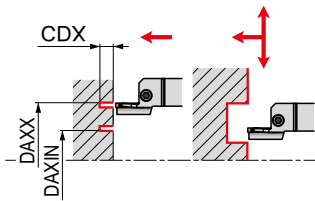
**PRAMET**

**G**



**Axial Face Grooving tool for GL inserts**

Right handed axial face grooving tool holder for GL inserts. Suited for face grooving, turning and profiling applications. Body treated for longer tool life.

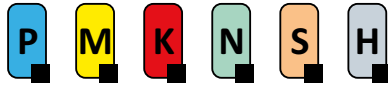


| Product                                 | HF   | H    | B    | WF   | LF   | CW   | CDX  | DAXX | DAXIN | kg   | G1361 | G1362 |
|---|------|------|------|------|------|------|------|------|-------|------|-------|-------|
|   | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm)  |      |       |       |
| <b>R</b> <b>GL3-S2020KFR-12-L035027</b> | 20   | 20   | 20   | 20.5 | 125  | 3.00 | 12   | 35   | 27    | 0.40 | G1361 | GL16  |
| <b>GL3-S2020KFR-15-L044033</b>          | 20   | 20   | 20   | 20.5 | 125  | 3.00 | 15   | 44   | 33    | 0.40 | G1361 | GL16  |
| <b>GL3-S2020KFR-15-L055040</b>          | 20   | 20   | 20   | 20.5 | 125  | 3.00 | 15   | 55   | 40    | 0.40 | G1361 | GL16  |
| <b>GL3-S2020KFR-20-L080051</b>          | 20   | 20   | 20   | 20.5 | 125  | 3.00 | 20   | 80   | 51    | 0.40 | G1361 | GL16  |
| <b>GL3-S2525MFR-12-L035027</b>          | 25   | 25   | 25   | 26   | 150  | 3.00 | 12   | 35   | 27    | 0.69 | G1361 | GL16  |
| <b>GL3-S2525MFR-15-L044033</b>          | 25   | 25   | 25   | 26   | 150  | 3.00 | 15   | 44   | 33    | 0.68 | G1361 | GL16  |
| <b>GL3-S2525MFR-15-L055040</b>          | 25   | 25   | 25   | 26   | 150  | 3.00 | 15   | 55   | 40    | 0.68 | G1361 | GL16  |
| <b>GL3-S2525MFR-20-L080051</b>          | 25   | 25   | 25   | 26   | 150  | 3.00 | 20   | 80   | 51    | 0.65 | G1361 | GL16  |
| <b>GL3-S2525MFR-25-L110076</b>          | 25   | 25   | 25   | 26   | 150  | 3.00 | 25   | 110  | 76    | 0.63 | G1361 | GL16  |
| <b>GL4-S2525MFR-20-L065050</b>          | 25   | 25   | 25   | 26   | 150  | 4.00 | 20   | 65   | 50    | 0.66 | G1362 | GL16  |
| <b>GL4-S2525MFR-20-L095060</b>          | 25   | 25   | 25   | 26   | 150  | 4.00 | 20   | 95   | 60    | 0.65 | G1362 | GL16  |
| <b>GL4-S2525MFR-25-L160090</b>          | 25   | 25   | 25   | 26   | 150  | 4.00 | 25   | 160  | 90    | 0.63 | G1362 | GL16  |
| <b>GL4-S2525MFR-25-L400150</b>          | 25   | 25   | 25   | 25.7 | 150  | 4.00 | 25   | 400  | 150   | 0.63 | G1362 | GL16  |
| <b>GL4-S2525MFR-25-L950380</b>          | 25   | 25   | 25   | 25.7 | 150  | 4.00 | 25   | 950  | 380   | 0.63 | G1362 | GL16  |
| <b>GL5-S2525MFR-25-L095060</b>          | 25   | 25   | 25   | 25.3 | 150  | 5.00 | 25   | 95   | 60    | 0.63 | G1363 | GL16  |
| <b>GL5-S2525MFR-25-L200090</b>          | 25   | 25   | 25   | 25.3 | 150  | 5.00 | 25   | 200  | 90    | 0.63 | G1363 | GL16  |
| <b>GL5-S2525MFR-25-L950180</b>          | 25   | 25   | 25   | 25.3 | 150  | 5.00 | 25   | 950  | 180   | 0.63 | G1363 | GL16  |
| <b>R</b> <b>GL6-S2525MFR-25-L095060</b> | 25   | 25   | 25   | 25.4 | 150  | 6.00 | 25   | 95   | 60    | 0.64 | G1364 | GL16  |
| <b>GL6-S2525MFR-25-L200090</b>          | 25   | 25   | 25   | 25.4 | 150  | 6.00 | 25   | 200  | 90    | 0.64 | G1364 | GL16  |
| <b>GL6-S2525MFR-25-L950180</b>          | 25   | 25   | 25   | 25.4 | 150  | 6.00 | 25   | 950  | 180   | 0.64 | G1364 | GL16  |
| <b>GL6-S3232PFR-32-L200090</b>          | 32   | 32   | 32   | 32.4 | 170  | 6.00 | 32   | 200  | 90    | 1.20 | G1364 | GL17  |
| <b>GL6-S3232PFR-32-L950180</b>          | 32   | 32   | 32   | 32.4 | 170  | 6.00 | 32   | 950  | 180   | 1.20 | G1364 | GL17  |

| G1361 | GL3-GM | GL3-MM | GL16 | HS 0620 | 6.0 | HXX 5 |
|-------|--------|--------|------|---------|-----|-------|
| G1362 | GL4-GM | GL4-MM | GL17 | HS 0825 | 8.0 | HXX 6 |
| G1363 | GL5-GM | GL5-MM |      |         |     |       |
| G1364 | GL6-GM | GL6-MM |      |         |     |       |

**NEW**

**GLSG R-R AXIAL**



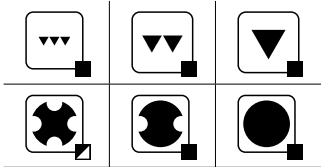
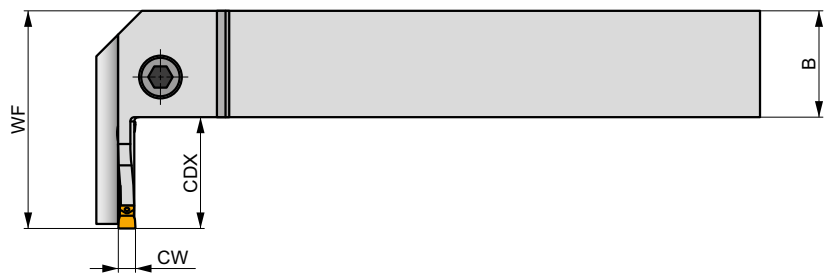
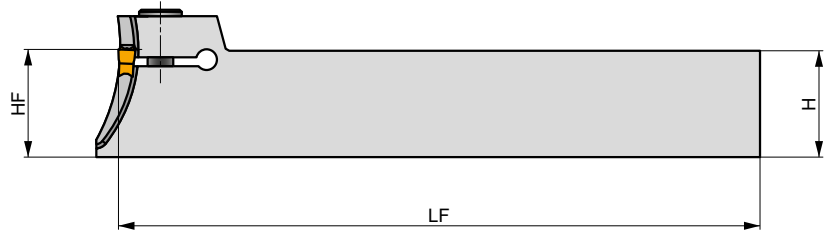
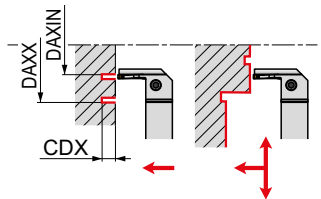
PRAMET

G



**Radial Face Grooving tool for GL inserts**

Right handed radial face grooving tool holder for GL inserts. Suited for face grooving, turning and profiling applications. Body treated for longer tool life.



| Product                                 | HF<br>(mm) | H<br>(mm) | B<br>(mm) | WF<br>(mm) | LF<br>(mm) | CW<br>(mm) | CDX<br>(mm) | DAXX<br>(mm) | DAXIN<br>(mm) | kg   |       |      |
|---|------------|-----------|-----------|------------|------------|------------|-------------|--------------|---------------|------|-------|------|
| <b>GL3-S2525MGR-15-R044033</b>          | 25         | 25        | 25        | 40.9       | 150        | 3.00       | 15          | 44           | 33            | 0.75 | GI361 | GL16 |
| <b>GL3-S2525MGR-15-R055040</b>          | 25         | 25        | 25        | 40.9       | 150        | 3.00       | 15          | 55           | 40            | 0.75 | GI361 | GL16 |
| <b>GL3-S2525MGR-20-R080051</b>          | 25         | 25        | 25        | 45.9       | 150        | 3.00       | 20          | 80           | 51            | 0.75 | GI361 | GL16 |
| <b>R</b> <b>GL3-S2525MGR-25-R110076</b> | 25         | 25        | 25        | 50.9       | 150        | 3.00       | 25          | 110          | 76            | 0.75 | GI361 | GL16 |
| <b>GL4-S2525MGR-20-R065050</b>          | 25         | 25        | 25        | 46         | 150        | 4.00       | 20          | 65           | 50            | 0.77 | GI362 | GL16 |
| <b>GL4-S2525MGR-25-R095060</b>          | 25         | 25        | 25        | 51         | 150        | 4.00       | 25          | 95           | 60            | 0.76 | GI362 | GL16 |
| <b>GL4-S2525MGR-25-R160090</b>          | 25         | 25        | 25        | 51         | 150        | 4.00       | 25          | 160          | 90            | 0.76 | GI362 | GL16 |
| <b>GL4-S2525MGR-25-R400150</b>          | 25         | 25        | 25        | 51         | 150        | 4.00       | 25          | 400          | 150           | 0.75 | GI362 | GL16 |

| GI361 | GL3-GM | GL3-MM |
|-------|--------|--------|
| GI362 | GL4-GM | GL4-MM |

| GL16 | HS 0620 | 6.0 | HXK 5 |
|------|---------|-----|-------|

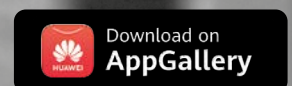
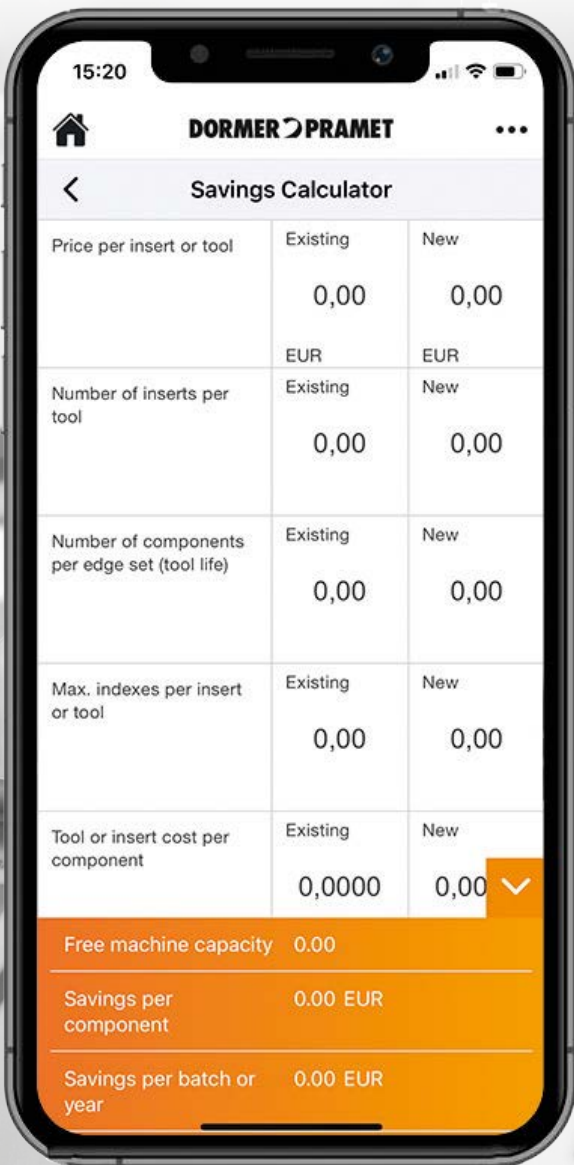


# DORMER PRAMET



## POCKET SAVER

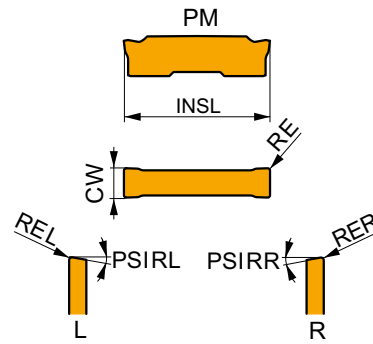
Our machining calculator allows you to measure the savings based on different products and applications. A useful pocket-sized tool, which will help keep cash in your pockets! **Simply Reliable.**





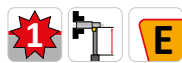
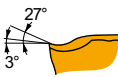
# GL. D - PM

|     | CW   | CWTOLL | CWTOLU | INSL |
|-----|------|--------|--------|------|
|     | (mm) | (mm)   | (mm)   | (mm) |
| 150 | 1.50 | -0.04  | 0.04   | 16.5 |
| 200 | 2.00 | -0.05  | 0.05   | 25.0 |
| 250 | 2.55 | -0.05  | 0.05   | 25.0 |
| 300 | 3.00 | -0.05  | 0.05   | 25.0 |
| 400 | 4.00 | -0.05  | 0.05   | 25.0 |
| 500 | 5.00 | -0.05  | 0.05   | 25.0 |
| 600 | 6.00 | -0.05  | 0.05   | 25.0 |



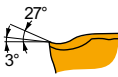
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

| Product | RE<br>(mm) | P             |               | M             |               | K             |               | N             |               | S             |               | H             |               | PSIRR<br>(°) | PSIRL<br>(°) |
|---------|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|
|         |            | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) |              |              |



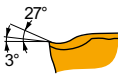
PM geometry with highly positive rake, first choice for parting-off, and continuous to slightly interrupted cuts.

|                       |     |      |     |      |     |      |     |      |     |      |    |      |   |   |   |   |
|-----------------------|-----|------|-----|------|-----|------|-----|------|-----|------|----|------|---|---|---|---|
| GL1-D150M015-PM:G8330 | NEW | 0.15 | 130 | 0.05 | 75  | 0.05 | 120 | 0.05 | 390 | 0.06 | 30 | 0.04 | - | - | - | - |
| GL2-D200M02-PM:G8330  |     | 0.2  | 130 | 0.08 | 75  | 0.07 | 120 | 0.08 | 390 | 0.10 | 30 | 0.06 | - | - | - | - |
| GL2-D200M02-PM:T7325  |     | 0.2  | 150 | 0.08 | 115 | 0.07 | 140 | 0.08 | -   | -    | 45 | 0.06 | - | - | - | - |
| GL3-D250G02-PM:G8330  |     | 0.2  | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | - | - |
| GL3-D300M02-PM:G8330  |     | 0.2  | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | - | - |
| GL3-D300M02-PM:T7325  |     | 0.2  | 150 | 0.10 | 115 | 0.09 | 140 | 0.10 | -   | -    | 45 | 0.07 | - | - | - | - |
| GL4-D400M02-PM:G8330  |     | 0.2  | 130 | 0.12 | 75  | 0.11 | 120 | 0.12 | 390 | 0.14 | 30 | 0.10 | - | - | - | - |
| GL4-D400M02-PM:T7325  |     | 0.2  | 150 | 0.12 | 115 | 0.11 | 140 | 0.12 | -   | -    | 45 | 0.10 | - | - | - | - |
| GL5-D500M03-PM:G8330  |     | 0.3  | 130 | 0.15 | 75  | 0.14 | 120 | 0.15 | 390 | 0.18 | 30 | 0.12 | - | - | - | - |
| GL6-D600M03-PM:G8330  |     | 0.3  | 130 | 0.15 | 75  | 0.14 | 120 | 0.15 | 390 | 0.18 | 30 | 0.12 | - | - | - | - |



R-PM right-handed geometry with highly positive rake, first choice for tubes parting-off, and continuous cuts.

|                          |     |      |     |      |     |      |     |      |     |      |    |      |   |   |    |   |
|--------------------------|-----|------|-----|------|-----|------|-----|------|-----|------|----|------|---|---|----|---|
| GL1-D150G015R06-PM:G8330 | NEW | 0.15 | 130 | 0.05 | 75  | 0.05 | 120 | 0.05 | 390 | 0.06 | 30 | 0.04 | - | - | 6  | - |
| GL1-D150G015R12-PM:G8330 | NEW | 0.15 | 130 | 0.05 | 75  | 0.05 | 120 | 0.05 | 390 | 0.06 | 30 | 0.04 | - | - | 12 | - |
| GL2-D200G02R06-PM:G8330  |     | 0.2  | 130 | 0.08 | 75  | 0.07 | 120 | 0.08 | 390 | 0.10 | 30 | 0.06 | - | - | 6  | - |
| GL2-D200G02R06-PM:T7325  |     | 0.2  | 150 | 0.08 | 115 | 0.07 | 140 | 0.08 | -   | -    | 45 | 0.06 | - | - | 6  | - |
| GL2-D200G02R12-PM:G8330  |     | 0.2  | 130 | 0.08 | 75  | 0.07 | 120 | 0.08 | 390 | 0.10 | 30 | 0.06 | - | - | 12 | - |
| GL3-D300G02R06-PM:G8330  |     | 0.2  | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | 6  | - |
| GL3-D300G02R06-PM:T7325  |     | 0.2  | 150 | 0.10 | 115 | 0.09 | 140 | 0.10 | -   | -    | 45 | 0.07 | - | - | 6  | - |
| GL3-D300G02R12-PM:G8330  |     | 0.2  | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | 12 | - |
| GL4-D400G02R06-PM:G8330  |     | 0.2  | 130 | 0.12 | 75  | 0.11 | 120 | 0.12 | 390 | 0.14 | 30 | 0.10 | - | - | 6  | - |
| GL4-D400G02R06-PM:T7325  |     | 0.2  | 150 | 0.12 | 115 | 0.11 | 140 | 0.12 | -   | -    | 45 | 0.10 | - | - | 6  | - |
| GL4-D400G02R12-PM:G8330  |     | 0.2  | 130 | 0.12 | 75  | 0.11 | 120 | 0.12 | 390 | 0.14 | 30 | 0.10 | - | - | 12 | - |



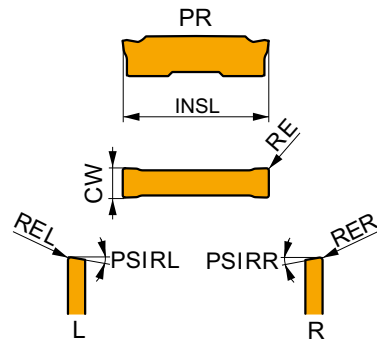
L-PM left-handed geometry with highly positive rake, first choice for tubes parting-off, and continuous cuts.

|                          |     |      |     |      |     |      |     |      |     |      |    |      |   |   |   |    |
|--------------------------|-----|------|-----|------|-----|------|-----|------|-----|------|----|------|---|---|---|----|
| GL1-D150G015L06-PM:G8330 | NEW | 0.15 | 130 | 0.05 | 75  | 0.05 | 120 | 0.05 | 390 | 0.06 | 30 | 0.04 | - | - | - | 6  |
| GL1-D150G015L12-PM:G8330 | NEW | 0.15 | 130 | 0.05 | 75  | 0.05 | 120 | 0.05 | 390 | 0.06 | 30 | 0.04 | - | - | - | 12 |
| GL2-D200G02L06-PM:G8330  |     | 0.2  | 130 | 0.08 | 75  | 0.07 | 120 | 0.08 | 390 | 0.10 | 30 | 0.06 | - | - | - | 6  |
| GL2-D200G02L06-PM:T7325  |     | 0.2  | 150 | 0.08 | 115 | 0.07 | 140 | 0.08 | -   | -    | 45 | 0.06 | - | - | - | 6  |
| GL2-D200G02L12-PM:G8330  |     | 0.2  | 130 | 0.08 | 75  | 0.07 | 120 | 0.08 | 390 | 0.10 | 30 | 0.06 | - | - | - | 12 |
| GL3-D300G02L06-PM:G8330  |     | 0.2  | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | - | 6  |
| GL3-D300G02L06-PM:T7325  |     | 0.2  | 150 | 0.10 | 115 | 0.09 | 140 | 0.10 | -   | -    | 45 | 0.07 | - | - | - | 6  |
| GL3-D300G02L12-PM:G8330  |     | 0.2  | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | - | 12 |
| GL4-D400G02L06-PM:G8330  |     | 0.2  | 130 | 0.12 | 75  | 0.11 | 120 | 0.12 | 390 | 0.14 | 30 | 0.10 | - | - | - | 6  |
| GL4-D400G02L06-PM:T7325  |     | 0.2  | 150 | 0.12 | 115 | 0.11 | 140 | 0.12 | -   | -    | 45 | 0.10 | - | - | - | 6  |
| GL4-D400G02L12-PM:G8330  |     | 0.2  | 130 | 0.12 | 75  | 0.11 | 120 | 0.12 | 390 | 0.14 | 30 | 0.10 | - | - | - | 12 |



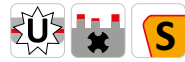
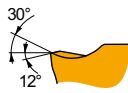
# GL. D - PR

|     | CW   | CWTOLL | CWTOLU | INSL |
|-----|------|--------|--------|------|
|     | (mm) | (mm)   | (mm)   | (mm) |
| 200 | 2.00 | -0.05  | 0.05   | 25.0 |
| 300 | 3.00 | -0.05  | 0.05   | 25.0 |
| 400 | 4.00 | -0.05  | 0.05   | 25.0 |
| 500 | 5.00 | -0.05  | 0.05   | 25.0 |
| 600 | 6.00 | -0.05  | 0.05   | 25.0 |



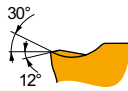
Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

| Product | RE<br>(mm) | P             |               | M             |               | K             |               | N             |               | S             |               | H             |               | PSIRR<br>(°) | PSIRL<br>(°) |
|---------|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|
|         |            | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) | vc<br>(m/min) | f<br>(mm/rev) |              |              |



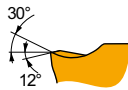
PR geometry with negative T-land, first choice for difficult grooving and parting-off, and continuous to interrupted cuts.

|                      |     |     |      |     |      |     |      |   |   |   |   |   |   |   |   |
|----------------------|-----|-----|------|-----|------|-----|------|---|---|---|---|---|---|---|---|
| GL2-D200M02-PR:G8330 | 0.2 | 130 | 0.10 | 75  | 0.09 | 120 | 0.10 | - | - | - | - | - | - | - | - |
| GL2-D200M02-PR:T7325 | 0.2 | 150 | 0.10 | 115 | 0.09 | 140 | 0.10 | - | - | - | - | - | - | - | - |
| GL3-D300M02-PR:G8330 | 0.2 | 130 | 0.12 | 75  | 0.11 | 120 | 0.12 | - | - | - | - | - | - | - | - |
| GL3-D300M02-PR:T7325 | 0.2 | 150 | 0.12 | 115 | 0.11 | 140 | 0.12 | - | - | - | - | - | - | - | - |
| GL4-D400M02-PR:G8330 | 0.2 | 130 | 0.15 | 75  | 0.14 | 120 | 0.15 | - | - | - | - | - | - | - | - |
| GL4-D400M02-PR:T7325 | 0.2 | 150 | 0.15 | 115 | 0.14 | 140 | 0.15 | - | - | - | - | - | - | - | - |
| GL5-D500M04-PR:G8330 | 0.4 | 130 | 0.18 | 75  | 0.16 | 120 | 0.18 | - | - | - | - | - | - | - | - |
| GL6-D600M04-PR:G8330 | 0.4 | 130 | 0.18 | 75  | 0.16 | 120 | 0.18 | - | - | - | - | - | - | - | - |



R-PR right-handed geometry with negative T-land, first choice for difficult bars parting-off, and continuous to interrupted cuts.

|                         |     |     |      |    |      |     |      |   |   |   |   |   |    |   |
|-------------------------|-----|-----|------|----|------|-----|------|---|---|---|---|---|----|---|
| GL2-D200G02R06-PR:G8330 | 0.2 | 130 | 0.10 | 75 | 0.09 | 120 | 0.10 | - | - | - | - | - | 6  | - |
| GL2-D200G02R12-PR:G8330 | 0.2 | 130 | 0.10 | 75 | 0.09 | 120 | 0.10 | - | - | - | - | - | 12 | - |
| GL3-D300G02R06-PR:G8330 | 0.2 | 130 | 0.12 | 75 | 0.11 | 120 | 0.12 | - | - | - | - | - | 6  | - |
| GL3-D300G02R12-PR:G8330 | 0.2 | 130 | 0.12 | 75 | 0.11 | 120 | 0.12 | - | - | - | - | - | 12 | - |
| GL4-D400G02R06-PR:G8330 | 0.2 | 130 | 0.15 | 75 | 0.14 | 120 | 0.15 | - | - | - | - | - | 6  | - |
| GL4-D400G02R12-PR:G8330 | 0.2 | 130 | 0.15 | 75 | 0.14 | 120 | 0.15 | - | - | - | - | - | 12 | - |



L-PR left-handed geometry with negative T-land, first choice for difficult bars parting-off, and continuous to interrupted cuts.

|                         |     |     |      |    |      |     |      |   |   |   |   |   |   |    |
|-------------------------|-----|-----|------|----|------|-----|------|---|---|---|---|---|---|----|
| GL2-D200G02L06-PR:G8330 | 0.2 | 130 | 0.10 | 75 | 0.09 | 120 | 0.10 | - | - | - | - | - | - | 6  |
| GL2-D200G02L12-PR:G8330 | 0.2 | 130 | 0.10 | 75 | 0.09 | 120 | 0.10 | - | - | - | - | - | - | 12 |
| GL3-D300G02L06-PR:G8330 | 0.2 | 130 | 0.12 | 75 | 0.11 | 120 | 0.12 | - | - | - | - | - | - | 6  |
| GL3-D300G02L12-PR:G8330 | 0.2 | 130 | 0.12 | 75 | 0.11 | 120 | 0.12 | - | - | - | - | - | - | 12 |
| GL4-D400G02L06-PR:G8330 | 0.2 | 130 | 0.15 | 75 | 0.14 | 120 | 0.15 | - | - | - | - | - | - | 6  |
| GL4-D400G02L12-PR:G8330 | 0.2 | 130 | 0.15 | 75 | 0.14 | 120 | 0.15 | - | - | - | - | - | - | 12 |

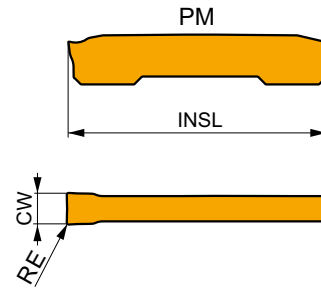
**NEW**



## GL. S - PM

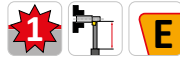
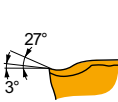
**PRAMET**

|     | CW   | CWTOLL | CWTOLU | INSL |
|-----|------|--------|--------|------|
|     | (mm) | (mm)   | (mm)   | (mm) |
| 300 | 3.00 | -0.05  | 0.05   | 24.5 |
| 400 | 4.00 | -0.05  | 0.05   | 24.3 |



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

| Product | RE   | P       |          | M       |          | K       |          | N       |          | S       |          | H       |          | PSIRR | PSIRL |
|---------|------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|-------|-------|
|         |      | vc      | f        | vc      | f        | vc      | f        | vc      | f        | vc      | f        | vc      | f        |       |       |
|         | (mm) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (°)   | (°)   |



PM geometry with highly positive rake on single sided insert, first choice for deep parting-off, and continuous to slightly interrupted cuts.

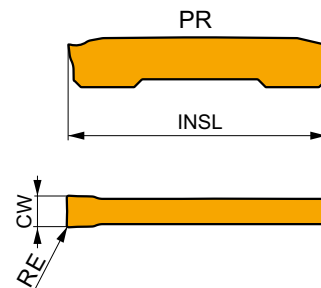
|                      |     |     |      |    |      |     |      |     |      |    |      |   |   |   |   |
|----------------------|-----|-----|------|----|------|-----|------|-----|------|----|------|---|---|---|---|
| GL3-S300M02-PM:G8330 | 0.2 | 130 | 0.10 | 75 | 0.09 | 120 | 0.10 | 390 | 0.12 | 30 | 0.07 | - | - | - | - |
| GL4-S400M02-PM:G8330 | 0.2 | 130 | 0.12 | 75 | 0.11 | 120 | 0.12 | 390 | 0.14 | 30 | 0.10 | - | - | - | - |

**NEW**

## GL. S - PR

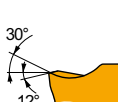
**PRAMET**

|     | CW   | CWTOLL | CWTOLU | INSL |
|-----|------|--------|--------|------|
|     | (mm) | (mm)   | (mm)   | (mm) |
| 300 | 3.00 | -0.05  | 0.05   | 24.5 |
| 400 | 4.00 | -0.05  | 0.05   | 24.3 |



Suitability and starting values for cutting speed (vc) and feed (f). Refer to our Machining Calculator app for further calculations.

| Product | RE   | P       |          | M       |          | K       |          | N       |          | S       |          | H       |          | PSIRR | PSIRL |
|---------|------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|-------|-------|
|         |      | vc      | f        | vc      | f        | vc      | f        | vc      | f        | vc      | f        | vc      | f        |       |       |
|         | (mm) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (m/min) | (mm/rev) | (°)   | (°)   |



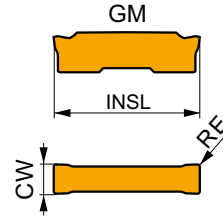
PR geometry with negative T-land on single sided insert, first choice for difficult deep grooving and parting-off, and continuous to interrupted cuts.

|                      |     |     |      |    |      |     |      |   |   |   |   |   |   |   |   |
|----------------------|-----|-----|------|----|------|-----|------|---|---|---|---|---|---|---|---|
| GL3-S300M02-PR:G8330 | 0.2 | 130 | 0.12 | 75 | 0.11 | 120 | 0.12 | - | - | - | - | - | - | - | - |
| GL4-S400M02-PR:G8330 | 0.2 | 130 | 0.15 | 75 | 0.14 | 120 | 0.15 | - | - | - | - | - | - | - | - |



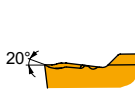
## GL. D - GM

|     | CW   | CWTOLL | CWTOLU | INSL |
|-----|------|--------|--------|------|
|     | (mm) | (mm)   | (mm)   | (mm) |
| 200 | 2.00 | -0.05  | 0.05   | 25.0 |
| 300 | 3.00 | -0.05  | 0.05   | 25.0 |
| 400 | 4.00 | -0.05  | 0.05   | 25.0 |
| 500 | 5.00 | -0.05  | 0.05   | 25.0 |
| 600 | 6.00 | -0.05  | 0.05   | 25.0 |
| 800 | 8.00 | -0.05  | 0.05   | 25.0 |



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

| Product | RE<br>(mm) | P             |               |            | M             |               |            | K             |               |            | N             |               |            | S             |               |            | H             |               |            |
|---------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|
|         |            | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) |



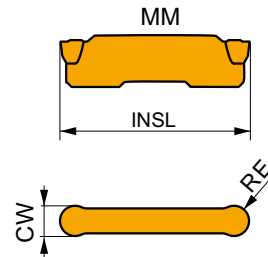
GM versatile geometry for grooving and longitudinal turning, and continuous to interrupted cuts.

|                                    |     |     |      |     |     |      |     |     |      |     |    |      |     |   |   |   |   |   |   |
|------------------------------------|-----|-----|------|-----|-----|------|-----|-----|------|-----|----|------|-----|---|---|---|---|---|---|
| GL2-D200M02-GM:G8330               | 0.2 | 190 | 0.10 | 0.8 | 110 | 0.09 | 0.8 | 180 | 0.10 | 0.8 | 45 | 0.08 | 0.6 | - | - | - | - | - | - |
| GL2-D200M02-GM:T7325               | 0.2 | 220 | 0.10 | 0.8 | 170 | 0.09 | 0.8 | 205 | 0.10 | 0.8 | 70 | 0.08 | 0.6 | - | - | - | - | - | - |
| GL3-D300M02-GM:G8330               | 0.2 | 150 | 0.20 | 1.0 | 90  | 0.18 | 1.0 | 140 | 0.20 | 1.0 | 35 | 0.14 | 0.8 | - | - | - | - | - | - |
| GL3-D300M02-GM:T7325               | 0.2 | 175 | 0.20 | 1.0 | 135 | 0.18 | 1.0 | 165 | 0.20 | 1.0 | 55 | 0.14 | 0.8 | - | - | - | - | - | - |
| GL3-D300M04-GM:G8330               | 0.4 | 160 | 0.20 | 1.0 | 95  | 0.18 | 1.0 | 150 | 0.20 | 1.0 | 40 | 0.14 | 0.8 | - | - | - | - | - | - |
| GL3-D300M04-GM:T7325               | 0.4 | 185 | 0.20 | 1.0 | 140 | 0.18 | 1.0 | 175 | 0.20 | 1.0 | 60 | 0.14 | 0.8 | - | - | - | - | - | - |
| GL4-D400M04-GM:G8330               | 0.4 | 150 | 0.25 | 1.2 | 90  | 0.23 | 1.2 | 140 | 0.25 | 1.2 | 35 | 0.18 | 1.0 | - | - | - | - | - | - |
| GL4-D400M04-GM:T7325               | 0.4 | 170 | 0.25 | 1.2 | 130 | 0.23 | 1.2 | 160 | 0.25 | 1.2 | 55 | 0.18 | 1.0 | - | - | - | - | - | - |
| GL4-D400M08-GM:G8330               | 0.8 | 180 | 0.25 | 1.2 | 105 | 0.23 | 1.2 | 170 | 0.25 | 1.2 | 45 | 0.18 | 1.0 | - | - | - | - | - | - |
| GL4-D400M08-GM:T7325               | 0.8 | 200 | 0.25 | 1.2 | 155 | 0.23 | 1.2 | 190 | 0.25 | 1.2 | 65 | 0.18 | 1.0 | - | - | - | - | - | - |
| GL5-D500M08-GM:G8330               | 0.8 | 170 | 0.30 | 1.2 | 100 | 0.27 | 1.2 | 160 | 0.30 | 1.2 | 40 | 0.21 | 1.0 | - | - | - | - | - | - |
| GL5-D500M08-GM:T7325               | 0.8 | 190 | 0.30 | 1.2 | 145 | 0.27 | 1.2 | 180 | 0.30 | 1.2 | 60 | 0.21 | 1.0 | - | - | - | - | - | - |
| GL6-D600M08-GM:G8330               | 0.8 | 170 | 0.30 | 1.2 | 100 | 0.27 | 1.2 | 160 | 0.30 | 1.2 | 40 | 0.21 | 1.0 | - | - | - | - | - | - |
| GL6-D600M08-GM:T7325               | 0.8 | 190 | 0.30 | 1.2 | 145 | 0.27 | 1.2 | 180 | 0.30 | 1.2 | 60 | 0.21 | 1.0 | - | - | - | - | - | - |
| GL6-D800M08-GM:G8330 <sup>1)</sup> | 0.8 | 170 | 0.30 | 1.2 | 100 | 0.27 | 1.2 | 160 | 0.30 | 1.2 | 40 | 0.21 | 1.2 | - | - | - | - | - | - |

<sup>1)</sup> Usable only in holders ≥ CDX 24.

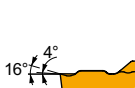
## GL. D - MM

|     | CW   | CWTOLL | CWTOLU | INSL |
|-----|------|--------|--------|------|
|     | (mm) | (mm)   | (mm)   | (mm) |
| 200 | 2.00 | -0.05  | 0.05   | 25.0 |
| 300 | 3.00 | -0.05  | 0.05   | 25.0 |
| 400 | 4.00 | -0.05  | 0.05   | 25.0 |
| 500 | 5.00 | -0.05  | 0.05   | 26.0 |
| 600 | 6.00 | -0.05  | 0.05   | 26.0 |



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

| Product | RE<br>(mm) | P             |               |            | M             |               |            | K             |               |            | N             |               |            | S             |               |            | H             |               |            |
|---------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|---------------|---------------|------------|
|         |            | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) | vc<br>(m/min) | f<br>(mm/rev) | ap<br>(mm) |



MM geometry, with full radius shape for copy profiling and longitudinal turning, and continuous to interrupted cuts.

|                      |     |     |      |     |     |      |     |     |      |     |    |      |     |   |   |   |   |   |   |
|----------------------|-----|-----|------|-----|-----|------|-----|-----|------|-----|----|------|-----|---|---|---|---|---|---|
| GL2-D200MM0-MM:G8330 | 1.0 | 250 | 0.10 | 1.0 | 150 | 0.09 | 1.0 | 235 | 0.10 | 1.0 | 60 | 0.08 | 0.8 | - | - | - | - | - | - |
| GL2-D200MM0-MM:T7325 | 1.0 | 285 | 0.10 | 1.0 | 220 | 0.09 | 1.0 | 270 | 0.10 | 1.0 | 90 | 0.08 | 0.8 | - | - | - | - | - | - |
| GL3-D300MM0-MM:G8330 | 1.5 | 210 | 0.20 | 1.2 | 125 | 0.18 | 1.2 | 195 | 0.20 | 1.2 | 50 | 0.14 | 1.0 | - | - | - | - | - | - |
| GL3-D300MM0-MM:T7325 | 1.5 | 240 | 0.20 | 1.2 | 185 | 0.18 | 1.2 | 225 | 0.20 | 1.2 | 75 | 0.14 | 1.0 | - | - | - | - | - | - |
| GL4-D400MM0-MM:G8330 | 2.0 | 220 | 0.20 | 1.2 | 130 | 0.18 | 1.2 | 205 | 0.20 | 1.2 | 55 | 0.14 | 1.0 | - | - | - | - | - | - |
| GL4-D400MM0-MM:T7325 | 2.0 | 250 | 0.20 | 1.2 | 195 | 0.18 | 1.2 | 235 | 0.20 | 1.2 | 80 | 0.14 | 1.0 | - | - | - | - | - | - |
| GL5-D500MM0-MM:G8330 | 2.5 | 205 | 0.25 | 1.2 | 120 | 0.23 | 1.2 | 190 | 0.25 | 1.2 | 50 | 0.18 | 1.0 | - | - | - | - | - | - |
| GL5-D500MM0-MM:T7325 | 2.5 | 235 | 0.25 | 1.2 | 180 | 0.23 | 1.2 | 220 | 0.25 | 1.2 | 75 | 0.18 | 1.0 | - | - | - | - | - | - |
| GL6-D600MM0-MM:G8330 | 3.0 | 195 | 0.30 | 1.2 | 115 | 0.27 | 1.2 | 185 | 0.30 | 1.2 | 45 | 0.21 | 1.0 | - | - | - | - | - | - |
| GL6-D600MM0-MM:T7325 | 3.0 | 220 | 0.30 | 1.2 | 170 | 0.27 | 1.2 | 205 | 0.30 | 1.2 | 70 | 0.21 | 1.0 | - | - | - | - | - | - |



# TECHNICAL INFORMATION

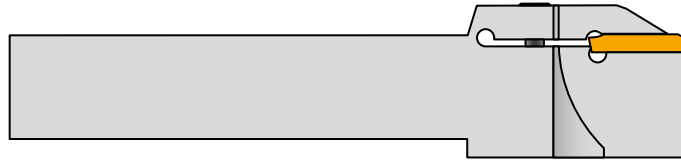






## PARTING – OFF & GROOVING HOLDERS (EXTERNAL TURNING) – GL – CODE DESIGNATION

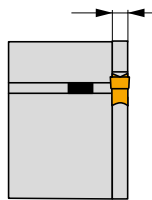
|           |          |          |             |          |          |          |           |          |            |            |
|-----------|----------|----------|-------------|----------|----------|----------|-----------|----------|------------|------------|
| <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b>    | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b>  | <b>9</b> | <b>10</b>  | <b>11</b>  |
| <b>GL</b> | <b>3</b> | <b>S</b> | <b>2525</b> | <b>M</b> | <b>F</b> | <b>R</b> | <b>20</b> | <b>R</b> | <b>120</b> | <b>090</b> |



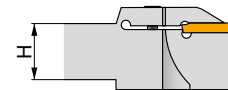
| 1          | 2           | 3          | 4                |
|------------|-------------|------------|------------------|
| Tool group | Pocket size | Shank type | Shank dimensions |

1, 2, 3, 4, 5, 6

**GL**

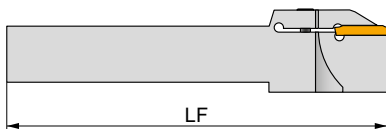


|          |                                      |
|----------|--------------------------------------|
| <b>A</b> | steel shank with internal coolant    |
| <b>S</b> | steel shank without internal coolant |

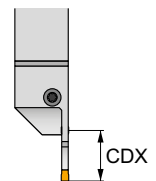
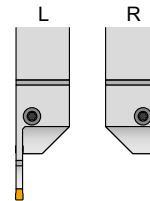
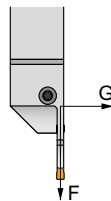


| H × B (mm)  |           |
|-------------|-----------|
| <b>1212</b> | – 12 × 12 |
| <b>1616</b> | – 16 × 16 |
| <b>2020</b> | – 20 × 20 |
| <b>2525</b> | – 25 × 25 |
| <b>3232</b> | – 32 × 32 |

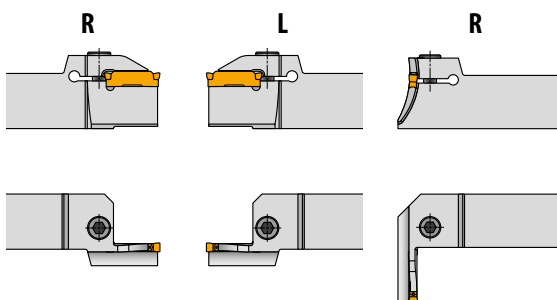
| 5                        | 6                               | 7                    | 8                           |
|--------------------------|---------------------------------|----------------------|-----------------------------|
| Holder total length – LF | Tool style – cutting edge angle | Version (right/left) | Cutting depth maximum – CDX |



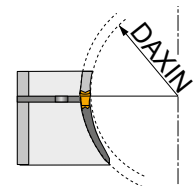
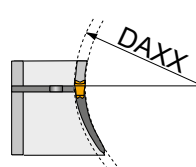
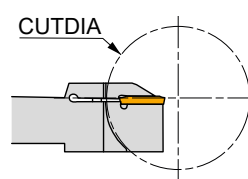
|          | LF (mm) |
|----------|---------|
| <b>H</b> | 100     |
| <b>K</b> | 125     |
| <b>M</b> | 150     |
| <b>P</b> | 170     |



| 9                         | 10               | 11               |
|---------------------------|------------------|------------------|
| Blade curvature direction | Maximum diameter | Minimum diameter |



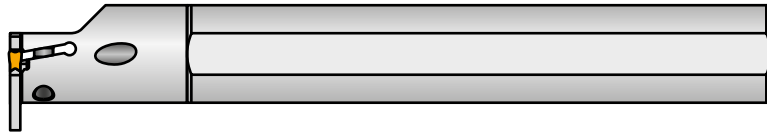
Additional information for axial turning.





## PARTING – OFF & GROOVING HOLDERS (INTERNAL TURNING) – GL – CODE DESIGNATION

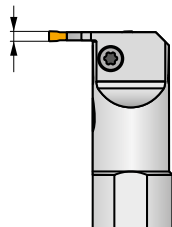
|    |   |   |   |    |   |   |   |   |    |   |    |
|----|---|---|---|----|---|---|---|---|----|---|----|
| 1  | 2 | 3 | 4 | 5  | 6 | 7 | 8 | 9 |    |   |    |
| GL | 3 | - | A | 32 | S | G | R | - | 12 | - | 45 |



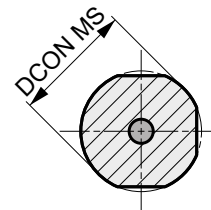
| 1          | 2           | 3          | 4                |
|------------|-------------|------------|------------------|
| Tool group | Pocket size | Shank type | Shank dimensions |

2, 3, 4

GL

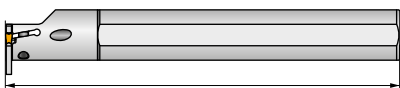


|   |                                      |
|---|--------------------------------------|
| A | steel shank with internal coolant    |
| S | steel shank without internal coolant |



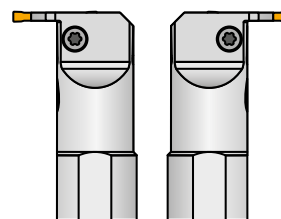
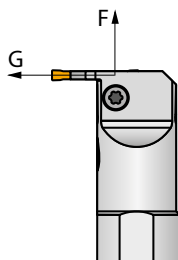
| DCON MS (mm) |    |
|--------------|----|
| 25           | 25 |
| 32           | 32 |
| 40           | 40 |

| 5                        | 6                               | 7                    | 8                           |
|--------------------------|---------------------------------|----------------------|-----------------------------|
| Holder total length – LF | Tool style – cutting edge angle | Version (right/left) | Cutting depth maximum – CDX |

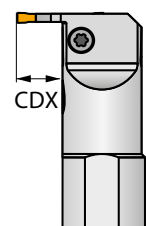


LF

|   | LF (mm) |
|---|---------|
| Q | 180     |
| S | 250     |
| T | 300     |

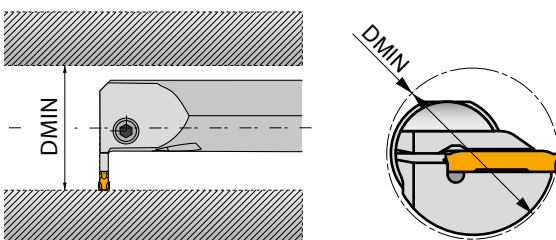


R L



CDX

| 9                |
|------------------|
| Minimum diameter |





**PARTING – OFF & GROOVING BLADES (EXTERNAL TURNING) – GL – CODE DESIGNATION**

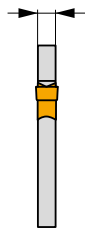
|           |          |          |          |           |          |          |                      |
|-----------|----------|----------|----------|-----------|----------|----------|----------------------|
| <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b>  | <b>6</b> | <b>7</b> | <b>8</b>             |
| <b>GL</b> | <b>1</b> | <b>-</b> | <b>S</b> | <b>26</b> | <b>K</b> | <b>B</b> | <b>R</b> - <b>16</b> |



|            |             |            |
|------------|-------------|------------|
| <b>1</b>   | <b>2</b>    | <b>3</b>   |
| Tool group | Pocket size | Shank type |

1, 2, 3, 4, 5, 6

GL

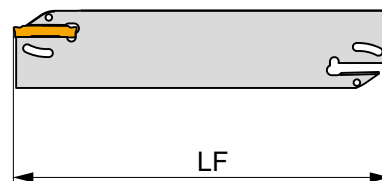


|          |                                      |
|----------|--------------------------------------|
| <b>A</b> | Steel shank with internal coolant    |
| <b>S</b> | Steel shank without internal coolant |

|                  |                         |            |
|------------------|-------------------------|------------|
| <b>4</b>         | <b>5</b>                | <b>6</b>   |
| Shank dimensions | Blade total length – LF | Tool style |



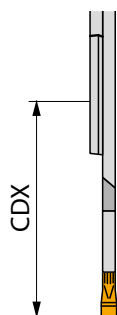
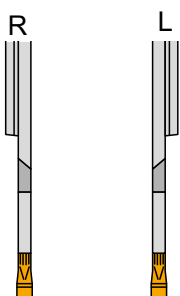
|           | H (mm) |
|-----------|--------|
| <b>26</b> | 26     |
| <b>29</b> | 29     |
| <b>32</b> | 32     |



|          | LF (mm) |
|----------|---------|
| <b>C</b> | 50      |
| <b>K</b> | 125     |
| <b>M</b> | 150     |

**B – blade**  
**BS – modular blade**

|                      |                             |
|----------------------|-----------------------------|
| <b>7</b>             | <b>8</b>                    |
| Version (right/left) | Cutting depth maximum – CDX |





## PARTING-OFF & GROOVING INSERTS – GL – CODE DESIGNATION

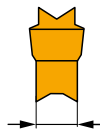
|           |          |          |            |          |           |            |           |
|-----------|----------|----------|------------|----------|-----------|------------|-----------|
| 1         | 2        | 3        | 4          | 5        | 6         | 7          | 8         |
| <b>GL</b> | <b>3</b> | <b>D</b> | <b>300</b> | <b>G</b> | <b>02</b> | <b>L06</b> | <b>PM</b> |



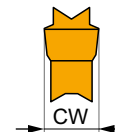
|            |             |                 |                    |
|------------|-------------|-----------------|--------------------|
| 1          | 2           | 3               | 4                  |
| Tool group | Pocket size | Number of edges | Cutting width – CW |

1, 2, 3, 4, 5, 6

**GL**



|          |           |
|----------|-----------|
| <b>S</b> | One edge  |
| <b>D</b> | Two edges |

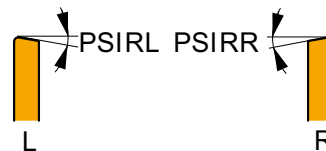
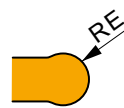
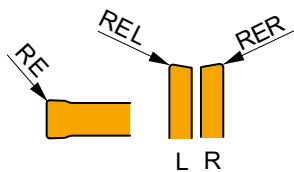


|     | CW   |
|-----|------|
| 150 | 1.50 |
| 200 | 2.00 |
| 250 | 2.50 |
| 300 | 3.00 |
| 400 | 4.00 |
| 500 | 5.00 |
| 600 | 6.00 |
| 800 | 8.00 |

|             |             |                            |                         |
|-------------|-------------|----------------------------|-------------------------|
| 5           | 6           | 7                          | 8                       |
| Edge design | Nose radius | Primary cutting edge angle | Chipbreaker designation |

**G** Ground

**M** Direct pressed



**PM**  
**PR**  
**GM**  
**MM**

| RE, RER, REL (mm) |      |
|-------------------|------|
| <b>015</b>        | 0.15 |
| <b>02</b>         | 0.2  |
| <b>03</b>         | 0.3  |
| <b>04</b>         | 0.4  |
| <b>08</b>         | 0.8  |

**ROUND GEOMETRY**

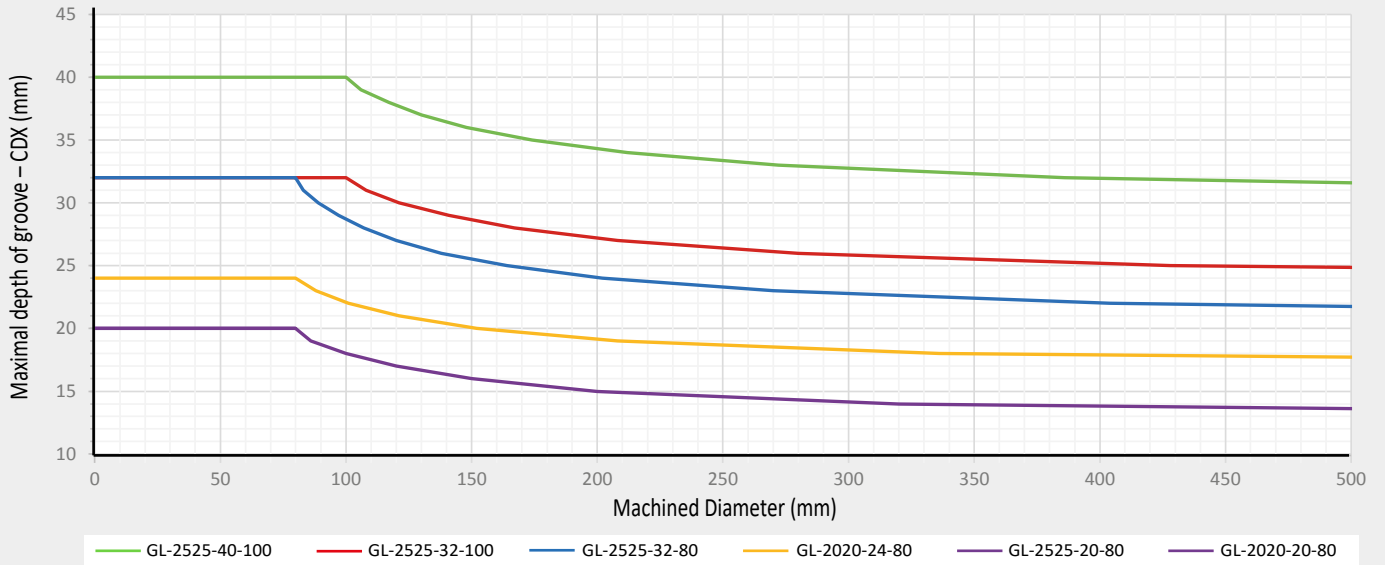
| RE (mm)   |           |
|-----------|-----------|
| <b>MO</b> | RE = CW/2 |

| (°)       |    |
|-----------|----|
| <b>06</b> | 6  |
| <b>12</b> | 12 |

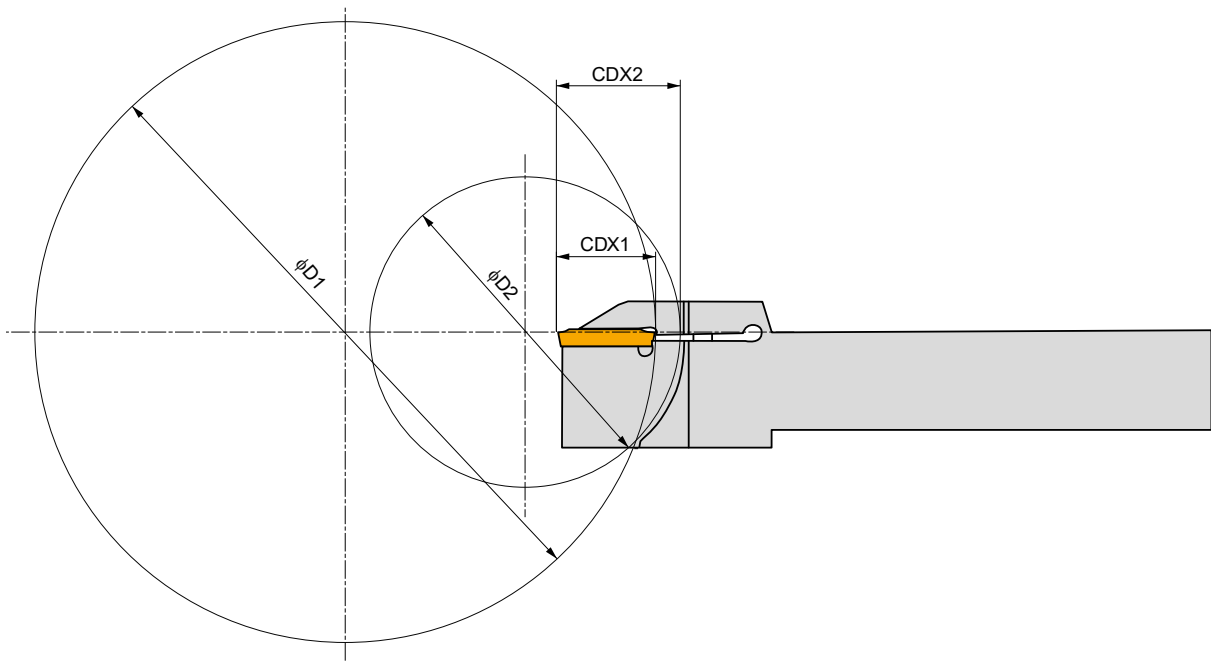
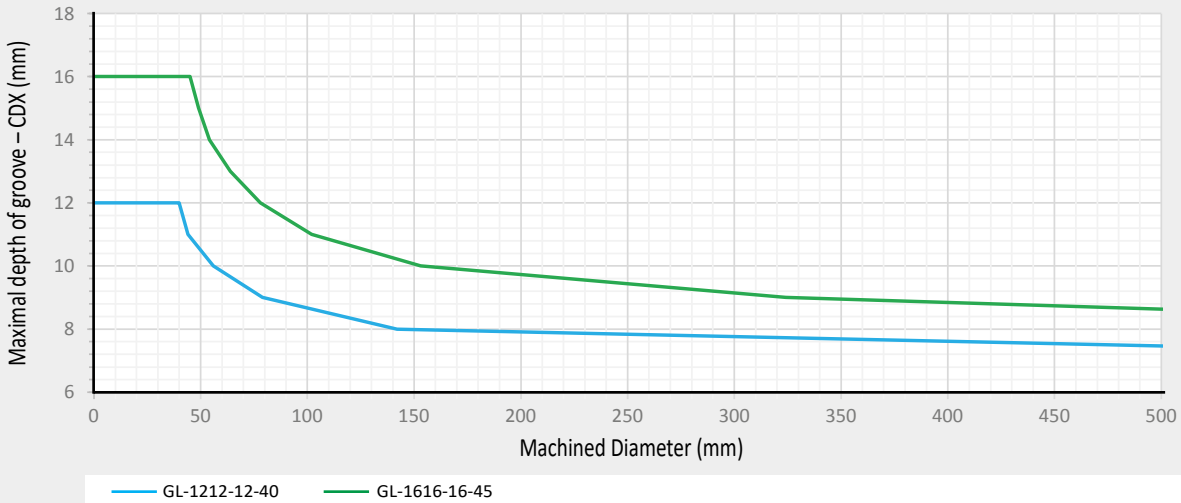


## CUTTING DEPTHS DEPENDING ON MACHINED DIAMETER

### GLAF(RL) EXT



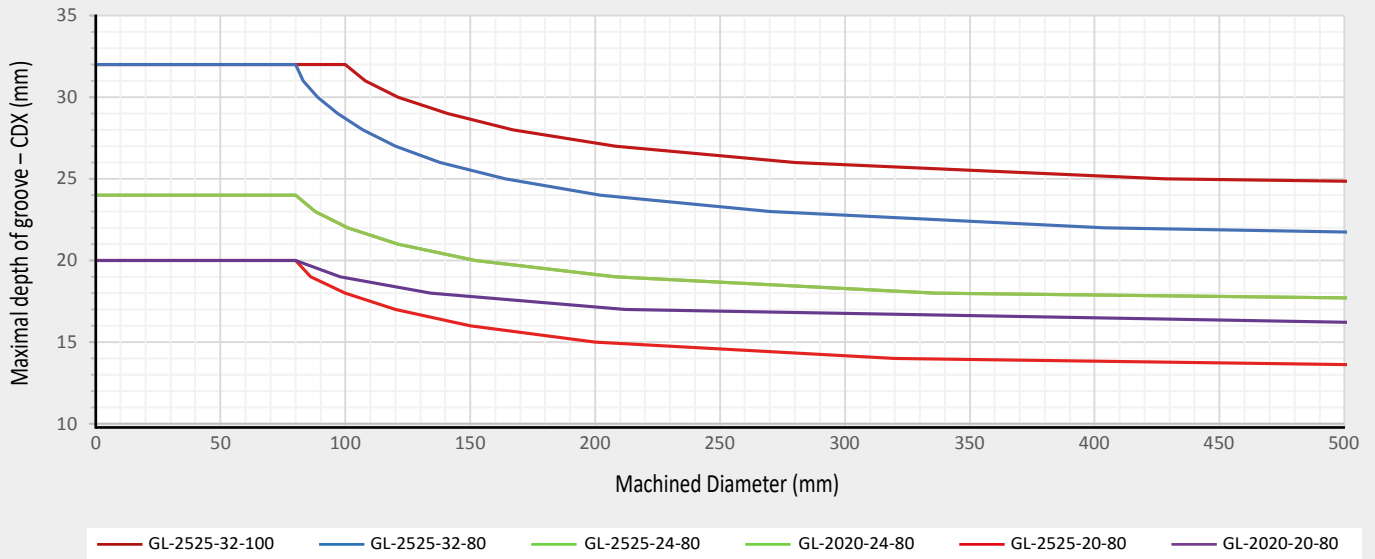
### GLAF(RL) EXT-S



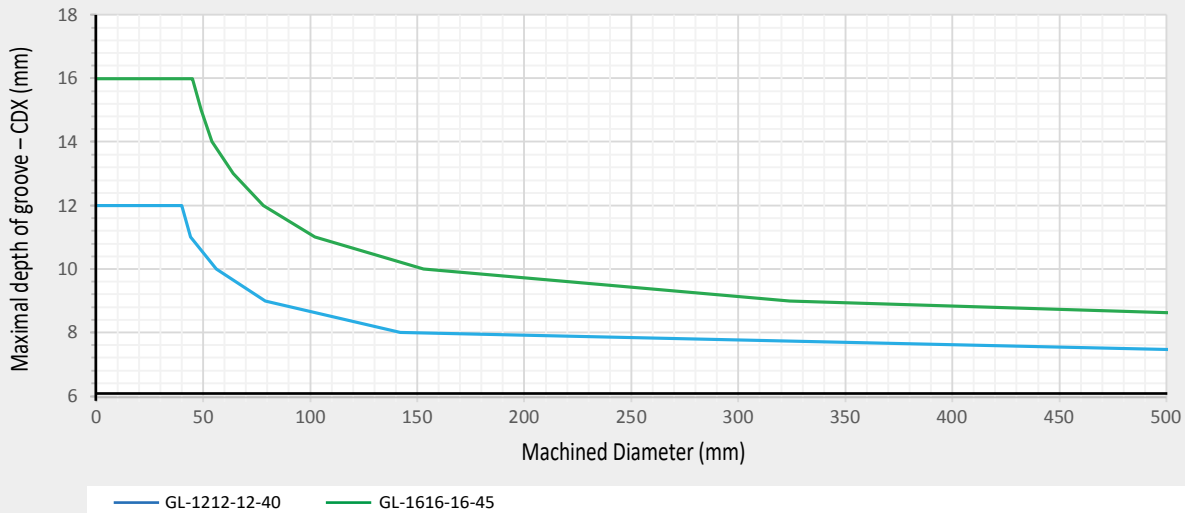


## CUTTING DEPTHS DEPENDING ON MACHINED DIAMETER

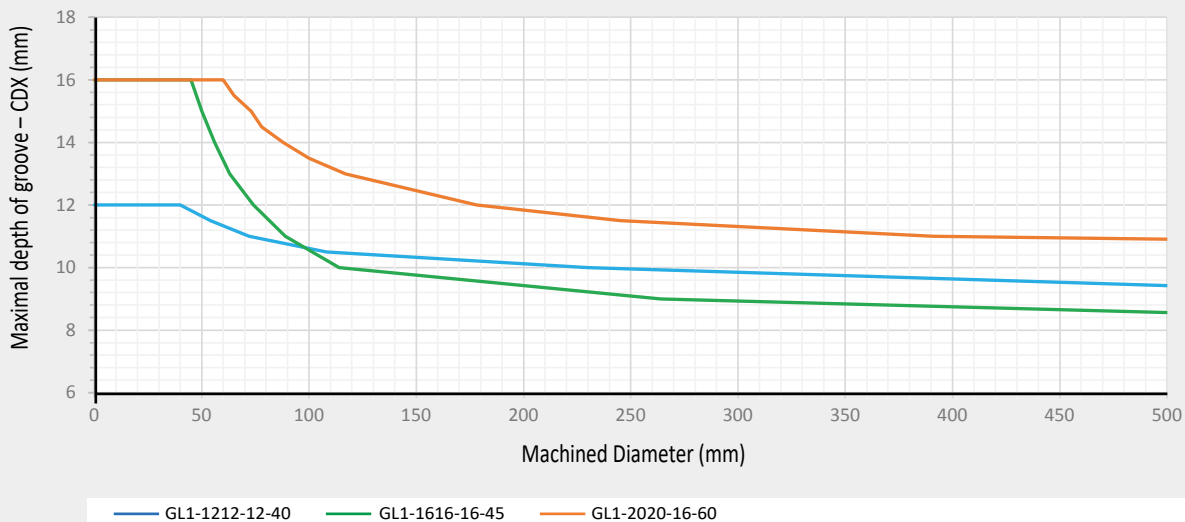
### GLSF (RL) EXT



### GLSF (RL) EXT-S



### GL1





# GEOMETRY, CHIP-FORMING DIAGRAM AND APPLICATION – GL INSERTS

**GM**

| Material                 | Grade                    | Application                         |
|--------------------------|--------------------------|-------------------------------------|
| P                        | M                        | K                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| See diagram              |                          |                                     |
|                          |                          |                                     |
|                          |                          |                                     |
| <b>?</b>                 | <b>GL. D</b>             |                                     |

**MM**

| Material                 | Grade                    | Application                         |
|--------------------------|--------------------------|-------------------------------------|
| P                        | M                        | K                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| See diagram              |                          |                                     |
|                          |                          |                                     |
|                          |                          |                                     |
| <b>?</b>                 | <b>GL. D</b>             |                                     |

**PM**

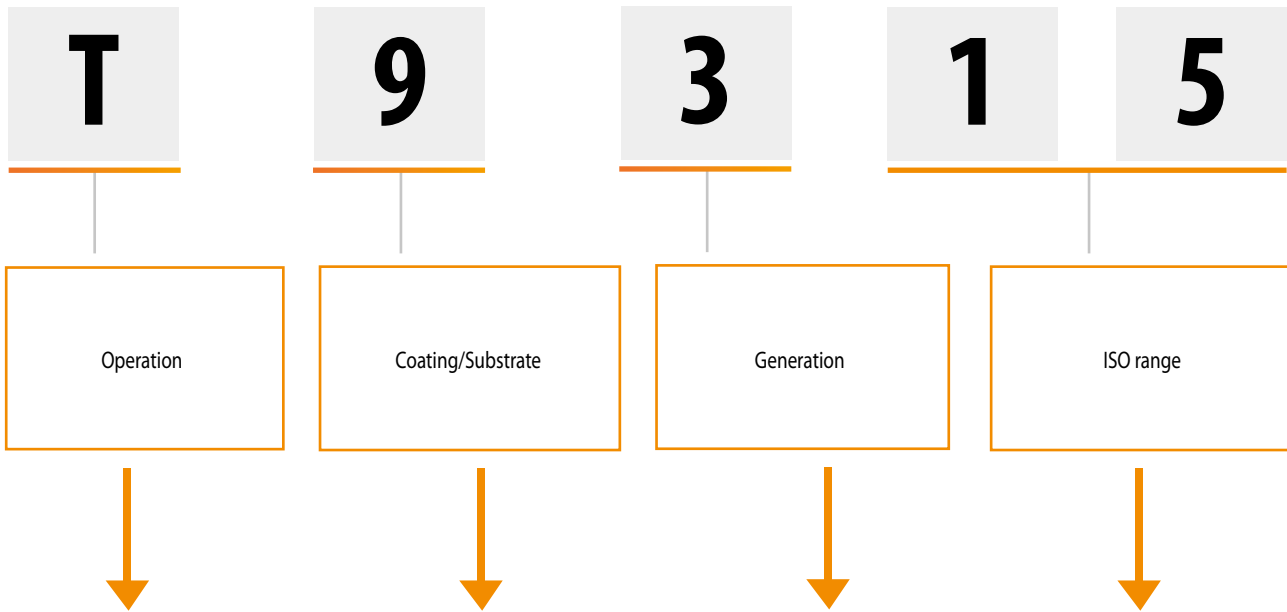
| Material                 | Grade                    | Application                         |
|--------------------------|--------------------------|-------------------------------------|
| P                        | M                        | K                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| See diagram              |                          |                                     |
|                          |                          |                                     |
|                          |                          |                                     |
| <b>?</b>                 | <b>GL. D; GL. S</b>      |                                     |

**PR**

| Material                 | Grade                               | Application              |
|--------------------------|-------------------------------------|--------------------------|
| P                        | M                                   | K                        |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| See diagram              |                                     |                          |
|                          |                                     |                          |
|                          |                                     |                          |
| <b>?</b>                 | <b>GL. D; GL. S</b>                 |                          |



## TURNING GRADES



|          |                          |
|----------|--------------------------|
| <b>D</b> | Drilling                 |
| <b>M</b> | Milling                  |
| <b>T</b> | Turning                  |
| <b>G</b> | Grooving and Parting off |

|                              |                     |
|------------------------------|---------------------|
| <b>0 PVD</b><br><b>1 CVD</b> | Special application |
| <b>2 PVD</b><br><b>3 CVD</b> | Free                |
| <b>4 PVD</b><br><b>5 CVD</b> | Group K, H          |
| <b>6 PVD</b><br><b>7 CVD</b> | Group M, S          |
| <b>8 PVD</b><br><b>9 CVD</b> | Universal           |
| <b>B</b>                     | CBN                 |
| <b>C</b>                     | Ceramic             |
| <b>D</b>                     | PCD                 |
| <b>T</b>                     | Cermet              |

1 - 9

|                |         |
|----------------|---------|
| <b>01 - 50</b> |         |
|                | 01 - 05 |
|                | 05 - 10 |
|                | 10 - 20 |
|                | 20 - 30 |
|                | 30 - 40 |
|                | 40 - 50 |





## TURNING GRADES

| Grade Identification | Area of Application | Application                         | Feed | Cutting speed | Resistance to adverse Working Conditions | Coating | Colour      | Substrate   | Coolant benefit | Grade description  |
|----------------------|---------------------|-------------------------------------|------|---------------|--|---------|-------------|-------------|-----------------|--|
| <b>T7325</b>         | P15 - P35           | <input checked="" type="checkbox"/> |      |               |  | MT-CVD  | FGM         | FGM         | +++             | One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations. |
|                      | M10 - M25           | <input type="checkbox"/>            |      |               |  |         |             |             |                 |  |
|                      | K15 - K25           | <input type="checkbox"/>            |      |               |  |         |             |             |                 |  |
|                      | S10 - S25           | <input type="checkbox"/>            |      |               |  |         |             |             |                 |  |
| <b>G8330</b>         | P25 - P40           | <input type="checkbox"/>            |      |               |  | PVD     | submicron H | submicron H | +++             | Universal cutting grade for grooving and parting-off applications. This grade is characterized by its exceptional reliability and versatility. Developed to fit machining conditions for most workpiece materials.                 |
|                      | M20 - M35           | <input type="checkbox"/>            |      |               |  |         |             |             |                 |  |
|                      | K20 - K40           | <input type="checkbox"/>            |      |               |  |         |             |             |                 |  |
|                      | S15 - S25           | <input checked="" type="checkbox"/> |      |               |  |         |             |             |                 |  |

### Substrat

|                          |  |
|--------------------------|--|
| <b>H</b>                 | WC-Co based substrate                              |
| <b>submicron H</b>       | WC-Co based substrate fine grained (< 1 µm)        |
| <b>ultra submicron H</b> | WC-Co based substrate very fine grained (< 0,5 µm) |
| <b>FGM</b>               | Functionally graded substrate                      |
| <b>Cermet</b>            | Cemented carbide without WC                        |
| <b>ceramics</b>          | Cutting ceramics                                   |
| <b>PCD</b>               | Polycrystalline Diamond                            |
| <b>CBN</b>               | Cubic Boron Nitride                                |
| <b>HSS</b>               | High speed steel                                   |

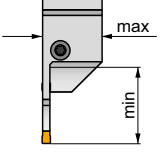

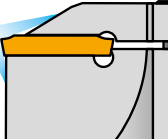

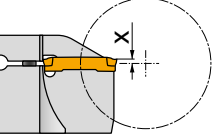



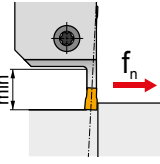

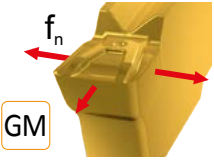

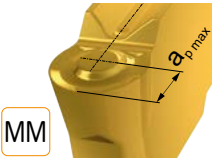



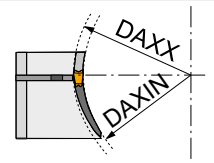



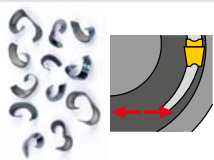

### Coating

|               |   |
|---------------|---|
| <b>MT-CVD</b> | Medium-temperature chemical method of coating |
| <b>PVD</b>    | Low-temperature physical method of coating    |
| ×             | Uncoated grade                                |

### Benefits of cutting fluid

|     |                             |
|-----|-----------------------------|
| +++ | Use of coolant is essential |
| ++  | Highly recommended          |
| +   | Recommended                 |
| +/- | Optional                    |
| --  | Do not use coolant          |
| -   | Coolant not recommended     |

APPLICATION TIPS AND EDUCATION

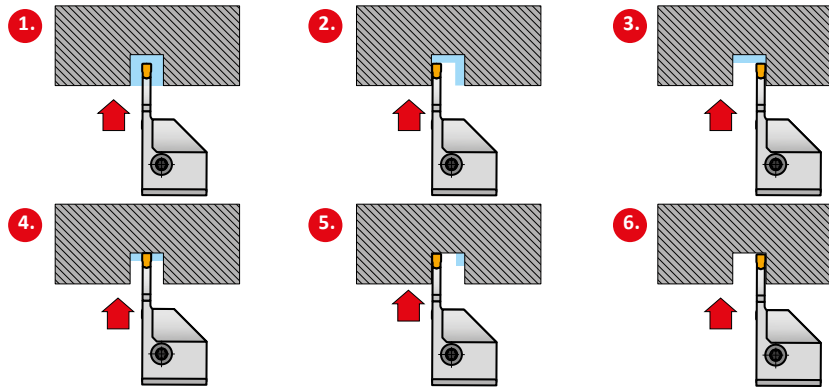
| Example  | Recommendation  | Education   |
|--|---|---|
|   | <p>Choose a tool holder with the maximum possible cross-section and the minimum possible tool overhang and CDX (maximum cutting depth) to reduce vibrations.</p>      |    |
|   | <p>Applying coolant directly to the cutting edge in sufficient quantities reduces the temperature of the cutting edge and seat, resulting in prolonged tool life.</p> |    |
|    | <p>When parting off or deep grooving, it is advisable to set the cutting edge slightly higher than the workpiece axis to reduce vibrations.</p>                       |    |
|    | <p>For parting off or deep grooving operations, use PM or PR chip breakers, which both form the desired spiral-shaped chips.</p>                                      |    |
|  | <p>When longitudinal turning, it is advisable to use tools with the minimum possible CDX (maximum cutting depth) to reduce vibrations and deflection of the tool.</p> |   |
|  | <p>For longitudinal turning operations, use the GM chip breaker, which has the proper geometry on the front and both sides of the cutting edge.</p>                   |  |
|  | <p>When copy turning with the MM chip breaker, the maximum depth of cut is 50% of the diameter of the geometry.</p>   |  |
|  | <p>For internal grooving operations, use only the GM and MM chip breakers, which both form the desired short chips.</p>   |  |
|  | <p>When face grooving, it is necessary to select a tool holder with the correct range of diameters.</p>   |  |
|  | <p>For deep face grooving operations, use only the GM chip breaker, which forms the desired long helical chips that don't get stuck in the face groove.</p>           |  |
|  | <p>For face turning and profiling operations, use only the GM and MM chip breakers, which both form the desired short chips.</p>                                      |  |

## RECESSES, PARTING AND COPY TURNING

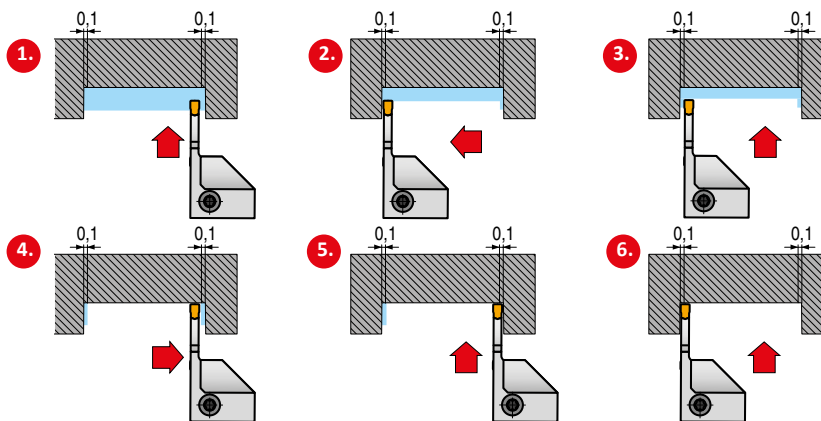
### Recommendation for practical usage:

The procedure for turning a recess (deepening and widening) is shown in the following illustration.

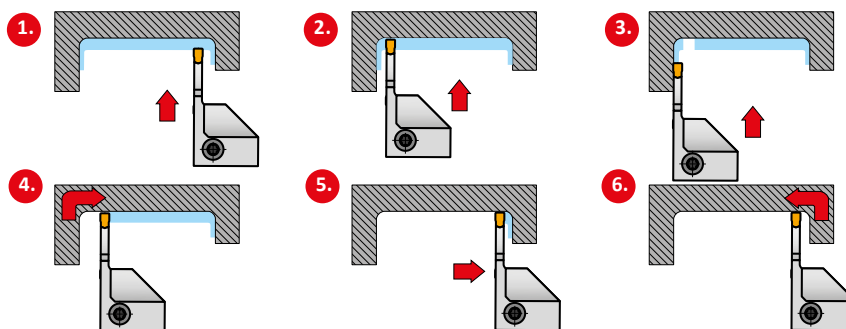
Note: To create a flat seating surface, use insert type **GL** with chip breaker **GM** or LCMF with chipbreaker F. The outboard radial grooving passes should overlap the central pass by two times the insert corner radius.



When machining a wide recess, follow the procedure shown in the following illustration.

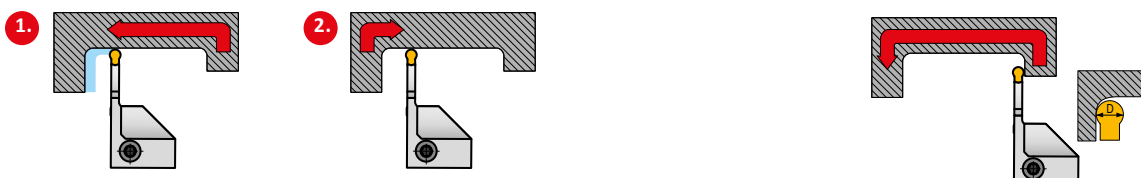


When opening up or deepening a contour using side turning, use the procedure shown in the following illustration.



Roughing of contour (insert with round cutting edge).

Finishing of contour (insert with round cutting edge).





## WMG (WORK MATERIAL GROUP)

| ISO group    | WMG (Work Material Group) | Hardness (HB or HRC)   | Ultimate Tensile Strength (MPa)   | Correction factor kvG              |               |               |      |
|--------------|---------------------------|--|---|------------------------------------|---------------|---------------|------|
| P            | P1                        | P1.1   | Sulfurized  | < 240 HB                           | ≤ 830         | 1.33          |      |
|              |                           | P1.2   | Free machining steel  | Sulfurized and phosphorized        | < 180 HB      | ≤ 620         | 1.49 |
|              |                           | P1.3   | (carbon steels with increased machinability)  | Sulfurized/phosphorized and leaded | < 180 HB      | ≤ 620         | 1.53 |
|              | P2                        | P2.1   | Plain carbon steel<br>(steels comprised of mainly iron and carbon)  | Containing < 0.25 % C              | < 180 HB      | ≤ 620         | 1.14 |
|              |                           | P2.2   |   | Containing < 0.55 % C              | < 240 HB      | ≤ 830         | 1.00 |
|              |                           | P2.3   |   | Containing > 0.55 % C              | < 300 HB      | ≤ 1030        | 0.89 |
|              | P3                        | P3.1   | Alloy steel<br>(carbon steels with an alloying content ≤ 10 %)  | Annealed                           | < 180 HB      | ≤ 620         | 0.92 |
|              |                           | P3.2   |   | Hardened and tempered              | 180 – 260 HB  | > 620 ≤ 900   | 0.74 |
|              |                           | P3.3   |   |                                    | 260 – 360 HB  | > 900 ≤ 1240  | 0.63 |
|              | P4                        | P4.1   | Tool steel<br>(special alloy steel for tools, dies and molds)   | Annealed                           | < 26 HRC      | ≤ 900         | 0.55 |
| P4.2         |                           | Hardened and tempered  |   | 26 – 39 HRC                        | > 900 ≤ 1240  | 0.47          |      |
| P4.3         |                           |  |   | 39 – 45 HRC                        | > 1240 ≤ 1450 | 0.38          |      |
| M            | M1                        | Ferritic stainless steel<br>(straight chromium non-hardenable alloys)                                    | Annealed  | < 160 HB                           | ≤ 520         | 1.22          |      |
|              |                           |  |   | 160 – 220 HB                       | > 520 ≤ 700   | 1.03          |      |
|              | M2                        | Martensitic stainless steel<br>(straight chromium hardenable alloys)                                     | Quenched and tempered   | < 200 HB                           | ≤ 670         | 1.08          |      |
|              |                           |  |   | 200 – 280 HB                       | > 670 ≤ 950   | 0.89          |      |
|              |                           |  |   | 280 – 380 HB                       | > 950 ≤ 1300  | 0.75          |      |
|              | M3                        | Austenitic stainless steel<br>(chromium-nickel and chromium-nickel-manganese alloys)                     | Precipitation-hardened  | < 200 HB                           | ≤ 750         | 1.00          |      |
|              |                           |  |   | 200 – 260 HB                       | > 750 ≤ 870   | 0.86          |      |
|              |                           |  |   | 260 – 300 HB                       | > 870 ≤ 1040  | 0.77          |      |
| M4           | M4.1                      | Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel   |   | < 300 HB                           | ≤ 990         | 0.75          |      |
|              | M4.2                      | Precipitation hardening austenitic stainless steel   |   | 300 – 380 HB                       | ≤ 1320        | 0.64          |      |
| K            | K1                        | Gray iron or Automotive Gray iron (GG)<br>(iron-carbon castings with a lamellar graphite microstructure) | Ferritic or ferritic-pearlitic  | < 180 HB                           | ≤ 190         | 1.35          |      |
|              |                           |  |   | 180 – 240 HB                       | > 190 ≤ 310   | 1.00          |      |
|              |                           |  |   | 240 – 280 HB                       | > 310 ≤ 390   | 0.75          |      |
|              | K2                        | Malleable iron (GTS/GTW)<br>(iron-carbon castings with a graphite-free microstructure)                   | Ferritic  | < 160 HB                           | ≤ 400         | 1.39          |      |
|              |                           |  |   | 160 – 200 HB                       | > 400 ≤ 550   | 1.13          |      |
|              |                           |  |   | 200 – 240 HB                       | > 550 ≤ 660   | 0.90          |      |
|              | K3                        | Ductile iron (GGG)<br>(iron-carbon castings with a nodular graphite microstructure)                      | Pearlitic   | < 180 HB                           | ≤ 560         | 1.23          |      |
|              |                           |  |   | 180 – 220 HB                       | > 560 ≤ 680   | 0.94          |      |
|              |                           |  |   | 220 – 260 HB                       | > 680 ≤ 800   | 0.76          |      |
|              | K4                        | K4.1   | Austenitic gray iron (ASTM A436)<br>(iron-carbon alloy castings with an austenitic lamellar graphite microstructure)                | Ferritic                           | < 180 HB      | ≤ 190         | 1.14 |
|              |                           |  |   |                                    | < 240 HB      | ≤ 740         | 0.86 |
|              |                           | K4.2   | Austenitic ductile iron (ASTM A439 or ASTM A571)<br>(iron-carbon alloy castings with an austenitic nodular graphite microstructure) | Ferritic-pearlitic or pearlitic    | < 280 HB      | > 840 ≤ 980   | 0.63 |
|              |                           |  |   |                                    | 280 – 320 HB  | > 980 ≤ 1130  | 0.54 |
|              |                           |  |   |                                    | 320 – 360 HB  | > 1130 ≤ 1280 | 0.45 |
|              | K5                        | K4.3   | Austempered ductile iron (ASTM A897)<br>(iron-carbon alloy castings with an ausferrite microstructure)                              | Pearlitic                          | < 180 HB      | ≤ 400         | 1.29 |
| 180 – 220 HB |                           |  |   |                                    | > 400 ≤ 450   | 0.97          |      |
| 220 – 260 HB |                           |  |   |                                    | > 450 ≤ 500   | 0.75          |      |
| N            | N1                        | Commercially pure wrought aluminium  | Half hard tempered  | < 60 HB                            | ≤ 240         | 1.33          |      |
|              |                           |  |   | 60 – 100 HB                        | > 240 ≤ 400   | 1.00          |      |
|              |                           |  |   | 100 – 150 HB                       | > 400 ≤ 590   | 0.67          |      |
|              | N2                        | Wrought aluminium alloys   | Full hard tempered  | < 75 HB                            | ≤ 240         | 0.67          |      |
|              |                           |  |   | 75 – 90 HB                         | > 240 ≤ 270   | 0.60          |      |
|              |                           |  |   | 90 – 140 HB                        | > 270 ≤ 440   | 0.43          |      |
|              | N3                        | N3.1   | Free-cutting copper-alloys materials with excellent machining properties  |                                    | –             | –             | 0.70 |
|              |                           | N3.2   | Short-chip copper-alloys with good to moderate machining properties   |                                    | –             | –             | 0.41 |
|              |                           | N3.3   | Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties  |                                    | –             | –             | 0.21 |
|              | N4                        | N4.1   | Thermoplastic polymers  |                                    | –             | –             | 0.70 |
| N4.2         |                           | Thermosetting polymers   |   | –                                  | –             | 0.27          |      |
| N4.3         |                           | Reinforced polymers or composites  |   | –                                  | –             | 0.29          |      |
| N5           | N5.1                      | Graphite   |   | –                                  | –             | 1.00          |      |
| S            | S1                        | Titanium or titanium alloys  |   | < 200 HB                           | ≤ 660         | 1.94          |      |
|              |                           |  |   | 200 – 280 HB                       | > 660 ≤ 950   | 1.72          |      |
|              |                           |  |   | 280 – 360 HB                       | > 950 ≤ 1200  | 1.44          |      |
|              | S2                        | Fe-based high-temperature alloys   |   | < 200 HB                           | ≤ 690         | 1.33          |      |
|              |                           |  |   | 200 – 280 HB                       | > 690 ≤ 970   | 1.17          |      |
|              | S3                        | Ni-based high-temperature alloys   |   | < 280 HB                           | ≤ 940         | 1.00          |      |
|              |                           |  |   | 280 – 360 HB                       | > 940 ≤ 1200  | 0.83          |      |
|              | S4                        | Co-based high-temperature alloys   |   | < 240 HB                           | ≤ 800         | 0.78          |      |
| 240 – 320 HB |                           |  |   | > 800 ≤ 1070                       | 0.67          |               |      |
| H            | H1                        | Chilled cast iron  |   | < 440 HB                           | –             | 1.52          |      |
|              |                           |  |   | < 55 HRC                           | –             | 0.90          |      |
|              | H2                        | Hardened cast iron   |   | > 55 HRC                           | –             | 0.77          |      |
|              |                           |  |   | < 51 HRC                           | –             | 1.00          |      |
|              | H3                        | Hardened steel < 55 HRC  |   | 51 – 55 HRC                        | –             | 0.82          |      |
|              |                           |  |   | 55 – 59 HRC                        | –             | 0.64          |      |
|              | H4                        | Hardened steel > 55 HRC  |   | > 59 HRC                           | –             | 0.54          |      |



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