

# Complete Machining Solutions

## **PARTING**



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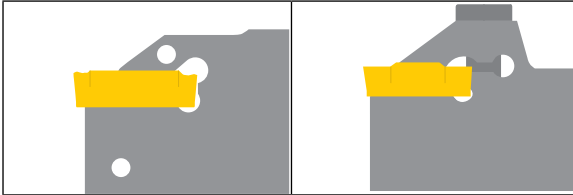
## User Guide 594

## Modular-Grip Adaptations 812

## Clamping Systems

**DO-GRIP**

- First choice for parting
- Double-ended insert
- Self-clamped for deeper grooving and parting medium to large diameters
- Screw-clamped for small diameters
- See also **HELI-GRIP**, page 265



Self-clamped

Screw-clamped

**TANG-GRIP**

- Very rigid clamping in a tangentially oriented pocket
- Enables machining at very high feed rates and provides excellent straightness and surface finish
- Recommended for parting large diameter parts and for interrupted cuts
- Offers a free, unobstructed chip flow



TANG-GRIP

**CUT-GRIP**

- Single-ended insert
- Self- and screw-clamped options

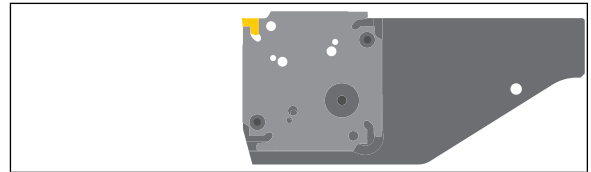


Screw-clamped

Self-clamped

**LOGIQ-FGRIP**  
HIGH FEED GRIP HOLDER

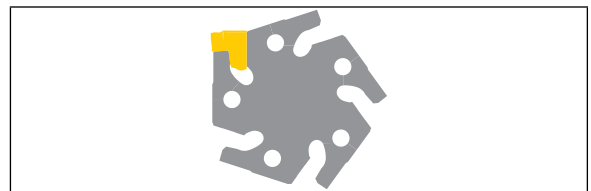
- Unique adaptation for Quad /Square type adapters with 4 pockets
- Outstanding stability, vibration free parting system also on big diameters
- Improves insert life, surface finish and workpiece straightness due to robust design
- Enables reduction of cutting width due to excellent stability, leading to material savings
- **Ø4.72"** bar can be cut with only .12" insert width
- Guarantees high productivity, especially when using **TAG N...HF** inserts with feed of up to .016 IPR
- Economical adapters with 4 pockets
- User friendly, easy to operate
- Saves set up time after pocket replacement; adapter can be positioned with new pocket without set up
- Several adapters can be clamped on one tool block
- The tools and adapters are designed for **JET-CUT** cooling up to 2030 PSI



LOGIQ-FGRIP

**TANG5GRIP**  
PARTING AND GROOVING

- Economical pentagonal adapters with 5 pockets
- No setup time after pocket replacement
- Several adapters can be clamped on one holder
- The tools and adapters are designed for **JET-CUT** cooling up to 4930 PSI



TANG-5-GRIP

**PENTACUT**

- 5 cutting edges
- Fast edge indexing
- For shallow grooving and up to .79" parting diameter
- PENTA-IQ for parting up to 1.57" bar diameter



PENTACUT

PENTA-IQ

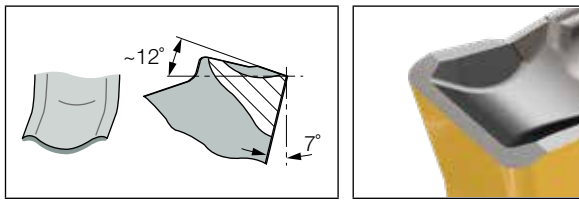
## Main Chipformers

## HF-Type

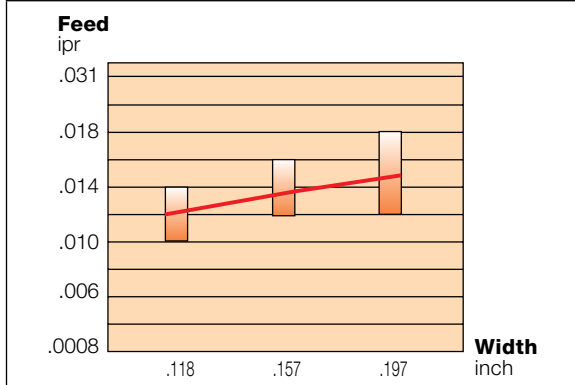
- For high feed machining only!
- Reinforced cutting edge (negative rake)
- Should be used with short extension tools

$$f \approx \frac{W_{\text{insert}}}{12} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✗	✗	✗	✓



Recommended feed range as a function of insert width



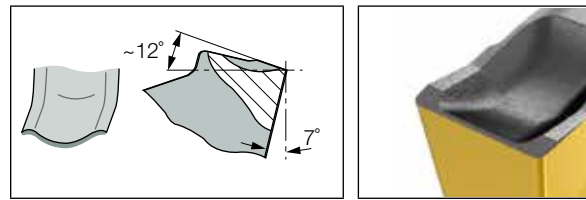
## C-Type

- First choice for parting of bars, hard materials and tough applications
- A positive rake, single cavity with negative land and shoulders provides extra cutting-edge strength
- Medium-to-high feed

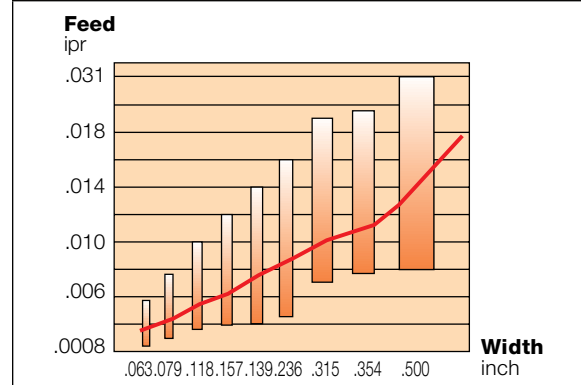
$$f \approx \frac{W_{\text{insert}}}{18} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✗	✓ (IC20 only)	✓ (IC20 only)	✓

Recommendations are for neutral inserts.  
For R/L inserts, reduce feed by 20-40%.



Recommended feed range as a function of insert width

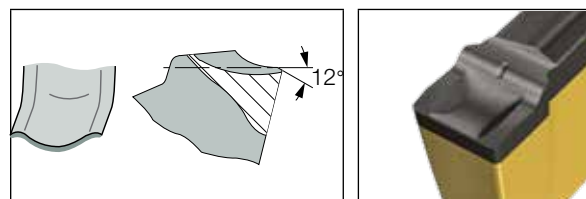


## MF Type

- Parting and Grooving Insert for Soft and Hard Materials, Medium Feed

$$f \approx \frac{W_{\text{insert}}}{21} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✓	✓	✗	✓



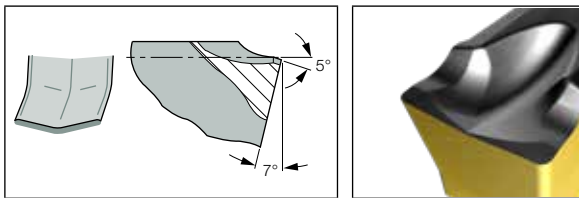
**JT-Type**

Based on the J-type chipformer with a T-land reinforced frontal cutting edge.

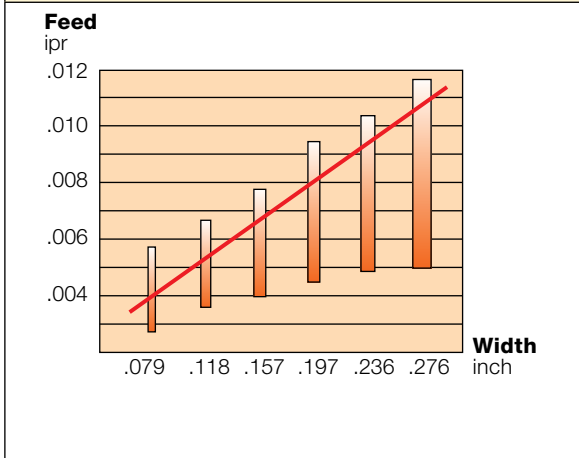
- Provides a solution for the intermediate range between the strong and negative C-type configuration and the positive edged J-type chipformer.
- Can be used on a wide range of materials.
- Same manner as the J-type, but it can be used at higher feeds due to its reinforced edge.

$$f \approx \frac{W \text{ insert}}{24} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✓	✓	X	✓



Recommended feed range as a function of insert width



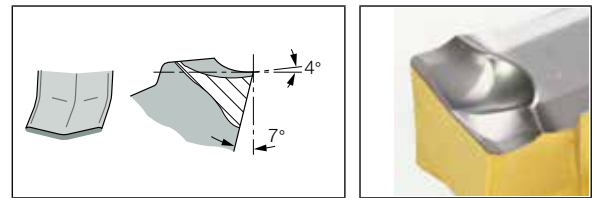
**J-Type**

- First choice for soft materials, parting tubes, small diameters and thin-walled parts
- Cutting edge with positive rake
- Low-to-medium feed

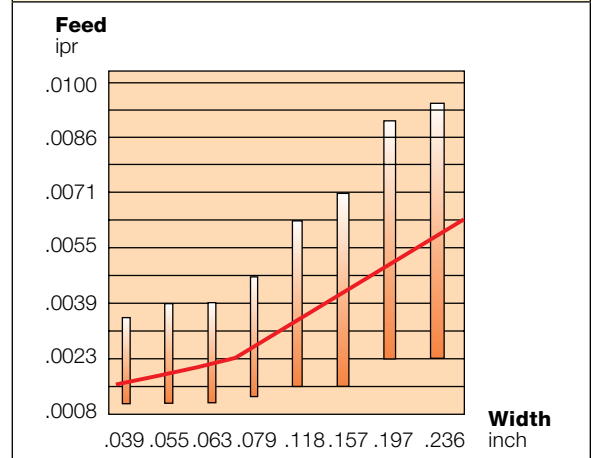
$$f \approx \frac{W \text{ insert}}{26} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✓	✓	✓	X

Recommendations Are for Neutral Inserts. For R/L Inserts, Reduce Feed by 20-40%.



Recommended feed range as a function of insert width

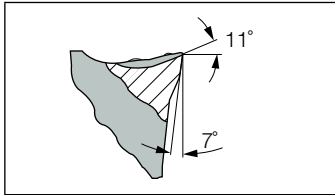


**Z-Type**

- Cutting edge with high positive rake, suitable for parting tubes, thin walled parts and for small diameters
- Suitable for soft materials
- Excellent for cutting bearing steel and stainless steel
- Low-to-medium feeds

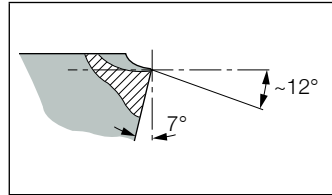
$$f \approx \frac{W_{\text{insert}}}{28} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✓	✓	✓	✗

**UA/UT-Type**

- A chipformer for use at low feeds
- Recommended for CrNi alloys and low carbon steel, especially in the bearing industry and on similar, ductile materials
- The narrow chipformer design ensures short deformed chips and provides improved performance
- **UA** and **UT** are similar chipformers. **UT** is slightly tighter than the **UA** chipformer

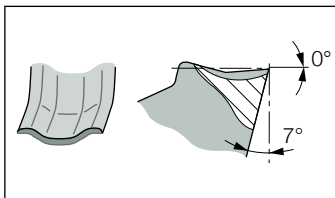
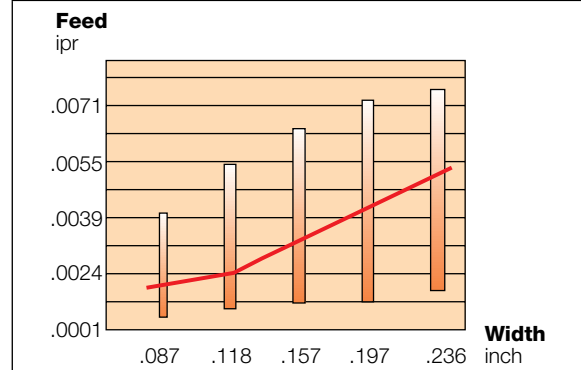
$$f \approx \frac{W_{\text{insert}}}{40} \text{ [inch/rev]}$$

**LF**

- Parting and Grooving Insert for Stainless Steel & soft materials
- Miniature Parts
- Low Feeds

$$f \approx \frac{W_{\text{insert}}}{31} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✓	✓	✗	✗

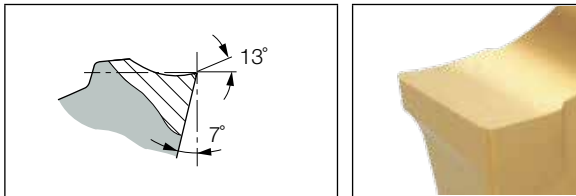
**Recommended feed range as a function of insert width**

**P-Type**

- Very positive rake inclination and sharp cutting edge
- For soft materials, slim parts and general parting
- Low feeds

$$f \approx \frac{W_{\text{insert}}}{55} \text{ [inch/rev]}$$

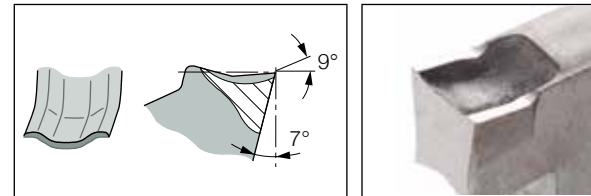
Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	✓	X	✓	X

**A-Type**

- Positive rake, sharp edge
- For parting aluminum
- In grade **IC20**

$$f \approx \frac{W_{\text{insert}}}{43} \text{ [inch/rev]}$$

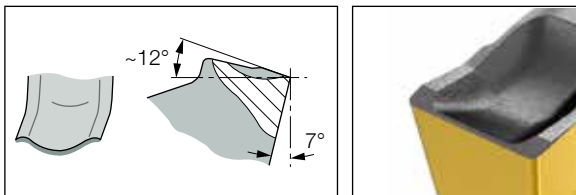
Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
X	X	X	✓	X

**M-Type**

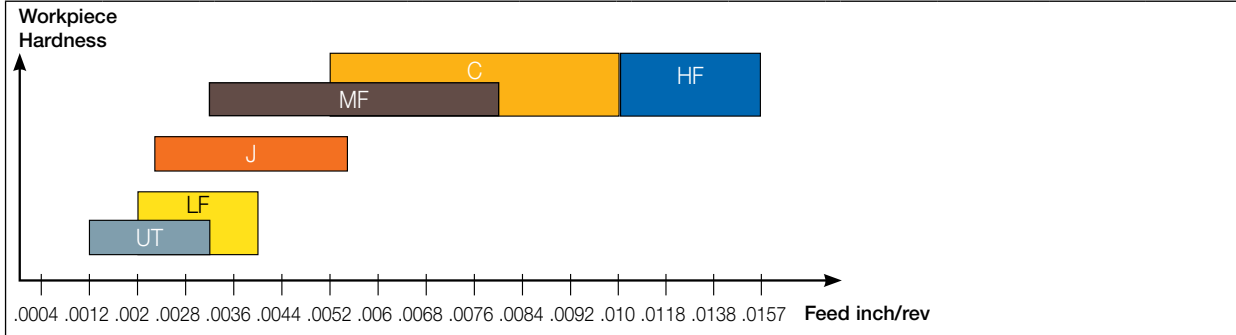
- Similar to C-type, but with modified edge (smaller K-land)
- Improved chip control at medium feed

$$f \approx \frac{W_{\text{insert}}}{22} \text{ [inch/rev]}$$

Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
✓	X	✓	X	X



Main Chipformers Recommended Feed



Selection of Chipformers for Various Workpiece Materials

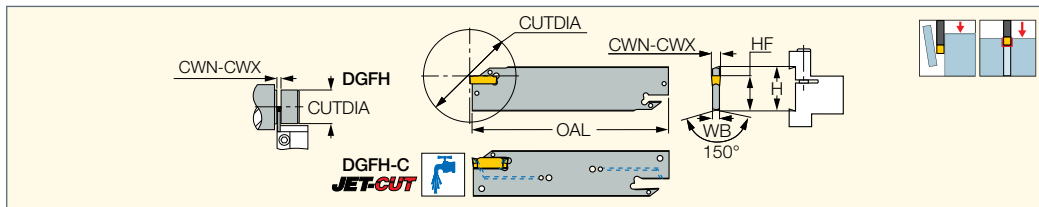
Inserts		Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
High	HF	✓	✗	✗	✗	✓
	C	✓	✗	✓ (IC20 only)	✓ (IC20 only)	✓
	W	✓	✗	✗	✗	✓
	C-jet (Coolant)	✓	✓	✓	✗	✗
	MF	✓	Medium to high feed	✓	✗	✓
	JT	✓	✓	✓	✗	✓
Feed	J	✓	✓	✓	✓	✗
	Z	✓	✓	✓	✓	✗
	LFT	✓	✓	✓	✗	✗
	LF	✓	✓	✓	✗	✗
Low	UT	✓	✗	✗	✗	✗
	P	✓	✓	✗	✓	✗
	A	✗	✗	✗	✓	✗

✓ First choice



**DGFH**

Parting and Grooving Blades with and without Coolant Channels Carrying DO-GRIP and HELI-GRIP Inserts



Designation	H	CWN <sup>(4)</sup>	CWX <sup>(5)</sup>	WB	OAL	HF	CUTDIA	Insert
DGFH 26-1.4	1.024	.055	.055	.098 <sup>(7)</sup>	4.331	.843	1.024	DG. 14..
DGFH 26-2 <sup>(1)</sup>	1.024	.075 <sup>(6)</sup>	.098	.063	4.331	.843	1.535 <sup>(8)</sup>	DG. 1.../DG. 2...
DGFH 26-3 <sup>(1)</sup>	1.024	.118 <sup>(6)</sup>	.125	.094	4.331	.843	1.535 <sup>(8)</sup>	DG. 1.../DG. 3...
DGFH 26C-3 <sup>(2)</sup>	1.024	.118	.125	.094	4.331	.843	1.535 <sup>(8)</sup>	DGNC/DGRC/DGLC 3...
DGFH 26-4	1.024	.157	.157	.126	4.331	.843	3.150	DG. 4.../GRIP 4...
DGFH 32-1.4	1.260	.055	.055	.098 <sup>(7)</sup>	5.906	.976	1.024	DG. 14
DGFH 32-2 <sup>(1)</sup>	1.260	.075 <sup>(6)</sup>	.098	.071	5.906	.976	1.535 <sup>(8)</sup>	DG. 1.../DG. 2...
DGFH 32-3 <sup>(1)</sup>	1.260	.118 <sup>(6)</sup>	.125	.094	5.906	.976	1.535 <sup>(8)</sup>	DG. 1.../DG. 3...
DGFH 32C-3 <sup>(2)</sup>	1.260	.118	.125	.094	5.906	.976	1.535 <sup>(8)</sup>	DGNC/DGRC/DGLC 3...
DGFH 32-4	1.260	.157	.157	.126	5.906	.976	3.937	DG. 4.../GRIP 4...
DGFH 32C-4 <sup>(3)</sup>	1.260	.157	.157	.126	5.906	.976	2.717	DGNC/DGRC/DGLC 3...
DGFH 32-5	1.260	.197	.197	.157	5.906	.976	4.724	DG. 5.../GRIP 5...
DGFH 32-6	1.260	.236	.250	.205	5.906	.976	4.724	DG. 6.../GRIP 6...
DGFH 45-3	1.772	.118 <sup>(6)</sup>	.125	.094	8.858	1.496	6.299	DG. 1.../DG. 3...
DGFH 45-4	1.772	.157	.161	.126	8.858	1.496	6.299	DG. 4.../GRIP 4...
DGFH 45-5	1.772	.189	.197	.157	8.858	1.496	6.299	DG. 5.../GRIP 5...
DGFH 45-6	1.772	.236	.252	.205	8.858	1.496	6.299	DG. 6.../GRIP 6...

• DG..1.0 insert can be mounted into pocket sizes 2 and 3, in which case the pocket width has to be modified • For user guide, see pages 594-603

(1) For CUTDIA 1.97", use single-ended insert (should be modified by the user)

(2) Blades with frontal coolant holes (JET-CUT) • For CUTDIA 1.97", use single-ended insert (should be modified by the user)

(3) These blades are suitable for turning, using GRIP 4 inserts • Blades with frontal coolant holes (JET-CUT)

(4) Minimum cutting width

(5) Maximum cutting width

(6) For DG. 1... insert, modify holder

(7) Thickness at the D.O.C. area is .039"

(8) Maximum diameter with double sided inserts.

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • DGN/DGNC/DGNM-C (533)

• DGR/L-C DGRC/LC-C (534) • DGN/DGNM-J/JS/JT (535) • DGR/L-J/JS (536) • DGN-P (539) • DGN-UT/UA (539) • DGN-W (534) • DGN-WP (540)

• DGN-Z (538) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • GRIP (277) • GRIP (full radius) (278)

**For holders, see pages:** C#-TBK-R/L (677) • HSK A-WH-TBK-R/L (688) • SGTBF (673) • SGTBK (673) • SGTBR/L (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

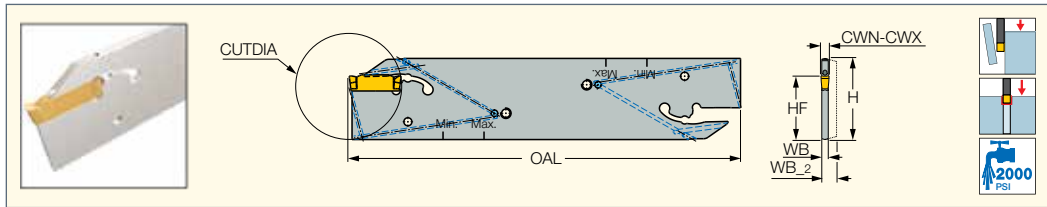
**Spare Parts**

Designation							
DGFH 26-1.4	EDG 23B*						
DGFH 26-2	EDG 23A*						
DGFH 26-3	EDG 23A*						
DGFH 26C-3	EDG 23A*		SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 26-4	EDG 23A*						
DGFH 32-1.4	EDG 23B*						
DGFH 32-2	EDG 33A*						
DGFH 32-3	EDG 33A*						
DGFH 32C-3	EDG 33A*		SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 32-4	EDG 33A*						
DGFH 32C-4	EDG 33A*		SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 32-5	EDG 33A*						
DGFH 32-6	EDG 33A*						
DGFH 45-3	EDG 33A*						
DGFH 45-4	EDG 33A*						
DGFH 45-5	EDG 33A*						
DGFH 45-6	EDG 33A*						

\* Optional, should be ordered separately

**DO-GRIP JETCUT**  
 TWISTED 2-SIDED

**DGFH-JHP**

 Parting and Grooving Blades  
 with Channels for Low and  
 High-Pressure Coolant  
 Carrying DO-GRIP Inserts


Designation	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WB	WB_2	OAL	H	HF	CUTDIA	Insert			
DGFH 32-2-JHP <sup>(1)</sup>	.075 <sup>(4)</sup>	.098	.071	.098	5.906	1.260	.976	1.535	DG. 1.../DG. 2...		SGC 340	EDG 33A-JHP*
DGFH 32-3-JHP	.118 <sup>(4)</sup>	.125	.098	-	5.984	1.260	.976	3.543	DG. 1.../DG. 3... SR M2.0X2.5DIN916		SGC 340	EDG 33A-JHP*
DGFH 32-4-JHP	.157	.157	.126	-	5.984	1.260	.980	3.543	DG. 4.../GRIP 4...		SGC 340	EDG 33A-JHP*
DGFH 32-5-JHP	.197	.197	.157	-	5.984	1.260	.980	3.543	DG. 5.../GRIP 5... SR M2.0X2.5DIN916		SGC 340	EDG 33A-JHP*
DGFH 32-6-JHP <sup>(1)</sup>	.236	.250	.205	-	6.299	1.260	.980	3.543	DG. 6.../GRIP 6...		SGC 340	EDG 33A-JHP*

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Only an upper channel

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

<sup>(4)</sup> For DG. 1... insert, modify holder

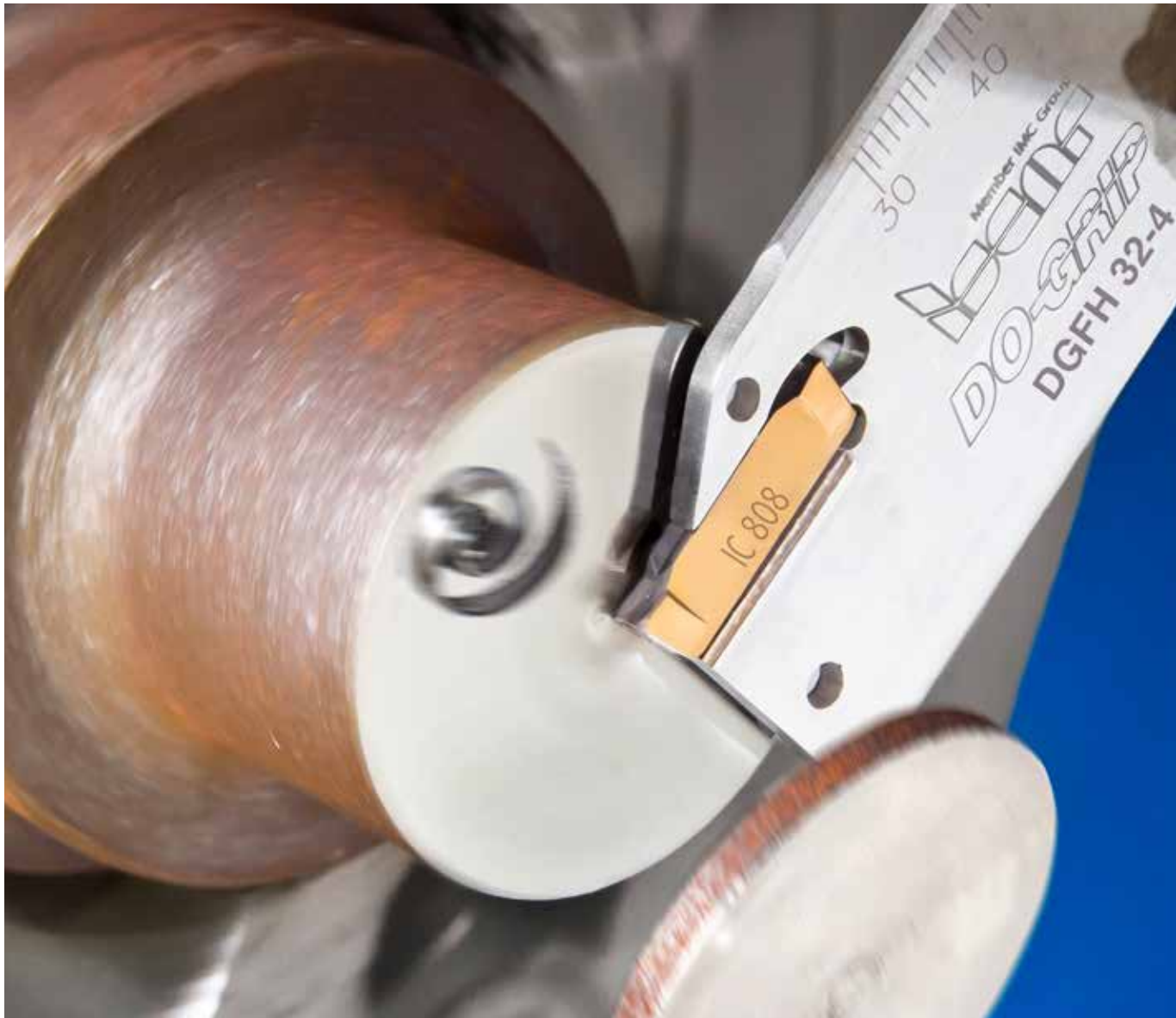
\* Optional, should be ordered separately

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/JA (539) • DGN-W (534) • DGN-WP (540) • DGN-Z (538)

• DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534)

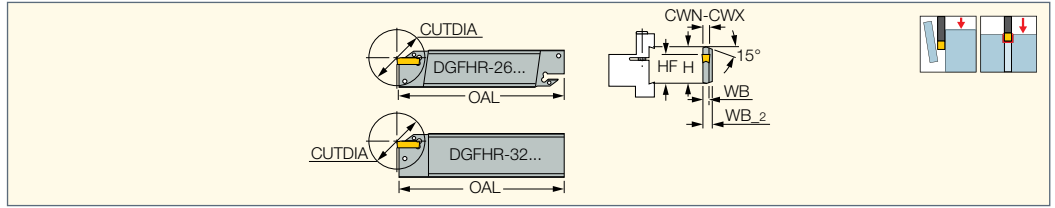
• DGR/L-J/JS (536) • GRIP (277) • GRIP (full radius) (278) • GRIPA (278) • GRIPA (full radius) (279)

**For holders, see pages:** TGTBU-JHP (551)



**DGFHR/L**

Parting and Grooving Reinforced  
Blades Carrying DO-GRIP Inserts



Designation	H	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB_2	WB	OAL	HF	CUTDIA <sup>(3)</sup>	Machines	Insert	
<b>DGFHR 26T16-2</b>	1.024	.075	.098	.315	.067	4.331	.843	1.654	TNS-30	DG. 1.../DG. 2..	EDG 23A*
<b>DGFHR/L 26T23-2</b>	1.024	.075	.098	.315	.063	4.331	.843	1.654	TNS-30/112	DG. 1.../DG. 2..	EDG 23A*
<b>DGFHR/L 26T16-3</b>	1.024	.118	.125	.315	.094	4.331	.843	1.181	TNS-30	DG. 1.../DG. 3..	EDG 23A*
<b>DGFHR/L 26T23-3</b>	1.024	.118	.125	.315	.094	4.331	.843	1.654	TNS-30/42	DG. 1.../DG. 3..	EDG 23A*
<b>DGFHR/L 32T22-2</b>	1.260	.075	.098	.315	.063	4.331	.976	1.654	TNS-42	DG. 1.../DG. 2..	EDG 33A*
<b>DGFHR/L 32T33-3</b>	1.260	.118	.125	.315	.094	4.331	.976	2.362	TNS-42/60/65	DG. 1.../DG. 3..	EDG 33A*
<b>DGFHR/L 32T33-4</b>	1.260	.157	.157	.315	.134	4.331	.976	2.362	TNS-42/60/65	DG. 4.../GRIP 4..	EDG 33A*
<b>DGFHL 32T41-4</b>	1.260	.157	.157	.394	.134	4.331	.976	3.150	TNS-65/80/480	DG. 4.../GRIP 4..	EDG 33A*
<b>DGFHR 32T41-4</b>	1.260	.157	.157	.315	.134	4.331	.976	3.150	TNS-65/80/480	DG. 4.../GRIP 4..	EDG 33A*

- Insert limit is T<sub>max</sub>=.709". If deeper penetration is required, the insert should be modified into single-ended by the user.
- DG..1.0 insert can be mounted into pocket sizes 2 and 3. in which case the pocket width has to be modified - see page 531
- For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width • For DG: 1.0 insert - modify holder

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> The specified limit refers to the tool

\* Optional, should be ordered separately

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

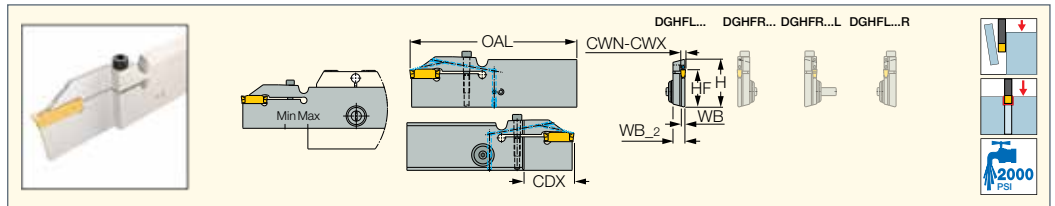
• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**For holders, see pages:** C#-TBK-R/L (677) • HSK A-WH-TBK-R/L (688) • SGTBF (673) • SGTBR/L (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**DO-GRIP JETCUT**  
TWISTED 2-SIDED

**DGFHR/L-BC-JHP**

Parting and Grooving Reinforced  
Blades with Channels for  
High-Pressure Coolant  
Carrying DO-GRIP Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB_2	WB	OAL	H	HF	CDX <sup>(3)</sup>	Insert				
<b>DGFHR/L 32BC-3T33-JHP</b>	.118	.125	.311	.094	4.370	1.260	.976	1.299	DG. 3..	SR M4-21532	HW 3.0	SGC 340	SR M3X3DIN913
<b>DGFHL 32BC-3T33R-JHP</b>	.118	.125	.311	.094	4.370	1.260	.976	1.299	DG. 3..	SR M4-21532	HW 3.0	SGC 340	SR M3X3DIN913
<b>DGFHR 32BC-3T33L-JHP</b>	.118	.125	.311	.094	4.370	1.260	.976	1.299	DG. 3..	SR M4-21532	HW 3.0	SGC 340	SR M3X3DIN913

- For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Minimum cutting width • For DG: 1.0 insert - modify holder

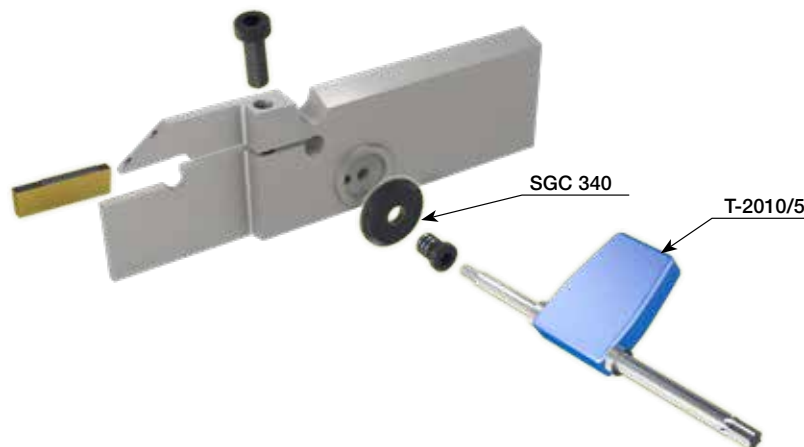
<sup>(2)</sup> Maximum cutting width

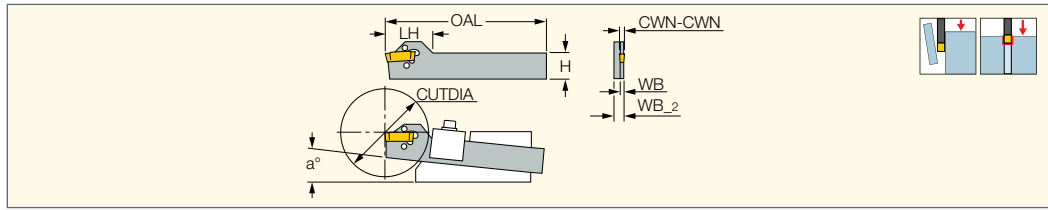
<sup>(3)</sup> The specified limit refers to the tool

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**For holders, see pages:** TGTBU-JHP (551)



**DOGRIP**  
TWISTED 2-SIDED**DGFS**Blades for Multi-Spindle  
Machines, Replacement for  
HSS and Brazed Tools

Designation	H	CWN <sup>(7)</sup>	CWX <sup>(8)</sup>	CUTDIA	WB	WB_2	OAL	LH	a°	
DGFS 0-12-2 <sup>(1)</sup>	.500	.075	.098	1.260	.063	.126	4.331	1.260	0	EDG 33B*
DGFS 0-17-2 <sup>(2)</sup>	.685	.075	.098	1.378	.063	.126	4.331	1.260	0	EDG 33B*
DGFS 0-17-3 <sup>(2)</sup>	.685	.118	.125	2.362	.094	.126	4.331	1.260	0	EDG 33B*
DGFS 5-17-2 <sup>(3)</sup>	.685	.075	.098	1.378	.063	.126	4.331	1.260	5	EDG 33B*
DGFS 5-17-3 <sup>(3)</sup>	.685	.118	.125	2.362	.094	.126	4.331	1.260	5	EDG 33B*
DGFS 5-17-4 <sup>(3)</sup>	.685	.157	.157	2.362	.126	.126	4.331	1.260	5	EDG 33B*
DGFS 5-22-2 <sup>(4)</sup>	.874	.075	.098	1.968	.063	.126	5.906	1.260	5	EDG 33B*
DGFS 5-22-3 <sup>(5)</sup>	.874	.118	.125	2.953	.094	.126	5.906	1.260	5	EDG 33B*
DGFS 5-22-4 <sup>(5)</sup>	.874	.157	.157	3.150	.126	.126	5.906	1.260	5	EDG 33B*
DGFS 5-24-3	.937	.118	.125	3.150	.094	.126	5.906	1.260	5	EDG 33B*
DGFS 5-28-2 <sup>(6)</sup>	1.122	.075	.098	2.559	.063	.126	5.906	1.260	5	EDG 33B*
DGFS 5-28-4 <sup>(6)</sup>	1.122	.157	.157	3.937	.126	.126	5.906	1.260	5	EDG 33B*

• DG..1.0 insert can be mounted into pocket sizes 2 and 3. in which case the pocket width has to be modified -see page 531

• For user guide, see pages 594-603

<sup>(1)</sup> Toolholder assembly X18-1,46,47-WT,160-CL,354-CL,701-ACL,702,702-CL,703,703-CL,704,704-CL,6921,6925

<sup>(2)</sup> Toolholder assembly E-7,47,102-CL,103-CL,161-A-CL,162-A-CL

<sup>(3)</sup> Toolholder assembly 226,226-CL,275,275-CL,276-CL,361-CL,431,630,707-A,707-A-CL

<sup>(4)</sup> Toolholder assembly 100-CL,274,277,277-CL,274-CL,370,383-CL, 6722,6754,6755,6854,6855,6922,51,51-CL,353-CL,167,370-CL

<sup>(5)</sup> Toolholder assembly 100-CL,274,277,277-CL,274-CL,370,383-CL, 6722,6754,6755,6854,6855,51,51-CL,353-CL,167,370-CL

<sup>(6)</sup> Toolholder assembly 278,278-CL,279,279-CL,280,280-CL,281,281-CL,375-CL,359-CL,372-CL,A6120,52,52-CL

<sup>(7)</sup> Minimum cutting width • For DG: 1.0 insert - modify holder

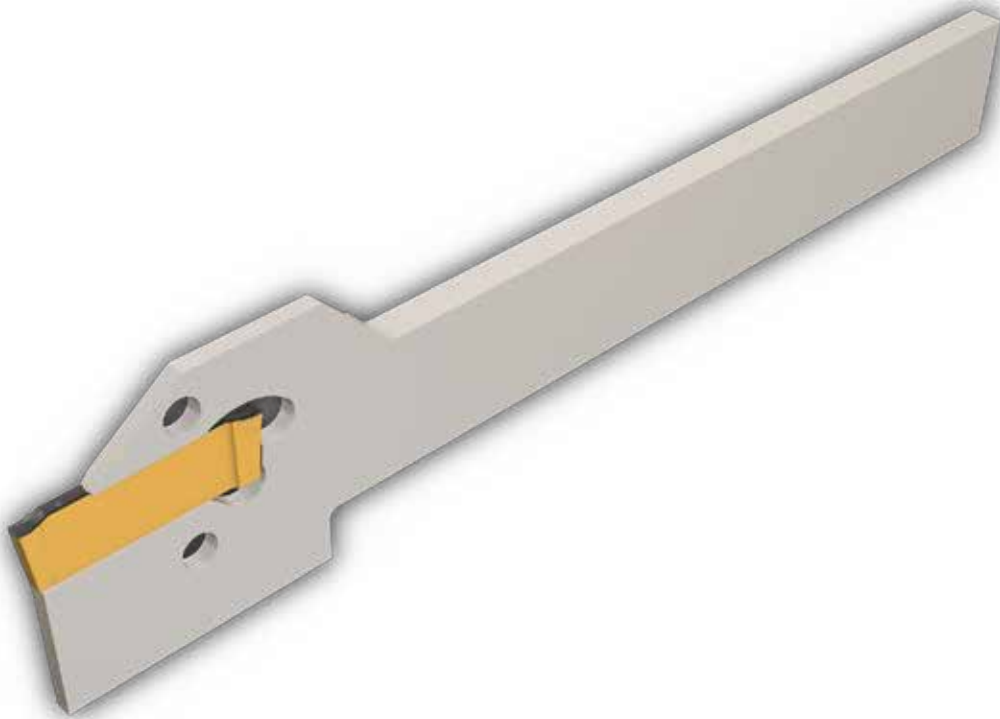
<sup>(8)</sup> Maximum cutting width

\* Optional, should be ordered separately

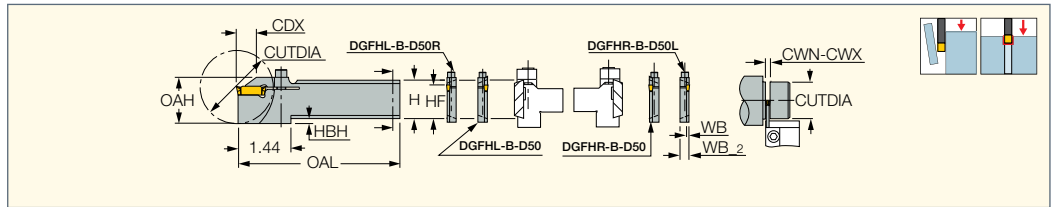
**For inserts, see pages:** DGN-LF/LFT (537) • GRIPA (278) • GRIPA (full radius) (279) • DGN/DGNC/DGNM-C (533) • DGR/L-C DGRC/LC-C (534)

• DGN/DGNM-J/JS/JT (535) • DGR/L-J/JS (536) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGR-P (540) • DGR-WP (541)

• DGR-Z/ZS (538) • GRIP (277) • GRIP (full radius) (278)



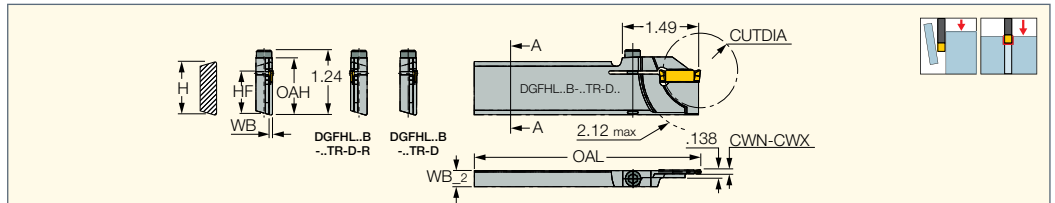
**DGFHR/L-B-D..(R/L)**  
Reinforced Type Blades  
with Screw Clamping



Designation	H <sup>(4)</sup>	CWN <sup>(5)</sup>	CWX <sup>(6)</sup>	WB	WB_2	OAL	OAH	HF	HBH	CDX <sup>(7)</sup>	CUTDIA <sup>(8)</sup>	Insert		
<b>DGFHR/L 26B-2D50</b> <sup>(1)</sup>	1.024	.075	.098	.063	.315	4.331	1.33	.843	.14	.709	1.968	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 26B-2D50R</b> <sup>(2)</sup>	1.024	.075	.098	.063	.315	4.331	1.24	.843	.15	.709	1.968	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHR 26B-2D50L</b> <sup>(2)</sup>	1.024	.075	.098	.063	.315	4.331	1.24	.843	.15	.709	1.968	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHR/L 26B-3D50</b> <sup>(1)</sup>	1.024	.118	.125	.094	.315	4.331	1.24	.843	.15	.709	1.968	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 26B-3D50R</b> <sup>(2)</sup>	1.024	.118	.125	.094	.315	4.331	1.24	.843	.15	.709	1.968	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0
<b>DGFHR 26B-3D50L</b> <sup>(2)</sup>	1.024	.118	.125	.094	.315	4.331	1.24	.843	.15	.709	1.968	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0
<b>DGFHR/L 32B-2D50</b> <sup>(3)</sup>	1.260	.075	.098	.063	.315	4.724	1.24	.976	-	.709	1.968	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 32B-2D50R</b> <sup>(2)</sup>	1.260	.075	.098	.063	.315	4.724	1.24	.976	-	.709	1.968	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHR 32B-2D50L</b> <sup>(2)</sup>	1.260	.075	.098	.063	.315	4.724	1.24	.976	-	.709	1.968	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHR/L 32B-3D50</b> <sup>(3)</sup>	1.260	.118	.125	.094	.315	4.724	1.24	.976	-	.709	1.968	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 32B-3D50R</b> <sup>(2)</sup>	1.260	.118	.125	.094	.315	4.724	1.24	.976	-	.709	1.968	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0
<b>DGFHR 32B-3D50L</b> <sup>(2)</sup>	1.260	.118	.125	.094	.315	4.724	1.24	.976	-	.709	1.968	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0

- Insert (double sided) limit is CDX=.709", If deeper penetration is required the insert should be changed to a single-ended insert DGNM type.
  - DG..1.0 insert can be mounted into pocket sizes 2 and 3, in which case the pocket width has to be modified-see page 531
  - For user guide, see pages 594-603
  - <sup>(1)</sup> For Traub machines, model TNC 30, TNM 28, TNS 26/30/42/112, TNA 300, TNK 260
  - <sup>(2)</sup> For Tornos Bechler, Emco 2000/20, 2000/26 machines
  - <sup>(3)</sup> For TRAUB machines, model TNC 42/65, TNM 42/65, TNS 42/60/65, TNA 300/400
  - <sup>(4)</sup> Mounted on all ISCAR standard blocks.
  - <sup>(5)</sup> Minimum cutting width • For DG: 1.0 insert - modify holder
  - <sup>(6)</sup> Maximum cutting width
  - <sup>(7)</sup> Cutting depth maximum
  - <sup>(8)</sup> The specified limit refers to the tool.
- For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)
- For holders, see pages:** C#-TBK-R/L (677) • HSK A-WH-TBK-R/L (688) • SGTBF (673) • SGTBR/L (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**DGFHL-26B-TR-D**  
Reinforced Blades with  
Screw Clamping for Traub  
and Index Machines



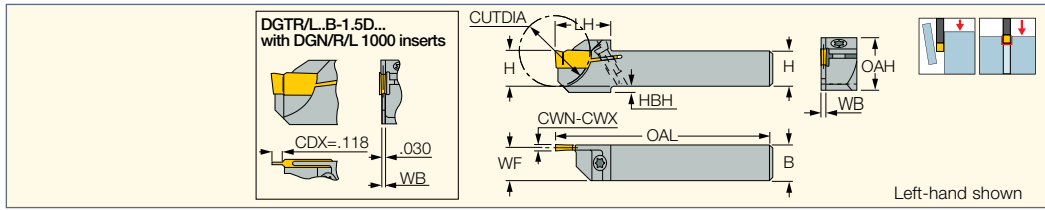
Designation	H <sup>(2)</sup>	CWN <sup>(3)</sup>	CWX <sup>(4)</sup>	WB	WB_2	OAL	OAH	HF	CUTDIA <sup>(5)</sup>	Insert		
<b>DGFHL 26B-1.5TR-D20</b> <sup>(1)</sup>	1.024	.039	.059	.047	.311	4.331	1.10	.843	.787	DG. 1.../DG. 15..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 26B-2TR-D36</b>	1.024	.075 <sup>(6)</sup>	.098	.063	.311	4.331	1.10	.843	1.417	DG. 1.../DG. 2..	SR M5X20-01172	HW 3.0
<b>DGFHL 26B-2TR-D36R</b>	1.024	.075 <sup>(6)</sup>	.098	.063	.311	4.331	1.10	.843	1.417	DG. 1.../DG. 2..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 26B-3TR-D36</b>	1.024	.118 <sup>(6)</sup>	.125	.094	.311	4.331	1.10	.843	1.417	DG. 1.../DG. 3..	SR M4X20 DIN912	HW 3.0
<b>DGFHL 26B-3TR-D36R</b>	1.024	.118 <sup>(6)</sup>	.125	.094	.311	4.331	1.10	.843	1.417	DG. 1.../DG. 3..	SR M5X20-01172	HW 3.0

- Insert limit is Tmax=.709". If deeper penetration is required, the insert should be modified into single-ended by the user
  - DG..1.0 insert can be mounted into pocket sizes 2 and 3, in which case the pocket width has to be modified - see page 531
  - For user guide, see pages 594-603
  - <sup>(1)</sup> Do not use DG.. 1.4 on this tool!
  - <sup>(2)</sup> Mounted on all ISCAR standard blocks
  - <sup>(3)</sup> Minimum cutting width
  - <sup>(4)</sup> Maximum cutting width
  - <sup>(5)</sup> The specified limit refers to the tool
  - <sup>(6)</sup> For DG: 1.0 insert - modify holder.
- For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)



**DGTR/L-B-D-SH**

Parting and Grooving Short Head Tools for CNC and Swiss Automatics



Designation	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	H	B	WB	WF	LH	CUTDIA	OAH	HBH	OAL	Insert		
DGTR/L 9.5B-1.4D20SH	.055	.055	.375	.375	.039	.350	.710	.790	.52	-	4.700	DG. 14..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 9.5B-2D20SH	.075	.100	.375	.375	.063	.340	.750	.790	.62	.10	4.700	DG. 1.../DG. 2..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 12.7B-1.4D24SH	.055	.055	.500	.500	.039	.480	.750	1.000	.65	-	4.700	DG. 14..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 12.7B-2D24SH	.075	.100	.500	.500	.063	.470	.750	1.000	.65	-	4.700	DG. 1.../DG. 2..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 12.7B-3D24SH	.118	.125	.500	.500	.094	.450	.750	1.000	.70	.05	4.700	DG. 1.../DG. 3..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 16B-1.5D25SH <sup>(1)</sup>	.039	.059	.630	.630	.047	.606	.768	1.000	.78	-	4.724	DG. 1.../DG. 15..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 16B-2D25SH	.075	.098	.630	.630	.063	.598	.768	1.000	.78	-	4.724	DG. 1.../DG. 2..	SR 16-236 P <sup>(a)</sup>	T-15/5
DGTR/L 16B-3D25SH	.118	.125	.630	.630	.094	.583	.768	1.000	.78	-	4.724	DG. 1.../DG. 3..	SR 16-236 P <sup>(a)</sup>	T-15/5

• DGN/R/L 1 mm inserts can also be mounted into pocket sizes 2 and 3. For insert depth capacity table and modification instructions for the 2 and 3 holder pockets, see page 531

• For user guide, see pages 594-603

<sup>(1)</sup> Do not use DG.. 1.4 on this tool!

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

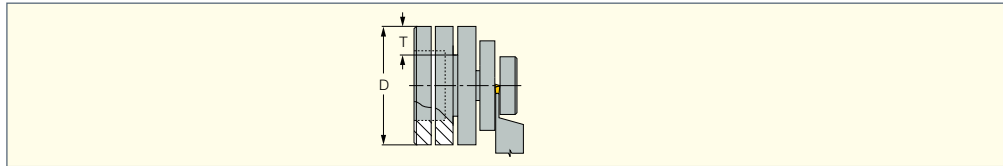
<sup>(a)</sup> Recommended tightening torque for this item: 3 N\*m (26.5 lbf\*in)

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**Depth Capacity DGTR/L-B-D**

Depth of Cut as Function of Workpiece Diameter (DGN/R/L-100... excluded)



Designation	øDmax																
DGTR/L 9.5B-1.4D20	—	—	—	—	—	—	—	—	—	.80	.90	1.0	1.3	1.8	3.0	NL	
DGTR/L 12.7B-1.4D30	—	—	—	—	—	1.2	1.3	1.4	1.5	1.7	2.0	2.4	3.3	4.9	11.8	NL	
DGTR/L 16B-1.4D30	—	—	—	—	—	1.2	1.3	1.4	1.5	1.7	2.0	2.4	3.3	4.9	11.8	NL	
DGTR/L 19B-1.4D30	—	—	—	—	—	1.2	1.3	1.4	1.5	1.7	2.0	2.4	3.3	4.9	11.8	NL	
DGTR/L 9.5B-2D30	—	—	—	—	—	1.2	1.3	1.4	1.5	1.7	2.0	2.4	3.3	4.9	11.8	NL	
DGTR/L 12.7B-2D30	—	—	—	—	—	1.2	1.3	1.4	1.5	1.7	2.0	2.4	3.3	4.9	11.8	NL	
DGTR/L 16B-2D32	—	—	—	—	1.3	1.4	1.5	1.6	1.9	2.2	2.7	3.7	5.9	15.7	NL	NL	
DGTR/L 19B-2D35	—	—	—	3.0	3.5	4.4	6.1	9.8	25.6	NL	NL	NL	NL	NL	NL	NL	
DGTR/L 25.4B-2D35	—	—	—	3.0	3.5	4.4	6.1	9.8	25.6	NL	NL	NL	NL	NL	NL	NL	
DGTR/L 12.7B-3D30	—	—	—	—	—	1.2	1.3	1.4	1.5	1.7	2.0	2.4	3.3	4.9	11.8	NL	
DGTR/L 16B-2D35	—	—	—	1.4	1.5	1.7	1.8	2.0	2.3	2.8	3.6	5.1	9.0	47.0	NL	NL	
DGTR/L 19B-3D40	2.2	2.4	2.8	3.3	4.0	5.3	7.9	15.8	NL	NL	NL	NL	NL	NL	NL	NL	
DGTR/L 25.4B-3D40	2.2	2.4	2.8	3.3	4.0	5.3	7.9	15.8	NL	NL	NL	NL	NL	NL	NL	NL	
Depth T	.787	.748	.709	.669	.630	.591	.551	.512	.472	.433	.394	.354	.315	.276	.236	.197	.157

NL- No Limit

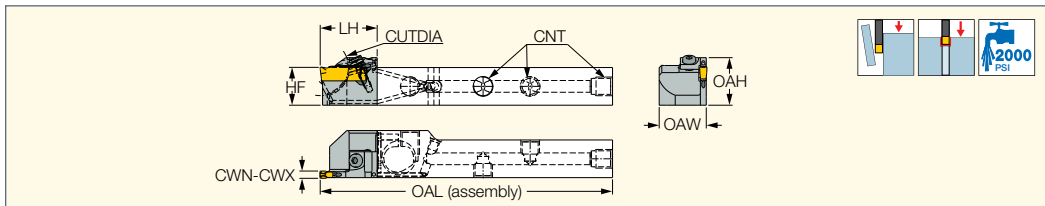
Example:

For .35" depth of groove on a 2.95" workpiece diameter, six tools may be used.



**NQCH-DGTR/L-D-SH-JHP**

Screw Lock JETCUT Modular Heads Carrying DO-GRIP Double-Edged Parting Inserts for Swiss-Type Machines



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	HF	OAW	OAH	LH	OAL	CUTDIA	Insert		
NQCH12-DGTL-2D24SH-JHP	.075	.098	.476	.787	.638	.945	4.882	.945	DGN	SR M3X10DIN912	HW 2.5
NQCH12-DGTR-2D24SH-JHP	.075	.098	.476	.787	.638	.953	4.890	.945	DGN	SR M3X10DIN912	HW 2.5
NQCH16-DGTL-2D24SH-JHP	.075	.098	.634	.787	.795	.945	4.882	.945	DGN		
NQCH16-DGTR-2D24SH-JHP	.075	.098	.634	.787	.795	.953	4.890	.945	DGN		

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

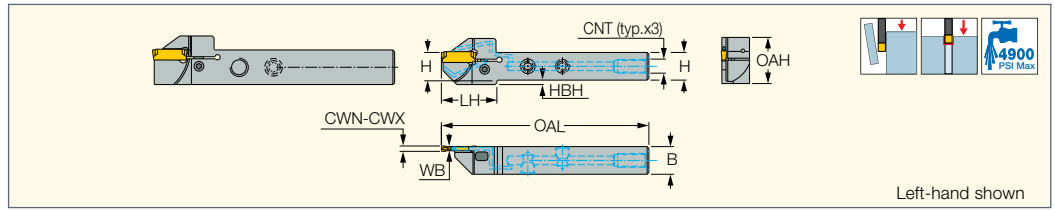
**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-W (534) • DGN-WP (540) • DGN-Z (538)

• DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534)

• DGR/L-J/JS (536)

**For holders, see pages:** NQCH-JHP (404)

**DGTR/L-B-D-JHP-SL**  
Parting and Grooving Side Lock  
Type Tools with  
High-Pressure Coolant for  
CNC and Swiss Automatics



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	LH	CUTDIA <sup>(3)</sup>	OAH	HBH	OAL	Insert	CNT
DGTR/L 12.7B-2D24-JHP-SL	.075	.100	.500	.500	.067	1.100	.940	1.00	.23	3.940	DG. 2...	5/16 UNF
DGTR/L 16B-2D35-JHP-SL	.075	.098	.630	.630	.067	1.260	1.380	1.05	.10	4.724	DG. 2...	5/16"-24 UNF
DGTR/L 19B-2D35-JHP-SL	.075	.100	.750	.750	.067	1.300	1.400	1.10	-	5.510	DG. 2...	1/8"-28 BSPP
DGTR/L 12.7B-3D24-JHP-SL	.118	.125	.500	.500	.094	1.100	.940	1.00	.23	3.940	DG. 3...	5/16 UNF
DGTR/L 16B-3D35-JHP-SL	.118	.125	.630	.630	.094	1.260	1.380	1.05	.10	4.724	DG. 3...	5/16"-24 UNF
DGTR/L 19B-3D40-JHP-SL	.118	.125	.750	.750	.094	1.400	1.600	1.10	-	5.510	DG. 3...	1/8"-28 BSPP
DGTR/L 25.4B-2D35-JHP-SL	.075	.098	1.000	1.000	.067	1.260	1.380	1.30	-	5.511	DG.3...	1/8"-28 BSPP
DGTR/L 25.4B-3D40-JHP-SL	.118	.125	1.000	1.000	.094	1.401	1.600	1.30	-	5.511	DG.3...	1/8"-28 BSPP

• DGN/R/L 1 mm inserts can also be mounted into pocket sizes 2 and 3. For insert depth capacity table and modification instructions for the 2 and 3 holder pockets, see page 531

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

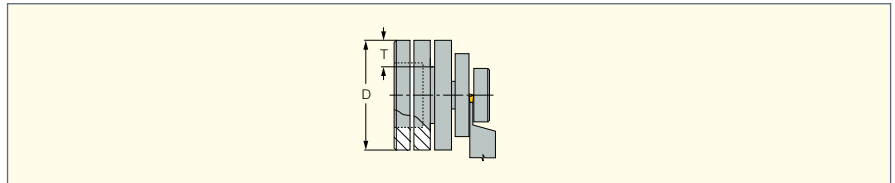
<sup>(3)</sup> Maximum cutting diameter

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

### Depth Capacity DGTR/L-B-D-JHP-SL

Depth of Cut as Function of Workpiece Diameter  
(DGN/R/L-100... excluded)



Designation	øDmax															
DGTR/L 12.7B-2D24-JHP-SL	—	—	—	—	—	—	—	.94	1.02	1.06	1.1	1.18	1.26	1.42	1.65	2.04
DGTR/L 16B-2D35-JHP-SL	—	—	—	—	—	—	—	.94	1.02	1.06	1.1	1.18	1.26	1.42	1.65	2.04
DGTR/L 19B-2D35-JHP-SL	—	—	—	1.38	1.53	1.65	1.81	2.01	2.33	2.79	3.58	5.12	9.06	47.2	NL	NL
DGTR/L 12.7B-3D24-JHP-SL	—	—	—	1.38	1.53	1.65	1.81	2.01	2.33	2.79	3.58	5.12	9.06	47.2	NL	NL
DGTR/L 16B-3D35-JHP-SL	—	—	—	2.95	3.54	4.45	6.1	9.84	25.6	NL	NL	NL	NL	NL	NL	NL
DGTR/L 19B-3D40-JHP-SL	2.20	2.44	2.79	3.27	4.01	5.27	7.87	15.7	NL	NL	NL	NL	NL	NL	NL	NL



NL- No Limit

### Flow Rate vs. Pressure

Designation	1000 PSI Flow Rate (GPM)	1450 PSI Flow Rate (GPM)	2000 PSI Flow Rate (GPM)
DGTR/L ...2-JHP-SL	.5-1.1	1.1-1.6	1.6-2.1
DGTR/L ...3-JHP-SL	1.8-2.4	2.4-2.9	2.9-3.4

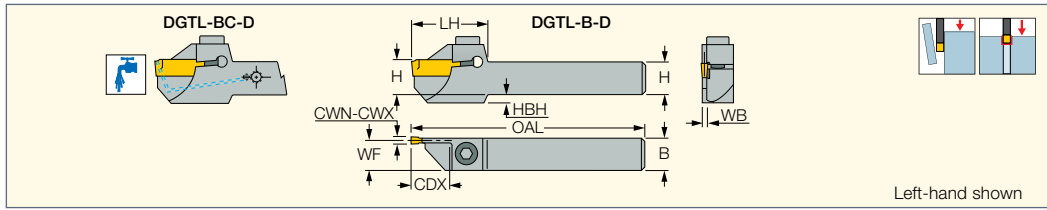
### Spare Parts

Designation							
DGTR/L 12.7B-2D24-JHP-SL	PIN-32121	SR M5-24145-RL		SR 5/16UNF TL360	BLD HW2.5	HW 5/32"	SW6-SD
DGTR/L 16B-2D35-JHP-SL	PIN-32121	SR M5-24145-RL		SR 5/16UNF TL360	BLD HW2.5	HW 5/32"	SW6-SD
DGTR/L 19B-2D35-JHP-SL	PIN-32121	SR M5-24145-RL		PLG G1/8 TL360	BLD HW2.5	HW 5.0	SW6-SD
DGTR/L 12.7B-3D24-JHP-SL	PIN-32121	SR M5-24145-RL		SR 5/16UNF TL360	BLD HW2.5	HW 5/32"	SW6-SD
DGTR/L 16B-3D35-JHP-SL	PIN-32121	SR M5-24145-RL		SR 5/16UNF TL360	BLD HW2.5	HW 5/32"	SW6-SD
DGTR/L 19B-3D40-JHP-SL	PIN-32121	SR M5-24145-RL		PLG G1/8 TL360	BLD HW2.5	HW 5.0	SW6-SD
DGTL 25.4B-2D35-JHP-SL					BLD HW2.5*		
DGTR/L 25.4B-2D35-JHP-SL	PIN-32121	SR M5-24145-RL		PLG G1/8 TL360		HW 5.0	SW6-SD
DGTR 25.4B-2D35-JHP-SL					BLD HW2.5		
DGTL 25.4B-3D40-JHP-SL	PIN-32121	SR M5-24145	SR M5-24145-RL	PLG G1/8 TL360	BLD HW2.5	HW 5.0	SW6-SD
DGTR 25.4B-3D40-JHP-SL	PIN-32121	SR M5-24145-RL		PLG G1/8 TL360	BLD HW2.5	HW 5.0	SW6-SD

\* Optional, should be ordered separately

**DGTR/L-B/BC-D**

Integral Shank Reinforced Parting and Grooving Tools Especially for DGNC Type of Inserts



Designation	CWN <sup>(3)</sup>	CWX <sup>(4)</sup>	H	B	WB	OAL	LH	CDX <sup>(5)</sup>	WF	HBH	CSP <sup>(6)</sup>	Insert
DGTR/L 9.5B-1.4D20	.055	.055	.375	.375	.039	5.500	.930	.394	.360	.10	0	DG. 14..
DGTR/L 12.7B-1.4D30	.055	.055	.500	.500	.039	5.500	1.200	.591	.480	.11	0	DG. 14..
DGTR/L 16B-1.4D30	.055	.055	.630	.630	.039	5.512	1.165	.591	.610	-	0	DG. 14..
DGTR/L 19B-1.4D30	.055	.055	.750	.750	.039	5.500	1.200	.591	.730	-	0	DG. 14..
DGTR/L 9.5B-2D30	.075	.100	.375	.375	.063	5.500	1.200	.591	.340	.24	0	DG. 1.../DG. 2..
DGTR/L 12.7B-2D30	.075	.100	.500	.500	.063	5.500	1.200	.591	.470	.24	0	DG. 1.../DG. 2..
DGTR/L 16B-2D32	.075	.098	.630	.630	.063	5.512	1.205	.630	.598	-	0	DG. 1.../DG. 2..
DGTR/L 19B-2D35	.075	.100	.750	.750	.063	5.500	1.300	.689	.720	-	0	DG. 1.../DG. 2..
DGTR/L 25.4B-2D35	.075	.100	1.000	1.000	.063	5.500	1.300	.689	.970	-	0	DG. 1.../DG. 2..
DGTR/L 12.7B-3D30	.118	.125	.500	.500	.094	5.500	1.200	.591	.450	.11	0	DG. 1.../DG. 3..
DGTR/L 16B-3D35	.118	.125	.630	.630	.094	5.512	1.264	.630	.583	.10	0	DG. 1.../DG. 3..
DGTR/L 16BC-3D35 <sup>(1)</sup>	.118	.125	.630	.630	.094	5.512	1.224	.630	.583	.10	1	DGNC/DGRC/DGLC 3...
DGTR/L 19BC-3D40 <sup>(1)</sup>	.118	.125	.750	.750	.094	5.500	1.400	.787	.700	.10	1	DGNC/DGRC/DGLC 3...
DGTR/L 19B-3D40 <sup>(2)</sup>	.118	.125	.750	.750	.094	5.500	1.400	.787	.700	-	0	DG. 1.../DG. 3..
DGTR/L 25.4B-3D40 <sup>(2)</sup>	.118	.125	1.000	1.000	.094	5.500	1.400	.787	.950	-	0	DG. 1.../DG. 3..
DGTL 25.4BC-3D40 <sup>(1)</sup>	.118	.125	1.000	1.000	.094	5.500	1.400	.787	.950	-	1	DGNC/DGRC/DGLC 3...
DGTR 25.4BC-3D40 <sup>(1)</sup>	.118	.125	1.000	1.000	.094	5.500	1.400	.780	.950	-	1	DGNC/DGRC/DGLC 3...

- Important: 1.4 mm (.055") width inserts should be used only on tools for 1.4 mm specific width tools
- DGN/R/L 1 mm (.039") inserts can also be mounted into pocket sizes 2 and 3.
- For insert depth capacity table and modification instructions for the 2 and 3 holder pockets, see page 531 • For user guide, see pages 594-603

<sup>(1)</sup> Tools for inserts with coolant holes for high temperature alloys and stainless steel

<sup>(2)</sup> Insert's Tmax=7", for deeper penetration modify insert into single-ended

<sup>(3)</sup> Minimum cutting width

<sup>(4)</sup> Maximum cutting width







<sup>(5)</sup> The specified limit refers to the tool

<sup>(6)</sup> 0 - Without coolant supply, 1 - With coolant supply

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR-L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

### Spare Parts

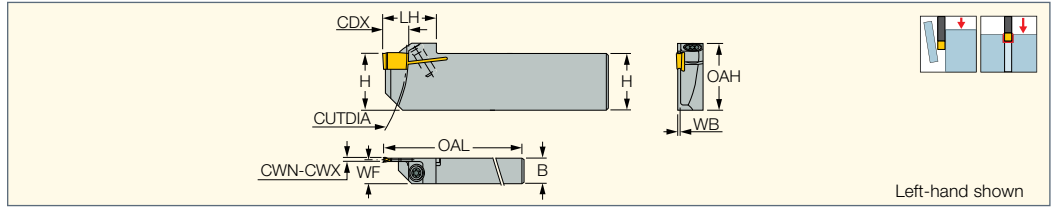
Designation						
DGTR/L 9.5B-1.4D20	SR M5X12 DIN912	HW 4.0				
DGTR/L 12.7B-1.4D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 16B-1.4D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 19B-1.4D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 9.5B-2D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 12.7B-2D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 16B-2D32	SR M4X14 DIN912	HW 3.0				
DGTL 19B-2D35	SR M5X12 DIN912	HW 4.0				
DGTR 19B-2D35	SR M4X14 DIN912	HW 3.0				
DGTL 25.4B-2D35	SR M5X12 DIN912	HW 4.0				
DGTR 25.4B-2D35	SR M4X14 DIN912	HW 3.0				
DGTR/L 12.7B-3D30	SR M5X12 DIN912	HW 4.0				
DGTR/L 16B-3D35	SR M5X12 DIN912	HW 4.0				
DGTR/L 16BC-3D35	SR M5X12 DIN912	HW 4.0	CGM 343*	CF 343*	SGCU 341*	CGF 343*
DGTR/L 19BC-3D40	SR M5X12 DIN912	HW 4.0	CGM 343*	CF 343*	SGCU 341*	CGF 343*
DGTR/L 19B-3D40	SR M5X12 DIN912	HW 4.0				
DGTR/L 25.4B-3D40	SR M5X12 DIN912	HW 4.0				
DGTR/L 25.4BC-3D40	SR M5X12 DIN912	HW 4.0	CGM 343*	CF 343*	SGCU 341*	CGF 343*

\* Optional, should be ordered separately





**DGTR/L-B-T-SH**  
Reinforced Parting and Grooving  
Short Head Tools Carrying  
DGN Double-Ended Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	WF	OAL	LH	CUTDIA	CDX <sup>(3)</sup>	OAH		
<b>DGTR/L 2009B-1.5T9SH</b>	.039	.059	.787	.354	.047	.331	3.937	.748	3.740	.354	.93	SR 16-236 P	T-15/5

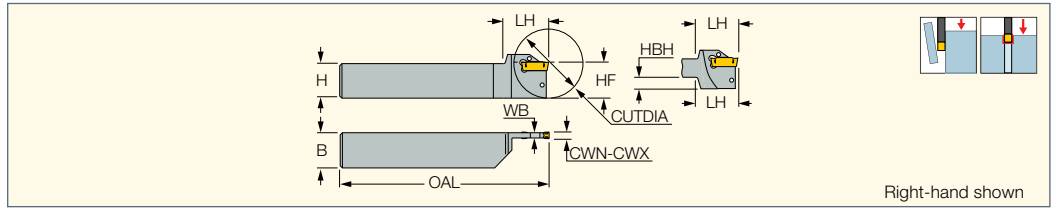
• Important: .055" (1.4 mm) width inserts should be used only on tools for .055" specific width! • For user guide, see pages 594-603

- <sup>(1)</sup> Minimum cutting width
- <sup>(2)</sup> Maximum cutting width
- <sup>(3)</sup> Cutting depth maximum

**For inserts, see pages:** DGN-P (539) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR/L-J/JS (536)



**DGTR/L**  
Integral Shank Parting  
and Grooving Tools



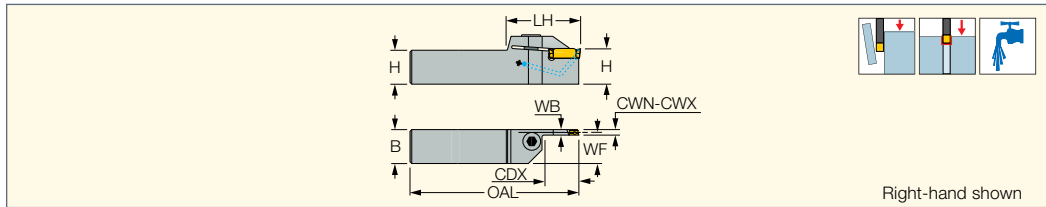
Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	OAL	LH	HBH	CUTDIA	Insert	
<b>DGTR/L 9.5-2</b>	.075	.100	.375	.375	.071	4.500	1.100	.26	1.400	DG. 1../DG. 2..	EDG 33B*
<b>DGTR/L 12.7-2</b>	.075	.100	.500	.500	.071	4.500	1.100	.26	1.400	DG. 1../DG. 2..	EDG 33B*
<b>DGTR/L 1616-2</b>	.075	.098	.630	.630	.071	5.906	1.142	.10	1.378	DG. 1../DG. 2..	EDG 33B*
<b>DGTR/L 19-2</b>	.075	.100	.750	.750	.071	4.500	1.100	.14	1.400	DG. 1../DG. 2..	EDG 33A*
<b>DGTR/L 12.7-3</b>	.118	.125	.500	.500	.100	4.500	1.100	.26	1.400 <sup>(3)</sup>	DG. 1../DG. 3..	EDG 33B*
<b>DGTR/L 1616-3</b>	.118	.125	.630	.630	.098	5.906	1.142	.26	1.378 <sup>(3)</sup>	DG. 1../DG. 3..	EDG 33B*
<b>DGTR/L 19-3</b>	.118	.125	.750	.750	.100	4.500	1.100	-	1.400 <sup>(3)</sup>	DG. 1../DG. 3..	EDG 33A*
<b>DGTR/L 25.4-3</b>	.118	.125	1.000	1.000	.100	6.000	1.100	-	1.400 <sup>(3)</sup>	DG. 1../DG. 3..	EDG 33A*
<b>DGTR/L 19-4</b>	.157	.157	.750	.750	.134	4.500	1.200	-	2.000	DG. 4../GRIP 4..	EDG 33A*
<b>DGTR/L 25.4-4</b>	.157	.157	1.000	1.000	.134	6.000	1.200	-	2.000	DG. 4../GRIP 4..	EDG 33A*
<b>DGTR/L 25.4-5</b>	.189	.200	1.000	1.000	.157	6.000	1.300	-	3.000	DG. 5../GRIP 5..	EDG 33A*
<b>DGTR/L 25.4-6</b>	.236	.236	1.000	1.000	.209	6.000	1.300	-	3.000	DG. 6../GRIP 6..	EDG 33A*

- Insert limit is Tmax=.709". If deeper penetration is required, the insert should be modified into single-ended by the user
- DG..1.0 insert can be mounted into pocket sizes 2 and 3, in which case the pocket width has to be modified - see page 531
- For user guide, see pages 594-603

- <sup>(1)</sup> Minimum cutting width
- <sup>(2)</sup> Maximum cutting width
- <sup>(3)</sup> Dmax=1.69" when single-ended insert is used
- \* Optional, should be ordered separately

**For inserts, see pages:** GRIPA (278) • GRIPA (full radius) (279) • DGN-LF/LFT (537) • DGN-MF (537) • DGN/DGNC/DGNM-C (533)  
 • DGR/L-C DGRC/LC-C (534) • DGN/DGNM-J/JS/JT (535) • DGR/L-J/JS (536) • DGN-P (539) • DGN-UT/UA (539) • DGN-W (534) • DGN-WP (540)  
 • DGN-Z (538) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • GRIP (277) • GRIP (full radius) (278)

**DO-GRIP**  
 TWISTED 2-SIDED **JET-CUT**
**DGTR/L-BC-T**

 Parting and Grooving  
 Tools with Coolant Holes  
 Carrying JET-CUT Inserts


Designation	H	B	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	OAL	WB	WF	LH	CDX <sup>(3)</sup>	Insert
DGTR/L 19BC-4T25	.750	.750	.157	.157	5.500	.134	.680	1.700	.980	DGNC/DGRC/DGLC 4...
DGTR/L 25.4BC-4T25	1.000	1.000	.157	.157	6.000	.134	.933	1.700	.980	DGNC/DGRC/DGLC 4...

• For user guide, see pages 594-603







(1) Minimum cutting width

(2) Maximum cutting width

(3) Cutting depth maximum

**For inserts, see pages:** DGN-UT/UA (539) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

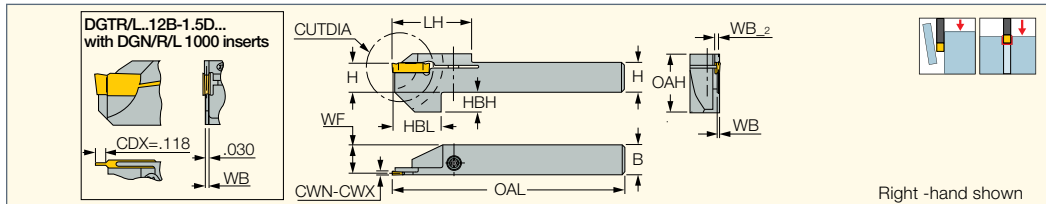
**Spare Parts**

Designation						
DGTR/L-BC-T	SR M6X16 DIN912	SGCU 341*	CGF 343*	CF 343*	CGM 343*	HW 5.0

\* Optional, should be ordered separately

**DO-GRIP**  
 TWISTED 2-SIDED

**DGTR/L-B-D-TR**

 Reinforced Parting and Grooving  
 Tools Carrying Double-Ended  
 DO-GRIP Inserts


Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	WB_2	WF	OAL	LH	HBL	CUTDIA	OAH	HBH	Insert
DGTR/L 12B-1.4D20-TR12	.055	.055	.472	.472	.039	.091	.453	3.740	1.280	.787	.790	.93	.31	DG. 14..
DGTR/L 12B-1.5D20-TR12	.039	.059	.472	.472	.047	.091	.445	3.740	1.280	.787	.790	.93	.31	DG. 1.../DG. 15..

• Important: .055" width inserts should be used only on tools for .055" specific width! • For Traub machines, model TNL 12/7



• For user guide, see pages 594-603

(1) Minimum cutting width

(2) Maximum cutting width

**For inserts, see pages:** DGN-P (539) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR/L-J/JS (536)

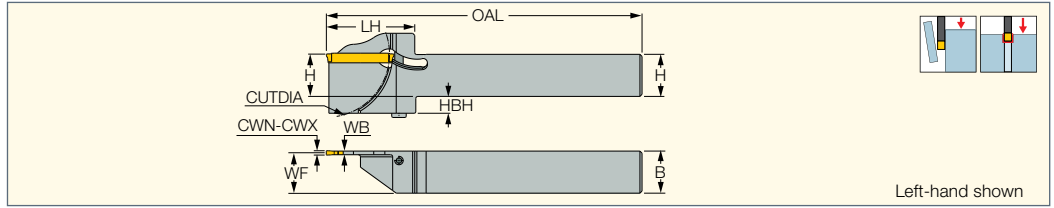
**Spare Parts**

Designation		
DGTR/L-B-D-TR	SR 16-236 P <sup>(a)</sup>	T-15/5

(a) 3 N\*m(26.5 lbf\*in)

**DGTR/L-XL**

Integral Shank Reinforced  
Parting and Grooving Tools  
Parting Up to 2.56" Diameters



Designation	CW	CUTDIA	H	B	WB	OAL	LH	WF	HBH		
DGTR/L 19B-2XL-D60	.079	2.400	.752	.752	.069	5.910	1.700	.720	.35	SR M4X35DIN912	HW 3.0
DGTR/L 25.4B-2XL-D60	.079	2.400	1.000	1.000	.069	5.910	1.700	.960	.10	SR M4X35DIN912	HW 3.0
DGTR/L 19B-3XL-D65	.118	2.600	.750	.750	.094	5.910	1.700	.700	.51	SR M5X40DIN912	HW 4.0
DGTR/L 25.4B-3XL-D65	.118	2.600	1.000	1.000	.094	5.910	1.700	.950	.26	SR M5X40DIN912	HW 4.0

• For insert depth capacity table, see page 527 • For user guide, see pages 594-603  
For inserts, see pages: DGN-C-XL (543) • DGN-J-XL (543) • DGR/L-C-XL (543) • DGR/L-J-XL (544)

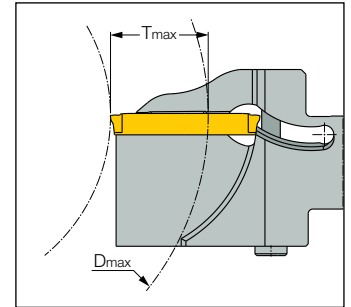
**Depth of Cut as Function of Workpiece Diameter**

Tmax/Dmax for DGTR/L...-2XL

T <sub>max</sub>	D <sub>max</sub>
.59	No limit
.63	23.62
.67	11.81
.71	7.87
.75	5.91
.79	5.12
.83	4.72
.87	3.94
.91	3.54
.94	3.35
.98	3.15
1.02	2.95
1.06	2.76
1.10	2.56
1.14	2.48
1.18	2.36

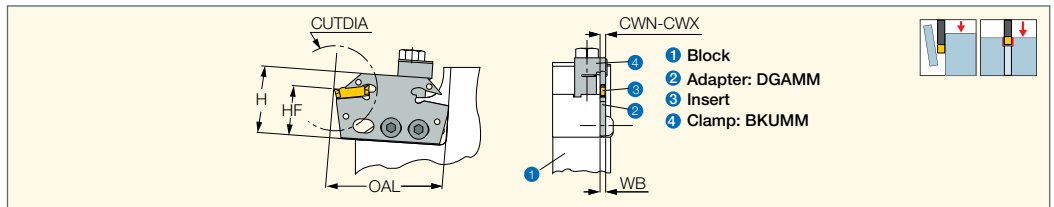
Tmax/Dmax for DGTR/L...-3XL

T <sub>max</sub>	D <sub>max</sub>
.59	No limit
.63	39.37
.67	15.75
.71	11.81
.75	9.06
.79	7.09
.83	5.91
.87	5.12
.91	4.53
.94	4.13
.98	3.74
1.02	3.54
1.06	3.35
1.10	3.15
1.14	2.95
1.18	2.83
1.22	2.76
1.28	2.56



**DGAMM**

Replacement DO-GRIP Adapter  
for Other Manufacturers'  
Holders. Parting and Grooving,  
with Double-Ended Inserts



Designation	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WB	HF	H	OAL	
DGAMM 38-2 <sup>(1)</sup>	.039	.098	.039	1.092	1.500	2.540	EDG 33A*
DGAMM 48-2 <sup>(1)</sup>	.039	.098	.039	1.487	1.890	3.060	EDG 33A*
DGAMM 38-3 <sup>(1)</sup>	.039	.125	.094	1.092	1.500	2.540	EDG 33A*
DGAMM 48-3 <sup>(1)</sup>	.039	.125	.094	1.487	1.890	3.060	EDG 33A*
DGAMM 38-4	.157	.157	.126	1.092	1.500	2.540	EDG 33A*
DGAMM 48-4	.157	.157	.126	1.487	1.890	3.060	EDG 33A*
DGAMM 38-5	.189	.197	.157	1.092	1.500	2.540	EDG 33A*
DGAMM 48-5	.189	.197	.157	1.487	1.890	3.060	EDG 33A*

<sup>(1)</sup> For DG.-10.. insert, modify holder pocket according to depth capacity table.

<sup>(2)</sup> Minimum cutting width

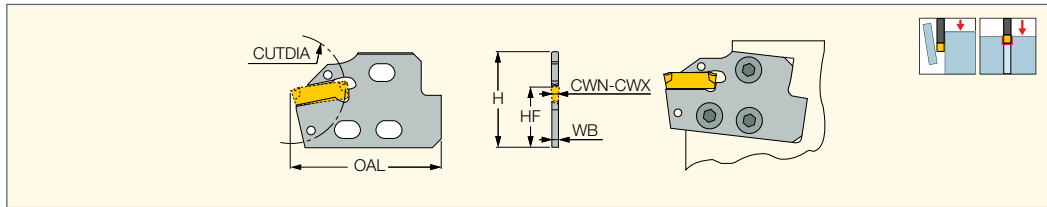
<sup>(3)</sup> Maximum cutting width

\* Optional, should be ordered separately

For inserts, see pages: DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)  
• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**DO-GRIP**  
TWISTED 2-SIDED**DGAM**

Parting and Grooving  
Replacement Adapter for  
DO-GRIP Double-Ended Inserts,  
for Other Manufacturers' Holders



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	H	OAL	
DGAM 45-2	.075 <sup>(3)</sup>	.098	.039	1.067	1.770	2.410	EDG 33A*
DGAM 33-3	.118 <sup>(3)</sup>	.125	.094	.811	1.300	2.060	EDG 33A*
DGAM 45-3	.118 <sup>(3)</sup>	.125	.094	1.067	1.770	2.410	EDG 33A*
DGAM 33-5	.189	.197	.126	.811	1.300	2.060	EDG 33A*
DGAM 45-5	.189	.197	.157	1.067	1.770	2.410	EDG 33A*

• DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified -see page 531

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> For DG: 1.0 insert - modify holder.

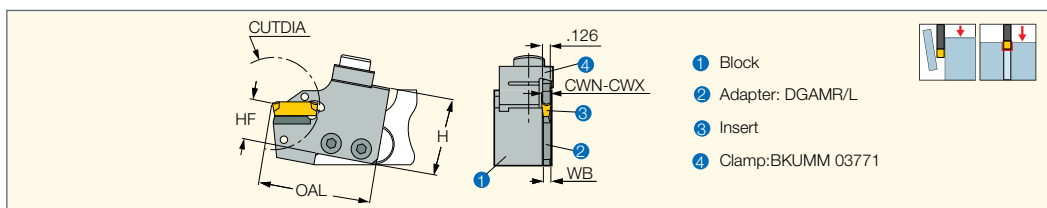
\* Optional, should be ordered separately

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**DO-GRIP**  
TWISTED 2-SIDED**DGAMR/L**

Parting and Grooving  
Replacement Adapter for  
DO-GRIP Double-Ended Inserts,  
for Other Manufacturers' Holders



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	H	OAL	
DGAMR/L 32-2	.075 <sup>(3)</sup>	.087	.039	.671	1.100	1.870	EDG 33A*
DGAMR/L 32-3	.118 <sup>(3)</sup>	.125	.094	.671	1.100	1.870	EDG 33A*
DGAMR/L 32-4	.157	.157	.126	.671	1.100	1.870	EDG 33A*
DGAML 32-5	.189	.197	.157	.671	1.100	1.870	EDG 33A*

• DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified -see page 531

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> For DG: 1.0 insert - modify holder.

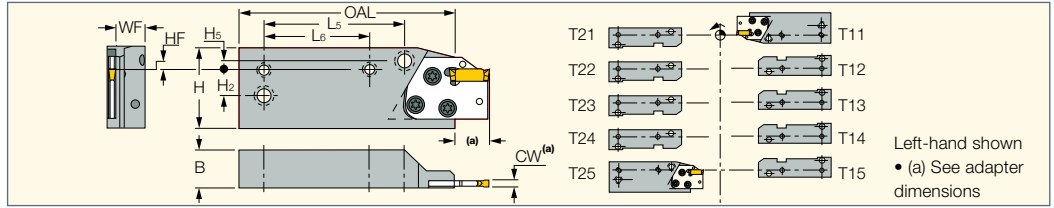
\* Optional, should be ordered separately

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)



**DGHAL-DECO**  
 Holders for DGAD Adapters for  
 Tornos Bechler Deco Machines



M e t r i c									
Designation	H	B	OAL	WF	HF	H2	H5	L6	L5
DGHAL DECO 7-10 <sup>(1)</sup>	40.3	18.2	106.00	15.0	-	12.8	4.8	52.00	69.00
DGHAL DECO 13 <sup>(2)</sup>	42.0	35.2	115.00	28.7	2.0	16.0	16.0	60.00	60.00
DGHAL DECO 20-26 <sup>(2)</sup>	44.8	23.2	120.00	20.0	4.0	17.0	17.0	65.00	65.00

• DGAD-... HGAD-... adapters should be ordered separately

<sup>(1)</sup> Positioning combinations: T11; T25

<sup>(2)</sup> Positioning combinations: All

For tools, see pages: DGAD-B-D (531) • DGAD/HGAD (531) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552)

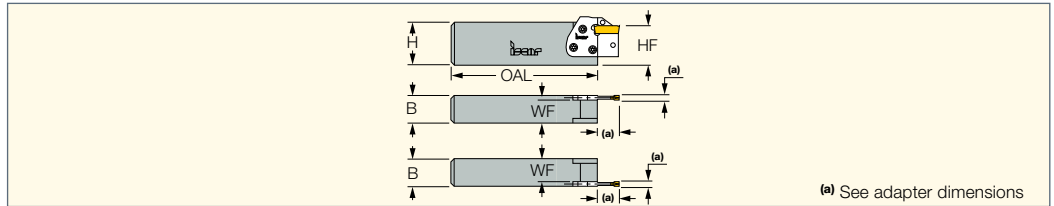
**Spare Parts**

Designation							
DGHAL DECO 7-10	SR 14-519-L9.7 <sup>(a)</sup>	HW 4.0	SR 16-212-L9.5	T-20/5	SR 16-212	SR M5X25DIN912	
DGHAL DECO 13	SR 14-519-L9.7 <sup>(a)</sup>	HW 5.0	SR 16-212-L7.5	T-20/5	SR 16-212	SR M6X25 DIN912	
DGHAL DECO 20-26	SR 14-519-L12.8 <sup>(a)</sup>	HW 5.0	SR 16-212-L7.5	T-20/5	SR 16-212	SR M6X25 DIN912	EZ 104

<sup>(a)</sup> Recommended tightening torque: 9 N\*m (80lbf\*in)



**HMSN-New Britain**  
 Holders for Grooving and  
 Turning Adapters for New Britain  
 Multi-Spindle Bar Machines



Designation	H	B	HF	OAL	WF	S1 <sup>(2)</sup>			
HMSN 35/3722 <sup>(1)</sup>	1.437	.882	1.358	7.154	.724	226	SR 16-212	SR 14-519	T-20/5

• DGAD-... HGAD-..., adapters should be ordered separately

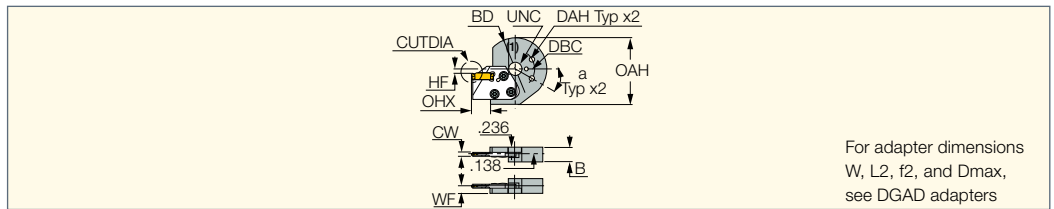
<sup>(1)</sup> For models #42; #52; #60; #61; #62; #602

<sup>(2)</sup> Comparable Empire block

For tools, see pages: DGAD-B-D (531) • DGAD/HGAD (531) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72)



**HSTBS**  
 Holders for DO-GRIP DGAD  
 Parting Adapters, for Automatic  
 Brown & Sharpe Machines



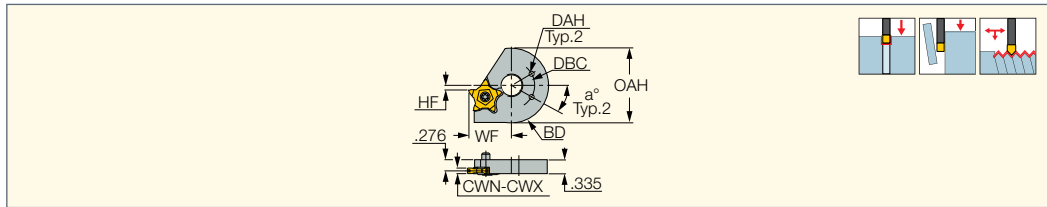
For adapter dimensions W, L2, f2, and Dmax, see DGAD adapters

Designation	BD	OAH	HF	DBC	a°	DAH	B			
HSTBS 76L	3.000	2.87	.250	1.500	30	.187	.453	SR 16-212/L10 M5X0.8	T-20/5	SR 14-519/L10.2
HSTBS 76R	3.000	2.87	.250	1.500	30	.187	.453	SR 16-212/L10 M5X0.8	T-20/5	SR 14-519/L10.2

For tools, see pages: DGAD-B-D (531) • DGAD/HGAD (531) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72)

**PENTACUT**  
 PARTING & GROOVING LINE

**HSTBS-PEN**

 Adapters for Brown & Sharpe  
 Automatic Machines, with PENTA  
 Inserts for Parting and Grooving


Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	BD	HF	DBC	a°	DAH	UNC	OAH	WF		
<b>HSTBS PEN 24-76R</b>	.020	.246	3.000	.250	1.500	30	.187	5/8-11	2.570	1.500	SR 16-212-01397	T-2010/5

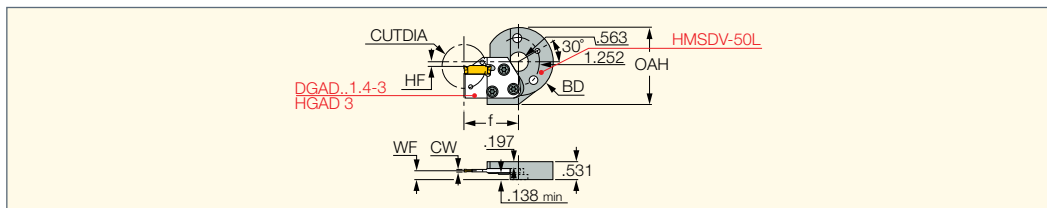
<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

**For inserts, see pages:** PENTA 24-BSPT (736) • PENTA 24-ISO (716) • PENTA 24-MT (704) • PENTA 24-NPT (731) • PENTA 24-UN (723)  
 • PENTA 24-W (728) • PENTA 24-WT (698) • PENTA 24N-C (334) • PENTA 24N-C (full radius) (335) • PENTA 24N-J (333) • PENTA 24N-J (full radius) (334)  
 • PENTA 24N-PF (full radius) (336) • PENTA 24N-PF/P (335) • PENTA 24N-Z (336) • PENTA 24R-C (587) • PENTA 24R-P (590) • PENTA 24R/L-J (586)  
 • PENTA 24R/L-Z (589)

**DO GRIP**  
 TWISTED 2-SIDED

**HMSDV**

 Adapter Holders for  
 Davenport Machines


Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CUTDIA	f	HF	OAH	WF	BD			
<b>HMSDV 50L</b>	.039	.087	1.260	1.580	.130	2.25	.272	1.988	SR 16-212/L10 M5X0.8	T-20/5	SR 14-519-00684

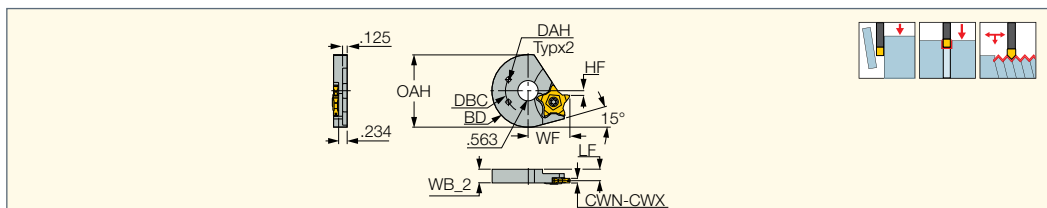
<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

**For tools, see pages:** DGAD-B-D (531) • DGAD/HGAD (531) • SCLCR-PAD (64) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72)

**PENTACUT**  
 PARTING & GROOVING LINE

**HMSDV PEN**

 Adapter Holders for  
 Davenport Machines using  
 PENTA 24... Inserts


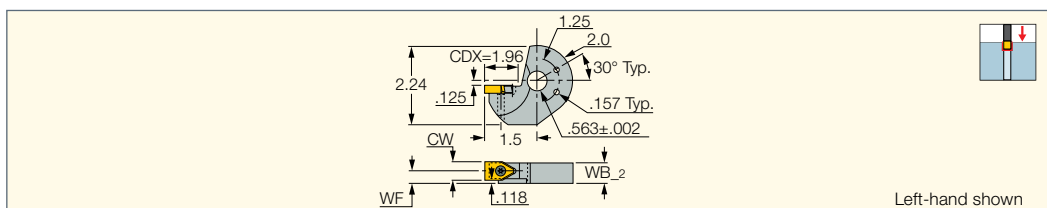
Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	BD	OAH	DBC	WF	HF	DAH	WB_2	LF		
<b>HMSDV PEN 24-50L</b>	.020	.246	1.994	1.99	1.251	1.140	.130	.141	.372	.250	SR 34-523-L7	T-15/5

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

**For inserts, see pages:** PENTA 24-BSPT (736) • PENTA 24-ISO (716) • PENTA 24-MT (704) • PENTA 24-NPT (731) • PENTA 24-UN (723)  
 • PENTA 24-W (728) • PENTA 24-WT (698) • PENTA 24N-C (334) • PENTA 24N-C (full radius) (335) • PENTA 24N-J (333) • PENTA 24N-J (full radius) (334)  
 • PENTA 24N-PF (full radius) (336) • PENTA 24N-PF/P (335) • PENTA 24N-Z (336) • PENTA 24R-C (587) • PENTA 24R-P (590) • PENTA 24R/L-J (586)  
 • PENTA 24R/L-Z (589)

**V-LOCK**
**HMSDV SXCN**

 Adapter Holders for Wide  
 Profile Grooving Inserts, for  
 Davenport Machines


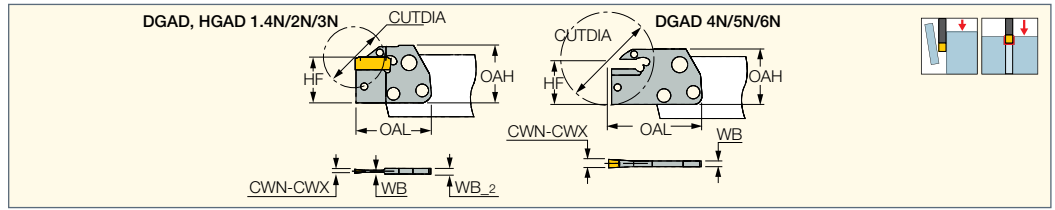
Designation	CW	WB_2	WF		
<b>HMSDV SXCN 50L-13</b>	.512	.614	.398	SR 14-591	T-20/5
<b>HMSDV SXCN 50L-14</b>	.571	.663	.427	SR 76-2067	T-15/5

• Toolholder seat needs to be modified according to insert profile to ensure clearance

**For inserts, see pages:** XNUW (384)

**DGAD/HGAD**

Parting and Grooving Adapters for DO-GRIP Double-Ended Inserts



Designation	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WB	WB_2	OAH	HF	OAL	CUTDIA	
DGAD 1.4N	.055	.055	.039	.126	1.181	.945	1.634	1.102	EDG 23B*
DGAD 2N	.075 <sup>(4)</sup>	.098	.063	.126	1.181	.945	1.634	1.260	EDG 33A*
DGAD 3N <sup>(1)</sup>	.118 <sup>(4)</sup>	.125	.094	.157	1.181	.945	1.634	1.260	EDG 33A*
HGAD 3N	.118	.118	.094	.157	1.181	.945	1.988	1.968	EDG 23B*
DGAD 4N	.157	.157	.126	-	1.181	.945	1.988	1.968	EDG 33A*
DGAD 5N	.189	.197	.157	-	1.181	.945	1.988	1.968	EDG 33A*
DGAD 6N	.236	.250	.205	-	1.181	.945	1.988	1.968	EDG 33A*

• DG..1.0 insert can be mounted into pocket sizes 2 and 3, in which case the pocket width has to be modified - see page 531

• For user guide, see pages 594-603

<sup>(1)</sup> Only the DGN/R/L inserts are suitable for this adapter

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

<sup>(4)</sup> For .039" inserts, modify adapter

\* Optional, should be ordered separately

**For inserts, see pages:** DGN-P (539) • DGN-UT/UA (539) • DGN-W (534) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536) • GRIP (277)

• GRIP (full radius) (278) • GRIPA (278) • GRIPA (full radius) (279) • HGN-C (541) • HGN-J (542) • HGN-UT (542) • HGR/L-C (541) • HGR/L-J/JS (542)

**For holders, see pages:** MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289) • C#-MAHD (679) • C#-MAHPD (680)

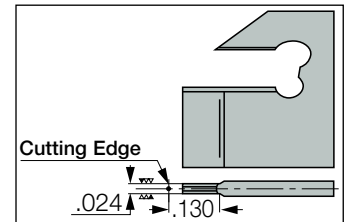
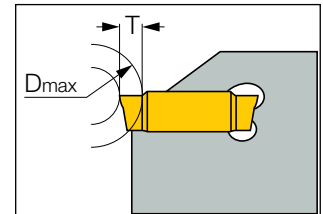
• C#-MAHDR-45 (678) • C#-MAHDOR (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687) • HSK A63WH-MAHDOR (687) • IM-MAHD (689)

• IM-MAHPD (689) • C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • HMSN-New Britain (529) • HMSDV (530) • DGHAL-DECO (Metric) (529) • HSTBS (529)

**Depth Capacity for DGN/R-1002J Insert on Standard Holders**

Depth: T	Dmax
Up to .047	No limit
.051	32.677
.055	8.583
.059	4.961
.063	3.480
.067	2.685
.071	2.189
.075	1.846
.079	1.602
.083	1.417

Depth: T	Dmax
Up to .087	1.272
.091	1.154
.094	1.051
.098	.976
.102	.913
.106	.854
.110	.807
.115	.764
.118	.724

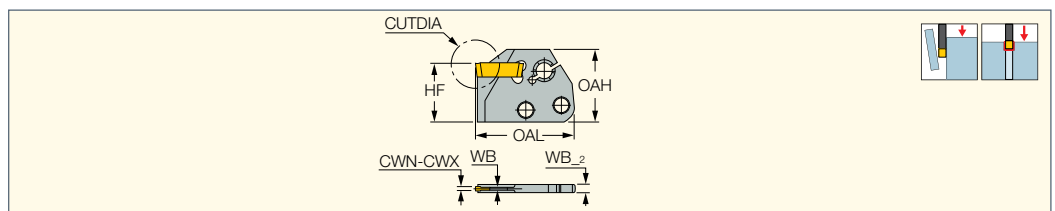


**Standard Holders Modification**

To achieve no limitation on the workpiece diameter up to .118" depth, the steel support under the insert should be ground, as per the sketch.

**DGAD-B-D**

Parting and Grooving Screw-Clamped Adapters for DO-GRIP Double-Ended Inserts



Designation	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WB	WB_2	OAL	CUTDIA	HF	OAH
DGAD 1.4B-D16	.055	.055	.039	.126	1.449	.630	.945	1.193
DGAD 1.5B-D20 <sup>(1)</sup>	.039	.059	.039	.126	1.614	.787	.945	1.193
DGAD 2B-D20	.075	.098	.063	.126	1.614	.787	.945	1.193

• Up to .118" depth, without any limitation on the diameter.

• DG..1.0 insert can also be mounted into pocket sizes 2 and 3, in which case the pocket width has to be modified-see page 531

• For user guide, see pages 594-603

<sup>(1)</sup> Do not use DG.. 1.4 on this tool!

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**For holders, see pages:** C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289)

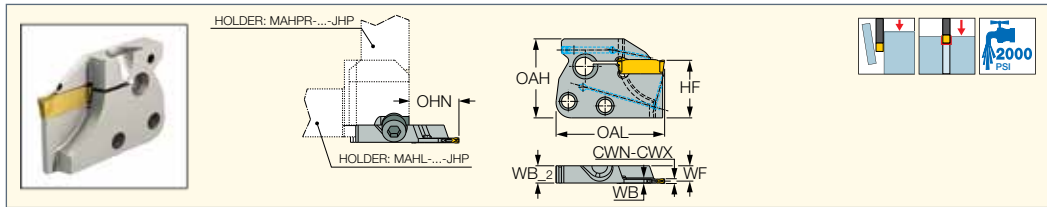
• C#-MAHD (679) • C#-MAHPD (680) • C#-MAHDR-45 (678) • C#-MAHDOR (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687)

• HSK A63WH-MAHDOR (687) • IM-MAHD (689) • IM-MAHPD (689) • HMSN-New Britain (529) • HMSDV (530) • DGHAL-DECO (Metric) (529) • HSTBS (529)

**DO-GRIP**  
TWISTED 2-SIDED **JËTCUT**  
**MODULAR-GRIP**

**DGPAD-JHP**

Adapters with High-Pressure  
Coolant Channels for DO-GRIP  
Parting and Grooving Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CUTDIA	OHN <sup>(3)</sup>	WF	WB	WB_2	OAL	OAH	HF	Insert
DGPAD 2R/L-D22-JHP	.075	.098	.866	.827	.252	.063	.283	1.791	1.299	.945	DG. 2...
DGPAD 2R/L-D32-JHP	.075	.098	1.260	.827	.252	.063	.283	1.791	1.299	.945	DG. 2...
DGPAD 3R/L-D32-JHP	.118	.125	1.260	.827	.236	.094	.283	1.791	1.299	.945	DG. 3...
DGPAD 2R/L-D42-JHP	.075	.098	1.654	.827	.248	.067	.283	1.929	1.299	.945	DG. 2...

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Minimum overhang

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)  
• DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**For holders, see pages:** DT##/2 MAHD#-#-XL-JHP (823) • MS-ES#####-GWS-MG-JHP (825)

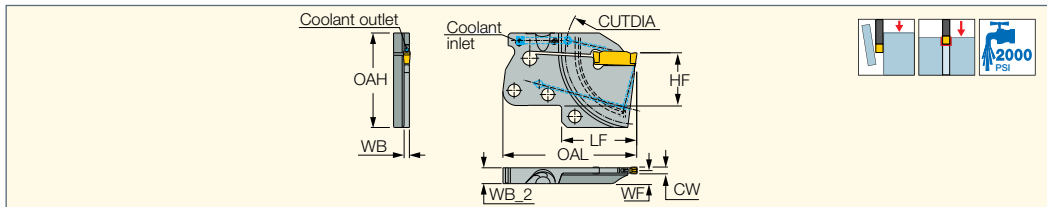
**Flow Rate vs. Pressure**

Designation	1000 PSI	1450 PSI	2000 PSI
	Flow Rate (GPM)	Flow Rate (GPM)	Flow Rate (GPM)
DGPAD 2R/L-D22-JHP	1.32	1.59	1.85
DGPAD 2R/L-D32-JHP	1.32	1.59	1.85
DGPAD 3R/L-D32-JHP	2.25	2.64	3.17

**DO-GRIP**  
TWISTED 2-SIDED **JËTCUT**

**DGPAD-XL-JHP**

Parting and Grooving Extra Long  
Adapters with Coolant Channels  
Carrying DO-GRIP Inserts



Designation	CW	CUTDIA	WF	WB	WB_2	LF	OAL	OAH	HF	Insert
DGPAD-XL 3R/L-D52-JHP	.118	2.047	.236	.094	.283	1.091	2.142	1.693	1.339	DGN 3..
DGPAD-XL 3L-D65-JHP	.118	2.559	.236	.094	.283	1.346	2.378	1.693	1.339	DGN 3..
DGPAD-XL 3R-D65-JHP	.118	2.559	.236	.094	.283	1.346	2.362	1.693	1.339	DGN 3..

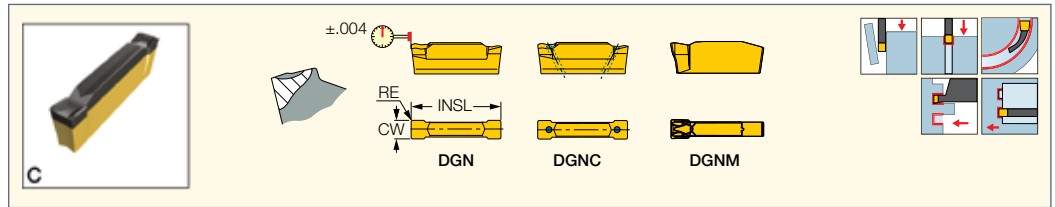
• For user guide and accessories, see pages 594-603, 489-490

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-Z (538) • DGN/DGNC/DGNM-C (533)  
• DGN/DGNM-J/JS/JT (535) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**For holders, see pages:** ABC MAHDR-#-XL-JHP (848) • MAHPR/L-XL-JHP (616) • MAHR/L-MG-XL-JHP (555) • TR TNK36 MAHDL-R-XL-JHP (847)

• TR45TNL MAHDN-R-XL-JHP (847) • V## MAHD#-#-XL-##-JHP (844)





Designation	Dimensions						Tough ↔ Hard											Recommended Machining Data					
	CW	CWTOL <sup>(3)</sup>	RE	RETOL <sup>(4)</sup>	CDX <sup>(5)</sup>	INSL	IC328	IC830	IC928	IC1030	IC1028	IC354	IC5400	IC1010	IC308	IC808	IC908		IC30N	IC20	IC807	IC907	f groove (IPR)
<b>DGN 2002C</b>	.079	.0012	.0079	.0008	.709	.783	•	•		•	•	•	•	•		•	•						.0020-.0063
<b>WGN 2002C</b>	.079	.0012	.0079	.0008	.709	.783								•									.0020-.0063
<b>DGN 2202C</b>	.087	.0012	.0079	.0008	.709	.780	•	•		•	•	•	•	•		•	•					•	.0020-.0063
<b>DGN 2502C</b>	.098	.0012	.0079	.0008	.709	.815			•	•				•									.0032-.0079
<b>DGN 3102C</b>	.122	.0016	.0079	.0008	.709	.791	•	•		•	•	•	•	•		•	•					•	.0039-.0098
<b>DGNC 3102C<sup>(1)</sup></b>	.122	.0016	.0079	.0008	.709	.827										•	•						.0039-.0098
<b>DGNM 3202C<sup>(2)</sup></b>	.125	.0016	.0079	.0008	- <sup>(6)</sup>	.803	•					•					•						.0039-.0098
<b>DGN 4003C</b>	.157	.0016	.0118	.0012	- <sup>(6)</sup>	.740	•	•		•	•	•		•	•	•	•				•		.0039-.0118
<b>DGNC 4003C<sup>(1)</sup></b>	.157	.0016	.0118	.0012	- <sup>(6)</sup>	.748										•	•						.0039-.0118
<b>DGN 4803C</b>	.189	.0016	.0118	.0012	- <sup>(6)</sup>	.783	•																.0047-.0138
<b>DGN 5003C</b>	.197	.0016	.0118	.0012	- <sup>(6)</sup>	.752	•	•		•	•	•		•	•	•	•						.0047-.0138
<b>DGN 6303C</b>	.250	.0016	.0138	.0012	- <sup>(6)</sup>	.752	•	•						•	•	•	•						.0059-.0158

• Feed values for grade IC20 should be decreased by 50% • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Inserts with coolant holes, recommended coolant pressure 145PSI minimum

<sup>(2)</sup> Single-ended insert

<sup>(3)</sup> Cutting width tolerance (+/-)

<sup>(4)</sup> Corner radius tolerance (+/-)

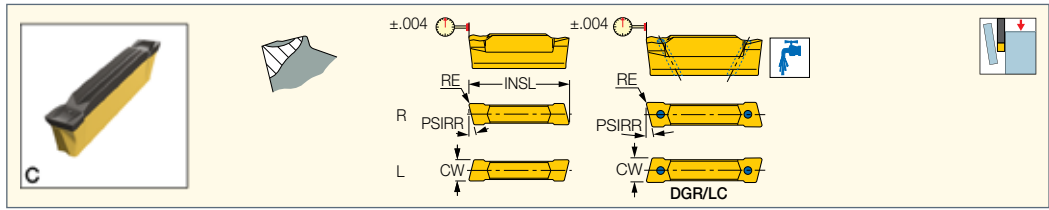
<sup>(5)</sup> Cutting depth maximum

<sup>(6)</sup> No depth limit

**For tools, see pages:** C#-HELIR/L (271) • C#-HFIR/L-MC (626) • CR HFIR-M (628) • D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (622) • DGTR/L-B/BC-D (524) • DGTR/L-BC-T (526) • HELIR/L (272) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HFFR/L-T (619) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFIR/L-MC (627) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGPAD (274) • HGPAD-JHP (274) • IM-HFIR-MC (626) • NQCH-DGTR/L-D-SH-JHP (522)



**DGR/L-C DGRC/LC-C**  
Double-Sided Inserts for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data f groove (IPR)	
	CW	RE	CDX <sup>(2)</sup>	PSIRL	PSIRR	INSL	IC328	IC830	IC1030	IC1028	IC354	IC1010	IC808	IC908		IC20
DGL 2202C-6D	.087	.0079	.709	6.0	-	.819	●		●	●	●	●		●	●	.0016-.0047
DGR 2202C-6D	.087	.0079	.709	-	6.0	.819	●	●	●	●	●	●	●	●	●	.0016-.0047
DGL 3102C-15D	.122	.0079	.709	15.0	-	.827	●	●	●	●	●	●		●	●	.0031-.0055
DGL 3102C-6D	.122	.0079	.709	6.0	-	.827	●	●	●	●	●	●	●	●	●	.0031-.0071
DGLC 3102C-6D <sup>(1)</sup>	.122	.0079	.709	6.0	-	.827							●	●		.0031-.0071
DGR 3102C-15D	.122	.0079	.709	-	15.0	.823	●	●	●	●	●	●		●	●	.0031-.0055
DGR 3102C-6D	.122	.0079	.709	-	6.0	.827	●	●	●	●	●	●	●	●	●	.0031-.0071
DGR 3102C-8D	.122	.0079	.709	-	8.0	.831	●	●	●	●						.0020-.0059
DGRC 3102C-6D <sup>(1)</sup>	.122	.0079	.709	-	6.0	.823							●	●		.0031-.0071
DGL 4003C-4D	.157	.0118	- <sup>(3)</sup>	4.0	-	.744	●		●	●	●			●	●	.0031-.0079
DGLC 4003C-4D <sup>(1)</sup>	.157	.0118	- <sup>(3)</sup>	4.0	-	.748							●			.0031-.0079
DGR 4003C-4D	.157	.0118	- <sup>(3)</sup>	-	4.0	.740	●	●		●	●	●		●	●	.0031-.0079
DGRC 4003C-4D <sup>(1)</sup>	.157	.0118	- <sup>(3)</sup>	-	4.0	.748							●	●		.0031-.0079
DGR 4800CS-4D	.189	.0008	- <sup>(3)</sup>	-	4.0	.776	●									.0020-.0059
DGR 4800CS-8D	.189	.0008	- <sup>(3)</sup>	-	8.0	.776	●									.0020-.0059
DGR 4803C-4D	.189	.0118	- <sup>(3)</sup>	-	4.0	.799	●									.0039-.0098
DGR 4803C-8D	.189	.0118	- <sup>(3)</sup>	-	8.0	.799	●									.0039-.0079
DGL 5003C-4D	.197	.0118	- <sup>(3)</sup>	4.0	-	.752	●			●					●	.0039-.0098
DGR 5003C-4D	.197	.0118	- <sup>(3)</sup>	-	4.0	.756	●			●					●	.0039-.0098
DGL 6303C-4D	.250	.0138	- <sup>(3)</sup>	4.0	-	.752	●			●					●	.0047-.0118
DGR 6303C-4D	.250	.0138	- <sup>(3)</sup>	-	4.0	.752	●			●					●	.0047-.0118

• Feed values for grade IC20 should be decreased by 50% • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Inserts with coolant holes, recommended coolant pressure 145 PSI minimum

<sup>(2)</sup> Cutting depth maximum

<sup>(3)</sup> No depth limit

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527)

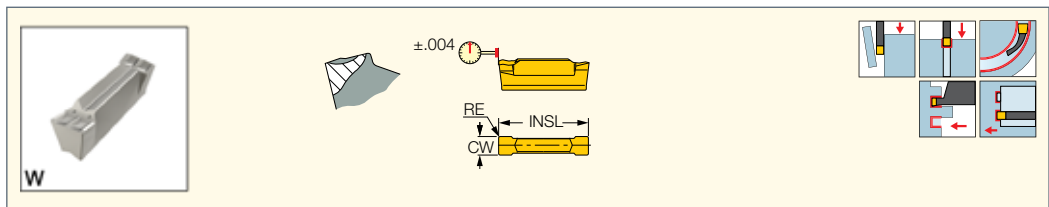
• DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521)

• DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (632) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522)

• DGTR/L-B/BC-D (524) • DGTR/L-BC-T (526) • HELIR/L (272) • NQCH-DGTR/L-D-SH-JHP (522)



**DGN-W**  
Double-Sided Inserts with Central Ridged Chipformer for Parting and Grooving Hard Materials and Interrupted Cuts



Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data f groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL	IC328	IC1030	IC354	
DGN 5003W	.197	.0118	.0016	.0012	.748	●	●	●	.0047-.0130

• No depth limit • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

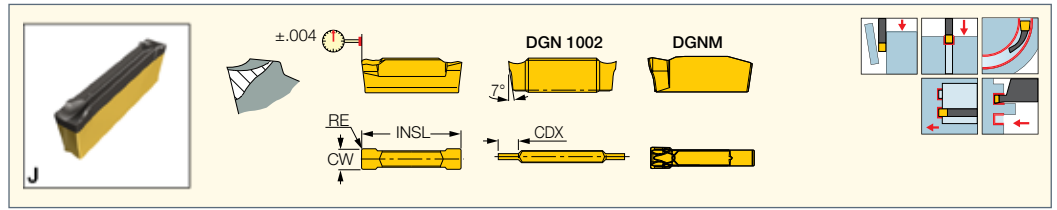
<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** C#-HELIR/L (271) • C#-HFIR/L-MC (626) • CR HFIR-M (628) • DGAD/HGAD (531) • DGAQ (571) • DGAQ-JHP (571)

• DGFH (275) • DGFH-JHP (276) • DGTR/L (525) • HELIR/L (272) • HFAER/L-5T, 6T (622) • HFAIR/L-DG (625) • HFFR/L-T (619) • HFHR/L-5T (615)

• HFIR/L-MC (627) • HFPAD-5 (618) • HFPAD-JHP (617) • HGPAD (274) • HGPAD-JHP (274) • IM-HFIR-MC (626) • NQCH-DGTR/L-D-SH-JHP (522)

**DGN/DGNM-J/JS/JT**  
Double-Sided Inserts for Parting and Grooving Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts



Designation	Dimensions						Tough ↔ Hard											Recommended Machining Data				
	CW	CWTOL <sup>(3)</sup>	RE	RETOL <sup>(4)</sup>	CDX <sup>(5)</sup>	INSL	IC328	IC830	IC928	IC1030	IC1028	IC354	IC5400	IC1010	IC308	IC808	IC908		IC20	IC807	IC907	f groove (IPR)
DGN 1002J	.039	.00078	.0063	.0008	.118	.827	●				●	●			●							.0008-.0027
DGN 1402J	.055	.00118	.0063	.0008	.591	.622	●	●			●	●	●		●	●	●					.0012-.0047
DGN 1502J	.059	.00118	.0063	.0008	.709	.823	●				●	●			●		●					.0012-.0047
DGN 2002J	.079	.00078	.0079	.0008	.709	.780									●							.0016-.0047
DGN 2002JT	.079	.00118	.0079	.0008	.709	.780										●						.0016-.0055
DGN 2200JS <sup>(1)</sup>	.087	.00118	.0008	.0008	.709	.748	●	●			●				●							.0012-.0031
DGN 2202J	.087	.00118	.0079	.0008	.709	.780	●	●			●	●	●	●	●	●	●	●	●	●		.0016-.0047
DGN 2202JT	.087	.00118	.0079	.0008	.709	.780		●					●		●							.0016-.0055
DGN 3100JS <sup>(1)</sup>	.122	.00157	.0008	.0008	.709	.776	●				●				●							.0012-.0039
DGN 3102J	.122	.00157	.0079	.0008	.709	.791	●	●			●	●	●	●	●	●	●	●	●	●	●	.0016-.0063
DGN 3102JT	.122	.00157	.0079	.0008	.709	.791		●					●		●						●	.0020-.0071
DGN 3202J	.125	.00157	.0079	.0008	.709	.791											●					.0016-.0063
DGNM 3202J <sup>(2)</sup>	.125	.00157	.0079	.0008	- <sup>(6)</sup>	.799	●				●			●			●					.0016-.0063
DGN 4003J	.157	.00157	.0118	.0012	- <sup>(6)</sup>	.744	●	●			●	●		●	●	●	●	●	●	●		.0020-.0071
DGN 4003JT	.157	.00157	.0118	.0012	- <sup>(6)</sup>	.744		●														.0020-.0071
DGN 4803J	.189	.00157	.0118	.0012	- <sup>(6)</sup>	.803	●															.0020-.0079
DGN 5003J	.197	.00157	.0118	.0012	- <sup>(6)</sup>	.748	●	●			●	●		●	●	●	●	●	●	●		.0020-.0079
DGN 5003JT	.197	.00157	.0118	.0012	- <sup>(6)</sup>	.748			●													.0020-.0079
DGN 6303J	.250	.00157	.0138	.0012	- <sup>(6)</sup>	.752	●	●			●	●		●	●	●	●	●	●	●		.0020-.0098
DGN 6303JT	.250	.00157	.0138	.0012	- <sup>(6)</sup>	.752			●													.0020-.0098

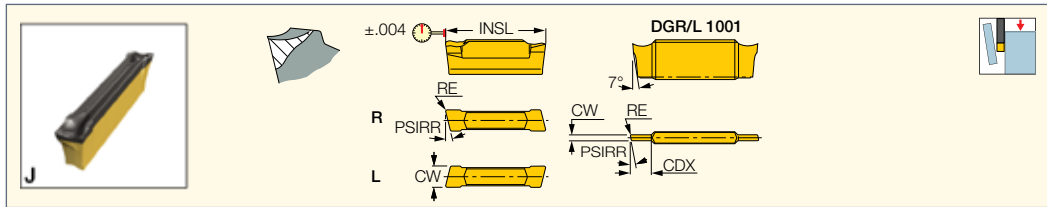
- JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge; most suitable for soft materials at low to medium feeds
- For cutting speed recommendations and user guide, see pages 594-603

- (1) Sharp corners
- (2) Single-ended insert
- (3) Cutting width tolerance (+/-)
- (4) Corner radius tolerance (+/-)
- (5) Cutting depth maximum
- (6) No depth limit

**For tools, see pages:** C#-HELIR/L (271) • C#-HFIR/L-MC (626) • CR HFIR-M (628) • D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (628) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522) • DGTR/L-B-D-TR (526) • DGTR/L-B-T-SH (525) • DGTR/L-B/BC-D (524) • DGTR/L-BC-T (526) • HELIR/L (272) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HFFR/L-T (619) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFIR/L-MC (627) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGPAD (274) • HGPAD-JHP (274) • IM-HFIR-MC (626) • NQCH-DGTR/L-D-SH-JHP (522)

**DGR/L-J/JS**

Double-Sided Inserts for Parting Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts



Designation	Dimensions						Tough ↔ Hard										Recommended Machining Data f groove (IPR)	
	CW	RE	CDX <sup>(2)</sup>	INSL	PSIRL	PSIRR	IC328	IC880	IC1030	IC1028	IC354	IC1010	IC308	IC808	IC908	IC20		
DGL 1001J-8D	.039	.0027	.118	.827	-	8.0												.0008-.0024
DGR 1001J-8D	.039	.0027	.118	.827	-	8.0	●			●		●			●			.0008-.0024
DGL 1400JS-15D <sup>(1)</sup>	.055	.0008	.551	.606	15.0	-	●		●									.0012-.0027
DGR 1400JS-15D <sup>(1)</sup>	.055	.0008	.551	.606	15.0	-	●	●		●		●			●			.0012-.0027
DGL 1402J-8D	.055	.0063	.551	.622	-	8.0	●			●								.0012-.0031
DGR 1402J-8D	.055	.0063	.551	.622	-	8.0	●	●	●	●			●			●		.0012-.0031
DGR 1500J-8D	.059	.0020	.709	.823	8.0	-	●	●	●	●		●	●					.0012-.0031
DGL 2200JS-15D <sup>(1)</sup>	.087	.0008	.709	.811	15.0	-	●		●	●	●		●			●		.0012-.0027
DGL 2200JS-6D <sup>(1)</sup>	.087	.0008	.709	.811	6.0	-	●						●			●		.0012-.0031
DGR 2200JS-15D <sup>(1)</sup>	.087	.0008	.709	.811	15.0	-	●		●	●	●		●		●	●		.0012-.0027
DGR 2200JS-6D <sup>(1)</sup>	.087	.0008	.709	.811	6.0	-	●	●	●	●	●	●			●			.0012-.0031
DGL 2202J-6D	.087	.0079	.709	.827	6.0	-	●		●	●	●	●				●	●	.0012-.0039
DGR 2202J-15D	.087	.0079	.709	.827	15.0	-	●	●	●	●								.0012-.0031
DGR 2202J-6D	.087	.0079	.709	.827	-	6.0	●	●	●	●	●				●	●		.0012-.0039
DGL 3100JS-15D <sup>(1)</sup>	.122	.0008	.709	.811	-	15.0	●			●	●		●		●			.0012-.0027
DGL 3100JS-6D <sup>(1)</sup>	.122	.0008	.709	.811	6.0	-	●			●			●		●			.0012-.0031
DGR 3100JS-15D <sup>(1)</sup>	.122	.0008	.709	.811	-	15.0	●	●	●	●	●	●			●			.0012-.0027
DGR 3100JS-6D <sup>(1)</sup>	.122	.0008	.709	.811	6.0	-	●	●	●	●	●	●			●			.0012-.0031
DGL 3102J-15D	.122	.0079	.709	.827	15.0	-	●		●	●								.0016-.0039
DGL 3102J-6D	.122	.0079	.709	.827	6.0	-	●	●	●	●	●				●	●		.0016-.0055
DGR 3102J-15D	.122	.0079	.709	.827	-	15.0	●		●	●	●	●			●			.0016-.0039
DGR 3102J-6D	.122	.0079	.709	.827	6.0	-	●	●	●	●	●			●	●	●		.0016-.0055
DGR 4000JS-15D <sup>(1)</sup>	.157	.0000	- <sup>(3)</sup>	.760	15.0	-	●		●									.0016-.0039
DGL 4003J-4D	.157	.0118	- <sup>(3)</sup>	.744	-	4.0	●		●	●	●				●	●		.0016-.0059
DGR 4003J-4D	.157	.0118	- <sup>(3)</sup>	.744	4.0	-	●	●		●	●			●	●	●		.0016-.0059
DGR 4800JS-4D <sup>(1)</sup>	.189	.0012	- <sup>(3)</sup>	.780	-	4.0	●											.0016-.0047
DGR 4800JS-8D <sup>(1)</sup>	.189	.0012	- <sup>(3)</sup>	.780	-	8.0	●											.0016-.0055
DGR 4803J-4D	.189	.0118	- <sup>(3)</sup>	.780	-	4.0	●											.0016-.0071
DGR 4803J-8D	.189	.0118	- <sup>(3)</sup>	.780	-	8.0	●											.0016-.0059
DGL 5003J-4D	.197	.0118	- <sup>(3)</sup>	.780	-	4.0	●			●								.0020-.0079
DGR 5003J-4D	.197	.0118	- <sup>(3)</sup>	.780	4.0	-	●		●	●						●		.0020-.0079
DGL 6303J-4D	.250	.0138	- <sup>(3)</sup>	.752	-	4.0	●			●								.0020-.0098
DGR 6303J-4D	.250	.0138	- <sup>(3)</sup>	.752	-	4.0	●											.0020-.0098

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Sharp corners

<sup>(2)</sup> Cutting depth maximum

<sup>(3)</sup> No depth limit.

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527)

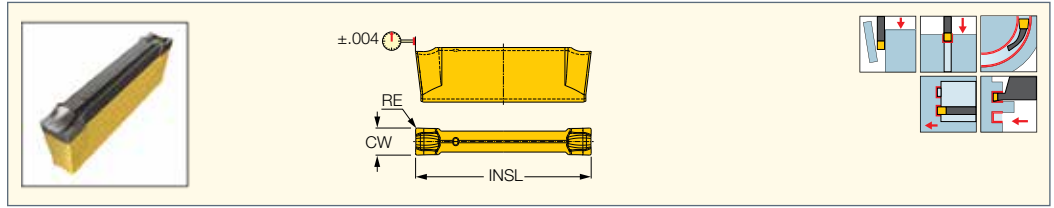
• DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D-(R/L) (521)

• DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522)

• DGTR/L-B-D-TR (526) • DGTR/L-B-T-SH (525) • DGTR/L-B/BC-D (524) • DGTR/L-BC-T (526) • HELIR/L (272) • NQCH-DGTR/L-D-SH-JHP (522)

**DGN-LF/LFT**

Double-Sided Inserts for Parting and Grooving Stainless Steel



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data f groove (IPR)	
	CW	CWTOL <sup>(1)</sup>	RE	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	INSL	IC830	IC928	IC1030	IC5400	IC1010	IC808		IC908
<b>DGN 2002LF</b>	.079	.0012	.0079	.0008	.709	.780	•				•	•	•	.0012-.0031
<b>DGN 2202LF</b>	.087	.0012	.0079	.0008	.709	.780		•	•	•	•	•	•	.0012-.0031
<b>DGN 2502LF</b>	.098	.0012	.0079	.0008	.709	.780			•	•	•	•	•	.0012-.0031
<b>DGN 3102LF</b>	.122	.0016	.0079	.0008	.709	.791	•	•	•	•	•	•	•	.0016-.0039
<b>DGN 3102LFT</b>	.122	.0016	.0079	.0008	.709	.831		•				•	•	.0016-.0047

• The LFT chipformer features basically the same design as the LF chipformer, except that it is reinforced by a T-land to improve its durability in interrupted-cut or on hard materials applications. It can be applied at higher feeds than the LF chipformer

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

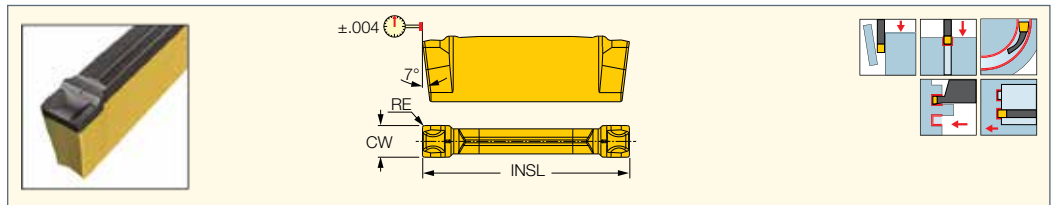
**For tools, see pages:** DGAD-B-D (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275)

• DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532)

• DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522) • DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)

**DGN-MF**

Double-Sided Inserts for Parting and Grooving Soft and Hard Materials at Medium Feeds



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data f groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	CDX <sup>(2)</sup>	INSL	IC830	IC1030	IC5400	IC1010	IC808	
<b>DGN 2002MF</b>	.079	.0079	.0016	.709	.783	•	•	•	•	•	.0016-.0047
<b>DGN 2202MF</b>	.087	.0079	.0016	.709	.783		•		•		.0016-.0047
<b>DGN 3002MF</b>	.118	.0079	.0016	.709	.791			•			.0024-.0071
<b>DGN 3102MF</b>	.122	.0079	.0016	.709	.791	•	•	•	•	•	.0024-.0071
<b>DGN 4003MF</b>	.157	.0118	.0016	-	.740	•				•	.0032-.0079

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

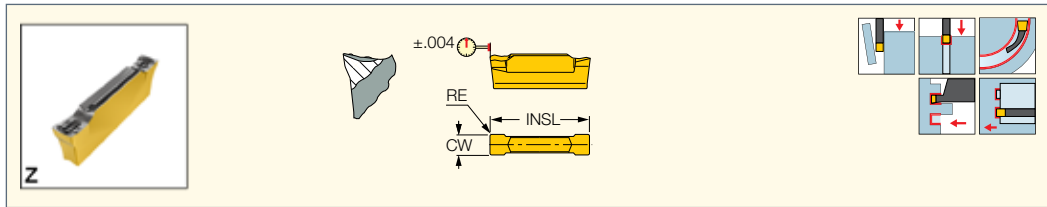
<sup>(2)</sup> Cutting depth maximum

**For tools, see pages:** C#-HELIR/L (271) • C#-HFIR/L-MC (626) • CR HFIR-M (628) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275)

• DGFH-JHP (276) • DGFHR/L-B-D..(R/L) (521) • DGFHR/L-BC-JHP (519) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525)

• DGTR/L-B-D-JHP-SL (523) • HELIR/L (272) • HFAER/L-4 (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HFFR/L-T (619) • HFHR/L-4T (615)

• HFIR/L-MC (627) • HFPAD-4 (618) • HFPAD-JHP (617) • HGPAD (274) • HGPAD-JHP (274) • IM-HFIR-MC (626) • NQCH-DGTR/L-D-SH-JHP (522)

**DOGRIP**  
TWISTED 2-SIDED**DGN-Z**Double-Sided Inserts for Parting  
Tubes, Thin-Walled  
and Small Parts

Designation	Dimensions						Tough ↔ Hard				Recommended Machining Data
	CW	CDX <sup>(1)</sup>	CWTOL <sup>(2)</sup>	RE	RETOL <sup>(3)</sup>	INSL	IC1030	IC1010	IC808	IC908	
<b>DGN 2002Z</b>	.079	.709	.0012	.0079	.0008	.823	●	●	●	●	.0012-.0047
<b>DGN 3002Z</b>	.118	.709	.0012	.0079	.0008	.823			●	●	.0012-.0063

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting depth maximum

<sup>(2)</sup> Cutting width tolerance (+/-)

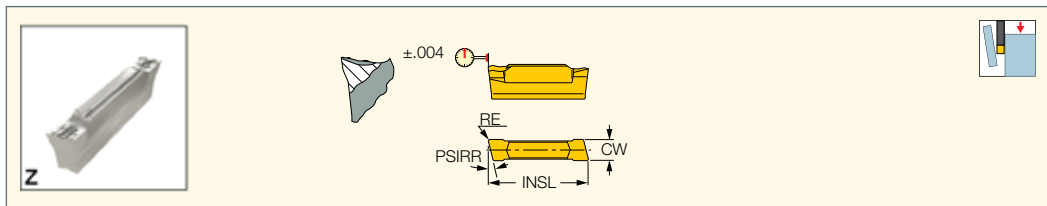
<sup>(3)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528)

• DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521)

• DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522)

• DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)

**DOGRIP**  
TWISTED 2-SIDED**DGR-Z/ZS**Double-Sided Inserts with Very  
Positive Rake for Parting Tubes,  
Thin-Walled and Small Parts

Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	INSL	CDX <sup>(2)</sup>	PSIRR	f groove (IPR)		
<b>DGR 2000ZS-15D</b> <sup>(1)</sup>	.079	.0008	.803	.709	15.0	●	.0012-.0027	
<b>DGR 2000ZS-6D</b> <sup>(1)</sup>	.079	.0008	.803	.709	6.0	●	.0012-.0031	
<b>DGR 2002Z-15D</b>	.079	.0079	.823	.709	15.0	●	.0012-.0039	
<b>DGR 2002Z-6D</b>	.079	.0079	.823	.709	6.0	●	.0012-.0039	
<b>DGR 3000ZS-15D</b> <sup>(1)</sup>	.118	.0008	.803	.709	15.0	●	.0012-.0039	
<b>DGR 3000ZS-6D</b> <sup>(1)</sup>	.118	.0008	.803	.709	6.0	●	.0012-.0047	
<b>DGR 3002Z-6D</b>	.118	.0079	.823	.709	6.0	●	.0012-.0055	

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Sharp corners

<sup>(2)</sup> Cutting depth maximum

**For tools, see pages:** D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528)

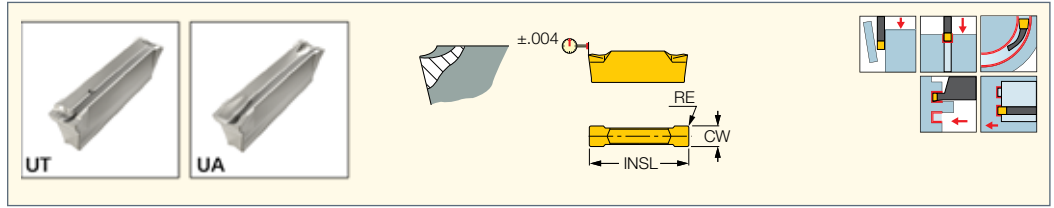
• DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521)

• DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522)

• DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)

**DGN-UT/UA**

Double-Sided Inserts for Parting and Grooving Cr-Ni Alloys, Low Carbon Steel and Ductile Materials at Low Feeds



Designation	Dimensions						Tough ↔ Hard										Recommended Machining Data
	CW	CWTOL <sup>(1)</sup>	RE	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	INSL	IC328	IC1030	IC1028	IC354	IC350	IC1010	IC308	IC908	IC20	f groove (IPR)	
DGN 2202UA	.087	.0012	.0079	.0008	.709	.783	●		●	●						.0016-.0051	
DGN 2202UT	.087	.0012	.0079	.0008	.709	.772					●			●		.0012-.0043	
DGN 3003UA	.118	.0012	.0098	.0008	.709	.807	●	●	●			●			●	.0016-.0059	
DGN 3003UT	.118	.0012	.0098	.0008	.709	.807							●	●		.0016-.0051	
DGN 4003UA	.157	.0016	.0118	.0008	- <sup>(4)</sup>	.764	●			●						.0020-.0063	
DGN 4003UT	.157	.0016	.0118	.0008	- <sup>(4)</sup>	.760	●			●				●		.0016-.0059	
DGN 5003UT	.197	.0016	.0118	.0008	- <sup>(4)</sup>	.748	●		●				●	●		.0020-.0071	
DGN 6008UT	.236	.0016	.0315	.0020	- <sup>(4)</sup>	.752	●			●			●	●		.0024-.0079	

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

<sup>(4)</sup> No depth limit

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527)

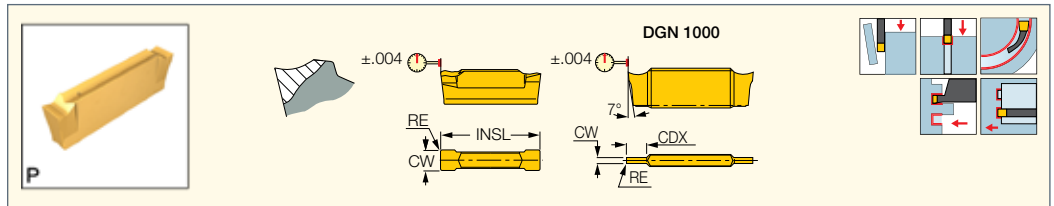
• DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521)

• DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522)

• DGTR/L-B/BC-D (524) • DGTR/L-BC-T (526) • HELIR/L (272) • HGPAD (274) • HGPAD-JHP (274) • NQCH-DGTR/L-D-SH-JHP (522)

**DGN-P**

Double-Sided Inserts for Parting and Grooving Soft Materials, Thin and Miniature Parts



Designation	Dimensions						IC508	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL	CDX <sup>(3)</sup>		
DGN 1000P	.039	.0020	.0008	.0008	.787	.118	●	.0008-.0020
DGN 1500P	.059	.0020	.0008	.0008	.787	.709	●	.0008-.0027
DGN 2000P	.079	.0020	.0008	.0008	.787	.709	●	.0008-.0031
DGN 3000P	.118	.0020	.0008	.0008	.787	.709	●	.0008-.0039

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

**For tools, see pages:** D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528)

• DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521)

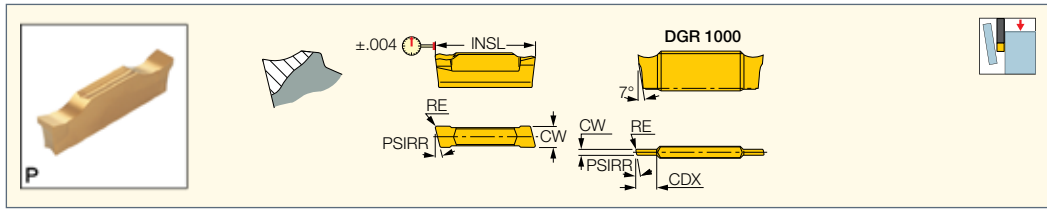
• DGFHR/L-BC-JHP (519) • DGFS (520) • DGPAD-JHP (532) • DGPAD-XL-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522)

• DGTR/L-B-D-TR (526) • DGTR/L-B-T-SH (525) • DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)

**DO-GRIP**  
 TWISTED 2-SIDED

**DGR-P**

Double-Sided Inserts for Parting Soft Materials, Thin and Miniature Parts



Designation	Dimensions						IC508	Recommended Machining Data
	CW	RE	INSL	CDX <sup>(1)</sup>	PSIRR	f groove (IPR)		
DGR 1000P-15D	.039	.0020	.811	.114	15.0	●	.0008-.0012	
DGR 1000P-6D	.039	.0020	.811	.114	6.0	●	.0008-.0016	
DGR 1500P-15D	.059	.0020	.811	.709	15.0	●	.0008-.0016	
DGR 1500P-6D	.059	.0020	.811	.709	6.0	●	.0008-.0020	
DGR 2000P-15D	.079	.0020	.811	.709	15.0	●	.0008-.0020	
DGR 2000P-6D	.079	.0020	.811	.709	6.0	●	.0008-.0027	

• For cutting speed recommendations and user guide, see pages 594-603

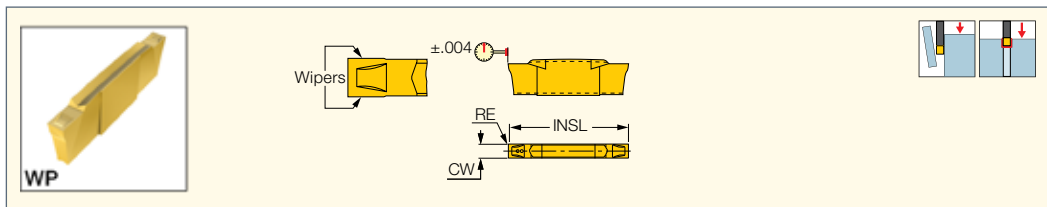
<sup>(1)</sup> Cutting depth maximum

**For tools, see pages:** D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • DGFS (520) • DGPAD-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522) • DGTR/L-B-D-TR (526) • DGTR/L-B-T-SH (525) • DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)

**DO-GRIP**  
 TWISTED 2-SIDED

**DGN-WP**

Double-Sided Parting and Grooving Inserts with a Wiper Design for High Flatness and Surface Finish



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	INSL	IC328	IC1030	
DGN 1900WP	.075	.0020	.0008	.0008	.236	.776	●	●	.0016-.0047
DGN 2400WP	.094	.0020	.0008	.0008	.236	.803	●	●	.0020-.0055

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

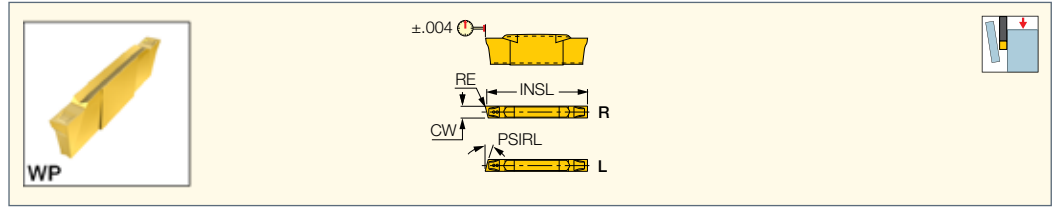
<sup>(3)</sup> Cutting depth maximum

**For tools, see pages:** D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHL-26B-TR-D (521) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • DGFS (520) • DGPAD-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522) • DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)





**DGR-WP**  
Double-Sided Parting Inserts with a Wiper Design for High Flatness and Surface Finish



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data  f groove (IPR)
	CW	RE	CDX <sup>(1)</sup>	INSL	PSIRR	IC328	IC1030	
<b>DGR 1900WP-12D</b>	.075	.0020	.236	.776	12.0	●	●	.0016-.0039
<b>DGR 1900WP-5D</b>	.075	.0020	.236	.776	5.0	●	●	.0016-.0039
<b>DGR 2400WP-12D</b>	.094	.0020	.236	.803	12.0	●	●	.0016-.0039
<b>DGR 2400WP-5D</b>	.094	.0020	.236	.803	5.0	●	●	.0016-.0047

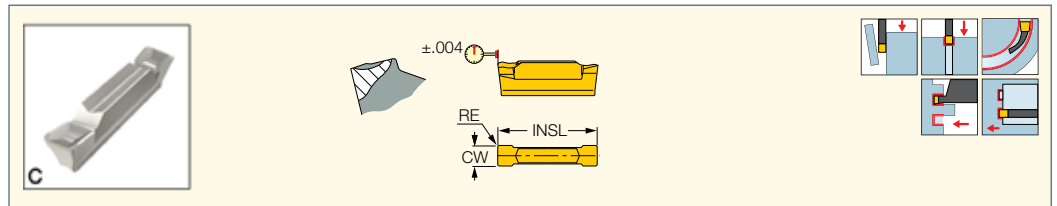
• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting depth maximum

**For tools, see pages:** D/HGAD RE/LE-JHP (553) • DGAD-B-D (531) • DGAD/HGAD (531) • DGAM (528) • DGAMM (527) • DGAMR/L (528) • DGAQ (571) • DGAQ-JHP (571) • DGFH (275) • DGFH-JHP (276) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • DGFS (520) • DGPAD-JHP (532) • DGTR/L (525) • DGTR/L-B-D-JHP-SL (523) • DGTR/L-B-D-SH (522) • DGTR/L-B/BC-D (524) • NQCH-DGTR/L-D-SH-JHP (522)



**HGN-C**  
Parting and Grooving Inserts for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data  f groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	INSL	IC328	IC830	IC354	IC308	IC908	
<b>HGN 3003C</b>	.118	.0118	.0020	.622	●	●	●	●	●	.0031-.0079

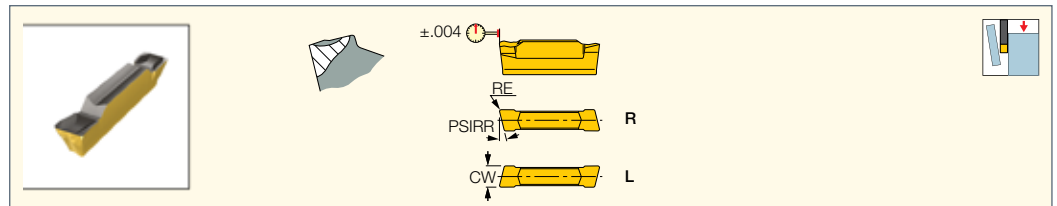
• No depth limit • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • HELIR/L (272) • HFPAD-3 (617) • HFPAD-JHP (617) • HGAIR/L-3 (624) • HGFH (274) • HGHR/L-3 (614) • HGPAD (274) • HGPAD-JHP (274)



**HGR/L-C**  
Inserts for Parting Bars, Hard Materials and Tough Applications



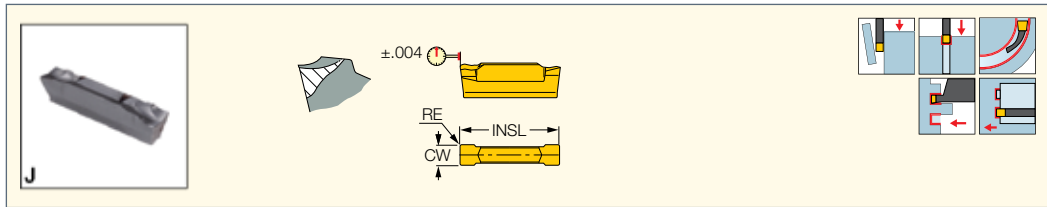
Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data  f groove (IPR)
	CW	RE	INSL	PSIRL	PSIRR	IC328	IC830	
<b>HGL 3003C-6D</b>	.118	.0118	.614	6.0	-	●	●	.0024-.0063
<b>HGR 3003C-6D</b>	.118	.0118	.614	-	6.0	●	●	.0024-.0063

• No depth limit • For cutting speed recommendations and user guide, see pages 594-603

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • HELIR/L (272) • HGFH (274) • HGPAD (274) • HGPAD-JHP (274)

**DOGRIP**  
TWISTED 2-SIDED**HGN-J**

Inserts for Parting and Grooving Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts



Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL	IC328	IC830	IC354	IC308	
<b>HGN 3002J</b>	.118	.0079	.0020	.0012	.634	●	●	●	●	f groove (IPR) .0016-.0059

• No depth limit • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

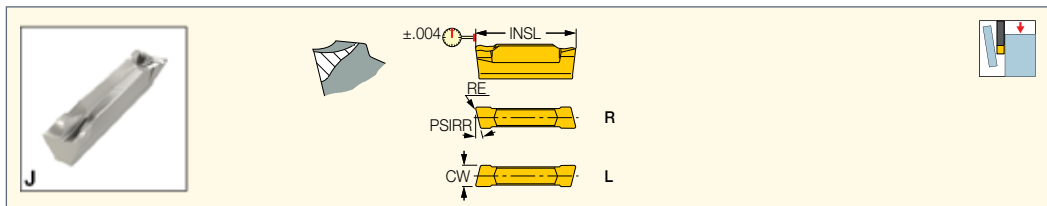
<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • HELIR/L (272) • HFPAD-3 (617) • HFPAD-JHP (617)

• HGAIR/L-3 (624) • HGFH (274) • HGHR/L-3 (614) • HGPAD (274) • HGPAD-JHP (274)

**DOGRIP**  
TWISTED 2-SIDED**HGR/L-J/JS**

Double-Sided Inserts for Parting Soft Materials, Tubes, Small Diameters and Thin-Walled Parts



Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data
	CW	RE	PSIRL	PSIRR	INSL	IC328	IC830	IC354	
<b>HGL 3000JS-15D<sup>(1)</sup></b>	.118	.0008	15.0	-	.598	●			f groove (IPR) .0012-.0027
<b>HGR 3000JS-15D<sup>(1)</sup></b>	.118	.0008	-	15.0	.598	●			.0012-.0027
<b>HGL 3002J-6D</b>	.118	.0079	6.0	-	.618	●			.0016-.0047
<b>HGR 3002J-6D</b>	.118	.0079	-	6.0	.618	●	●	●	.0016-.0047

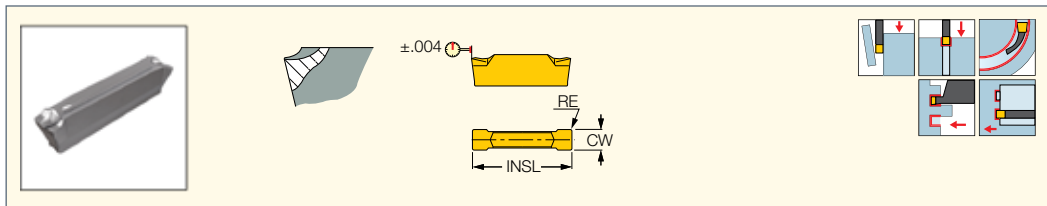
• No depth limit • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Sharp corners

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • HELIR/L (272) • HGFH (274) • HGPAD (274) • HGPAD-JHP (274)

**DOGRIP**  
TWISTED 2-SIDED**HGN-UT**

Double-Sided Inserts for Parting and Grooving Low Feeds on Cr-Ni Alloys and Low Carbon Steel



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL	IC328	IC354	
<b>HGN 3003UT</b>	.118	.0118	.0020	.0012	.622	●	●	f groove (IPR) .0016-.0051

• No depth limit • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

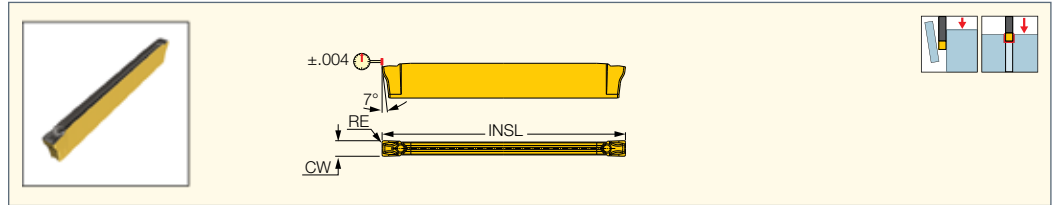
<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** C#-HELIR/L (271) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • HELIR/L (272) • HFPAD-3 (617) • HFPAD-JHP (617)

• HGAIR/L-3 (624) • HGFH (274) • HGHR/L-3 (614) • HGPAD (274) • HGPAD-JHP (274)

**DOGRIPXL****DGN-C-XL**

Extra Long Parting and Grooving Inserts for Parting Bars Up to 2.56" Diameters, Hard Materials and Tough Applications



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	INSL	IC830	IC5400	IC808	
<b>DGN 2002C-XL</b>	.081	.0079	.0016	.0012	1.181	1.260	●	●	●	f groove (IPR) .0020-.0063
<b>DGN 3002C-XL</b>	.118	.0079	.0016	.0012	1.280	1.378	●	●	●	.0027-.0079

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

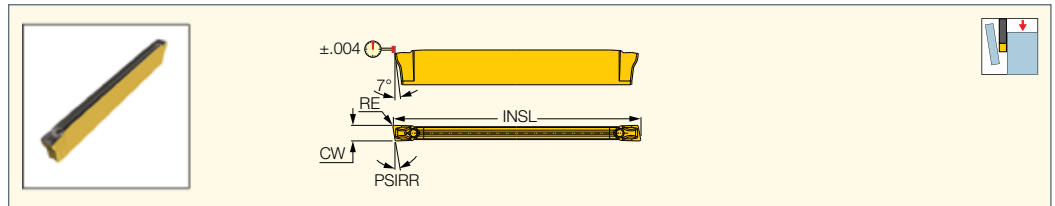
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

**For tools, see pages:** DGTR/L-XL (527)

**DOGRIPXL****DGR/L-C-XL**

Extra Long Double-Sided Inserts for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data
	CW	RE	CDX <sup>(1)</sup>	PSIRL	PSIRR	INSL	IC830	IC808	
<b>DGL 2002C-6D-XL</b>	.079	.0080	1.181	6.0	-	1.260	●	●	f groove (IPR) .0020-.0047
<b>DGR 2002C-6D-XL</b>	.079	.0080	1.181	-	6.0	1.260	●	●	.0020-.0047
<b>DGL 3002C-6D-XL</b>	.118	.0080	1.280	6.0	-	1.380	●	●	.0031-.0071
<b>DGR 3002C-6D-XL</b>	.118	.0080	1.280	-	6.0	1.380	●	●	.0031-.0071

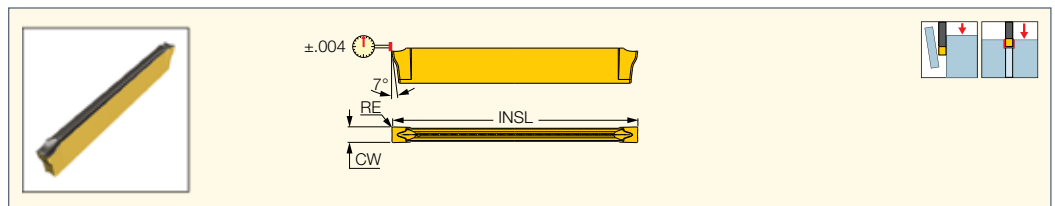
• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting depth maximum

**For tools, see pages:** DGTR/L-XL (527)

**DOGRIPXL****DGN-J-XL**

Extra Long Inserts for Parting and Grooving Soft Materials, Parting Tubes, Small Diameters and Thin-Walled Parts



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	INSL	IC830	IC5400	IC808	
<b>DGN 2002J-XL</b>	.081	.0079	.0016	.0012	1.181	1.260	●	●	●	f groove (IPR) .0016-.0055
<b>DGN 3002J-XL</b>	.118	.0079	.0016	.0012	1.280	1.378	●	●	●	.0016-.0063

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

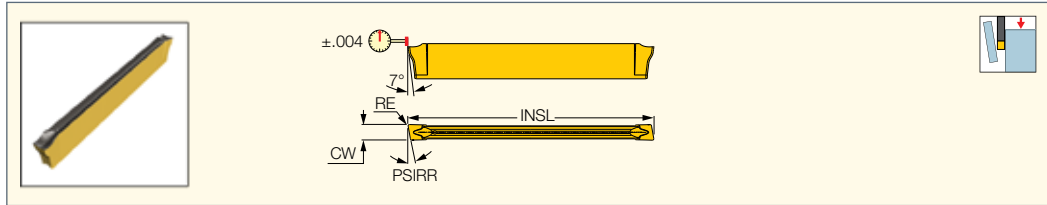
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

**For tools, see pages:** DGTR/L-XL (527)

**DOGRIPXL****DGR/L-J-XL**

Extra Long Double-Sided Inserts  
for Parting Soft Materials,  
Tubes, Small Diameters  
and Thin-Walled Parts



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data
	CW	RE	CDX <sup>(1)</sup>	PSIRL	PSIRR	INSL	IC830	IC808	
DGL 2002J-6D-XL	.079	.0079	1.181	6.0	-	1.260	●	●	f groove (IPR) .0016-.0039
DGR 2002J-6D-XL	.079	.0079	1.181	-	6.0	1.260	●	●	.0016-.0039
DGL 3002J-6D-XL	.118	.0079	1.280	6.0	-	1.378	●	●	.0016-.0055
DGR 3002J-6D-XL	.118	.0079	1.280	-	6.0	1.378	●	●	.0016-.0055

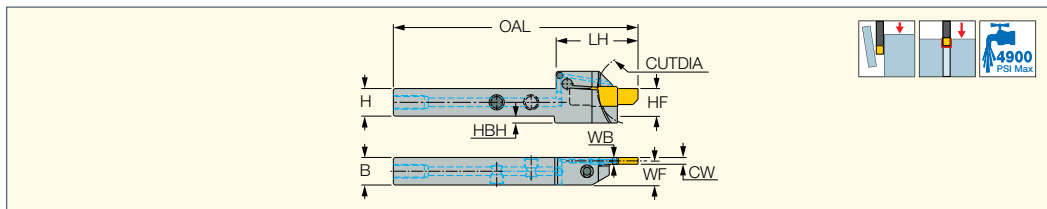
• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting depth maximum

For tools, see pages: DGTR/L-XL (527)

**ISCARPARTING****JETCUT****BGTR/L-B-JHP**

Integral Shank Parting and  
Grooving Tools with Coolant  
Channels Carrying Narrow Inserts  
for Parting up to .787" Bars



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	HF	B	WB	OAL	LH	D max <sup>(3)</sup>	WF	HBH
BGTR/L 16B-D20-JHP	.031	.059	.630	.630	.630	.157	5.591	1.870	1.575 <sup>(4)</sup>	.551	.157
BGTR/L 19B-D20-JHP	.031	.059	.750	.750	.750	.157	5.591	1.870	1.570 <sup>(4)</sup>	.671	.080
BGTR/L 25.4B-D20-JHP	.031	.059	1.000	1.000	1.000	.157	5.591	1.870	1.570 <sup>(4)</sup>	.921	-

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width





<sup>(3)</sup> The specified limit refers to the tool

<sup>(4)</sup> for grooving

For inserts, see pages: BGM N-J (545) • BGM R/L-J (545)

For holders, see pages: AVC-D80-VH (96) • DT30/2 ASH# 16/20-1-35080 (824)

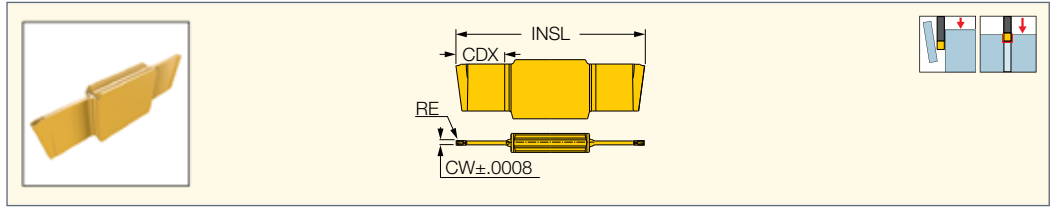
**Spare Parts**

Designation				
BGTR/L 16B-D20-JHP	SR M5X16 DIN912		SR 5/16UNF TL360	HW 4.0
BGTR/L 19B-D20-JHP	SR M5X16 DIN912	HW 3.0	PLG G1/8 TL360	HW 5.0
BGTR/L 25.4B-D20-JHP	SR M5X16 DIN912	HW 3.0	PLG G1/8 TL360	HW 5.0

**ISCARPARTING**

**BGM N-J**

Narrow Material Cost Saving Inserts for Grooving and Parting up to .787" Bar Diameters



Designation	Dimensions						IC1008	Recommended Machining Data
	CW	CWTOL <sup>(1)</sup>	RE	RETOL <sup>(2)</sup>	CDX	INSL		f groove (IPR)
BGM N0801J	.031	.0008	.0039	.0008	.394	1.524	●	.0008-.0020
BGM N1001J	.039	.0008	.0039	.0008	.394	1.524	●	.0008-.0031
BGM N1201J	.047	.0008	.0039	.0008	.394	1.524	●	.0012-.0039
BGM N1501J	.059	.0008	.0039	.0008	.394	1.524	●	.0020-.0047

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

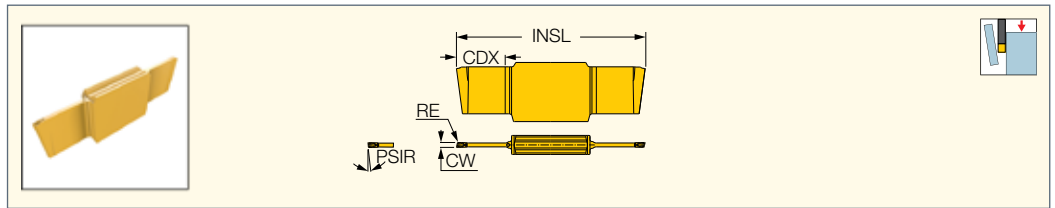
<sup>(2)</sup> Corner radius tolerance (+/-)

For tools, see pages: BGTR/L-B-JHP (544)

**ISCARPARTING**

**BGM R/L-J**

Narrow Material Cost Saving Inserts for Parting up to .787" Bar Diameters



Designation	Dimensions					IC1008	Recommended Machining Data
	CW	RE	INSL	CDX	PSIR		f groove (IPR)
BGM R/L1001J-15D	.039	.0039	1.524	.394	15.0	●	.0008-.0024
BGM R/L1001J-6D	.039	.0039	1.524	.394	6.0	●	.0008-.0031

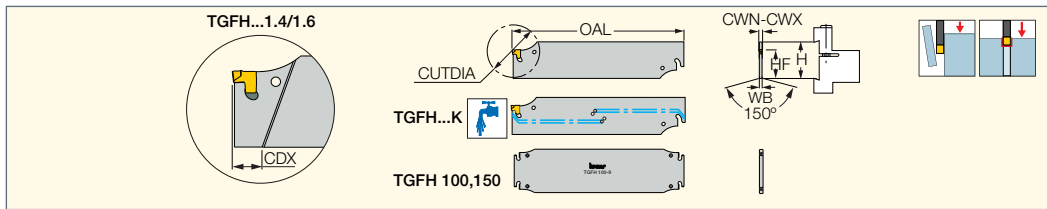
• For cutting speed recommendations and user guide, see pages 594-603

For tools, see pages: BGTR/L-B-JHP (544)

**TANG-GRIP**  
PARTING LINE  
**SUMO-GRIP**  
HEAVY DUTY LINE

**TGFH/R/L**

Blades with a Tangentially Oriented Pocket Carrying TANG-GRIP Single-Ended Inserts for Parting and Grooving



Designation	H	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WB	OAL	CDX	HF	CUTDIA	CSP <sup>(4)</sup>	Insert		
TGFH 19-1.4	.748	.055	.055	.041 <sup>(5)</sup>	3.386	.378	.618	1.181	0	TAG 1.4	ETG 1.4/1.6*	
TGFH 19-1.6	.748	.063	.063	.051 <sup>(6)</sup>	3.386	.433	.618	1.260	0	TAG 1.6	ETG 1.4/1.6*	
TGFH 19-2	.748	.071	.094	.065	3.386	-	.618	1.496	0	TAG 2	ETG 2*	
TGFH 26-1.4	1.024	.055	.055	.041 <sup>(5)</sup>	4.331	.327	.843	1.142	0	TAG 1.4	ETG 1.4/1.6*	
TGFH 26-1.6	1.024	.063	.063	.051 <sup>(7)</sup>	4.331	.394	.843	1.378	0	TAG 1.6	ETG 1.4/1.6*	
TGFH 26-2	1.024	.071	.094	.065	4.331	-	.843	1.968	0	TAG 2	ETG 2*	
TGFH 26-3	1.024	.110	.138	.098	4.331	-	.843	2.953	0	TAG 3	ETG 3-4*	
TGFH 26K-3 <sup>(1)</sup>	1.024	.110	.138	.098	4.331	-	.843	2.953	1	TAG 3	ETG 3-4-SH*	SGC 340
TGFH 26-4	1.024	.146	.177	.134	4.331	-	.843	3.150	0	TAG 4	ETG 3-4*	
TGFH 26-5	1.024	.185	.217	.157	5.906	-	.843	3.150	0	TAG 5	ETG 5-7*	
TGFH 32-1.4	1.260	.055	.055	.041 <sup>(8)</sup>	5.906	.280	.976	1.142	0	TAG 1.4	ETG 1.4/1.6*	
TGFH 32-1.6	1.260	.063	.063	.051 <sup>(5)</sup>	5.906	.394	.976	1.496	0	TAG 1.6	ETG 1.4/1.6*	
TGFH 32-2	1.260	.071	.094	.065 <sup>(6)</sup>	5.906	-	.976	1.968	0	TAG 2	ETG 2*	
TGFH 32-3	1.260	.110	.138	.098	5.906	-	.976	3.937	0	TAG 3	ETG 3-4*	
TGFH 32K-3 <sup>(1)</sup>	1.260	.110	.138	.098	5.906	-	.976	3.937	1	TAG 3	ETG 3-4-SH*	SGC 340
TGFH 32-4	1.260	.146	.177	.134	5.906	-	.976	3.937	0	TAG 4	ETG 3-4*	
TGFH 32K-4 <sup>(1)</sup>	1.260	.146	.177	.134	5.906	-	.976	3.937	1	TAG 4	ETG 3-4-SH*	SGC 340
TGFH 32-5	1.260	.185	.217	.157	5.906	-	.976	4.724	0	TAG 5	ETG 5-7*	
TGFH 32-6	1.260	.224	.256	.205	5.906	-	.976	4.724	0	TAG 6	ETG 5-7*	
TGFH 32-7	1.260	.268	.295	.236	5.827	-	.976	4.724	0	TAG 7	ETG 5-7*	
TGFH 45-3	1.772	.110	.138	.098	8.858	-	1.500	6.299	0	TAG 3	ETG 3-4*	
TGFH 45-4	1.772	.146	.177	.134	8.858	-	1.500	6.299	0	TAG 4	ETG 3-4*	
TGFH 45-5	1.772	.185	.217	.157	8.858	-	1.500	6.299	0	TAG 5	ETG 5-7*	
TGFH 45-6	1.772	.224	.256	.205	8.858	-	1.500	6.299	0	TAG 6	ETG 5-7*	
TGFH 45-7	1.772	.268	.295	.236	8.858	-	1.500	6.299	0	TAG 7	ETG 5-7*	
TGFH 52-7	2.071	.268	.295	.236	7.480	-	1.780	7.480	0	TAG 7	ETG 5-7*	
TGFH 53-7	2.071	.268	.295	.236	10.236	-	1.780	8.661	0	TAG 7	ETG 5-7*	
TGFH 52K-8 <sup>(1)</sup>	2.071	.303	.335	.283	7.480	-	1.780	7.480	1	TAG 8	ETG 8-12*	
TGFH 53K-8 <sup>(1)</sup>	2.071	.303	.335	.283	10.236	-	1.780	8.465	1	TAG 8	ETG 8-12*	
TGFH 52K-9 <sup>(1)</sup>	2.071	.343	.394	.323	7.480	-	1.780	7.480	1	TAG 9	ETG 8-12*	
TGFH 53K-9 <sup>(1)</sup>	2.071	.343	.394	.323	10.236	-	1.780	8.465	1	TAG 9	ETG 8-12*	
TGFHR/L 53K-12 <sup>(1)</sup>	2.071	.461	.500	.394	10.236	-	1.780	8.465	1	TAG 12	ETG 8-12*	
TGFH 100-9	3.937	.343	.394	.323	18.110	-	3.642	17.717	0	TAG 9	ETG 8-12*	
TGFH 100-12	3.937	.461	.500	.394	18.110	-	3.642	17.717	0	TAG 12	ETG 8-12*	
TGFH 150-12	5.906	.461	.500	.394	24.016	-	5.610	23.622	0	TAG 12	ETG 8-12*	

• For user guide, see pages 594-603

<sup>(1)</sup> With coolant holes, the recommended coolant pressure is 145 PSI min. Cooling tube SGCU 341 should be ordered separately

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

<sup>(4)</sup> 0 - Without coolant supply, 1 - With coolant supply

<sup>(5)</sup> Thickness beyond the D.O.C. area is .098"

<sup>(6)</sup> Thickness beyond the D.O.C. area is .063"

<sup>(7)</sup> Thickness beyond the D.O.C. area is 2.50 mm

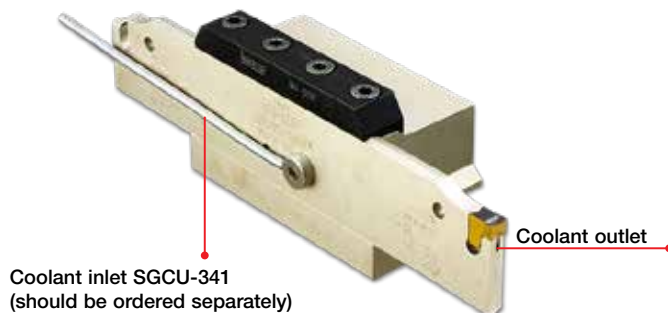
<sup>(8)</sup> Thickness at the D.O.C. area is .041"

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564) • TAGB/TAGBA (357)

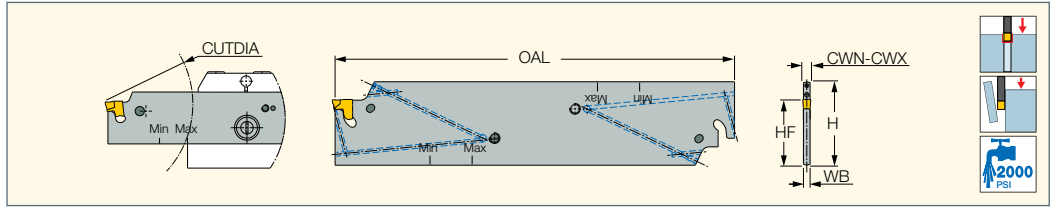
**For holders, see pages:** C#-TBK-R/L (677) • HSK A-WH-TBK-R/L (688) • SGTBF (673) • SGTBK (673) • SGTBR/L (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**TGFH...K**

Coolant inlet SGCU-341  
(should be ordered separately)

**TGFH-JHP**

Parting and Grooving Blades with Channels for Low and High-Pressure Coolant Carrying TANG-GRIP Inserts



Designation	H	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WB	OAL	HF	CUTDIA	Insert		
TGFH 26C-3-JHP	1.024	.110	.138	.098	5.512	.843	2.953	TAG 3	SGC 340	ETG 3-4-SH*
TGFH 32C-3-JHP	1.260	.110	.138	.098	5.906	.976	3.543	TAG 3	SGC 340	ETG 3-4-SH*
TGFH 26C-4-JHP	1.024	.146	.177	.134	5.512	.843	2.953	TAG 4	SGC 340	ETG 3-4-SH*
TGFH 32C-4-JHP	1.260	.146	.177	.134	5.906	.976	3.543	TAG 4	SGC 340	ETG 3-4-SH*
TGFH 32C-5-JHP	1.260	.185	.217	.157	6.299	.976	4.724	TAG 5	SGC 340	ETG 5-7*
TGFH 32C-6-JHP <sup>(1)</sup>	1.260	.224	.256	.205	6.299	.976	4.724	TAG 6	SGC 340	ETG 5-7*

• For user guide and accessories, see pages 594-603

<sup>(1)</sup> Only an upper channel

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

\* Optional, should be ordered separately

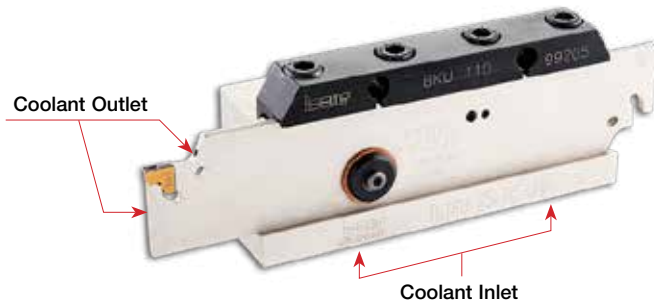
**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

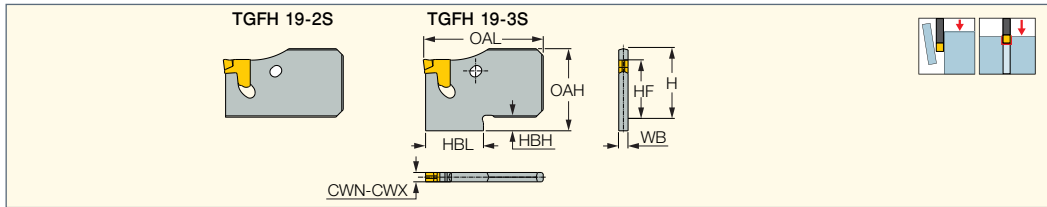
• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564) • TAGB/TAGBA (357)


**For holders, see pages:** TGTBU-JHP (551)

**Flow Rate vs. Pressure**

Designation	1000 PSI Flow Rate (GPM)	1450 PSI Flow Rate (GPM)	2000 PSI Flow Rate (GPM)
TGFH-JHP	1.6-1.8	1.8-2.1	2.1-2.4



**TANG-GRIP**  
PARTING LINE**TGFH-S**Parting and Grooving  
Single-Sided Blades Carrying  
TANG-GRIP Inserts

Designation	H	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	OAL	HF	OAH	HBH	HBL	CDX <sup>(3)</sup>	CUTDIA	
<b>TGFH 19-2S</b>	.750	.071	.094	.065	1.260	.618	.75	-	-	.472	1.420	ETG 2*
<b>TGFH 19-3S</b>	.750	.110	.138	.098	1.362	.618	.87	.12	.61	.630	1.575	ETG 3-4-SH*

- For Dmax and Tmax drawing, see SGBHR/L holder

- (1) Minimum cutting width

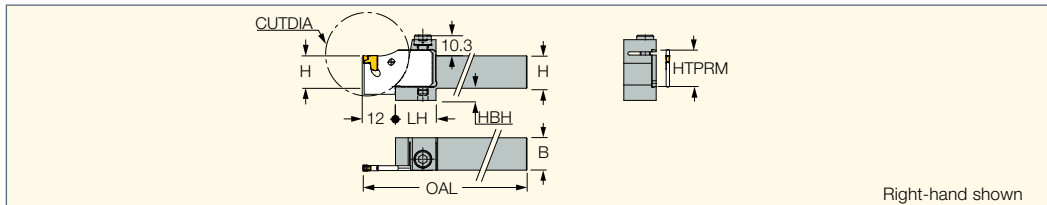
- (2) Maximum cutting width

- (3) Cutting depth maximum

- \* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

- TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**SELF-GRIP****SGBHR/L**Tool Blocks for SELF-GRIP  
Single-Sided Blades




Designation	H	B	HBH	OAL	HTPRM	LH	CDX <sup>(1)</sup>	CUTDIA
<b>SGBHR/L 1010</b>	10.0	10.0	10.0	154.00	19.0	20.0	16.00	40.0
<b>SGBHR 1212</b>	12.0	12.0	8.0	154.00	19.0	20.0	16.00	40.0
<b>SGBHR 1414</b>	14.0	14.0	6.0	154.00	19.0	20.0	16.00	40.0
<b>SGBHR/L 1616</b>	16.0	16.0	6.0	154.00	19.0	20.0	16.00	40.0
<b>SGBHR/L 2020</b>	20.0	20.0	2.0	154.00	19.0	20.0	16.00	40.0
<b>SGBHR/L 2525</b>	25.0	25.0	-	154.00	19.0	20.0	16.00	40.0

- For Dmax and Tmax dimensions, see TGFH-S adapters

- (1) Cutting depth maximum

**For tools, see pages:** TGFH-S (548)

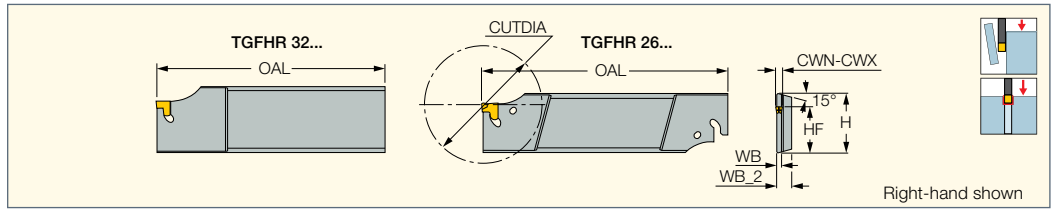
**Spare Parts**


Designation			
<b>SGBHL 1010</b>	SET ESG 1	SR M5X25DIN912	HW 4.0
<b>SGBHR 1010</b>		SR M5X25DIN912	HW 4.0
<b>SGBHR 1212</b>		SR M5X25DIN912	HW 4.0
<b>SGBHR 1414</b>	SET ESG 1	SR M5X25DIN912	HW 4.0
<b>SGBHR/L 1616</b>		SR M5X25DIN912	HW 4.0
<b>SGBHL 2020</b>		SR M5X25DIN912	HW 4.0
<b>SGBHR 2020</b>	SET ESG 1	SR M5X25DIN912	HW 4.0
<b>SGBHR/L 2525</b>		SR M5X25DIN912	HW 4.0



**TGFHR/L**

Single- and Double-Ended Parting and Grooving Reinforced Blades Carrying TANG-GRIP Tangentially Clamped Inserts



Designation	H	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	WB_2	OAL	HF	CUTDIA	
TGFHL 26T16-2	1.024	.071	.094	.065	.311	4.350	.843	1.693	ETG 2*
TGFHR 26T16-3	1.024	.110	.138	.098	.311	4.350	.843	1.693	ETG 3-4-SH*
TGFHR/L 26T23-2	1.024	.071	.094	.065	.311	4.350	.843	1.811	ETG 2*
TGFHR/L 26T23-3	1.024	.110	.138	.098	.311	4.350	.843	1.811	ETG 3-4-SH*
TGFHR/L 32T22-2	1.260	.071	.094	.065	.311	4.350	.976	1.654	ETG 2*
TGFHR/L 32T22-3	1.260	.110	.138	.098	.311	4.350	.976	1.654	ETG 3-4-SH*
TGFHR/L 32T33-3	1.260	.110	.138	.098	.311	4.350	.976	2.598	ETG 3-4-SH*
TGFHR/L 32T33-4	1.260	.146	.177	.134	.311	4.350	.976	2.598	ETG 3-4-SH*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

\* Optional, should be ordered separately

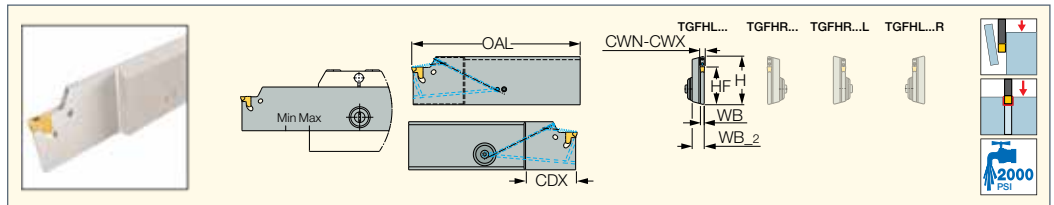
**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)



• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** C#-TBK-R/L (677) • HSK A-WH-TBK-R/L (688) • SGTBF (673) • SGTBK (673) • SGTBR/L (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**TGFHR/L-JHP**

Parting and Grooving Reinforced Blades with Channels for High-Pressure Coolant Carrying TANG-GRIP Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB_2	WB	OAL	H	HF	CDX <sup>(3)</sup>	Insert		
TGFHR/L 32C-3T33-JHP	.110	.138	.311	.098	4.350	1.260	.976	1.299	TAG 3	ETG 3-4-SH*	SGC 340
TGFHL 32C-3T33R-JHP	.110	.138	.311	.098	4.350	1.260	.976	1.299	TAG 3	ETG 3-4-SH*	SGC 340
TGFHR 32C-3T33L-JHP	.110	.138	.311	.098	4.350	1.260	.976	1.299	TAG 3	ETG 3-4-SH*	SGC 340

• For user guide and accessories, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Cutting depth maximum

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

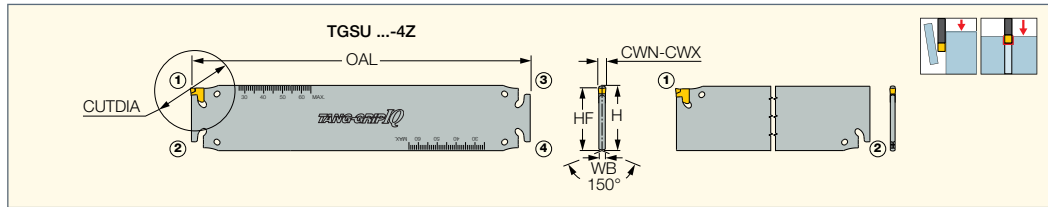
• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** TGTBU-JHP (551)



**TANG-GRIP IQ**  
 350 LINE

**TGSU**

 Parting and Grooving Flat Top  
 Blades with Tangential Pockets  
 Carrying TANG-GRIP  
 Single-Ended Inserts


Designation	H	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	CUTDIA	NOP <sup>(4)</sup>	WB	OAL	HF	CSP <sup>(5)</sup>	Insert	
TGSU 35-1.4-IQ	1.378	.055	.055	1.378	2	.098 <sup>(6)</sup>	7.087	1.307	0	TAG 1.4	ETG 1.4/1.6*
TGSU 35-2-IQ	1.378	.071	.094	2.343	2	.098 <sup>(7)</sup>	6.299	1.307	0	TAG 2	ETG 2*
TGSU 35-3-IQ-4Z	1.378	.110	.138	4.724	4	.098	7.087	1.307	0	TAG 3	ETG 3-4-SH*
TGSU 35-4-IQ-4Z	1.378	.146	.177	4.724	4	.134	7.087	1.307	0	TAG 4	ETG 3-4-SH*
TGSU 35-5-IQ	1.378	.185	.217	5.669	2	.157	7.087	1.307	0	TAG 5	ETG 5-7*
TGSU 35-6-IQ	1.378	.224	.256	5.669	2	.205	7.087	1.307	0	TAG 6	ETG 5-7*
TGSU 35-7-IQ	1.378	.268	.295	5.669	2	.236	7.087	1.307	0	TAG 7	ETG 5-7*
TGSU 35C-8-IQ <sup>(1)</sup>	1.378	.303	.335	5.669	2	.283	7.087	1.307	1	TAG 8	ETG 8-12*
TGSU 35C-9-IQ <sup>(1)</sup>	1.378	.343	.394	5.669	2	.323	7.087	1.307	1	TAG 9	ETG 8-12*
TGSU 56C-7-IQ <sup>(1)</sup>	2.205	.268	.295	8.661	2	.236	10.236	2.110	1	TAG 7	ETG 5-7*
TGSU 56C-8-IQ <sup>(1)</sup>	2.205	.303	.335	8.661	2	.283	10.236	2.110	1	TAG 8	ETG 8-12*
TGSU 56C-9-IQ <sup>(1)</sup>	2.205	.343	.394	8.661	2	.323	10.236	2.110	1	TAG 9	ETG 8-12*

• For user guide, see pages 594-603

(1) C- Internal coolant, use with TGTBU HD blocks only; cooling tube SGCU 341 should be ordered separately

(2) Minimum cutting width

(3) Maximum cutting width

(4) Number of pockets

(5) 0 - Without coolant supply, 1 - With coolant supply

(6) Thickness at the D.O.C. area is .041"

(7) Thickness at the D.O.C. area is .065"

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

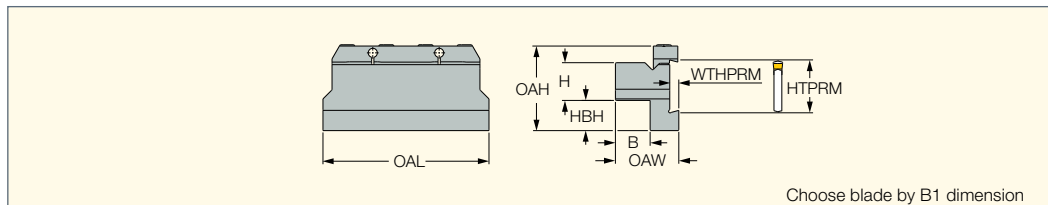
• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564) • TAGB/TAGBA (357)

**For holders, see pages:** TGTBU (550)

 TGSU 35-3-IQ-4Z  
 TGSU 35-4-IQ-4Z

**TANG-GRIP IQ**  
 350 LINE

**TGTBU**

 Tool Blocks for TGSU Parting  
 and Grooving Blades


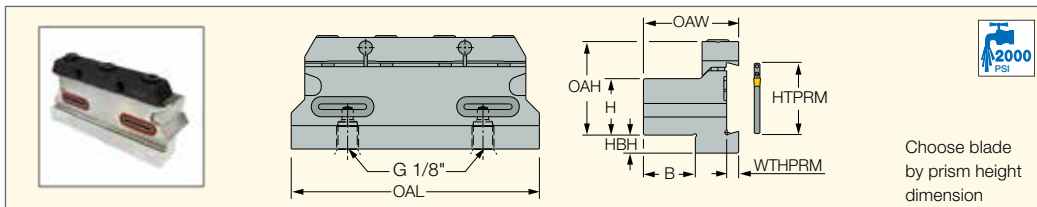
Designation	H	B	HTPRM	WTHPRM	OAW	OAH	HBH	OAL			
TGTBU 19-35	.750	.750	1.378	.236	1.535	2.20	1.02	4.331	BKU 110	SR M6X16 DIN912	HW 5.0
TGTBU 25.4-35	1.000	1.024	1.378	.236	1.772	2.20	.72	4.331	BKU 110	SR M6X16 DIN912	HW 5.0
TGTBU 31.8-35	1.250	1.142	1.378	.236	1.890	2.20	.47	4.331	BKU 110	SR M6X16 DIN912	HW 5.0
TGTBU 31.8-35 HD <sup>(1)</sup>	1.250	1.181	1.378	.315	2.165	2.56	.72	4.331	BK 509	SR M8X20DIN912	HW 6.0
TGTBU 38.1-35 HD <sup>(1)</sup>	1.250	1.181	1.378	.315	2.598	2.56	.47	4.331	BK 509	SR M8X20DIN912	HW 6.0
TGTBU 38.1-35	1.500	1.535	1.378	.236	2.283	2.20	.22	4.331	BKU 110	SR M6X16 DIN912	HW 5.0
TGTBU 38.1-56 HD <sup>(1)</sup>	1.500	1.614	2.205	.315	2.598	3.27	1.18	5.118	BK 509	SR M8X20DIN912	HW 6.0

(1) HD - recommended blocks for TGSU...-8, TGSU...-9 blades

**For tools, see pages:** TGSU (550)

**TGTBU-JHP**

Tool Blocks for Parting and Grooving Blades for High-Pressure Coolant



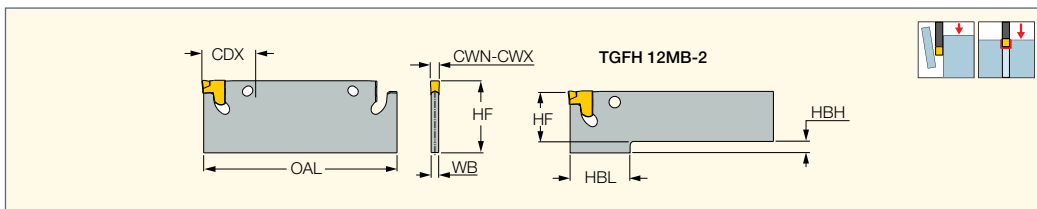
Choose blade by prism height dimension

Designation	H	B	HTPRM	OAW	OAH	HBH	WTHPRM	OAL				
TGTBU 16-5G-JHP	.630	.665	1.024	1.402	1.18	.52	.161	3.386	BKU 86	SR M6X16 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 19-35-JHP	.750	.787	1.378	1.535	1.24	.97	.236	4.331		SR M6X20 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 19-5G JHP	.750	.787	1.024	1.520	1.70	.39	.160	3.386	BKU 86	SR M6X16 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 19-6G JHP	.750	.787	1.260	1.540	1.40	.63	.209	3.937	BKU 100	SR M6X16 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 25.4-5G JHP	1.000	1.028	1.024	1.730	1.75	.20	.160	4.331	BKU 105	SR M6X16 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 25.4-35-JHP	1.000	1.142	1.378	1.772	1.48	.72	.236	4.331	BKU 210	SR M6X20 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 25.4-6G JHP	1.000	1.028	1.260	1.780	1.65	.30	.209	4.331	BKU 110	SR M6X16 DIN912	HW 5.0	OR 14X2.5N N
TGTBU 31.8-6G JHP	1.252	1.142	1.260	1.900	1.90	.21	.209	4.331	BKU 110	SR M6X16 DIN912	HW 5.0	OR 14X2.5N N

For tools, see pages: DGFH-JHP (276) • DGFHR/L-BC-JHP (519) • TGFH-JHP (547) • TGFHR/L-JHP (549)

**TGFH-MB**

Parting and Grooving Blades for Other Manufacturers Blocks



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	OAL	HF	HBH	HBL	CDX <sup>(3)</sup>	Insert	
TGFH 12MB-2 L58	.071	.094	.065	2.283	.480	.11	.610	.453	TAG 2	ETG 2*
TGFH 17MB-2 L58	.071	.094	.065	2.283	.677	-	-	.453	TAG 2	ETG 2*
TGFH 22MB-2 L58	.071	.094	.065	2.283	.874	-	-	.453	TAG 2	ETG 2*
TGFH 17MB-3	.110	.138	.098	2.520	.677	-	-	.472	TAG 3	ETG 3-4-SH*
TGFH 22MB-3	.110	.138	.098	2.520	.874	-	-	.472	TAG 3	ETG 3-4-SH*
TGFH 22MB-3-L84	.110	.138	.098	3.307	.874	-	-	.630	TAG 3	ETG 3-4-SH*
TGFH 28MB-3	.110	.138	.098	3.937	1.102	-	-	.748	TAG 3	ETG 3-4-SH*
TGFH 17MB-4	.146	.177	.134	2.756	.677	-	-	.551	TAG 4	ETG 3-4-SH*
TGFH 22MB-4	.146	.177	.134	2.756	.874	-	-	.551	TAG 4	ETG 3-4-SH*
TGFH 22MB-4-L90	.146	.177	.134	3.543	.874	-	-	.669	TAG 4	ETG 3-4-SH*
TGFH 28MB-4	.146	.177	.134	3.937	1.102	-	-	.748	TAG 4	ETG 3-4-SH*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

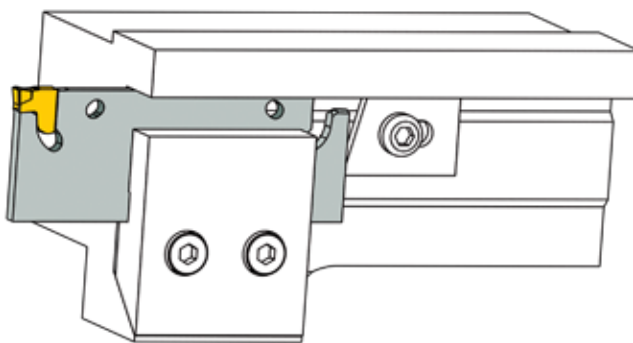
<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Cutting depth maximum

\* Optional, should be ordered separately

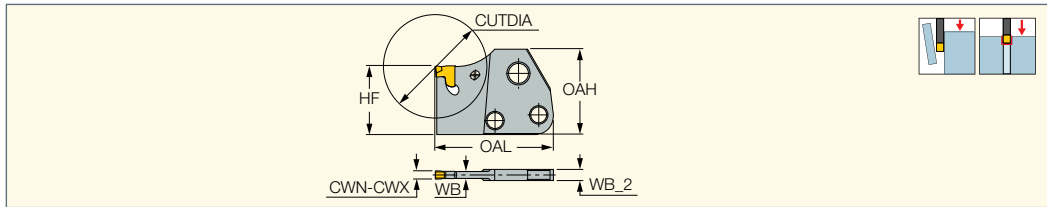
For inserts, see pages: TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)


• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)



**TANG-GRIP**  
PARTING LINE

**TGAD**

 Parting and Grooving  
Adapters Carrying TANG-GRIP  
Tangentially Clamped Inserts


Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB_2	WB	OAL	CUTDIA	HF	OAH	Insert	
<b>TGAD 1.4N</b>	.055	.055	.126	.043	1.634	1.260	.945	1.142	TAG 1.4	ETG 1.4/1.6*
<b>TGAD 2N</b>	.071	.094	.126	.067	1.634	1.260	.945	1.181	TAG 2	ETG 2*
<b>TGAD 3N</b>	.110	.138	.157	.094	1.634	1.378	.945	1.181	TAG 3	ETG 3-4-SH*
<b>TGAD 4N</b>	.146	.177	.126	.126	1.988	1.968	.945	1.181	TAG 4	ETG 3-4-SH*
<b>TGAD 5N</b>	.185	.217	.157	.157	1.988	1.968	.945	1.181	TAG 5	ETG 5-7*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

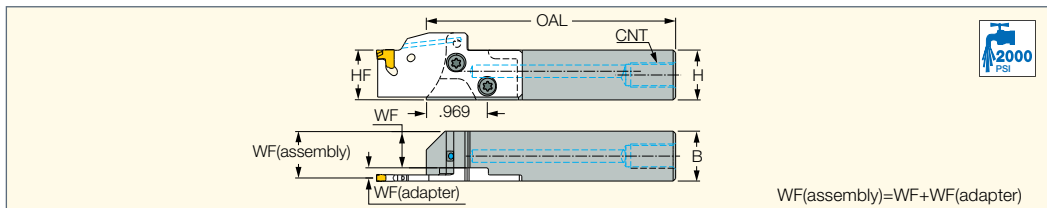
**For holders, see pages:** DGHAL-DECO (Metric) (529) • MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289) • C#-MAHD (679)

• C#-MAHPD (680) • C#-MAHDR-45 (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687) • HSK A63WH-MAHDOR (687) • IM-MAHD (689)

• C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • IM-MAHPD (689)

**MODUGRIP JETCUT**  
MODULAR GRIP CARTRIDGES





**NMAHR/L-JHP**

 Holders with High-Pressure  
Coolant Channels Carrying  
MODU-GRIP Adapters


Designation	H	B	OAL	WF	CNT	HF
<b>NMAHR/L 19-MG-JHP</b>	.750	.750	3.937	.539	G1/8	.750
<b>NMAHR/L 25.4-MG-JHP</b>	1.000	1.000	3.937	.791	G1/8	1.000

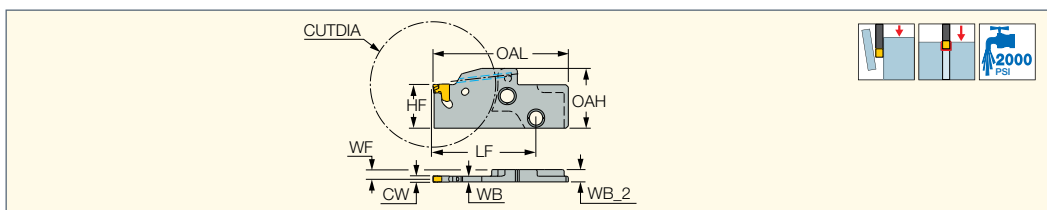
**For tools, see pages:** D/HGAD RE/LE-JHP (553) • PCAD RE/LE-JHP (553) • TGAD RE/LE-JHP (552)

**Spare Parts**

Designation				
<b>NMAHR/L-JHP</b>	SR M5-04451	SW6-T-SH	BLD T20/S7	OR 5X1N

**TANG-GRIP**  
PARTING LINE  
**MODUGRIP**  
MODULAR GRIP CARTRIDGES

**TGAD RE/LE-JHP**

 Parting and Grooving Adapters  
with Channels for High-Pressure  
Coolant Carrying  
TANG-GRIP Inserts


Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WF	WB	WB_2	LF	OAL	OAH	HF	CUTDIA	Insert
<b>TGAD 2R/LE-D54-JHP</b>	.071	.094	.176	.065	.209	1.748	2.295	1.016	.744	2.126	TAG 2
<b>TGAD 3R/LE-D54-JHP</b>	.118	.138	.161	.096	.209	1.748	2.295	1.016	.744	2.126	TAG 3

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

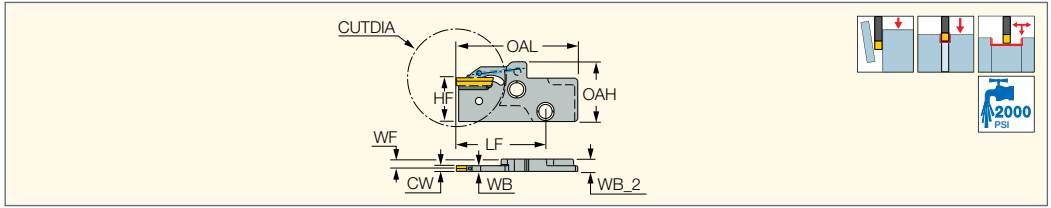
**For holders, see pages:** NMAHR/L-JHP (552)

**Spare Parts**

Designation	
<b>TGAD 2R/LE-D54-JHP</b>	ETG 2*
<b>TGAD 3R/LE-D54-JHP</b>	ETG 3-4-SH*

\* Optional, should be ordered separately

**D/HGAD RE/LE-JHP**  
Parting and Grooving Adapters  
with Channels for High-Pressure  
Coolant Carrying DO-GRIP Inserts



Designation	CWN <sup>(2)</sup>	CWX <sup>(3)</sup>	WF	WB	WB_2	LF	OAL	OAH	HF	CUTDIA	Insert	
<b>DGAD 2R/LE-D38-JHP</b> <sup>(1)</sup>	.075	.098	.177	.063	.209	1.591	2.140	1.016	.744	1.496	DGN 2	EDG 33A*
<b>DGAD 3R/LE-D38-JHP</b> <sup>(1)</sup>	.118	.125	.161	.096	.209	1.591	2.140	1.016	.744	1.496	DGN 3	EDG 33A*
<b>HGAD 3R/LE-D42-JHP</b>	.118	.118	.161	.096	.209	1.512	2.061	1.016	.744	1.654	HGN 3	EDG 23B*

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> For parting and external grooving only

<sup>(2)</sup> Minimum cutting width

<sup>(3)</sup> Maximum cutting width

\* Optional, should be ordered separately

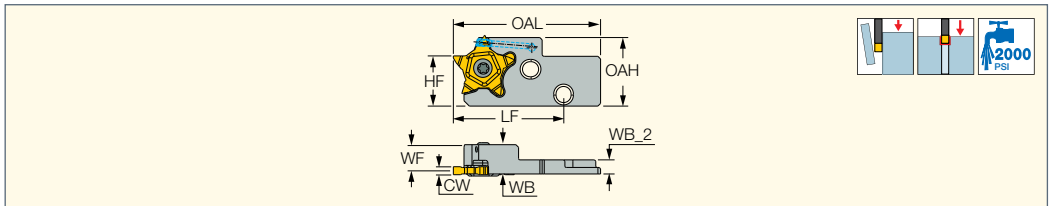
**For inserts, see pages:** DGN-P (539) • DGN-UT/UA (539) • DGN-WP (540) • DGN-Z (538) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535)

DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536) • GRIP (full radius) (278)

HGN-C (541) • HGN-J (542) • HGN-UT (542) • HGR/L-C (541) • HGR/L-J/JS (542)

**For holders, see pages:** NMAHR/L-JHP (552)

**PCAD RE/LE-JHP**  
Parting and Grooving  
Adapters with Channels  
for High-Pressure Coolant  
Carrying PENTA 24 Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WF	WB	WB_2	LF	OAL	OAH	HF	Insert
<b>PCAD 24R/LE-JHP</b>	.020	.125	.205	.433	.209	1.630	2.177	1.016	.744	PENTA 24

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

**For inserts, see pages:** PENTA 24-BSPT (736) • PENTA 24-ISO (716) • PENTA 24-MT (704) • PENTA 24-NPT (731) • PENTA 24-UN (723)

PENTA 24-W (728) • PENTA 24-WT (698) • PENTA 24N-C (334) • PENTA 24N-C (full radius) (335) • PENTA 24N-J (333) • PENTA 24N-J (full radius) (334)

PENTA 24N-PF (full radius) (336) • PENTA 24N-PF/P (335) • PENTA 24N-Z (336) • PENTA 24R-C (587) • PENTA 24R-P (590) • PENTA 24R/L-J (586)

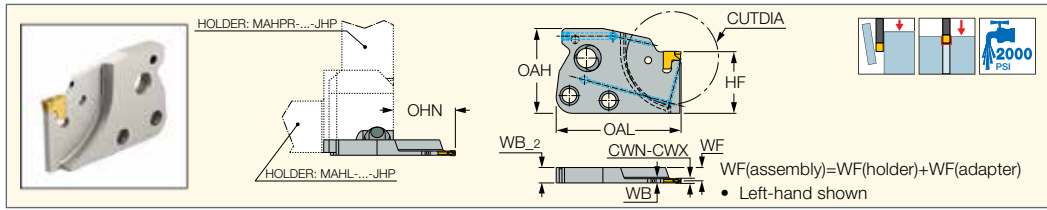
PENTA 24R/L-Z (589)


**For holders, see pages:** NMAHR/L-JHP (552)

**Spare Parts**

Designation	
<b>PCAD 24LE-JHP</b>	SR 16-212-01397L
<b>PCAD 24RE-JHP</b>	SR 16-212-01397

**TANG-GRIP JETCUT**  
 PARTING LINE  
**MODULAR-GRIP**
**TAGPAD-JHP**

 Parting and Grooving Adapters  
 with Coolant Channels for  
 High-Pressure Carrying  
 TANG-GRIP Inserts


Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CUTDIA	OHN <sup>(3)</sup>	WF	WB	WB_2	OAL	OAH	HF	Insert	
TAGPAD 2R/L-D42-JHP	.071	.094	1.654	.945	.204	.065	.236	1.906	1.299	.945	TAG 2	ETG 2*
TAGPAD 2R/L-D52-JHP	.071	.094	2.047	1.142	.204	.065	.236	2.102	1.299	.945	TAG 2	ETG 2*
TAGPAD 3R/L-D42-JHP	.110	.138	1.654	.945	.189	.094	.236	1.906	1.299	.945	TAG 3	ETG 3-4-SH*
TAGPAD 3R/L-D52-JHP	.110	.138	2.047	1.142	.189	.094	.236	2.102	1.299	.945	TAG 3	ETG 3-4-SH*

• For user guide and accessories see pages 594-603, 489-490

(1) Minimum cutting width

(2) Maximum cutting width

(3) Minimum overhang

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

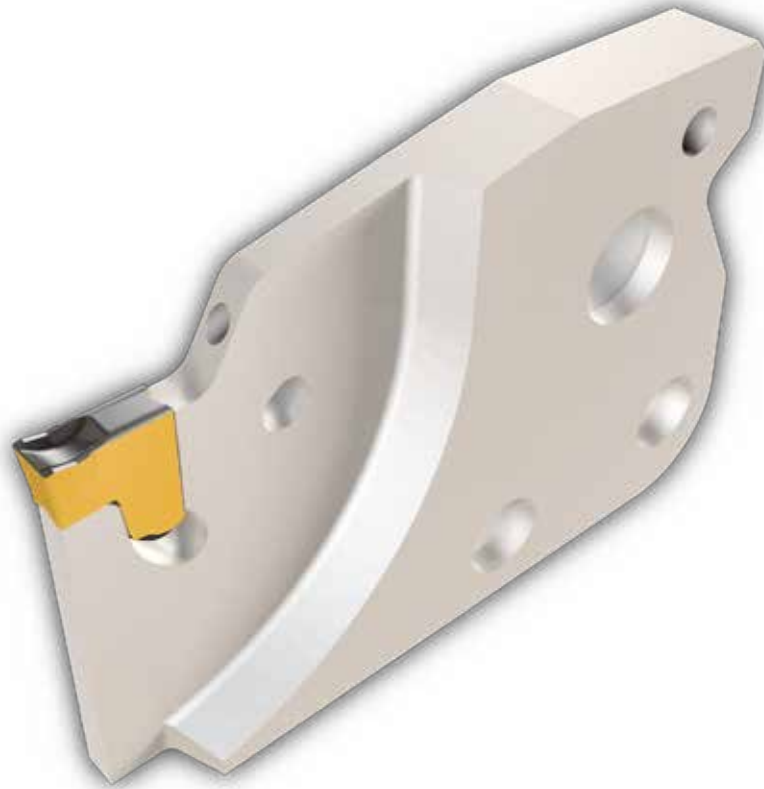
• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** ABC MAHDR-#-XL-JHP (848) • DT##/2 MAHD#-#-XL-JHP (823) • MS##-##-MG-JHP (822) • MS-ES#####-GWS-MG-JHP (825)

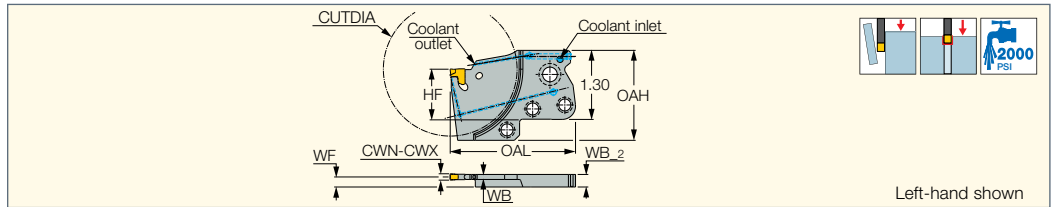
• TR45 MAHDR-#-XL-JHP (846) • V## MAHD#-#-XL-##-JHP (844) • V## MAHD-XL-JHP (845)

**Flow Rate vs. Pressure**

Designation	1000 PSI	1450 PSI	2000 PSI
	Flow Rate (GPM)	Flow Rate (GPM)	Flow Rate (GPM)
TAGPAD 2R/L-D42-JHP	1.32	1.59	1.85
TAGPAD 2R/L-D52-JHP	1.32	1.59	1.85
TAGPAD 3R/L-D42-JHP	2.25	2.64	3.17
TAGPAD 3R/L-D52-JHP	2.25	2.64	3.17



**TAGPAD-XL-JHP**  
Extra Long Parting and Grooving  
Adapters with Channels  
for High-Pressure Coolant  
Carrying TANG-GRIP Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WF	WB	WB_2	OAL	OAH	HF	CUTDIA	Insert
TAGPAD-XL 2R/L-D65-JHP	.071	.094	.205	.063	.236	2.362	1.693	1.339	2.559	TAG 2
TAGPAD-XL 3R/L-D52-JHP	.110	.138	.189	.094	.236	2.102	1.693	1.339	2.047	TAG 3
TAGPAD-XL 3R/L-D65-JHP	.110	.138	.189	.094	.236	2.358	1.693	1.339	2.559	TAG 3
TAGPAD-XL 3R/L-D82-JHP	.110	.138	.189	.094	.236	2.772	1.693	1.339	3.228	TAG 3
TAGPAD-XL 3R/L-D102-JHP	.110	.138	.189	.094	.236	3.248	1.693	1.339	4.016	TAG 3
TAGPAD-XL 4R/L-D52-JHP	.146	.177	.169	.134	.236	2.102	1.693	1.339	2.047	TAG 4
TAGPAD-XL 4R/L-D65-JHP	.146	.177	.169	.134	.236	2.362	1.693	1.339	2.559	TAG 4
TAGPAD-XL 4R/L-D82-JHP	.146	.177	.169	.134	.236	2.756	1.693	1.339	3.228	TAG 4
TAGPAD-XL 4R/L-D102-JHP	.146	.177	.169	.134	.236	3.268	1.693	1.339	4.016	TAG 4

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width


**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** ABC MAHDR-#-XL-JHP (848) • MAHPR/L-XL-JHP (616) • MAHR/L-MG-XL-JHP (555) • TR TNK36 MAHDL-R-XL-JHP (847)

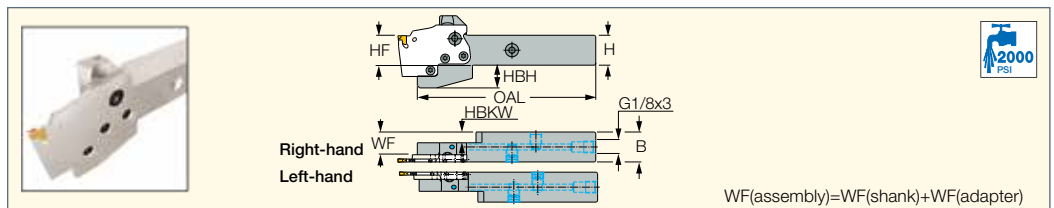
• TR45 MAHDR-#-XL-JHP (846) • TR45TNL MAHDN-R-XL-JHP (847) • V## MAHD-#-#-XL-##-JHP (844) • V## MAHD-XL-JHP (845)

### Spare Parts

Designation	
TAGPAD-XL 2L-D65-JHP	ETG 2*
TAGPAD-XL 2R-D65-JHP	ETG 2*
TAGPAD-XL 3L-D52-JHP	ETG 3-4-SH*
TAGPAD-XL 3R-D52-JHP	ETG 3-4-SH*
TAGPAD-XL 3L-D65-JHP	ETG 3-4-SH*
TAGPAD-XL 3R-D65-JHP	ETG 3-4-SH*
TAGPAD-XL 3L-D82-JHP	ETG 3-4-SH*
TAGPAD-XL 3R-D82-JHP	ETG 3-4-SH*
TAGPAD-XL 3L-D102-JHP	ETG 3-4-SH*
TAGPAD-XL 3R-D102-JHP	ETG 3-4-SH*
TAGPAD-XL 4L-D52-JHP	ETG 3-4-SH*
TAGPAD-XL 4R-D52-JHP	ETG 3-4-SH*
TAGPAD-XL 4L-D65-JHP	ETG 3-4-SH*
TAGPAD-XL 4R-D65-JHP	ETG 3-4-SH*
TAGPAD-XL 4L-D82-JHP	ETG 3-4-SH*
TAGPAD-XL 4R-D82-JHP	ETG 3-4-SH*
TAGPAD-XL 4L-D102-JHP	ETG 3-4-SH*
TAGPAD-XL 4R-D102-JHP	ETG 3-4-SH*

\* Optional, should be ordered separately

**MAHR/L-MG-XL-JHP**  
Holders with High-Pressure  
Coolant Channels for  
Interchangeable Adapters










Designation	H	B	OAL	HBH	WF	HBKW
MAHR/L 19-MG-XL-JHP	.750	.750	5.870	.98	.512	.118
MAHR/L 25.4-MG-XL-JHP	1.000	1.000	5.870	.73	.772	.370

• For user guide and accessories, see pages 594-603, 489-490

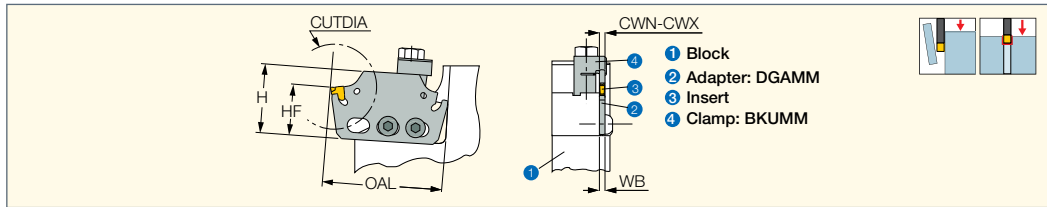
**For tools, see pages:** DGPAD-XL-JHP (532) • TAGPAD-XL-JHP (555) • TNFPAD-XL-JHP (640)


### Spare Parts

Designation							
MAHL 19-MG-XL-JHP	SR M6X12DIN6912-P	HW 5.0	SR M5-04451	T-20/5	SR M6X14-XT DIN 912	OR 5X1N	PLG G1/8 TL360
MAHR 19-MG-XL-JHP	SR M6X12DIN6912	HW 5.0	SR M5-04451	T-20/5	SR M6X14-XT DIN 912	OR 5X1N	PLG G1/8 TL360
MAHR/L 25.4-MG-XL-JHP	SR M6X12DIN6912-P	HW 5.0	SR M5-04451	T-20/5	SR M6X14-XT DIN 912	OR 5X1N	PLG G1/8 TL360

**TANG-GRIP**  
PARTING LINE**TANMM**

Replacement Parting and Grooving Adapters for TANG-GRIP Tangentially Clamped Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	H	OAL	
TANMM 38-3	.110	.138	.094	1.092	1.500	2.540	ETG 3-4-SH*
TANMM 48-3	.110	.138	.094	1.487	1.890	3.060	ETG 3-4-SH*
TANMM 38-4	.146	.177	.126	1.092	1.500	2.540	
TANMM 48-4	.146	.177	.126	1.487	1.890	3.060	ETG 3-4-SH*

<sup>(1)</sup> Minimum cutting width<sup>(2)</sup> Maximum cutting width

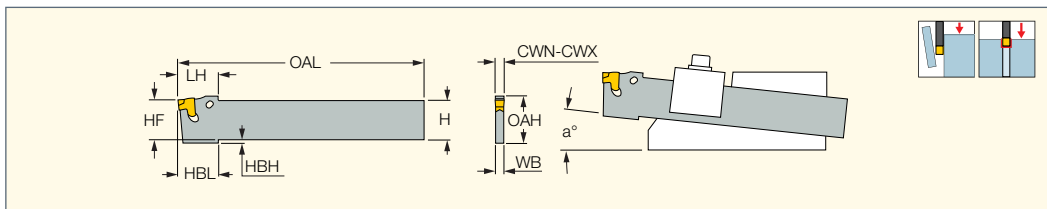
\* Optional, should be ordered separately


For inserts, see pages: TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**TANG-GRIP**  
PARTING LINE**TGFS**

Blades for Multi-Spindle Machines - Replacement for HSS and Brazed Tools



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	WB	OAL	OAH	HF	LH	HBL	HBH	CUTDIA	a°	Insert	
TGFS 0-17-2	.071	.094	.680	.065	4.331	.68	.677	-	.710	.07	1.380	0	TAG 2	ETG 2*
TGFS 0-17-3	.110	.138	.677	.098	4.331	.75	.677	-	.709	.07	2.362	0	TAG 3	ETG 3-4-SH*
TGFS 5-17-2	.071	.094	.690	.065	4.331	.74	.689	.710	.710	.06	1.380	5	TAG 2	ETG 2*
TGFS 5-17-3	.110	.138	.685	.098	4.331	.81	.689	.709	.709	.06	2.362	5	TAG 3	ETG 3-4-SH*
TGFS 5-17-4	.146	.177	.685	.134	4.331	.81	.689	.709	.709	.06	2.362	5	TAG 4	ETG 3-4-SH*
TGFS 5-22-2	.071	.094	.874	.065	5.906	.94	.882	.710	-	-	1.970	5	TAG 2	ETG 2*
TGFS 5-22-3	.110	.138	.874	.098	5.906	.95	.882	.709	-	-	2.953	5	TAG 3	ETG 3-4-SH*
TGFS 5-22-4	.146	.177	.874	.134	5.906	.95	.882	.709	-	-	3.150	5	TAG 4	ETG 3-4-SH*
TGFS 5-28-4	.146	.177	1.126	.134	5.906	1.20	1.130	.709	-	-	3.937	5	TAG 4	ETG 3-4-SH*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width<sup>(2)</sup> Maximum cutting width

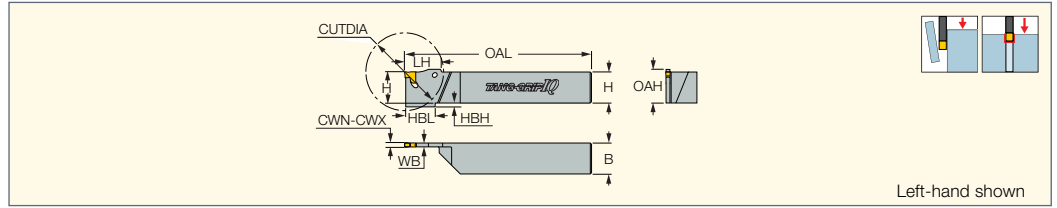
\* Optional, should be ordered separately

For inserts, see pages: TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)



**TGTR/L-IQ**  
Integral Shank TANG-GRIP  
Toolholders for Parting  
and Grooving



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	OAL	OAH	LH	HBL	HBH	CUTDIA	Insert	
TGTR/L 9.5-1.4-IQ	.055	.060	.375	.375	.041	5.512	-	-	.590	.22	.790	TAG 1.4	ETG 1.4/1.6*
TGTR/L 12.7-1.4-IQ	.055	.060	.500	.500	.041	5.512	-	-	.630	.09	1.180	TAG 1.4	ETG 1.4/1.6*
TGTR/L 19-1.4-IQ	.055	.060	.750	.750	.041	5.512	-	-	-	-	1.180	TAG 1.4	ETG 1.4/1.6*
TGTR 9.5-1.6-IQ	.063	.065	.375	.375	.051	4.724	-	-	.629	.02	1.100	TAG 1.6	ETG 1.4/1.6*
TGTR/L 12.7-1.6-IQ	.063	.065	.500	.500	.051	4.724	-	-	.629	.12	1.260	TAG 1.6	ETG 1.4/1.6*
TGTR/L 9.5-2-IQ	.071	.098	.375	.375	.063	5.905	-	-	.730	.22	1.100	TAG 2	ETG 2*
TGTR/L 12.7-2-IQ	.071	.098	.500	.500	.063	5.910	-	-	.730	.14	1.260	TAG 2	ETG 2*
TGTR/L 16-2-IQ	.071	.098	.626	.626	.063	5.910	-	-	.710	.12	1.260	TAG 2	ETG 2*
TGTR/L 19-2-IQ	.071	.098	.750	.750	.063	5.905	-	-	-	-	1.380	TAG 2	ETG 2*
TGTR 25.4-2-IQ	.071	.098	1.000	1.000	.063	5.910	-	-	-	-	2.240	TAG 2	ETG 2*
TGTR/L 12.7-3-IQ	.110	.138	.500	.500	.098	5.905	-	-	.730	.25	1.260	TAG 3	ETG 3-4-SH*
TGTR/L 16-3-IQ	.110	.138	.625	.625	.098	5.905	-	-	.710	.12	1.260	TAG 3	ETG 3-4-SH*
TGTR/L 19-3-IQ	.110	.138	.750	.750	.098	4.500	.82	.900	-	-	1.750	TAG 3	ETG 3-4*
TGTR/L 25.4-3-IQ	.110	.138	1.000	1.000	.098	5.905	1.07	.900	-	-	2.250	TAG 3	ETG 3-4*
TGTR/L 19-4-IQ	.146	.177	.750	.750	.134	4.500	.82	.900	-	-	2.000	TAG 4	ETG 3-4*
TGTR/L 25.4-4-IQ	.146	.177	1.000	1.000	.134	5.905	1.07	.900	-	-	2.500	TAG 4	ETG 3-4*
TGTR/L 25.4-5-IQ	.185	.217	1.000	1.000	.157	5.910	1.00	-	-	-	3.000	TAG 5	ETG 5-7*
TGTR/L 25.4-6-IQ	.224	.256	1.000	1.000	.204	5.910	1.00	-	-	-	3.000	TAG 6	ETG 5-7*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

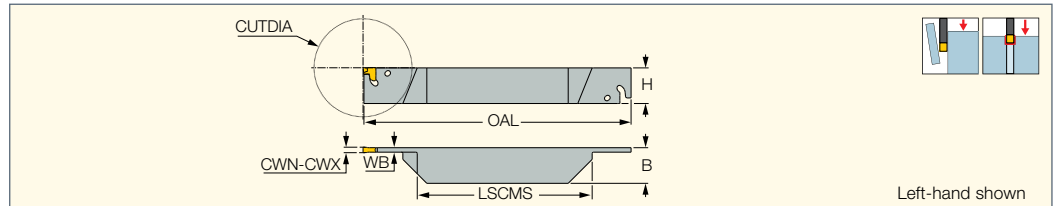
<sup>(2)</sup> Maximum cutting width

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564) • TAGB/TAGBA (357)

**TGTR/L-IQ-2Z**  
Integral Shank TANG-GRIP  
Toolholders with 2 Pockets  
for Parting and Grooving



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CUTDIA	H	B	WB	OAL	LSCMS	Insert	
TGTR/L 19-3-IQ-2Z	.110	.138	1.750	.750	.750	.098	5.905	3.860	TAG 3	ETG 3-4-SH*
TGTR/L 25.4-3-IQ-2Z	.110	.138	2.240	1.000	1.000	.098	5.905	3.937	TAG 3	ETG 3-4-SH*
TGTR/L 19-4-IQ-2Z	.146	.177	2.000	.750	.750	.134	5.905	4.090	TAG 4	ETG 3-4-SH*
TGTR/L 25.4-4-IQ-2Z	.146	.177	2.520	1.000	1.000	.134	5.905	4.170	TAG 4	ETG 3-4-SH*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

\* Optional, should be ordered separately

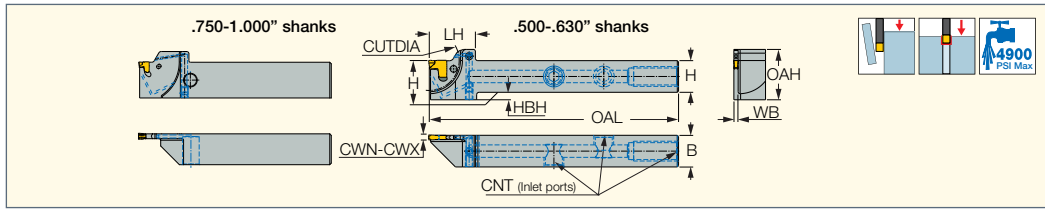
**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)





**TGTR/L-JHP**  
Parting and Grooving Tools with Channels for High-Pressure Coolant Carrying  
TANG-GRIP Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	OAL	OAH	LH	HBH	CNT	CUTDIA	Insert
TGTR/L 12.7-2JHP	.071	.100	.500	.500	.068	3.940	.80	.730	.12	UNF 5/16-24 <sup>(3)</sup>	.940	TAG 2
TGTR/L 1616-2JHP	.071	.098	.630	.630	.068	4.724	.85	1.004	-	UNF 5/16-24	1.380	TAG 2
TGTR/L 19-2JHP	.071	.100	.750	.750	.068	4.720	1.00	1.004	-	G 1/8-28	1.400	TAG 2
TGTR/L 1616-3JHP	.110	.138	.630	.630	.098	4.724	.96	1.004	.12	UNF 5/16-24	1.380	TAG 3
TGTR/L 19-3JHP	.110	.138	.750	.750	.100	4.724	1.00	1.378	-	G 1/8-28	2.100	TAG 3
TGTR/L 25.4-3JHP	.110	.138	1.000	1.000	.100	5.906	1.30	1.378	-	G 1/8-28	2.200	TAG 3
TGTR/L 19-4JHP	.146	.177	.750	.750	.134	4.724	1.00	1.378	-	G 1/8-28	2.100	TAG 4
TGTR/L 25.4-4JHP	.146	.177	1.000	1.000	.134	5.906	1.30	1.378	-	G 1/8-28	2.200	TAG 4

• For user guide and accessories, see pages 594-603, 489-490

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Use M5 G1/8 adapter.

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**Flow Rate vs. Pressure**

Designation	1000 psi Flow Rate (GPM)	1450 psi Flow Rate (GPM)	2030 psi Flow Rate (GPM)
TGTR/L...-2JHP	.5-1.06	1.0-1.6	1.6-2.1
TGTR/L...-3JHP	1.8-2.4	2.4-3.0	3.0-3.4
TGTR/L...-4JHP	1.8-2.4	2.4-3.0	3.0-3.4

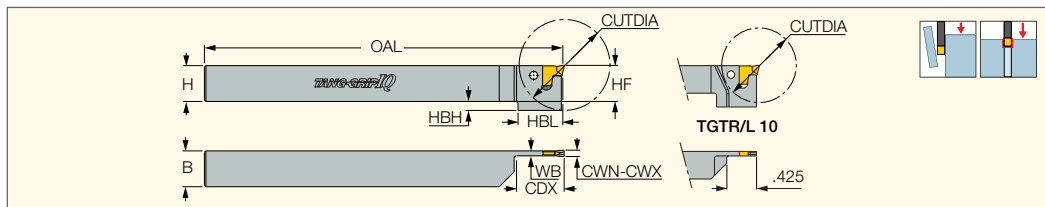
**Spare Parts**

Designation					
TGTR/L 12.7-2JHP	ETG 2-SH-T*				HW 5/32"
TGTR/L 1616-2JHP	ETG 2"				HW 5/32"
TGTR/L 19-2JHP	ETG 2"	PLG G1/8 TL360			HW 5.0
TGTR/L 1616-3JHP	ETG 3-4-SH*				HW 5/32"
TGTR/L 19-3JHP	ETG 3-4-SH*	PLG G1/8 TL360			HW 5.0
TGTR/L 25.4-3JHP	ETG 3-4-SH*	PLG G1/8 TL360			HW 5.0
TGTR/L 19-4JHP	ETG 3-4-SH*	PLG G1/8 TL360			HW 5.0
TGTR/L 25.4-4JHP	ETG 3-4-SH*	PLG G1/8 TL360			HW 5.0

\* Optional, should be ordered separately



**TGTR/L-2T.SH-L120**  
Integral Shank Short-Head  
TANG-GRIP Toolholders for  
Parting and Grooving



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	HF	B	WB	OAL	HBL	HBH	CDX <sup>(3)</sup>	CUTDIA <sup>(4)</sup>	
TGTR/L 1010-2T10SH-L120-IQ	.071	.098	.394	.398	.394	.065	4.724	.591	.20	.394	1.020	ETG 2-SH-T*
TGTR/L 1212-2T15SH-L120-IQ	.071	.098	.472	.476	.472	.065	4.724	.591	.12	.591	1.180	ETG 2-SH-T*
TGTR/L 1616-2T18SH-L120-IQ	.071	.098	.630	.634	.630	.065	4.724	-	-	.709	1.420	ETG 2-SH-T*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Cutting depth maximum

<sup>(4)</sup> For parting

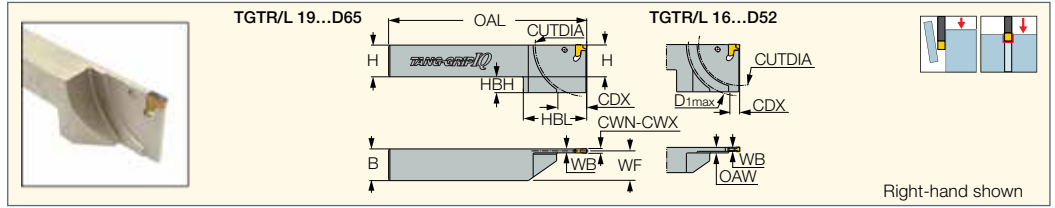
\* Optional, should be ordered separately


**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562) • TAG N-UT (565)

• TAG R/L-C (562) • TAG R/L-J/JS (564)

**TGTR/L-D**

Integral Shank TANG-GRIP  
Toolholders with Reinforced  
Blades for Parting and Grooving  
Mainly Sub-Spindle Machines



Designation	CW	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	H	B	WB	WB_2	OAL	HBL	WF	HBH	CUTDIA	D1 <sub>max</sub>	CDX	Insert	
<b>TGTR/L 1616-2-D52-IQ</b>	.079	.071	.094	.630	.630	.065	.138	4.921	1.575	.598	.55	2.050	2.56	.236	TAG 2	ETG 2*
<b>TGTR/L 1616-3-D52-IQ</b>	.118	.110	.138	.630	.630	.098	.138	4.921	1.575	.583	.55	2.050	2.56	.236	TAG 3	ETG 3-4-SH*

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

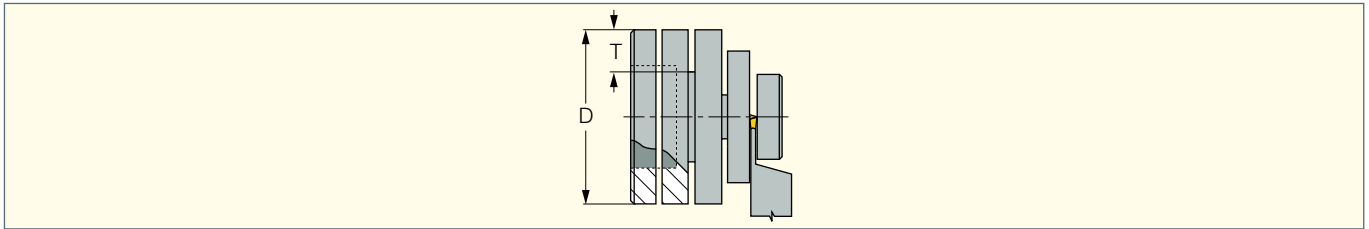
\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**Depth Capacity TGTR/L-D**

Table determining depth of cut as function of workpiece diameter

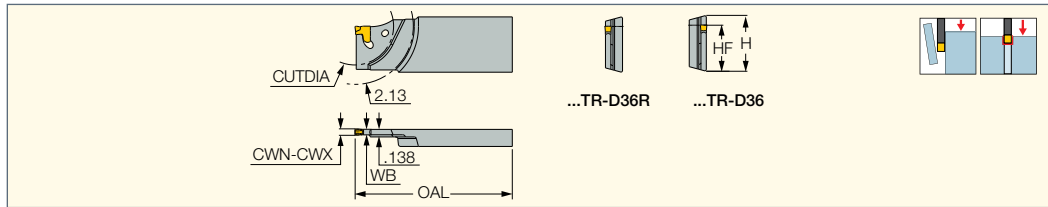



Designation	Tmax										
<b>TGTR/L 1616-2-D52-IQ</b>	.78	.98	.75	.63	.59	.51	.43	.39	.35	.31	
<b>TGTR/L 1616-3-D52-IQ</b>	.78	.98	.79	.67	.59	.51	.43	.39	.35	.31	

D →	1.57	1.97	2.36	2.75	3.15	3.94	4.72	5.90	7.87	11.8
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**TANG-GRIP**  
PARTING LINE**TGFHL-TR**

Reinforced Blades for TRAUB and Index Machines Carrying TANG-GRIP Tangentially Clamped Inserts



Designation	H	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	OAL	HF	CUTDIA	Insert	
<b>TGFHL 26-2TR-D36</b>	1.024	.071	.094	.065	4.331	.843	1.420	TAG 2	ETG 2*
<b>TGFHL 26-2TR-D36R</b>	1.024	.071	.094	.065	4.331	.843	1.420	TAG 2	ETG 2*
<b>TGFHL 26-3TR-D36</b>	1.024	.110	.138	.098	4.331	.843	1.420	TAG 3	ETG 3-4-SH*
<b>TGFHL 26-3TR-D36R</b>	1.024	.110	.138	.098	4.331	.843	1.420	TAG 3	ETG 3-4-SH*

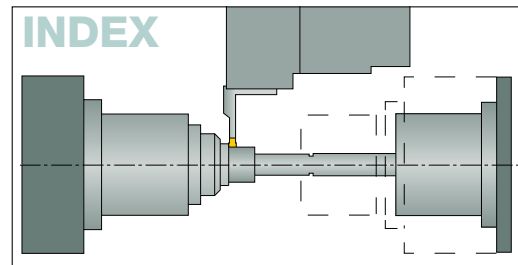
• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width<sup>(2)</sup> Maximum cutting width

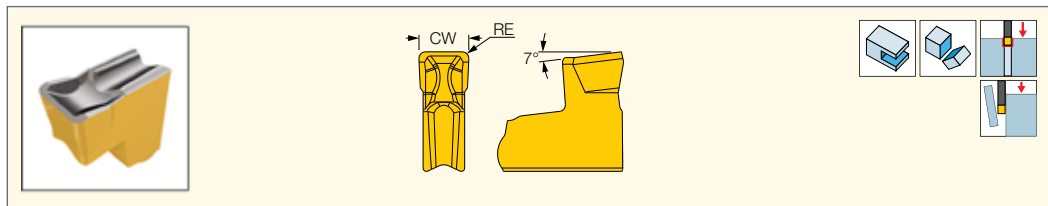
\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** SGTBR/L (673) • SGTBU/SGTBN (672) • UBHCR/L (673)**TANG-FGRIP**  
HIGH FEED PARTING**TANG-GRIP**  
PARTING LINE**TAG N-HF**

Single-Ended Inserts for High Feed Parting and Grooving, Hard Materials and Tough Applications



Designation	Dimensions			Tough ↔ Hard				Recommended Machining Data
	CW	CWTOL <sup>(1)</sup>	RE	IC880	IC1030	IC1010	IC808	
<b>TAG N3HF</b>	.118	.00157	.0157	●	●	●	●	f groove (IPR) .0098-.0138
<b>TAG N4HF</b>	.157	.00157	.0197	●	●	●	●	.0118-.0157
<b>TAG N5HF</b>	.197	.00157	.0197	●	●	●	●	.0118-.0157

• For cutting speed recommendations see pages 600-601

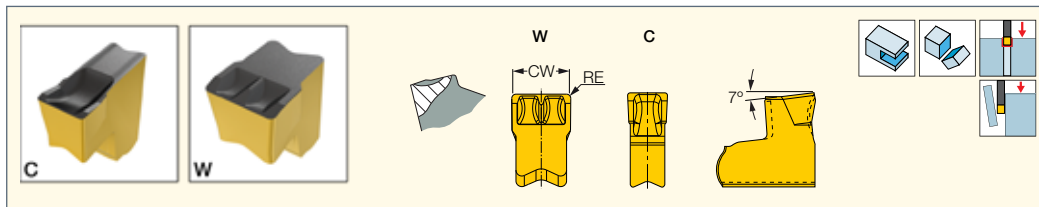
<sup>(1)</sup> Cutting width tolerance (+/-)**For tools, see pages:** ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548) • TGFH/R/L (356)

• TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-D (559) • TGTR/L-IQ (557) • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TAG N-C/W/M**

Single-Ended Inserts for Parting, Grooving and Slitting Bars, Hard Materials and Tough Applications



Designation	Dimensions			Tough ↔ Hard										Recommended Machining Data	
	CW	CWTOL <sup>(3)</sup>	RE	IC830	IC928	IC1030	IC5400	IC1010	IC808	IC908	IC30N	IC20	IC807		f groove (IPR)
TAG N1.4C	.055	.0016	.0063											•	.0016-.0039
TAG N1.6C	.063	.0016	.0063	•						•					.0016-.0055
TAG N2C	.079	.0016	.0079	•		•	•	•		•		•			.0020-.0063
TAG N2.4C	.094	.0016	.0063	•						•					.0024-.0071
TAG N3CB <sup>(1)</sup>	.118	.0016	.0138	•						•					.0047-.0118
TAG N3C	.120	.0016	.0079	•	•	•	•	•		•	•	•	•		.0039-.0098
TAG N3M <sup>(2)</sup>	.120	.0016	.0079	•							•				.0024-.0071
TAG N3W	.120	.0016	.0079	•							•				.0039-.0098
TAG N4C	.157	.0016	.0094	•	•	•	•	•		•			•		.0039-.0118
TAG N4CB <sup>(1)</sup>	.157	.0016	.0157	•						•					.0039-.0130
TAG N4M <sup>(2)</sup>	.157	.0016	.0094	•							•				.0024-.0079
TAG N4W	.157	.0016	.0094	•							•				.0039-.0118
TAG N4.8C	.189	.0016	.0118	•						•					.0039-.0138
TAG N5C	.199	.0016	.0098	•						•		•			.0039-.0138
TAG N6.3C	.248	.0016	.0138	•						•					.0059-.0157
TAG N7W	.276	.0031	.0197	•						•					.0071-.0157
TAG N8C	.315	.0039	.0197	•						•					.0079-.0276
TAG N9.5W	.374	.0020	.0197	•						•					.0087-.0315
TAG N9.5C	.374	.0039	.0197	•						•					.0098-.0315
TAG N12.7W	.500	.0039	.0335	•						•					.0118-.0315

• Feed values for grade IC20 should be decreased by 50% • For cutting speed recommendations see pages 600-601

<sup>(1)</sup> Larger corner radii for interrupted cut and high feed applications

<sup>(2)</sup> Similar to C-type, but with a modified edge; improved chip control at medium feeds

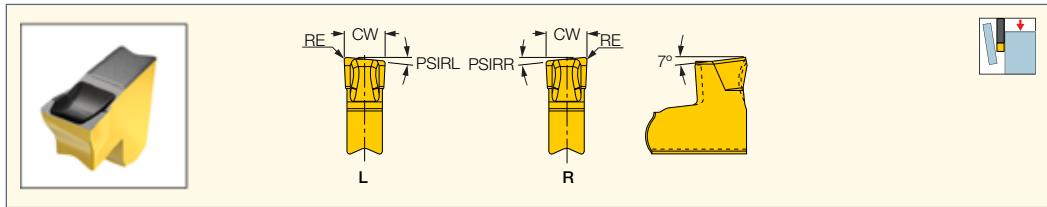
<sup>(3)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** ADMP D45 (576) • Anti-Vibration Blades (293) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556)  
 • TGAD (552) • TGAD RE/LE-JHP (552) • TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGBHR/L (354) • TGBHR/L-JHP (355)  
 • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548) • TGFH/R/L (356) • TGFH-L-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556)  
 • TGSU (550) • TGTR/L-2T..SH-L120 (558) • TGTR/L-D (559) • TGTR/L-IQ (557)  
 • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TANG-GRIP**  
PARTING LINE

**TAG R/L-C**

Single-Ended Inserts for Parting Bars, Hard Materials and Tough Parting Applications



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data  f groove (IPR)
	CW	CWTOL <sup>(1)</sup>	RE	PSIRR	PSIRL	IC830	IC928	IC808	IC908	IC30N	
TAG L2C-6D	.081	.0039	.008	-	6.0	●		●			.0016-.0047
TAG R2C-6D	.081	.0039	.008	6.0	-	●		●			.0016-.0047
TAG R2.4C-8D	.094	.0039	.006	8.0	-			●			.0020-.0051
TAG L3C-6D	.118	.0039	.008	-	6.0	●	●	●	●		.0031-.0071
TAG R3C-6D	.118	.0039	.008	6.0	-	●	●	●	●		.0031-.0071
TAG R3C-8D	.118	.0039	.008	8.0	-					●	.0024-.0063
TAG L3C-15D	.118	.0039	.008	-	15.0	●	●	●	●		.0031-.0063
TAG R3C-15D	.118	.0039	.008	15.0	-	●	●	●	●		.0031-.0063
TAG L4C-4D	.159	.0039	.009	-	4.0	●		●			.0031-.0079
TAG R4C-4D	.159	.0039	.009	4.0	-	●	●	●	●		.0031-.0079
TAG L5C-4D	.199	.0039	.010	-	4.0	●		●			.0039-.0098
TAG R5C-4D	.199	.0039	.010	4.0	-	●		●			.0039-.0098
TAG L6.3C-4D	.250	.0039	.014	-	4.0	●		●			.0047-.0118
TAG R6.3C-4D	.250	.0039	.014	4.0	-	●		●			.0047-.0118

• For cutting speed recommendations and user guide, see pages 594-603

(1) Cutting width tolerance (+/-)

For tools, see pages: ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGBHR/L (354) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548)

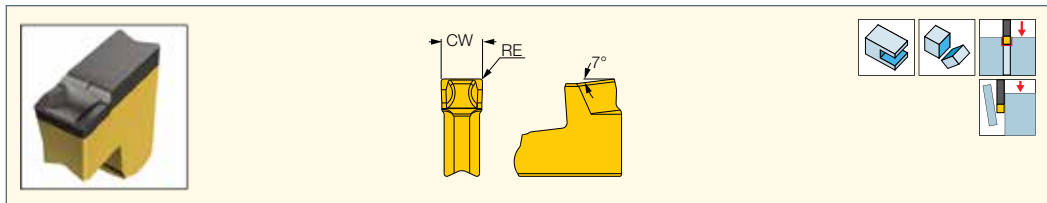
• TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T..SH-L120 (558)

• TGTR/L-D (559) • TGTR/L-IQ (557) • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TANG-GRIP**  
PARTING LINE

**TAG N-MF**

Single-Ended Inserts for Parting Grooving and Slitting Stainless and Alloy Steel at Medium Feed



Designation	Dimensions			Tough ↔ Hard						Recommended Machining Data  f groove (IPR)
	CW	CWTOL <sup>(1)</sup>	RE	IC830	IC1030	IC5400	IC1010	IC808	IC807	
TAG N2MF	.079	.0020	.008	●	●	●	●	●	●	.0016-.0059
TAG N3MF	.120	.0020	.008	●	●	●	●	●	●	.0024-.0071
TAG N4MF	.157	.0020	.010	●	●	●	●	●	●	.0027-.0087
TAG N5MF	.197	.0020	.010	●				●		.0031-.0098

• For cutting speed recommendations and user guide, see pages 594-603

(1) Cutting width tolerance (+/-)

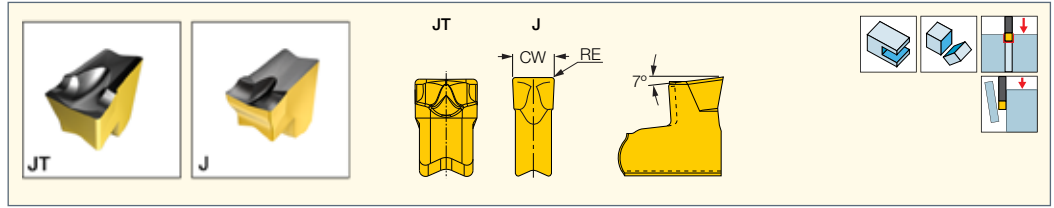
For tools, see pages: ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548) • TGFH/R/L (356)

• TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T..SH-L120 (558) • TGTR/L-D (559) • TGTR/L-IQ (557)

• TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TAG N-J/JS/JT**  
Single-Ended Inserts for  
Parting, Grooving and  
Slitting Soft Materials



Designation	Dimensions				Tough ↔ Hard									Recommended Machining Data f groove (IPR)
	CW	RE	CWTOL <sup>(2)</sup>	RETOL <sup>(3)</sup>	IC830	IC928	IC1030	IC5400	IC1010	IC808	IC908	IC20	IC807	
TAG N1.4J	.055	.0063	.0016	.0012	●					●			●	
TAG N1.6J	.063	.0063	.0016	.0012	●					●			●	
TAG N2JS <sup>(1)</sup>	.079	.0008	.0016	.0008	●					●			●	
TAG N2J	.079	.0079	.0016	.0016	●		●	●	●	●		●	●	
TAG N2JT	.079	.0079	.0016	.0016	●	●		●		●	●		●	
TAG N3JS <sup>(1)</sup>	.120	.0008	.0016	.0008	●					●			●	
TAG N3J	.120	.0079	.0016	.0012	●	●	●	●	●	●	●	●	●	
TAG N3JT	.120	.0079	.0016	.0012	●			●		●	●		●	
TAG N3.2JT	.128	.0079	.0016	.0012	●			●		●	●		●	
TAG N4J	.157	.0094	.0016	.0012	●	●	●	●	●	●	●		●	
TAG N4JT	.159	.0094	.0016	.0012	●			●		●	●		●	
TAG N5J	.199	.0098	.0016	.0016	●				●	●			●	
TAG N5JT	.199	.0098	.0016	.0016	●					●	●		●	
TAG N6.3J	.250	.0134	.0016	.0016	●					●			●	
TAG N6.3JT	.250	.0134	.0016	.0016	●					●	●		●	
TAG N7JT	.278	.0197	.0016	.0016	●					●			●	

• JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge; most suitable for soft materials at low to medium feeds.

• For cutting speed recommendations, see pages 600-601

<sup>(1)</sup> Sharp corners cannot be used on TGSF slitting cutters

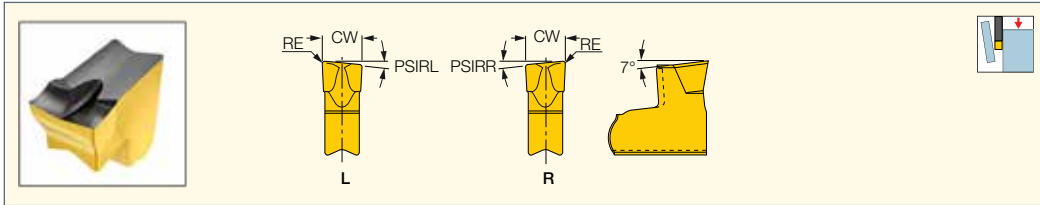
<sup>(2)</sup> Cutting width tolerance (+/-)

<sup>(3)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552) • TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGBHR/L (354) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548) • TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T..SH-L120 (558) • TGTR/L-D (559) • TGTR/L-IQ (557) • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TANG-GRIP**  
PARTING LINE

**TAG R/L-J/JS**

 TANG-GRIP Inserts for Parting  
Soft Materials, Tubes, Small  
Diameters and Thin-Walled Parts


Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data
	CW	RE	PSIRL	PSIRR	IC830	IC928	IC808	IC908	IC807	
TAG L1.4J-8D	.055	.0063	8.0	-	●		●		●	.0012-.0031
TAG R1.4J-8D	.055	.0063	-	8.0	●		●		●	.0012-.0031
TAG L1.4JS-10D <sup>(1)</sup>	.055	.0008	10.0	-	●		●		●	.0008-.0024
TAG R1.4JS-10D <sup>(1)</sup>	.055	.0008	-	10.0	●		●		●	.0008-.0024
TAG L2J-6D	.079	.0079	6.0	-	●		●			.0012-.0039
TAG R2J-6D	.079	.0079	-	6.0	●		●			.0012-.0039
TAG L2JS-6D <sup>(1)</sup>	.079	.0008	6.0	-	●		●			.0008-.0031
TAG R2JS-6D <sup>(1)</sup>	.079	.0008	-	6.0	●		●			.0008-.0031
TAG L2J-15D	.079	.0079	15.0	-	●		●			.0012-.0031
TAG R2J-15D	.079	.0079	-	15.0	●		●			.0012-.0031
TAG L2JS-15D <sup>(1)</sup>	.079	.0008	15.0	-	●		●			.0008-.0024
TAG R2JS-15D <sup>(1)</sup>	.079	.0008	-	15.0	●		●			.0008-.0024
TAG L3J-6D	.118	.0079	6.0	-	●	●	●	●		.0016-.0055
TAG R3J-6D	.118	.0079	-	6.0	●	●	●	●		.0016-.0055
TAG L3JS-6D <sup>(1)</sup>	.118	.0008	6.0	-	●		●			.0012-.0039
TAG R3JS-6D <sup>(1)</sup>	.118	.0008	-	6.0	●		●			.0012-.0039
TAG L3J-15D	.118	.0079	15.0	-	●	●	●	●		.0016-.0047
TAG R3J-15D	.118	.0079	-	15.0	●	●	●	●		.0016-.0047
TAG L3JS-15D <sup>(1)</sup>	.118	.0008	15.0	-	●		●			.0012-.0031
TAG R3JS-15D <sup>(1)</sup>	.118	.0008	-	15.0	●		●			.0012-.0031
TAG L4J-4D	.157	.0094	4.0	-	●		●			.0016-.0059
TAG R4J-4D	.157	.0094	-	4.0	●	●	●	●		.0016-.0059
TAG L5J-4D	.199	.0098	4.0	-	●		●			.0020-.0071
TAG R5J-4D	.199	.0098	-	4.0	●		●			.0020-.0071
TAG L6.3J-4D	.250	.0138	4.0	-	●		●			.0020-.0079
TAG R6.3J-4D	.250	.0138	-	4.0	●		●			.0020-.0079

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Sharp corners cannot be used on TGSF slitting cutters

**For tools, see pages:** ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

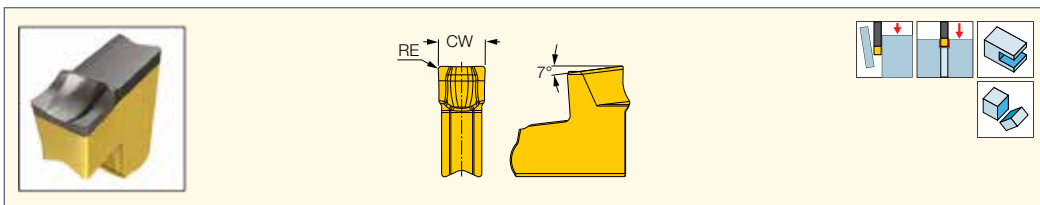
• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGBHR/L (354) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548)

• TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T.SH-L120 (558)

• TGTR/L-D (559) • TGTR/L-IQ (557) • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TANG-GRIP**  
PARTING LINE

**TAG N-LF**

 Single-Ended Inserts for  
Parting, Grooving and  
Slitting Stainless Steel


Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	IC830	IC1030	IC5400	IC1010	IC808	
TAG N2LF	.079	.008	.0016	.0012	●	●	●	●	●	.0012-.0031
TAG N3LF	.120	.008	.0016	.0012	●	●	●	●	●	.0016-.0039

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGBHR/L-JHP (355) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548)

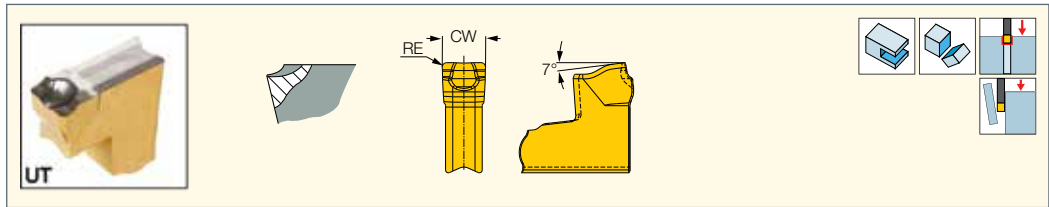
• TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T.SH-L120 (558)

• TGTR/L-D (559) • TGTR/L-IQ (557) • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)



**TAG N-UT**

Single-Sided Inserts for Parting, Grooving & Slitting at Low Feeds on Cr-Ni Alloys, Ductile Materials & Low Carbon Steel



Designation	Dimensions				Tough ← Hard			Recommended Machining Data  f groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	IC830	IC808	IC908	
<b>TAG N2UT</b>	.079	.0079	.0016	.0016	•	•	•	.0012-.0039
<b>TAG N3UT</b>	.118	.0118	.0016	.0016	•	•		.0016-.0047
<b>TAG N4UT</b>	.157	.0118	.0016	.0016			•	.0020-.0059
<b>TAG N5UT</b>	.197	.0118	.0016	.0016			•	.0020-.0071
<b>TAG N6UT</b>	.236	.0335	.0016	.0016			•	.0024-.0087

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGBHR/L (354) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548)

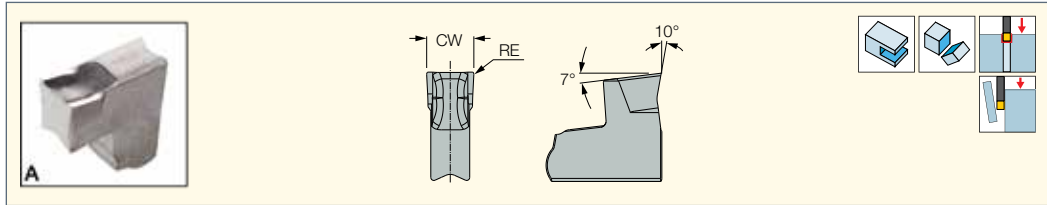
• TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T..SH-L120 (558)

• TGTR/L-D (559) • TGTR/L-IQ (557) • TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)



**TANG-GRIP**  
 PARTING LINE

**TAG N-A**

 Single-Ended Inserts for Parting,  
 Grooving and Slitting Aluminum


Designation	Dimensions				IC20	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>		f groove (IPR)
<b>TAG N2A</b>	.079	.008	.0016	.0016	●	.0008-.0039
<b>TAG N3A</b>	.121	.008	.0016	.0016	●	.0012-.0055
<b>TAG N4A</b>	.157	.009	.0016	.0012	●	.0012-.0063

• For cutting speed recommendations, see pages 600-601

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** ADMP D45 (576) • TAGPAD-JHP (554) • TAGPAD-XL-JHP (555) • TANMM (556) • TGAD (552) • TGAD RE/LE-JHP (552)

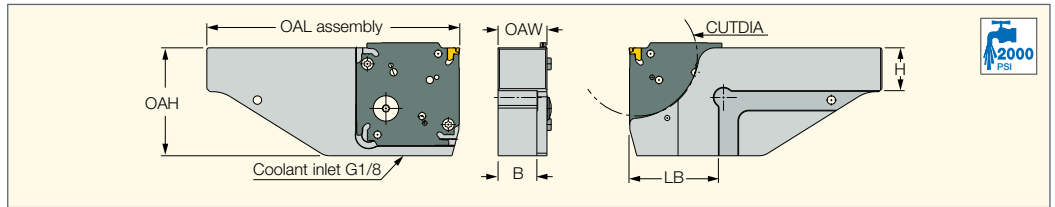
• TGAQ (570) • TGAQ-ECD (JET-CROWN) (573) • TGAQ-JHP (569) • TGFH-JHP (547) • TGFH-MB (551) • TGFH-S (548) • TGFH/R/L (356)

• TGFHL-TR (560) • TGFHR/L (549) • TGFHR/L-JHP (549) • TGFS (556) • TGSU (550) • TGTR/L-2T..SH-L120 (558) • TGTR/L-D (559) • TGTR/L-IQ (557)

• TGTR/L-IQ-2Z (557) • TGTR/L-JHP (558)

**TGTBQ-JHP**

Tool Blocks for Square TANG-F-GRIP and DO-F-GRIP Parting and Grooving Adapters for High-Pressure Coolant

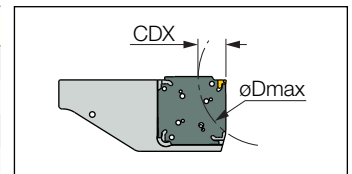


Designation	OAH	H	B	OAW	OAL	LB	CUTDIA
TGTBQ 19L-D52-JHP	1.970	.750	.772	1.008	4.803	1.339	2.047
TGTBQ 19R-D52-JHP	1.970	.750	.772	1.008	4.803	1.339	2.047
TGTBQ 25.4L-D52-JHP	1.970	1.000	1.024	1.260	5.197	1.339	2.047
TGTBQ 25.4R-D52-JHP	1.970	1.000	1.024	1.260	5.197	1.339	2.047
TGTBQ 19L-D82-JHP	2.520	.750	.772	1.008	5.512	2.087	3.228
TGTBQ 19R-D82-JHP	2.520	.750	.772	1.008	5.512	2.087	3.228
TGTBQ 25.4L-D82-JHP	2.520	1.000	1.024	1.260	5.906	2.087	3.228
TGTBQ 25.4R-D82-JHP	2.520	1.000	1.024	1.260	5.906	2.087	3.228
TGTBQ 31.8L-D82-JHP	2.520	1.250	1.280	1.516	5.925	2.106	3.228
TGTBQ 31.8R-D82-JHP	2.520	1.250	1.280	1.516	5.925	2.106	3.228
TGTBQ 25.4L-D120-JHP	3.740	1.000	1.024	1.260	6.496	2.638	4.724
TGTBQ 25.4R-D120-JHP	3.740	1.000	1.024	1.260	6.496	2.638	4.724
TGTBQ 31.8L-D120-JHP	3.740	1.250	1.280	1.516	6.496	2.638	4.724
TGTBQ 31.8R-D120-JHP	3.740	1.250	1.280	1.516	6.496	2.638	4.724
TGTBQ 25.4L-D160-JHP	4.210	1.000	1.024	1.260	7.500	3.642	6.299
TGTBQ 25.4R-D160-JHP	4.210	1.000	1.024	1.260	7.500	3.642	6.299
TGTBQ 31.8L-D160-JHP	4.210	1.250	1.280	1.516	7.500	3.642	6.299
TGTBQ 31.8R-D160-JHP	4.210	1.250	1.280	1.516	7.500	3.642	6.299
TGTBQ 38.1L-D160-JHP	4.210	1.500	1.520	1.756	7.500	3.642	6.299
TGTBQ 38.1R-D160-JHP	4.210	1.500	1.520	1.756	7.500	3.642	6.299

For tools, see pages: DGAQ (571) • DGAQ-JHP (571) • TGAQ (570) • TGAQ-JHP (569)

Table for determining depth of cut for grooving as function of workpiece diameter.

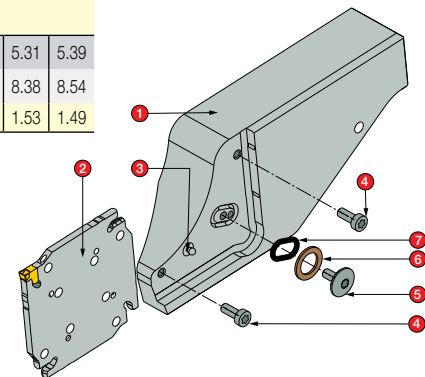
Designation	øDmax																	
	2.08	2.12	2.16	2.20	2.24	2.32	2.40	2.51	2.63	2.79	2.95	3.18	3.46	3.77	4.21	4.80	5.55	6.65
TGTBQ...D52-JHP	2.08	2.12	2.16	2.20	2.24	2.32	2.40	2.51	2.63	2.79	2.95	3.18	3.46	3.77	4.21	4.80	5.55	6.65
TGTBQ...D82-JHP	4.21	4.33	4.48	4.68	4.88	5.11	5.39	5.70	6.06	6.49	7.00	7.63	8.38	9.33	10.51	12.12	14.29	17.44
TGTBQ...D120-JHP	7.95	8.26	8.62	9.01	9.44	9.96	10.51	11.14	11.88	12.75	13.74	14.96	16.41	18.18	20.39	23.30	27.12	32.55
TGTBQ...D160-JHP	13.58	14.21	14.84	15.59	16.45	17.36	18.42	19.64	20.62	22.67	24.56	26.85	29.64	33.07	37.44	43.14	50.94	62.32
CDX	.82	.78	.74	.70	.66	.62	.58	.54	.50	.46	.42	.38	.35	.31	.27	.23	.19	.15



Designation	øDmax															
	3.26	3.26	3.30	3.30	3.34	3.38	3.42	3.46	3.50	3.58	3.62	3.70	3.77	3.85	3.97	4.05
TGTBQ...D82-JHP	3.26	3.26	3.30	3.30	3.34	3.38	3.42	3.46	3.50	3.58	3.62	3.70	3.77	3.85	3.97	4.05
TGTBQ...D120-JHP	5.47	5.55	5.63	5.71	5.82	5.90	6.02	6.14	6.30	6.45	6.61	6.77	6.96	7.20	7.40	7.67
TGTBQ...D160-JHP	8.66	8.85	9.01	9.21	9.40	9.64	9.88	10.11	10.39	10.66	10.98	11.33	11.73	12.12	12.59	13.07
CDX	1.45	1.41	1.37	1.33	1.29	1.26	1.22	1.18	1.14	1.10	1.06	1.02	.98	.94	.90	.86

Designation	øDmax																
	4.76	4.80	4.84	4.84	4.88	4.92	4.92	4.96	5.00	5.03	5.07	5.11	5.15	5.19	5.27	5.31	5.39
TGTBQ...D120-JHP	4.76	4.80	4.84	4.84	4.88	4.92	4.92	4.96	5.00	5.03	5.07	5.11	5.15	5.19	5.27	5.31	5.39
TGTBQ...D160-JHP	6.73	6.96	7.12	7.20	7.24	7.32	7.40	7.48	7.59	7.67	7.79	7.87	7.99	8.11	8.23	8.38	8.54
CDX	2.20-2.36	2.08-2.16	2.04	2.00	1.96	1.92	1.88	1.85	1.81	1.77	1.73	1.69	1.65	1.61	1.57	1.53	1.49

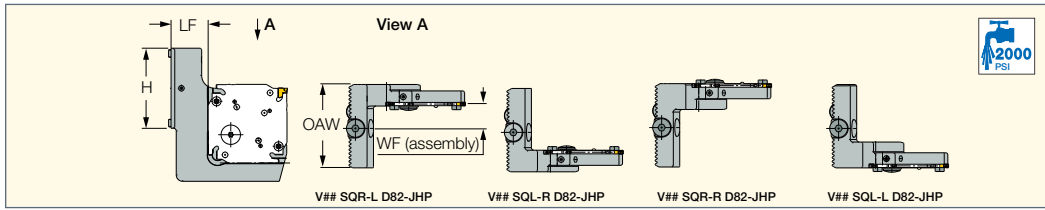
1. **Block:** TGTBQ...D...
2. **Blade:** T/DGAQ...
3. **Locating Pin:** Side thrust Pin .118"
4. **Screw:** SR M4x10 ISO 14580
5. **Screw:** SR M4x9-Seal-JHP
6. **Seal washer:** CSW 1/8"
7. **O-ring:** O-ring 10x2 NBR



**Spare Parts**

Designation							
TGTBQ-JHP	SR M4X9-SEAL-JHP	SIDE THRUST PIN 3mm	JHP COPPER SEAL 1/8"	SR ISO 14580 M4X10	SW6-SD	BLD T20/S7	O-RING 10X2 NBR

**V## SQ#-#-D82-JHP**  
Intermediate Holders for  
TANG-F-GRIP and DO-F-GRIP  
Square Type D82 Adapters  
Designed for Modular  
Tooling Systems



Designation	H	LF	OAW	WF <sup>(1)</sup>
V60 SQL-L-D82-JHP	2.441	1.366	2.539	1.140
V60 SQL-R-D82-JHP	2.441	1.366	2.539	.604
V60 SQR-L-D82-JHP	2.441	1.366	2.539	.742
V60 SQR-R-D82-JHP	2.441	1.366	2.539	1.278
V85 SQL-L-D82-JHP	3.268	1.366	3.346	1.612
V85 SQL-R-D82-JHP	3.268	1.366	3.346	1.077
V85 SQR-L-D82-JHP	3.268	1.366	3.346	1.077
V85 SQR-R-D82-JHP	3.268	1.366	3.346	1.612

<sup>(1)</sup> When .118" width insert is used.

For tools, see pages: DGAQ (571) • DGAQ-JHP (571) • TGAQ (570) • TGAQ-JHP (569)

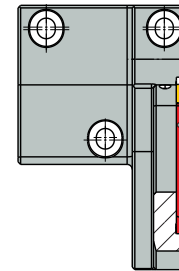
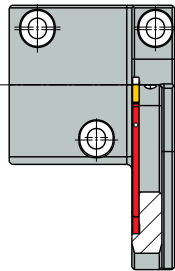
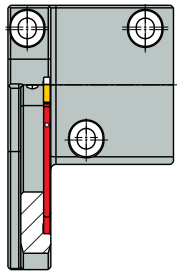
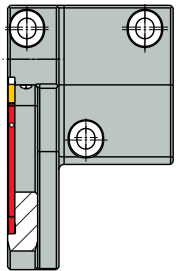
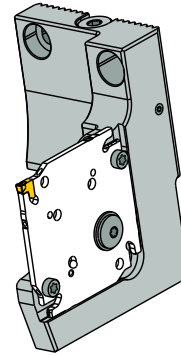
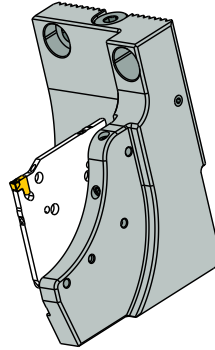
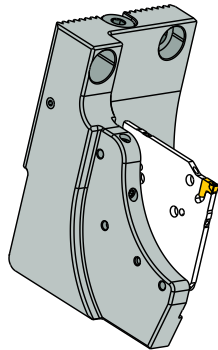
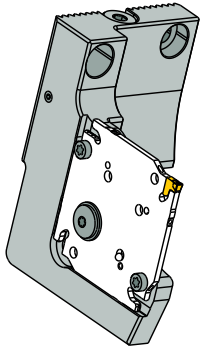
**Identification Key**

V60 SQL-L-D82-JHP

V60 SQL-R-D82-JHP

V60 SQR-L-D82-JHP

V60 SQR-R-D82-JHP



L- Holder (prism) orientation  
L- Pocket side

L- Holder (prism) orientation  
R- Pocket side

R- Holder (prism) orientation  
L- Pocket side

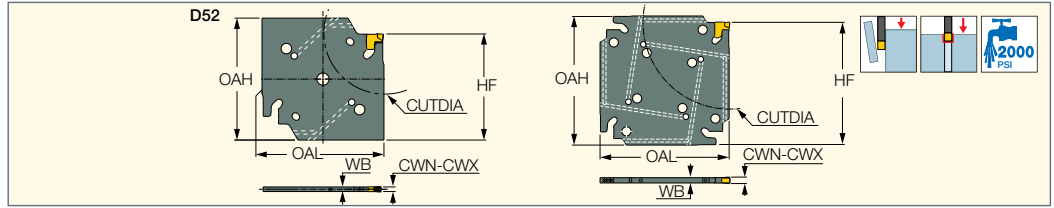
R- Holder (prism) orientation  
R- Pocket side

**Spare Parts**

Designation					
V## SQ#-#-D82-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	O-RING 10X2 NBR	SIDE THRUST PIN 3mm	SR ISO 14580 M4X10

**TGAQ-JHP**

Parting and Grooving Square Adapters with Internal Coolant Holes Carrying TANG-GRIP Tangentially Clamped Inserts



Designation	OAL	OAH	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	CUTDIA <sup>(3)</sup>	MIID <sup>(4)</sup>	CSP <sup>(5)</sup>
TGAQ D52-2-2Z-JHP	1.968	1.968	.071	.098	.065	1.713	2.047	TAG 2	1
TGAQ D52-3-2Z-JHP	1.968	1.968	.110	.138	.098	1.713	2.047	TAG 3	1
TGAQ D52-4-2Z-JHP	1.968	1.968	.146	.177	.134	1.713	2.047	TAG 4	1
TGAQ D82-2-4Z-JHP	2.402	2.402	.071	.098	.065	2.283	3.228	TAG 2	1
TGAQ D82-3-4Z-JHP	2.402	2.402	.110	.138	.098	2.283	3.228	TAG 3	1
TGAQ D82-4-4Z-JHP	2.402	2.402	.146	.177	.134	2.283	3.228	TAG 4	1
TGAQ D120-3-4Z-JHP	3.563	3.563	.110	.138	.098	3.307	4.724	TAG 3	1
TGAQ D120-4-4Z-JHP	3.563	3.563	.146	.177	.134	3.307	4.724	TAG 4	1
TGAQ D120-5-4Z-JHP	3.563	3.563	.185	.217	.157	3.307	4.724	TAG 5	1
TGAQ D160-3-4Z-JHP	3.937	3.937	.110	.138	.098	3.819	6.299	TAG 3	1
TGAQ D160-4-4Z-JHP	3.937	3.937	.146	.177	.134	3.819	6.299	TAG 4	1
TGAQ D160-5-4Z-JHP	3.937	3.937	.185	.217	.157	3.819	6.299	TAG 5	1

• Suitable for all TANG-GRIP inserts

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Maximum diameter for parting

<sup>(4)</sup> Master insert identification

<sup>(5)</sup> 0 - Without coolant supply, 1 - With coolant supply

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)




• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** TGTBQ-JHP (567) • V## SQ#-#-D82-JHP (568)

**Flow Rate vs. Pressure**

Designation	1000 PSI	1450 PSI	2000 PSI
	Flow Rate (GPM)	Flow Rate (GPM)	Flow Rate (GPM)
TGAQ D.../-2.../-3...-JHP	1.1-1.9	1.3-2.1	1.6-2.4
TGAQ D.../-4.../-5...-JHP	1.6-1.9	1.9-2.1	2.1-2.4

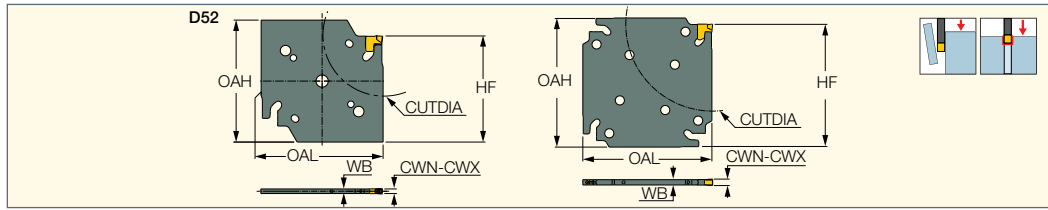
**Spare Parts**

Designation			
TGAQ D52-2-2Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 2*
TGAQ D52-3-2Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D52-4-2Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D82-2-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 2*
TGAQ D82-3-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D82-4-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D120-3-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D120-4-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D120-5-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 5-7*
TGAQ D160-3-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D160-4-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 3-4-SH*
TGAQ D160-5-4Z-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	ETG 5-7*

\* Optional, should be ordered separately

**TGAQ**

Parting and Grooving Square Adapters Carrying TANG-GRIP Tangentially Clamped Inserts



Designation	OAL	OAH	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	CUTDIA <sup>(3)</sup>	MIID <sup>(4)</sup>	CSP <sup>(5)</sup>
TGAQ D52-2-2Z	1.968	1.968	.071	.098	.065	1.713	2.047	TAG 2	0
TGAQ D52-3-2Z	1.968	1.968	.110	.138	.098	1.713	2.047	TAG 3	0
TGAQ D52-4-2Z	1.968	1.968	.146	.177	.134	1.713	2.047	TAG 4	0
TGAQ D82-2-4Z	2.402	2.402	.071	.098	.065	2.283	3.228	TAG 2	0
TGAQ D82-3-4Z	2.402	2.402	.110	.138	.098	2.283	3.228	TAG 3	0
TGAQ D82-4-4Z	2.402	2.402	.146	.177	.134	2.283	3.228	TAG 4	0
TGAQ D120-3-4Z	3.563	3.563	.110	.138	.098	3.307	4.724	TAG 3	0
TGAQ D120-4-4Z	3.563	3.563	.146	.177	.134	3.307	4.724	TAG 4	0
TGAQ D120-5-4Z	3.563	3.563	.185	.217	.157	3.307	4.724	TAG 5	0
TGAQ D160-3-4Z	3.937	3.937	.110	.138	.098	3.819	6.299	TAG 3	0
TGAQ D160-4-4Z	3.937	3.937	.146	.177	.134	3.819	6.299	TAG 4	0
TGAQ D160-5-4Z	3.937	3.937	.185	.217	.157	3.819	6.299	TAG 5	0

• Suitable for all TANG-GRIP inserts

(1) Minimum cutting width

(2) Maximum cutting width

(3) Maximum diameter for parting

(4) Master insert identification



(5) 0 - Without coolant supply, 1 - With coolant supply

For inserts, see pages: TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

For holders, see pages: TGTBQ-JHP (567) • V## SQ#-#-D82-JHP (568)

**Spare Parts**

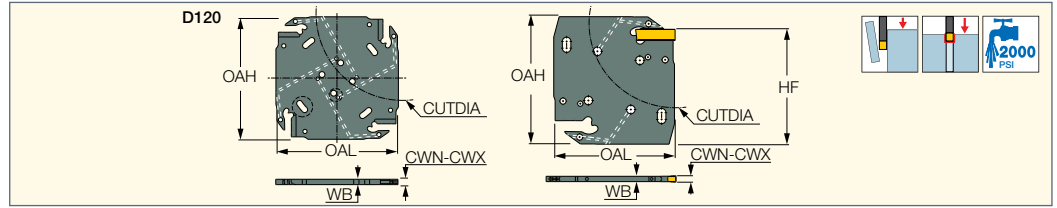
Designation		
TGAQ D52-2-2Z	SR ISO 14580 M4X10	ETG 2*
TGAQ D52-3-2Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D52-4-2Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D82-2-4Z	SR ISO 14580 M4X10	ETG 2*
TGAQ D82-3-4Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D82-4-4Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D120-3-4Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D120-4-4Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D120-5-4Z	SR ISO 14580 M4X10	ETG 5-7*
TGAQ D160-3-4Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D160-4-4Z	SR ISO 14580 M4X10	ETG 3-4-SH*
TGAQ D160-5-4Z	SR ISO 14580 M4X10	ETG 5-7*

\* Optional, should be ordered separately



### DGAQ-JHP

Parting and Grooving Square Adapters with Internal Coolant Holes Carrying DO-GRIP Inserts



Designation	OAL	OAH	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	CUTDIA <sup>(3)</sup>	MIID <sup>(4)</sup>	CSP <sup>(5)</sup>
DGAQ D52-2-2Z-JHP	1.968	1.968	.075	.098	.068	1.713	2.047	DGN 2	1
DGAQ D52-3-2Z-JHP	1.968	1.968	.118	.125	.098	1.713	2.047	DGN 3	1
DGAQ D52-4-2Z-JHP	1.968	1.968	.157	.157	.126	1.713	2.047	DGN 4	1
DGAQ D82-3-2Z-JHP	2.535	2.535	.118	.125	.098	2.283	3.228	DGN 3	1
DGAQ D82-4-2Z-JHP	2.535	2.535	.157	.157	.126	2.283	3.228	DGN 4	1
DGAQ D82-5-2Z-JHP	2.535	2.535	.197	.197	.157	2.283	3.228	DGN 5	1
DGAQ D120-4-4Z-JHP	3.563	3.563	.157	.157	.126	3.307	4.724	DGN 4	1
DGAQ D120-5-4Z-JHP	3.563	3.563	.197	.197	.157	3.307	4.724	DGN 5	1

• When using .079 and .118" double-sided inserts, the depth of cut is limited up to .75". For larger depth, use a DGNM type single-ended insert.

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Maximum diameter for parting

<sup>(4)</sup> Master insert identification

<sup>(5)</sup> 0 - Without coolant supply, 1 - With coolant supply

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-W (534) • DGN-WP (540) • DGN-Z (538)

• DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534)

• DGR/L-J/JS (536)

**For holders, see pages:** TGTBQ-JHP (567) • V## SQ#-#-D82-JHP (568)

### Flow Rate vs. Pressure

Designation	1000 PSI Flow Rate (GPM)	1450 PSI Flow Rate (GPM)	2000 PSI Flow Rate (GPM)
DGAQ D.../-2.../-3...-JHP	1.1-1.9	1.3-2.1	1.6-2.4
DGAQ D.../-4.../-5...-JHP	1.6-1.9	1.9-2.1	2.1-2.4

### Spare Parts

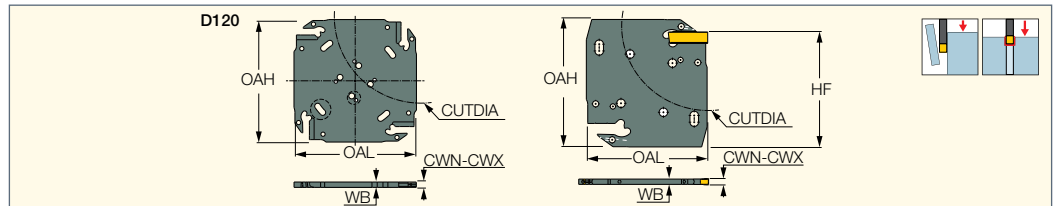
Designation			
DGAQ-JHP	SR M4X9-SEAL-JHP	JHP COPPER SEAL 1/8"	EDG 33A*

\* Optional, should be ordered separately



### DGAQ

Parting and Grooving Square Adapters Carrying DO-GRIP Inserts



Designation	OAL	OAH	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	HF	CUTDIA <sup>(3)</sup>	MIID <sup>(4)</sup>	CSP <sup>(5)</sup>
DGAQ D52-2-2Z	1.968	1.968	.075	.098	.068	1.713	2.047	DGN 2	0
DGAQ D52-3-2Z	1.968	1.968	.118	.125	.098	1.713	2.047	DGN 3	0
DGAQ D52-4-2Z	1.968	1.968	.157	.157	.126	1.713	2.047	DGN 4	0
DGAQ D82-3-2Z	2.535	2.535	.118	.125	.098	2.283	3.228	DGN 3	0
DGAQ D82-4-2Z	2.535	2.535	.157	.157	.126	2.283	3.228	DGN 4	0
DGAQ D82-5-2Z	2.535	2.535	.197	.197	.157	2.283	3.228	DGN 5	0
DGAQ D120-4-4Z	3.563	3.563	.157	.157	.126	3.307	4.724	DGN 4	0
DGAQ D120-5-4Z	3.563	3.563	.197	.197	.157	3.307	4.724	DGN 5	0

• When using .079 and .118" double-sided inserts, the depth of cut is limited up to .75". For larger depth, use a DGNM type single-ended insert.

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Maximum diameter for parting

<sup>(4)</sup> Master insert identification

<sup>(5)</sup> 0 - Without coolant supply, 1 - With coolant supply

**For inserts, see pages:** DGN-LF/LFT (537) • DGN-MF (537) • DGN-P (539) • DGN-UT/UA (539) • DGN-W (534) • DGN-WP (540) • DGN-Z (538)

• DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGR-P (540) • DGR-WP (541) • DGR-Z/ZS (538) • DGR/L-C DGRC/LC-C (534) • DGR/L-J/JS (536)

**For holders, see pages:** TGTBQ-JHP (567) • V## SQ#-#-D82-JHP (568)

### Spare Parts

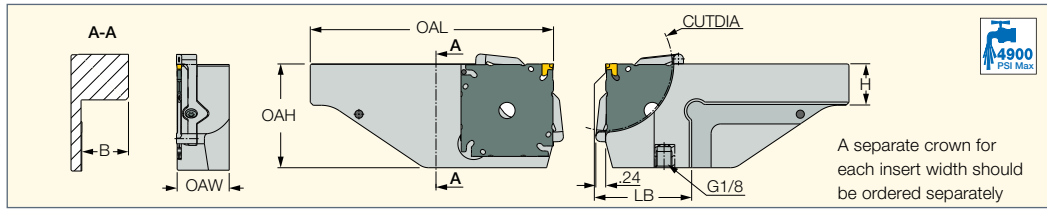
Designation		
DGAQ	SR ISO 14580 M4X10	EDG 33A*

\* Optional, should be ordered separately

**LOGIQ FGRIP**  
 HIGH FEED GRIP HOLDER

**JETCROWN**  
 LOGIQ JET COOLANT

**TGTBQ-ECD-JHP  
(JET-CROWN)**

 Tool Blocks for Square TANG-F-GRIP  
 (TGAQ-ECD) Parting and Grooving  
 Adapters for High-Pressure Coolant


Designation	H	B	OAH	OAW	OAL	LB	CUTDIA				
TGTBQ 19L-D65-ECD-JHP	.750	.771	2.165	1.007	5.078	1.653	2.559	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 19R-D65-ECD-JHP	.750	.771	2.165	1.007	5.078	1.653	2.559	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 19L-D82-ECD-JHP	.750	.771	2.519	1.007	5.511	2.086	3.220	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 19R-D82-ECD-JHP	.750	.771	2.519	1.007	5.511	2.086	3.220	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 25.4L-D65-ECD-JHP	1.000	1.023	2.165	1.259	5.472	1.653	2.559	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 25.4R-D65-ECD-JHP	1.000	1.023	2.165	1.259	5.472	1.653	2.559	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 25.4L-D82-ECD-JHP	1.000	1.023	2.519	1.259	5.905	2.086	3.220	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346
TGTBQ 25.4R-D82-ECD-JHP	1.000	1.023	2.519	1.259	5.905	2.086	3.220	SR M7-R-L	BLD T20/S7	SW6-SD	SPRING PIN 2.5X10 DIN7346

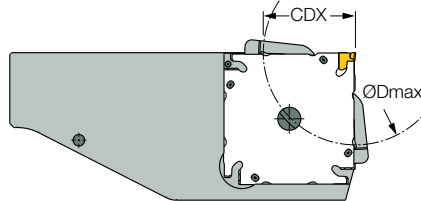
• A separate crown for each insert width should be ordered separately.

For tools, see pages: TGAQ-ECD (JET-CROWN) (573)

### Depth of cut as function of workpiece diameter

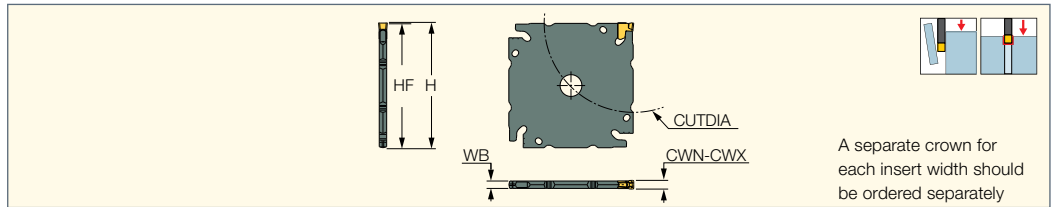
Designation	Dmax																			
	3.86	3.74	3.54	3.43	3.31	3.19	3.07	2.99	2.91	2.87	2.83	2.76	2.72	2.68	2.64	2.60	2.56			
TGTBQ ..R/L-D65-ECD	3.86	3.74	3.54	3.43	3.31	3.19	3.07	2.99	2.91	2.87	2.83	2.76	2.72	2.68	2.64	2.60	2.56			
CDX	.31	.35	.39	.43	.47	.51	.55	.59	.63	.67	.71	.75	.79-.83	.87	.91-.94	.98-1.30	1.28			
TGTBQ ..R/L-D82-ECD	4.64	4.56	4.40	4.25	4.13	4.01	3.89	3.81	3.74	3.66	3.58	3.54	3.50	3.46	3.42	3.38	3.34	3.30	3.26	3.22
CDX	.43	.47	.51	.55	.59	.63	.66	.70	.74	.78	.82	.86	.90	.94	.98	1.02	1.06	1.10	1.22	1.61

The tool cannot be used for grooving applications when the workpiece diameter is larger than 4.64".





**TGAQ-ECD (JET-CROWN)**  
Parting and Grooving Square  
Adapters Compatible with  
TANG-GRIP Inserts (Single-Ended)



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	H	HF <sup>(3)</sup>	CUTDIA	MIID <sup>(4)</sup>		
<b>TGAQ D65-2-4Z-ECD</b>	.071	.098	.065	1.929	1.917	2.559	TAG N2	ECD D65-2-TG*	ETG 2*
<b>TGAQ D65-3-4Z-ECD</b>	.110	.138	.098	1.929	1.917	2.559	TAG N3	ECD D65-3-TG*	ETG 3-4-SH*
<b>TGAQ D82-2-4Z-ECD</b>	.071	.098	.065	2.283	2.272	3.228	TAG N2	ECD D82-2-TG*	ETG 2*
<b>TGAQ D82-3-4Z-ECD</b>	.110	.138	.098	2.283	2.272	3.228	TAG N3	ECD D82-3-TG*	ETG 3-4-SH*
<b>TGAQ D82-4-4Z-ECD</b>	.146	.177	.134	2.283	2.272	3.228	TAG N4	ECD D82-4-TG*	ETG 3-4-SH*

• Suitable for all TANG-GRIP inserts

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Related to insert

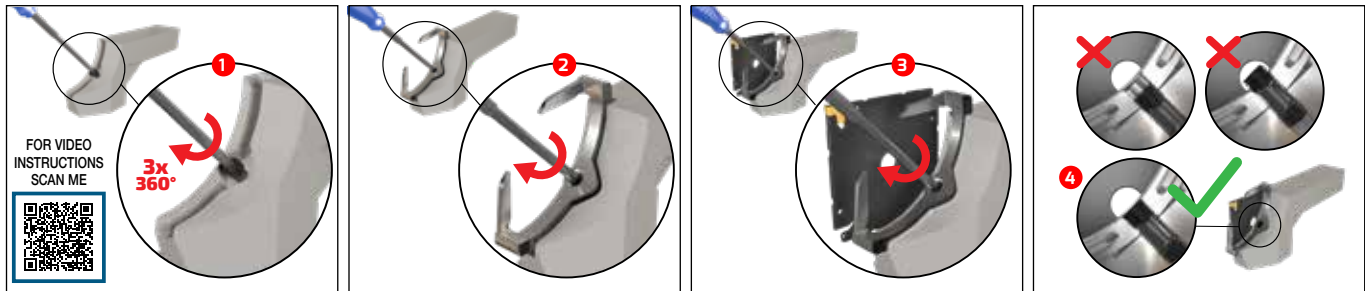
<sup>(4)</sup> Master insert identification

\* Optional, should be ordered separately

**For inserts, see pages:** TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)

• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

**For holders, see pages:** TGTBQ-ECD-JHP (JET-CROWN) (572)

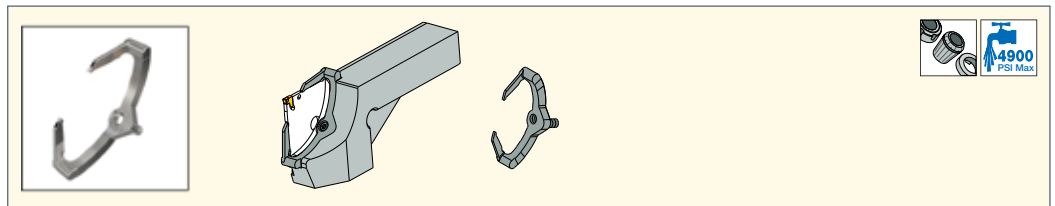


**Accessories**

**JETCROWN**  
LOGIQ JET COOLANT

**CROWN (ECD)**

Crown Clamping Mechanism  
with a Single Screw for Fast  
Clamping and Indexing. Features  
Two Effective Coolant Holes



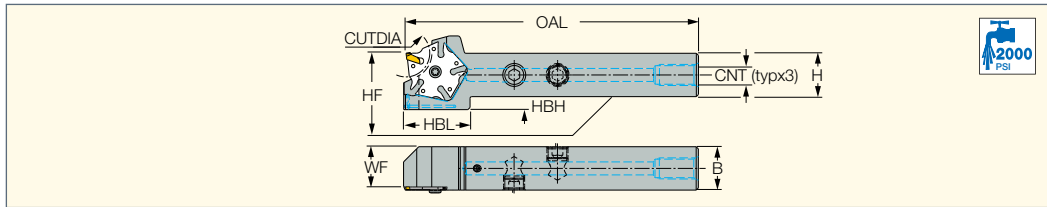
Designation	CW <sup>(1)</sup>	CUTDIA <sup>(2)</sup>
<b>ECD D65-2-TG</b>	.079	2.559
<b>ECD D65-3-TG</b>	.118	2.559
<b>ECD D82-2-TG</b>	.079	3.228
<b>ECD D82-3-TG</b>	.118	3.228
<b>ECD D82-4-TG</b>	.157	3.228

<sup>(1)</sup> Related insert cutting width

<sup>(2)</sup> Maximum parting diameter

**SLIMGRIP**  
NARROW INSERTS**THMPR/L D22-JHP**

Holders with High-Pressure  
Coolant Channels for Pentagonal  
SLIM-GRIP Adapters

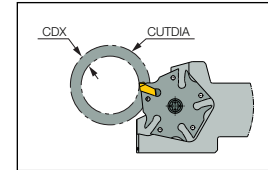


Designation	H	HF	HBH	B	WF	CUTDIA	OAL	HBL	CNT
THMPR/L 16-D22-JHP	.630	.634	.394	.630	.575	.866	5.315	1.165	UNF 5/16-24
THMPR/L 19-D22-JHP	.750	.752	.276	.750	.693	.866	5.315	1.165	G1/8






For tools, see pages: ADMP D22 (574)

## THMPR/L...-D22-JHP CDX to CUTDIA

CDX	≤.0787	≤.118	≤.157	≤.197	≤.236	≤.275	≤.315	≤.433
CUTDIA	1.96	1.65	1.42	1.26	1.18	1.10	1.02	.866

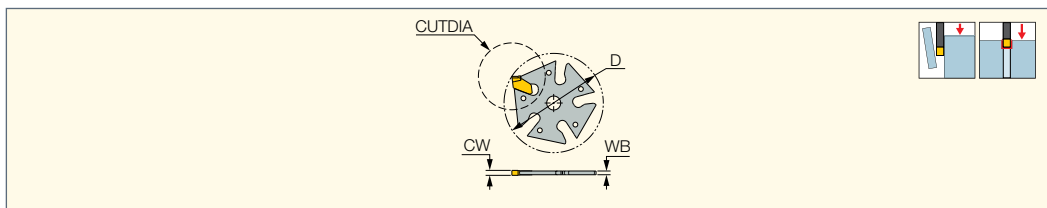


## Spare Parts

Designation					
THMPR/L 16-D22-JHP	SR 5/16UNF TL360	HW 5/32"	SR M4-39432		T-15/5
THMPR/L 19-D22-JHP	PLG G1/8 TL360	HW 5.0	SR M4-39432		T-15/5
THMPR/L 19-D22-JHP	PLG G1/8 TL360	HW 5.0	SR M4-39432	SR M4X8 DIN912	T-15/5

**SELF5GRIP**  
PARTING AND GROOVING**SLIMGRIP**  
NARROW INSERTS**ADMP D22**

Parting and Grooving  
Adapters with 5 Pockets  
for SLIM-GRIP Inserts



Designation	CW	WB	D	CUTDIA	Insert
ADMP D22-1.2	.047	.042	32	.866	GFT 1.2
ADMP D22-1.6	.063	.047	32	.866	GFT 1.6

• For user guide, see pages 594-603

For inserts, see pages: GFT-C (575) • GFT-J (575)

For holders, see pages: THMPR/L D22-JHP (574)

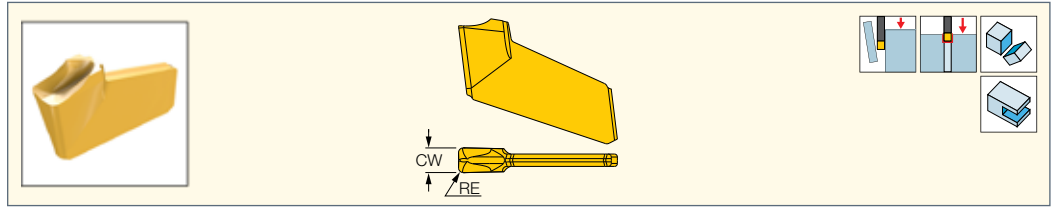
## Spare Parts

Designation	
ADMP D22	ESG-SLM*

\* Optional, should be ordered separately

**GFT-J**

Thin Parting, Grooving  
and Slitting Single-Ended  
Inserts for Soft Materials

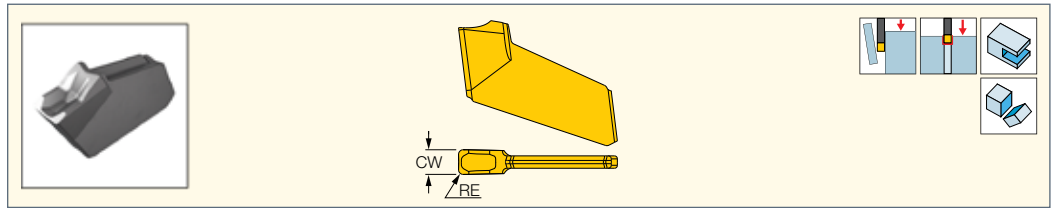


Designation	Dimensions		Tough ↔ Hard		Recommended Machining Data  f groove (IPR)
	CW	RE	IC1028	IC1008	
GFT 0.6J-0.1	.024	.0039	•	•	.0010-.0020
GFT 0.8J-0.1	.031	.0039	•	•	.0012-.0027
GFT 1.0J-0.1	.039	.0039	•	•	.0012-.0035
GFT 1.2J-0.14	.047	.0055	•	•	.0012-.0039
GFT 1.6J-0.16	.063	.0063	•	•	.0012-.0047

For tools, see pages: ADMP D22 (574) • SGAQ (401)

**GFT-C**

Thin Parting, Grooving  
& Slitting Single-Ended  
Inserts for Soft Materials

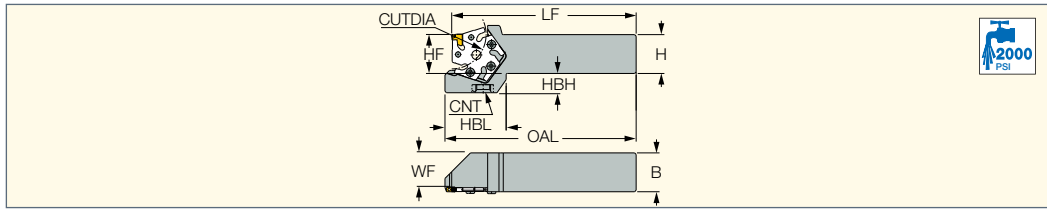


Designation	Dimensions		Tough ↔ Hard		Recommended Machining Data  f groove (IPR)
	CW	RE	IC1028	IC1008	
GFT 1.6C-0.16	.063	.0063	•	•	.0020-.0059

For tools, see pages: ADMP D22 (574)

**TANG-GRIP**  
PARTING LINE  
**TANG5GRIP**  
PARTING AND GROOVING

**THMPR/L D45-JHP**  
Holders with High-Pressure  
Coolant Channels for Pentagonal  
TANG-GRIP Adapters



Designation	H	HF	HBH	B	WF	CUTDIA	LF	OAL	HBL	CNT
THMPR/L 19-D45-JHP	.750	.752	.748	.750	.644	1.772	4.236	4.409	1.654	G1/8
THMPR/L 25.4-D45-JHP	1.000	1.004	.496	1.000	.896	1.772	4.748	4.921	1.575	G1/8

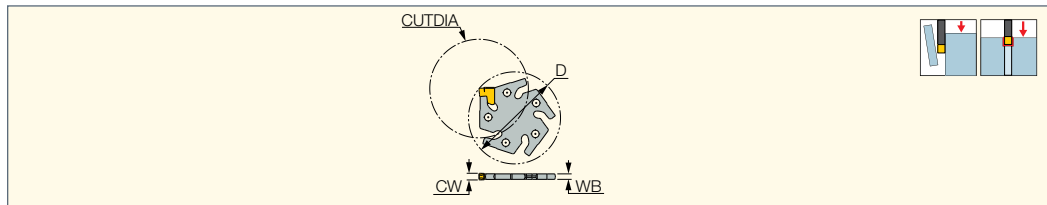
For tools, see pages: ADMP D45 (576)

### Spare Parts

Designation				
THMPR/L D45-JHP	SR M3X8 ISO 14580 BLACK	T-10/5	PLG G1/8 TL360	HW 5.0

**TANG5GRIP**  
PARTING AND GROOVING

**ADMP D45**  
Parting and Grooving Adapters  
with 5 Pockets for TANG-GRIP  
Tangentially Clamped Inserts



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WB	D	CUTDIA	Insert
ADMP D45-2.0	.071	.094	.063	1.654	1.772	TAG 2
ADMP D45-3.0	.110	.138	.098	1.654	1.772	TAG 3

• For user guide, see pages 594-603

<sup>(1)</sup> Minimum cutting width

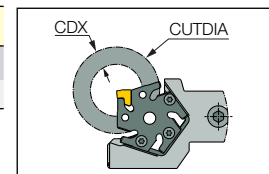
<sup>(2)</sup> Maximum cutting width

For inserts, see pages: TAG N-A (566) • TAG N-C/W/M (561) • TAG N-HF (560) • TAG N-J/JS/JT (563) • TAG N-LF (564) • TAG N-MF (562)


• TAG N-UT (565) • TAG R/L-C (562) • TAG R/L-J/JS (564)

For holders, see pages: THMPR/L D45-JHP (576)

THMPR/L...-D45-JHP Tmax. to Dmax.									
CDX	≤.118	≤.157	≤.197	≤.236	≤.275	≤.315	≤.354	≤.394	≤.886
CUTDIA	3.35	3.15	2.95	2.75	2.55	2.36	2.16	1.96	1.77



### Spare Parts

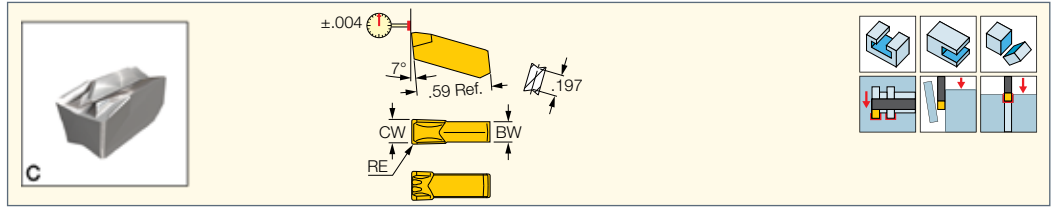
Designation	
ADMP D45-2.0	ETG 2*
ADMP D45-3.0	ETG 3-4-SH*

\* Optional, should be ordered separately

**CUTGRIP**

**GIM-C**

Parting and Grooving  
Single-Sided Inserts for  
Parting Bars, Hard Materials  
and Tough Applications



Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	BW	IC328	IC830	IC354	IC908	IC20	f groove (IPR)
<b>GIM 3C</b>	.118	.0087	.0020	.094	●	●	●	●	●	.0059-.0098
<b>GIM 4C</b>	.157	.0098	.0020	.134	●	●	●	●	●	.0059-.0098
<b>GIM 5C</b>	.197	.0157	.0020	.157	●	●	●	●	●	.0059-.0118
<b>GIM 6C</b>	.236	.0157	.0020	.189	●	●	●	●	●	.0059-.0118

• For cutting speed recommendations, see pages 600-601

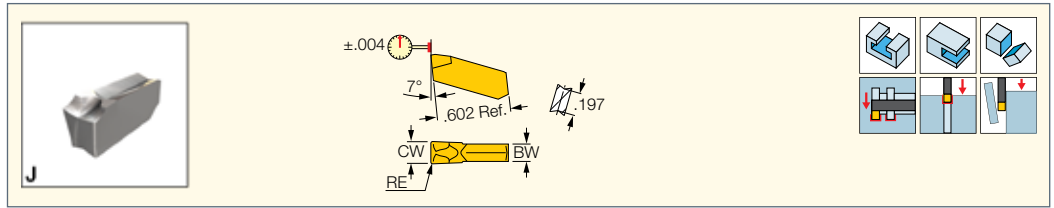
<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** Anti-Vibration Blades (293) • C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292) • CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287) • GHMPRL (283) • GHMR/L (283)

**CUTGRIP**

**GIM-J**

Utility Single-Sided Inserts  
for Parting and Grooving  
Soft Materials, Tubes  
and Small Diameters



Designation	Dimensions				Tough ↔ Hard					Recommended Machining Data	
	CW	RE	CWTOL <sup>(1)</sup>	BW	IC328	IC830	IC54	IC354	IC908	IC20	f groove (IPR)
<b>GIM 2.2J</b>	.087	.0067	.0020	.067	●	●	●	●	●	●	.0024-.0051
<b>GIM 3J</b>	.118	.0098	.0020	.094	●	●	●	●	●	●	.0031-.0059
<b>GIM 4J</b>	.157	.0098	.0020	.126	●	●	●	●	●	●	.0031-.0071

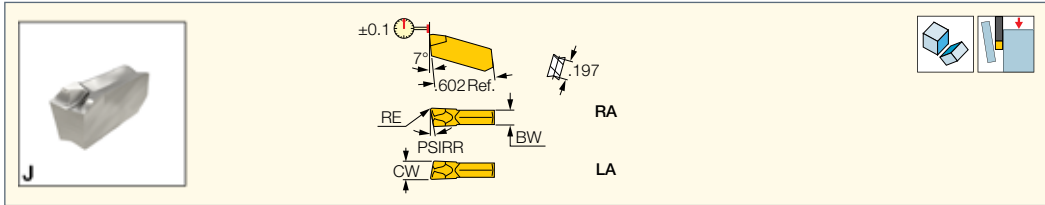
• For cutting speed recommendations, see pages 600-601

<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292) • CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287) • GHMPRL (283) • GHMR/L (283) • GHSR/L (398) • GHSR/L-JHP-SL (399) • NQCH-GHSR/L-JHP (399)

**CUTGRIP****GIM-J-RA/LA**

Utility Single-Sided Inserts  
for Parting and Grooving  
Soft Materials, Parting Tubes  
and Small Diameters



Designation	Dimensions						Tough ↔ Hard							Recommended Machining Data f groove (IPR)	
	CW	RE	CWTOL <sup>(1)</sup>	PSIRL	PSIRR	BW	IC656	IC328	IC830	IC54	IC354	IC908	IC20		
GIM 2.2J-8LA	.087	.0067	.0020	8.0	-	.067		●				●	●	●	.0020-.0039
GIM 2.2J-8RA	.087	.0067	.0020	-	8.0	.067	●	●	●			●	●	●	.0020-.0039
GIM 2.2JS-15LA	.087	.0008	.0020	15.0	-	.067		●				●	●	●	.0020-.0039
GIM 2.2JS-15RA	.087	.0008	.0020	-	15.0	.067		●	●	●		●	●	●	.0020-.0039
GIM 3J-4LA	.118	.0087	.0020	4.0	-	.094						●	●	●	.0020-.0047
GIM 3J-4RA	.118	.0098	.0020	-	4.0	.094		●	●			●	●	●	.0020-.0047
GIM 3J-8LA	.118	.0098	.0020	8.0	-	.094		●				●	●	●	.0020-.0047
GIM 3J-8RA	.118	.0098	.0020	-	8.0	.094	●	●	●			●	●	●	.0020-.0047
GIM 3JS-15LA	.118	.0008	.0020	15.0	-	.094		●	●			●	●	●	.0020-.0047
GIM 3JS-15RA	.118	.0008	.0020	-	15.0	.094		●	●			●	●	●	.0020-.0047
GIM 4J-6LA	.157	.0098	.0020	6.0	-	.126							●	●	.0031-.0059
GIM 4J-6RA	.157	.0098	.0020	-	6.0	.126						●	●	●	.0031-.0059

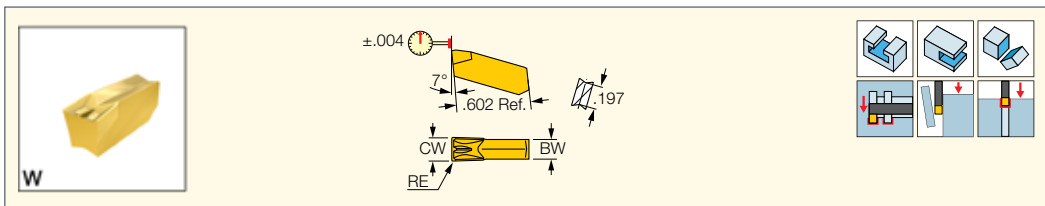
• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292) • CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287) • GHMPRL (283) • GHMR/L (283) • GHSR/L (398) • GHSR/L-JHP-SL (399) • NQCH-GHSR/L-JHP (399)

**CUTGRIP****GIM-W**

Single-Sided Inserts with  
Center Ridged Chipformer and  
Reinforced Edge for Parting  
and Grooving Alloy Steel



Designation	Dimensions				Tough ↔ Hard						Recommended Machining Data f groove (IPR)	
	CW	RE	CWTOL <sup>(1)</sup>	BW	IC328	IC830	IC54	IC354	IC908	IC20		
GIM 2.4	.094	.0071	.0020	.094					●	●	●	.0039-.0071
GIM 3	.118	.0087	.0020	.094		●	●	●	●	●	●	.0039-.0071
GIM 3.2	.126	.0087	.0020	.094		●	●	●	●	●	●	.0039-.0079
GIM 4	.157	.0098	.0020	.126		●	●	●	●	●	●	.0059-.0079

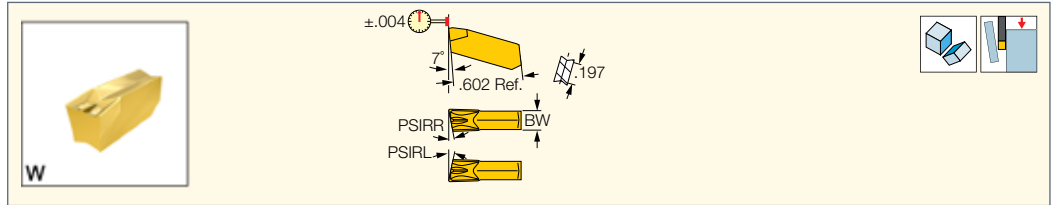
• For cutting speed recommendations, see pages 600-601

<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292) • CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287) • GHMPRL (283) • GHMR/L (283)

# CUTGRIP

**GIM-W-RA/LA**  
Single-Sided Screw-Clamped  
Inserts with Central Rridged  
Chipformer for Parting Alloy Steel



Designation	Dimensions						Tough ↔ Hard							Recommended Machining Data  f groove (IPR)	
	CW	RE	CWTOL <sup>(1)</sup>	PSIRL	PSIRR	BW	IC656	IC328	IC830	IC54	IC354	IC908	IC20		
<b>GIM 3-4LA</b>	.118	.0079	.0020	4.0	-	.094		●				●	●	●	.0031-.0063
<b>GIM 3-8LA</b>	.118	.0079	.0020	8.0	-	.094		●			●	●	●	●	.0031-.0063
<b>GIM 3S-15RA</b>	.118	.0087	.0020	-	15.0	.094		●							.0031-.0063
<b>GIM 3-4RA</b>	.118	.0098	.0020	-	4.0	.094	●		●			●	●	●	.0031-.0063
<b>GIM 3-8RA</b>	.118	.0098	.0020	-	8.0	.094	●		●			●	●	●	.0031-.0063
<b>GIM 3.2-4LA</b>	.126	.0087	.0020	4.0	-	.098						●			.0031-.0063
<b>GIM 3.2-4RA</b>	.126	.0087	.0020	-	4.0	.098			●			●		●	.0031-.0063
<b>GIM 3.2-8LA</b>	.126	.0087	.0020	8.0	-	.098						●			.0031-.0063
<b>GIM 3.2-8RA</b>	.126	.0087	.0020	-	8.0	.098			●			●		●	.0031-.0063
<b>GIM 4-4LA</b>	.157	.0098	.0020	4.0	-	.126						●		●	.0039-.0063
<b>GIM 4-4RA</b>	.157	.0098	.0020	-	4.0	.126	●					●		●	.0039-.0063
<b>GIM 4-8LA</b>	.157	.0098	.0020	8.0	-	.126						●		●	.0039-.0063
<b>GIM 4-8RA</b>	.157	.0098	.0020	-	8.0	.126			●			●		●	.0039-.0063

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

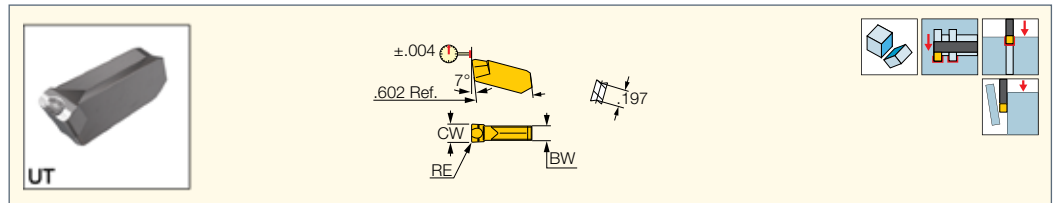
**For tools, see pages:** C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292)

• CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287)

• GHMPR/L (283) • GHMR/L (283)

# CUTGRIP

**GIM-UT**  
Single-Ended Screw-Clamped  
Inserts for Parting and Grooving  
at Low Feeds on CrNi Alloys  
and Low Carbon Steel



Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data  f groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	BW	IC656	IC328	
<b>GIM 4.6UT</b>	.181	.0236	.0012	.150	●	●	.0012-.0039

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292)

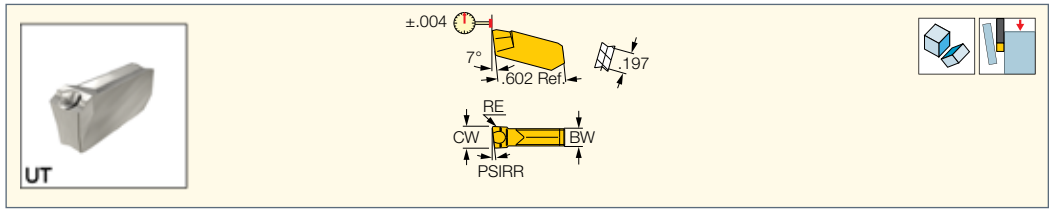
• CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287)

• GHMPR/L (283) • GHMR/L (283)

**CUTGRIP**

**GIM-UT-RA/LA**

Single-Ended Screw-Clamped Inserts for Parting at Low Feeds on CrNi Alloys and Low Carbon Steel



Designation	Dimensions					IC328	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	PSIRR	BW		f groove (IPR)
<b>GIM 3UT-1.5RA</b>	.123	.0098	.0012	1.5	.098	●	.0012-.0039

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

**For tools, see pages:** C#-GHDR/L (284) • CGHN 26-M (380) • CGHN 32-DGM (382) • CGHN 32-M (381) • CGHN-D (291) • CGHN-DG (292)

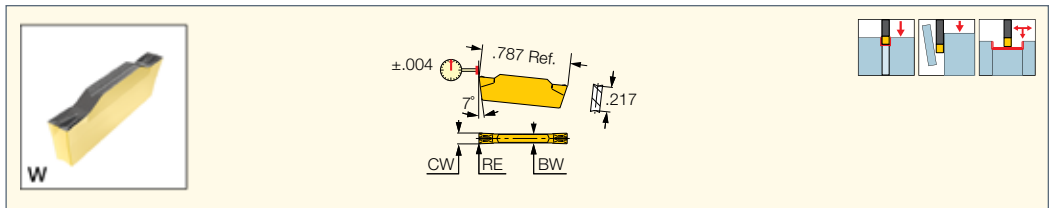
• CGHN-S (291) • CGPAD (290) • CGPAD-JHP (290) • GHDR/L (short pocket) (285) • GHDR/L-JHP (short pocket) (286) • GHGR/L (287)

• GHMPR/L (283) • GHMR/L (283)

**CUTGRIP**

**GDMW 2.4**

Utility Double-Ended Inserts for External Turning, Grooving and Parting



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	CDX <sup>(3)</sup>	IC830	IC808	IC908	IC20	IC20N	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)
<b>GDMW 2.4</b>	.094	.007	.0016	.0012	.079	.709	●	●	●	●	●	.010-.059	.0027-.0047	.0020-.0031

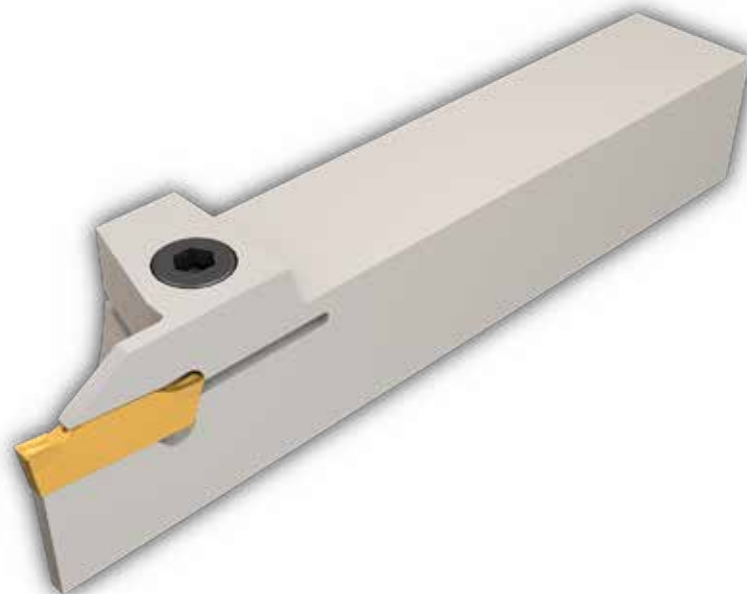
• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

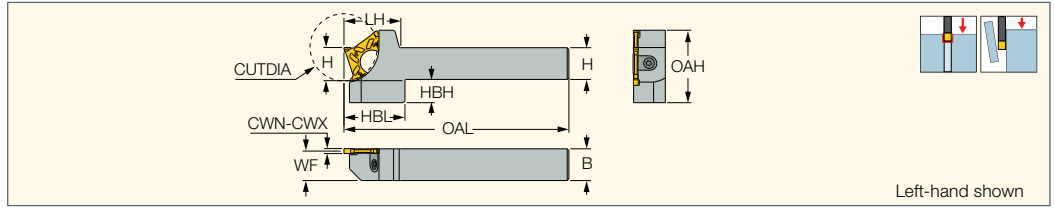
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

**For tools, see pages:** PADR/L (318) • PHGR/L (318) • PHSR/L (398)







Designation	H	B	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WF	CUTDIA	OAL	LH	HBL	HBH	OAH
PCHR/L 12.7-D22-2-IQ	.500	.500	.079	.094	.470	.870	4.720	.780	.800	.40	1.00
PCHR/L 16-D22-2-IQ	.630	.630	.079	.094	.606	.870	4.724	1.059	.913	.16	1.00
PCHR/L 19-D22-2-IQ	.750	.750	.079	.094	.720	.870	4.720	.780	-	-	1.00
PCHR/L 12.7-D22-3-IQ	.500	.500	.118	.126	.450	.870	4.720	.780	.800	.40	1.00
PCHR/L 16-D22-3-IQ	.630	.630	.118	.126	.579	.870	4.724	.776	.787	.28	1.00
PCHR/L 19-D22-3-IQ	.750	.750	.118	.126	.700	.870	4.720	.780	-	-	1.00
PCHR/L 12.7-D32-2-IQ	.500	.500	.079	.094	.480	1.300	3.937	1.000	1.250	.60	1.30
PCHR/L 16-D32-2-IQ	.630	.630	.079	.094	.610	1.260	4.724	1.118	1.161	.39	1.32
PCHR/L 19-D32-2-IQ	.750	.750	.079	.094	.730	1.300	4.724	1.000	1.250	.35	1.30
PCHR/L 25.4-D32-2-IQ	1.000	1.000	.079	.094	.970	1.300	4.724	1.000	-	-	1.30
PCHR/L 12.7-D32-3-IQ	.500	.500	.118	.126	.390	1.300	3.937	1.000	1.250	.60	1.30
PCHR/L 16-D32-3-IQ	.630	.630	.118	.126	.579	1.260	4.724	1.024	1.260	.47	1.28
PCHR/L 19-D32-3-IQ	.750	.750	.118	.126	.700	1.300	4.724	1.000	1.250	.35	1.30
PCHR/L 25.4-D32-3-IQ	1.000	1.000	.118	.126	.950	1.300	4.724	1.000	-	-	1.30
PCHR/L 19-D40-2-IQ	.750	.750	.079	.094	.720	1.600	5.320	1.300	1.440	.55	1.70
PCHR/L 25.4-D40-2-IQ	1.000	1.000	.079	.094	.930	1.600	5.320	1.300	1.320	.30	1.70
PCHR/L 16-D40-3-IQ	.630	.630	.118	.126	.579	1.570	5.315	1.311	1.449	.67	1.71
PCHR/L 19-D40-3-IQ	.750	.750	.118	.126	.700	1.600	5.320	1.300	1.440	.55	1.70
PCHR/L 25.4-D40-3-IQ	1.000	1.000	.118	.126	.950	1.600	5.320	1.300	1.320	.30	1.70

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

For inserts, see pages: PENTA D-N-C (583) • PENTA D-N-J (583) • PENTA D-N-PB (584) • PENTA D-R/L-C (584) • PENTA D-R/L-J (583) • PENTA D-R/L-PB (584)

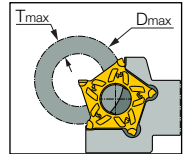
Tmax as a Function of Dmax for PENTA D22								
Tmax	T <sub>≤.047</sub>	T <sub>≤.079</sub>	T <sub>≤.118</sub>	T <sub>≤.157</sub>	T <sub>≤.197</sub>	T <sub>≤.276</sub>	T <sub>≤.354</sub>	T <sub>≤.433</sub>
Dmax	N.L. <sup>(1)</sup>	23.6	5.1	2.3	1.6	1.2	1.0	.9

Tmax as a Function of Dmax for PENTA D32										
Tmax	T <sub>≤.047</sub>	T <sub>≤.079</sub>	T <sub>≤.118</sub>	T <sub>≤.157</sub>	T <sub>≤.197</sub>	T <sub>≤.236</sub>	T <sub>≤.276</sub>	T <sub>≤.315</sub>	T <sub>≤.354</sub>	T <sub>≤.630</sub>
Dmax	N.L. <sup>(1)</sup>	N.L. <sup>(1)</sup>	9.8	5.1	3.1	2.4	2.0	1.8	1.6	1.3





  

Tmax as a Function of Dmax for PENTA D40															
Tmax	T <sub>≤.047</sub>	T <sub>≤.079</sub>	T <sub>≤.118</sub>	T <sub>≤.157</sub>	T <sub>≤.197</sub>	T <sub>≤.236</sub>	T <sub>≤.276</sub>	T <sub>≤.315</sub>	T <sub>≤.354</sub>	T <sub>≤.394</sub>	T <sub>≤.433</sub>	T <sub>≤.472</sub>	T <sub>≤.511</sub>	T <sub>≤.630</sub>	T <sub>≤.787</sub>
Dmax	N.L. <sup>(1)</sup>	N.L. <sup>(1)</sup>	N.L. <sup>(1)</sup>	13.7	7.9	5.5	4.1	3.3	3.0	2.6	2.4	2.2	2.0	1.8	1.6



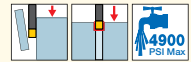
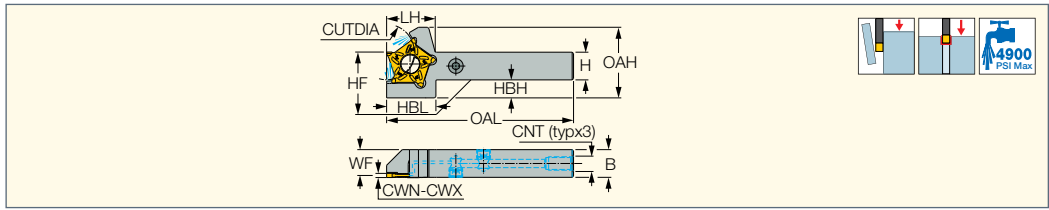
<sup>(1)</sup> N.L. = No Limit

### Spare Parts

Designation				
PCHR/L 12.7-D22-2-IQ	SR M6-R-L	LEVER PD22-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 16-D22-2-IQ	SR M6-R-L	LEVER PD22-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 19-D22-2-IQ	SR M6-R-L	LEVER PD22-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 12.7-D22-3-IQ	SR M6-R-L	LEVER PD22-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 16-D22-3-IQ	SR M6-R-L	LEVER PD22-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 19-D22-3-IQ	SR M6-R-L	LEVER PD22-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 12.7-D32-2-IQ	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 16-D32-2-IQ	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 19-D32-2-IQ	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 25.4-D32-2-IQ	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD
PCHR/L 12.7-D32-3-IQ	SR M6-R-L	LEVER PD32-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 16-D32-3-IQ	SR M6-R-L	LEVER PD32-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 19-D32-3-IQ	SR M6-R-L	LEVER PD32-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 25.4-D32-3-IQ	SR M6-R-L	LEVER PD32-3 INJ	BLD T15/S7	SW6-SD
PCHR/L 16-D40-3-IQ	SR M7-R-L	LEVER PD40 INJ	BLD T20/S7	SW6-SD
PCHR/L 19-D40-3-IQ	SR M7-R-L	LEVER PD40 INJ	BLD T20/S7	SW6-SD
PCHR/L 25.4-D40-3-IQ	SR M7-R-L	LEVER PD40 INJ	BLD T20/S7	SW6-SD



**PCHR/L-D-JHP**  
Grooving and Parting Tools with Channels for High-Pressure Coolant Carrying Inserts with 5 Cutting Edges



Designation	H	HF	HBH	B	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	WF	CUTDIA	OAL	LH	HBL	OAH	CNT
PCHR/L 12.7-D22-2-JHP	.500	.000	.29	.500	.079	.094	.460	.870	3.996	1.140	1.161	1.26	UNF 5/16-24
PCHR/L 16-D22-2-JHP	.630	.000	.20	.630	.079	.094	.591	.866	4.783	1.142	1.161	1.26	UNF 5/16-24
PCHR/L 19-D22-2-JHP	.750	.000	.04	.750	.079	.094	.710	.870	4.783	1.140	1.161	1.26	G 1/8-28
PCHR/L 12.7-D32-2-JHP	.500	.504	.54	.500	.079	.094	.467	1.260	3.940	1.200	1.220	1.61	UNF 5/16-24
PCHR/L 16-D32-2-JHP	.630	.634	.39	.630	.079	.094	.599	1.260	4.724	1.020	1.063	1.61	UNF 5/16-24
PCHR/L 19-D32-2-JHP	.750	.754	.29	.750	.079	.094	.687	1.260	4.720	1.200	1.220	1.61	G 1/8-28
PCHR/L 16-D40-3-JHP	.630	.630	.67	.630	.118	.126	.575	1.575	5.315	1.429	1.449	2.01	UNF 5/16-24
PCHR/L 19-D40-3-JHP	.750	.750	.55	.750	.118	.126	.700	1.570	5.315	1.420	1.440	2.01	G 1/8-28
PCHR/L 25.4-D40-3-JHP	1.000	1.000	.30	1.000	.118	.126	.950	1.570	5.315	33.100	33.600	2.01	G 1/8-28

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

For inserts, see pages: PENTA D-N-C (583) • PENTA D-N-J (583) • PENTA D-N-PB (584) • PENTA D-R/L-C (584) • PENTA D-R/L-J (583) • PENTA D-R/L-PB (584)

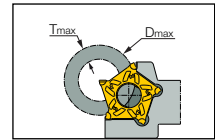
PCHR/L D22-2...-JHP Dmax for Parting Off 22/T11										
Tmax	T <sub>≤.039</sub>	T <sub>≤.079</sub>	T <sub>≤.118</sub>	T <sub>≤.157</sub>	T <sub>≤.197</sub>	T <sub>≤.236</sub>	T <sub>≤.276</sub>	T <sub>≤.315</sub>	T <sub>≤.354</sub>	T <sub>≤.394</sub>
Dmax	3.5	2.5	1.9	1.6	1.3	1.2	1.1	1.1	.9	.8

PCHR/L D32-2...-JHP Dmax for Parting Off 32/T16										
Tmax	T <sub>≤.039</sub>	T <sub>≤.079</sub>	T <sub>≤.118</sub>	T <sub>≤.157</sub>	T <sub>≤.197</sub>	T <sub>≤.236</sub>	T <sub>≤.276</sub>	T <sub>≤.315</sub>	T <sub>≤.354</sub>	T <sub>≤.394</sub>
Dmax	5.9	4.9	3.9	3.1	2.6	2.2	2.0	1.8	1.7	1.6

PCHR/L D40-3...-JHP Dmax for Parting Off 40/T20										
Tmax	T <sub>≤.039</sub>	T <sub>≤.079</sub>	T <sub>≤.118</sub>	T <sub>≤.157</sub>	T <sub>≤.197</sub>	T <sub>≤.236</sub>	T <sub>≤.276</sub>	T <sub>≤.315</sub>	T <sub>≤.354</sub>	T <sub>≤.394</sub>
Dmax	15.7	11.8	7.9	5.7	4.5	3.7	3.2	2.9	2.6	2.4

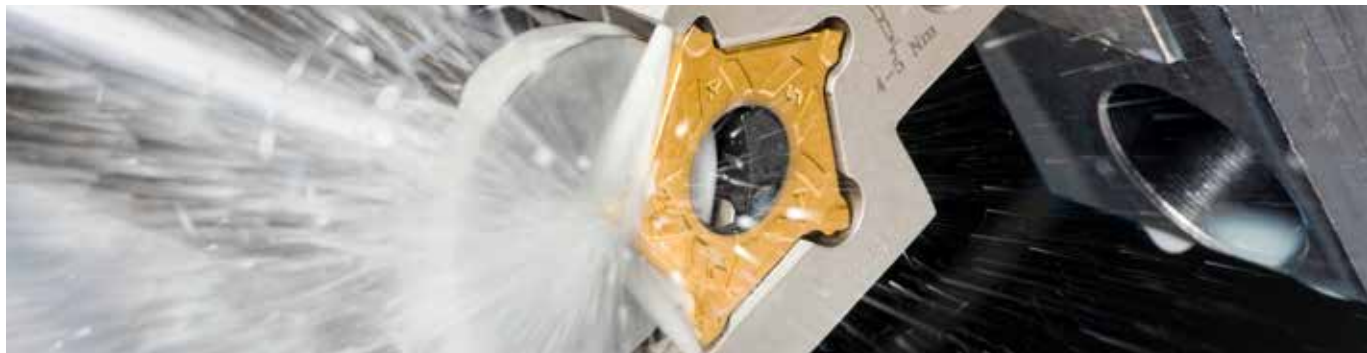


**Flow Rate vs. Pressure**

Designation	1015 PSI Flow Rate (GPM)	1450 PSI Flow Rate (GPM)	2030 PSI Flow Rate (GPM)
PCHR/L...-2JHP	.528-1.06	1.06-1.58	1.58-2.11
PCHR/L...-3JHP	1.85-2.38	2.38-2.90	2.90-3.43

**Spare Parts**

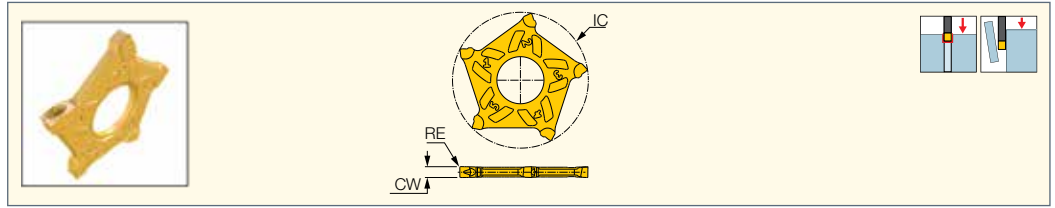
Designation							
PCHR/L 12.7-D22-2-JHP	SR M6-R-L	LEVER PD22-2 INJ	BLD T15/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 16-D22-2-JHP	SR M6-R-L	LEVER PD22-2 INJ	BLD T15/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 19-D22-2-JHP	SR M6-R-L	LEVER PD22-2 INJ	BLD T15/S7	SW6-SD	HW 5.0	PLG G1/8 TL360	
PCHR/L 12.7-D32-2-JHP	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 16-D32-2-JHP	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 19-D32-2-JHP	SR M6-R-L	LEVER PD32-2 INJ	BLD T15/S7	SW6-SD	HW 5.0	PLG G1/8 TL360	
PCHR/L 16-D40-3-JHP	SR M7-R-L	LEVER PD40 INJ	BLD T20/S7	SW6-SD	HW 5/32"		SR 5/16UNF TL360
PCHR/L 19-D40-3-JHP	SR M7-R-L	LEVER PD40 INJ	BLD T20/S7	SW6-SD	HW 5.0	PLG G1/8 TL360	
PCHR/L 25.4-D40-3-JHP	SR M7-R-L	LEVER PD40 INJ	BLD T20/S7	SW6-SD	HW 5.0	PLG G1/8 TL360	





**PENTA D-N-J**

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions					IC808G	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	IC		f groove (IPR)
PENTA D22N200J020	.079	.0079	.0008	.0012	.866	●	.0016-.0047
PENTA D22N300J020	.118	.0079	.0008	.0012	.866	●	.0016-.0063

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

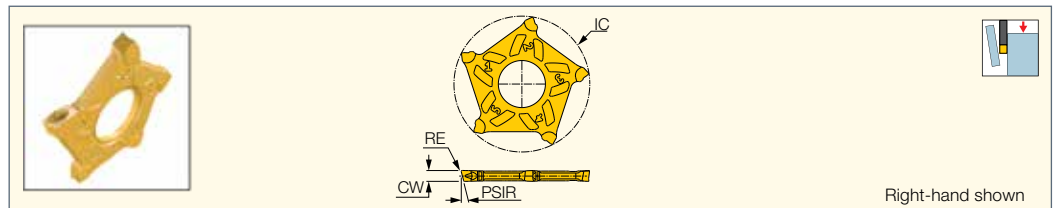
<sup>(2)</sup> Corner radius tolerance (+/-)

For tools, see pages: PCHR/L-D-IQ (581) • PCHR/L-D-JHP (582)



**PENTA D-R/L-J**

Inserts with 5 Cutting Edges for Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions					IC808G	Recommended Machining Data
	CW	RE	IC	PSIRL	PSIRR		f groove (IPR)
PENTA D22L200J-6D	.079	.0079	.866	6.0	-	●	.0016-.0039
PENTA D22R200J-6D	.079	.0079	.866	-	6.0	●	.0016-.0039
PENTA D22L200J-15D	.079	.0079	.866	15.0	-	●	.0016-.0031
PENTA D22R200J-15D	.079	.0079	.866	-	15.0	●	.0016-.0031
PENTA D22L300J-6D	.118	.0079	.866	6.0	-	●	.0016-.0047
PENTA D22R300J-6D	.118	.0079	.866	-	6.0	●	.0016-.0047
PENTA D22L300J-15D	.118	.0079	.866	15.0	-	●	.0016-.0039
PENTA D22R300J-15D	.118	.0079	.866	-	15.0	●	.0016-.0039

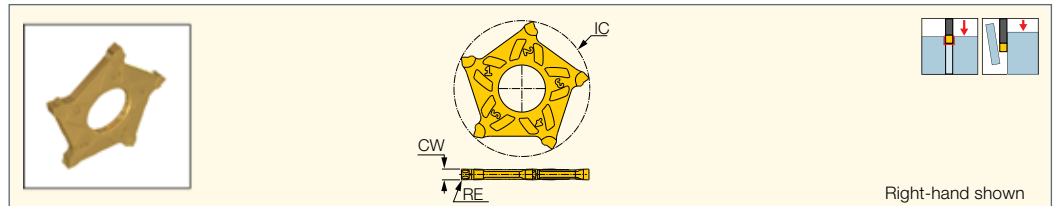
• For cutting speed recommendations and user guide, see pages 594-603

For tools, see pages: PCHR/L-D-IQ (581) • PCHR/L-D-JHP (582)



**PENTA D-N-C**

Inserts with 5 Cutting Edges for Parting and Grooving Hard Materials, Tough and General Applications



Designation	Dimensions					IC808G	Recommended Machining Data
	RE	CW	RETOL <sup>(1)</sup>	CWTOL <sup>(2)</sup>	IC		f groove (IPR)
PENTA D32N200C020	.0079	.079	.0012	.0008	1.191	●	.0016-.0055
PENTA D32N300C020	.0079	.118	.0012	.0008	1.191	●	.0024-.0087
PENTA D40N300C020	.0079	.119	.0012	.0008	1.488	●	.0024-.0087

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Corner radius tolerance (+/-)

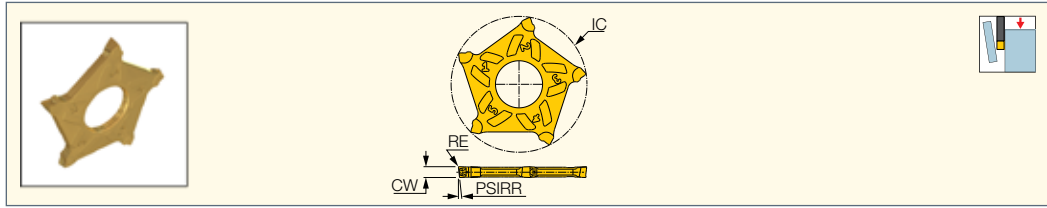
<sup>(2)</sup> Cutting width tolerance (+/-)

For tools, see pages: PCHR/L-D-IQ (581) • PCHR/L-D-JHP (582)

**PENTA IQGRIP**  
PARTING LINE

**PENTA D-R/L-C**

Inserts with 5 Cutting Edges for Parting Hard Materials, Tough and General Applications

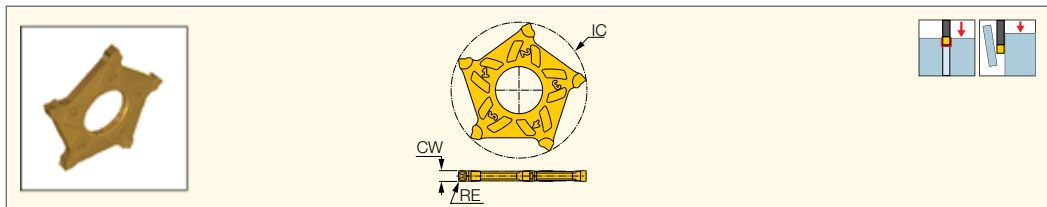


Designation	Dimensions					IC808G	Recommended Machining Data
	CW	RE	IC	PSIRL	PSIRR		f groove (IPR)
PENTA D32L200C-6D	.079	.0039	1.191	6.0	-	●	.0016-.0047
PENTA D32R200C-6D	.079	.0039	1.191	-	6.0	●	.0016-.0047
PENTA D32L200C-15D	.079	.0079	1.191	15.0	-	●	.0016-.0039
PENTA D32R200C-15D	.079	.0079	1.191	-	15.0	●	.0016-.0039
PENTA D32L300C-6D	.118	.0079	1.191	6.0	-	●	.0016-.0055
PENTA D32R300C-6D	.118	.0079	1.191	-	6.0	●	.0016-.0055
PENTA D32L300C-15D	.118	.0079	1.191	15.0	-	●	.0016-.0039
PENTA D32R300C-15D	.118	.0079	1.191	-	15.0	●	.0016-.0039
PENTA D40L300C-6D	.118	.0079	1.488	6.0	-	●	.0016-.0055
PENTA D40R300C-6D	.118	.0079	1.488	-	6.0	●	.0016-.0055
PENTA D40L300C-15D	.118	.0079	1.488	15.0	-	●	.0016-.0039
PENTA D40R300C-15D	.118	.0079	1.488	-	15.0	●	.0016-.0039

**PENTA IQGRIP**  
PARTING LINE

**PENTA D-N-PB**

Pentagonal Inserts for Parting and Grooving Bearing Steel and Other Ductile Materials



Designation	Dimensions					IC808G	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	IC		f groove (IPR)
PENTA D40N300PB020	.118	.0079	.0008	.0012	1.488	●	.0012-.0039

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

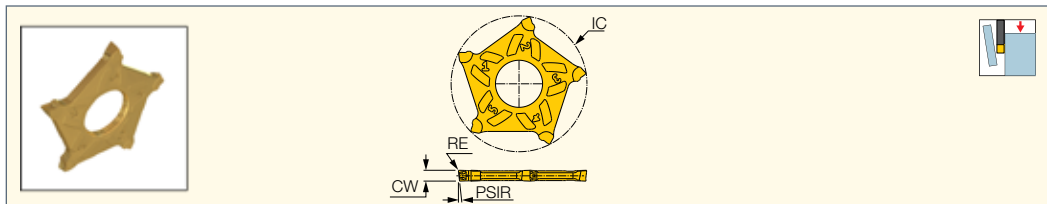
<sup>(2)</sup> Corner radius tolerance (+/-)

For tools, see pages: PCHR/L-D-IQ (581) • PCHR/L-D-JHP (582)

**PENTA IQGRIP**  
PARTING LINE

**PENTA D-R/L-PB**

Pentagonal Inserts for Parting Bearing Steel and other Ductile Materials



Designation	Dimensions					IC808G	Recommended Machining Data
	CW	RE	IC	PSIRL	PSIRR		f groove (IPR)
PENTA D40L300PB-6D	.118	.0079	1.488	6.0	-	●	.0012-.0031
PENTA D40R300PB-6D	.118	.0079	1.488	-	6.0	●	.0012-.0031
PENTA D40L300PB-15D	.118	.0039	1.488	15.0	-	●	.0012-.0024
PENTA D40R300PB-15D	.118	.0039	1.488	-	15.0	●	.0012-.0024

• For cutting speed recommendations and user guide, see pages 594-603

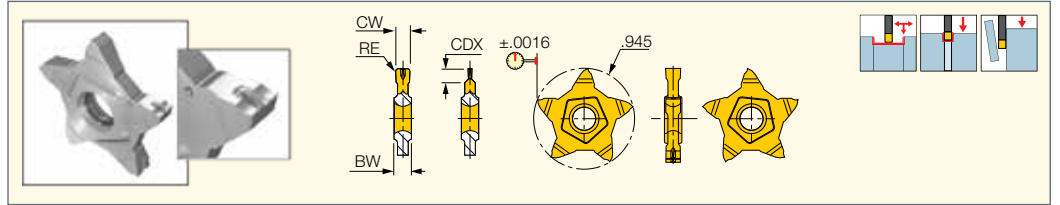
For tools, see pages: PCHR/L-D-IQ (581) • PCHR/L-D-JHP (582)

Identification System for Standard Inserts

<b>PENTA</b>	<b>24</b>	<b>N</b>	<b>150</b>	<b>J</b>	<b>010</b>
Family name	Circular circumference of the insert	Insert lead angle (K) N, R, L	Cutting edge width CW(mm)x100	Chipbreaker style J, Z	Corner radius RE (mm)x100 for neutral insert. (k=0) Or lead angle for right- or left-hand inserts. (eg. 15D=15°)



**PENTA 24N-J**  
 Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Tubes, Small and Thin-Walled Parts



Designation	Dimensions						Tough ↔ Hard				Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	CDX <sup>(3)</sup>	IC1010	IC1008	IC908	IC807G	
PENTA 24N050J000	.020	.0000	.0008	.0008	.157	.039			●		.0008-.0016
PENTA 24N050J004	.020	.0016	.0008	.0008	.157	.098		●			.0008-.0020
PENTA 24N080J000	.031	.0000	.0008	.0008	.157	.063			●		.0008-.0020
PENTA 24N100J004	.039	.0016	.0008	.0008	.157	.138			●		.0012-.0027
PENTA 24N100J006	.039	.0024	.0008	.0008	.157	.138		●		●	.0012-.0027
PENTA 24N104J000	.041	.0000	.0008	.0008	.157	.079			●		.0008-.0027
PENTA 24N120J000	.047	.0000	.0008	.0008	.157	.079			●	●	.0012-.0027
PENTA 24N125J010	.049	.0039	.0008	.0008	.157	.079			●		.0012-.0027
PENTA 24N140J000	.055	.0000	.0008	.0008	.157	.079			●		.0012-.0031
PENTA 24N147J000	.058	.0000	.0008	.0008	.157	.098			●		.0012-.0031
PENTA 24N150J010	.059	.0039	.0000	.0008	.157	.197	●	●	●	●	.0012-.0039
PENTA 24N157J015	.062	.0059	.0008	.0012	.157	.118			●	●	.0000-.0047
PENTA 24N170J010	.067	.0039	.0008	.0012	.157	.118			●	●	.0012-.0047
PENTA 24N178J018	.070	.0071	.0008	.0012	.157	.118			●	●	.0016-.0047
PENTA 24N185J015	.073	.0059	.0008	.0012	.157	.118			●		.0016-.0047
PENTA 24N196J015	.077	.0059	.0008	.0012	.157	.118			●	●	.0016-.0047
PENTA 24N196J040	.077	.0157	.0008	.0012	.157	.118			●		.0012-.0039
PENTA 24N200J020	.079	.0079	.0008	.0012	.157	.236	●	●	●	●	.0016-.0047
PENTA 24N222J015	.087	.0059	.0008	.0012	.157	.138			●	●	.0016-.0063
PENTA 24N230J020	.091	.0079	.0008	.0012	.157	.138			●	●	.0016-.0063
PENTA 24N239J015	.094	.0059	.0008	.0012	.157	.197			●	●	.0016-.0063
PENTA 24N247J020	.097	.0079	.0008	.0012	.157	.197			●	●	.0016-.0063
PENTA 24N270J010	.106	.0039	.0008	.0008	.157	.197			●		.0016-.0063
PENTA 24N287J020	.113	.0079	.0008	.0012	.157	.256			●		.0016-.0063
PENTA 24N300J000	.118	.0000	.0008	.0008	.157	.256			●		.0016-.0039
PENTA 24N300J020	.118	.0079	.0008	.0012	.157	.256	●		●	●	.0016-.0063
PENTA 24N300J040	.118	.0157	.0008	.0012	.157	.256			●	●	.0016-.0063
PENTA 24N315J015	.124	.0059	.0008	.0012	.157	.256			●		.0016-.0063
PENTA 24N318J020	.125	.0079	.0008	.0012	.157	.256			●	●	.0016-.0063
PENTA 24N330J010	.130	.0039	.0008	.0012	.197	.252			●		.0016-.0063
PENTA 24N348J020	.137	.0079	.0008	.0012	.197	.252			●		.0016-.0071
PENTA 24N356J020	.140	.0079	.0008	.0012	.197	.252			●		.0016-.0071
PENTA 24N374J020	.147	.0079	.0008	.0012	.197	.252			●		.0016-.0071
PENTA 24N398J020	.157	.0079	.0008	.0012	.197	.244			●		.0016-.0071
PENTA 24N400J040	.157	.0157	.0008	.0012	.197	.244			●		.0016-.0071
PENTA 24N423J010	.167	.0039	.0008	.0012	.197	.244			●		.0016-.0071

● Recessing is possible only with .094" and wider inserts • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

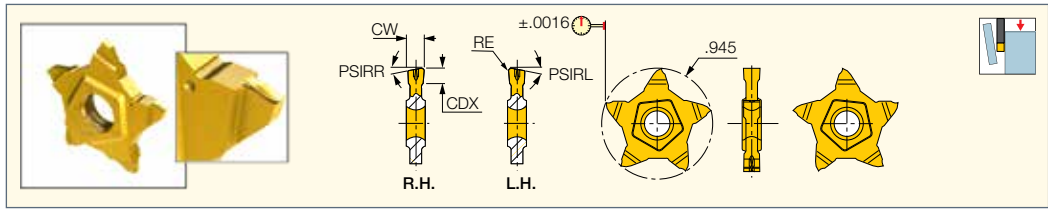
<sup>(3)</sup> For grooving and parting depth relative to part diameter, see page 588

**For tools, see pages:** HMSDV PEN (630) • HSTBS-PEN (530) • PCAD RE/LE-JHP (653) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

**PENTACUT**  
PARTING & GROOVING LINE**PENTA 24R/L-J**

Inserts with 5 Cutting Edges  
for Parting Tubes, Small  
and Thin-Walled Parts



Designation	Dimensions							IC1008	Recommended Machining Data
	CW	CDX <sup>(1)</sup>	RE	CWTOL <sup>(2)</sup>	PSIRL	PSIRR	CUTDIA <sup>(3)</sup>		f groove (IPR)
PENTA 24L100J15D	.039	.138	.0024	.0008	15.0	-	.276	●	.0008-.0024
PENTA 24R100J15D	.039	.138	.0024	.0008	-	15.0	.276	●	.0008-.0024
PENTA 24L150J06D	.059	.197	.0039	.0008	6.0	-	.394	●	.0012-.0035
PENTA 24L150J15D	.059	.197	.0024	.0008	15.0	-	.394	●	.0012-.0031
PENTA 24R150J06D	.059	.197	.0024	.0008	-	6.0	.394	●	.0012-.0035
PENTA 24R150J15D	.059	.197	.0024	.0008	-	15.0	.394	●	.0012-.0031
PENTA 24L200J06D	.079	.236	.0039	.0008	6.0	-	.472	●	.0016-.0039
PENTA 24L200J15D	.079	.236	.0039	.0008	15.0	-	.472	●	.0016-.0035
PENTA 24R200J06D	.079	.236	.0039	.0008	-	6.0	.472	●	.0016-.0039
PENTA 24R200J15D	.079	.236	.0039	.0008	-	15.0	.472	●	.0016-.0035

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting depth maximum

<sup>(2)</sup> Cutting width tolerance (+/-)

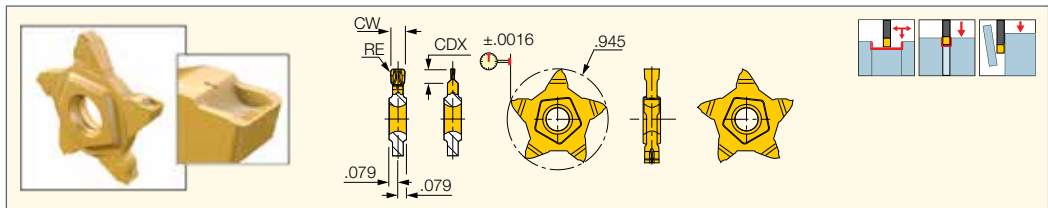
<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 589

**For tools, see pages:** HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

**PENTACUT**  
PARTING & GROOVING LINE**PENTA 24N-C**

Inserts with 5 Cutting Edges for  
Parting and Grooving Bars, Hard  
Materials and Tough Applications



Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	f groove (IPR)		
PENTA 24N150C010	.059	.0039	.0008	.0020	.197	●	.0020-.0043	
PENTA 24N157C015	.062	.0059	.0008	.0020	.118	●	.0020-.0047	
PENTA 24N170C010	.067	.0039	.0008	.0020	.118	●	.0020-.0051	
PENTA 24N178C018	.070	.0071	.0008	.0020	.118	●	.0020-.0055	
PENTA 24N196C015	.077	.0059	.0008	.0020	.118	●	.0020-.0059	
PENTA 24N200C020	.079	.0079	.0008	.0020	.236	●	.0020-.0063	
PENTA 24N222C015	.087	.0059	.0008	.0020	.138	●	.0020-.0063	
PENTA 24N230C020	.091	.0079	.0008	.0020	.138	●	.0024-.0067	
PENTA 24N239C015	.094	.0059	.0008	.0020	.197	●	.0027-.0071	
PENTA 24N247C020	.097	.0079	.0008	.0020	.197	●	.0031-.0071	
PENTA 24N270C010	.106	.0039	.0008	.0020	.244	●	.0035-.0071	
PENTA 24N287C020	.113	.0079	.0008	.0020	.244	●	.0039-.0071	
PENTA 24N300C020	.118	.0079	.0008	.0020	.244	●	.0039-.0079	
PENTA 24N300C040	.118	.0157	.0008	.0020	.244	●	.0039-.0079	
PENTA 24N318C020	.125	.0079	.0008	.0020	.244	●	.0039-.0079	
PENTA 24N478C055	.188	.0216	.0008	.0020	.244	●	.0039-.0098	
PENTA 24N486C040	.191	.0157	.0008	.0020	.244	●	.0039-.0098	
PENTA 24N500C040	.197	.0157	.0008	.0020	.244	●	.0039-.0098	

• Recessing is possible only with .094" and wider inserts • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

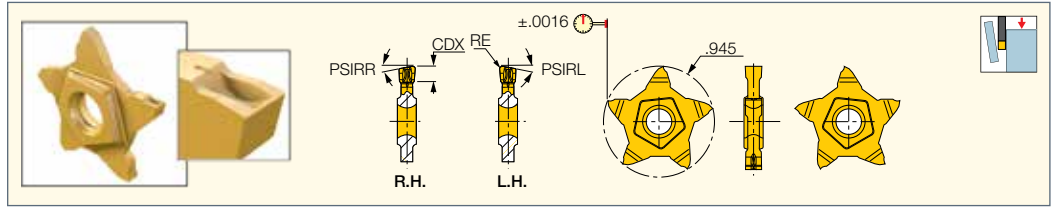
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 588

**For tools, see pages:** HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

**PENTA 24R-C**  
Inserts with 5 Cutting Edges  
for Parting Bars, Hard Materials  
and Tough Applications



Designation	Dimensions					IC1008	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	CDX <sup>(2)</sup>	PSIRR		f groove (IPR)
<b>PENTA 24R150C06D</b>	.059	.0024	.0008	.197	6.0	●	.0012-.0039
<b>PENTA 24R200C06D</b>	.079	.0039	.0008	.236	6.0	●	.0016-.0047

• For cutting speed recommendations and user guide, see pages 594-603

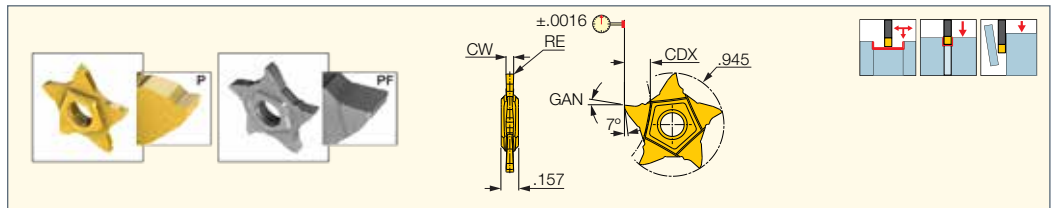
<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Cutting depth maximum

**For tools, see pages:** HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

**PENTA 24N-PF/P**  
Pentagonal Inserts with a High  
Positive Flat Rake for Parting  
and Precision Grooving



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>	GAN	IC1008	IC908	IC30N	
<b>PENTA 24N050PF005</b>	.020	.0020	.0008	.0008	.098	6.0			●	.0004-.0016
<b>PENTA 24N075PF005</b>	.030	.0020	.0008	.0008	.098	6.0			●	.0008-.0020
<b>PENTA 24N095PF005</b>	.037	.0020	.0008	.0008	.157	6.0			●	.0008-.0020
<b>PENTA 24N100P005</b>	.039	.0020	.0008	.0008	.138	12.0	●			.0008-.0020
<b>PENTA 24N100PF010</b>	.039	.0039	.0008	.0008	.157	6.0		●	●	.0012-.0024
<b>PENTA 24N125PF020</b>	.049	.0079	.0008	.0008	.197	6.0			●	.0012-.0024
<b>PENTA 24N145PF020</b>	.057	.0079	.0008	.0008	.244	6.0			●	.0012-.0024
<b>PENTA 24N150P005</b>	.059	.0020	.0008	.0008	.197	12.0	●			.0008-.0027
<b>PENTA 24N150PF020</b>	.059	.0079	.0008	.0012	.236	6.0		●	●	.0012-.0035
<b>PENTA 24N175PF020</b>	.069	.0079	.0008	.0012	.244	6.0			●	.0008-.0031
<b>PENTA 24N185PF020</b>	.073	.0079	.0008	.0012	.236	6.0			●	.0012-.0039
<b>PENTA 24N200P005</b>	.079	.0020	.0008	.0008	.236	12.0	●			.0008-.0031
<b>PENTA 24N200PF020</b>	.079	.0079	.0008	.0012	.256	6.0		●	●	.0016-.0039
<b>PENTA 24N230PF020</b>	.091	.0079	.0008	.0012	.244	6.0			●	.0016-.0055
<b>PENTA 24N239PF015</b>	.094	.0059	.0008	.0012	.256	6.0		●		.0016-.0055
<b>PENTA 24N250PF020</b>	.098	.0079	.0008	.0012	.256	6.0		●	●	.0016-.0055
<b>PENTA 24N300PF020</b>	.118	.0079	.0008	.0012	.256	6.0		●	●	.0016-.0055
<b>PENTA 24N300PF030</b>	.118	.0118	.0008	.0012	.244	6.0			●	.0016-.0059
<b>PENTA 24N400PF020</b>	.157	.0079	.0008	.0012	.256	6.0			●	.0016-.0063
<b>PENTA 24N400PF040</b>	.157	.0157	.0008	.0012	.244	6.0			●	.0016-.0063

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 588

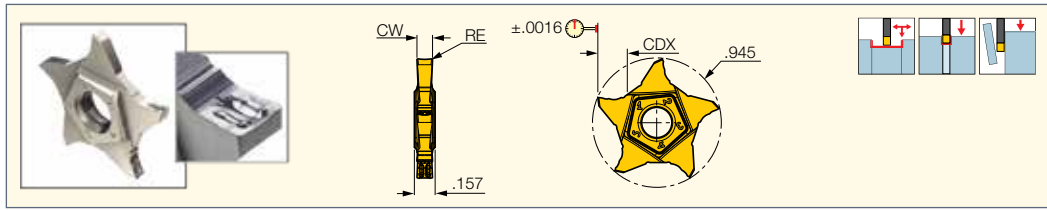
**For tools, see pages:** HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

**PENTACUT**  
 PARTING & GROOVING LINE

**PENTA 24N-Z**

Inserts with 5 Cutting Edges for Grooving and Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions					IC908	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>		f groove (IPR)
PENTA 24N150Z010	.059	.0039	.0008	.0008	.197	●	.0020-.0031
PENTA 24N200Z020	.079	.0079	.0008	.0012	.252	●	.0016-.0047
PENTA 24N300Z020	.118	.0079	.0008	.0000	.252	●	.0016-.0063

- Cutting edge with high positive rake, suitable for parting tubes, thin walled parts and for small diameters
- Suitable for machining soft materials and bearing steel at low to medium feeds
- For cutting speed recommendations and user guide, see pages 594-603

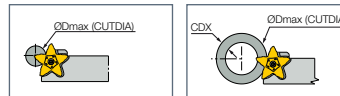
<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 588

**For tools, see pages:** HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

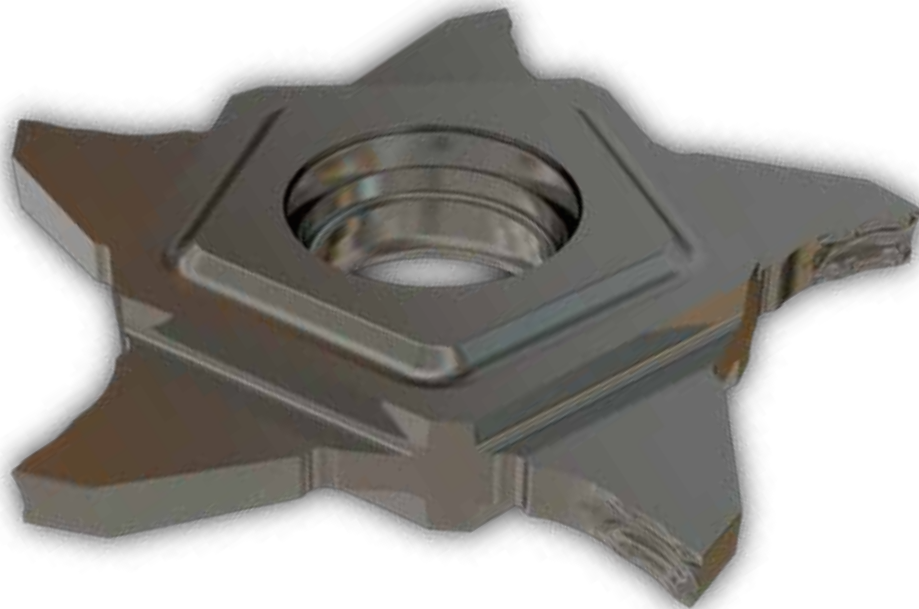


ØDmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts										
CW±.0008	CDX <sup>(3)</sup>	CDX/ØDmax	T≤.118	T≤.138	T≤.157	T≤.177	T≤.197	T≤.217	T≤.256	T≤.252
CW=.020 <sup>(1)</sup>	.039	.039 / N.L.	-	-	-	-	-	-	-	-
CW=.020 <sup>(2)</sup>	.098			9.84						
CW=.031	.063	.063 / N.L.		-						
CW=.039	.138		N.L.	9.84						
.041≤CW≤.055	.079	.079 / N.L.		-						
CW=.058	.098	.098 / N.L.		-						
CW=.059	.197		N.L.	18.5	8.27	2.76	1.18			
.062≤CW≤.077	.118		N.L.	-						
CW=.079	.236 <sup>(4)</sup>		N.L.	18.5	8.27	5.12	2.95	1.77	.79	
.087≤CW≤.091	.138		N.L.	9.84						
.094≤CW≤.098	.197		N.L.	18.5	8.27	2.76	1.18			
.106≤CW≤.125	.252		N.L.	18.5	8.27	5.31	3.94	2.76	1.57	.79

<sup>(1)</sup> Refers to PENTA 24N050J000 - a precision grooving insert.

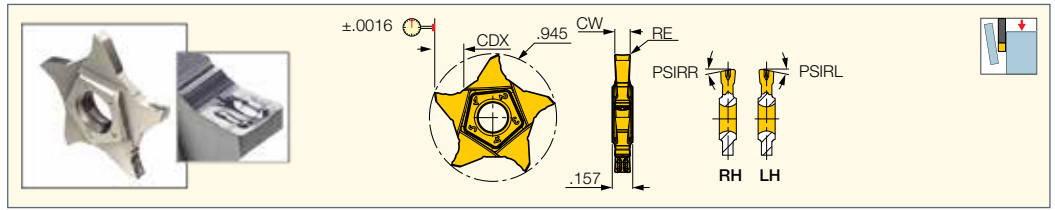
<sup>(2)</sup> Refers to PENTA 24N050J004 - a parting insert.

<sup>(3)</sup> CUTDIA for parting = 2 x CDX

<sup>(4)</sup> For full radius insert, CDX = .118, ØDmax = No limit




**PENTA 24R/L-Z**  
Inserts with 5 Cutting Edges  
for Parting Tubes, Small  
and Thin-Walled Parts



Designation	Dimensions						IC1008	Recommended Machining Data
	CW	PSIRL	PSIRR	RE	CUTDIA	CDX <sup>(1)</sup>		
PENTA 24L150Z06D	.059	6.0	-	.0024	.394	.197	●	.0012-.0035
PENTA 24L150Z15D	.059	15.0	-	.0024	.394	.197	●	.0012-.0031
PENTA 24R150Z06D	.059	-	6.0	.0024	.394	.197	●	.0012-.0035
PENTA 24R150Z15D	.059	-	15.0	.0024	.394	.197	●	.0012-.0031
PENTA 24L200Z06D	.079	6.0	-	.0039	.504	.252	●	.0016-.0039
PENTA 24L200Z15D	.079	15.0	-	.0039	.504	.252	●	.0016-.0035
PENTA 24R200Z06D	.079	-	6.0	.0039	.504	.252	●	.0016-.0039
PENTA 24R200Z15D	.079	-	15.0	.0039	.504	.252	●	.0016-.0035
PENTA 24L300Z06D	.118	6.0	-	.0079	.504	.252	●	.0016-.0051
PENTA 24L300Z15D	.118	15.0	-	.0079	.504	.252	●	.0016-.0047
PENTA 24R300Z06D	.118	-	6.0	.0079	.504	.252	●	.0016-.0059
PENTA 24R300Z15D	.118	-	15.0	.0079	.504	.252	●	.0016-.0055

- Cutting edge with high positive rake, suitable for parting tubes, thin walled parts and for small diameters
- Suitable for machining soft materials and bearing steel at low to medium feeds
- For cutting speed recommendations and user guide, see pages 594-603

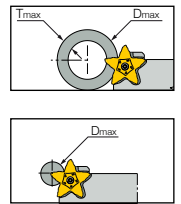
<sup>(1)</sup> Cutting depth maximum

**For tools, see pages:** HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

W±.0008	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts										
	Tmax <sup>(1)</sup>	Tmax / Dmax	T≤.118	T≤.138	T≤.157	T≤.177	T≤.197	T≤.217	T≤.236	T≤.244	T≤.252
W=.020	.039	.039 / N.L.	-	-	-	-	-	-	-	-	-
W=.020	.098	.098 / N.L.	-	-	-	-	-	-	-	-	-
W=.031	.063	.063 / N.L.	-	-	-	-	-	-	-	-	-
W=.039	.138		N.L.	9.843	-	-	-	-	-	-	-
.041≤W≤.055	.079	.079 / N.L.	-	-	-	-	-	-	-	-	-
W=.058	.098	.098 / N.L.	-	-	-	-	-	-	-	-	-
W=.059	.197		N.L.	18.504	8.268	2.756	1.181	-	-	-	-
.062≤W≤.077	.118		N.L.	-	-	-	-	-	-	-	-
W=.079	.236 <sup>(2)</sup>		N.L.	18.504	8.268	5.118	2.953	1.772	.787	-	-
.087≤W≤.090	.138		N.L.	9.843	-	-	-	-	-	-	-
.094≤W≤.098	.197		N.L.	18.504	8.268	2.756	1.181	-	-	-	-
.106≤W≤.125	.244		N.L.	18.504	8.268	5.315	3.937	2.756	1.575	.787	-
.126≤W≤.147	.252		N.L.	13.780	7.087	4.528	3.150	2.047	1.260	1.02	.787
.148≤W≤.157	.244		N.L.	13.780	7.087	4.528	3.150	2.441	1.260	.709	-
.158≤W≤.167	.244		N.L.	13.780	7.087	4.528	3.150	2.441	1.654	.983	-

<sup>(1)</sup> Dmax for parting = 2 x Tmax

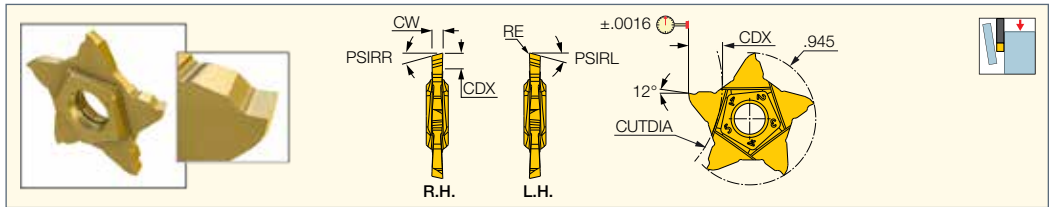
<sup>(2)</sup> For full radius insert, Tmax = .118, Dmax = No limit



**PENTACUT**  
PARTING & GROOVING LINE

**PENTA 24R-P**

Inserts with 5 Cutting Edges  
for Parting Soft Materials, Thin  
Walls and Miniature Parts



Designation	Dimensions						IC1008	Recommended Machining Data f groove (IPR)
	CW	CDX <sup>(1)</sup>	RE	CWTOL <sup>(2)</sup>	CUTDIA <sup>(3)</sup>	PSIRR		
PENTA 24R100P06D	.039	.138	.0020	.0008	.283	6.0	●	.0008-.0016
PENTA 24R100P15D	.039	.138	.0020	.0008	.283	15.0	●	.0008-.0012
PENTA 24R150P06D	.059	.197	.0020	.0008	.433	6.0	●	.0008-.0020
PENTA 24R150P15D	.059	.197	.0020	.0008	.433	15.0	●	.0008-.0016
PENTA 24R200P06D	.079	.236	.0020	.0008	.496	6.0	●	.0008-.0027
PENTA 24R200P15D	.079	.236	.0020	.0008	.496	15.0	●	.0008-.0020

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting depth maximum

<sup>(2)</sup> Cutting width tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 589

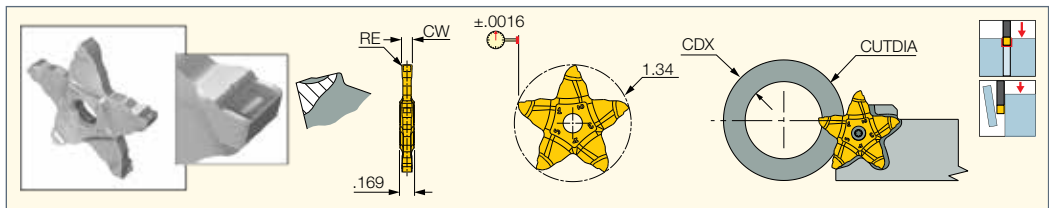
For tools, see pages: HMSDV PEN (530) • HSTBS-PEN (530) • PCAD RE/LE-JHP (553) • PCADR/L (330) • PCADR/L-JHP (330) • PCHBR/L (332)

• PCHPR/L (329) • PCHR/L-24 (325) • PCHR/L-24-JHP (326)

**PENTACUT**  
PARTING & GROOVING LINE

**PENTA 34N-C**

Inserts with 5 Cutting Edges  
for Parting and Grooving  
Hard Materials, Tough and  
General Applications



Designation	Dimensions					IC908	Recommended Machining Data f groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>		
PENTA 34N150C015	.059	.0059	.0008	.0012	.315	●	.0012-.0027
PENTA 34N200C020	.079	.0079	.0008	.0012	.315	●	.0016-.0055
PENTA 34N200C100	.079	.0394	.0008	.0020	.315	●	.0020-.0063
PENTA 34N222C015	.087	.0059	.0008	.0012	.315	●	.0020-.0055
PENTA 34N230C020	.091	.0079	.0008	.0012	.315	●	.0020-.0055
PENTA 34N239C015	.094	.0059	.0008	.0012	.315	●	.0020-.0059
PENTA 34N239C120	.094	.0472	.0008	.0020	.315	●	.0020-.0071
PENTA 34N247C020	.097	.0079	.0008	.0012	.315	●	.0020-.0071
PENTA 34N250C020	.098	.0079	.0008	.0012	.315	●	.0020-.0071
PENTA 34N270C010	.106	.0039	.0008	.0012	.394	●	.0020-.0071
PENTA 34N287C020	.113	.0079	.0008	.0012	.394	●	.0020-.0071
PENTA 34N300C000	.118	.0000	.0008	.0008	.394	●	.0016-.0039
PENTA 34N300C020	.118	.0079	.0008	.0012	.394	●	.0024-.0087
PENTA 34N300C040	.118	.0157	.0008	.0012	.394	●	.0024-.0098
PENTA 34N300C150	.118	.0590	.0008	.0020	.394	●	.0024-.0079
PENTA 34N315C015	.124	.0059	.0008	.0012	.394	●	.0024-.0079
PENTA 34N318C020	.125	.0079	.0008	.0012	.394	●	.0024-.0087
PENTA 34N330C010	.130	.0039	.0008	.0008	.394	●	.0024-.0079
PENTA 34N348C020	.137	.0079	.0008	.0012	.394	●	.0024-.0098
PENTA 34N350C025	.138	.0098	.0008	.0012	.394	●	.0024-.0118
PENTA 34N398C020	.157	.0079	.0008	.0012	.394	●	.0024-.0118
PENTA 34N400C030	.157	.0118	.0008	.0012	.394	●	.0024-.0118

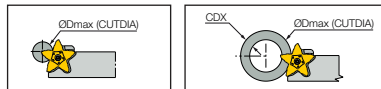
• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 590

For tools, see pages: PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328) • PCHR/L-34-JHP (328)



ØDmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts

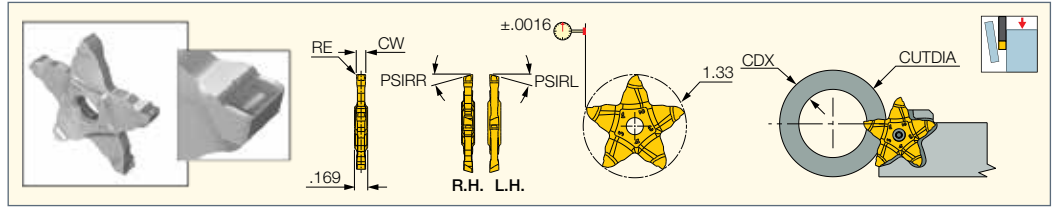
CW±.0008	T≤.197	T≤.236	T≤.276	T≤.311	T≤.335	T≤.354	T≤.394
.059 ≤ CW ≤ .106	N.L.	13.77	6.50	3.94	2.17	-	-
.107 ≤ CW ≤ .157	N.L.	13.77	6.50	3.94	2.17	2.17	.787

N.L. = No Limit

CUTDIA for parting = 2 x CDX

**PENTA 34R/L-C**

Inserts with 5 Cutting Edges for Parting Hard Materials, Tough and General Applications



Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	CUTDIA <sup>(1)</sup>	CDX <sup>(2)</sup>	PSIRL	PSIRR		f groove (IPR)
PENTA 34L150C08D	.059	.0027	.709	.315	8.0	-	●	.0012-.0031
PENTA 34R150C08D	.059	.0027	.709	.315	-	8.0	●	.0012-.0031
PENTA 34L200C06D	.079	.0039	.709	.315	6.0	-	●	.0016-.0047
PENTA 34R200C06D	.079	.0039	.709	.315	-	6.0	●	.0016-.0047
PENTA 34L200C15D	.079	.0039	.709	.315	15.0	-	●	.0016-.0039
PENTA 34R200C15D	.079	.0039	.709	.315	-	15.0	●	.0016-.0039
PENTA 34L300C06D	.118	.0079	.787	.394	6.0	-	●	.0016-.0055
PENTA 34R300C06D	.118	.0079	.787	.394	-	6.0	●	.0024-.0055
PENTA 34L300C15D	.118	.0079	.787	.394	15.0	-	●	.0016-.0039
PENTA 34R300C15D	.118	.0079	.787	.394	-	15.0	●	.0024-.0047

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> For grooving and parting depths relative to part diameter, see page 593

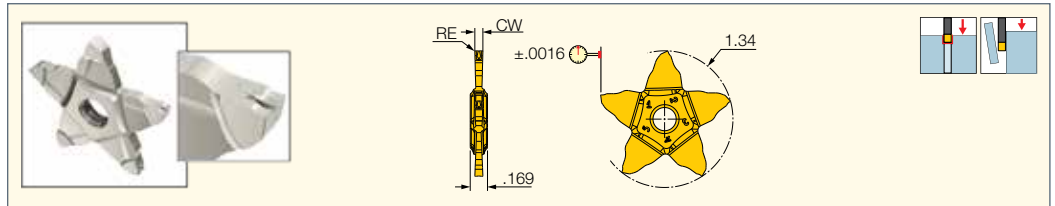
<sup>(2)</sup> Cutting depth maximum

**For tools, see pages:** PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328)

• PCHR/L-34-JHP (328)

**PENTA 34N-J**

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions					IC908	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>		f groove (IPR)
PENTA 34N150J015	.059	.0059	.0008	.0001	.335	●	.0012-.0039
PENTA 34N200J020	.079	.0079	.0008	.0001	.335	●	.0016-.0047
PENTA 34N200J100	.079	.0394	.0008	.0001	.335	●	.0020-.0047
PENTA 34N239J015	.094	.0059	.0008	.0001	.335	●	.0016-.0063
PENTA 34N239J120	.094	.0472	.0008	.0001	.335	●	.0024-.0063
PENTA 34N250J020	.098	.0079	.0008	.0001	.335	●	.0016-.0063
PENTA 34N270J010	.106	.0039	.0008	.0001	.394	●	.0016-.0063
PENTA 34N300J000	.118	.0000	.0008	.0000	.394	●	.0016-.0039
PENTA 34N300J020	.118	.0079	.0008	.0001	.394	●	.0016-.0063
PENTA 34N300J040	.118	.0157	.0008	.0001	.394	●	.0016-.0063
PENTA 34N300J150	.118	.0590	.0008	.0001	.394	●	.0024-.0079
PENTA 34N318J020	.125	.0079	.0008	.0001	.394	●	.0079-.0063

• Recessing is possible only with .094" and wider inserts • For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

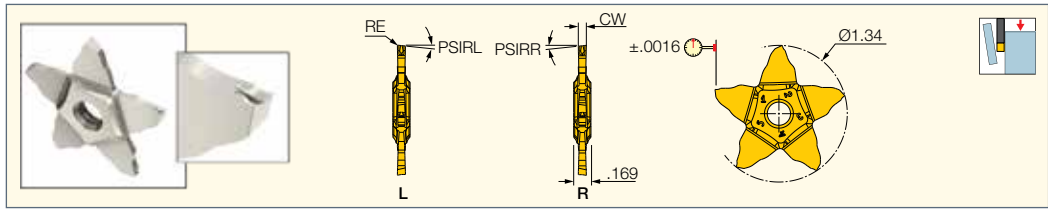
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 590

**For tools, see pages:** PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328) • PCHR/L-34-JHP (328)

**PENTACUT**  
PARTING & GROOVING LINE**PENTA 34R/L-J**

Inserts with 5 Cutting Edges  
for Parting Tubes, Small  
and Thin-Walled Parts



Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	CUTDIA <sup>(2)</sup>	PSIRL	PSIRR		f groove (IPR)
PENTA 34L150J06D	.059	.0027	.0008	.709	6.0	-	●	.0012-.0035
PENTA 34L150J15D	.059	.0027	.0008	.709	15.0	-	●	.0012-.0031
PENTA 34R150J06D	.059	.0027	.0008	.709	-	6.0	●	.0012-.0035
PENTA 34R150J15D	.059	.0027	.0008	.709	-	15.0	●	.0012-.0031
PENTA 34L200J06D	.079	.0039	.0008	.709	6.0	-	●	.0016-.0039
PENTA 34L200J15D	.079	.0039	.0008	.709	15.0	-	●	.0016-.0035
PENTA 34R200J06D	.079	.0039	.0008	.709	-	6.0	●	.0016-.0039
PENTA 34R200J15D	.079	.0039	.0008	.709	-	15.0	●	.0016-.0035

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

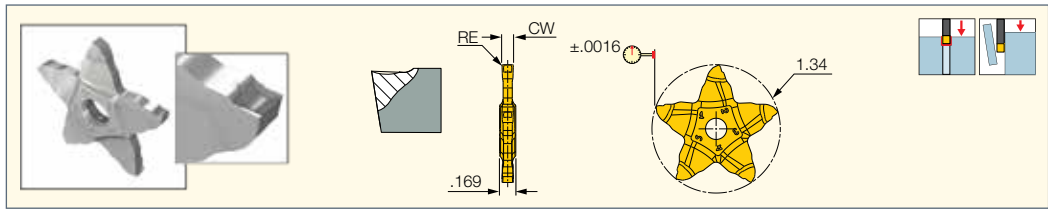
<sup>(2)</sup> For grooving and parting depths relative to part diameter, see page 593

**For tools, see pages:** PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328)

• PCHR/L-34-JHP (328)

**PENTACUT**  
PARTING & GROOVING LINE**PENTA 34N-PB**

Parting and Grooving Pentagonal  
Inserts for Parting Bearing Steel  
and Other Ductile Materials



Designation	Dimensions					IC908	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX <sup>(3)</sup>		f groove (IPR)
PENTA 34N150PB015	.059	.0059	.0008	.0012	.335	●	.0012-.0024
PENTA 34N200PB020	.079	.0079	.0008	.0012	.335	●	.0012-.0031
PENTA 34N300PB020	.118	.0079	.0008	.0012	.374	●	.0012-.0039

• For cutting speed recommendations and user guide, see pages 594-603

<sup>(1)</sup> Cutting width tolerance (+/-)

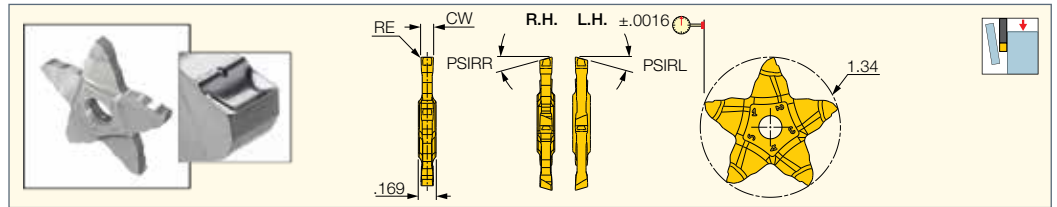
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> For grooving and parting depths relative to part diameter, see page 590

**For tools, see pages:** PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328)

• PCHR/L-34-JHP (328)

**PENTA 34R/L-PB**  
Pentagonal Inserts for Parting Bearing Steel and other Ductile Materials

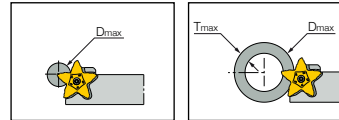


Designation	Dimensions					IC908	Recommended Machining Data
	CW	RE	CUTDIA	PSIRL	PSIRR		f groove (IPR)
<b>PENTA 34R150PB-6D</b>	.059	.0027	.709	-	6.0	●	.0012-.0020
<b>PENTA 34L150PB-6D</b>	.059	.0027	.709	6.0	-	●	.0012-.0020
<b>PENTA 34R200PB-6D</b>	.079	.0039	.709	-	6.0	●	.0012-.0024
<b>PENTA 34L200PB-6D</b>	.079	.0039	.709	6.0	-	●	.0012-.0024
<b>PENTA 34R300PB-6D</b>	.118	.0079	.787	-	6.0	●	.0012-.0031
<b>PENTA 34L300PB-6D</b>	.118	.0079	.787	6.0	-	●	.0012-.0031

• For cutting speed recommendations and user guide, see pages 594-603

**For tools, see pages:** PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328)

• PCHR/L-34-JHP (328)



Dmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts							
W±.0008	T≤.197	T≤.236	T≤.276	T≤.315	T≤.335	T≤.354	T≤.394
.058 ≤ W ≤ .106	N.L.	13.78	6.50	3.94	2.16	-	-
.106 ≤ W ≤ .158						2.16	.79

Dmax for parting = 2 x Tmax

N.L. = No Limit



## Parting and Grooving

### Selection of Inserts

For a proper match of insert and cutting material to application, the following variables must be taken into consideration:

- Width of cut (width of insert)
- Chipformer style
- Lead angle
- Corner radius
- Carbide grade

### Width of Cut (W.O.C.) and Depth of Cut (D.O.C.)

In selecting **W.O.C.**, the main factor to consider is the required **D.O.C.** The ratio  $D.O.C. \approx 8 \times W.O.C.$  is of practical use on alloy steel of average machinability. For example, applying a .118" **W.O.C.** insert **TAG N3C** to cut-off a 1.89" solid bar.

Additional factors which affect **D.O.C.** capacity, relative to the ratio, are:

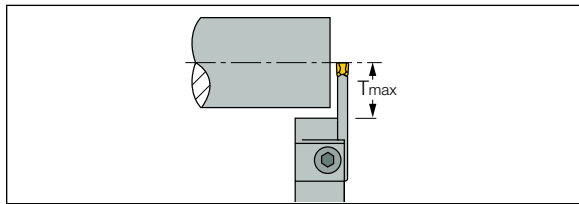
### Holder Or Blade Size

To minimize risk of vibration and deflection always choose:

- Blade or toolholder with smallest possible overhang.
- Toolholder with maximum shank dimension.
- Blade height (B) dimension which is larger than  $T_{max}$ .
- Blade or holder with maximum blade width (largest possible insert seat size).

Example:

- A **W.O.C.** .375" on blade TGFH 53K-9 (B=2.07") extends the ratio of **D.O.C.** to **W.O.C.** by some 50% to 4.72".



### Insert Support

A self-clamped tool is recommended for deep radial machining. A screw-clamp holder is recommended for axial and small **D.O.C.** machining.

### 90° Mounting

It is very important that the insert is mounted at 90° to the center line of the workpiece in order to obtain perpendicular surfaces and reduce the risk of vibration.

### Workpiece Machinability

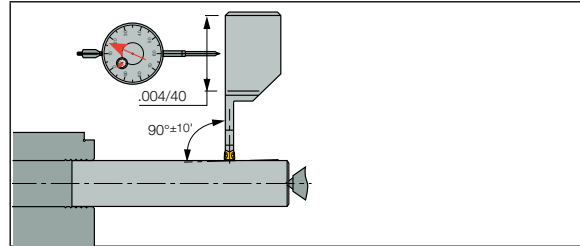
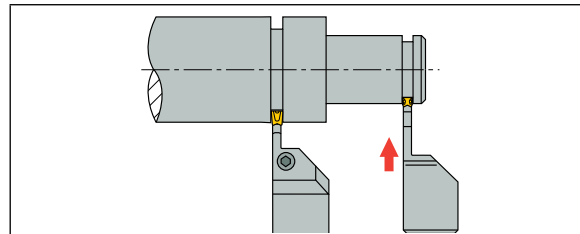
The workpiece material affects all of the above factors.

### Machine Power and Setup Rigidity

Excessive **W.O.C.** on a light-duty machine will yield vibration and may even stop spindle rotation.

### Expensive Workpiece Material

On costly metals the narrowest applicable **W.O.C.** should be used.

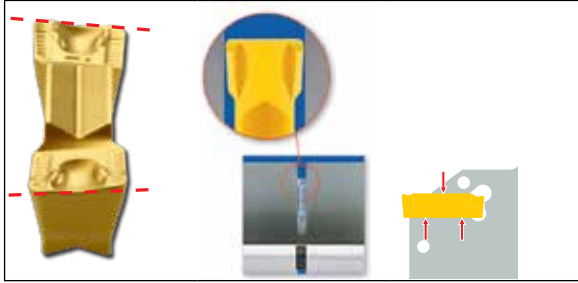


## Insert Positioning

### The Twisted Insert for Cut-Off and Grooving Applications

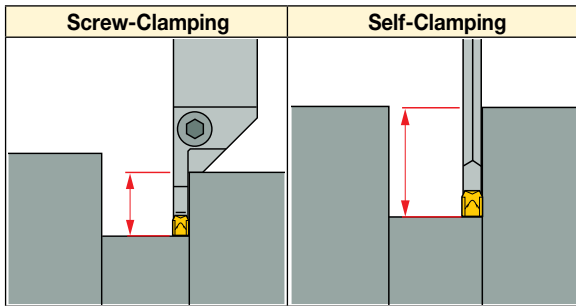
Machining depths longer than insert length is made possible with the double-ended, twisted insert body.

The rear edge is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface when the tool penetrates deeply into the workpiece.



### Clamping

Extended, prismatic surfaces guarantee reliable, foolproof clamping even in unstable machining conditions.



Small diameters (D.O.C.)  
with screw-clamped Inserts

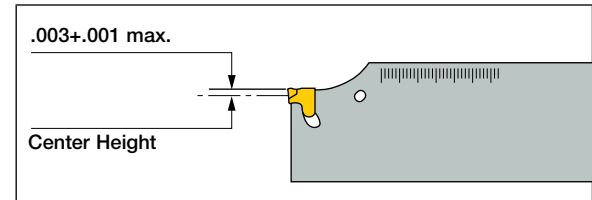
Large diameters (D.O.C.)  
with self-clamped Inserts

### Setup

- The optimal cutting edge height above the center of **TANG-GRIP** tools is up to  $.003" + .001"$ , an advantage when cutting solid bar to center
- Cut-off as close to chuck as possible
- On new applications, first machine in the low or middle range of recommended speeds and feeds

### Machining

- Consistency of speed and feed improves performance
- Apply coolant abundantly
- Secure inserts into clean pockets
- Cutting forces on soft workpiece materials may be insufficient to push insert well into pocket. Tap insert into place using a plastic hammer
- On a conventional lathe, lock the carriage to prevent axial motion during cut-off

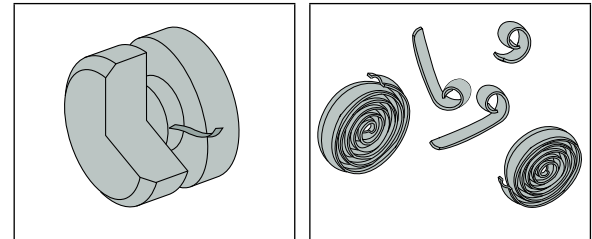


### Usage

- Replace worn inserts promptly, the price of a new one is much less than the risk of damage from continuing with one that is worn out
- Replace blades that have worn or damaged pockets
- Never try to repair damaged pockets
- Chip curling is dependent on the chipformer type and the machining conditions

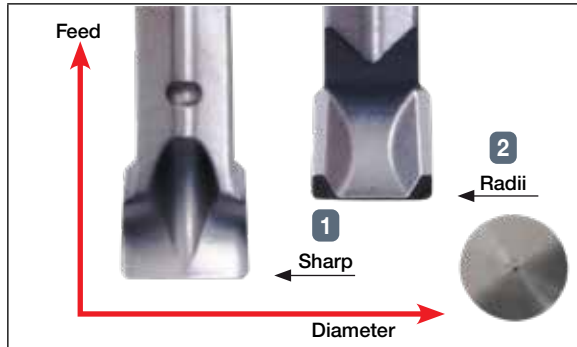
### Chipformer Features

- Narrows the chip
- Eliminates friction with groove walls, prevents chip jam overload
- Permits higher feeds
- Produces unscratched surfaces, eliminating additional facing
- Curls the chips into compact spirals for easy disposal



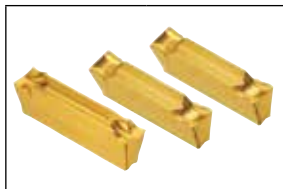
## Selection of Corner Radius

- 1 A smaller corner radius ( $r$ ) will reduce the load on the workpiece and produce a smaller size burr
- 2 At the same time, a large corner radius allows for higher feeds and increased tool life



### Standard Corner Radius

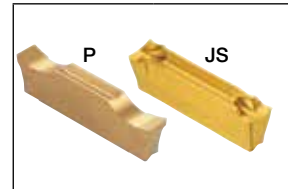
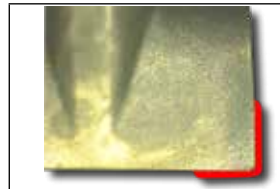
- Standard medium corner size
- For general applications and materials



Medium (standard) corner radius

### "S" Sharp Corners

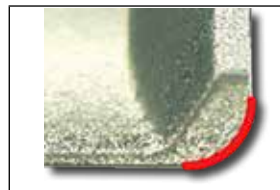
- Cutting edge with positive rake and sharp corners
- When a minimum burr (pip) size is essential
- For small feeds
- For small diameters or thin walls
- For CNCs, multi-spindle and screw machines



Sharp corner

### "B" Large Corner Radius

- Reinforced corners with stronger cutting edge
- For tough applications and interrupted cuts



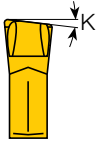


Large corner radius

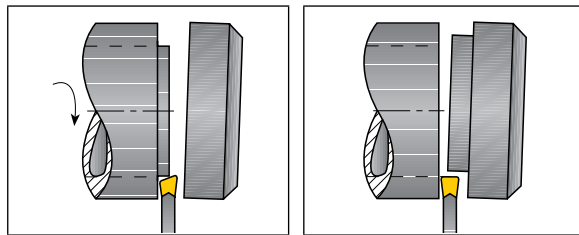


**Lead Angle**

Lead angle (**K**) on cut-off inserts reduces size of burr remaining on workpiece. Increasing the lead angle reduces the burr, but also reduces possible feed rates and tool life. Therefore, neutral inserts are recommended for parts on which a burr is tolerated.

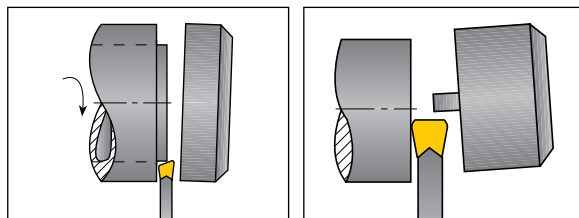
Insert designations such as **TAG R... DGR (R.H.)** and **TAG L... DGL (L.H.)** comply with standard terms for turning direction. When looking toward the chuck from the workpiece, **R.H.**=counterclockwise (**C.C.**) rotation of workpiece and **L.H.**=clockwise (**C**) rotation of workpiece. **C.C.** requires right-hand inserts; **C** requires left-hand inserts. A neutral insert with 0° lead angle increases **D.O.C.** capacity.

Left TAG L/DGL	Neutral TAG N/DGN	Right TAG R/DGR
		



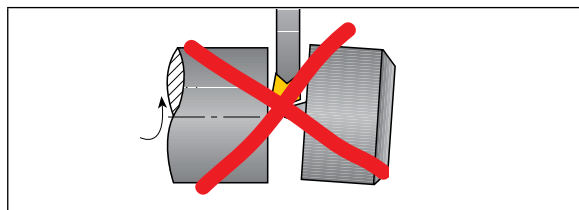
TAGR/GFR/DGR

TAGR/GFN/DGN










TAG R/DGR

TAG N/DGN

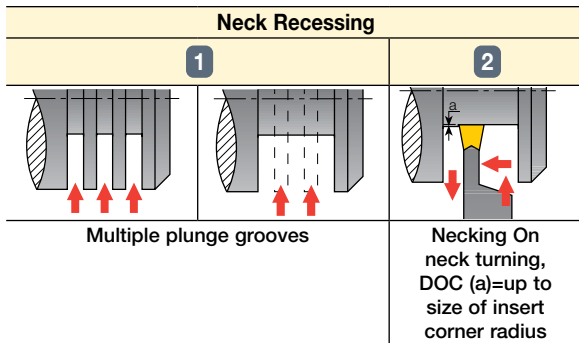
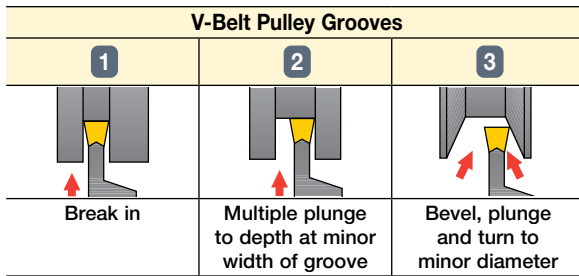
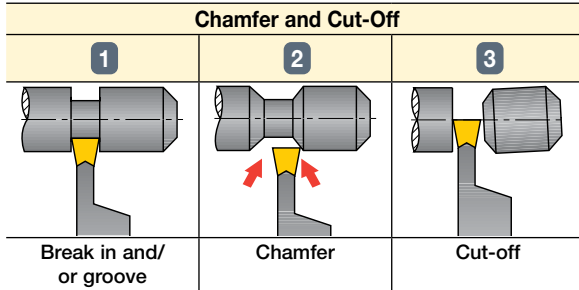


TAG R/DGR-WRONG

**Neutral Insert Vs. Lead Angle Type**

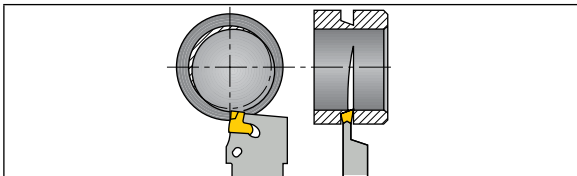
			
<b>Lifetime</b>		✓	
<b>Chip Control</b>		✓	
<b>Burr Size</b>			✓
<b>Surface Finish</b>		✓	
<b>Part Straightness</b>		✓	

## General Rules for Specific Applications



## Cut-Off on Eccentric Tubes

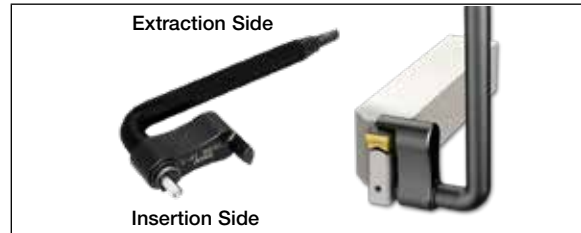
Inserts with 4° lead angle are usually recommended for tubes. However, the combination of eccentric bore and machine resiliency may increase feed-snap on breakthrough and damage the cutting edge. Changing to 6° lead angle inserts will moderate breakthrough. Alternatively, inserts with an extra negative rake-land that strengthens the cutting edge are available on request.



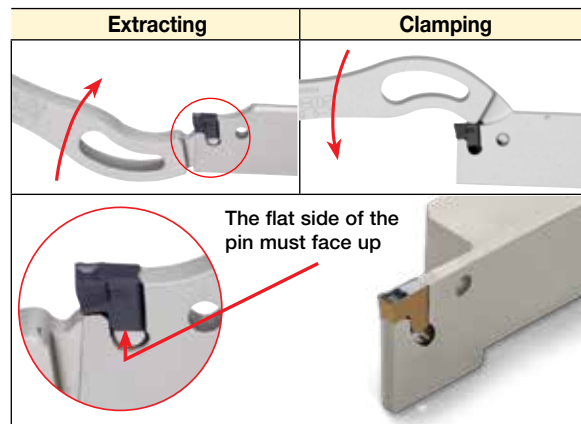
## Clamping / Extraction Instructions

**TANG-GRIP**  
PARTING LINE

The tools are equipped with a user-friendly clamping and extraction device

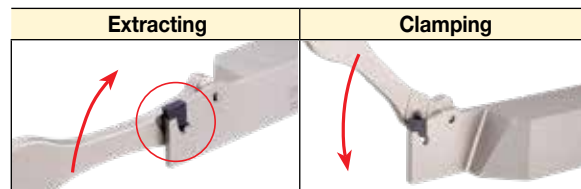


ETG 8-12 Extractor for .315" to .500" Inserts



ETG 1.4 (for .055" tools)

ETG 3-4 (for .118" and .157" tools)



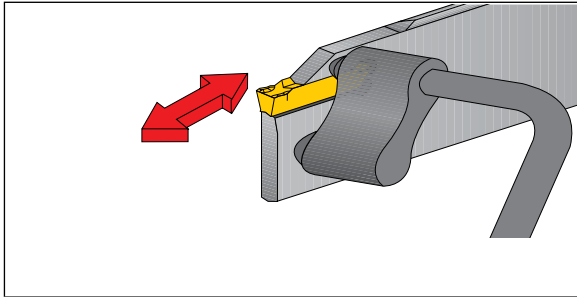
ETG 2 (for .079" tools)

ETG 5-7 (for .197-.276" tools)

### Clamping / Extraction Instructions



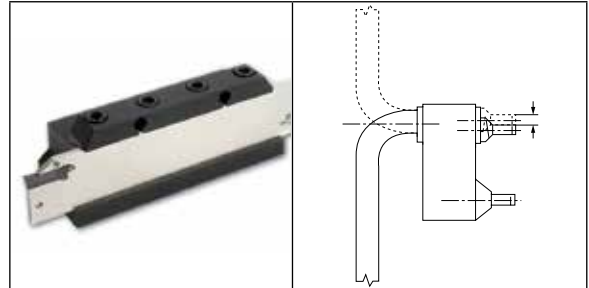
Extractor for DGN/R/L Double-Ended Inserts  
Do-Grip Insert Clamping/Extracting



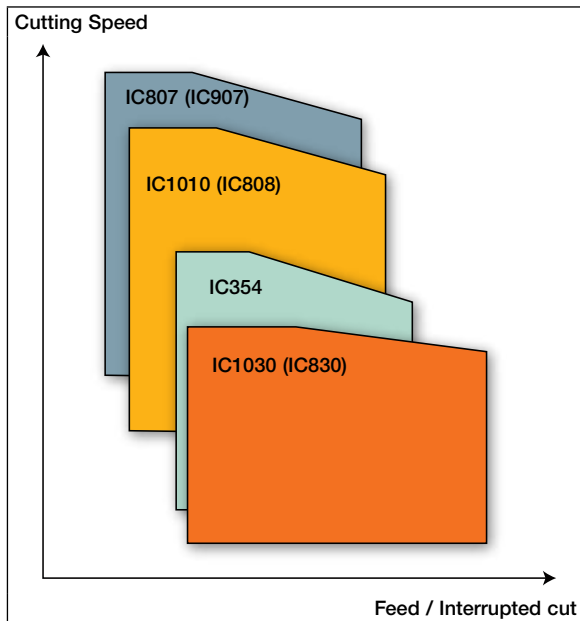
Extracting the insert

### Eccentric Extractor for Insert Indexing

Simple to operate; controlled rotation requires low force; guarantees limited upper jaw movement and secures maximum load on blade.



### Grade Application Range



### Selection Guide for Parting Grades

Material groups	ISO P		ISO M	ISO K	ISO N	ISO S	ISO H
	1-11	12-13	14	15-20	21-28	31-37	38-41
	Steel	Stainless Steel Ferritic & Martensitic	Stainless Steel Austenitic & Duplex (Ferritic - Austenitic)	Cast Iron	Non-ferrous	High Temperature Alloys	Hard Steel & Cast Iron
<p>Harder</p> <p>↑</p> <p>↓</p> <p>Tougher</p>	IC807 (IC907)	IC807 (IC907)	IC807 (IC907)		IC20	IC807 (IC907)	IC807 (IC907)
			IC808	IC808	IC807 (IC907)		
	IC808	IC1010	IC1010	IC20		IC20	IC808
	IC1010	IC5400	IC5400	IC808		IC808	IC1010
	IC830	IC830	IC830	IC1010		IC830	IC830
	IC1030	IC1030	IC1030		IC1030	IC1030	

■ First choice

## Workpiece Materials

ISO	Material	Condition	Tensile Strength [ksi]	Hardness HB	Material Group No. <sup>(1)</sup>	
P	Non-alloy steel and cast steel, free cutting steel	<0.25% C	Annealed	61	125	1
		≥0.25% C	Annealed	94	190	2
		<0.55% C	Quenched and tempered	123	250	3
		≥0.55% C	Annealed	109	220	4
			Quenched and tempered	145	300	5
	Low alloy and cast steel (less than 5% of alloying elements)	Annealed	87	200	6	
		Quenched and tempered	135	275	7	
			145	300	8	
			174	350	9	
	High alloyed steel, cast steel and tool steel	Annealed	99	200	10	
		Quenched and tempered	160	325	11	

P	Stainless steel and cast steel	Ferritic / martensitic	99	200	12
		Martensitic	119	240	13

M	Stainless steel and cast steel	Austenitic, duplex	87	180	14
---	--------------------------------	--------------------	----	-----	----

K	Gray cast iron (GG)	Ferritic / pearlitic		180	15
		Pearlitic / martensitic		260	16
	Nodular cast iron (GGG)	Ferritic		160	17
		Pearlitic		250	18
	Malleable cast iron	Ferritic		130	19
		Pearlitic		230	20

N	Aluminum-wrought alloys	Not hardenable		60	21	
		Hardenable		100	22	
	Aluminum-cast alloys	≤12% Si	Not hardenable		75	23
			Hardenable		90	24
		>12% Si	High temperature		130	25
		>1% Pb	Free cutting		110	26
	Copper alloys	Brass		90	27	
		Electrolytic copper		100	28	
	Non metallic	Duroplastics, fiber plastics				29
		Hard rubber				30

S	High temperature alloys	Fe based	Annealed		200	31
			Hardened		280	32
		Ni or Co based	Annealed		250	33
			Hardened		350	34
	Titanium alloys	Cast		320	35	
		Pure	58	190	36	
		Alpha+Beta alloys, hardened	152	310	37	

H	Hardened steel	Hardened		55 HRC	38
		Hardened		60 HRC	39
	Chilled cast iron	Cast		400	40
	Cast iron	Hardened		55 HRC	41

<sup>(1)</sup> For material groups, see pages 852-882

**Parting Speed Recommendations (SFM)**

Material Group No.	IC907/807	IC30N	IC354	IC1010/ IC908/808/1008	IC5400	IC1030/ IC830/928/1028	IC328
1	525 - 785	425 - 625	375 - 560	445 - 655	360 - 525	330 - 490	310 - 460
2	490 - 675	395 - 525	345 - 475	410 - 560	330 - 445	310 - 410	280 - 395
3	375 - 560	295 - 445	260 - 395	310 - 460	245 - 360	230 - 345	215 - 330
4	410 - 625	330 - 490	295 - 445	345 - 525	280 - 425	260 - 395	245 - 360
5	330 - 525	260 - 425	230 - 375	280 - 445	230 - 360	215 - 330	195 - 310
6	410 - 625	330 - 490	295 - 445	345 - 525	280 - 425	260 - 395	245 - 360
7	330 - 560	260 - 445	230 - 395	280 - 460	230 - 360	215 - 345	195 - 330
8	330 - 525	260 - 425	230 - 375	280 - 445	230 - 360	215 - 330	195 - 310
9	295 - 490	230 - 395	215 - 345	245 - 410	195 - 330	180 - 310	165 - 280
10	490 - 675	395 - 525	345 - 475	410 - 560	330 - 445	310 - 410	280 - 395
11	295 - 490	230 - 395	215 - 345	245 - 410	195 - 330	180 - 310	165 - 280

	IC20N	IC907/807	IC808	IC908	IC5400	IC830/928/1028	IC328
12	560 - 985	375 - 690	360 - 655	345 - 625	280 - 490	260 - 460	245 - 445
13	490 - 950	345 - 655	330 - 625	310 - 590	245 - 475	230 - 445	215 - 410

	IC20N	IC907/807	IC808	IC908	IC5400	IC830/928/1028	IC328
14	460 - 855	310 - 575	295 - 560	280 - 525	230 - 425	215 - 395	195 - 360

	IC907/807	IC808	IC908	IC20		
15	560 - 1000	475 - 885	460 - 835	230 - 410		
16	490 - 705	425 - 625	410 - 590	195 - 295		
17	525 - 870	460 - 755	445 - 720	215 - 360		
18	410 - 675	360 - 590	345 - 560	165 - 280		
19	625 - 1050	560 - 920	525 - 870	260 - 425		
20	525 - 870	460 - 755	445 - 720	215 - 360		

	IC907/807	IC908/808	IC20			
21	1180 - 3545	1085 - 3250	985 - 2955			
22	885 - 2955	820 - 2705	740 - 2460			
23	885 - 2955	820 - 2705	740 - 2460			
24	590 - 1770	540 - 1625	490 - 1475			
25	590 - 1180	540 - 1085	490 - 985			
26	590 - 1180	540 - 1085	490 - 985			
27	425 - 885	395 - 820	360 - 740			
28	295 - 590	260 - 540	245 - 490			
29	130 - 590	130 - 540	115 - 490			
30						

	IC807	IC907	IC908	IC808	IC830/328/928/1028	IC20
31	165 - 230	150 - 230	130 - 195	130 - 215	100 - 150	100 - 130
32	115 - 180	115 - 165	100 - 150	100 - 150	65 - 115	65 - 100
33	115 - 180	115 - 165	100 - 150	100 - 150	65 - 115	65 - 100
34	100 - 165	100 - 150	80 - 130	80 - 130	65 - 100	50 - 100
35	80 - 115	80 - 115	65 - 100	65 - 100	50 - 65	50 - 65
36	375 - 625	360 - 605	310 - 525	330 - 560	230 - 395	215 - 360
37	130 - 165	130 - 165	115 - 150	115 - 150	100 - 130	130 - 165

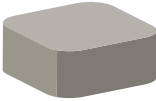





	IC807	IC907	IC808	IC908		
38	115 - 150	100 - 130	100 - 130	80 - 115		
39	100 - 130	80 - 115	80 - 115	65 - 100		
40	150 - 215	130 - 195	130 - 195	100 - 165		
41	130 - 165	115 - 150	115 - 150	100 - 130		

## ISCAR Parting Grades Chart



	Grade	ISO	Grade Description	Coating Layers	Coating Color*
PVD COATED	IC308	P15-P30	A tough submicron grain size substrate with PVD coating. Suitable for steel, alloy steels and stainless steel at low to medium cutting speeds under stable conditions.		
		S15-S30			
	IC328	P30-P45	A tough substrate with PVD coating, suitable for a wide range of applications on steels and stainless steel at low to medium speeds and medium to high feeds. The grade is recommended for interrupted cuts and machining under unstable conditions.		
		M25-M40			
	IC354	P20-P40	A tough substrate with PVD coating, suitable for general use on a wide range of carbon steels, alloy steels and stainless steel at moderate speeds and feeds.		
		M20-M30			
	IC807	P10-P20	A hard submicron grain size substrate with PVD coating and a special SUMOTEC surface treatment. Suitable for machining steels, alloy steels, austenitic stainless steel, high temperature alloys and hard steels at moderate to relatively high cutting speeds under stable conditions. Features high wear resistance and plastic deformation durability.		
M05-M15					
K15-K30					
S10-S20					
H05-H15					
IC808	P15-P30	A tough submicron grain size substrate with PVD coating and a special SUMOTEC surface treatment. Recommended for general use for a large variety of applications and materials such as steels, alloy steels, austenitic stainless steel and high temperature alloys at moderate cutting speeds and feeds. Features high wear resistance and chipping durability.			
	M20-M30				
	K20-K40				
	S15-S30				
IC830	P30-P45	A tough substrate with PVD coating and a special SUMOTEC surface treatment. Suitable for machining steel and stainless steel at low to medium cutting speeds and moderate to high feeds. The grade features high toughness and recommended for interrupted cuts and machining under unstable conditions. May be used on high temperature alloys at low cutting speeds.			
	M25-M40				
IC907	P10-P20	A hard submicron grain size substrate with PVD coating, suitable for a wide range of materials such as steels, alloy steels, hard steels, austenitic stainless steel and heat resistant alloys at moderate to relatively high cutting speeds under stable conditions. Features high wear resistance and plastic deformation durability.			
	M05-M15				
	K15-K30				
	S10-S20				
IC908	P15-P30	A tough submicron grain size substrate with a PVD coating, recommended for general use for diverse operations on materials such as steels, alloy steels, austenitic stainless steel and high temperature alloys at a wide range of cutting speeds. Features high wear resistance and chipping durability.			
	M20-M30				
	K20-K40				
	S15-S30				
	H20-H30				

\* For coated grades

ISCAR Parting Grades Chart

	Grade	ISO	Grade Description	Coating Layers	Coating Color*
PVD COATED	IC928	P30-P45	A tough substrate with PVD coating, suitable for machining steel and stainless steel at low to medium cutting speeds and moderate to high feeds. The grade is recommended for interrupted cut and machining at unstable conditions.	AlTiCrN Base	
		M25-M40			
	IC1008	P15-P30	A tough submicron grain size substrate with PVD coating. Recommended for general use on a wide range of applications and materials as steels, alloy steels, austenitic stainless steel and high temperature alloys at moderate cutting speeds.	TiN TiAlN Base	
		M20-M30			
		K20-K40			
		S15-S30			
	IC1010	P15-P30	A tough submicron grain size substrate with PVD coating. Recommended for general use on a wide range of applications and materials such as steels, alloy steels, austenitic stainless steel and high temperature alloys at moderate cutting speeds and low to medium feeds. The grade features improved toughness and wear resistance which extends tool life.	TiN AlTiN Base	
		M20-M30			
K20-K40					
S15-S30					
IC1028	P30-P45	A tough substrate with PVD coating, suitable for machining steel and stainless steel at low to medium cutting speeds and moderate to high feeds. The grade is recommended for interrupted cuts and machining under unstable conditions.	TiN AlTiCrN Base		
	M25-M40				
IC1030	P30-P45	A tough substrate with PVD coating, suitable for machining steel and stainless steel at low to medium cutting speeds and moderate to high feeds. Recommended for interrupted cuts and machining under unstable conditions. The grade features improved toughness and wear resistance which extends tool life.	TiN AlTiN Base		
	M25-M40				
CVD COATED	IC5400	P30-P45	A tough substrate with MTCVD coating and a special SUMOTEC post coating treatment. Suitable for machining steel and stainless steel at low to medium cutting speeds and moderate to high feeds under stable and unstable machining conditions.	TiN Al <sub>2</sub> O <sub>3</sub> TiCN Base	
		M25-M45			

\* For coated grades

	Grade	ISO	Grade Description	Uncoated Layers	Uncoated
CERMET	IC30N	P10-P30	A tough cermet grade, suitable for machining, steels and stainless steel at medium to high cutting speeds and low feeds. Features excellent surface finish, very good wear resistance and prevents built-up edge.	Base	
		M10-M20			
UNCOATED	IC20	K10-K20	A hard-uncoated carbide grade for machining aluminum and other non-ferrous materials at medium to high cutting speeds. Can be used for cast iron at low cutting speeds. Suitable also for machining high temperature and Titanium alloys, at low cutting speeds.	Base	
		N05-N25			
		S10-S20			
		H10-H20			





# FACE GROOVING AND TURNING



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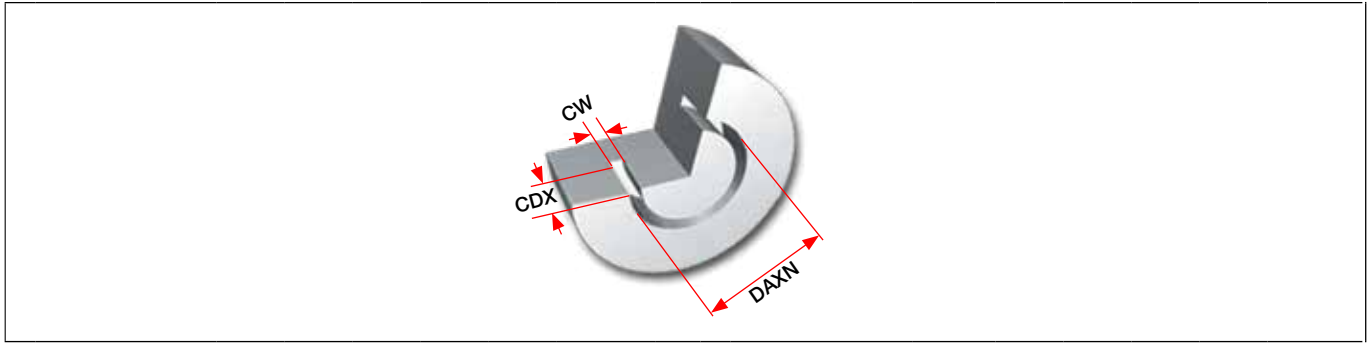
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Face Grooving Grades Chart .....661

**A Variety of Inserts for Face Machining Applications**



**Face Grooving DAXN .236-1.57"**

		DAXN	DAXX	CWN	CWX	CDX	Page
Picco		.236	-	.039	.197	1.575	648-654
MIFR/MEFL		.315	-	.059	.138	.59	656-657
GFQR		.472	.748	.039	.098	.118	655
HGPL		.472	∞	.118	.236	∞	631
GRIP		.472	∞	.118	.25	∞	630
DGN		.826	∞	.157	.236	∞	533-540
HFPR/L		.472	∞	.118	.236	∞	629
TNF		1.181	27.6	.118	.236	∞	639-640
HFPN		1.06	5.118	.079	.079	.551	628

**Face Grooving DAXN .95-3.15"**

		DAXN	DAXX	CWN	CWX	CDX	Page
PENTA 34F		.472	∞	.094	.157	.197	645
GDMY/N		1.968	∞	.315	.315	1.063	298-301
GIF		3.15	∞	.315	.394	1.063	302, 304, 308, 634
GIFG 8		1.968	∞	.315	.315	.98	634
GIMM 8CC		3.15	∞	.315	.315	∞	637
GDMC CC		1.968	∞	.276	.315	∞	637
GIA-K		3.15	∞	.315	.315	.98	310
GFF		0.98	2.165	.083	.236	1.378	644

## Small Diameter Face Machining Systems



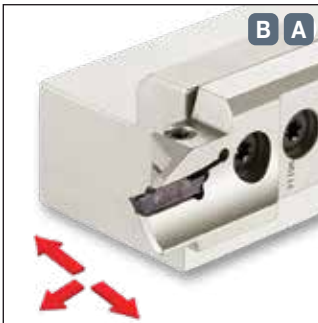
Tool: HGHR/L see page 614  
Insert: GRIP... / HGPL...

CW = .118-.25"

CDX = .236"

DAXN = .472"

Integral shank toolholder with double-ended inserts. Used for face grooving and face turning of small parts for .472" minimum groove diameter.



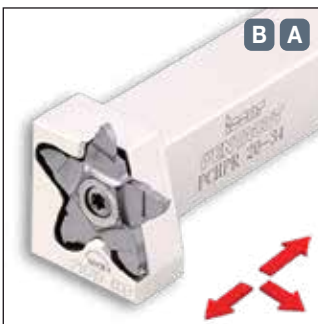
Tool: HGAER/L... (adapter) see page 612  
Tool: HFAER/L... (adapter) see page 622  
Insert: HFPR/L...

CW = .118-.236"

CDX = 1.259"

DAXN = .472"

Exchangeable external adapters. Used with **HELIFACE** and GRIP inserts for deep face machining.



Tool: PCHPR/L see page 329  
Insert: PENTA 34F...

CW = .094-.157"

CDX = .196"

DAXN = .866"

Pentagonal insert for face grooving and recessing up to .196" depth of cut at a minimum of .866" diameter.



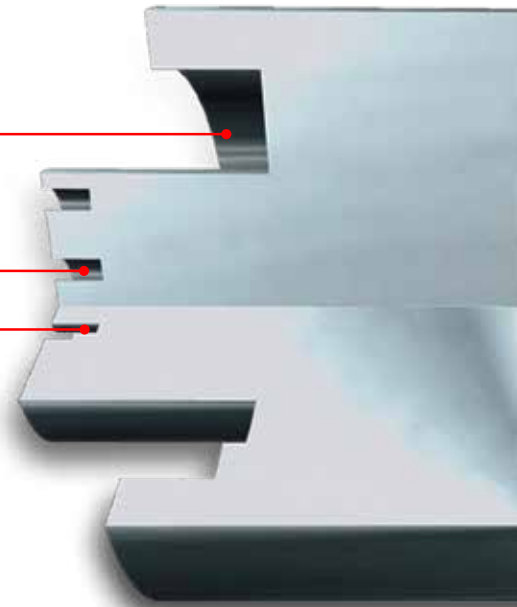
Tool: PICCO R010 see pages 648-650

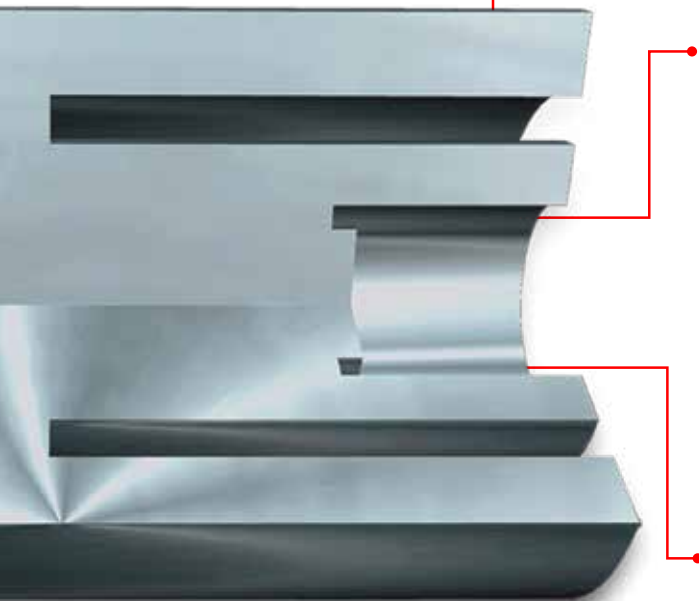
CW = .039-.118"

CDX = .236"

DAXN = .236"

Small solid carbide bars for machining shallow grooves from .236" minimum diameter.





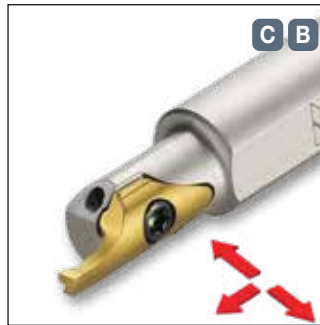
Tool: PICCO R015 see pages 653-654

CW = .098-.118"

CDX = 1.181"

DAXN = .590"

Small solid carbide bars for machining deep face grooves of up to 1.181" and .590" minimum diameter.



Tool: MIFHR ... see page 465

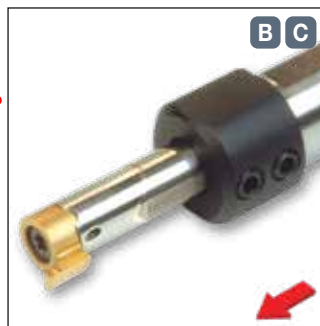
Insert: MIFR ...

CW = .059-.138"

CDX = .217"

DAXN = .315"

**MINCUT**-A family of internal face grooving and face turning tools for machining small diameters ranging from .315 - 1.34". Strong and stable tangential pocket with internal coolant.



Tool: MGCH 09C see page 654

Insert: GFQR...

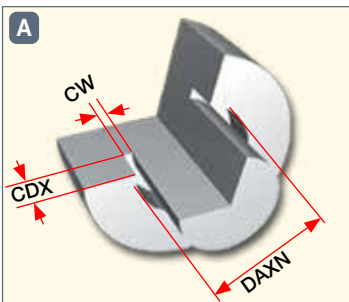
CW = .039-.098"

CDX = .118"

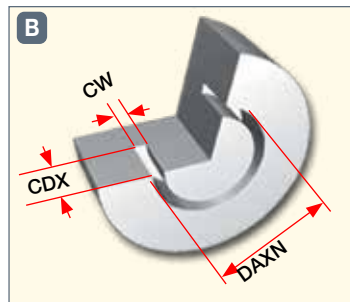
DAXN = .472"

A screw-clamped insert on an internal coolant solid carbide bar. Used for machining shallow grooves from .472" minimum diameter.

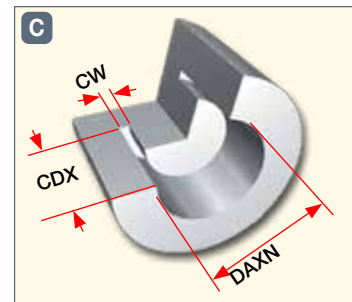
Main Applications



Grooving Next to a Shaft

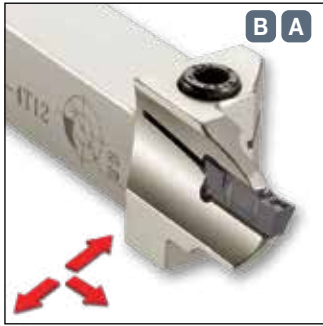


External Grooving



Internal Grooving

## Medium Diameter Face Machining Systems



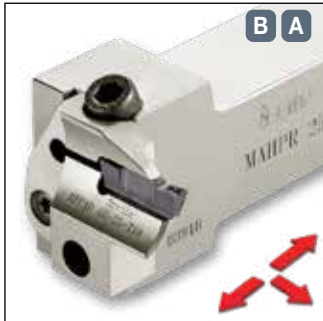
Tool: HFHR/L... see pages 614-616  
Insert: HFPR/L...

CW = .118-.236"

CDX = 1.259"

DAXN = .984"

Integral shank toolholders carrying **HELIFACE** and GRIP inserts. For deep face grooving and side face turning.



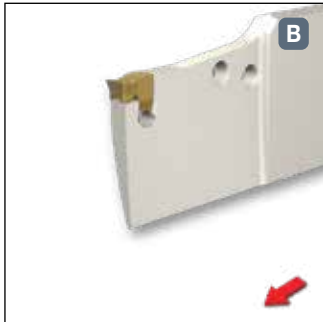
Tool: HFPAD... (adapter) see pages 617-619  
Insert: HFPR/L...

CW = .118-.236"

CDX = .787"

DAXN = .984"

Slanted, screw-clamped adapter carrying **HELIFACE** and GRIP inserts. A part of the **MODULAR-GRIP** system. Very rigid, for tough face operations.



Tool: TNFFH see page 638  
Insert: TNF 3-6C...

CW = .118-.236"

CDX = 1.378"

DAXN = 1.181"

Adapter and blade toolholders carrying TNF GN/M/P-IQ inserts. For deep face grooving.



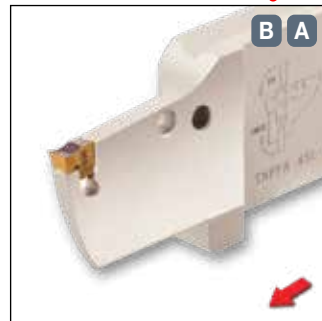
Tool: HFFR/L... see page 619  
Insert: HFPR/L...

CW = .157-.236"

CDX = 1.496"

DAXN = 1.889"

Economical, double-ended blades carrying **HELIFACE** and GRIP inserts. Recommended for deep face grooving and face turning to a maximum depth of 1.496".



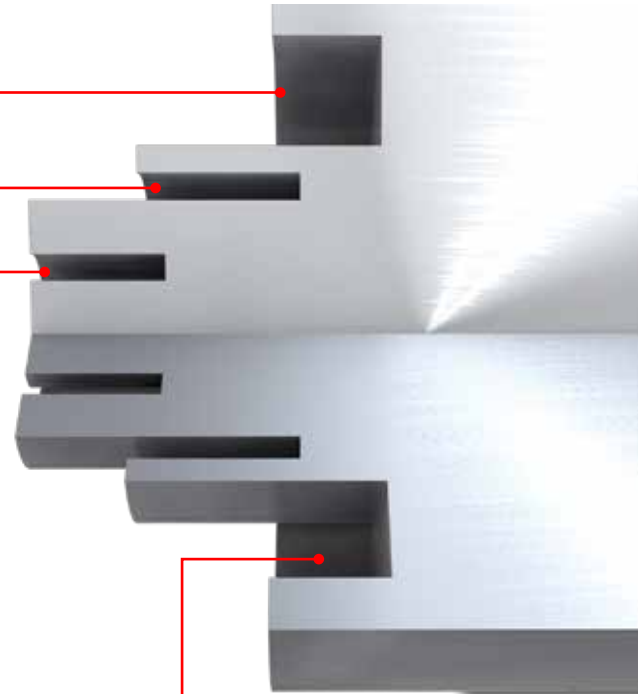
Tool: TNFFA see page 639  
Insert: TNF GN/M/P-IQ...

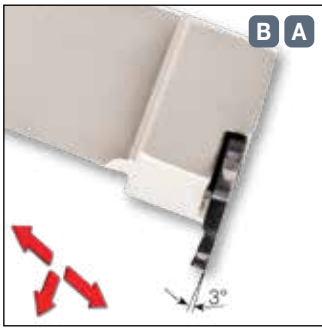
CW = .118-.236"

CDX = 1.378"

DAXN = 1.181"

Reinforced blades carrying TNF GN/M/P-IQ inserts. Recommended for face grooving only. Can machine along a shaft. Excellent chip evacuation.

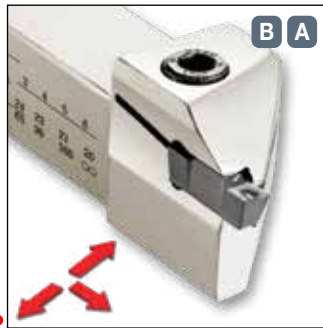




Tool: PCHPRS/LS see page 646  
Insert: PENTA 34F-RS/LS...

- CW = .094-0.157"
- CDX = .196"
- DAXN = .866"

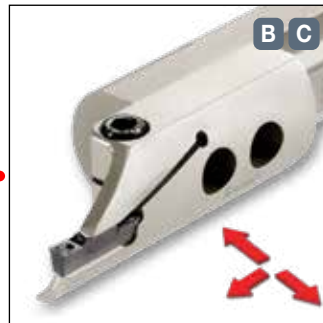
Pentagonal insert for face grooving and recessing next to shoulders up to .196" depth of cut at a minimum of .866" diameter.



Tool: HFHR/L...-M see page 623  
Insert: HFPR/L...

- CW = .118-.236"
- CDX = .209"
- DAXN = .787"

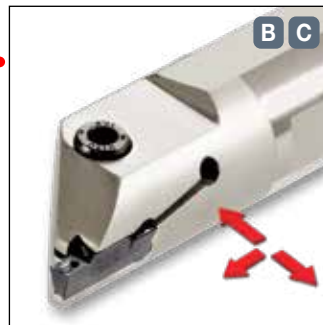
Integral toolholders which mount **HELIFACE** and GRIP inserts. For machining up to .209" depth of cut. .118-.236" wide inserts can be mounted in the same pocket.



Tool: HFAIR/L...& HG AIR/L (adapter) see page 624  
Insert: HFPR/L...

- CW = .118-.236"
- CDX = .472"
- DAXN = 1.259"

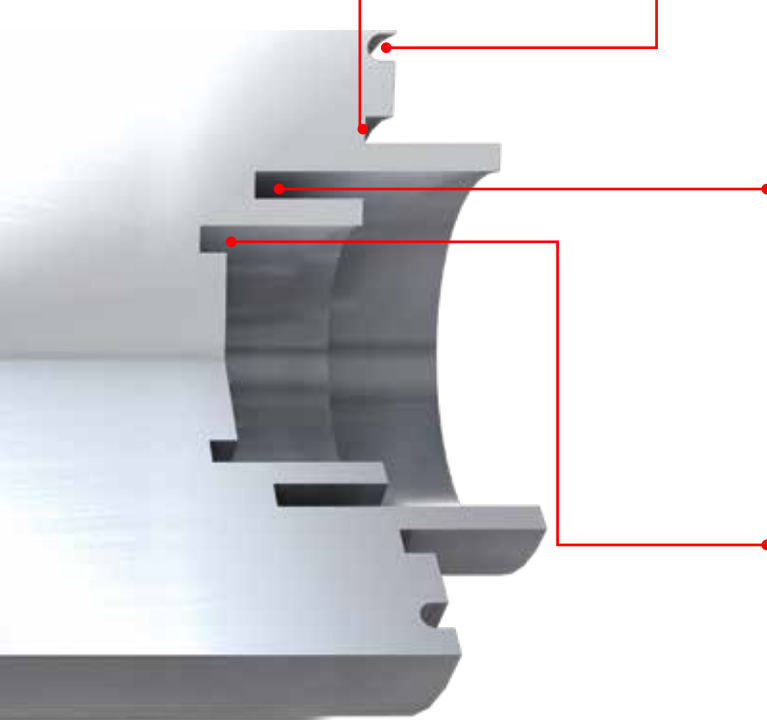
Exchangeable, internal coolant adapters carrying **HELIFACE** and GRIP inserts. Recommended for deep internal face machining.



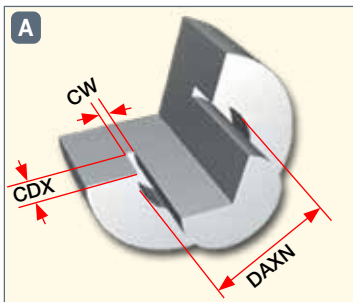
Tool: HFIR/L...-MC see pages 626-627  
Insert: HFPR/L...

- CW = .118-.236"
- CDX = .196"
- DAXN = .787"

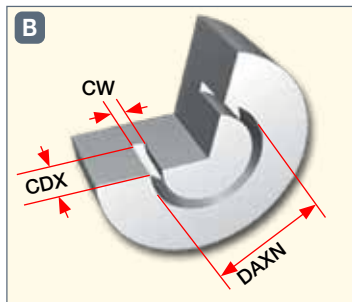
Boring bars for shallow face machining of up to .196" depth carrying **HELIFACE** and GRIP inserts. Internal coolant .157-.236" width inserts can be mounted in the same pocket.



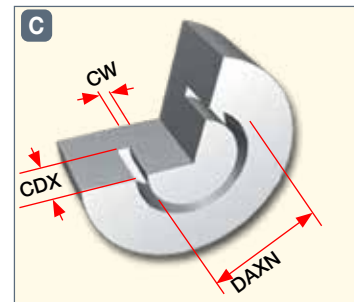
Main Applications



Grooving Next to a Shaft

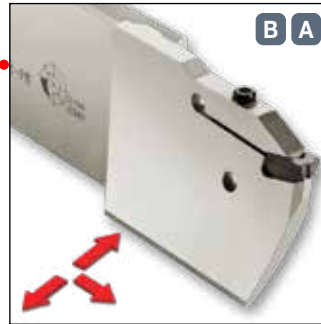
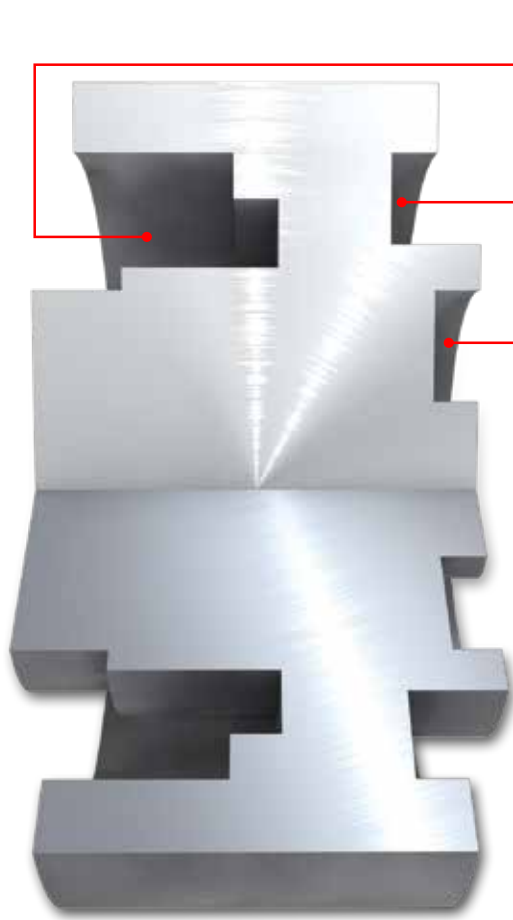


External Grooving



Internal Grooving

## Large Diameter Face Machining Systems



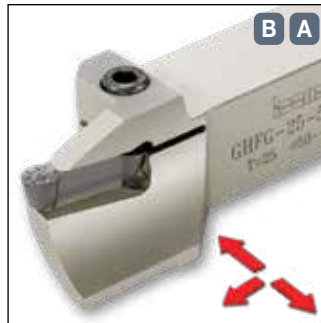
Tool: CGFG 51-..R/L-P8  
see page 634  
Insert: GIMY 8...

CW = .315"

CDX = 4.724"

DAXN = 7.086"

Blades carrying .315" single-ended **CUT-GRIP** inserts. Can machine up to 4.724" depth next to a shaft. Used for large diameters.



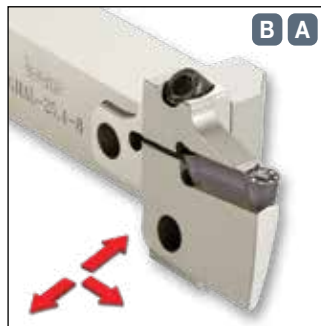
Tool: GHFG ..R/L-8 see page 632  
Insert: GDMY 8...

CW = .315"

CDX = .984"

DAXN = 1.968"

Integral toolholders carrying .315" **CUT-GRIP** inserts. For heavy machining of medium and large parts. Can machine next to a shaft of up to 1.14" depth.



Tool: GAFG ..R/L-8  
(adapter) see page 633  
Insert: GDM 8CC

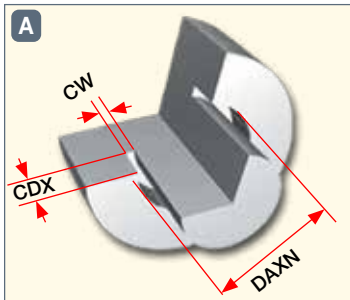
CW = .315"

CDX = .984"

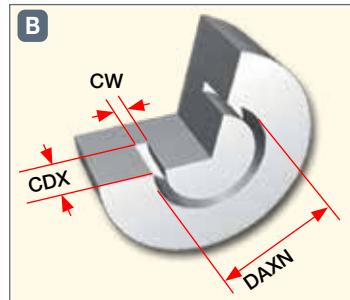
DAXN = 3.149"

Exchangeable adapters carrying .315" **CUT-GRIP** inserts. Can machine up to .984" depth next to a shaft. For heavy machining of medium and large parts.

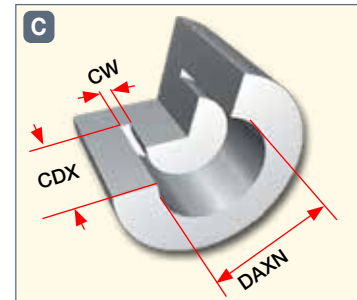
## Main Applications



Grooving Next to a Shaft



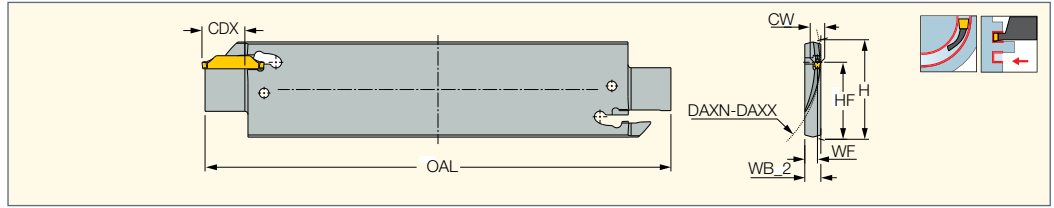
External Grooving



Internal Grooving



**HFFH**  
Face Grooving Blades



Designation	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CW	CDX	WF	WB_2	HF	H	OAL
HFFH 38R/L-2	1.50	1.77	.079	.551	.177	.205	.976	1.260	5.906
HFFH 45R/L-2	1.77	2.36	.079	.551	.173	.205	.976	1.260	5.906
HFFH 60R/L-2	2.36	3.15	.079	.551	.173	.205	.976	1.260	5.906
HFFH 80R/L-2	3.15	3.94	.079	.551	.173	.205	.976	1.260	5.906
HFFH 100R/L-2	3.94	5.12	.079	.551	.173	.205	.976	1.260	5.906

• H dimension links blades and blocks

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

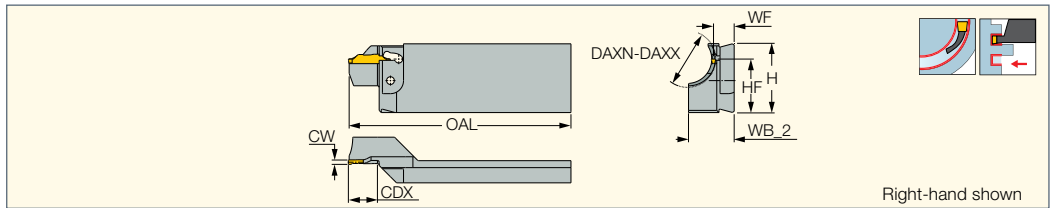
**For inserts, see pages:** HFPN (628)

**For holders, see pages:** C#-TBK-R/L (677) • HSK A-WH-TBK-R/L (688) • SGTBF (673) • SGTBK (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**Spare Parts**

Designation	
HFFH	EDG 33B*

**HFFA**  
Reinforced Face Grooving Blades



Designation	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDX	H	WF	HF	OAL	WB_2
HFFA 27R/L-2	.079	1.06	1.14	.551	1.260	.374	.976	4.016	.827
HFFA 29R/L-2	.079	1.14	1.30	.551	1.260	.374	.976	4.016	.728
HFFA 33R/L-2	.079	1.30	1.50	.551	1.260	.374	.976	4.016	.689
HFFA 38R/L-2	.079	1.50	1.81	.551	1.260	.374	.976	4.016	.531
HFFA 46R/L-2	.079	1.81	2.36	.551	1.260	.374	.976	4.016	.531
HFFA 60R/L-2	.079	2.36	3.15	.551	1.260	.374	.976	4.016	.551
HFFA 80R/L-2	.079	3.15	4.13	.551	1.260	.374	.976	4.016	.634

• For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

**For inserts, see pages:** HFPN (628)

**For holders, see pages:** SGTBF (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

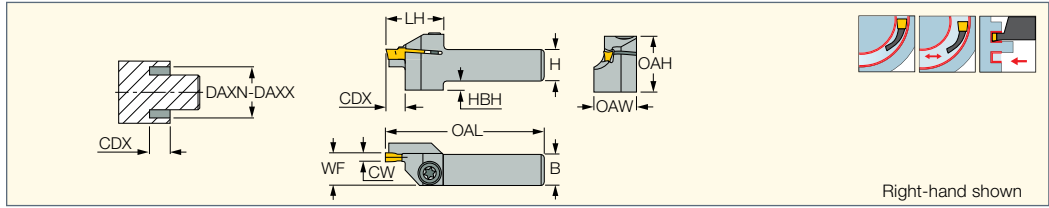
**Spare Parts**

Designation	
HFFA	EDG 33B*

**HELIFACE**

**HGHR/L-3**

Integral Holders for Face Grooving and Turning



Right-hand shown

Designation	CW	CDX	H	B	HBH	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	WF	OAH	OAW	OAL	LH		
HGHL 9.5-12-3T6	.118	.236	.375	.375	.12	.47	.63	.370	.67	.559	5.000	.750	SR 76-1400	T-20/3
HGHL 12.7-12-3T6	.118	.236	.500	.500	.12	.47	.63	.460	.70	.646	5.000	.750	SR 76-1400	T-20/3
HGHL 12.7-16-3T6	.118	.236	.500	.500	.12	.63	.98	.460	.70	.619	5.000	.750	SR 76-1400	T-20/3
HGHR/L 15.9-12-3T6	.118	.236	.625	.625	.12	.47	.63	.590	.82	.771	5.000	.750	SR 76-1400	T-20/3
HGHR/L 19-12-3T6	.118	.236	.750	.750	-	.47	.63	.750	.95	.907	5.000	.750	SR 76-1400	T-20/3
HGHR/L 19-16-3T6	.118	.236	.750	.750	-	.63	.98	.750	.95	.907	5.000	.750	SR 76-1400	T-20/3
HGHR/L 25.4-12-3T6	.118	.236	1.000	1.000	-	.47	.63	1.000	1.20	1.157	5.000	.750	SR 76-1400	T-20/3
HGHR/L 25.4-16-3T6	.118	.236	1.000	1.000	-	.63	.98	1.000	1.20	1.157	5.000	.750	SR 76-1400	T-20/3
HGHR 9.5-16-3T6	.118	.236	.375	.375	.12	.63	.98	.370	.67	.524	5.000	.750	SR 76-1400	T-20/3
HGHR 15.9-16-3T6	.118	.236	.625	.625	.12	.63	.98	.590	.82	.735	5.000	.750	SR 76-1400	T-20/3

• HGN & GRIP inserts can be used only with right-hand toolholders, HGPL inserts only with left-hand toolholders • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

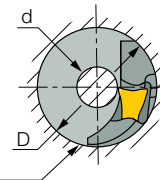
For inserts, see pages: GRIP (277) • GRIP (full radius) (278) • HGN-C (541) • HGN-J (542) • HGN-UT (542) • HGPL (631)

Groove can be widened with no limitation toward or away from the center with the exception of the following tools:

**HGHR/L...-12-3T6**

D	d
.472	.157
.512	.039
.513	0

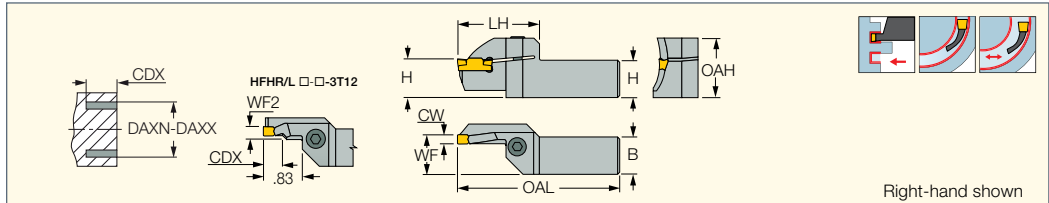
Limitation of widening toward center depends on the major diameter (D) as per chart



**HELIFACE**

**HFHR/L-3T**

Integral Toolholders for External Facing



Right-hand shown

Designation	CW	CDX	H	B	OAL	WF	WF2	DAXN <sup>(2)</sup>	DAXX <sup>(3)</sup>	LH	OAH		
HFHR/L 25.4-25-3T12	.118	.470	1.000	1.000	6.000	1.020	.21	.98	1.18	1.500	1.31	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-30-3T12	.118	.470	1.000	1.000	6.000	1.020	.21	1.18	1.50	1.500	1.35	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-38-3T12	.118	.470	1.000	1.000	6.000	1.020	.21	1.50	1.89	1.500	1.39	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-48-3T22 <sup>(1)</sup>	.118	.870	1.000	1.000	6.000	1.020	-	1.89	2.36	1.570	1.43	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-60-3T22 <sup>(1)</sup>	.118	.870	1.000	1.000	6.000	1.020	-	2.36	2.96	1.570	1.43	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-75-3T25 <sup>(1)</sup>	.118	.980	1.000	1.000	6.000	1.020	-	2.95	3.94	1.690	1.43	SR M6X16 DIN912	HW 5.0

• For user guide, see pages 607-612, 663-669

<sup>(1)</sup> For deep face grooving only

<sup>(2)</sup> Minimum penetration diameter

<sup>(3)</sup> Maximum penetration diameter

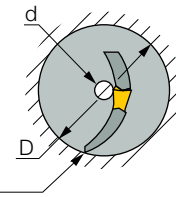
For inserts, see pages: HFPR/L (629) • HFPR/L (full radius) (629)

Groove can be widened with no limitation toward or away from the center with the exception of the following tools:

**HFHR/L-#-25-3T12**

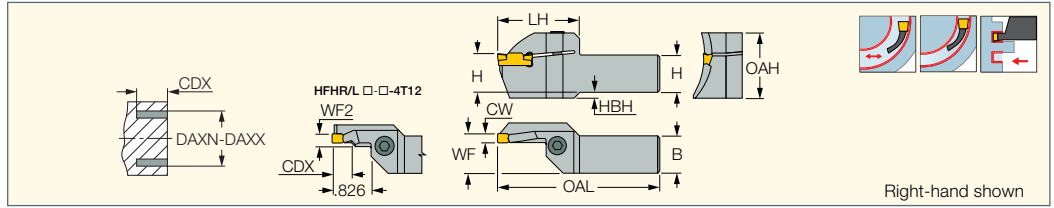
D	d
.98	.20
1.02	.08
≥1.06	0

Limitation of widening toward center (d) depends on the major diameter (D) as per chart



**HFHR/L-4T**

Integral Toolholders for External Facing



Designation	CW	CDX	WF2	H	B	OAL	WF	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	LH	OAH		
<b>HFHR 25.4-25-4T12</b>	.157	.470	.24	1.000	1.000	6.000	1.020	.98	1.14	1.540	1.35	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-29-4T12</b>	.157	.470	.24	1.000	1.000	6.000	1.020	1.14	1.34	1.540	1.39	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-34-4T20</b>	.157	.790	.24	1.000	1.000	6.000	1.020	1.34	1.57	1.540	1.39	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-40-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	1.57	1.89	1.730	1.43	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-48-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	1.89	2.36	1.730	1.47	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-60-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	2.36	2.95	1.730	1.47	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-75-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	2.95	3.94	1.730	1.47	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-100-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	3.94	5.51	1.730	1.47	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-140-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	5.51	9.45	1.730	1.47	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-240-4T25</b>	.157	.980	.24	1.000	1.000	6.000	1.020	9.45	31.50	1.730	1.47	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 4 inserts can be used only with right-hand tools, HGPL 4 inserts with left-hand tools • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

**For inserts, see pages:** DGN-MF (637) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (635) • GRIP (277) • GRIP (full radius) (278)

• GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629) • HGPL (631)

**Groove can be widened with no limitation toward or away from the center with the exception of the following tools:**

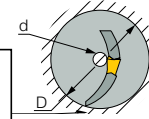
**HFHR/L-#-25-4T12**

D	d
.98	.04
≥1.02	0

**HFHR/L-#-29-4T12**

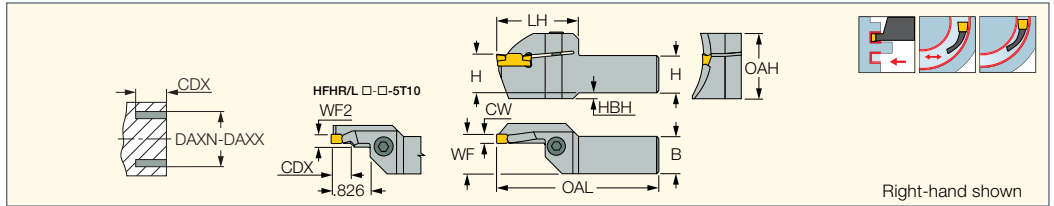
D	d
1.14	.04
≥1.8	0

Limitation of widening toward center (d) depends on the major diameter (D) as per chart



**HFHR/L-5T**

Integral Toolholders for External Facing



Designation	CW	CDX	H	B	OAL	WF2	WF	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	LH	OAH		
<b>HFHR/L 25.4-25-5T10</b>	.197	.390	1.000	1.000	6.000	.28	1.040	.98	1.18	1.500	1.31	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-28-5T15</b>	.197	.670	1.000	1.000	6.000	-	1.040	1.10	1.22	1.340	1.39	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-31-5T15</b>	.197	.670	1.000	1.000	6.000	-	1.040	1.22	1.38	1.340	1.39	SR M6X16 DIN912	HW 5.0
<b>HFHR 25.4-35-5T20</b>	.197	.790	1.000	1.000	6.000	-	1.040	1.38	1.57	1.540	1.43	SR M6X16 DIN912	HW 5.0
<b>HFHR 25.4-40-5T20</b>	.197	.790	1.000	1.000	6.000	-	1.040	1.57	1.77	1.540	1.43	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-55-5T25</b>	.197	.980	1.000	1.000	6.000	-	1.040	2.17	2.76	1.730	1.43	SR M6X16 DIN912	HW 5.0
<b>HFHR 25.4-45-5T25</b>	.197	.980	1.000	1.000	6.000	-	1.040	1.77	2.17	1.730	1.43	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-70-5T32</b>	.197	1.260	1.000	1.000	6.000	-	1.040	2.76	3.74	2.000	1.43	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4-95-5T32</b>	.197	1.260	1.000	1.000	6.000	-	1.040	3.74	5.12	2.000	1.43	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 5 inserts can be used only with right-hand tools, HGPL 5 inserts with left-hand tools • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

**For inserts, see pages:** DGN-W (534) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • GRIP (277) • GRIP (full radius) (278)

• HFPR/L (629) • HFPR/L (full radius) (629) • HGPL (631)

**Groove can be widened with no limitation toward or away from the center with the exception of the following tools:**

**HFHR/L-#-31-5T15**

D	d
1.22	.59
1.26	.39
1.30	.28
1.34	.16
1.38	.08
≥1.42	0

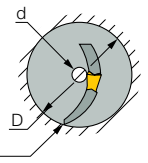
**HFHR/L-#-28-5T15**

D	d
1.10	.51
1.14	.31
1.18	.20
1.22	.12
1.29	.04
≥1.30	0

**HFHR/L-#-25-5T10**

D	d
.98	.16
1.02	.04
≥1.06	0

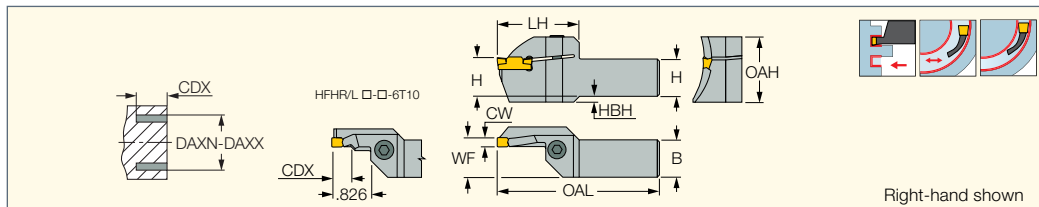
Limitation of widening toward center (d) depends on the major diameter (D) as per chart



**HELIFACE**

**HFHR/L-6T**

Integral Toolholders for External Facing



Designation	CW	CDX	H	B	OAL	WF	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	LH	OAH	HBH		
HFHR/L 25.4-30-6T15	.236	.670	1.000	1.000	6.000	1.050	1.18	1.50	1.420	1.39	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-38-6T20	.236	.790	1.000	1.000	6.000	1.050	1.50	1.97	1.540	1.43	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-50-6T25	.236	.980	1.000	1.000	6.000	1.050	1.97	2.76	1.730	1.47	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-70-6T32	.236	1.260	1.000	1.000	6.000	1.050	2.76	3.94	2.000	1.47	-	SR M6X16 DIN912	HW 5.0
HFHR 25.4-100-6T20	.236	.790	1.000	1.000	6.000	1.050	3.94	7.09	2.000	1.47	-	SR M6X20 DIN912	HW 5.0
HFHR/L 25.4-100-6T32	.236	1.260	1.000	1.000	6.000	1.050	3.94	7.09	2.000	1.47	-	SR M6X16 DIN912	HW 5.0
HFHR/L 25.4-180-6T32	.236	1.260	1.000	1.000	6.000	1.050	7.09	15.80	2.000	1.57	.10	SR M6X16 DIN912	HW 5.0

• DGN & GRIP 6 inserts can be used only with right-hand tools, HGPL 6 inserts with left-hand tools • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

For inserts, see pages: DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/J5/JT (535) • GRIP (277) • GRIP (full radius) (278) • HFPR/L (629)

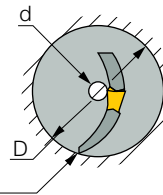
• HFPR/L (full radius) (629) • HGPL (631)

Groove can be widened with no limitation toward or away from the center with the exception of the following tools:

**HFHR/L-#-30-6T15**

D	d
1.18	.28
1.22	.16
1.26	.04
≥1.30	0

Limitation of widening toward center (d) depends on the major diameter (D) as per chart

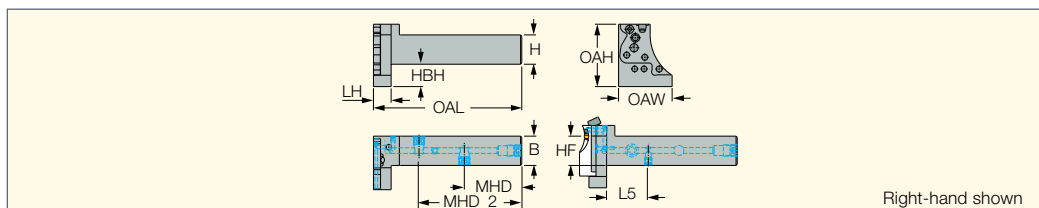


**MODULARGRIP**

**JETCUT**

**MAHPR/L-XL-JHP**

Holders with High-Pressure Coolant Channels for MODULAR-GRIP Perpendicularly Mounted Adapters



Designation	H	B	LH	OAL	HBH	OAH	OAW	HF	L5	MHD	MHD 2
MAHPR/L-XL-19-JHP-MCG	.750	.750	.591	4.724	1.000	2.087	1.772	.750	1.142	1.968	3.346
MAHPR/L-XL-20-JHP-MCG	.787	.787	.906	4.724	.945	2.087	1.772	.787	1.142	1.968	3.346
MAHPR/L-XL-25-JHP-MCG	.984	.984	.591	4.724	.748	2.087	1.791	.984	1.378	1.968	3.543
MAHPR/L-XL-25.4-JHP-MCG	1.000	1.000	.591	4.724	.748	2.087	1.791	1.000	1.378	1.968	3.543

For tools, see pages: DGPAD-XL-JHP (532) • HFPAD-JHP (617) • TAGPAD-XL-JHP (555) • TNFPAD-XL-JHP (640)

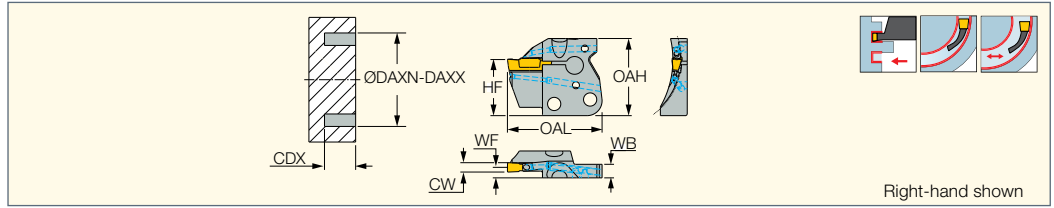
**Spare Parts**

Designation									
MAHPR/L-XL-19-JHP-MCG	SR M5-04451	T-20/5	SR M6X16 DIN912	HW 5.0	OR 5X1N	SR M4X3 DIN913	SR M6X6 DIN913 TL360	PLG G1/8 TL360	SUPPORT MG-XL-5113377
MAHPR/L-XL-20-JHP-MCG	SR M5-04451	T-20/5	SR M6X16 DIN912	HW 5.0	OR 5X1N	SR M4X4 DIN913 TL360	SR M6X6 DIN913 TL360	PLG G1/8 TL360	SUPPORT MG-XL-5113377
MAHPR/L-XL-25-JHP-MCG	SR M5-04451	T-20/5	SR M6X16 DIN912	HW 5.0	OR 5X1N	SR M4X4 DIN913 TL360	SR M6X6 DIN913 TL360	PLG G1/8 TL360	SUPPORT MG-XL-5113377
MAHPR/L-XL-25.4-JHP-MCG	SR M5-04451	T-20/5	SR M6X20 DIN912	HW 5.0	OR 5X1N	SR M4X3 DIN913	SR M6X6 DIN913 TL360	PLG G1/8 TL360	SUPPORT MG-XL-5113377

# MODULAR-GRIP

## HFPAD-JHP

Adapters for Face Machining



Right-hand shown

Designation	CW	CDX	WF	WB	OAL	HF	OAH	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>
HFPAD 3R/L-40-T10-JHP	.118	.394	.189	.228	1.555	.945	1.299	1.57	2.56
HFPAD 3R/L-115-T18-JHP	.118	.709	.189	.228	1.713	.945	1.299	4.53	15.75
HFPAD 3R/L-65-T18-JHP	.118	.709	.189	.228	1.713	.945	1.299	2.56	4.53
HFPAD 4R/L-44-T14-JHP	.157	.551	.189	.228	1.594	.945	1.299	1.73	2.28
HFPAD 4R/L-58-T14-JHP	.157	.551	.189	.228	1.594	.945	1.299	2.28	3.46
HFPAD 4R/L-88-T14-JHP	.157	.551	.177	.228	1.594	.945	1.299	3.46	6.89
HFPAD 4R/L-175-T20-JHP	.157	.787	.189	.256	1.791	.945	1.299	6.89	31.50
HFPAD 5R/L-110-T14-JHP	.197	.551	.177	.248	1.791	.945	1.299	4.33	7.87
HFPAD 5R/L-40-T14-JHP	.197	.551	.177	.248	1.594	.945	1.299	1.57	1.97
HFPAD 5L-50-T14-JHP	.197	.551	.177	.248	1.594	.945	1.299	1.97	2.95
HFPAD 5R/L-75-T14-JHP	.197	.551	.177	.248	1.594	.945	1.299	2.95	4.33
HFPAD 5R/L-200-T20-JHP	.197	.787	.177	.260	1.791	.945	1.299	7.87	31.50
HFPAD 6R/L-60-T14-JHP	.236	.551	.177	.268	1.594	.945	1.299	2.36	3.94
HFPAD 6R/L-100-T20-JHP	.236	.787	.177	.268	1.791	.945	1.299	3.94	7.87
HFPAD 6R/L-200-T20-JHP	.236	.787	.177	.280	1.791	.945	1.299	7.87	118.11

- WF(assembly)=WF(shank) + WF(adapter) • HGN,GRIP,DGN inserts can be used only with right-hand adapters, HGPL inserts with left-hand adapters
- For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum axial grooving diameter

<sup>(2)</sup> Maximum axial grooving diameter

**For inserts, see pages:** DGN-MF (537) • DGN-W (534) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • GRIP (277) • GRIP (full radius) (278)

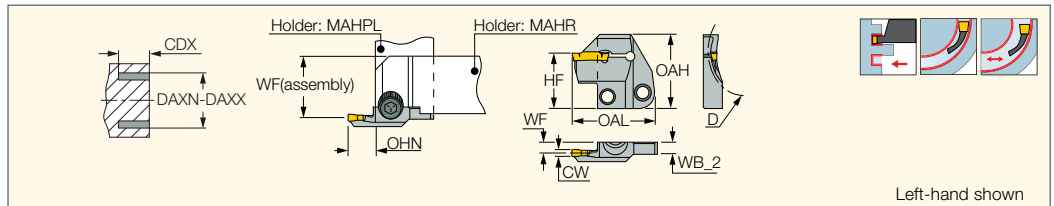
• GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629) • HGN-C (541) • HGN-J (542) • HGN-UT (542) • HGPL (631)

**For holders, see pages:** C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • MAHPR/L-JHP (289) • MAHPR/L-XL-JHP (616) • MAHR/L-JHP (288)

# MODULAR-GRIP

## HFPAD-3

Adapters for Face Machining



Left-hand shown

Designation	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CW	CDX	OHN <sup>(3)</sup>	WF <sup>(4)</sup>	WB_2	OAL	HF	OAH
HFPAD 3R/L-25-T10	.98	1.18	.118	.394	.591	.189	.228	1.555	.945	1.260
HFPAD 3R/L-30-T10	1.18	1.57	.118	.394	.591	.189	.228	1.555	.945	1.260
HFPAD 3R/L-40-T10	1.57	2.56	.118	.394	.591	.189	.228	1.555	.945	1.260
HFPAD 3R/L-65-T18	2.56	4.53	.118	.709	.748	.189	.228	1.713	.945	1.260
HFPAD 3R/L-115-T18	4.53	15.75	.118	.709	.748	.189	.228	1.713	.945	1.260

- WF(assembly)=WF(shank) + WF(adapter) • HGN & GRIP 3 inserts can be used only with right-hand adapters, HGPL 3 inserts with left-hand adapters
- For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Minimum overhang

<sup>(4)</sup> WF(adapter)

**For inserts, see pages:** GRIP (277) • GRIP (full radius) (278) • HGN-C (541) • HGN-J (542) • HGN-UT (542) • HGPL (631)

**For holders, see pages:** C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289)

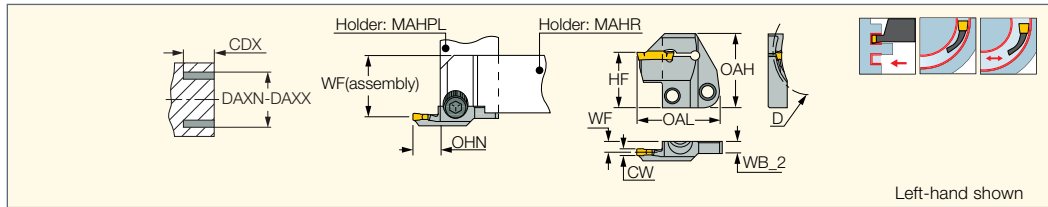
• C#-MAHD (679) • C#-MAHPD (680) • C#-MAHDR-45 (678) • C#-MAHDOR (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687)

• HSK A63WH-MAHDOR (687) • IM-MAHD (689) • IM-MAHPD (689)

## MODULARGRIP

### HFPAD-4

Adapters for Face Machining



Designation	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CW	CDX	OHN <sup>(3)</sup>	WF <sup>(4)</sup>	WB_2	OAL	HF	OAH
HFPAD 4R/L-25-T10	.98	1.22	.157	.394	.630	.177	.228	1.594	.945	1.260
HFPAD 4R/L-31-T10	1.22	1.73	.157	.394	.630	.177	.228	1.594	.945	1.260
HFPAD 4R/L-44-T14	1.73	2.28	.157	.551	.630	.177	.228	1.594	.945	1.260
HFPAD 4R/L-58-T14	2.28	3.46	.157	.551	.630	.177	.228	1.594	.945	1.260
HFPAD 4R/L-88-T14	3.46	6.89	.157	.551	.630	.177	.228	1.594	.945	1.260
HFPAD 4R/L-175-T20	6.89	31.50	.157	.787	.827	.177	.256	1.791	.945	1.260

- WF(assembly)=WF(shank) + WF(adapter) • DGN & GRIP 4 inserts can be used only with right-hand adapters, HGPL 4 inserts with left-hand adapters
- For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Minimum overhang

<sup>(4)</sup> WF(adapter)

**For inserts, see pages:** DGN-MF (537) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • GRIP (277) • GRIP (full radius) (278)

• GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629) • HGPL (631)

**For holders, see pages:** C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289)

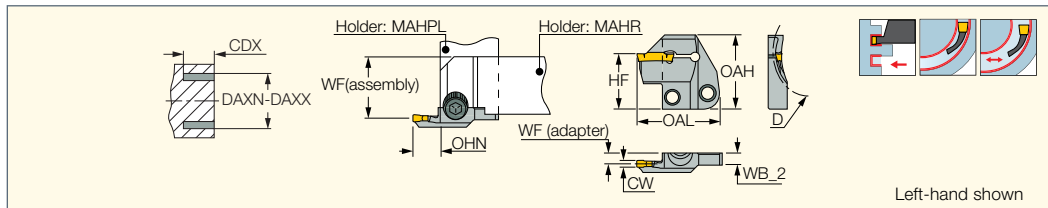
• C#-MAHD (679) • C#-MAHPD (680) • C#-MAHDR-45 (678) • C#-MAHDOR (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687)

• HSK A63WH-MAHDOR (687) • IM-MAHD (689) • IM-MAHPD (689)

## MODULARGRIP

### HFPAD-5

Adapters for Face Machining



Designation	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CW	CDX	OHN <sup>(3)</sup>	WF <sup>(4)</sup>	WB_2	OAL	HF	OAH
HFPAD 5R/L-40-T14	1.57	1.97	.197	.551	.630	.177	.248	1.594	.945	1.260
HFPAD 5R/L-50-T14	1.97	2.95	.197	.551	.630	.177	.248	1.594	.945	1.260
HFPAD 5R/L-75-T14	2.95	4.33	.197	.551	.630	.177	.248	1.594	.945	1.260
HFPAD 5R/L-110-T14	4.33	7.87	.197	.551	.630	.177	.248	1.594	.945	1.260
HFPAD 5R/L-200-T20	7.87	31.50	.197	.787	.827	.177	.260	1.791	.945	1.260

- WF(assembly)=WF(shank) + WF(adapter) • DGN & GRIP 5 inserts can be used only with right-hand adapters, HGPL 5 inserts with left-hand adapters

- For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Minimum overhang

<sup>(4)</sup> WF(adapter)

**For inserts, see pages:** HFPR/L (629) • HFPR/L (full radius) (629) • GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • DGN-W (534) • HGPL (631)

**For holders, see pages:** C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289)

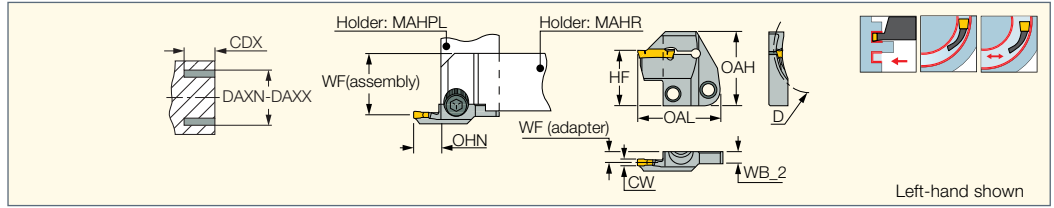
• C#-MAHD (679) • C#-MAHDOR (678) • C#-MAHPD (680) • C#-MAHDR-45 (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687)

• HSK A63WH-MAHDOR (687) • IM-MAHD (689) • IM-MAHPD (689)

# MODULARGRIP

## HFPAD-6

Adapters for Face Machining



Designation	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CW	CDX	OHN <sup>(3)</sup>	WF <sup>(4)</sup>	WB_2	OAL	HF	OAH
HFPAD 6R/L-60-T14	2.36	3.94	.236	.551	.630	.177	.268	1.594	.945	1.260
HFPAD 6R/L-100-T20	3.94	7.87	.236	.787	.827	.177	.268	1.791	.945	1.260
HFPAD 6R/L-200-T20	7.87	118.11	.236	.787	.827	.177	.280	1.791	.945	1.260

- WF(assembly)=WF(shank) + WF(adapter) • DGN & GRIP 6 inserts can be used only with right-hand adapters, HGPL 6 inserts with left-hand adapters
- For user guide, see pages 607-612, 663-669

- (1) Minimum penetration diameter
- (2) Maximum penetration diameter
- (3) Minimum overhang
- (4) WF(adapter)

**For inserts, see pages:** HFPR/L (629) • HFPR/L (full radius) (629) • GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533)

• DGN/DGNM-J/JS/JT (535) • HGPL (631)

**For holders, see pages:** C#-MAHD-JHP (679) • C#-MAHPD-JHP (680) • MAHPR/L-JHP (289) • MAHR/L-JHP (288) • MAHR/L (288) • MAHPR/L (289)

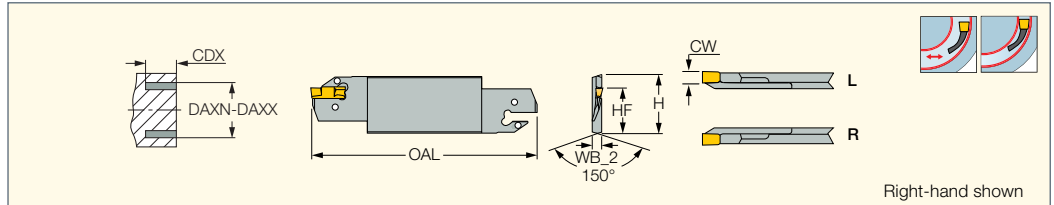
• C#-MAHD (679) • C#-MAHPD (680) • C#-MAHDR-45 (678) • C#-MAHDOR (678) • HSK A63WH-MAHUR/L (688) • HSK A63WH-MAHDR-45 (687)

• HSK A63WH-MAHDOR (687) • IM-MAHD (689) • IM-MAHPD (689)

# HELIFACE

## HFFR/L-T

Blades for Face Machining



Designation	CW	DAXN <sup>(2)</sup>	DAXX <sup>(3)</sup>	CDX	OAL	HF	H	WB_2
HFFR/L 48-4T25 <sup>(1)</sup>	.157	1.89	2.36	.984	5.906	.976	1.260	.205
HFFR/L 60-4T25	.157	2.36	2.95	.984	5.906	.976	1.260	.205
HFFR/L 75-4T30	.157	2.95	5.51	1.181	5.906	.976	1.260	.205
HFFR/L 140-4T30	.157	5.51	59.06	1.181	5.906	.976	1.260	.126
HFFR/L 70-5T32	.197	2.76	3.74	1.260	5.906	.976	1.260	.205
HFFR/L 95-5T35	.197	3.74	5.12	1.378	5.906	.976	1.260	.205
HFFR/L 130-5T38	.197	5.12	7.09	1.496	5.906	.976	1.260	.205
HFFR/L 180-5T38	.197	7.09	59.06	1.496	5.906	.976	1.260	.157
HFFR/L 90-6T32	.236	3.54	7.09	1.260	5.906	.976	1.260	.205
HFFR/L 180-6T38	.236	7.09	15.75	1.496	5.906	.976	1.260	.205

- After initial groove, no limitation of widening groove outward or toward center
- DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades
- For user guide, see pages 607-612, 663-669

- (1) HGPL 4Y with LH blade
- (2) Minimum penetration diameter
- (3) Maximum penetration diameter

**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629)

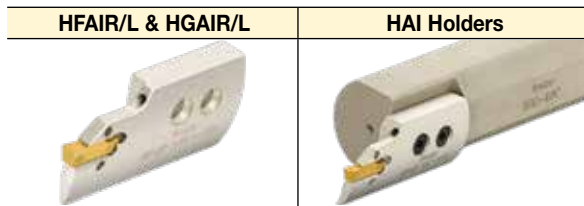
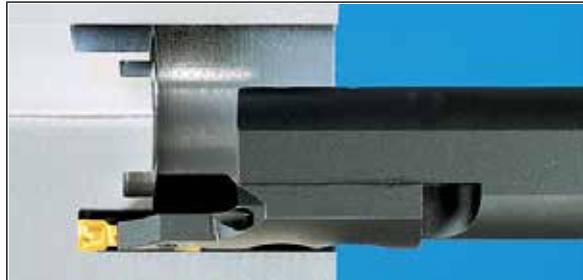
• GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGN-W (534) • HGPL (631)

**For holders, see pages:** SGTBF (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**Boring Bars for Adapters**

**HGAIR/L & HFAIR/L Adapters and HAI Holders**

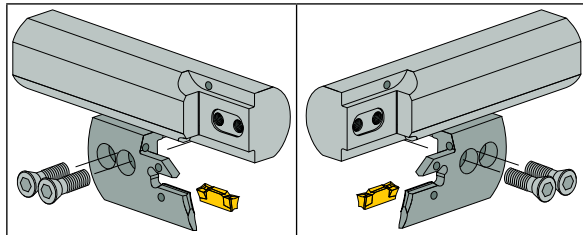
Adapter clamped on HAI round shank holders can machine deep internal boring and grooving applications. The tool can bore down to the bottom, and is supplied with internal coolant for better performance.



Exchangeable adapters, see page 624 for adapters, see page 624

HFAIR/L HGAIR/L	- □	C	- □	T - □
HELIFACE Internal adapters right or left	Min. initial groove diameter	Internal coolant	Insert width	Max. depth of groove

**HAI Holder System Assembly**



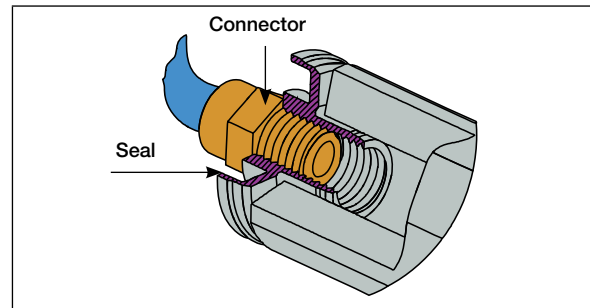
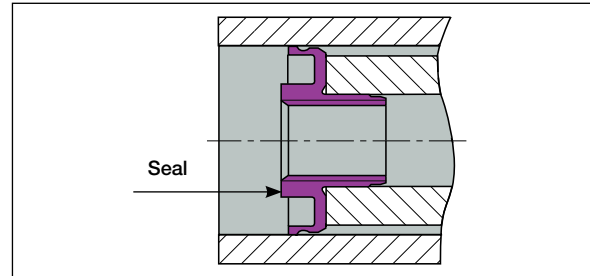
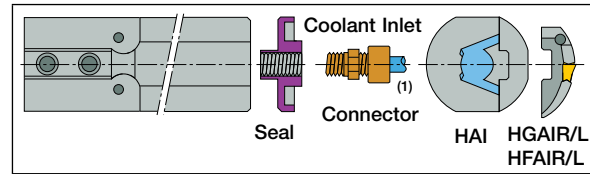
**HFAIR & HGAIR  
Left-hand Adapters**

**HFAIR & HGAIR  
Right-hand Adapters**

The same HAI boring bar can be used with right- and left-hand adapters in a wide range of face machining applications. The two screws and the central guiding slot on the adapter correspond to the key and holes on the holder ensuring strong, safe, and accurate clamping.



**Coolant System**

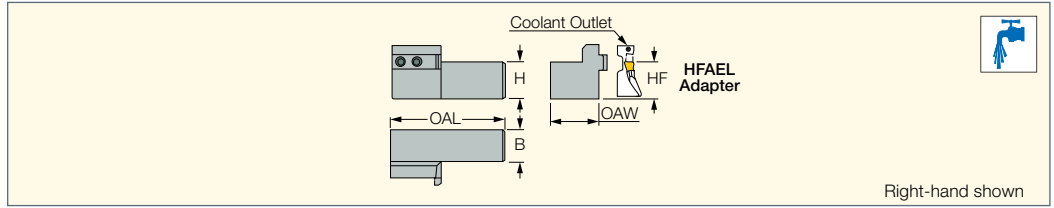


<sup>(1)</sup> Connector for coolant inlet BSP 1/8 thread. For PL-20, use M6 thread. Connector not supplied with tools.





**HAR/L**

Face Machining Adapter Holders



Right-hand shown

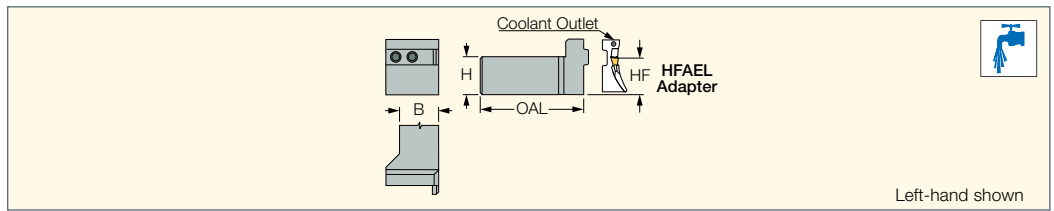
Designation	OAL	B	H	HF	OAW		
<b>HAR/L 25.4C</b>	5.500	1.000	1.000	1.000	1.550	SR 14-519	T-20/3
<b>HAR/L 31.7C</b>	6.300	1.250	1.250	1.250	1.800	SR 14-519	T-20/3

• Holders for adapters HFAER/L & HGAER/L, HFAIR/L & HGAIR/L



**For tools, see pages:** HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAER/L-3 (621) • HGAIR/L-3 (624)

**HAPR/L**

Face Machining Perpendicular Holders for Adapters



Left-hand shown

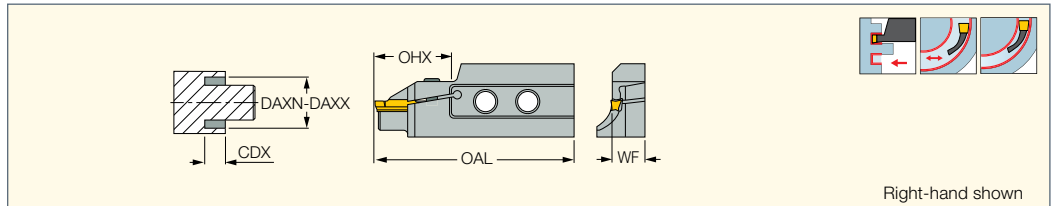
Designation	OAL	H	HF	B		
<b>HAPR/L 25.4C</b>	4.880	1.000	1.000	1.000	SR 14-519	T-20/3
<b>HAPR/L 31.7C</b>	5.670	1.250	1.250	1.250	SR 14-519	T-20/3

• Holders for adapters HFAER/L & HGAER/L, HFAIR/L & HGAIR/L

**For tools, see pages:** HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAER/L-3 (621) • HGAIR/L-3 (624)

**HGAER/L-3**

Adapters for External Facing Along Shafts



Right-hand shown

Designation	CDX	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	OHX <sup>(3)</sup>	WF	OAL
<b>HGAER/L 12-3M</b>	.079	.118	.47	19.69	.827	.402	2.165
<b>HGAER/L 12-3T6</b>	.236	.118	.47	.59	.827	.402	2.165
<b>HGAER/L 14-3T7</b>	.276	.118	.55	.67	.827	.402	2.165
<b>HGAER/L 17-3T8</b>	.315	.118	.67	.83	.827	.402	2.165
<b>HGAER/L 21-3T9</b>	.354	.118	.83	.98	.827	.402	2.165

• GRIP 3 inserts can be used with right-hand adapters only, HGPL 3 with left-hand adapters • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter



<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Maximum overhang

**For inserts, see pages:** GRIPA (278) • GRIPA (full radius) (279) • GRIP (277) • GRIP (full radius) (278) • HGPL (631)

**For holders, see pages:** C#-HAD (682) • C#-HAPR/L (682) • HAPR/L (621) • HAR/L (621) • IM-HAD (690) • IM-HAPR/L (690)

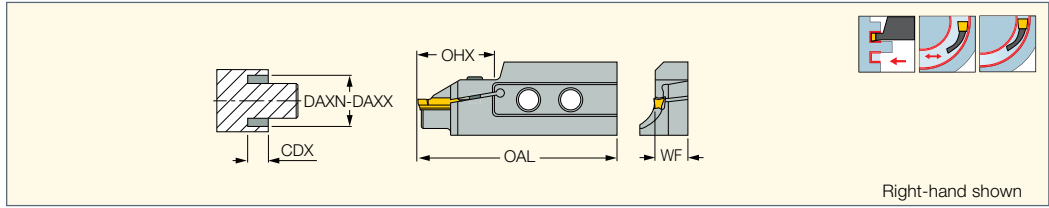
**Spare Parts**

Designation		
<b>HGAER/L-3</b>	SR 16-236 P	T-15/3



**HELIFACE**

**HFAER/L-4**

Adapters for External Facing Along Shafts



Right-hand shown

Designation	CDX	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	OAL	OHX <sup>(3)</sup>	WF		
HFAER/L 40-4T20	.787	.157	1.57	1.89	2.697	.827	.457	SR M5X16 DIN912	HW 4.0
HFAER/L 48-4T20	.787	.157	1.89	2.36	2.697	.827	.457	SR M5X16 DIN912	HW 4.0
HFAER/L 60-4T25	.984	.157	2.36	2.95	2.697	1.024	.457	SR M5X16 DIN912	HW 4.0
HFAER/L 75-4T25	.984	.157	2.95	3.94	2.697	1.024	.457	SR M5X16 DIN912	HW 4.0

• DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Maximum overhang

**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629)

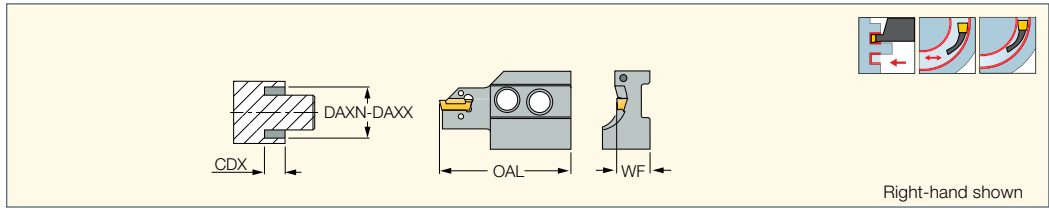
• GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • HGPL (631)

**For holders, see pages:** C#-HAD (682) • C#-HAPR/L (682) • HAPR/L (621) • HAR/L (621) • IM-HAD (690) • IM-HAPR/L (690)


**HELIFACE**

**HFAER/L-5T, 6T**

Adapters for External Facing Along Shafts



Right-hand shown

Designation	CW	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	OAL	WF	
HFAER/L 70C-5T25	.197	.984	2.76	3.74	2.598	.480	EDG 33B*
HFAER/L 95C-5T25	.197	.984	3.74	5.12	2.598	.480	EDG 33B*
HFAER/L 70C-6T28	.236	1.102	2.76	3.94	2.717	.484	EDG 33B*
HFAER/L 100C-6T32	.236	1.260	3.94	7.09	2.874	.484	EDG 33B*
HFAER/L 180C-6T32	.236	1.260	7.09	15.75	2.874	.484	EDG 33B*

• After initial groove, no limitation to widening groove outward from or toward center

• Adapters can be mounted on standard HAR/L, HAPR/L, HAI holders for external machining

• DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

\* Optional, should be ordered separately

**For inserts, see pages:** HFPR/L (629) • HFPR/L (full radius) (629) • GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533)

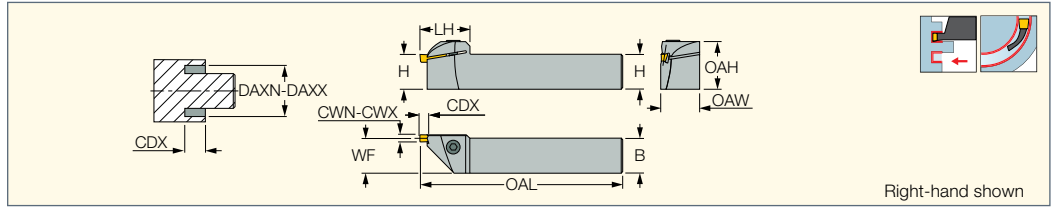
• DGN/DGNM-J/JS/JT (535) • DGN-W (534) • HGPL (631)

**For holders, see pages:** C#-HAD (682) • C#-HAPR/L (682) • HAPR/L (621) • HAR/L (621) • IM-HAD (690) • IM-HAPR/L (690)



**HFHR/L-M**

Toolholders for Shallow Face Grooving



Right-hand shown

Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CDX	WF	H	B	OAL	LH	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	OAH	OAW		
<b>HFHR 19M</b>	.118	.236	.209	.750	.750	.750	5.000	1.420	.79	78.74	1.10	.850	SR M6X16 DIN912	HW 5.0
<b>HFHR/L 25.4M</b>	.118	.236	.209	1.000	1.000	1.000	6.000	1.420	.79	78.74	1.35	1.100	SR M6X16 DIN912	HW 5.0

- DGN & GRIP 4 - 6 inserts can be used only with right-hand tools, HGPL 4 - 6 inserts with left-hand tools
- After initial groove, no limitation to widening groove outward or toward center
- For user guide, see pages 607-612, 663-669

- <sup>(1)</sup> Minimum cutting width
- <sup>(2)</sup> Maximum cutting width
- <sup>(3)</sup> Minimum penetration diameter
- <sup>(4)</sup> Maximum penetration diameter

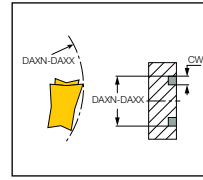
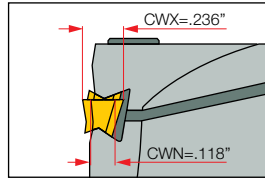
For inserts, see pages: HFPR/L (629) • HFPR/L (full radius) (629)

**HFHR/L-□M & HFHR/L-□M**

**Integral Toolholders**

For shallow machining to max. .209" depth of groove. One toolholder can be mounted with inserts in .118-.236" widths. The initial major diameter groove is limited by the insert geometry in each size.

After initial groove, face recessing outward or toward center is not limited by insert geometry.

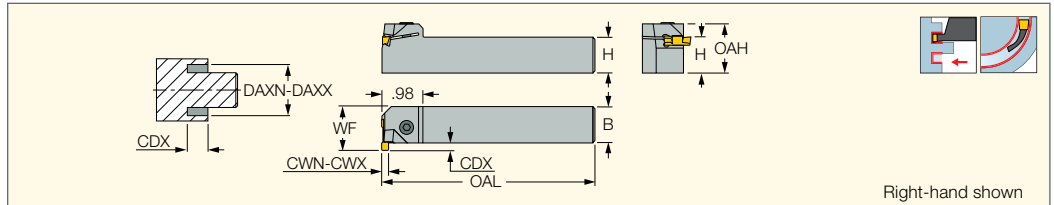


Insert initial face grooving range

DAXN-DAXX		
DAXX	DAXN	CW
2.362	.945	.117
3.543	.906	.157
11.811	.827	.197
∞	.787	.236

**HFHPR/L-M**

Perpendicular Toolholders for Shallow Face Grooving



Right-hand shown

Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CDX	WF	H	B	OAL	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	OAH		
<b>HFHPR/L 19M</b>	.118	.236	.197	.960	.750	.750	5.000	.95	78.74	1.10	SR M6X16 DIN912	HW 5.0
<b>HFHPR/L 25.4M</b>	.118	.236	.197	1.220	1.000	1.000	6.000	.95	78.74	1.35	SR M6X16 DIN912	HW 5.0

- DGN & GRIP 4 - 6 inserts can be used only with right-hand tools, HGPL 4 - 6 inserts with left-hand tools
- After initial groove, no limitation to widening groove outward or toward center
- For user guide, see pages 607-612, 663-669

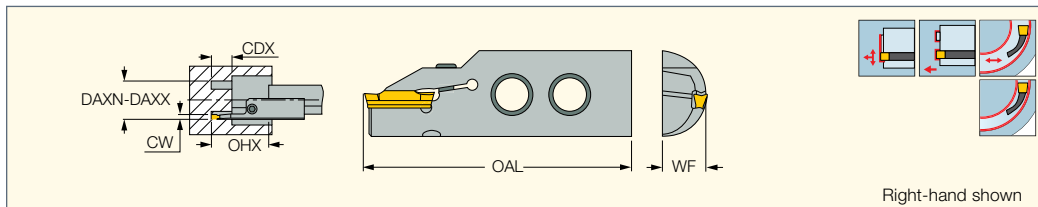
- <sup>(1)</sup> Minimum cutting width
- <sup>(2)</sup> Maximum cutting width
- <sup>(3)</sup> Minimum penetration diameter
- <sup>(4)</sup> Maximum penetration diameter

For inserts, see pages: HFPR/L (629) • HFPR/L (full radius) (629)

**HELIFACE**

**HGAIR/L-3**

Adapters for Internal Face Grooving and Turning



Right-hand shown

Designation	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CW	OAL	WF	OHX <sup>(3)</sup>		
HGAIR/L 12-3M	.079	.47	19.69	.118	2.165	.402	.827	SR 16-236 P	T-15/3
HGAIR/L 12-3T6	.236	.47	.59	.118	2.165	.402	.827	SR 16-236 P	T-15/3
HGAIR/L 14-3T7	.276	.55	.67	.118	2.165	.402	.827	SR 16-236 P	T-15/3
HGAIR/L 17-3T8	.315	.67	.83	.118	2.165	.402	.827	SR 16-236 P	T-15/3
HGAIR/L 21-3T9	.354	.83	.98	.118	2.165	.402	.827	SR 16-236 P	T-15/3
HGAIR/L 25-3T9	.354	.98	1.34	.118	2.165	.402	.827	SR 16-236 P	T-15/3
HGAIR/L 35-3T10	.394	1.38	1.77	.118	2.205	.406	.866	SR 16-236 P	T-15/3
HGAIR/L 45-3T10	.394	1.77	2.56	.118	2.205	.406	.866	SR 16-236 P	T-15/3
HGAIR/L 65-3T18	.709	2.56	4.53	.118	2.520	.445	1.181	SR 16-236 P	T-15/3
HGAIR/L 115-3T18	.709	4.53	15.75	.118	2.520	.445	1.181	SR 16-236 P	T-15/3

• HGN & GRIP 3 inserts can be used only with right-hand adapters, HGPL 3 inserts with left-hand adapters • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Maximum overhang

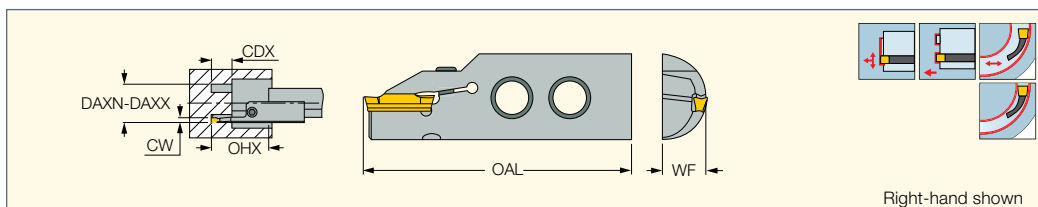
**For inserts, see pages:** GRIP (277) • GRIP (full radius) (278) • HGN-C (541) • HGN-J (542) • HGN-UT (542) • HGPL (631)

**For holders, see pages:** C#-HAD (682) • C#-HAPR/L (682) • HAI-C (624) • HAPR/L (621) • HAR/L (621) • IM-HAD (690) • IM-HAPR/L (690)

**HELIFACE**

**HFAIR/L-4**

Adapters for Internal Face Grooving and Turning



Right-hand shown

Designation	CDX	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	OAL	WF	OHX <sup>(3)</sup>		
HFAIR/L 34-4T18	.709	.157	1.34	1.57	2.638	.602	1.299	SR M5X16 DIN912	HW 4.0
HFAIR/L 40-4T20	.787	.157	1.57	1.89	2.638	.602	1.299	SR M5X16 DIN912	HW 4.0
HFAIR/L 48-4T20	.787	.157	1.89	2.36	2.638	.602	1.299	SR M5X16 DIN912	HW 4.0
HFAIR/L 60-4T25	.984	.157	2.36	2.95	2.638	.602	1.299	SR M5X16 DIN912	HW 4.0

• DGN & GRIP inserts can be used only with right-hand adapters, HGPL inserts with left-hand blades • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Maximum overhang

**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629)

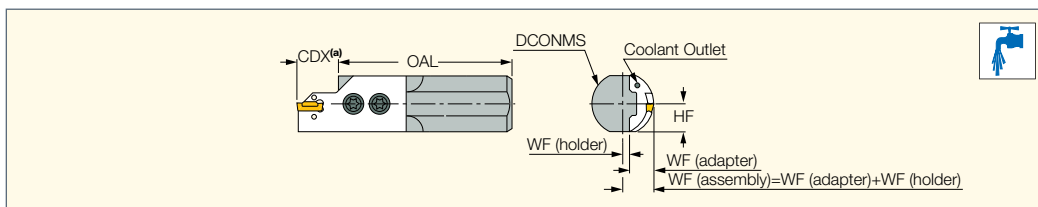
• GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • HGPL (631)

**For holders, see pages:** C#-HAD (682) • C#-HAPR/L (682) • HAI-C (624) • HAPR/L (621) • HAR/L (621) • IM-HAD (690) • IM-HAPR/L (690)

**HELIFACE**

**HAI-C**

Boring Bars with Coolant Holes for Internal Grooving and Turning Adapters



Designation	DCONMS	OAL	HF	WF <sup>(1)</sup>	CSP <sup>(2)</sup>			
HAI 19	.750	5.120	.338	.005	1	SR 14-519	T-20/3	
HAI 25.4C	1.000	6.000	.460	.130	1	SR 14-519	T-20/3	PL 100
HAI 31.7C	1.250	7.874	.570	.255	1	SR 14-519	T-20/3	PL 125
HAI 38.1C	1.500	10.000	.670	.380	1	SR 14-519	T-20/3	PL 150

• The HAI boring bars can be used with right and left-hand adapters • (a) CDX - see corresponding adapters

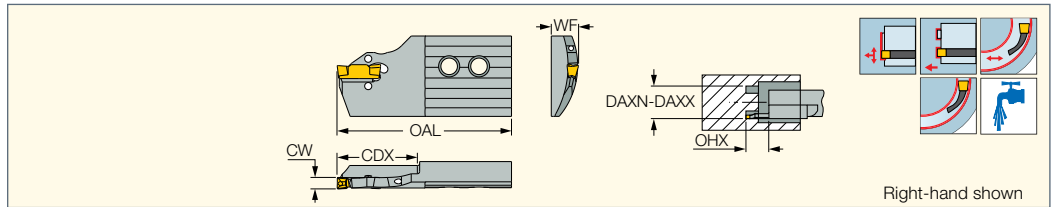
<sup>(1)</sup> Holder


<sup>(2)</sup> 0 - Without coolant supply, 1 - With coolant supply

**For tools, see pages:** HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAIR/L-3 (624)

**HFAIR/L-DG**

Adapters for Internal Face Grooving and Turning



Designation	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDX	WF	OHX <sup>(3)</sup>	OAL	
HFAIR/L 75C-4T30DG	.157	2.95	5.51	1.181	.429	1.358	2.697	EDG 33B*
HFAIR/L 140C-4T30DG	.157	5.51	-	1.181	.429	1.358	2.697	EDG 33B*
HFAIR/L 55C-5T25DG	.197	2.17	2.76	.984	.469	1.260	2.598	EDG 33B*
HFAIR/L 70C-5T25DG	.197	2.76	3.74	.984	.469	1.260	2.598	EDG 33B*
HFAIR/L 95C-5T35DG	.197	3.74	5.12	1.378	.469	1.555	2.894	EDG 33B*
HFAIR/L 130C-5T38DG	.197	5.12	7.09	1.496	.469	1.673	3.012	EDG 33B*
HFAIR/L 180C-5T38DG	.197	7.09	-	1.496	.469	1.673	3.012	EDG 33B*
HFAIR/L 70C-6T28DG	.236	2.76	3.94	1.102	.472	1.378	2.717	EDG 33B*
HFAIR/L 100C-6T32DG	.236	3.94	7.09	1.260	.472	1.535	2.874	EDG 33B*
HFAIR/L 180C-6T38DG	.236	7.09	-	1.496	.488	1.673	3.012	EDG 33B*

• After initial groove, no limitation to widening groove outward or toward center

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

<sup>(3)</sup> Maximum overhang

\* Optional, should be ordered separately

**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629)

• GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGN-W (534) • HGPL (631)

**For holders, see pages:** C#-HAD (682) • C#-HAPR/L (682) • HAI-C (624) • HAPR/L (621) • HAR/L (621) • IM-HAD (690) • IM-HAPR/L (690)

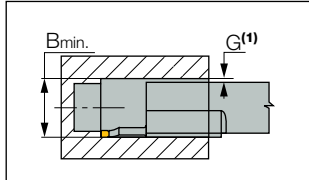
Adapters can be used for internal machining along bore.

Adapters can be mounted on standard HAI boring bars for internal machining and on HAR/L, HAPR/L holders for external machining.

**Boring, Face Grooving & Face Recessing Capacity**

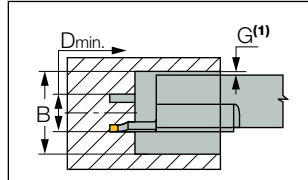
**Boring**

**B** Min. = F+G+d/2



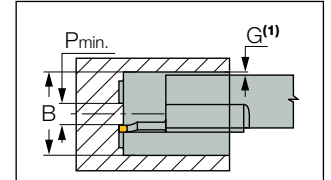
**Face Grooving**

**D** Min. = 2F-B+2G+d



**Face Recessing**

**P** Min. = 2F-B-2W+2G+d



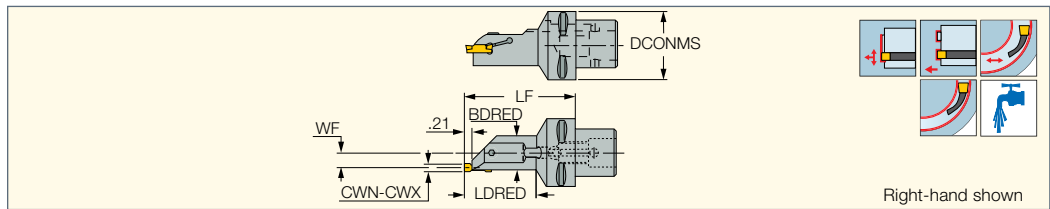
<sup>(1)</sup> The minimum recommended value for clearance (G) is .02".



## CAMFIX

### C#-HFIR/L-MC

Boring Bars for Internal Grooving and Turning with CAMFIX Exchangeable Shanks



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	DCONMS	WF	LDRED	LF	BDRED	CDI <sup>(3)</sup>			
<b>C4 HFIR/L-MC</b>	.118	.236	1.575	.445	2.05	3.15	.984	1	SR M5X16 DIN912	HW 4.0	EZ 83
<b>C5 HFIR-MC</b>	.118	.236	1.968	.445	2.05	3.15	.984	1	SR M5X16 DIN912	HW 4.0	EZ 83

- DGN & GRIP 4 - 6 inserts can be used only with right-hand tools, HGPL 4 - 6 inserts with left-hand tools
- After initial groove, no limitation to widening groove outward or toward center
- For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629)

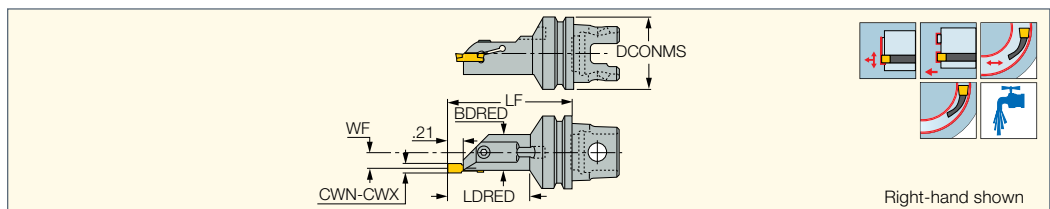
• GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGN-W (534) • HGPL (631)

## ISO 26622-1 XMZ

### HELIFACE

### IM-HFIR-MC

Tools for Internal Grooving and Turning with ISO 26622-1(\*) Tapered Shank



Designation	DCONMS	LF	BDRED	WF	LDRED	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>			
<b>IM40 HFIR-MC</b>	1.575	3.15	.984	.445	2.05	.118	.236	SR M5X16 DIN912	HW 4.0	EZ 83
<b>IM50 HFIR-MC</b>	1.968	3.15	.984	.445	2.05	.118	.236	SR M5X16 DIN912	HW 4.0	EZ 83

- (\*) Tools with orientation holes in the flange groove can be supplied on request
- DGN & GRIP 4 - 6 inserts can be used only with right-hand tools, HGPL 4 - 6 inserts with left-hand tools
- After initial groove, no limitation to widening groove outward or toward center • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

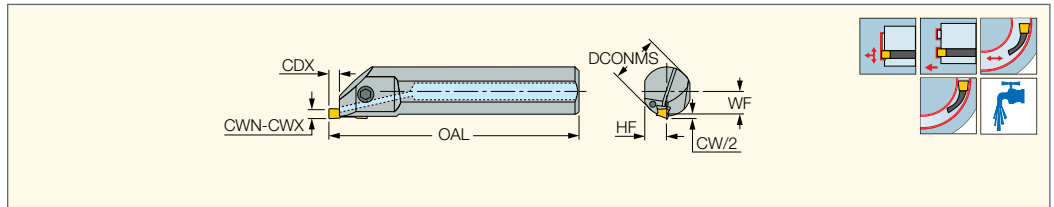
**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629)

• GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGN-W (534)



**HFIR/L-MC**

Boring Bars for Internal Grooving and Turning



Designation	DCONMS	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CDX	OAL	WF	HF			
<b>HFIR/L 15.9MC</b>	.625	.118	.236	.197	5.906	.438	.295	SR M5X16 DIN912	HW 4.0	PL 062
<b>HFIR/L 19.05MC</b>	.750	.118	.236	.197	6.693	.438	.354	SR M5X16 DIN912	HW 4.0	PL 075
<b>HFIR/L 25.4MC</b>	1.000	.118	.236	.197	8.000	.450	.460	SR M5X16 DIN912	HW 4.0	PL 100
<b>HFIR/L 31.7MC</b>	1.250	.118	.236	.197	10.000	.570	.570	SR M6X20 DIN912	HW 5.0	PL 125
<b>HFIR/L 38.1MC</b>	1.500	.118	.236	.197	12.000	.700	.670	SR M6X20 DIN912	HW 5.0	PL 150

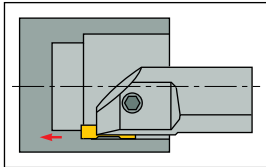
- DGN & GRIP 4 - 6 inserts can be used only with right-hand tools, HGPL 4 - 6 inserts with left-hand tools
- After initial groove, no limitation to widening groove outward or toward center
- For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum cutting width

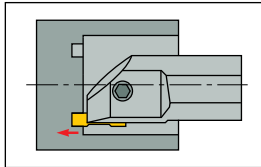
<sup>(2)</sup> Maximum cutting width

**For inserts, see pages:** DGN-MF (537) • DGN-W (534) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • GRIP (277) • GRIP (full radius) (278) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629) • HGPL (631)

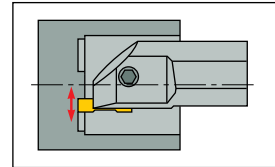
**Boring**



**Internal Face Grooving**



**Internal Face Recessing**



**HFIR/L-: MC Integral Boring Bars**

For shallow, internal face machining to max. .197" depth of groove.

One boring bar can be mounted with inserts of .157-.236" widths.

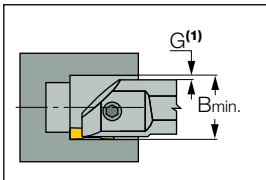
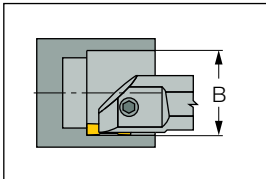
The initial major diameter groove is limited by the insert geometry of each size.

After initial groove, face recessing outward or toward center is not limited by insert geometry.

**Boring, Face Grooving & Face Recessing Capacity**

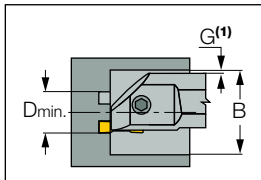
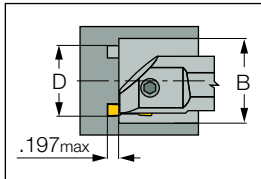
**Boring**

**B Min.=F+d/2+W/2+2G**



**Face Grooving**

**D Min.=2F+d+W-B+2G**

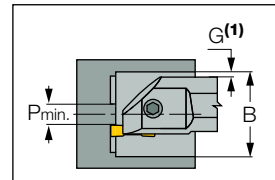
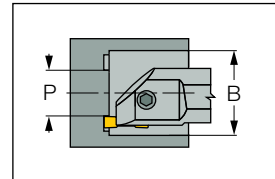


**Insert Initial Face Grooving Range**

W	D	
	Min.	Max.
.157	.906	3.543
.197	.827	11.81
.236	.787	∞

**Face Recessing**

**P Min.=2F+d-W-B+2G**

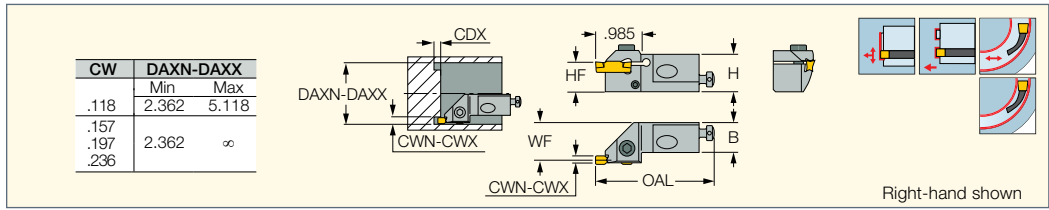


<sup>(1)</sup> The minimum recommended value for clearance (G) is .020".

**HELIFACE**

**CR HFIR-M**

Cartridges for Face Grooving and Turning



Designation	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	HF	B	H	OAL	WF	CDX
CR HFIR-16M	.118	.236	.630	.630	.787	2.638	.787	.197
CR HFIR-20M	.118	.236	.787	.787	.945	2.835	.945	.197

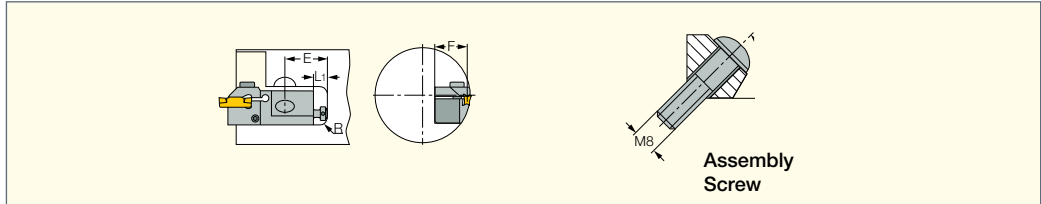
- Used for shallow internal face machining to max 197" depth of groove • Inserts in 118 - 236" widths can be mounted on the cartridges
- Only DGN and GRIP 157 - 236" inserts can be used with the right-hand tools

<sup>(1)</sup> Minimum cutting width  
<sup>(2)</sup> Maximum cutting width

**For inserts, see pages:** DGN-MF (537) • GRIPA (278) • GRIPA (full radius) (279) • HFPR/L (629) • HFPR/L (full radius) (629) • GRIP (277) • GRIP (full radius) (278) • DGN/DGNC/DGNM-C (533) • DGN/DGNM-J/JS/JT (535) • DGN-W (534)

**CR HFIR/L-M**

Assembly Dimensions



Designation	E	L1 <sup>(1)</sup>	F <sup>(2)</sup>	Rmax.	Assembly Screw <sup>(3)</sup>
CR HFIR/L-16M	.984	.315	.787	.236	M8X30
CR HFIR/L-20M	1.181	.394	.945	.236	M8X30

<sup>(1)</sup> L adjustment ± .04

<sup>(2)</sup> F adjustment +.01<sub>0</sub>

<sup>(3)</sup> Assembly screws ISO 7380 are recommended.

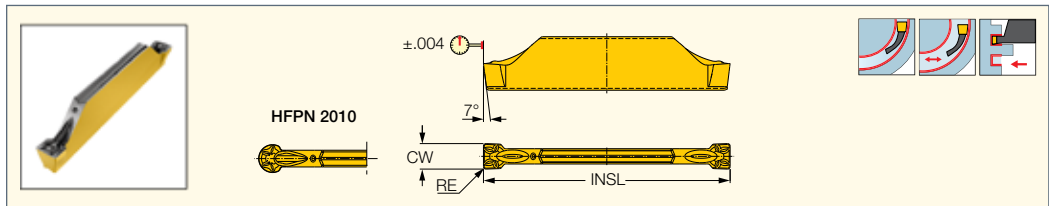
**Spare Parts**

Designation					
CR HFIR-16M	SR M5X20DIN912	HW 4.0	SR 76-1401	SR M4X10 DIN916	HW 2.0
CR HFIR-20M	SR M5X20DIN912	HW 4.0	SR 76-1401	SR M4X10 DIN913	HW 2.0

**HELIFACE**

**HFPN**

Utility Double-Ended Face Machining Inserts



Designation	Dimensions					IC808	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL		
HFPN 2002	.079	.0079	.0016	.0012	.764	•	f groove (IPR) .0012-.0039
HFPN 2010	.079	.0394	.0016	.0012	.764	•	.0012-.0039

• For cutting speed recommendations and user guide, see pages 658-669

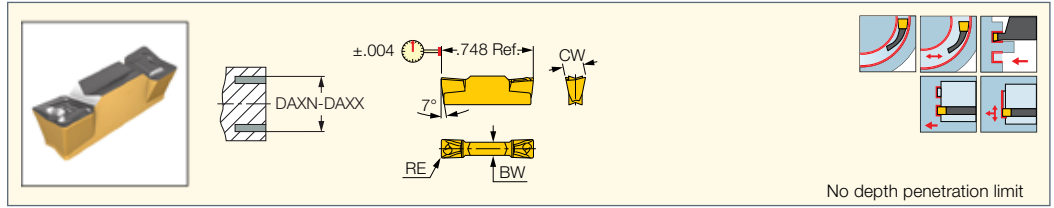
<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** HFFA (613) • HFFH (613)



**HFPR/L**  
Utility Double-Ended Face  
Machining Inserts



Designation	Dimensions							Tough ↔ Hard							Recommended Machining Data			
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	IC830	IC354	IC8250	IC808	IC9015	IC20	IC5010	IC806	a <sub>p</sub> (inch)	f face-groove (IPR)	f face-turn (IPR)
<b>HFPR/L 3003</b>	.118	.012	.0020	.0020	.083	1.01	2.03	●	●	●	●	●	●	●	●	.012-.059	.0031-.0079	.0039-.0079
<b>HFPR/L 4004</b>	.157	.016	.0020	.0020	.110	.95	2.90	●	●	●	●	●	●	●	●	.016-.079	.0039-.0094	.0059-.0098
<b>HFPR/L 5004</b>	.197	.016	.0020	.0020	.134	.87	6.69	●	●	●	●	●	●	●	●	.020-.098	.0047-.0094	.0059-.0138
<b>HFPR/L 6004</b>	.236	.016	.0020	.0020	.157	.82	-	●	●	●	●	●	●	●	●	.016-.118	.0047-.0110	.0059-.0157

• For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum axial grooving diameter-applies to type M tools only For other tools, apply the diameter limitations that are recorded on each tool

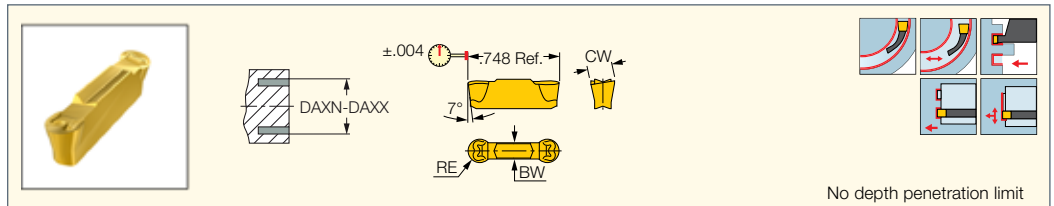
<sup>(4)</sup> Maximum axial grooving diameter-applies to type M tools only For other tools, apply the diameter limitations that are recorded on each tool

**For tools, see pages:** C#-HFIR/L-MC (626) • CR HFIR-M (628) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625)

• HFPR/L-T (619) • HFHPR/L-M (623) • HFHR/L-3T (614) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFHR/L-M (623)

• HFIR/L-MC (627) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • IM-HFIR-MC (626)

**HFPR/L  
(full radius)**  
Utility Double-Ended Full Radius  
Face Machining Inserts



Designation	Dimensions							Tough ↔ Hard							Recommended Machining Data			
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	IC830	IC354	IC8250	IC808	IC9015	IC20	IC5010	IC806	a <sub>p</sub> (inch)	f face-groove (IPR)	f face-turn (IPR)
<b>HFPR/L 3015</b>	.118	.059	.0020	.0020	.083	1.01	2.03	●	●	●	●	●	●	●	●	.000-.059	.0031-.0079	.0047-.0079
<b>HFPR/L 4020</b>	.157	.079	.0020	.0020	.110	.95	2.90	●	●	●	●	●	●	●	●	.000-.079	.0039-.0094	.0059-.0098
<b>HFPL 5025</b>	.197	.098	.0020	.0020	.134	.87	6.69	●	●	●	●	●	●	●	●	.000-.098	.0047-.0094	.0059-.0138
<b>HFPR 5025</b>	.197	.098	.0020	.0020	.134	.87	6.69	●	●	●	●	●	●	●	●	.000-.098	.0047-.0094	.0059-.0138
<b>HFPR/L 6030</b>	.236	.118	.0020	.0020	.157	.82	-	●	●	●	●	●	●	●	●	.000-.118	.0047-.0110	.0079-.0157

• For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum axial grooving diameter-applies to type M tools only For other tools, apply the diameter limitations that are recorded on each tool

<sup>(4)</sup> Maximum axial grooving diameter-applies to type M tools only For other tools, apply the diameter limitations that are recorded on each tool

**For tools, see pages:** C#-HFIR/L-MC (626) • CR HFIR-M (628) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625)

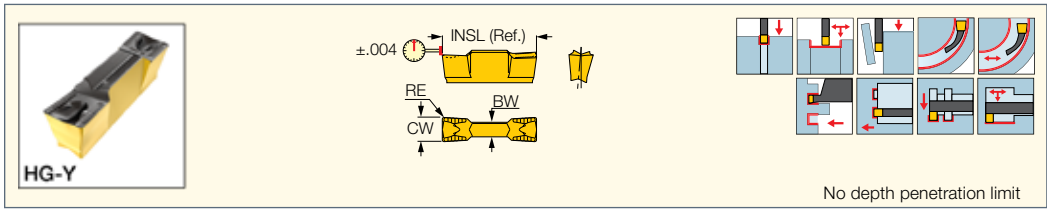
• HFPR/L-T (619) • HFHPR/L-M (623) • HFHR/L-3T (614) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFHR/L-M (623)

• HFIR/L-MC (627) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • IM-HFIR-MC (626)



**GRIP**

Utility Double-Ended  
Inserts for External, Internal  
and Face Machining



Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data						
	CW	CWTOL <sup>(1)</sup>	RE	RETOL <sup>(2)</sup>	INSL	BW	IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC806	IC807	IC804	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)	f face-groove (IPR)	f face-turn (IPR)
GRIP 3002Y	.118	.00196	.0079	.0020	.622	.091	●	●	●	●	●	●	●	●	●	●	.010-.071	.0055-.0071	.0027-.0043	.0031-.0079	.0039-.0079
GRIP 3003Y	.118	.00196	.0118	.0020	.622	.091	●	●	●	●	●	●	●	●	●	●	.016-.071	.0059-.0075	.0027-.0043	.0031-.0079	.0039-.0079
GRIP 318-040Y	.125	.00196	.0157	.0020	.622	.091	●	●	●	●	●	●	●	●	●	●	.020-.075	.0067-.0087	.0027-.0047	.0031-.0079	.0039-.0079
GRIP 4002Y	.157	.00196	.0079	.0020	.748	.110	●	●	●	●	●	●	●	●	●	●	.010-.094	.0063-.0083	.0035-.0055	.0039-.0094	.0059-.0118
GRIP 4004Y	.157	.00196	.0157	.0020	.748	.110	●	●	●	●	●	●	●	●	●	●	.020-.094	.0071-.0094	.0035-.0059	.0039-.0094	.0059-.0118
GRIP 476-080Y	.187	.00196	.0315	.0020	.748	.122	●	●	●	●	●	●	●	●	●	●	.039-.110	.0083-.0130	.0039-.0079	.0039-.0094	.0059-.0118
GRIP 5005Y	.197	.00196	.0197	.0020	.748	.130	●	●	●	●	●	●	●	●	●	●	.024-.118	.0079-.0118	.0043-.0079	.0047-.0094	.0059-.0138
GRIP 5008Y	.197	.00196	.0315	.0020	.748	.134	●	●	●	●	●	●	●	●	●	●	.039-.118	.0091-.0138	.0043-.0083	.0047-.0094	.0059-.0138
GRIP 6005Y	.236	.00196	.0197	.0020	.748	.165	●	●	●	●	●	●	●	●	●	●	.024-.142	.0087-.0142	.0051-.0091	.0047-.0110	.0059-.0157
GRIP 6008Y	.236	.00196	.0315	.0020	.748	.165	●	●	●	●	●	●	●	●	●	●	.039-.142	.0094-.0165	.0051-.0098	.0047-.0110	.0059-.0157
GRIP 635-080Y	.250	.00196	.0315	.0020	.748	.165	●	●	●	●	●	●	●	●	●	●	.039-.150	.0098-.0173	.0055-.0106	.0047-.0110	.0059-.0157

• For cutting speed recommendations and user guide, see pages 658-669

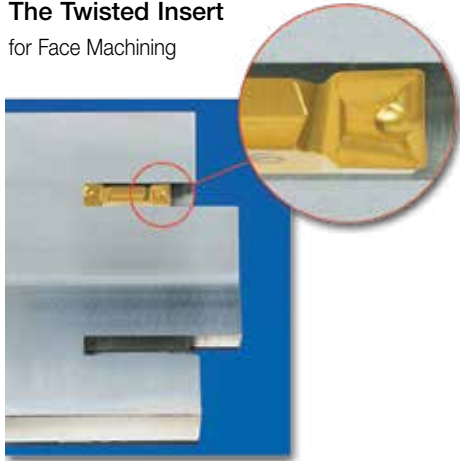
<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

- For tools, see pages:** C#-HELIR/L (271) • C#-HFIR/L-MC (626) • CR HFIR-M (628) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • DGFH (275) • DGFH-JHP (276) • DGFS (520) • DGTR/L (525) • HELIIR/L (379) • HELIR/L (272) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HFFR/L-T (619) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFIR/L-MC (627) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGAER/L-3 (621) • HGAIR/L-3 (624) • HGFH (274) • HGHR/L-3 (614) • HGPAD (274) • HGPAD-JHP (274) • IM-HFIR-MC (626)

**The Twisted Insert**

for Face Machining



The double-ended, twisted insert body makes it possible to machine deeper than the inserts' length.

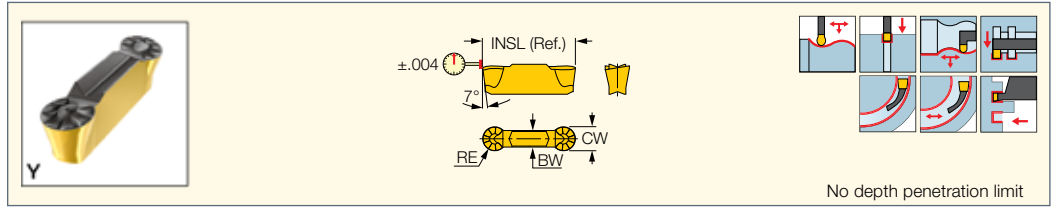
A unique chipformer for controlled chip flow in axial and radial directions.

The rear angle is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface as the tool penetrates deeply into the workpiece.



**GRIP (full radius)**

Utility Double-Ended Full Radius Inserts for External, Internal and Face Machining



Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data						
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL	BW	IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC806	IC807	IC804	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)	f face-groove (IPR)	f face-turn (IPR)
GRIP 3015Y	.118	.059	.0020	.0020	.622	.083	•	•	•	•	•	•	•	•	•	•	.000-.059	.0071-.0102	.0027-.0051	.0031-.0079	.0039-.0079
GRIP 318-159Y	.125	.063	.0020	.0020	.622	.091				•	•			•			.000-.059	.0075-.0110	.0027-.0051	.0031-.0079	.0039-.0079
GRIP 4020Y	.157	.079	.0020	.0020	.748	.110				•	•			•			.000-.079	.0079-.0134	.0035-.0067	.0039-.0094	.0059-.0118
GRIP 476-238Y	.187	.094	.0020	.0020	.748	.126				•	•			•			.000-.091	.0083-.0157	.0039-.0079	.0039-.0094	.0059-.0118
GRIP 5025Y	.197	.098	.0020	.0020	.748	.134	•	•		•	•			•			.000-.098	.0091-.0165	.0043-.0083	.0047-.0094	.0059-.0138
GRIP 6030Y	.236	.118	.0020	.0020	.748	.165	•	•		•	•			•			.000-.118	.0094-.0197	.0051-.0098	.0047-.0110	.0059-.0157
GRIP 635-318Y	.250	.125	.0020	.0020	.748	.157				•	•			•			.000-.122	.0098-.0209	.0055-.0106	.0047-.0110	.0059-.0157

• For cutting speed recommendations and user guide, see pages 658-669

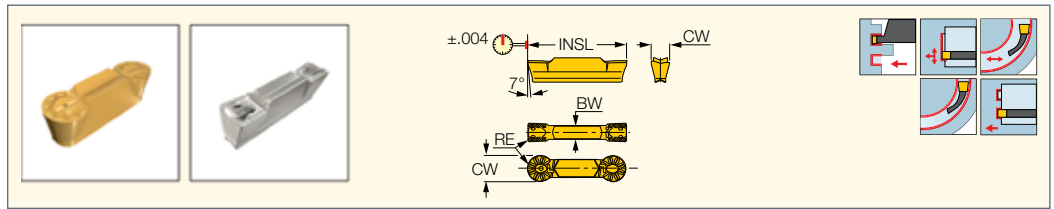
<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** C#-HELIR/L (271) • C#-HFIR/L-MC (626) • CR HFIR-M (628) • D/HGAD RE/LE-JHP (553) • DGAD/HGAD (531) • DGFH (275) • DGFH-JHP (276) • DGFS (520) • DGTR/L (525) • HELIIR/L (379) • HELIR/L (272) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HFRR/L-T (619) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFIR/L-MC (627) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGAER/L-3 (621) • HGAIIR/L-3 (624) • HGFH (274) • HGHR/L-3 (614) • HGPAD (274) • HGPAD-JHP (274) • IM-HFIR-MC (626)

**HGPL**

Utility Double-Ended Inserts for Face Machining



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data		
	CW	BW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	INSL	IC328	IC354	IC08	IC808	IC908	IC806	a <sub>p</sub> (inch)	f face-groove (IPR)	f face-turn (IPR)
HGPL 3015Y	.118	.083	.059	.0012	.0020	.630				•	•		.000-.059	.0031-.0079	.0047-.0091
HGPL 3002Y	.118	.091	.008	.0012	.0020	.630			•	•	•		.009-.071	.0031-.0079	.0047-.0091
HGPL 3003Y	.118	.091	.012	.0012	.0020	.630	•	•	•	•			.014-.071	.0031-.0079	.0047-.0091
HGPL 4002Y	.157	.110	.008	.0012	.0020	.748		•	•	•			.009-.094	.0039-.0094	.0063-.0118
HGPL 4004Y	.157	.110	.016	.0012	.0020	.748		•	•	•			.019-.094	.0039-.0094	.0063-.0118
HGPL 4020Y	.157	.110	.079	.0012	.0020	.748			•	•			.000-.079	.0039-.0094	.0063-.0118
HGPL 5005Y	.197	.130	.020	.0012	.0020	.748		•		•			.024-.118	.0047-.0094	.0079-.0150
HGPL 5025Y	.197	.130	.098	.0012	.0020	.748			•	•			.000-.098	.0047-.0094	.0079-.0150
HGPL 6005Y	.236	.165	.020	.0012	.0020	.748		•		•	•		.024-.142	.0047-.0110	.0094-.0177
HGPL 6030Y	.236	.165	.118	.0012	.0020	.748			•	•			.000-.118	.0047-.0110	.0094-.0177

• No depth penetration limit • For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

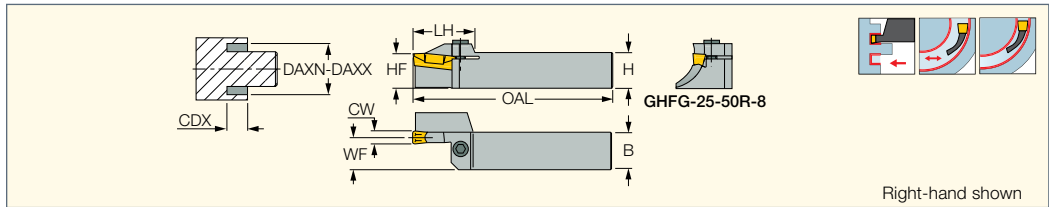
<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** C#-HFIR/L-MC (626) • HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HFRR/L-T (619) • HFHR/L-4T (615) • HFHR/L-5T (615) • HFHR/L-6T (616) • HFIR/L-MC (627) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGAER/L-3 (621) • HGAIIR/L-3 (624) • HGHR/L-3 (614)

**CUTGRIP**

**GHFG-R/L-8**

Holders for Face Grooving and Turning Along Shafts



Right-hand shown

Designation	CW	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	H	HF	B	OAL	LH	WF		
<b>GHFG 25.4-50R/L-8</b>	.315	1.000	1.97	2.52	1.000	1.000	1.000	6.000	1.600	.870	SR M6X20 DIN912	HW 5.0
<b>GHFG 25.4-63R/L-8</b>	.315	1.000	2.48	3.23	1.000	1.000	1.000	6.000	1.600	.870	SR M6X20 DIN912	HW 5.0

• For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

**For inserts, see pages:** GDMF (298) • GDMM-CC (637) • GDMN (299) • GDMU (299) • GDMY (298) • GDMY (full radius) (300) • GDMY-F (301)

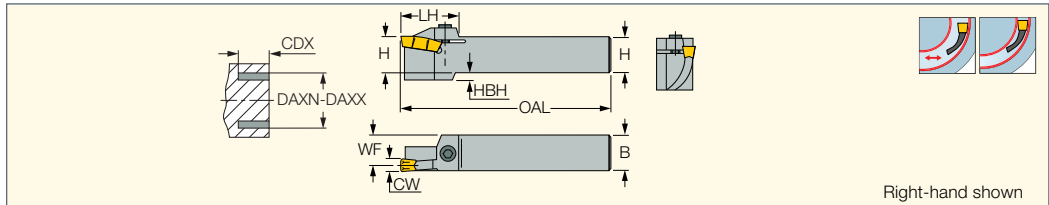
• GIA-K (long pocket) (310) • GIF (long pocket) (308) • GIF-E (W=315,394 full radius) (304) • GIF-E (W=315,394) (302)

• GIFG-E (W=315) (634) • GIPA/GIDA 8 (full radius) (499)

**CUTGRIP**

**GHFGR/L-8**

Holders for Face Turning and Grooving



Right-hand shown

Designation	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	H	B	CW	OAL	LH	WF	HBH		
<b>GHFGR/L 25.4-80-8</b>	.905	3.15	4.53	1.000	1.000	.315	6.000	1.710	.840	.30	SR M6X20 DIN912	HW 5.0
<b>GHFGR 31.7-80-8</b>	.905	3.15	4.53	1.250	1.250	.315	7.000	1.710	1.110	-	SR M6X25 DIN912	HW 5.0
<b>GHFGR 25.4-105-8</b>	.984	4.13	6.30	1.000	1.000	.315	6.000	1.710	.840	.24	SR M6X20 DIN912	HW 5.0
<b>GHFGR 31.7-105-8</b>	.984	4.13	6.30	1.250	1.250	.315	6.700	1.710	1.110	-	SR M6X20 DIN912	HW 5.0
<b>GHFGR/L 25.4-155-8</b>	.984	6.10	20.10	1.000	1.000	.315	6.000	1.710	.840	.24	SR M6X20 DIN912	HW 5.0
<b>GHFGR/L 31.7-155-8</b>	.984	6.10	20.10	1.250	1.250	.315	6.700	1.710	1.110	-	SR M6X20 DIN912	HW 5.0

• No limitation to widening the groove either way after initial grooving • CDX depends on the penetration diameter and the insert

• For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

**For inserts, see pages:** GDMF (298) • GDMM-CC (637) • GDMN (299) • GDMU (299) • GDMY (298) • GDMY (full radius) (300) • GDMY-F (301)

• GIA-K (long pocket) (310) • GIF (long pocket) (308) • GIF-E (W=315,394 full radius) (304) • GIF-E (W=315,394) (302)

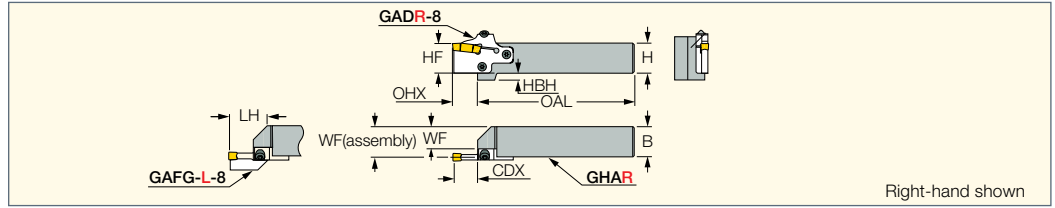
• GIFG-E (W=315) (634) • GIPA/GIDA 8 (full radius) (499)

CDX for GHFGR/L (25.4/31.7)-80-8							
D	GIF 8...	GIFG 8...	GDMY 8...	GIPA 8...	GIDA 8...	GIA 8...	GDMM 8CC...
3.150	.630	.906	.906	.787	.945	.630	.945
3.228	.669	.906	.906	.787	.945	.669	.945
3.307	.709	.906	.906	.827	.945	.709	.945
3.386	.748	.906	.906	.827	.945	.748	.945
3.465	.787	.906	.906	.866	.945	.787	.945
3.543	.787	.906	.906	.866	.945	.787	.945
3.780	.787	.906	.906	.866	.945	.787	.945
4.094	.787	.906	.906	.866	.945	.787	.945
4.528	.866	.906	.906	.866	.945	.866	.945
CDX for GHFGR/L (25.4/31.7)-105-8							
D	GIF 8...	GIFG 8...	GDMY 8...	GIPA 8...	GIDA 8...	GIA 8...	GDMM 8CC...
4.134	.827	.906	.906	.906	.945	.827	.945
4.488	.866	.906	.906	.906	.945	.866	.945
4.961	.906	.906	.945	.906	.945	.906	.945
5.512-6.299	.945	.945	.945	.906	.945	.945	.945
CDX for GHFGR/L (25.4/31.7)-155-8							
D	GIF 8...	GIFG 8...	GDMY 8...	GIPA 8...	GIDA 8...	GIA 8...	GDMM 8CC...
6.102	.945	.945	.945	.906	.945	.945	.945
7.087	.945	.945	.945	.906	.945	.945	.945
8.268-20.079	.945	.945	.945	.906	.945	.945	.945

**CUTGRIP**

**GHAR/L-8**

External Holders for Grooving and Turning Adapters



Designation	H	HF	WF	B	OAL	LH	OHX <sup>(1)</sup>	HBH	TGA	CDX <sup>(2)</sup>	FG
GHAR/L 25.4-8	1.000	1.000	.646	1.000	5.000	1.770	1.000	.54	GADR/L 8	1.000	GAFG...R/L-8
GHAR/L 31.7-8	1.250	1.250	.896	1.250	6.000	1.770	1.000	.29	GADR/L 8	1.000	GAFG...R/L-8

- Adapters GADR/L-8 for turning and grooving, GAFG-R/L-8 for face-grooving
- <sup>(1)</sup> Maximum overhang
- <sup>(2)</sup> See specific adapter dimensions
- For tools, see pages:** GADR/L-8 (295) • GAFG-R/L-8 (633) • PCADR/L 34N-RE (331)

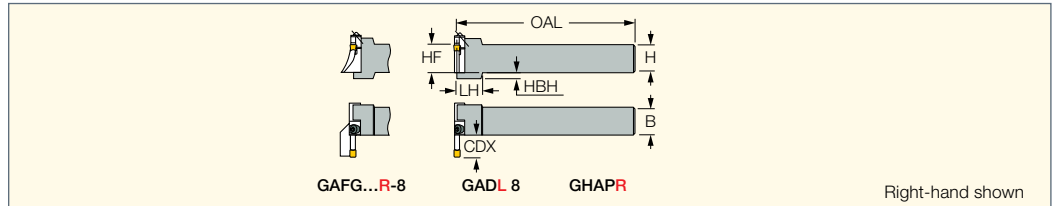
**Spare Parts**

Designation				
GHAR/L-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0

**CUTGRIP**

**GHAPR/L-8**

External Holders for Grooving and Turning With Perpendicularly Oriented Adapters



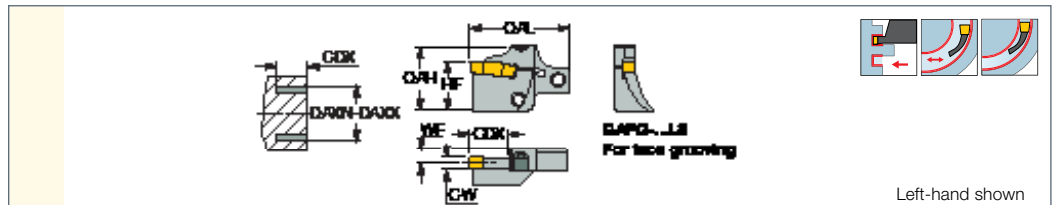
Designation	H	HF	B	OAL	LH	HBH	TGA <sup>(1)</sup>	CDX <sup>(2)</sup>	FG <sup>(3)</sup>				
GHAPR/L 31.7-8	1.250	1.250	1.250	6.100	1.180	.29	GADR/L 8	1.000	GAFG...R/L-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0

- Adapters GADR/L-8 for turning and grooving, GAFG-R/L-8 for face-grooving
- <sup>(1)</sup> Adapter for Turning & Grooving
- <sup>(2)</sup> See specific adapter dimensions
- <sup>(3)</sup> Adapter for Face Grooving
- For tools, see pages:** GADR/L-8 (295) • GAFG-R/L-8 (633) • PCADR/L 34N-RE (331)

**CUTGRIP**

**GAFG-R/L-8**

Adapters for Face Machining



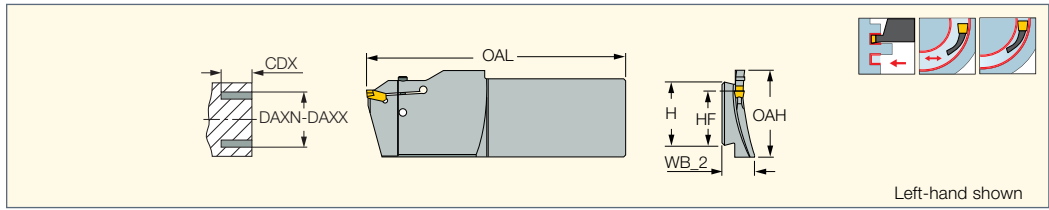
Designation	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDX <sup>(3)</sup>	WF	HF	OAH	OAL
GAFG 80R/L-8	.315	3.15	4.53	.906	.354	1.260	1.654	2.500
GAFG 105R/L-8	.315	4.13	6.30	.984	.354	1.260	1.654	2.500
GAFG 155R/L-8	.315	6.10	20.08	.984	.354	1.260	1.654	2.500

- No limitation for widening the groove either way after initial grooving • For user guide, see pages 607-612, 663-669
- <sup>(1)</sup> Minimum penetration diameter
- <sup>(2)</sup> Maximum penetration diameter
- <sup>(3)</sup> For GIFG-8 & GDMY-8 CDX=984" for DAX range
- For inserts, see pages:** GDMA (312) • GDMF (298) • GDMM-CC (637) • GDMN (299) • GDMU (299) • GDMY (298) • GDMY (full radius) (300)
- GDMY-F (301) • GIA-K (long pocket) (310) • GIF (long pocket) (308) • GIF-E (W=315,394 full radius) (304) • GIF-E (W=315,394) (302)
- GIFG-E (W=315) (634) • GIPA/GIDA 8 (full radius) (499)
- For holders, see pages:** C#-GHAD-8 (681) • C#-GHAPR/L-8 (682) • GHAPR/L-8 (295) • GHAR/L-8 (295) • IM-GHAD-8 (690)

**CUTGRIP**

**CGFG 51-P8**

Blades for Face Machining  
Carrying .315" Inserts



Designation	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDX	H	HF	OAL	OAH	WB_2		
CGFG 51-180R/L-P8	.315	7.09	9.45	2.756	2.071	1.772	7.874	2.36	1.083	SR M4-2052	HW 3.0
CGFG 51-240R/L-P8	.315	9.45	12.60	3.150	2.071	1.772	8.268	2.76	1.024	SR M4-2052	HW 3.0
CGFG 51-320R/L-P8	.315	12.60	17.32	3.543	2.071	1.772	8.661	3.15	.965	SR M4-2052	HW 3.0
CGFG 51-440R/L-P8	.315	17.32	27.56	3.937	2.071	1.772	9.055	3.54	.886	SR M4-2052	HW 3.0
CGFG 51-700R/L-P8	.315	27.56	59.06	4.724	2.071	1.772	9.843	3.94	.787	SR M4-2052	HW 3.0

• For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

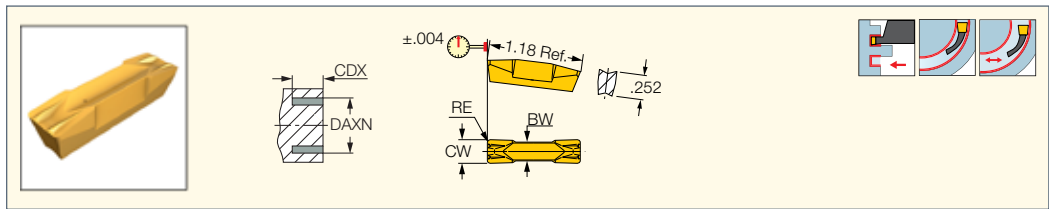
**For inserts, see pages:** GIMF (297) • GIMM 8CC (637) • GIMY (298) • GIMY (full radius) (300) • GIMY-F (301) • GIPY (311)

**For holders, see pages:** SGTBK (673) • SGTBU/SGTBN (672)

**CUTGRIP**

**GIFG-E  
(W=.315)**

Inserts for Deep Face  
Grooving and Turning



Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data  f face-groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	DAXN <sup>(3)</sup>	CDX <sup>(4)</sup>	BW	IC635	IC20	
GIFG 8.00E-0.80	.315	.031	.0008	.0020	1.97	.984	.236	•	•	.0059-.0098
GIFG 8.00E-1.20	.315	.047	.0008	.0020	1.97	.984	.236	•	•	.0059-.0098

• For cutting speed recommendations, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum axial grooving diameter

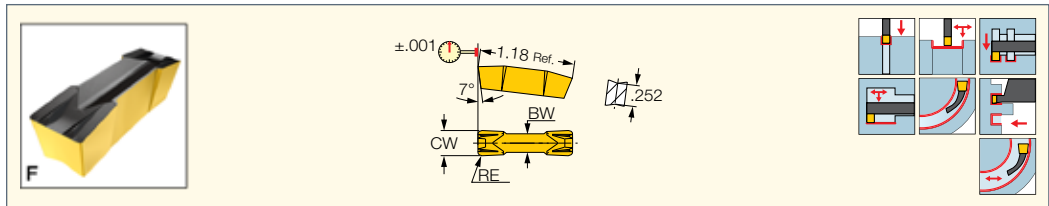
<sup>(4)</sup> Cutting depth maximum

**For tools, see pages:** GAFG-R/L-8 (633) • GHFG-R/L-8 (632) • GHFGR/L-8 (632)

**CUTGRIP**

**GIF-E  
(W=.315,.394)**

Precision Double-Ended Inserts  
for Grooving and Turning



Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data			
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	CDX <sup>(3)</sup>	IC880	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	IC807	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)
GIF 8.00E-0.40	.315	.0160	.0008	.0012	.236	1.063	•	•	•	•	•	•	•	•	•	.020-.189	.0114-.0189	.0071-.0122
GIF 8.00E-0.80	.315	.0315	.0008	.0020	.236	1.063	•	•	•	•	•	•	•	•	•	.039-.189	.0126-.0220	.0071-.0134
GIF 8.00E-1.20	.315	.0472	.0008	.0020	.236	1.063	•	•	•	•	•	•	•	•	•	.057-.189	.0126-.0244	.0071-.0134
GIF 10.00E-0.80	.394	.0315	.0008	.0020	.315	1.063	•	•	•	•	•	•	•	•	•	.039-.236	.0138-.0256	.0087-.0157
GIF 10.00E-1.20	.394	.0472	.0008	.0020	.315	1.063	•	•	•	•	•	•	•	•	•	.057-.236	.0138-.0283	.0087-.0157

• DMIN for internal machining = .256" • For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

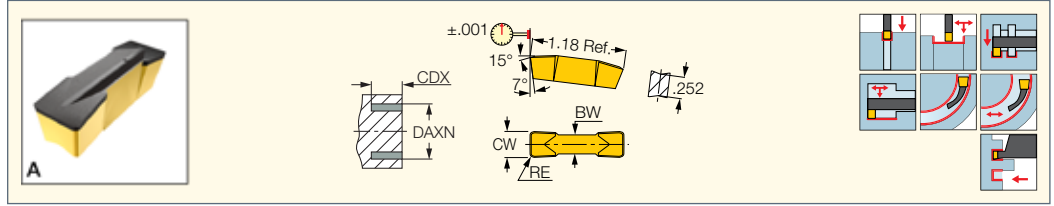
**For tools, see pages:** C#-GHDR/L (284) • CGHN-8-10D (296) • GADR/L-8 (295) • GADR/L-JHP (296) • GAFG-R/L-8 (633) • GHDR/L (long pocket) (294)

• GHDR/L-JHP (long pocket) (294) • GHFG-R/L-8 (632) • GHFGR/L-8 (632) • GHIR/L (W=260-315) (379)

# CUTGRIP

## GIA-K (long pocket)

Flat Top Precision Double-Ended Inserts with T-Land for Machining Cast Iron



Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	CDX <sup>(3)</sup>	DAXN <sup>(4)</sup>	IC5010	IC428	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)
<b>GIA 8.00K-0.80</b>	.315	.031	.0008	.0020	.236	.984	6.30	●	●	.039-.189	.0142-.0252	.0071-.0150
<b>GIA 8.00K-1.20</b>	.315	.047	.0008	.0020	.236	.984	6.30	●	●	.057-.189	.0142-.0276	.0071-.0150

• DMIN for internal machining = 256" • For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

<sup>(4)</sup> Minimum axial grooving diameter

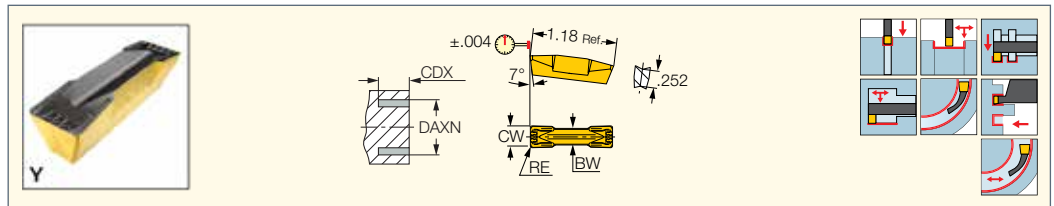
**For tools, see pages:** C#-GHDR/L (284) • CGHN-8-10D (296) • GADR/L-8 (295) • GADR/L-JHP (296) • GAFG-R/L-8 (633) • GHDR/L (long pocket) (294)

• GHDR/L-JHP (long pocket) (294) • GHFG-R/L-8 (632) • GHFGR/L-8 (632) • GHIR/L (W=260-315) (379)

# CUTGRIP

## GDMY

Utility Double-Ended Inserts for Grooving and Turning



Designation	Dimensions							Tough ↔ Hard							Recommended Machining Data		
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	DAXN <sup>(3)</sup>	CDX <sup>(4)</sup>	IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)
<b>GDMY 808</b>	.315	.031	.0020	.0020	.236	1.97	1.063	●	●	●	●	●	●	●	.039-.189	.0126-.0220	.0071-.0134

• DMIN for internal machining = 256" • For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum axial grooving diameter

<sup>(4)</sup> Cutting depth maximum

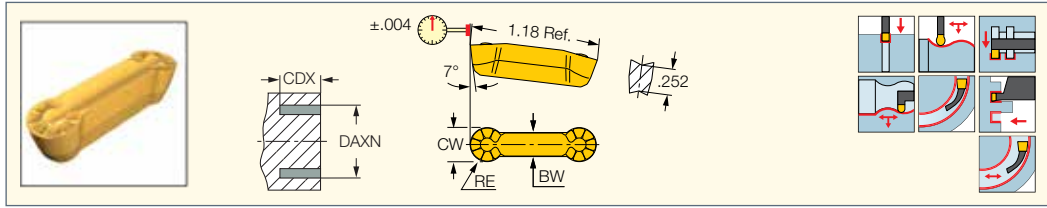
**For tools, see pages:** C#-GHDR/L (284) • CGHN-8-10D (296) • GADR/L-8 (295) • GADR/L-JHP (296) • GAFG-R/L-8 (633) • GHDR/L (long pocket) (294)

• GHDR/L-JHP (long pocket) (294) • GHFG-R/L-8 (632) • GHFGR/L-8 (632) • GHIR/L (W=260-315) (379)

**CUTGRIP**

**GDMY (full radius)**

Utility Double-Ended Full Radius Inserts for Grooving and Profiling



Designation	Dimensions							Tough ↔ Hard							Recommended Machining Data		
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	DAXN <sup>(3)</sup>	CDX	IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	a <sub>p</sub> (inch)	f turn (IPR)
<b>GDMY 840</b>	.315	.157	.0020	.0020	.220	1.97	.984	●	●	●	●	●	●	●	.000-.157	.0126-.0264	.0071-.0134

• Can cut arcs to 250° • DMIN for internal machining = 256" • For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum axial grooving diameter

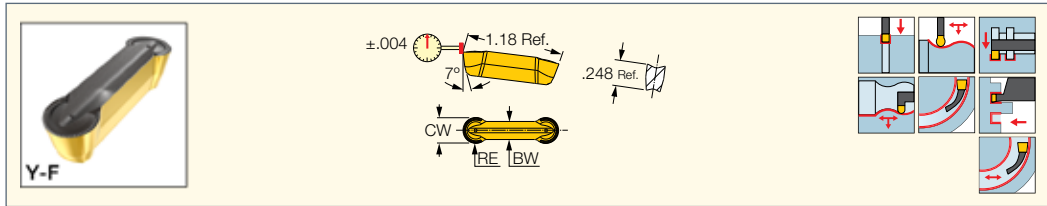
**For tools, see pages:** C#-GHDR/L (284) • CGHN-8-10D (296) • GADR/L-8 (295) • GADR/L-JHP (296) • GAFG-R/L-8 (633) • GHDKR/L (497)

• GHDR/L (long pocket) (294) • GHDR/L-JHP (long pocket) (294) • GHFG-R/L-8 (632) • GHFGR/L-8 (632) • GHIR/L (W=260-315) (379)

**CUTGRIP**

**GDMY-F**

Utility Double-Ended Inserts for Grooving and Profiling Ductile Materials



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	CDX <sup>(3)</sup>	IC808	IC908	a <sub>p</sub> (inch)	f turn (IPR)	f groove (IPR)
<b>GDMY 840F</b>	.315	.157	.0020	.0020	.220	.984	●	●	.000-.157	.0126-.0264	.0071-.0134

• DMIN for internal applications = 256" • For cutting speed recommendations and user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Cutting depth maximum

**For tools, see pages:** C#-GHDR/L (284) • CGHN-8-10D (296) • GADR/L-8 (295) • GADR/L-JHP (296) • GAFG-R/L-8 (633) • GHDR/L (long pocket) (294)

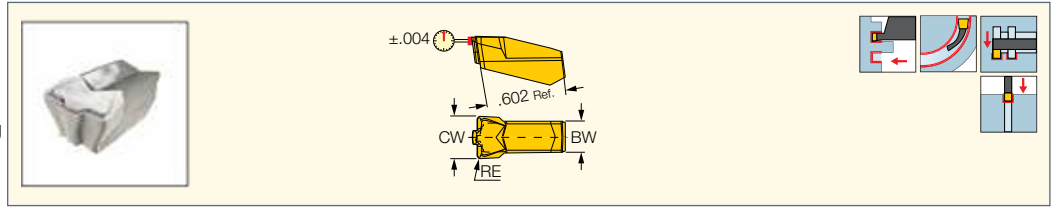
• GHDR/L-JHP (long pocket) (294) • GHFG-R/L-8 (632) • GHFGR/L-8 (632) • GHIR/L (W=260-315) (379)



**CUTGRIP**

**GIMM 8CC**

Single-Ended Utility Insert with a Front Chip Splitter for External Rough Grooving and Side Turning



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data f face-groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	IC808	IC908	
<b>GIMM 8CC</b>	.315	.031	.0020	.0020	.228	•	•	.0118-.0177

• For cutting speed recommendations, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

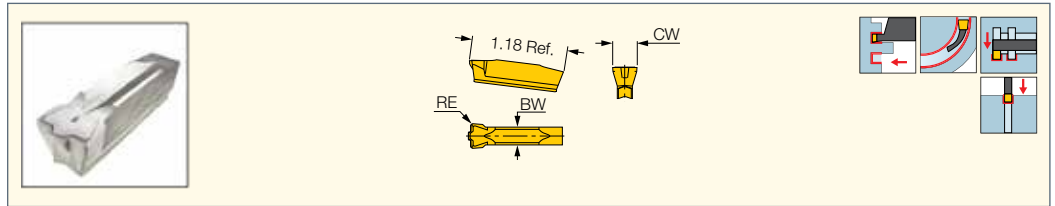
**For tools, see pages:** Anti-Vibration Blades (293) • CGFG 51-P8 (634) • CGHN-P8 (292) • CGHR/L-P8DG (292) • CGPAD (290) • GHDR/L (short pocket) (285)

• GHDR/L-JHP (short pocket) (286) • GHGR/L (287)

**CUTGRIP**

**GDMM-CC**

Single-Ended Utility Insert for External Rough Grooving and Side Turning with a Front Chip Splitter



Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data f face-groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	BW	IC830	IC354	IC808	IC907	
<b>GDMM 7CC</b>	.276	.0315	.0020	.0020	.236		•			.0118-.0177
<b>GDMM 8CC</b>	.315	.0315	.0020	.0020	.220	•		•	•	.0118-.0177

• For cutting speed recommendations, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

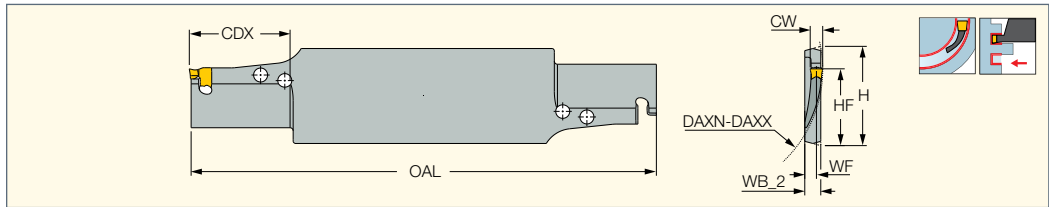
<sup>(2)</sup> Corner radius tolerance (+/-)

**For tools, see pages:** C#-GHDR/L (284) • GADR/L-8 (295) • GADR/L-JHP (296) • GAFG-R/L-8 (633) • GHDR/L (long pocket) (294)

• GHDR/L-JHP (long pocket) (294) • GHFG-R/L-8 (632) • GHFGR/L-8 (632) • GHIR/L (W=260-315) (379)



**TNFFH-IQ**  
Face Grooving Blades



Designation	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDX	HF	H	WF	WB_2	OAL	Insert	
TNFFH 65R/L-3IQ	.118	2.56	3.54	.709	.976	1.260	.161	.205	5.906	TNF 3...	ETF 3-6*
TNFFH 90R/L-3IQ	.118	3.54	4.72	.709	.976	1.260	.161	.205	5.906	TNF 3...	ETF 3-6*
TNFFH 120R/L-3IQ	.118	4.72	6.30	.945	.976	1.260	.161	.205	5.906	TNF 3...	ETF 3-6*
TNFFH 80R/L-4IQ	.157	3.15	5.91	1.260	.976	1.260	.150	.205	5.906	TNF 4...	ETF 3-6*
TNFFH 150R/L-4IQ	.157	5.91	19.69	1.260	.976	1.260	.150	.205	5.906	TNF 4...	ETF 3-6*
TNFFH 80R/L-5IQ	.197	3.15	5.91	1.181	.976	1.260	.140	.205	5.906	TNF 5...	ETF 3-6*
TNFFH 150R/L-5IQ	.197	5.91	19.69	1.378	.976	1.260	.140	.205	5.906	TNF 5...	ETF 3-6*
TNFFH 80R/L-6IQ	.236	3.15	5.91	1.181	.976	1.260	.130	.205	5.906	TNF 6...	ETF 3-6*
TNFFH 150R/L-6IQ	.236	5.91	27.56	1.378	.976	1.260	.130	.205	5.906	TNF 6...	ETF 3-6*

• H dimension links blades and blocks

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

\* Optional, should be ordered separately

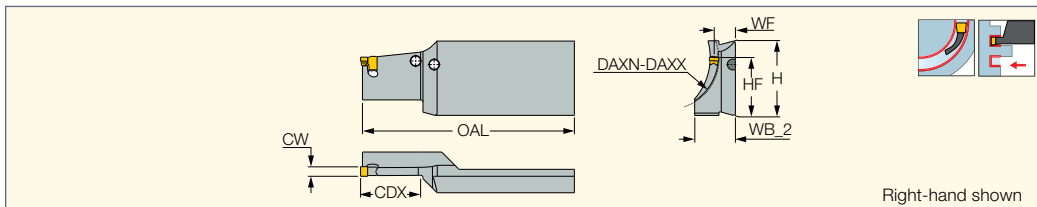
For inserts, see pages: TNF GN-IQ (640) • TNF-M-IQ (640) • TNF-P-IQ (639)

ETF 3-6 extractor (to be ordered separately)



**TNFFA-IQ**

Reinforced Face Grooving Blades



Right-hand shown

Designation	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDX	H	WF	HF	OAL	WB_2	Insert
TNFFA 30R/L-3IQ	.118	1.18	1.38	.748	1.260	.374	.976	3.543	.728	TNF 3...
TNFFA 35R/L-3IQ	.118	1.38	1.57	.748	1.260	.374	.976	3.543	.728	TNF 3...
TNFFA 40R/L-3IQ	.118	1.57	1.81	.906	1.260	.374	.976	3.543	.728	TNF 3...
TNFFA 46R/L-3IQ	.118	1.81	2.13	.984	1.260	.374	.976	3.543	.728	TNF 3...
TNFFA 54R/L-3IQ	.118	2.13	2.56	1.024	1.260	.374	.976	3.543	.728	TNF 3...
TNFFA 65R/L-3IQ	.118	2.56	3.15	1.063	1.260	.374	.976	3.543	.728	TNF 3...
TNFFA 80R/L-3IQ	.118	3.15	3.94	1.063	1.260	.374	.976	3.543	.657	TNF 3...
TNFFA 35R/L-4IQ	.157	1.38	1.77	.984	1.260	.354	.976	3.543	.713	TNF 4...
TNFFA 45R/L-4IQ	.157	1.77	2.36	.984	1.260	.354	.976	3.543	.681	TNF 4...
TNFFA 60R/L-4IQ	.157	2.36	3.15	1.063	1.260	.354	.976	3.543	.709	TNF 4...
TNFFA 80R/L-4IQ	.157	3.15	5.12	1.063	1.260	.354	.976	3.543	.583	TNF 4...
TNFFA 40R/L-5IQ	.197	1.57	1.97	.984	1.260	.382	.976	3.543	.709	TNF 5...
TNFFA 50R/L-5IQ	.197	1.97	2.76	1.102	1.260	.382	.976	3.543	.709	TNF 5...
TNFFA 70R/L-5IQ	.197	2.76	3.94	1.181	1.260	.382	.976	3.543	.709	TNF 5...
TNFFA 100R/L-5IQ	.197	3.94	7.09	1.378	1.260	.382	.976	3.543	.709	TNF 5...
TNFFA 45R/L-6IQ	.236	1.77	2.36	.984	1.260	.402	.976	3.543	.709	TNF 6...
TNFFA 60R/L-6IQ	.236	2.36	3.15	1.102	1.260	.402	.976	3.543	.709	TNF 6...
TNFFA 80R/L-6IQ	.236	3.15	4.33	1.181	1.260	.402	.976	3.543	.709	TNF 6...
TNFFA 110R/L-6IQ	.236	4.33	11.81	1.378	1.260	.402	.976	3.543	.583	TNF 6...

• For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

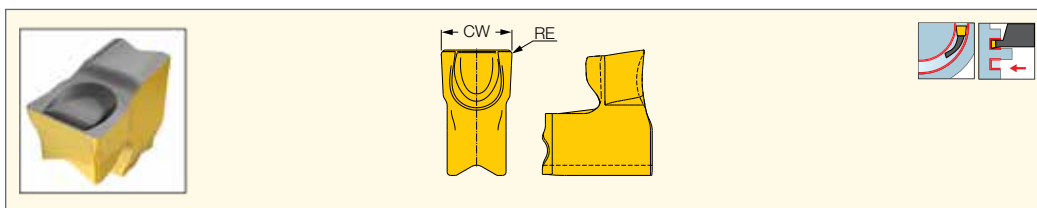
For inserts, see pages: TNF GN-IQ (640) • TNF-M-IQ (640) • TNF-P-IQ (639)

**Spare Parts**

Designation	
TNFFA-IQ	ETF 3-6"

**TNF-P-IQ**

Face Grooving Single-Ended  
Inserts for Machining Steel



Designation	Dimensions			IC808	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>		f face-groove (IPR)
TNF 3P-IQ	.118	.0118	.0020	•	.0039-.0059
TNF 4P-IQ	.157	.0098	.0020	•	.0039-.0059
TNF 5P-IQ	.197	.0138	.0020	•	.0047-.0079
TNF 6P-IQ	.236	.0138	.0020	•	.0047-.0079

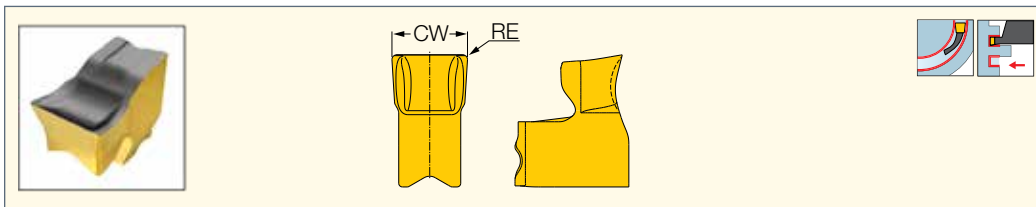
• For user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

For tools, see pages: TNFFA-IQ (639) • TNFFH-IQ (638) • TNFPAD-XL-JHP (640)



**TNF-M-IQ**  
Face Grooving Single-Ended  
Inserts for Machining  
Stainless Steel and High  
Temperature Alloys



Designation	Dimensions			IC808	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>		f face-groove (IPR)
TNF 3M-IQ	.118	.0118	.0020	●	.0031-.0039
TNF 4M-IQ	.157	.0098	.0020	●	.0031-.0047
TNF 5M-IQ	.197	.0138	.0020	●	.0047-.0079
TNF 6M-IQ	.236	.0138	.0020	●	.0047-.0079

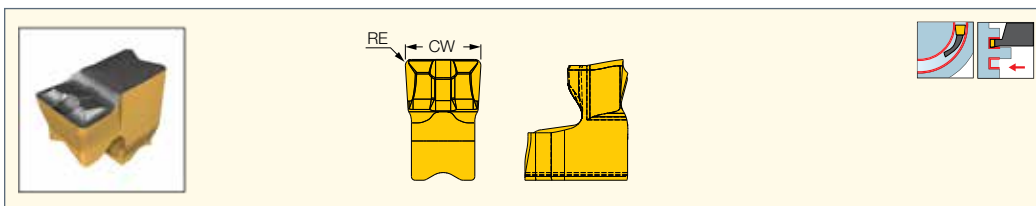
• For user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

For tools, see pages: TNFFA-IQ (639) • TNFFH-IQ (638) • TNFPAD-XL-JHP (640)



**TNF GN-IQ**  
Face Grooving Single-Ended  
Inserts for Machining Steel



Designation	Dimensions			IC808	Recommended Machining Data
	CW	RE	CWTOL <sup>(1)</sup>		f face-groove (IPR)
TNF 3GN-IQ	.118	.0118	.0020	●	.0024-.0039
TNF 4GN-IQ	.157	.0157	.0020	●	.0024-.0047
TNF 5GN-IQ	.197	.0157	.0020	●	.0031-.0063
TNF 6GN-IQ	.236	.0157	.0020	●	.0031-.0079

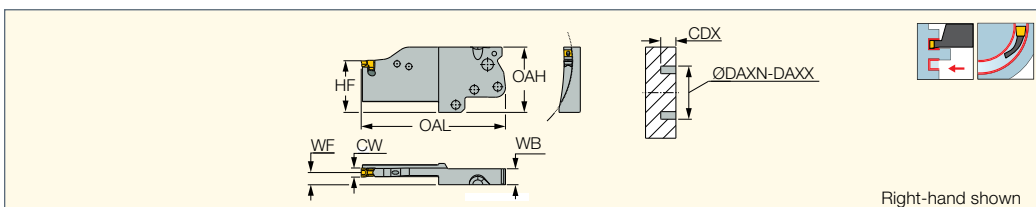
• For user guide, see pages 658-669

<sup>(1)</sup> Cutting width tolerance (+/-)

For tools, see pages: TNFFA-IQ (639) • TNFFH-IQ (638) • TNFPAD-XL-JHP (640)



**TNFPAD-XL-JHP**  
Adapters for Face Machining



Designation	CW	CDX	WF	WB	OAL	HF	OAH	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>
TNFPAD-XL 4L-35T20-JHP	.157	.787	.315	.374	2.559	1.339	1.693	1.38	2.09
TNFPAD-XL 4L-45T20-JHP	.157	.787	.315	.374	2.559	1.339	1.693	1.77	2.68
TNFPAD-XL 4R/L-35T35-JHP	.157	1.378	.315	.374	3.150	1.339	1.693	1.38	2.09
TNFPAD-XL 4R/L-45T35-JHP	.157	1.378	.315	.374	3.150	1.339	1.693	1.77	2.68
TNFPAD-XL 5L-60T20-JHP	.197	.787	.315	.394	2.559	1.339	1.693	2.36	3.54
TNFPAD-XL 5R/L-60T40-JHP	.197	1.575	.315	.394	3.346	1.339	1.693	2.36	3.54
TNFPAD-XL 6L-110T20-JHP	.236	.787	.315	.413	2.559	1.339	1.693	4.33	12.28
TNFPAD-XL 6L-80T20-JHP	.236	.787	.315	.413	2.559	1.339	1.693	3.15	4.80
TNFPAD-XL 6L-80T45-JHP	.236	1.772	.315	.413	3.543	1.339	1.693	3.15	4.80
TNFPAD-XL 6R/L-110T50-JHP	.236	1.968	.315	.413	3.740	1.339	1.693	4.33	12.28

• WF(assembly)=WF(shank) + WF(adapter) • TNF 456 inserts can be used with left and right hand adapters • For user guide, see pages 607-612, 663-669

<sup>(1)</sup> Minimum axial grooving diameter

<sup>(2)</sup> Maximum axial grooving diameter

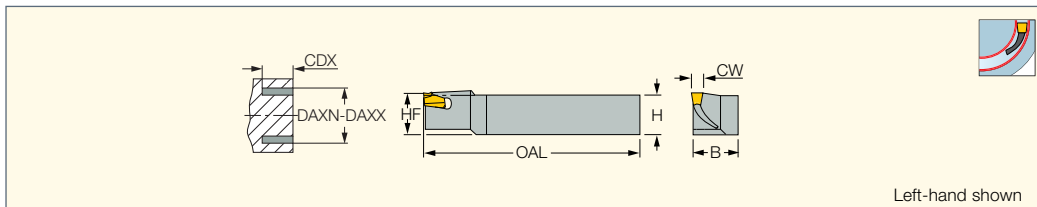
For inserts, see pages: TNF GN-IQ (640) • TNF-M-IQ (640) • TNF-P-IQ (639)


For holders, see pages: MAHPR/L-XL-JHP (616) • MAHR/L-MG-XL-JHP (555)

**Spare Parts**

Designation	
TNFPAD-XL-JHP	ETF 3-6

**SGFFR/L**  
Face Grooving Integral  
Shank Tools



Designation	CW	H	B	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	HF	OAL	Insert	
SGFFR/L 20-25-2	.083	.787	.787	.512	.98	1.18	.787	4.724	GFF 2R/L	SET ESG 0.5
SGFFR/L 20-30-2	.083	.787	.787	.551	1.14	1.42	.787	4.724	GFF 2R/L	ESG 0.5
SGFFR/L 20-35-2	.083	.787	.787	.630	1.38	1.81	.819	4.724	GFF 2N	ESG 0.5
SGFFR/L 20-45-2	.083	.787	.787	.787	1.77	2.40	.819	4.724	GFF 2N	ESG 0.5
SGFFR/L 20-60-2	.083	.787	.787	.787	2.36	3.15	.819	4.724	GFF 2N	ESG 0.5
SGFFR/L 25-35-2	.083	.984	.984	.630	1.38	1.81	1.016	5.118	GFF 2N	ESG 0.5
SGFFR/L 25-45-2	.083	.984	.984	.787	1.77	2.40	1.016	5.118	GFF 2N	ESG 0.5
SGFFR/L 25-60-2	.083	.984	.984	.787	2.36	3.15	1.016	5.118	GFF 2N	ESG 0.5
SGFFR 25-25-2	.083	.984	.984	.512	.98	1.18	.984	5.118	GFF 2N	ESG 0.5
SGFFR 25-30-2	.083	.984	.984	.551	1.14	1.42	.984	5.118	GFF 2N	ESG 0.5
SGFFR/L 20-30-3	.118	.787	.787	.630	1.18	1.38	.787	4.724	GFF 3R/L	SET ESG 1
SGFFR 20-35-3	.118	.787	.787	.709	1.35	1.60	.787	4.724	GFF 3R/L	SET ESG 1
SGFFR 20-40-3	.118	.787	.787	.787	1.57	1.85	.787	4.724	GFF 3R/L	SET ESG 1
SGFFR 20-46-3	.118	.787	.787	.866	1.81	2.17	.787	4.724	GFF 3R/L	SET ESG 1
SGFFR 20-55-3	.118	.787	.787	.866	2.13	2.56	.835	4.724	GFF 3N	SET ESG 1
SGFFR 20-65-3	.118	.787	.787	.906	2.52	3.15	.827	4.724	GFF 3N	SET ESG 1
SGFFR 20-80-3	.118	.787	.787	.945	3.11	3.94	.815	4.724	GFF 3N	SET ESG 1
SGFFR/L 25-40-3	.118	.984	.984	.787	1.57	1.85	.984	5.118	GFF 3R/L	SET ESG 1
SGFFR/L 25-55-3	.118	.984	.984	.945	2.13	2.56	1.031	5.118	GFF 3N	SET ESG 1
SGFFR 25-30-3	.118	.984	.984	.630	1.18	1.38	.984	5.118	GFF 3R/L	SET ESG 1
SGFFR 25-35-3	.118	.984	.984	.709	1.35	1.60	.984	5.118	GFF 3R/L	SET ESG 1
SGFFR 25-46-3	.118	.984	.984	.866	1.81	2.17	.984	5.118	GFF 3R/L	SET ESG 1
SGFFR 25-65-3	.118	.984	.984	.984	2.52	3.15	1.024	5.118	GFF 3N	SET ESG 1
SGFFR 25-80-3	.118	.984	.984	1.024	3.11	3.94	1.012	5.118	GFF 3N	SET ESG 1
SGFFR/L 20-35-4	.157	.787	.787	.787	1.38	1.77	.787	4.724	GFF 4N	SET ESG 1
SGFFR 20-45-4	.157	.787	.787	.984	1.73	2.28	.787	4.724	GFF 4N	SET ESG 1
SGFFR 20-60-4	.157	.787	.787	.984	2.24	3.15	.787	4.724	GFF 4N	SET ESG 1
SGFFR 20-80-4	.157	.787	.787	.984	3.11	5.12	.787	4.724	GFF 4N	SET ESG 1
SGFFR/L 25-45-4	.157	.984	.984	.984	1.73	2.28	.984	5.906	GFF 4N	SET ESG 1
SGFFR/L 25-60-4	.157	.984	.984	1.024	2.24	3.15	.984	5.906	GFF 4N	SET ESG 1
SGFFR/L 25-80-4	.157	.984	.984	1.024	3.11	5.12	.984	5.906	GFF 4N	SET ESG 1
SGFFR 25-35-4	.157	.984	.984	.787	1.38	1.77	.984	5.906	GFF 4N	SET ESG 1
SGFFR/L 20-50-5	.197	.787	.787	.984	1.97	2.95	.787	4.724	GFF 5N	SET ESG 1
SGFFR 20-75-5	.197	.787	.787	1.024	2.91	5.12	.787	4.724	GFF 5N	SET ESG 1
SGFFR/L 25-100-5	.197	.984	.984	1.181	3.94	7.09	.984	5.906	GFF 5N	SET ESG 1
SGFFR 25-50-5	.197	.984	.984	1.024	1.97	2.80	.984	5.906	GFF 5N	SET ESG 1
SGFFR 25-70-5	.197	.984	.984	1.102	2.72	4.02	.984	5.906	GFF 5N	SET ESG 1
SGFFR 20-60-6	.236	.787	.787	.984	2.24	2.36	.787	4.724	GFF 6N	SET ESG 1
SGFFR/L 25-100-6	.236	.984	.984	1.181	3.94	7.09	.984	5.906	GFF 6N	SET ESG 1
SGFFR/L 25-60-6	.236	.984	.984	1.181	2.24	3.03	.984	5.906	GFF 6N	SET ESG 1
SGFFR/L 25-75-6	.236	.984	.984	1.181	2.95	4.02	.984	5.906	GFF 6N	SET ESG 1

• Important: Apply RH insert on RH tool and LH insert on LH tool Neutral insert only as indicated

<sup>(1)</sup> Minimum penetration diameter

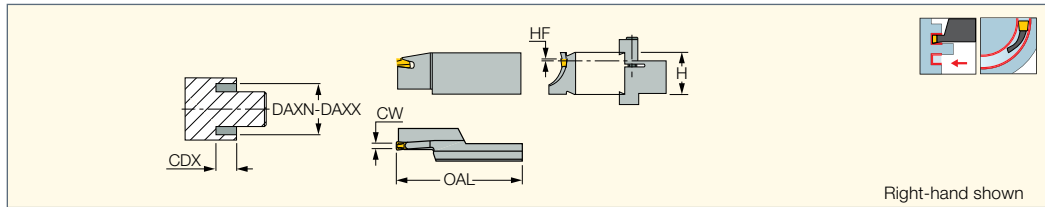
<sup>(2)</sup> Maximum penetration diameter

For inserts, see pages: GFF-N (644) • GFF-R/L (644)

**SELFGRIP**

**SGFFA**

Reinforced Face Grooving Blades for Standard Tool Blocks



Designation	CW	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	H	HF	OAL
SGFFA 25-R/L-2	.083	.512	.98	1.18	1.260	.000	3.150
SGFFA 30-L-2	.083	.551	1.14	1.42	1.260	.000	3.150
SGFFA 35-L-2	.083	.630	1.38	1.81	1.260	.031	3.150
SGFFA 45-L-2	.083	.787	1.77	2.40	1.260	.031	3.150
SGFFA 60-L-2	.083	.787	2.36	3.15	1.260	.031	3.150
SGFFA 80-L-2	.083	.787	3.11	4.02	1.260	.031	3.150
SGFFA 35-L-3	.118	.787	1.35	1.60	1.260	.000	3.543
SGFFA 40-L-3	.118	.866	1.57	1.85	1.260	.000	3.543
SGFFA 46-L-3	.118	.945	1.81	2.17	1.260	.000	3.543
SGFFA 55-L-3	.118	.984	2.13	2.56	1.260	.047	3.543
SGFFA 65-L-3	.118	1.024	2.52	3.15	1.260	.039	3.543
SGFFA 80-L-3	.118	1.102	3.11	3.94	1.260	.028	3.740
SGFFA 35-L-4	.157	.984	1.38	1.77	1.260	.000	3.543
SGFFA 45-R/L-4	.157	.984	1.73	2.28	1.260	.000	3.543
SGFFA 40-R/L-5	.197	.984	1.57	2.05	1.260	.000	3.543
SGFFA 50-R/L-5	.197	1.102	1.97	2.80	1.260	.000	3.740
SGFFA 70-L-5	.197	1.181	2.72	4.02	1.260	.000	3.740
SGFFA 100-L-5	.197	1.378	3.94	7.09	1.260	.000	3.937
SGFFA 45-R/L-6	.236	.984	1.73	2.28	1.260	.000	3.543
SGFFA 60-L-6	.236	1.181	2.24	3.03	1.260	.000	3.740
SGFFA 75-R/L-6	.236	1.378	2.95	4.02	1.260	.000	3.937

• Important: Apply RH insert on RH tool and LH insert on LH tool Neutral insert only as indicated • H dimension links blades and blocks


<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

For inserts, see pages: GFF-N (644) • GFF-R/L (644)

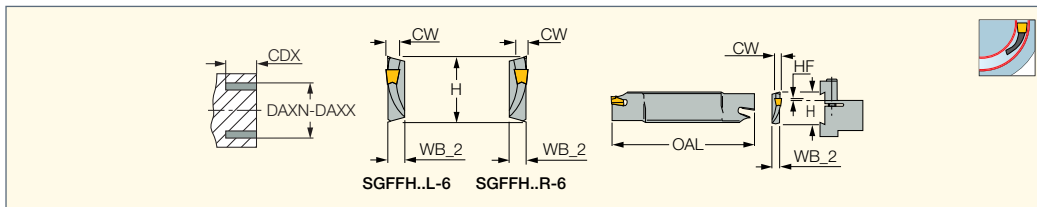
For holders, see pages: SGTBF (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**Spare Parts**

Designation	
SGFFA 25-L-2	SET ESG 0.5
SGFFA 25-R-2	ESG 0.5
SGFFA 30-L-2	ESG 0.5
SGFFA 35-L-2	ESG 0.5
SGFFA 45-L-2	ESG 0.5
SGFFA 60-L-2	ESG 0.5
SGFFA 80-L-2	ESG 0.5
SGFFA 35-L-3	SET ESG 1
SGFFA 40-L-3	SET ESG 1
SGFFA 46-L-3	SET ESG 1
SGFFA 55-L-3	SET ESG 1
SGFFA 65-L-3	SET ESG 1
SGFFA 80-L-3	SET ESG 1
SGFFA 35-L-4	SET ESG 1
SGFFA 45-R/L-4	SET ESG 1
SGFFA 40-R/L-5	SET ESG 1
SGFFA 50-R/L-5	SET ESG 1
SGFFA 70-L-5	SET ESG 1
SGFFA 100-L-5	SET ESG 1
SGFFA 45-R/L-6	SET ESG 1
SGFFA 60-L-6	SET ESG 1
SGFFA 75-R/L-6	SET ESG 1

**SGFFH**

Face Grooving Blades



Designation	CW	CDX	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	HF	H	WB_2	OAL
SGFFH 35-R/L-2	.083	.787	1.38	1.81	.031	1.260	.205	5.906
SGFFH 45-R/L-2	.083	.787	1.77	2.40	.031	1.260	.205	5.906
SGFFH 60-R-2	.083	.787	2.36	3.15	.031	1.260	.205	5.906
SGFFH 80-R/L-2	.083	.787	3.11	4.02	.031	1.260	.157	5.906
SGFFH 100-R/L-2	.083	.787	3.98	5.20	.000	1.260	.157	5.906
SGFFH 75-R/L-3	.118	.787	2.56	3.62	.039	1.260	.205	5.906
SGFFH 90-R/L-3	.118	.787	3.54	4.80	.008	1.260	.205	5.906
SGFFH 120-R/L-3	.118	.984	4.72	6.30	.000	1.260	.205	5.906
SGFFH 80-R/L-4	.157	1.181	3.15	6.10	.098	1.260	.205	5.906
SGFFH 150-R/L-4	.157	1.181	5.91	19.69	.098	1.260	.205	5.906
SGFFH 80-R/L-5	.197	1.260	3.15	6.38	.000	1.260	.205	5.906
SGFFH 150-R/L-5	.197	1.378	5.91	23.62	.000	1.260	.205	5.906
SGFFH 90-R/L-6	.236	1.260	3.54	5.91	.000	1.260	.315	5.906
SGFFH 150-R/L-6	.236	1.378	5.83	27.56	.000	1.260	.205	5.906

• Important: Apply RH insert on RH tool and LH insert on LH tool Neutral insert only as indicated • H dimension links blades and blocks


<sup>(1)</sup> Minimum penetration diameter

<sup>(2)</sup> Maximum penetration diameter

For inserts, see pages: GFF-N (644)

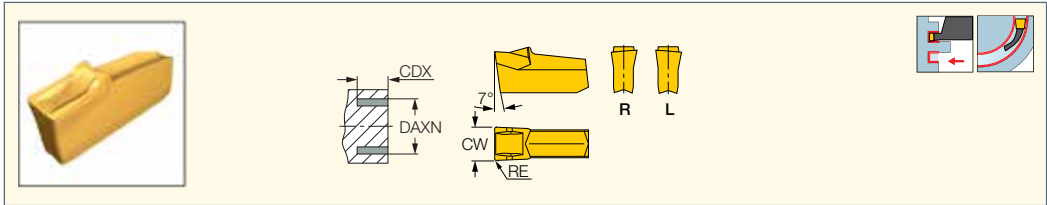
For holders, see pages: SGTBF (673) • SGTBK (673) • SGTBU/SGTBN (672) • UBHCR/L (673)

**Spare Parts**

Designation	
SGFFH 35-L-2	SET ESG 0.5
SGFFH 35-R-2	ESG 0.5
SGFFH 45-L-2	SET ESG 0.5
SGFFH 45-R-2	ESG 0.5
SGFFH 60-R-2	ESG 0.5
SGFFH 80-L-2	ESG 0.5
SGFFH 80-R-2	ESG 0.5
SGFFH 100-L-2	SET ESG 0.5
SGFFH 100-R-2	SET ESG 0.5
SGFFH 75-L-3	SET ESG 1
SGFFH 75-R-3	SET ESG 1
SGFFH 90-L-3	SET ESG 1
SGFFH 90-R-3	SET ESG 1
SGFFH 120-L-3	SET ESG 1
SGFFH 120-R-3	SET ESG 1
SGFFH 80-L-4	SET ESG 1
SGFFH 80-R-4	SET ESG 1
SGFFH 150-L-4	SET ESG 1
SGFFH 150-R-4	SET ESG 1
SGFFH 80-L-5	SET ESG 1
SGFFH 80-R-5	SET ESG 1
SGFFH 150-L-5	SET ESG 1
SGFFH 150-R-5	SET ESG 1
SGFFH 90-L-6	SET ESG 1
SGFFH 90-R-6	SET ESG 1
SGFFH 150-L-6	SET ESG 1
SGFFH 150-R-6	SET ESG 1

**SELF-GRIP**

**GFF-R/L**  
Face Grooving Inserts



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data f face-groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	IC354	IC20	
<b>GFF 2R</b>	.083	.008	.0039	.0020	.98	1.42	●	●	.0012-.0051
<b>GFF 3L</b>	.118	.012	.0039	.0020	1.18	2.17	●	●	.0012-.0059
<b>GFF 3R</b>	.118	.012	.0039	.0020	1.18	2.17	●	●	.0012-.0059

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

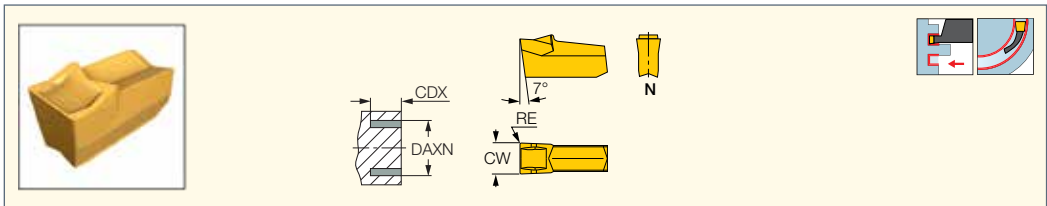
<sup>(3)</sup> Minimum axial grooving diameter

<sup>(4)</sup> Maximum axial grooving diameter

For tools, see pages: SGFFA (642) • SGFFR/L (641)

**SELF-GRIP**

**GFF-N**  
Face Grooving Inserts



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data f face-groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	IC354	IC20	
<b>GFF 2N</b>	.083	.008	.0039	.0020	1.38		●	●	.0012-.0051
<b>GFF 3N</b>	.118	.012	.0039	.0020	2.13		●	●	.0012-.0059
<b>GFF 4N</b>	.157	.010	.0039	.0020	1.38		●	●	.0016-.0071
<b>GFF 5N</b>	.197	.010	.0039	.0020	1.57		●	●	.0020-.0071
<b>GFF 6N</b>	.236	.010	.0039	.0020	1.73		●	●	.0020-.0079

• Grooving depth is limited only by the tool being used

<sup>(1)</sup> Cutting width tolerance (+/-)

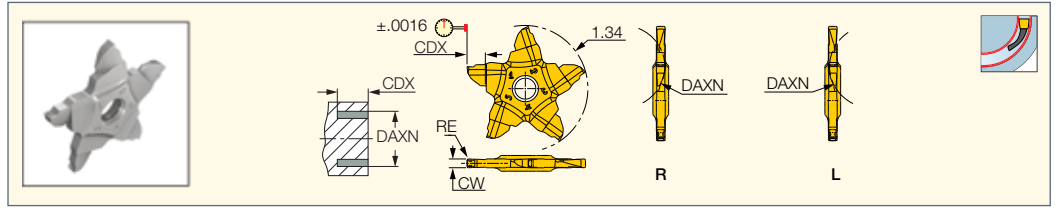
<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum axial grooving diameter

For tools, see pages: SGFFA (642) • SGFFH (643) • SGFFR/L (641)



**PENTA 34F-R/L**  
Pentagonal Inserts for  
Face Grooving and Recessing



Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	RETOL <sup>(1)</sup>	CDX	DAXN <sup>(2)</sup>	f face-groove (IPR)		
PENTA 34F239-0.15-22R/L	.094	.0059	.0008	.197	.87	●	.0031-.0047	
PENTA 34F247-0.20-22R/L	.097	.0079	.0008	.197	.87	●	.0031-.0047	
PENTA 34F300-0.40-22R/L	.118	.0157	.0008	.197	.87	●	.0031-.0059	
PENTA 34F400-0.40-22R/L	.157	.0157	.0008	.197	.87	●	.0031-.0059	

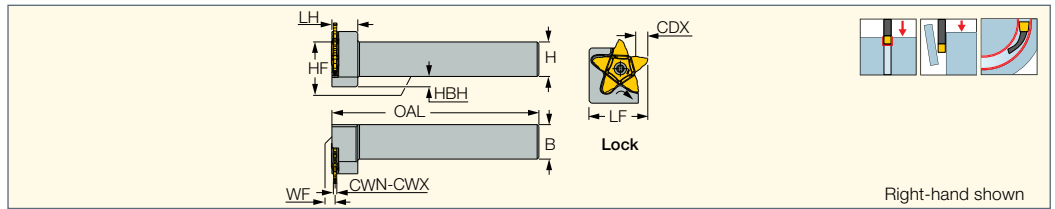
• For cutting speed recommendations, see pages 658-660

<sup>(1)</sup> Corner radius tolerance (+/-)

<sup>(2)</sup> Minimum axial grooving diameter

**For tools, see pages:** PCADR/L (330) • PCADR/L 34N-RE (331) • PCADR/L-JHP (330) • PCHBR/L (332) • PCHPR/L (329) • PCHR/L-34 (328) • PCHR/L-34-JHP (328)

**PCHPR/L**  
Perpendicular Holders  
Carrying Inserts with 5 Cutting  
Edges for Facing, Grooving,  
Parting and Recessing



Designation	H	B	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	CDX <sup>(3)</sup>	HF	WF	LF	OAL	LH	HBH
PCHPR/L 16-24	.630	.630	.020	.126 <sup>(4)</sup>	.256	.630	.059 <sup>(5)</sup>	.93	4.724	.453	-
PCHPR/L 19-24	.750	.750	.020	.126 <sup>(4)</sup>	.256	.750	.060 <sup>(5)</sup>	1.10	5.000	.450	-
PCHPR/L 25.4-24	1.000	1.000	.020	.126 <sup>(4)</sup>	.256	1.000	.060 <sup>(5)</sup>	1.30	5.500	.450	-
PCHPR/L 19-34	.750	.750	.055	.157	.394	.750	.070	1.30	5.000	.590	.24
PCHPR/L 25.4-34	1.000	1.000	.055	.157	.394	1.000	.070	1.30	5.500	.590	-

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width



<sup>(3)</sup> For specific information, refer to insert data

<sup>(4)</sup> Up to 244" width may be ordered on request

<sup>(5)</sup> Valid for inserts with W<126"

**For inserts, see pages:** PENTA 24-BSPT (736) • PENTA 24-ISO (716) • PENTA 24-MT (704) • PENTA 24-NPT (731) • PENTA 24-UN (723) • PENTA 24-W (728) • PENTA 24-WT (698) • PENTA 24N-C (334) • PENTA 24N-C (full radius) (335) • PENTA 24N-J (333) • PENTA 24N-J (full radius) (334) • PENTA 24N-PF (full radius) (336) • PENTA 24N-PF/P (335) • PENTA 24N-Z (336) • PENTA 24R-C (587) • PENTA 24R-P (590) • PENTA 24R/L-J (586) • PENTA 24R/L-Z (589) • PENTA 34F-R/L (645) • PENTA 34N-C (339) • PENTA 34N-J (340) • PENTA 34N-PB (338) • PENTA 34R/L-C (591) • PENTA 34R/L-J (592) • PENTA 34R/L-PB (593)

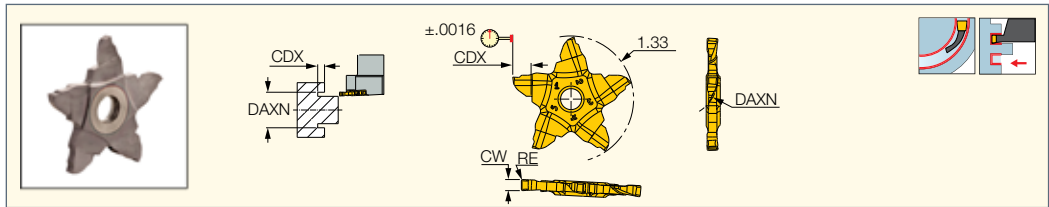
**Spare Parts**

Designation		
PCHPL 16-24	SR 16-212-01397	T-20/5
PCHPR 16-24	SR 16-212-01397L	T-20/5
PCHPL 19-24	SR 16-212-01397	T-20/5
PCHPR 19-24	SR 16-212-01397L	T-20/5
PCHPL 25.4-24	SR 16-212-01397	T-20/5
PCHPR 25.4-24	SR 16-212-01397L	T-20/5
PCHPR/L 19-34	SR 16-212-01397	T-20/5
PCHPR/L 25.4-34	SR 16-212-01397	T-20/5

**PENTACUT**  
PARTING & GROOVING LINE

**PENTA 34F-RS/LS**

Pentagonal Inserts for Face Grooving and Recessing Along Shafts up to .197" Depth of Cut at a Minimum of .866" Diameter



Designation	Dimensions					IC908	Recommended Machining Data f face-groove (IPR)
	CW	RE	CDX	DAXN <sup>(1)</sup>			
PENTA 34F239-0.15-22R/LS	.094	.0059	.197	.87	●	.0031-.0047	
PENTA 34F247-0.20-22R/LS	.097	.0079	.197	.87	●	.0031-.0047	
PENTA 34F300-0.40-22R/LS	.118	.0157	.197	.87	●	.0031-.0059	
PENTA 34F400-0.40-22R/LS	.157	.0157	.197	.87	●	.0031-.0059	

• For cutting speed recommendations, see pages 658-660

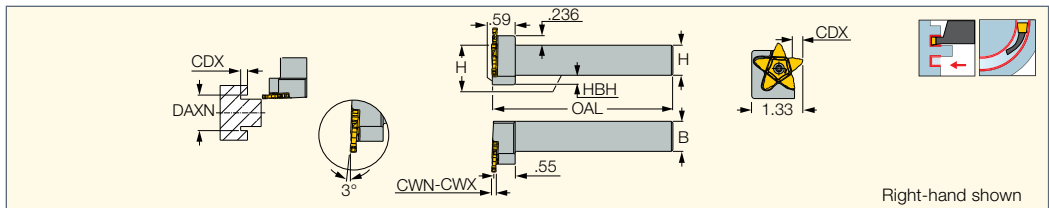
<sup>(1)</sup> Minimum axial grooving diameter



For tools, see pages: PCHPRS/LS (646)

**PENTACUT**  
PARTING & GROOVING LINE

**PCHPRS/LS**

Perpendicular Shank Tools that Mount Pentagonal Inserts for Machining Next to Long Central Shafts



Designation	H	B	CWN <sup>(1)</sup>	CWX <sup>(2)</sup>	OAL	HBH	CDX <sup>(3)</sup>	DAXN <sup>(4)</sup>		
PCHPR/LS 19-34	.750	.750	.094	.157	5.000	.24	.197	.87	SR 16-212-01397RS	T-20/5
PCHPR/LS 25.4-34	1.000	1.000	.094	.157	5.500	-	.197	.87	SR 16-212-01397RS	T-20/5

<sup>(1)</sup> Minimum cutting width

<sup>(2)</sup> Maximum cutting width

<sup>(3)</sup> Insert limit

<sup>(4)</sup> Minimum axial grooving diameter

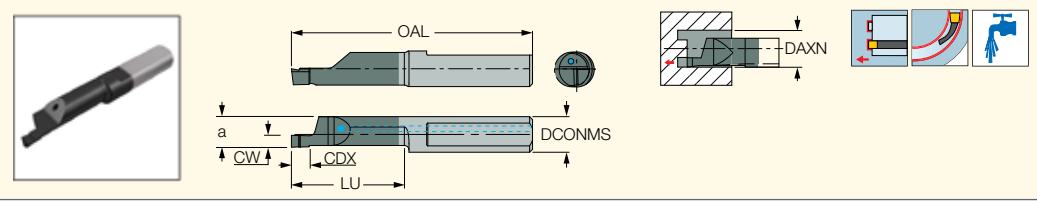
For inserts, see pages: PENTA 34F-RS/LS (646)

# FACE TOOLS FOR MINIATURE PARTS



**JETCUT PICCO CUT**

**PICCO-010/610-N**  
**(Face Grooving)**  
 Inserts with Internal Coolant  
 Channel for Face Grooving



Designation	Dimensions							IC908	Recommended Machining Data f face-groove (IPR)
	DAXN <sup>(1)</sup>	CW	CDX	DCONMS	a	LU	OAL		
PICCO R 010.1006-10N	.24	.039	.059	.238	.205	.354	1.260	●	.0004-.0016
PICCO R 010.1506-10N	.24	.059	.079	.238	.205	.354	1.260	●	.0004-.0016
PICCO R 010.1008-10N	.31	.039	.059	.278	.232	.354	1.260	●	.0004-.0016
PICCO R 010.1008-20N	.31	.039	.059	.278	.232	.748	1.614	●	.0004-.0016
PICCO R 010.1008-30N	.31	.039	.059	.278	.232	1.142	2.008	●	.0004-.0016
PICCO R 610.1008-10N	.31	.039	.059	.238	.205	.354	1.260	●	.0004-.0016
PICCO R/L 010.1508-20N	.31	.059	.098	.278	.232	.748	1.614	●	.0004-.0016
PICCO R 010.1508-10N	.31	.059	.098	.278	.232	.354	1.260	●	.0004-.0016
PICCO R 010.1508-30N	.31	.059	.098	.278	.232	1.142	2.008	●	.0004-.0016
PICCO R 610.1508-10N	.31	.059	.098	.238	.205	.354	1.260	●	.0004-.0016
PICCO R 610.1508-20N	.31	.059	.098	.238	.205	.748	1.614	●	.0004-.0016
PICCO R/L 010.2008-30N	.31	.079	.118	.278	.232	1.142	2.008	●	.0008-.0020
PICCO R 010.2008-10N	.31	.079	.118	.278	.232	.354	1.260	●	.0008-.0020
PICCO R 010.2008-20N	.31	.079	.118	.278	.232	.748	1.614	●	.0008-.0020
PICCO R 610.2008-10N	.31	.079	.118	.238	.205	.354	1.260	●	.0008-.0020
PICCO R 610.2008-20N	.31	.079	.118	.238	.205	.748	1.614	●	.0008-.0020
PICCO R 010.2508-10N	.31	.098	.138	.278	.232	.354	1.260	●	.0008-.0020
PICCO R 010.2508-20N	.31	.098	.138	.278	.232	.748	1.614	●	.0008-.0020
PICCO R 610.2508-10N	.31	.098	.138	.238	.205	.354	1.260	●	.0008-.0020
PICCO R 010.3008-10N	.31	.118	.138	.278	.232	.354	1.260	●	.0008-.0024
PICCO R 010.3008-20N	.31	.118	.138	.278	.232	.748	1.614	●	.0008-.0024
PICCO R 010.3008-30N	.31	.118	.138	.278	.232	1.142	2.008	●	.0008-.0024
PICCO R 610.3008-10N	.31	.118	.138	.238	.205	.354	1.260	●	.0008-.0024
PICCO R 610.3008-20N	.31	.118	.138	.238	.205	.748	1.614	●	.0008-.0024

- Only right-hand inserts are available as standard
- All inserts are with sharp corners
- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

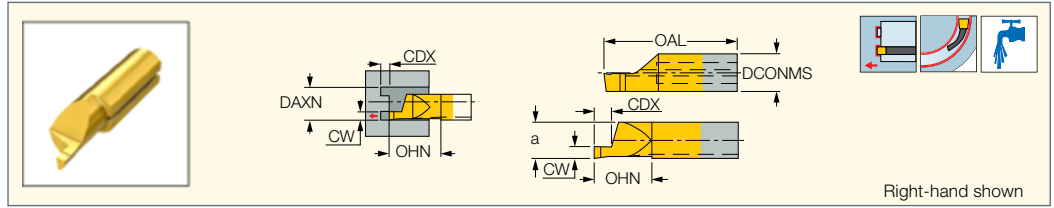
For holders, see pages: PICCO ACE-N (413) • PICCO-N (Holder) (415)



# PICCO CUT

## PICCO-010/610 (Face Grooving)

Inserts for Face Grooving



Right-hand shown

Designation	Dimensions							IC228	Recommended Machining Data
	DAXN <sup>(1)</sup>	CW	CDX	DCONMS	a	OHN <sup>(2)</sup>	OAL		f face-groove (IPR)
PICCO R 010.1006-10	.24	.039	.059	.236	.205	.433	1.024	●	.0004-.0016
PICCO R 010.1506-10	.24	.059	.079	.236	.205	.433	1.024	●	.0004-.0016
PICCO R 010.1008-10	.31	.039	.059	.276	.232	.433	1.024	●	.0004-.0016
PICCO R 010.1008-20	.31	.039	.059	.276	.232	.827	1.378	●	.0004-.0016
PICCO R 010.1008-30	.31	.039	.059	.276	.232	1.181	1.772	●	.0004-.0016
PICCO R 610.1008-10	.31	.039	.059	.236	.205	.433	1.024	●	.0004-.0016
PICCO R 610.1008-20	.31	.039	.059	.236	.205	.787	1.378	●	.0004-.0016
PICCO R/L 010.1508-20	.31	.059	.098	.276	.232	.827	1.378	●	.0004-.0016
PICCO R/L 010.1508-30	.31	.059	.098	.276	.232	1.181	1.772	●	.0004-.0016
PICCO R 010.1508-10	.31	.059	.098	.276	.232	.433	1.024	●	.0004-.0016
PICCO R 610.1508-10	.31	.059	.098	.236	.205	.433	1.024	●	.0004-.0016
PICCO R 610.1508-20	.31	.059	.098	.236	.205	.787	1.378	●	.0004-.0016
PICCO R/L 010.2008-30	.31	.079	.118	.276	.232	1.181	1.772	●	.0008-.0020
PICCO R 010.2008-10	.31	.079	.118	.276	.232	.433	1.024	●	.0008-.0020
PICCO R 010.2008-20	.31	.079	.118	.276	.232	.827	1.378	●	.0008-.0020
PICCO R 610.2008-10	.31	.079	.118	.236	.205	.433	1.024	●	.0008-.0020
PICCO R 610.2008-20	.31	.079	.118	.236	.205	.787	1.378	●	.0008-.0020
PICCO R 010.2508-10	.31	.098	.138	.276	.232	.433	1.024	●	.0008-.0020
PICCO R 010.2508-20	.31	.098	.138	.276	.232	.827	1.378	●	.0008-.0020
PICCO R 010.2508-30	.31	.098	.138	.276	.232	1.181	1.772	●	.0008-.0020
PICCO R 610.2508-10	.31	.098	.138	.236	.205	.433	1.024	●	.0008-.0020
PICCO R 610.2508-20	.31	.098	.138	.236	.205	.787	1.378	●	.0008-.0020
PICCO R 010.3008-10	.31	.118	.138	.276	.232	.433	1.024	●	.0008-.0024
PICCO R 010.3008-20	.31	.118	.138	.276	.232	.827	1.378	●	.0008-.0024
PICCO R 010.3008-30	.31	.118	.138	.276	.232	1.181	1.772	●	.0008-.0024
PICCO R 610.3008-10	.31	.118	.138	.236	.205	.433	1.024	●	.0008-.0024
PICCO R 610.3008-20	.31	.118	.138	.236	.205	.787	1.378	●	.0008-.0024

• Only right-hand inserts are available as standard • All inserts are with sharp corners • For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

<sup>(2)</sup> Minimum overhang

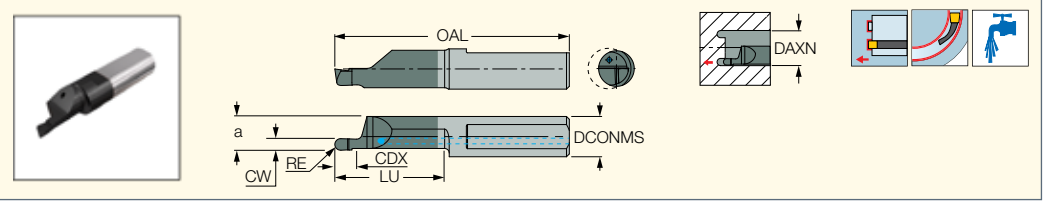
For holders, see pages: GPCOR (459) • PICCO ACE (434) • PICCO/MG PCO (Holder) (435)



## JETCUT PICCOCUT

### PICCO-010-N (Full Radius for Face Grooving)

Inserts with Internal Coolant Channel for Round Profile Face Grooving

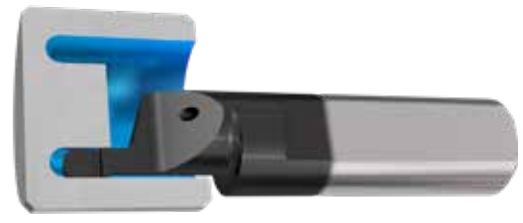


Designation	Dimensions								IC908	Recommended Machining Data	
	DAXN <sup>(1)</sup>	CW	RE	CDX	DCONMS	a	LU	OAL		f face-groove (IPR)	
PICCO R 010.1005-10N	.31	.039	.0197	.079	.278	.232	.354	1.260	●	.0004-.0016	
PICCO R 010.1005-20N	.31	.039	.0197	.079	.278	.232	.748	1.614	●	.0004-.0016	
PICCO R 010.1608-10N	.31	.063	.0315	.118	.278	.232	.354	1.260	●	.0004-.0020	
PICCO R 010.1608-20N	.31	.063	.0315	.118	.278	.232	.748	1.614	●	.0004-.0020	
PICCO R 010.2010-10N	.31	.079	.0394	.157	.278	.232	.354	1.260	●	.0008-.0020	
PICCO R 010.2010-20N	.31	.079	.0394	.157	.278	.232	.748	1.614	●	.0008-.0020	
PICCO R 010.2512-10N	.31	.098	.0492	.197	.278	.232	.354	1.260	●	.0008-.0020	
PICCO R 010.3015-10N	.31	.118	.0590	.236	.278	.232	.354	1.260	●	.0008-.0020	
PICCO R 010.3015-20N	.31	.118	.0590	.236	.278	.232	.748	1.614	●	.0008-.0020	

- Only right-hand inserts are available as standard, left-hand inserts on request
- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

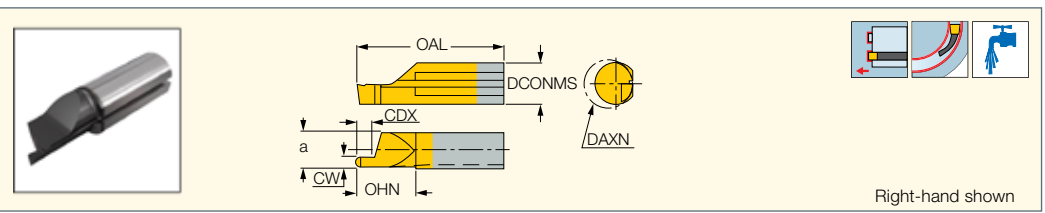
For holders, see pages: PICCO ACE-N (413) • PICCO-N (Holder) (415)



## PICCOCUT

### PICCO-010 (Round Face Groove)

Inserts for Round Profile Face Grooving



Right-hand shown

Designation	Dimensions								IC1008	Recommended Machining Data	
	DAXN <sup>(1)</sup>	CW	RE	CDX	DCONMS	a	OHN <sup>(2)</sup>	OAL		f face-groove (IPR)	
PICCO R 010.1005-10	.31	.039	.0197	.079	.276	.232	.433	1.024	●	.0004-.0016	
PICCO R 010.1005-20	.31	.039	.0197	.079	.276	.232	.787	1.378	●	.0004-.0016	
PICCO R 010.1608-10	.31	.063	.0315	.118	.276	.232	.433	1.024	●	.0004-.0020	
PICCO R 010.1608-20	.31	.063	.0315	.118	.276	.232	.787	1.378	●	.0004-.0020	
PICCO R 010.2010-10	.31	.079	.0394	.157	.276	.232	.433	1.024	●	.0008-.0020	
PICCO R 010.2010-20	.31	.079	.0394	.157	.276	.232	.787	1.378	●	.0008-.0020	
PICCO R 010.2512-10	.31	.098	.0492	.197	.276	.232	.433	1.024	●	.0008-.0020	
PICCO R 010.2512-20	.31	.098	.0492	.197	.276	.232	.787	1.378	●	.0008-.0020	
PICCO R 010.3015-10	.31	.118	.0590	.236	.276	.232	.433	1.024	●	.0008-.0020	
PICCO R 010.3015-20	.31	.118	.0590	.236	.276	.232	.787	1.378	●	.0008-.0020	

- Only right-hand inserts are available as standard, left-hand inserts on request
- For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

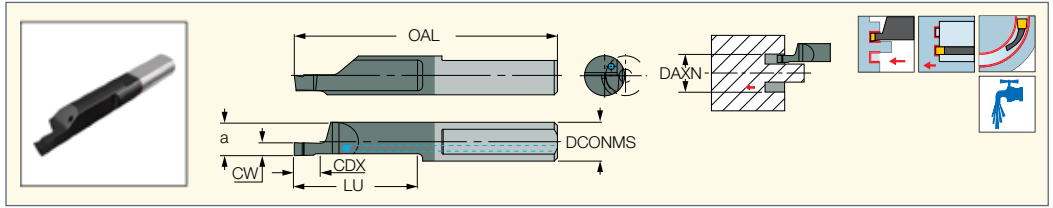
<sup>(2)</sup> Minimum overhang

For holders, see pages: GHPCOR (459) • PICCO ACE (434)

# JETCUT PICCOCUT

## PICCO-620-N (Face Grooving Along Shaft)

Inserts with Internal Coolant Channel for Grooving Along Shaft Dmin .236"



Designation	Dimensions							IC908	Recommended Machining Data
	DAXN <sup>(1)</sup>	CW	CDX	DCONMS	a	LU	OAL		f face-groove (IPR)
PICCO R 620.1006-20N	.24	.039	.079	.238	.205	.748	1.614	●	.0004-.0016
PICCO R 620.1506-20N	.24	.059	.118	.238	.205	.748	1.614	●	.0004-.0020
PICCO R 620.2006-20N	.24	.079	.157	.238	.205	.748	1.614	●	.0008-.0024
PICCO R 620.2506-20N	.24	.098	.197	.238	.205	.748	1.614	●	.0008-.0024
PICCO R 620.3006-20N	.24	.118	.236	.238	.205	.748	1.614	●	.0008-.0024

- Only right-hand inserts are available as standard, left-hand inserts on request
- All carbide inserts are with sharp corners
- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

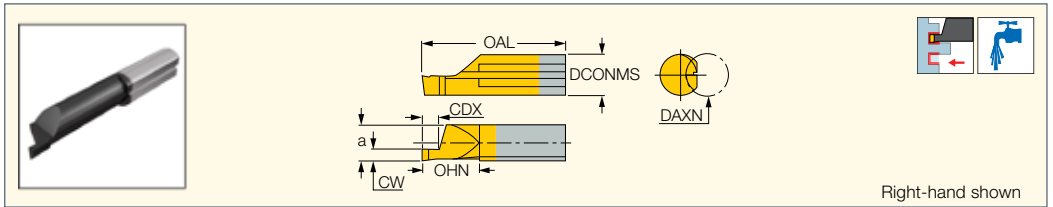
For holders, see pages: PICCO ACE-N (413) • PICCO-N (Holder) (415)



# PICCOCUT

## PICCO-620 (Groove Along Shaft)

Inserts for Grooving Along a Shaft Dmin .236"



Right-hand shown

Designation	Dimensions							IC1008	Recommended Machining Data
	DAXN <sup>(1)</sup>	CW	CDX	DCONMS	a	OHN <sup>(2)</sup>	OAL		f face-groove (IPR)
PICCO R 620.1006-20	.24	.039	.079	.236	.205	.787	1.378	●	.0004-.0016
PICCO R 620.1506-20	.24	.059	.118	.236	.205	.787	1.378	●	.0004-.0020
PICCO R 620.2006-20	.24	.079	.157	.236	.205	.787	1.378	●	.0008-.0024
PICCO R 620.2506-20	.24	.098	.197	.236	.205	.787	1.378	●	.0008-.0024
PICCO R 620.3006-20	.24	.118	.236	.236	.205	.787	1.378	●	.0008-.0024

- Only right-hand inserts are available as standard, left-hand inserts on request
- All carbide inserts are with sharp corners
- For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

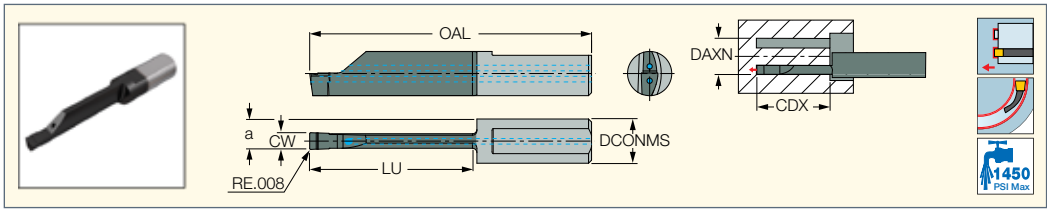
<sup>(2)</sup> Minimum overhang

For holders, see pages: GHPCOR (459) • PICCO ACE (434)

**PICCO CUT JET CUT**

**PICCO-016/020-N  
(Face Grooving)**

Inserts with Internal Coolant  
Channel for Deep Face Grooving



Designation	Dimensions							IC908	Recommended Machining Data f face-groove (IPR)
	DAXN <sup>(1)</sup>	CW	LU	CDX	DCONMS	a	OAL		
PICCO R016.0300-10N	.63	.118	.354	.354	.315	.217	1.260	●	.0004-.0020
PICCO R016.0300-20N	.63	.118	.748	.748	.315	.217	1.614	●	.0004-.0020
PICCO R016.0400-20N	.63	.157	.748	.748	.315	.236	1.614	●	.0004-.0020
PICCO R020.0300-25N	.79	.118	.945	.945	.315	.217	1.811	●	.0004-.0020
PICCO R020.0300-30N	.79	.118	1.142	1.142	.315	.217	2.008	●	.0004-.0016
PICCO R020.0300-40N	.79	.118	1.535	1.535	.315	.217	2.402	●	.0004-.0016
PICCO R020.0400-25N	.79	.157	.945	.945	.315	.236	1.811	●	.0004-.0024
PICCO R020.0400-30N	.79	.157	1.142	1.142	.315	.236	2.008	●	.0004-.0024
PICCO R020.0400-40N	.79	.157	1.535	1.535	.315	.236	2.402	●	.0004-.0020
PICCO R020.0500-25N	.79	.197	.945	.945	.315	.256	1.811	●	.0008-.0024
PICCO R020.0500-30N	.79	.197	1.142	1.142	.315	.256	2.008	●	.0008-.0024
PICCO R020.0500-35N	.79	.197	1.339	1.339	.315	.256	2.205	●	.0008-.0020
PICCO R020.0500-40N	.79	.197	1.535	1.535	.315	.256	2.402	●	.0008-.0020

- All inserts have two coolant holes which may be used with coolant pressure up to 1450 PSI
  - For detailed cutting data, see pages 658-660
  - Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- <sup>(1)</sup> Minimum axial grooving diameter

For holders, see pages: PICCO-N (Holder) (415)

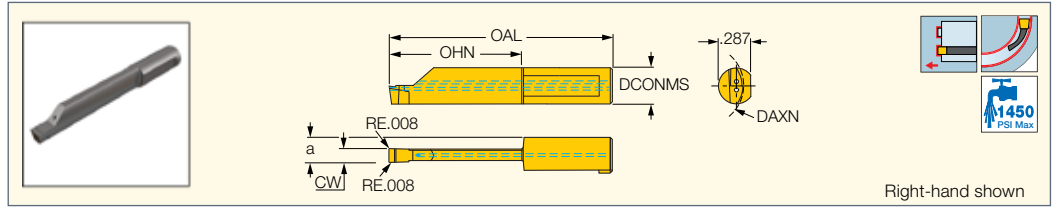




# PICCO CUT

## PICCO-016/020 (Face Grooving)

Inserts with Coolant Holes for Deep Face Grooving



Right-hand shown

Designation	Dimensions						IC1008	Recommended Machining Data
	DAXN <sup>(1)</sup>	CW	OHN <sup>(2)</sup>	DCONMS	a	OAL		f face-groove (IPR)
PICCO R 016.0300-10	.63	.118	.394	.315	.217	1.181	●	.0004-.0020
PICCO R 016.0300-20	.63	.118	.787	.315	.217	1.575	●	.0004-.0020
PICCO R 016.0400-10	.63	.157	.394	.315	.236	1.181	●	.0004-.0020
PICCO R 016.0400-20	.63	.157	.787	.315	.236	1.575	●	.0004-.0020
PICCO R 020.0300-25	.79	.118	.984	.315	.217	1.772	●	.0004-.0020
PICCO R 020.0300-30	.79	.118	1.181	.315	.217	1.969	●	.0004-.0020
PICCO R 020.0300-35	.79	.118	1.378	.315	.217	2.165	●	.0004-.0020
PICCO R 020.0300-40	.79	.118	1.575	.315	.217	2.362	●	.0004-.0020
PICCO R 020.0400-25	.79	.157	.984	.315	.236	1.772	●	.0004-.0024
PICCO R 020.0400-30	.79	.157	1.181	.315	.236	1.969	●	.0004-.0024
PICCO R 020.0400-35	.79	.157	1.378	.315	.236	2.165	●	.0004-.0020
PICCO R 020.0400-40	.79	.157	1.575	.315	.236	2.362	●	.0004-.0020
PICCO R 020.0500-20	.79	.197	.787	.315	.256	1.575	●	.0010-.0024
PICCO R 020.0500-25	.79	.197	.984	.315	.256	1.772	●	.0010-.0024
PICCO R 020.0500-30	.79	.197	1.181	.315	.256	1.969	●	.0010-.0024
PICCO R 020.0500-35	.79	.197	1.378	.315	.256	2.165	●	.0010-.0020
PICCO R 020.0500-40	.79	.197	1.575	.315	.256	2.362	●	.0010-.0020

• All inserts have two coolant holes which may be used with coolant pressure up to 1450 PSI • For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

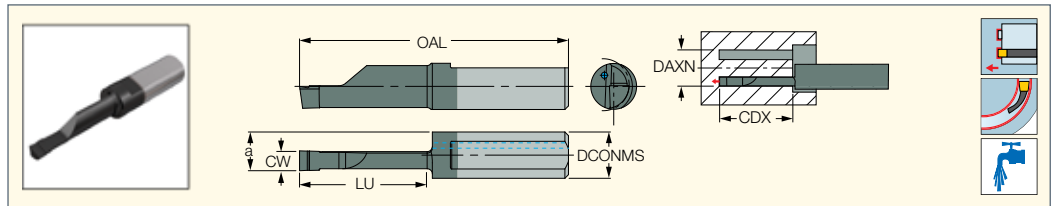
<sup>(2)</sup> Minimum overhang

For holders, see pages: GHPCOR (459) • PICCO/MG PCO (Holder) (435)

# JET CUT PICCO CUT

## PICCO-015-N (Face Grooving)

Inserts with Internal Coolant Channel for Deep Face Grooving



Designation	Dimensions						IC908	Recommended Machining Data
	DAXN <sup>(1)</sup>	CW	LU	DCONMS	a	OAL		f face-groove (IPR)
PICCO R 015.2515-20N	.31	.098	.7480	.278	.232	1.614	●	.0004-.0016
PICCO R 015.3015-20N	.31	.118	.7480	.278	.232	1.614	●	.0008-.0020
PICCO R 015.3015-30N	.31	.118	1.1417	.278	.232	2.008	●	.0004-.0016

• Only right-hand inserts are available as standard, left-hand inserts on request • All inserts are with sharp corners

• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only • For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

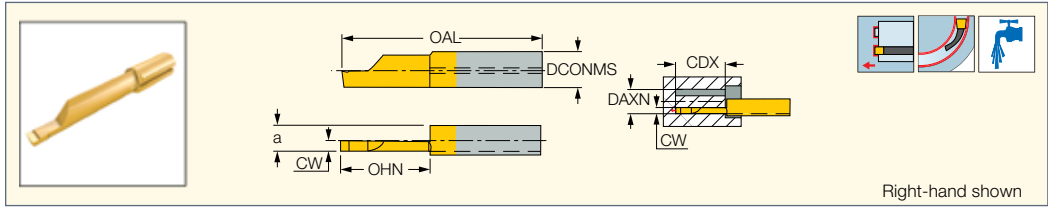
For holders, see pages: PICCO ACE-N (413) • PICCO-N (Holder) (415)



**PICCO CUT**

**PICCO-015  
(Face Grooving)**

Inserts for Deep Face Grooving



Designation	Dimensions							IC228	Recommended Machining Data
	DAXN <sup>(1)</sup>	CW	OHN <sup>(2)</sup>	DCONMS	a	OAL	CDX		
<b>PICCO R 015.2515-20</b>	.31	.098	.787	.276	.232	1.378	.787	●	.0004-.0016
<b>PICCO R/L 015.3015-20</b>	.31	.118	.787	.276	.232	1.378	.787	●	.0008-.0020
<b>PICCO R 015.3015-30</b>	.31	.118	1.181	.276	.232	1.772	1.181	●	.0004-.0016

• Only right-hand inserts are available as standard, left-hand inserts on request • All inserts are with sharp corners

• For detailed cutting data, see pages 658-660

<sup>(1)</sup> Minimum axial grooving diameter

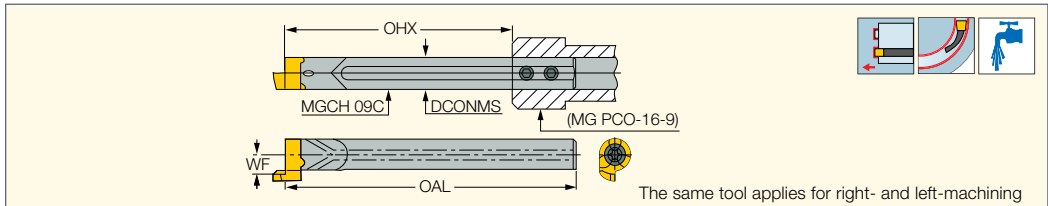
<sup>(2)</sup> Minimum overhang



**For holders, see pages:** GHPCOR (459) • PICCO ACE (434) • PICCO/MG PCO (Holder) (435)

**CHAMGROOVE**

**MGCH-C  
(face)**

Face Machining Tools Carrying GFQR Inserts for Dmin .472 - Dmax .748" Penetration Range



Designation	DCONMS	OAL	OHX <sup>(1)</sup>	WF		
<b>MGCH 09C</b>	.354	3.287	2.559	.217	SR 76-2145	T-15/5

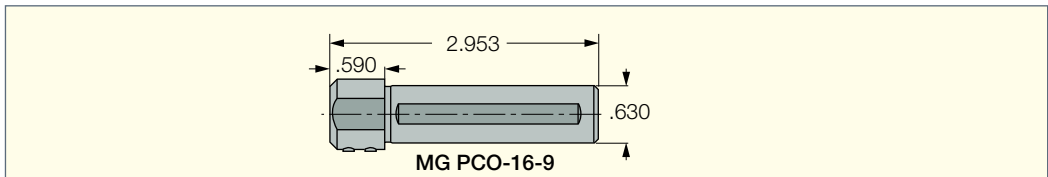
<sup>(1)</sup> Maximum overhang

**For inserts, see pages:** GFQR (655)

**For holders, see pages:** PICCO/MG PCO (Holder) (435)

**MG PCO**

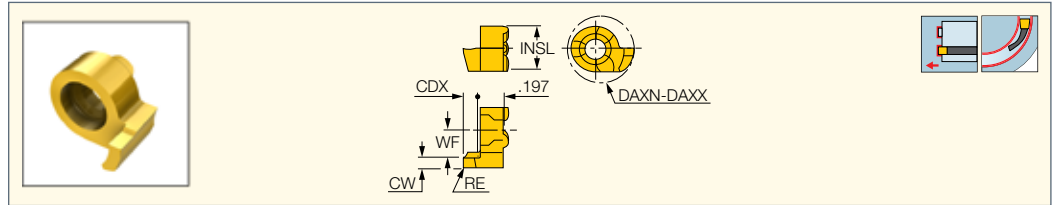
Holder Bar for Adjustable Shank



# CHAMGROOVE

## GFQR

Face Grooving Inserts



Designation	Dimensions							IC528	Recommended Machining Data f face-groove (IPR)
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	CDX	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>		
GFQR 12-1.00-0.05	.039	.0020	.0008	.0012	.059	.47	.63	●	.0004-.0016
GFQR 12-1.50-0.20	.059	.0079	.0008	.0012	.098	.47	.67	●	.0004-.0016
GFQR 12-2.00-0.20	.079	.0079	.0008	.0012	.118	.49	.71	●	.0008-.0020
GFQR 12-2.50-0.20	.098	.0079	.0008	.0012	.118	.51	.75	●	.0008-.0020

• For detailed cutting data, see pages 658-660

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

<sup>(3)</sup> Minimum penetration diameter

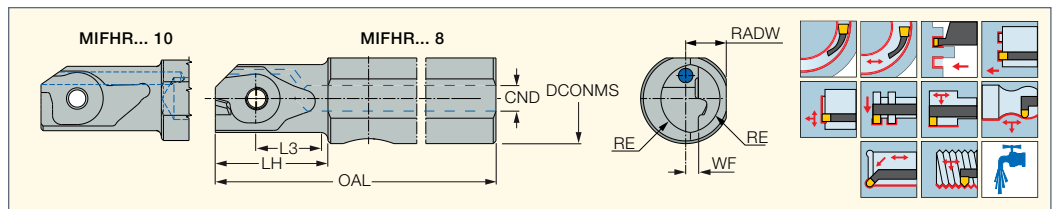
<sup>(4)</sup> Maximum penetration diameter

# MIX CUT

MINI FACE LINE

## MIFHR

Bars for Face and Internal Grooving, Undercutting and Threading Inserts



Designation	DCONMS	CND <sup>(2)</sup>	WF	RADW	OAL	L3	LH	RE	Insert			
MIFHR 9.5C-8	.375	.196	.055	.169	4.030	.291	.492	.1490	MI.R 8	SR 14-297	T-8/5	
MIFHR 12.7C-8	.500	.196	.055	.230	4.030	.291	.492	.1490	MI.R 8	SR 14-297	T-8/5	
MIFHR 12.7C-10 <sup>(1)</sup>	.500	.236	.094	.230	3.543	.440	.677	.1810	MI.R 10	SR 34-506 M3X0.5	T-9/5	
MIFHR 15.9C-10 <sup>(1)</sup>	.625	.236	.094	.287	3.543	.440	.677	.1810	MI.R 10	SR 34-506 M3X0.5	T-9/5	
MIFHR 15.9C-15	.625	.315	.105	.295	3.937	.441	.748	.4010	MI.R 15	SR 34-506/L	T-9/5	PL 062
MIFHR 19C-15	.750	.335	.183	.354	3.937	.492	.748	.4450	MI.R 15	SR 34-506/L	T-9/5	PL 075

<sup>(1)</sup> Only face grooving inserts are available for this tool

<sup>(2)</sup> Coolant entry diameter

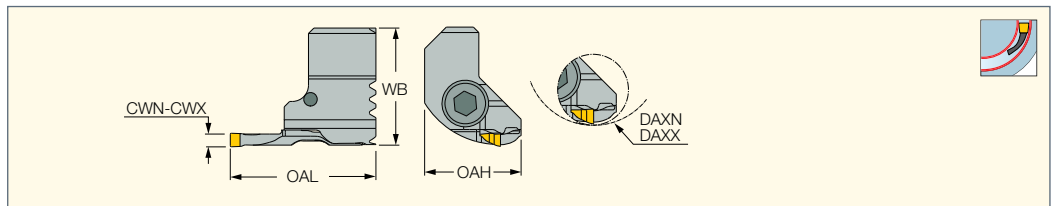
For inserts, see pages: MEFL (657) • MIFR (656) • MIGR 8 (465) • MITR 8-MT (709) • MIUR 8 (465)

# MIX CUT

MINI FACE LINE

## IHSR-MIFR

Trepanning Cartridges Carrying MINCUT Inserts Mounted on a BHR MB32-32X63 Boring Head



Designation	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CWN <sup>(3)</sup>	CWX <sup>(4)</sup>	OAL	WB	OAH	Insert		
IHSR 8-21 MIFR8	.31	.83	.059	.087	1.260	.906	.690	MI.R 8	SR 14-297	T-8/5
IHSR 19-34 MIFR10	.75	1.34	.079	.118	1.063	.866	.700	MI.R 10	SR 34-506 M3X0.5	T-9/5

<sup>(1)</sup> Minimum axial grooving diameter

<sup>(2)</sup> Maximum axial grooving diameter

<sup>(3)</sup> Minimum cutting width

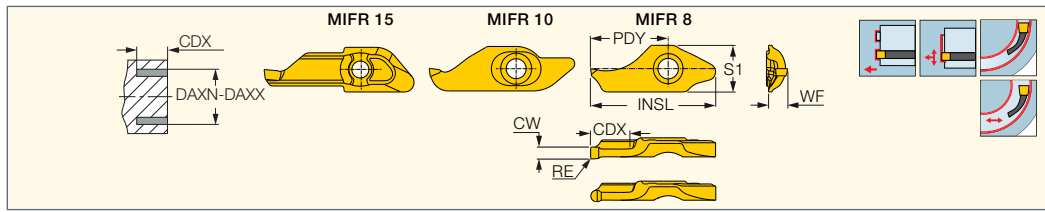
<sup>(4)</sup> Maximum cutting width

For inserts, see pages: MIFR (656)





**MIFR**  
Screw-Clamped Inserts  
for Internal Face Grooving  
and Turning, Penetration  
Diameter Range .315-.669"



Designation	Dimensions											IC908	Recommended Machining Data	
	INSL	CW	CWTOL <sup>(1)</sup>	RE	RETOL <sup>(2)</sup>	WF	S1	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>	CDX	PDY		f face-groove (IPR)	f face-turn (IPR)
MIFR 8-1.50-0.20	.697	.059	.0008	.0079	.0008	.102	.256	.31	.45	.217	.433	●	.0008-.0039	.0008-.0024
MIFR 8-1.60-0.80	.697	.063	.0008	.0315	.0008	.102	.256	.31	.48	.217	.433	●	.0008-.0039	.0008-.0024
MIFR 8-2.00-0.20	.697	.079	.0008	.0079	.0008	.110	.256	.31	.63	.217	.433	●	.0008-.0039	.0008-.0024
MIFR 8-2.20-0.20	.697	.087	.0008	.0079	.0008	.114	.256	.31	.83	.217	.433	●	.0008-.0039	.0008-.0024
MIFR 10-2.00-0.20	.988	.079	.0008	.0079	.0008	.118	.299	.39	-	.354	.583	●	.0008-.0039	.0008-.0024
MIFR 10-2.00-1.00	.988	.079	.0008	.0394	.0008	.118	.299	.39	-	.354	.583	●	.0008-.0039	.0008-.0024
MIFR 10-2.50-0.20	.988	.098	.0008	.0079	.0008	.122	.299	.39	1.18	.354	.583	●	.0008-.0039	.0008-.0024
MIFR 10-2.50-1.25	.988	.098	.0008	.0492	.0008	.130	.299	.39	-	.354	.583	●	.0008-.0039	.0008-.0024
MIFR 10-3.00-0.20	.988	.118	.0008	.0079	.0008	.134	.299	.39	1.18	.354	.583	●	.0008-.0039	.0008-.0024
MIFR 10-3.00-1.50	.988	.118	.0008	.0590	.0008	.130	.299	.39	1.34	.354	.583	●	.0008-.0039	.0008-.0024
MIFR 15-2.50-0.20	1.181	.098	.0008	.0079	.0008	.219	.354	.59	2.36	.591	.760	●	.0012-.0020	.0012-.0016
MIFR 15-2.50-1.25	1.181	.098	.0008	.0492	.0008	.219	.354	.47	1.85	.591	.760	●	.0012-.0020	.0012-.0016
MIFR 15-3.00-0.20	1.181	.118	.0008	.0079	.0008	.230	.354	.59	2.36	.591	.760	●	.0012-.0020	.0012-.0016
MIFR 15-3.00-1.50	1.181	.118	.0008	.0590	.0008	.230	.354	.39	-	.591	.760	●	.0012-.0020	.0012-.0016
MIFR 15-3.50-0.20	1.181	.138	.0008	.0079	.0008	.236	.354	.39	-	.591	.760	●	.0012-.0020	.0012-.0016

• Recommended cutting speeds and feeds can be increased by 20-30% for aluminum, and reduced by 20-30% for titanium and Inconel  
• For cutting speed recommendations, see pages 658-660

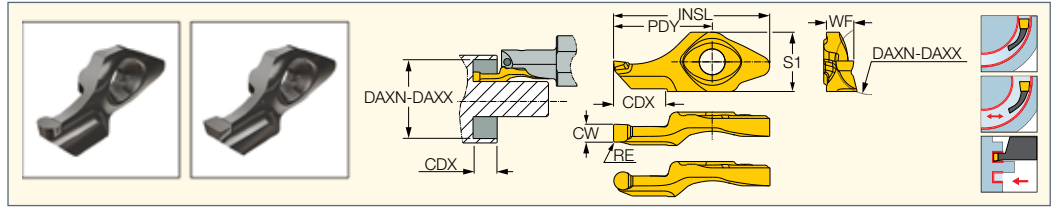
- <sup>(1)</sup> Cutting width tolerance (+/-)
- <sup>(2)</sup> Corner radius tolerance (+/-)
- <sup>(3)</sup> Minimum axial grooving diameter
- <sup>(4)</sup> Maximum axial grooving diameter

For tools, see pages: IHSR-MIFR (655) • MIFHR (465)



**MEFL**

Screw-Clamped Inserts for External Face Grooving and Turning Next to Shafts



Designation	Dimensions											IC908	Recommended Machining Data	
	CW	RE	CWTOL <sup>(1)</sup>	RETOL <sup>(2)</sup>	WF	S1	CDX	PDY	INSL	DAXN <sup>(3)</sup>	DAXX <sup>(4)</sup>		f face-groove (IPR)	f face-turn (IPR)
MEFL 8-1.50-0.20	.059	.0079	.0008	.0008	.102	.260	.217	.433	.685	.31	.59	●	.0008-.0039	.0008-.0024
MEFL 8-1.60-0.80	.063	.0315	.0008	.0008	.106	.260	.217	.433	.685	.28	.48	●	.0008-.0039	.0008-.0024
MEFL 8-2.00-0.20	.079	.0079	.0008	.0008	.122	.260	.217	.433	.685	.28	.79	●	.0008-.0039	.0008-.0024
MEFL 8-2.00-1.00	.079	.0394	.0008	.0008	.114	.260	.217	.433	.685	.28	.55	●	.0008-.0039	.0008-.0024
MEFL 8-2.20-0.20	.087	.0079	.0008	.0008	.122	.260	.217	.433	.685	.28	.79	●	.0008-.0039	.0008-.0024
MEFL 10-2.50-0.20	.098	.0079	.0008	.0008	.124	.299	.354	.585	.965	.39	1.77	●	.0008-.0024	.0008-.0020
MEFL 10-2.50-1.25	.098	.0492	.0008	.0008	.124	.299	.354	.585	.965	.39	1.77	●	.0008-.0024	.0008-.0020
MEFL 10-3.00-0.20	.118	.0079	.0008	.0008	.142	.299	.354	.585	.965	.39	3.94	●	.0008-.0024	.0008-.0020
MEFL 10-3.00-1.50	.118	.0590	.0008	.0008	.134	.299	.354	.585	.965	.39	3.94	●	.0008-.0024	.0008-.0020

• For cutting speed recommendations, see pages 658-660

<sup>(1)</sup> Cutting width tolerance (+/-)

<sup>(2)</sup> Corner radius tolerance (+/-)

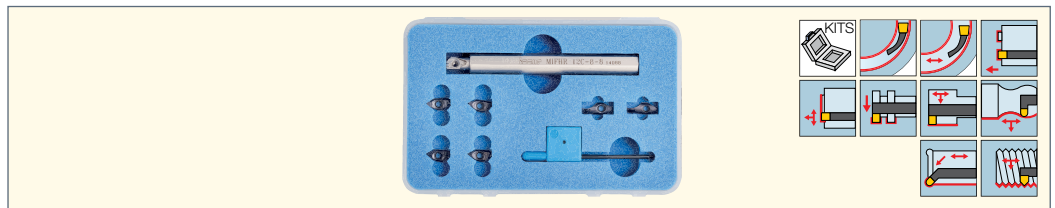
<sup>(3)</sup> Minimum axial grooving diameter

<sup>(4)</sup> Maximum axial grooving diameter

For tools, see pages: MIFHR (465)

**MINCUT KIT**

Contains One Toolholder and a Set of 6 Different Inserts for Internal Face Grooving and Turning Applications



Designation	Qty
KIT MINCUT INCH	7

Catalog No	Designation	Quantity
2801631	MIFHR 12.7C-8	1
6404029	MIGR 8-1.60-0.80	1
6404045	MIFR 8-2.20-0.20	1
6404049	MIFR 8-1.60-0.80	1
6405165	MITR 8-MT1-0.05	1
6405188	MIUR 8-1.00-0.50	1
6405194	MIGR 8-2.00-0.10	1

## Machining Data for Face Machining

ISO	Material	Condition	Tensile Strength [ksi]	Hardness HB	Material Group No.	
P	Non-alloy steel and cast steel, free cutting steel	<0.25% C	Annealed	61	125	1
		≥0.25% C	Annealed	94	190	2
		<0.55% C	Quenched and tempered	123	250	3
		≥0.55% C	Annealed	109	220	4
			Quenched and tempered	145	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)	Annealed	87	200	6	
		Quenched and tempered	135	275	7	
			145	300	8	
	High alloyed steel, cast steel, and tool steel	Annealed	99	200	10	
		Quenched and tempered	160	325	11	
	Stainless steel and cast steel	Ferritic/martensitic	99	200	12	
Martensitic		119	240	13		
M	Stainless steel and cast steel	Austenitic	87	180	14	
K	Cast iron nodular (GG)	Ferritic/pearlitic		180	15	
		Pearlitic/ Martensitic		260	16	
	Grey cast iron (GGG)	Ferritic		160	17	
		Pearlitic		250	18	
	Malleable cast iron	Ferritic		130	19	
		Pearlitic		230	20	
N	Aluminum-wrought alloys	Not cureable		60	21	
		Cured		100	22	
	Aluminum-cast-alloys	≤12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temperature		130	25
		>1% Pb	Free cutting		110	26
	Copper alloys	Brass		90	27	
		Electrolytic copper		100	28	
Non-metallic	Duroplastics, fiber plastics			29		
	Hard rubber			30		
S	Fe based	Annealed		200	31	
		Cured		280	32	
	High temp. alloys	Annealed		250	33	
		Hardened		350	34	
		Cast		320	35	
	Titanium Ti alloys	Pure	58	190	36	
		Alpha+Beta alloys, hardened	152	310	37	
H	Hardened steel	Hardened		55 HRC	38	
		Hardened		60 HRC	39	
	Chilled cast iron	Cast		400	40	
	Cast iron	Hardened		55 HRC	41	

Material no.	IC228/528	IC830	IC354	IC908	IC808	IC8250
1	280 - 410	300 - 440	310 - 480	390 - 590	410 - 620	590 - 890
2	250 - 360	260 - 380	300 - 410	360 - 510	380 - 540	540 - 750
3	200 - 280	210 - 310	230 - 330	280 - 410	300 - 430	410 - 610
4	210 - 330	230 - 360	250 - 380	310 - 480	330 - 490	460 - 710
5	160 - 280	180 - 300	200 - 310	250 - 390	260 - 410	360 - 590
6	210 - 330	230 - 360	250 - 380	310 - 480	330 - 490	460 - 710
7	160 - 280	180 - 310	200 - 330	250 - 410	260 - 430	360 - 610
8	160 - 280	180 - 300	200 - 310	250 - 390	260 - 410	360 - 590
9	160 - 250	160 - 260	180 - 300	230 - 360	250 - 380	340 - 540
10	250 - 360	260 - 380	300 - 410	360 - 510	380 - 540	540 - 750
11	160 - 250	160 - 260	180 - 300	230 - 360	250 - 380	340 - 540
	<b>IC806</b>	<b>IC808</b>	<b>IC354</b>	<b>IC830</b>	<b>IC20</b>	
12	360 - 660	330 - 590	260 - 480	250 - 440	160 - 300	
13	330 - 610	300 - 560	230 - 440	210 - 410	150 - 280	
	<b>IC806</b>	<b>IC808</b>	<b>IC354</b>	<b>IC830</b>	<b>IC20</b>	
14	300 - 560	260 - 510	210 - 410	200 - 380	130 - 250	
	<b>IC5010</b>	<b>IC428</b>	<b>IC8250</b>	<b>IC808</b>	<b>IC20</b>	
15	440 - 840	410 - 750	360 - 670	280 - 520	200 - 380	
16	390 - 590	360 - 520	330 - 480	250 - 360	180 - 260	
17	430 - 710	390 - 640	360 - 570	280 - 440	200 - 310	
18	340 - 560	310 - 510	280 - 460	210 - 360	150 - 250	
19	520 - 870	480 - 790	430 - 710	330 - 560	230 - 390	
20	430 - 710	390 - 640	360 - 570	280 - 440	200 - 310	
	<b>IC808</b>	<b>IC20</b>				
21	1080 - 3250	980 - 2950				
22	820 - 2710	740 - 2460				
23	820 - 2710	740 - 2460				
24	540 - 1620	490 - 1480				
25	540 - 1080	490 - 980				
26	540 - 1080	490 - 980				
27	390 - 820	360 - 740				
28	260 - 540	250 - 490				
29	130 - 540	110 - 490				
30						
	<b>IC806</b>	<b>IC908</b>	<b>IC808</b>	<b>IC830</b>	<b>IC20</b>	
31	150 - 230	110 - 180	110 - 200	80 - 130	80 - 130	
32	100 - 160	80 - 130	80 - 130	70 - 100	50 - 100	
33	100 - 160	80 - 130	80 - 130	70 - 100	50 - 100	
34	80 - 150	70 - 110	70 - 110	50 - 80	50 - 80	
35	70 - 100	50 - 80	50 - 80	30 - 70	30 - 50	
36	340 - 590	280 - 480	300 - 490	210 - 360	200 - 330	
37	130 - 160	100 - 130	100 - 130	80 - 110	110 - 150	
	<b>IC808</b>	<b>IC20</b>				
38	80 - 100	65 - 100				
39	65 - 100	50 - 80				
40	100 - 150	100 - 130				
41	80 - 100	80 - 100				

## Machining Data for Face Machining

ISO	Material	Condition	Tensile Strength [ksij]	Hardness HB	Material Group No.	Cutting Speed (SFM)	GFQR IC528 Feed (IPR)	PICCO IC228/1008 Feed (IPR)	MIFR/MEFL 8 IC908 Feed (IPR)	MIFR 10 IC908 Feed (IPR)	MIFR 15 IC908 Feed (IPR)	
P	Non-alloy steel and cast steel, free cutting steel	<0.25% C	Annealed	61	125	1	130-590	.0008-.0031	.0006-.002	.0006-.0031	.0012-.0039	.001-.003
		≥0.25% C	Annealed	94	190	2						
		<0.55% C	Quenched and tempered	123	250	3	130-430	.0008-.0024	.0006-.0016			
			Annealed	109	220	4						
	≥0.55% C	Quenched and tempered	145	300	5	130-390	.0008-.0024	.0006-.0016				
		Annealed	87	200	6	130-460	.0008-.0031	.0006-.0016				
	Low alloy and cast steel (less than 5% of alloying elements)	Quenched and tempered	135	275	7	130-460	.0008-.0031	.0006-.0016				
			145	300	8	130-390	.0008-.0024	.0006-.0012				
			174	350	9	130-390	.0008-.002	.0006-.0012				
	High alloyed steel, cast steel and tool steel	Annealed	99	200	10	130-460	.0008-.0031	.0006-.0016				
		Quenched and tempered	160	325	11	130-390	.0008-.0031	.0006-.0012				
	Stainless steel and cast steel	Ferritic/martensitic	99	200	12	130-390	.0008-.0031	.0006-.0016	.0006-.0028			
Martensitic		119	240	13	130-390	.0008-.0028	.0006-.0016					
M	Stainless steel and cast steel	Austenitic, duplex	87	180	14	130-330	.0008-.0024	.0006-.0012	.0006-.0028	.0014-.0031	.0008-.002	
K	Gray cast iron (GG)	Ferritic / pearlitic		180	15	130-460	.0008-.0031	.0006-.002	.0008-.0039	.002-.0047	.002-.004	
		Pearlitic / martensitic		260	16	130-390	.0008-.0028	.0006-.0016				
	Nodular cast iron (GGG)	Ferritic		160	17	130-460	.0008-.0031	.0006-.0016				
		Pearlitic		250	18	130-390	.0008-.0028	.0006-.0016				
	Malleable cast iron	Ferritic		130	19	130-460	.0008-.0024	.0006-.0016				
Pearlitic			230	20	130-390	.0008-.0028	.0006-.0016					
N	Aluminum-wrought alloys	Not hardenable		60	21	490-1050	.0008-.0031	.0006-.002	.0008-.0039	.002-.0059	.002-.005	
		Hardenable		100	22	330-820	.0008-.0031	.0006-.002				
	Aluminum-cast alloys	≤12% Si	Not hardenable		75	23	490-980	.0008-.0031				.0006-.002
		Hardenable		90	24	490-980	.0008-.0031	.0006-.002				
	>12% Si	High temperature		130	25	330-490	.0008-.0031	.0006-.002				
	Copper alloys	>1% Pb	Free cutting		110	26	260-750	.0008-.0031				.0006-.002
		Brass			90	27	230-660	.0008-.0031				.0006-.002
			Electrolytic copper		100	28	160-590	.0008-.0031				.0006-.002
Non metallic	Duroplastics, fiber plastics			29								
	Hard rubber			30								
S	High temperature alloys	Fe based	Annealed		200	31	70-130	.0008-.0024	.0006-.0016	.0006-.0028	.0008-.0031	.0008-.002
			Hardened		280	32	50-100	.0008-.0024	.0006-.0016			
		Ni or Co based	Annealed		250	33	50-70	.0008-.0024	.0006-.0016			
			Hardened		350	34	50-70	.0008-.0024	.0006-.0016			
	Titanium alloys	Cast		320	35	50-70	.0008-.0024	.0006-.0016				
		Pure		58	190	36	130-390	.0008-.0024	.0006-.0016			
H	Hardened steel	Hardened		55 HRC	38							
				60 HRC	39							
	Chilled cast iron	Cast		400	40							
	Cast iron	Hardened		55 HRC	41							

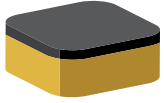
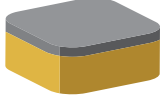
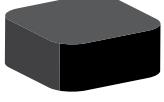
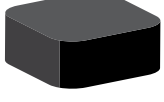



### ISCAR Face Grooving Grades Chart



Grade	ISO	Grade Description	Coating Layers	Coating Color*
IC354	P20-P40	A tough substrate with PVD coating, suitable for general use on a wide range of carbon steels, alloy steels and stainless steel at moderate speeds and feeds.		
	M20-M30			
IC806	M05-M15	A hard submicron grain size substrate with PVD coating and a special SUMOTEC surface treatment. Excellent for machining high temperature alloys and Titanium alloys, at moderate to relatively high cutting speeds. Features high wear resistance and plastic deformation durability.		
	S10-S20			
IC807	P10-P20	A hard submicron grain size substrate with PVD coating and a special SUMOTEC surface treatment. Suitable for machining steels, alloy steels, austenitic stainless steel, high temperature alloys and hard steels at moderate to relatively high cutting speeds under stable conditions. Features high wear resistance and plastic deformation durability.		
	M05-M15			
	K15-K30			
	S10-S20			
	H05-H15			
IC808	P15-P30	A tough submicron grain size substrate with PVD coating and a special SUMOTEC surface treatment. Recommended for general use for a large variety of applications and materials such as steels, alloy steels, austenitic stainless steel and high temperature alloys at moderate cutting speeds and feeds. Features high wear resistance and chipping durability.		
	M20-M30			
	K20-K40			
	S15-S30			
	H20-H30			
IC830	P30-P45	A tough substrate with PVD coating and a special SUMOTEC surface treatment. Suitable for machining steel and stainless steel at low to medium cutting speeds and moderate to high feeds. The grade features high toughness and recommended for interrupted cuts and machining under unstable conditions. May be used on high temperature alloys at low cutting speeds.		
	M25-M40			
	S20-S30			
IC908	P15-P30	A tough submicron grain size substrate with a PVD coating, recommended for general use for diverse operations on materials such as steels, alloy steels, austenitic stainless steel and high temperature alloys at a wide range of cutting speeds. Features high wear resistance and chipping durability.		
	M20-M30			
	K20-K40			
	S15-S30			
	H20-H30			

\* For coated grades

**ISCAR Face Grooving Grades Chart**

	Grade	ISO	Grade Description	Coating Layers	Coating Color*
<b>CVD COATED</b>	IC5010	K10-K20	A hard substrate with MTCVD coating with a special SUMOTEC surface treatment. Recommended for machining gray and nodular cast iron at moderate to high cutting speeds, provides very good resistance to chipping.	TiN	
				Al <sub>2</sub> O <sub>3</sub>	
				TiCN	
				Base	
IC8250	P15-P35	A tough substrate with a cobalt enriched layer and MTCVD coating with a special SUMOTEC surface treatment. Recommended for general use machining of steels, alloy steels and martensitic stainless steel in a wide range of conditions. Features high toughness and good wear resistance.	TiN		
	M15-M25		Al <sub>2</sub> O <sub>3</sub>		
			TiCN		
			Base		
IC418	K10-K25	A tough substrate with multilayer CVD coating. Recommended for machining gray and nodular cast iron at medium to high cutting speeds. Can be used for interrupted cuts and under heavy machining conditions.	Al <sub>2</sub> O <sub>3</sub>		
			TiC		
			Base		
IC428	K05-K20	A hard substrate with multilayer CVD coating. Recommended for machining gray and nodular cast iron at moderate to high cutting speeds.	Al <sub>2</sub> O <sub>3</sub>		
			TiC		
	H15-H25		Base		
IC9015	P10-P25	A hard substrate with a cobalt enriched layer and MTCVD coating. Recommended for high speed machining of steels, alloy steels and martensitic stainless steel with moderate feeds at stable conditions.	TiN		
	K10-K15		Al <sub>2</sub> O <sub>3</sub>		
			TiCN		
			Base		

\* For coated grades

	Grade	ISO	Grade Description	Coating Layers	Uncoated
<b>UNCOATED</b>	IC08	M15-M30	A tough uncoated submicron carbide grade, suitable for steels, stainless steel and high temperature alloys at low cutting speeds. Good choice for non-ferrous materials.		
		N10-N25			
		S20-S30			
				Base	
IC20	K10-K20	A hard-uncoated carbide grade for machining aluminum and other non-ferrous materials at medium to high cutting speeds. Can be used for cast iron at low cutting speeds. Suitable also for machining high temperature and Titanium alloys, at low cutting speeds.			
	N05-N25				
	S10-S20				
	H10-H20				
			Base		


**Clamping the Insert**

Clamping an insert correctly into the holder is necessary for stable machining.

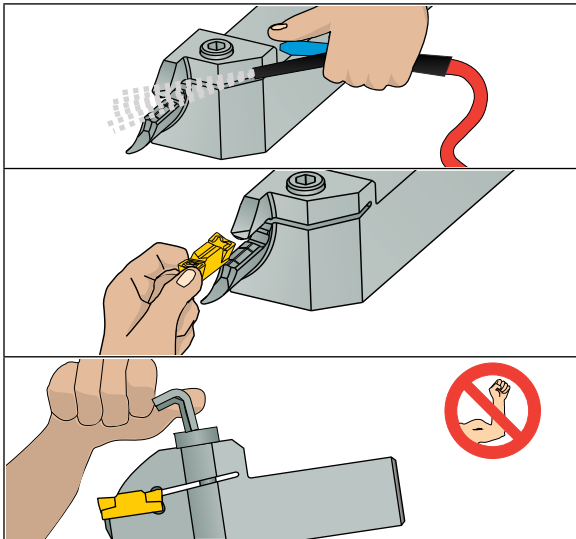
- Be sure that the seat is clean of dirt and swarfs.
- In the first stage of clamping, ease the insert gently into place. Make sure that the prismatic surfaces match.

**Screw Clamping Torque**



Insert Width	lbf·in
.118	35-44
.157	44-53
.197	53-62
.236/.315	62-80
CGFG 51...	35-53





The unique chipformer is designed for deep grooving and face turning both toward and away from the center with excellent chip formation.



**HELIFACE HFPR/L & HGPL Type      HELI-GRIP GRIP...Y Type**

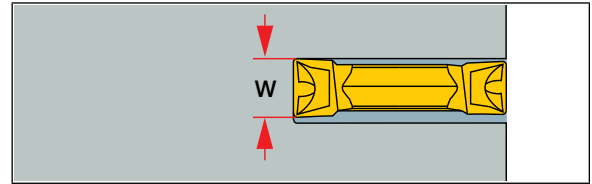
	
For general use in turning & grooving on all types of materials. Use for deep grooving in low-to-medium feeds .002-.006 IPR. Min grooving dia. .472".	The "all in one" insert for parting, external grooving and turning, internal grooving and turning, face grooving and turning.

**DO-GRIP DGN...C Type      DO-GRIP DGN...J Type**

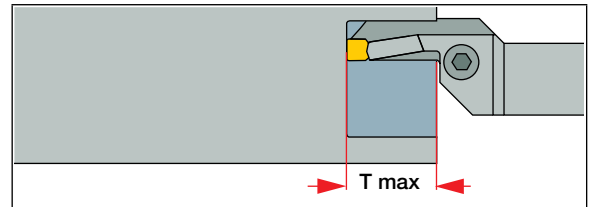
	
For grooving operations only. Strong cutting edge for hard materials and tough applications in feeds .004-.008 IPR.	For grooving operations only. Positive rake, for soft materials in low-to-medium feeds .002-.006 IPR.

**Face Machining Guide**

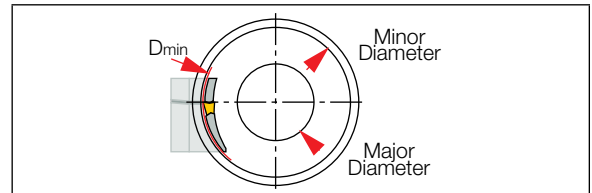
Tool Selection - Follow these recommendations to choose the right tool for high performance.



Choose the widest possible insert and tool, according to the cutting width and geometry to be machined.



Choose the shortest tool blade overhang, according to the maximum depth required.

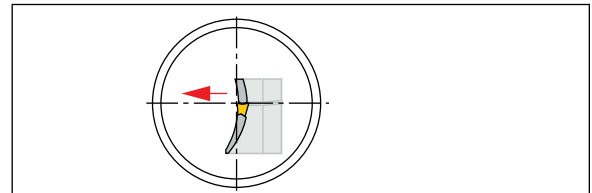


Choose the tool range with the largest diameter, depending on the initial grooving diameter required in the application.

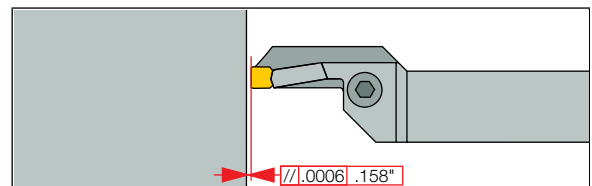
Remark:

On integral shank tools the given range refers to the holder capacity.

**Tool Adjustment - Prior to Machining, Check and Adjust the Following Tool Positions.**



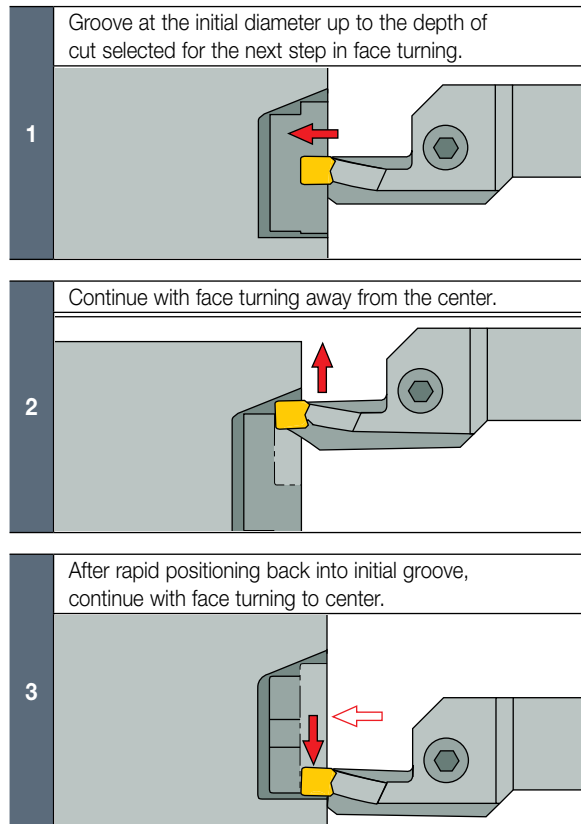
Check the cutting edge height at center line, machine in light turning down to center and check for burr.



Check parallelism of the cutting edge and machined surface. Correct position can guarantee good surface quality when face turning in both directions.

### Face Machining Guide

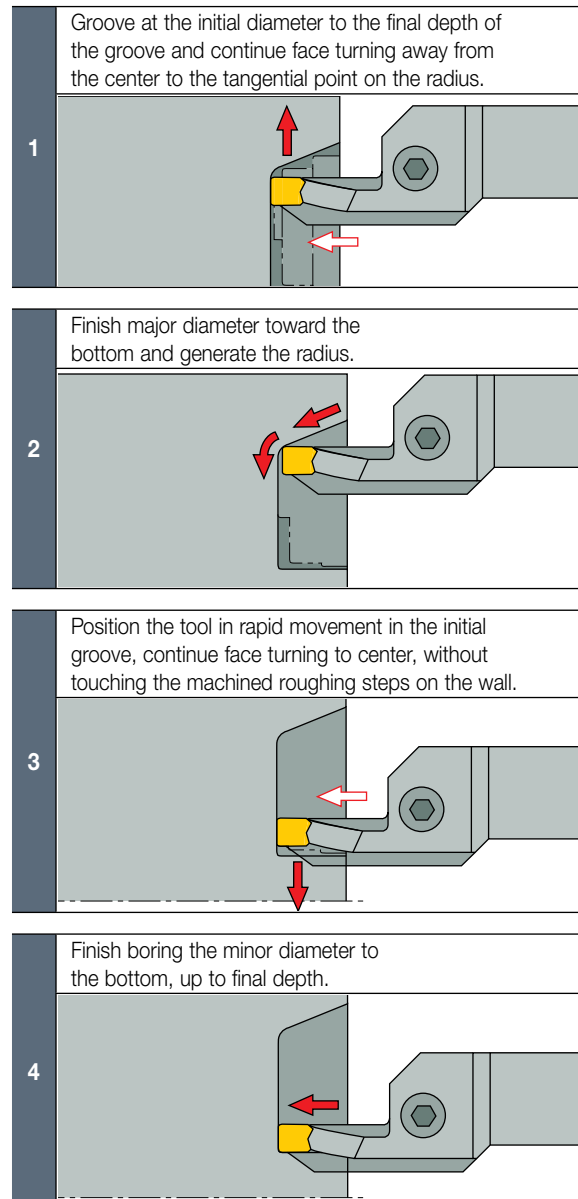
Recommended machining sequence in roughing operation using multifunction HELI-FACE tools.



Note: When face grooving, reduce the speed by 40% in relation to that used in face turning

### Optimizing the Machining Sequence

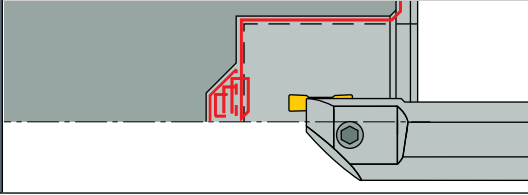
Recommended machining sequence using multifunction tools.



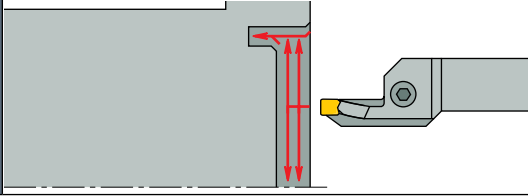
Note: When face grooving, reduce the speed by 40% in relation to that used in face turning

**The Multifunction Advantage**

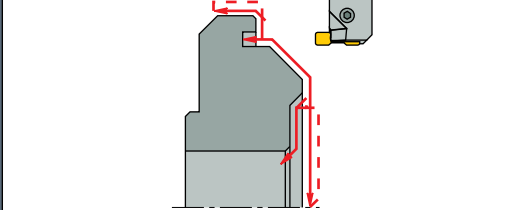
1 The **HELIFACE** internal boring bar HFIR/L MC type with internal coolant can replace the three different ISO tools and shorten machining time by 20%.



2 A single multifunction tool machines the whole part: grooving, face turning and chamfering, replacing three ISO tools and reducing machining time by 40%.



3 A single integral **HELIFACE** tool HFHPL-M replaces three ISO tools and reduces machining time by 50%.

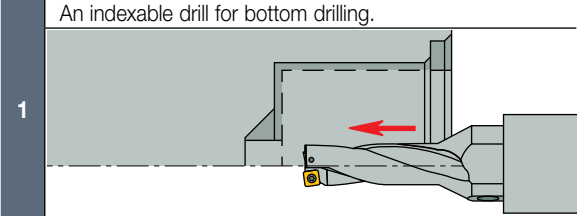


Note: When face grooving, reduce the speed by 40% in relation to that used in face turning

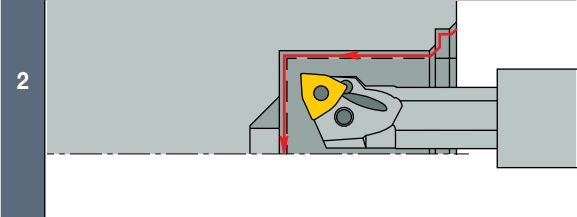
**The Multifunction Advantage**

This workpiece was machined using three different conventional tools.

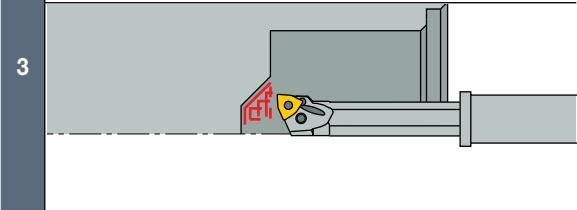
1 An indexable drill for bottom drilling.



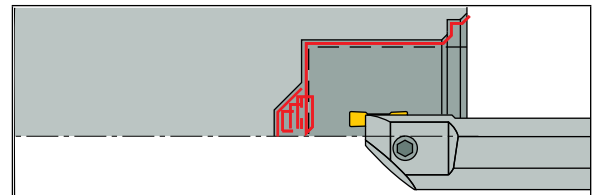
2 A standard internal boring bar with a trigon insert for roughing and finishing.



3 A standard internal boring bar with a trigon insert for bottom machining. This operation requires a small diameter shank and long overhang.

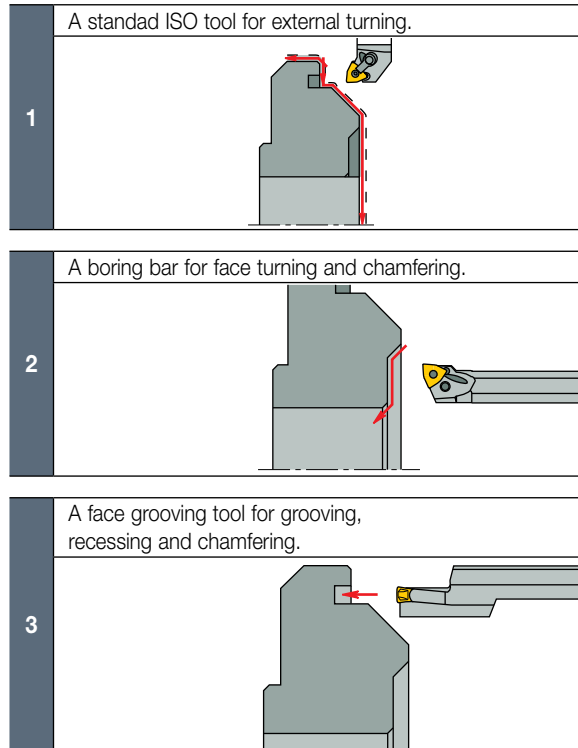


The **HELIFACE** internal boring bar HFIR/L MC type with internal coolant can replace the three different ISO tools and shorten machining time by 20%.



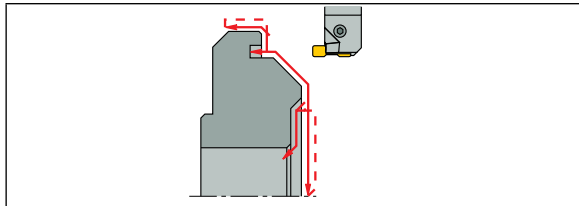
### The Multifunction Advantage

This part was machined using three different conventional tools.

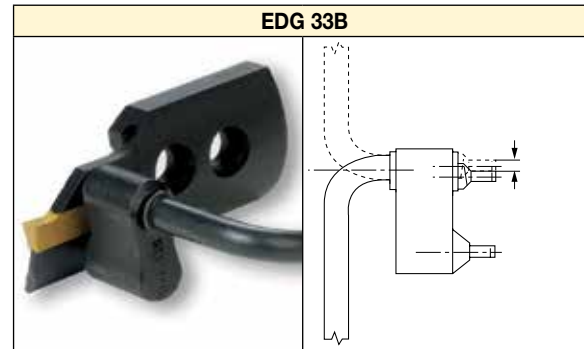


### The HELI-FACE Solution

A single integral **HELI-FACE** tool HFHPL-M replaces three ISO tools and reduces machining time by 50%.



### Insert Replacement



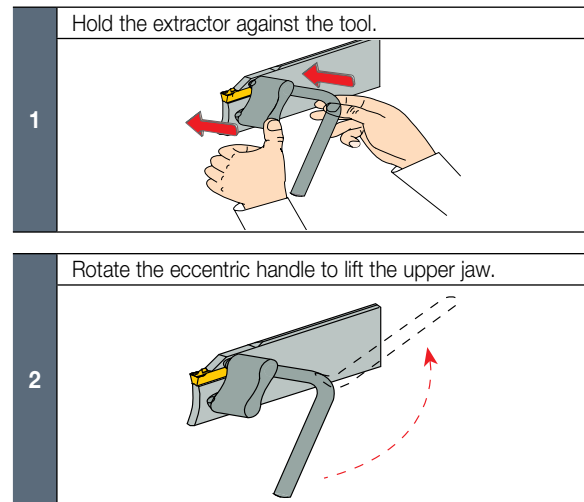
#### Eccentric Extractor

Simple to operate; controlled rotation requires low force; guarantees limited upper jaw movement and secures maximum load on blade.

Two extractor pins are placed in the two holes in the holder blades.

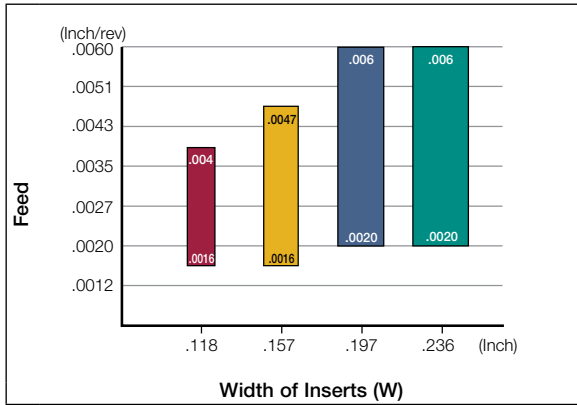
#### Indexing

Place the EDG extractor in the holes

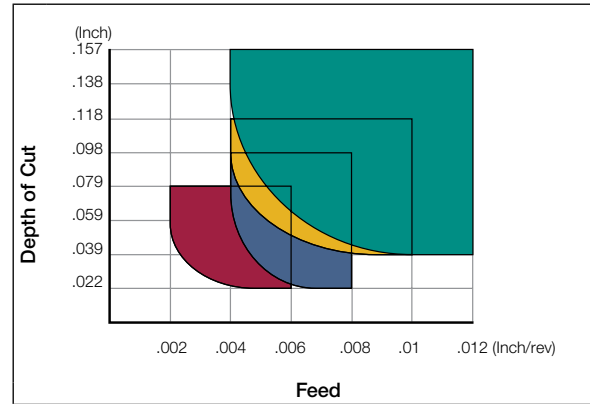


### Machining Conditions in Face Grooving

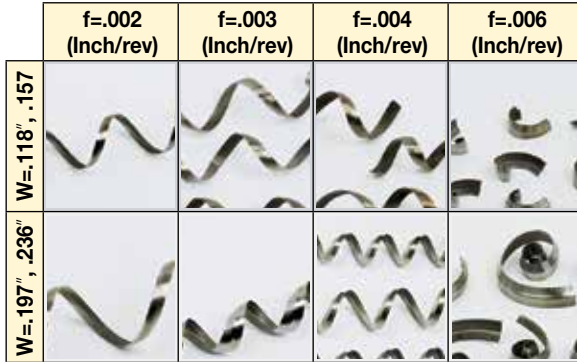
Recommended feed range for grooving with **HFPR/L** inserts in various widths.



Recommended depth of cut and feed range for face turning using **HFHR/L** toolholders carrying **HFPR/L** inserts in various widths.

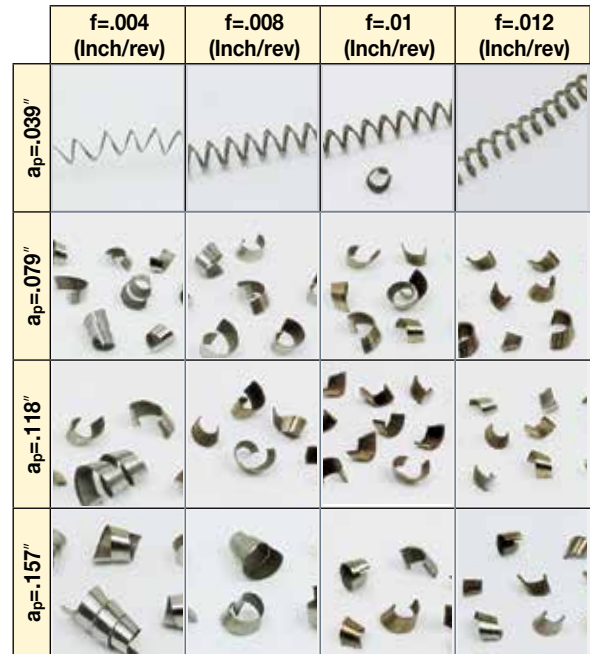


Chip shapes for grooving, according to width of insert and feed, using **HFHR/L** toolholders.



Note: In face grooving, narrowed and deformed chips are preferred. Curled and long chips can flow out more easily from deep grooves.

Chip shapes in face turning with inserts HFPR/L-5004 & HFPR/L 6004 and HFHR/L toolholders.



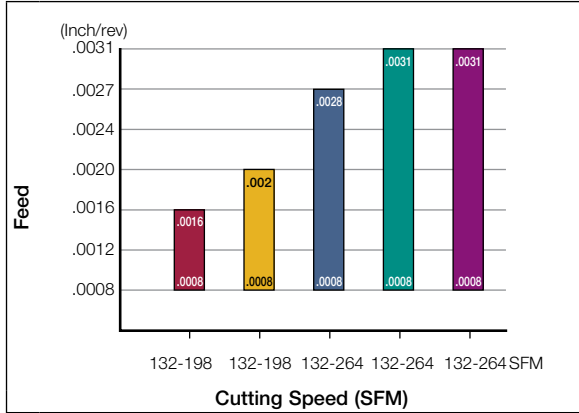
Note: In roughing, increase feed at small depth of cut and reduce feed at large depth of cut.

- HFPR/L 3003 GRIP/HGPL 300Y
- HFPR/L 4004 GRIP/HGPL 400Y
- HFPR/L 5004 GRIP/HGPL 500Y
- HFPR/L 6004 GRIP/HGPL 600Y

Face Grooving and Turning Recommendations

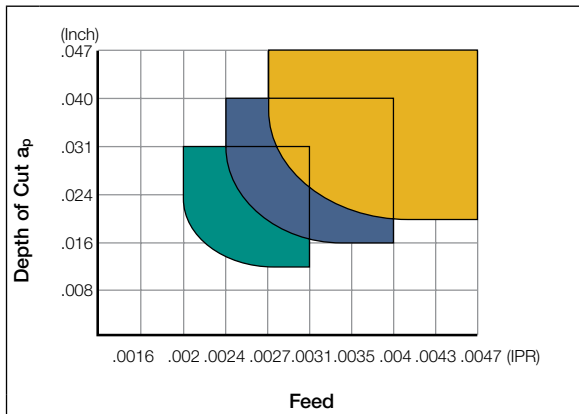
Using Adapters for .118" Inserts

Recommended Feed Range for Grooving With Grip 3... And **HGPL 3...** Inserts and **HGAIR/L** and **HGAER/L** Adapters. Feed Range Changes According to Adapter Type.



- HGAIR/L 12-3T6 HGAER/L 12-3T6
- HGAIR/L 14-3T7 HGAER/L 14-3T7
- HGAIR/L 17-3T8 HGAER/L 17-3T8
- HGAIR/L 21-3T9 HGAER/L 21-3T9
- HGAIR/L 25-3T9

Recommended depth of cut and feed range for turning with **HGPL 3...** inserts with **HGAIR/L** and **HGAER/L** adapters. Feed range changes according to adapter type.

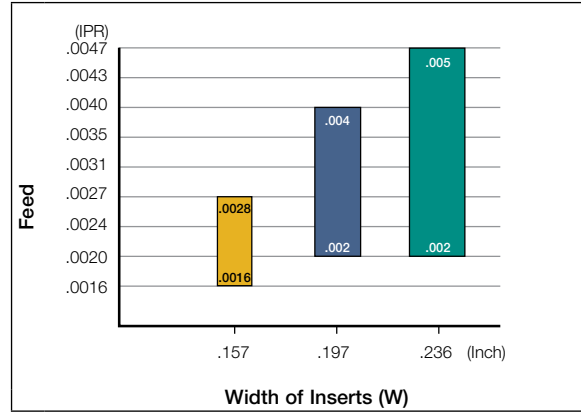


- HGAIR/L 21-3T9 HGAER/L 21-3T9 HGAIR/L 25-3T9
- HGAIR/L 14-3T7 HGAER/L 14-3T7 HGAIR/L 17-3T8 HGAER/L 17-3T8
- HGAIR/L 12-3T6 HGAER/L 12-3T6

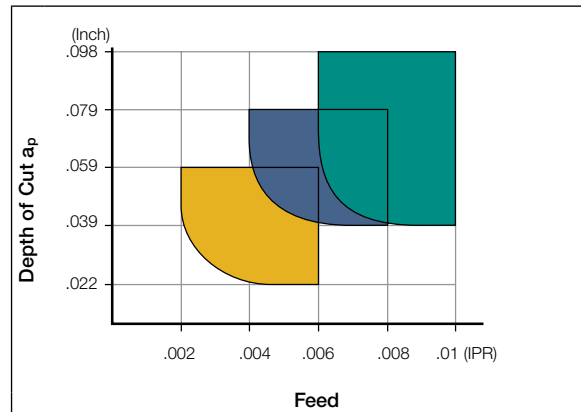
Note: In roughing, increase feed at small depth of cut, and reduce feed at large depth of cut.

Using Adapters for .157-.236" Inserts

Recommended feed range in grooving with **HFPR/L** inserts and **HFAIR/L** & **HFAER/L** adapters.



Recommended depth of cut and feed range in turning with **HFPR/L** inserts and **HFAIR/L** & **HFAER/L** adapters. Feed range changes according to adapter type.



- HFAIR/L- ...4 HFAER/L- ...4
- HFAIR/L- ...5 HFAER/L- ...5
- HFAIR/L- ...6 HFAER/L- ...6

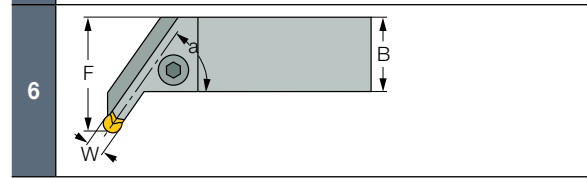
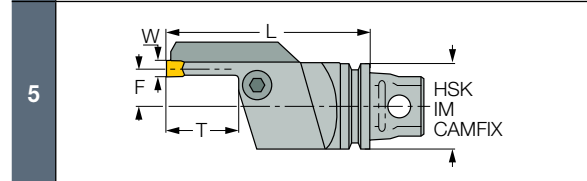
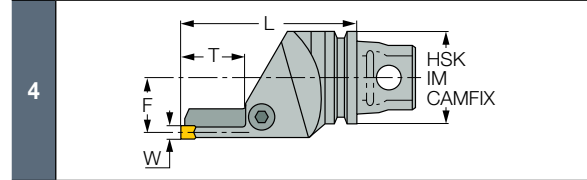
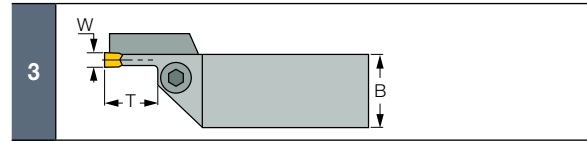
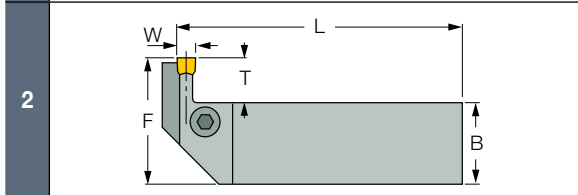
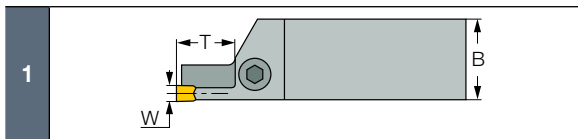
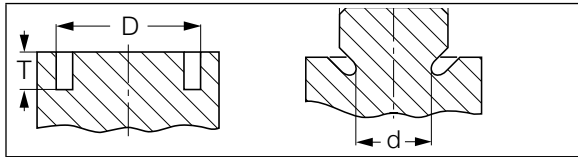
Note: In roughing, reduce feed when depth of cut is increased, and increase feed at small depth of cut.



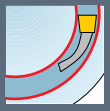
Specially Tailored

**Semi-Standard Face Grooving and Undercutting Tools**

The following drawings show typical semi-standard face grooving tools that can be ordered. Please specify all relevant dimensions and attach workpiece material geometric details.



**Grade Selection for Facing Applications**

	ISO P		ISO M	ISO K	ISO N	ISO S	ISO H
	1-11	12-13	14	15-20	21-28	31-37	38-41
<b>Material groups</b>	Steel	Stainless Steel Ferritic & Martensitic	Stainless Steel Austenitic & Duplex (Ferritic-Austenitic)	Cast Iron	Non-ferrous	High Temperature Alloys	Hard Steel & Cast Iron
 <p><b>FACING</b></p> <p>Harder ↑</p> <p>↓ Tougher</p>	IC808	IC808	IC808	IC5010			IC808
	IC8250	IC8250	IC8250		IC20	IC806	
	IC830	IC830		IC428	IC08	IC20	IC908
					IC808		

■ First choice



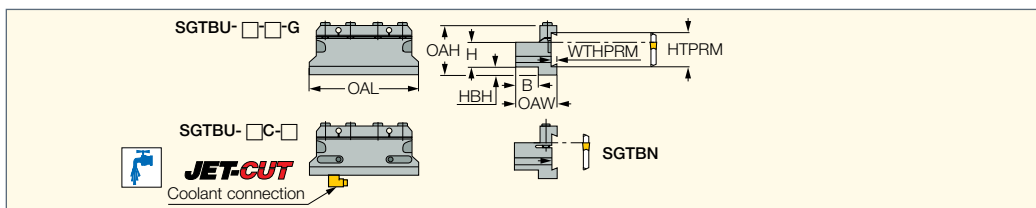
# TOOL BLOCKS



## TOOL BLOCKS

### SGTBU/SGTBN

Blocks for Various Parting and Grooving Blades



Designation	H	B	HTPRM	OAW	OAH	HBH	WTHPRM	OAL
SGTBN 16-2	.630	.630	.748	1.024	1.18	.16	.079	2.992
SGTBU 16-5G	.630	.669	1.024	1.339	1.69	.51	.161	3.386
SGTBU 19-5G	.750	.790	1.024	1.450	1.70	.39	.160	3.400
SGTBU 19-6G	.750	.790	1.260	1.500	1.94	.55	.210	3.950
SGTBU 25.4-5G	1.000	1.030	1.024	1.700	1.75	.20	.160	4.330
SGTBU 25.4-6G	1.000	1.028	1.260	1.750	1.95	.30	.210	4.330
SGTBU 25.4-8M	1.000	.906	1.772	1.654	2.76	1.06	.209	4.331
SGTBU 25.4C-6 (1)	1.000	1.028	1.260	1.744	1.94	.30	.210	4.330
SGTBU 31.8-6G	1.250	1.140	1.260	1.900	2.10	.20	.210	4.330
SGTBU 31.8C-14	1.250	1.140	2.071	2.477	3.93	1.65	.498	5.512
SGTBU 38.1-6G	1.500	1.650	1.260	2.283	2.15	-	.210	4.500
SGTBU 38.1-9	1.500	1.540	2.071	2.520	3.20	.94	.310	5.120
SGTBU 38.1C-14 (1)	1.500	1.102	2.071	2.476	3.93	1.41	.498	5.512
SGTBU 100-9-12 (2)	1.968	1.929	3.937	4.173	6.10	2.89	.591	8.858
SGTBU 150-9-12 (2)	1.968	1.929	5.906	4.173	8.23	5.02	.591	12.047

• Choose blade by HTPRM and WTHPRM dimensions

(1) Elbow-style connector unit supplied with each JET-CUT tool block

(2) See more detailed information below

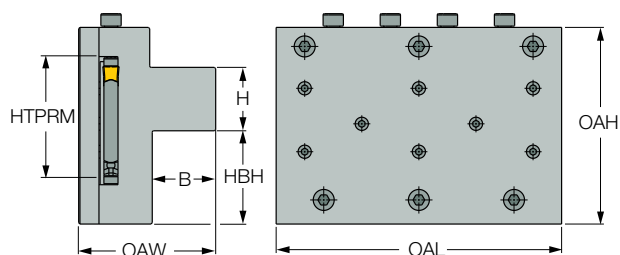
**For tools, see pages:** Anti-Vibration Blades (293) • CGFG 51-P8 (634) • CGHN-8-10D (296) • CGHN-D (291) • CGHN-DG (292) • CGHN-P8 (292)

• CGHR/L-12-14D (358) • CGHR/L-P8DG (292) • DGFH (275) • DGFHR/L (519) • DGFHR/L-B-D.(R/L) (521) • HFFA (613) • HFFH (613)

• HFFR/L-T (619) • HGFH (274) • PCHBR/L (332) • SGFFA (642) • SGFFH (643) • TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549)

• TGHN-D (280) • TNFFA-IQ (639) • TNFFH-IQ (638)

### SGTBU 100/150-9-12



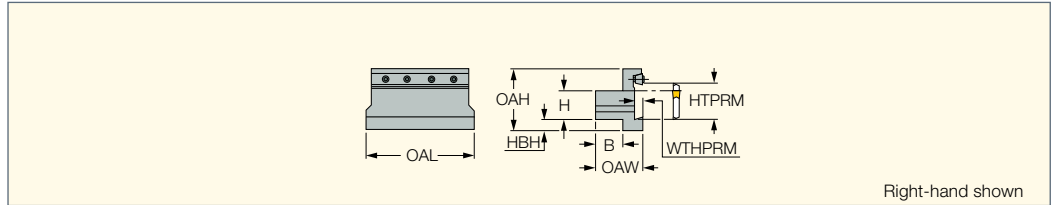
### Spare Parts

Designation									
SGTBN 16-2		SR M5X20DIN912		HW 4.0					
SGTBU 16-5G	BKU 86	SR M6X16 DIN912		HW 5.0					
SGTBU 19-5G	BKU 86	SR M6X16 DIN912		HW 5.0					
SGTBU 19-6G	BKU 100	SR M6X16 DIN912		HW 5.0					
SGTBU 25.4-5G	BKU 105	SR M6X16 DIN912		HW 5.0					
SGTBU 25.4-6G	BKU 110	SR M6X16 DIN912		HW 5.0					
SGTBU 25.4-8M	BKU 110	SR M6X16 DIN912		HW 5.0					
SGTBU 25.4C-6	BKU 110	SR M6X16 DIN912	SR M6X25 DIN912	HW 5.0			SGCU-344*	CF 343*	CGF 343* CGM 343*
SGTBU 31.8-6G	BKU 110	SR M6X16 DIN912		HW 5.0					
SGTBU 31.8C-14	BKU 32-14	SR M10X30 DIN912		HW 8.0	JHP ELBOW 90-G1/8-7/16UNF	OR 34X2.5N			
SGTBU 38.1-6G	BKU 110	SR M6X25 DIN912		HW 5.0					
SGTBU 38.1-9	BK 509	SR M8X25DIN912		HW 6.0					
SGTBU 38.1C-14	BKU 32-14	SR M10X30 DIN912		HW 8.0	JHP ELBOW 90-G1/8-7/16UNF	OR 34X2.5N			
SGTBU 100-9-12		SR M10X25 DIN912		HW 8.0					
SGTBU 150-9-12		SR M10X25 DIN912		HW 8.0					

## TOOL BLOCKS

### SGTBK

Blocks for Heavy Duty Parting and Grooving Blades



Right-hand shown

Designation	H	B	WTHPRM	HTPRM	OAW	OAH	HBH	OAL			
<b>SGTBK 32-9</b>	1.260	1.102	.335	1.260	1.890	2.44	.12	4.724	BK 32-9 WEDG	SR M6X16 DIN912	HW 5.0
<b>SGTBK 38-9</b>	1.496	1.378	.335	2.071	2.362	3.54	.98	5.315	BK 40-9	SR M6X20 DIN912	HW 5.0
<b>SGTBK 40-9</b>	1.575	1.378	.335	2.071	2.362	3.54	.91	5.315	BK 40-9	SR M6X20 DIN912	HW 5.0
<b>SGTBK 50-9</b>	1.968	1.575	.335	2.071	2.559	3.54	.59	5.315	BK 40-9	SR M6X20 DIN912	HW 5.0

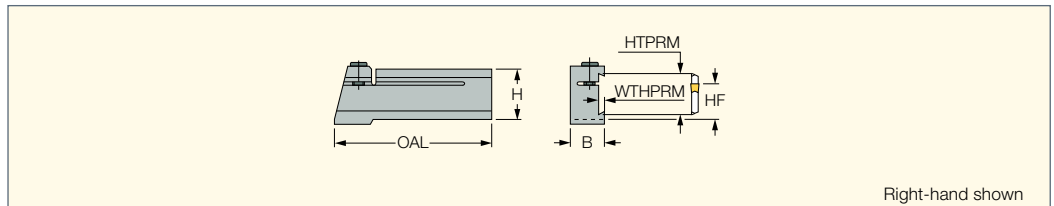
• Choose blade by HTPRM dimension

**For tools, see pages:** Anti-Vibration Blades (293) • CGFG 51-P8 (634) • CGHN-8-10D (296) • CGHN-P8 (292) • CGHR/L-12-14D (358) • CGHR/L-P8DG (292) • DGFH (275) • HFFH (613) • PCHBR/L (332) • SGFFH (643) • TGFH/R/L (356) • TGFHR/L (549) • TNFFH-IQ (638)

## TOOL BLOCKS

### SGTBR/L

Blocks for Parting and Grooving Blades for Conventional Lathes



Right-hand shown

Designation	H	HF	HTPRM	B	OAL	WTHPRM		
<b>SGTBR 19-2</b>	.984	.748	.748	.748	3.937	.079	SR M6X25 DIN912	HW 5.0
<b>SGTBL 25-6</b>	1.260	.984	1.024	.787	4.783	.197	SR M6X25 DIN912	HW 5.0
<b>SGTBR 25-6</b>	1.260	.984	1.024	.787	4.724	.197	SR M6X30 DIN912	HW 5.0

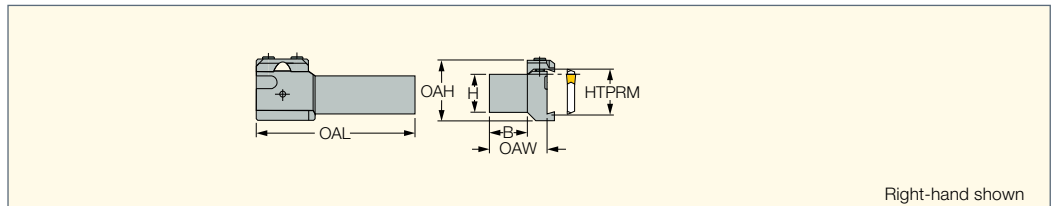
• Choose blade by HTPRM dimension

**For tools, see pages:** DGFH (275) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • HGFH (274) • PCHBR/L (332) • TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549)

## TOOL BLOCKS

### UBHCR/L

Holders for Grooving, Turning and Parting Blades



Right-hand shown

Designation	H	HTPRM	B	OAH	OAW	OAL				
<b>UBHCR/L 19-26</b>	.750	1.024	.750	1.42	1.400	3.937	BKU 176 307	SR M6X16 DIN912	HW 5.0	SPRING PLUNGER M6X14X3.5
<b>UBHCR/L 25.4-32</b>	1.000	1.260	1.000	1.81	1.600	5.118	BKU 176 307	SR M6X16 DIN912	HW 5.0	SPRING PLUNGER M6X14X3.5

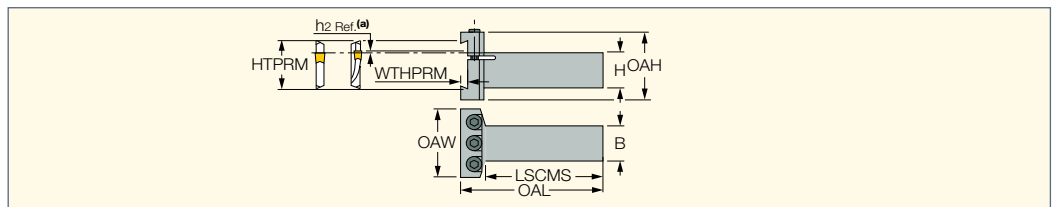
• Choose blade by HTPRM dimension

**For tools, see pages:** CGHN-D (291) • CGHN-DG (292) • CGHN-S (291) • CGHR/L-P8DG (292) • DGFH (275) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • HFFA (613) • HFFH (613) • HFFR/L-T (619) • HGFH (274) • PCHBR/L (332) • SGFFA (642) • SGFFH (643) • TGFH/R/L (356) • TGFHL-TR (560) • TGFHR/L (549) • TGHN-D (280) • TGHN-S (281) • TNFFA-IQ (639) • TNFFH-IQ (638)

## TOOL BLOCKS

### SGTBF

Perpendicular Blocks for Parting and Grooving Blades



Designation	H	B	HTPRM	OAL	LSCMS	OAW	OAH	WTHPRM		
<b>SGTBF 25.4-A</b>	1.000	1.000	1.260	5.000	4.380	1.750	1.90	.217	SR M6X40 DIN912	HW 5.0
<b>SGTBF 31.7-A</b>	1.250	1.250	1.260	5.000	4.390	1.750	1.90	.217	SR M6X40 DIN912	HW 5.0

• (a) h2 Ref. as defined for SELF-GRIP face grooving blades • Choose blade by HTPRM dimension

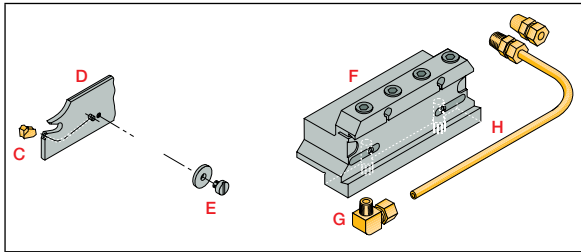
**For tools, see pages:** DGFH (275) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • HFFA (613) • HFFH (613) • HFFR/L-T (619) • HGFH (274) • PCHBR/L (332) • SGFFA (642) • SGFFH (643) • TGFH/R/L (356) • TGFHR/L (549) • TNFFA-IQ (639) • TNFFH-IQ (638)

**JETCUT Assembly**

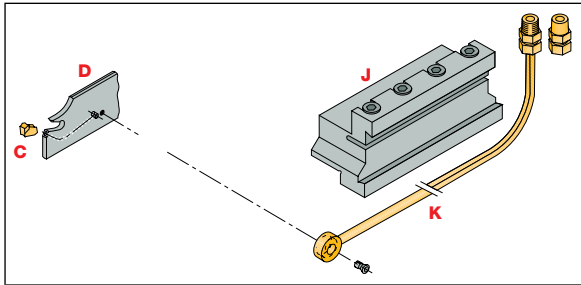
**SELF-GRIP**

- C** Insert **GF**□
- D** Blade **SGFH**□**K**-□
- E** Cap **SGC 340** supplied with a blade; to be used with Option 1 only.
- F** Tool block **SGTBU**□**C**-□
- G** Elbow-style connector unit supplied with each tool block
- H** **SGCU-344 H 3/16"** copper Tube 343 (length 9.84")
- J** Standard current tool blocks **SGTBN**, **SGTBU**, **SGTBF**
- K** Coolant connection unit **SGCU-341**
- M** Integral shank holder **SGTFR/L**□**K**-□

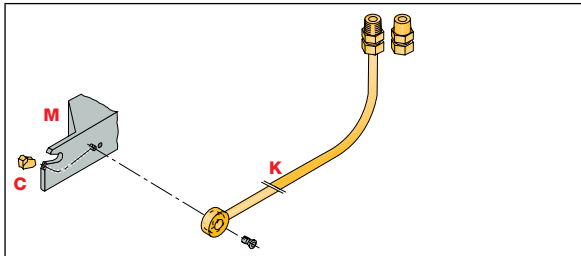
**Option 1:**  
Coolant supplied through the tool block.



**Option 2:**  
Coolant supplied directly to the blade.



**Option 3:**  
Coolant supplied directly to the integral shank tool.



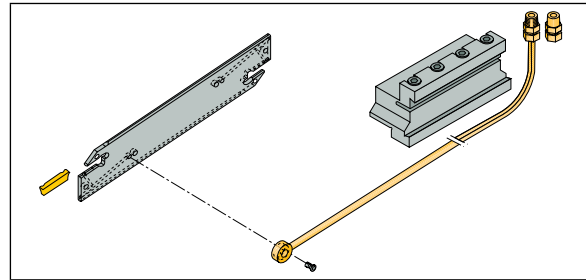
**DO-GRIP**  
500 STRAIGHT LINE

The coolant supply tube can be used with the following options:

- DGTR...C integral tool
- DGFH-C blades used on regular blocks by connecting directly to the blade
- SGTBU-C blocks with coolant passages and connecting ports

**The Right Connection for Your Application**

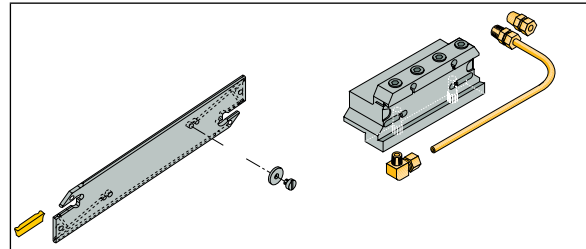
**Option 1:**  
Coolant supplied directly to the blade.



**SGCU 341 Coolant connection unit**

- Connectors:
- CGM 343** (G1/8 external thread)
  - CGF 343** (G1/8 internal thread)
  - CF 343** (NPT1/8 internal thread)

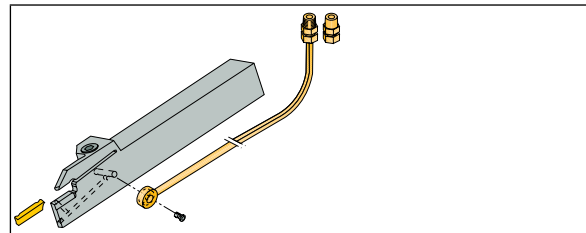
**Option 2:**  
Coolant supplied through the tool block.



**SGCU 344 Elbow connector**

- TUBE 343**  
3/16" copper tube (length 9.84")  
(G1/8 external thread) (G1/8 internal thread)  
(NPT1/8 external thread) (NPT1/8 internal thread)

**Option 3:**  
Coolant supplied directly to the tool.



**SGCU 341 Coolant connection unit**

- Connectors:
- CGM 343** (G1/8 external thread)
  - CGF 343** (G1/8 internal thread)
  - CF 343** (NPT1/8 internal thread)

# EXCHANGEABLE HEADS HOLDERS



# CONTENTS

CAMFIX (ISO 26623-1) .....677  
 HSK-T (ISO 12164-3 T Type and ICTM Standard) .....686  
 IM (ISO 26622-1 and Mazak XMZ Standard) .....688

**ISCAR** offers a wide range of tools for three types of Quick Change systems:

- 1 **CAMFIX** (ISO 26623-1)
- 2 **HSK-T** (ISO 12164-3 T Type and ICTM Standards)
- 3 IM (ISO 26622-1 and **Mazak XMZ** Standards)

### CAMFIX (ISO 266231)

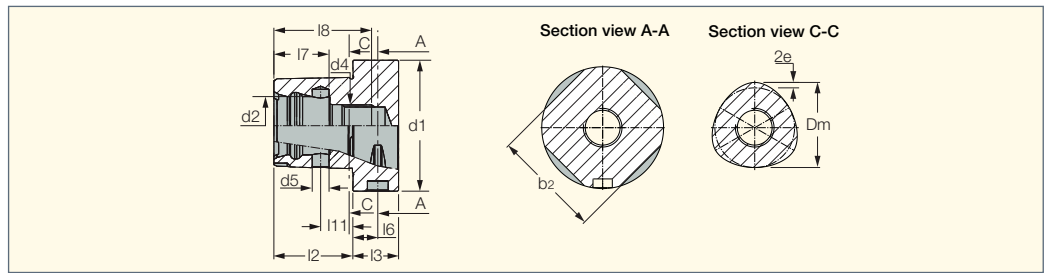


Quick Change tools are expensive compared to standard shank tools. **ISCAR** offers economical solutions by using adapters, blades or regular tools and boring bars on the Quick Change adaptations.

### HSK-T (ISO 1264-3 T Type and ICTM Standard)

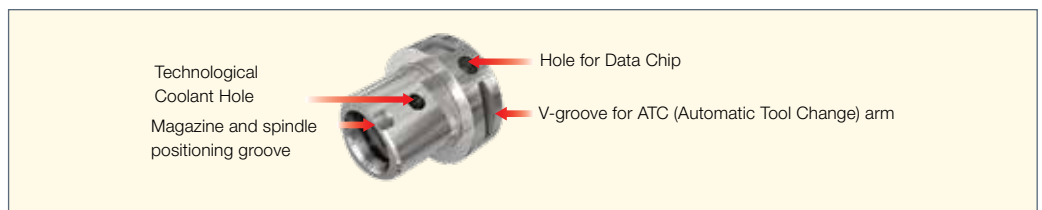






	M E T R I C														
CAMFIX	b2	d1 ±0.1	d2	d4	d5 ±0.1	Dm	e	l1	l2 ±0.1	l3 min	l6 ±0.15	l7 ±0.15	l8 min	l11 ±0.1	
<b>C3</b>	28.3	32	15	M12x1.5	3.6	22	0.7	2.5	19	15	6	13	25	8	
<b>C4</b>	35.3	40	18	M14x1.5	4.6	28	0.9	2.5	24	20	8	15	30	8	
<b>C5</b>	44.4	50	21	M16x1.5	6.1	35	1.12	3	30	20	10	20	37	14	
<b>C6</b>	55.8	63	28	M20x2	8.1	44	1.4	3	38	22	12	27	47	15.5	
<b>C8</b>	71.1	80	32	M20x2	9.1	55	2	3	48	30	12	28	48	25	
<b>C8X</b>	88.7	100	32	M20x2	9.1	55	2	3	48	32	16	28	48	25	
<b>C10</b>	88.3	100	43	M20x2	12	72	2.8	3	60	36	16	40	70	26.5	

**CAMFIX - ISO 26623-1**  
**Standard Quick Change**  
**Shanks**



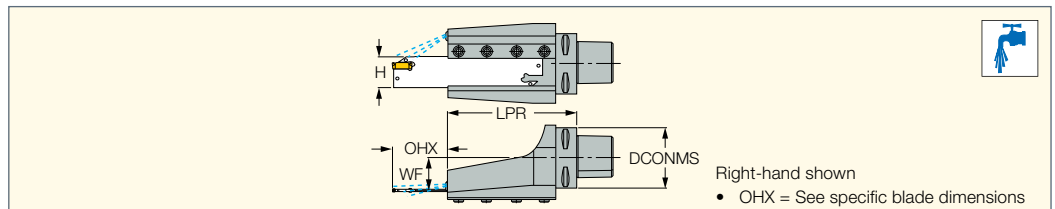
**Features**

- Symmetrical design: Due to the symmetrical design, the torque load is distributed on the polygon, providing a self-centering effect.
- Rigidity: The **CAMFIX** clamping mechanism is extremely rigid against bending forces.
- Accuracy: The taper and face contact ensure high repeatability within 2 microns, when operated with an automatic tool changer.

**TOOL BLOCKS**

**CAMFIX**

**C#-TBK-R/L**  
Blocks with CAMFIX  
Exchangeable Shanks for  
Parting and Grooving Blades



Designation	DCONMS	WF	LPR	H	CP <sup>(1)</sup>	CDI <sup>(2)</sup>					
<b>C6 TBK-32R/L</b>	2.480	1.260	5.433	1.260	1450	1	BK 32-9 WEDG	SR M6X16 DIN912	HW 5.0	EZ 125	SR M8X6 DIN913
<b>C8 TBK-52R</b>	3.150	1.594	6.339	2.047	1450	1	BK 40-9	SR M6X16 DIN912	HW 5.0	EZ 125	SR M8X6 DIN913

<sup>(1)</sup> Coolant pressure (PSI)

<sup>(2)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

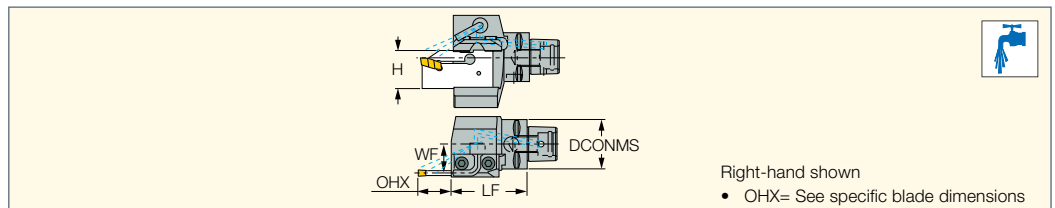
**For tools, see pages:** CGHN-DG (292) • CGHR/L-P8DG (292) • DGFH (275) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • HFFH (613)

• HGFH (274) • PCHBR/L (332) • TGFH/R/L (356) • TGFHR/L (549) • TNFFH-IQ (638)

**TOOL BLOCKS**

**CAMFIX**

**C#-TBU**  
Blocks with CAMFIX  
Exchangeable Tapered Shanks  
for Parting and Grooving Blades



Designation	DCONMS	WF	LF	H	CDI <sup>(1)</sup>						
<b>C4 TBU-32R/L</b>	1.575	.827	2.362	1.260	1	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X8 DIN916	EZP 5	EZ 125
<b>C5 TBU-32R</b>	1.968	1.181	2.520	1.260	1	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X8 DIN916	EZP 5	EZ 125

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

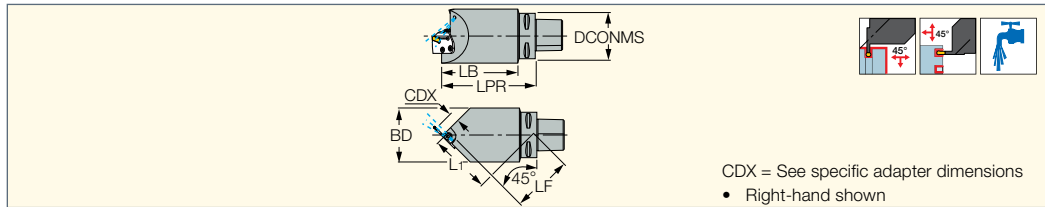
**For tools, see pages:** CGHN-S (291) • TGHN-S (281)

**MODULAR-GRIP**

**CAMFIX**

**C#-MAHDR-45**

Holder with CAMFIX  
Exchangeable Shanks for  
Parting, Grooving, Turning  
and Facing Adapters



CDX = See specific adapter dimensions  
• Right-hand shown

Designation	DCONMS	LPR	L1	LB	LF	BD	CP <sup>(1)</sup>	CDI <sup>(2)</sup>
<b>C6 MAHDR-45</b>	2.480	5.118	3.618	4.165	3.504	2.953	1450	1
<b>C8 MAHDR-45</b>	3.150	5.118	3.618	-	3.504	3.150	1450	1

• For mill-turn machines

<sup>(1)</sup> Coolant pressure (PSI)

<sup>(2)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619)

• HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)



**Spare Parts**

Designation								
<b>C6 MAHDR-45</b>	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20DIN7984	HW 4.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	SR M5X4 DIN913	EZ 83
<b>C8 MAHDR-45</b>	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	SR M5X6 DIN913	EZ 83

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

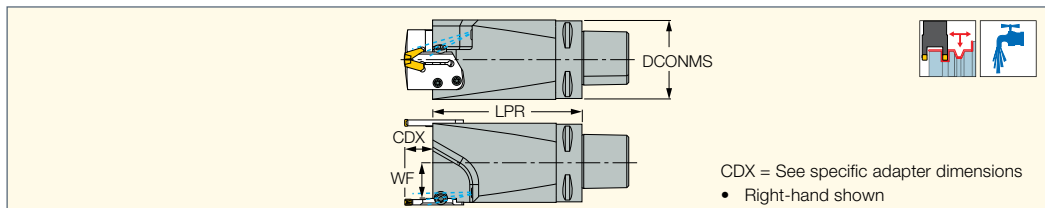
<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole

**MODULAR-GRIP**

**CAMFIX**

**C#-MAHDOR**

Holder with CAMFIX  
Exchangeable Shanks for  
Parting, Grooving, Turning  
and Facing Adapters



CDX = See specific adapter dimensions  
• Right-hand shown

Designation	DCONMS	WF	LPR	CDI <sup>(1)</sup>							
<b>C6 MAHDOR</b>	2.480	1.142	5.118	1	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	EZ 125

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole

**For tools, see pages:** DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HGPAD (274)

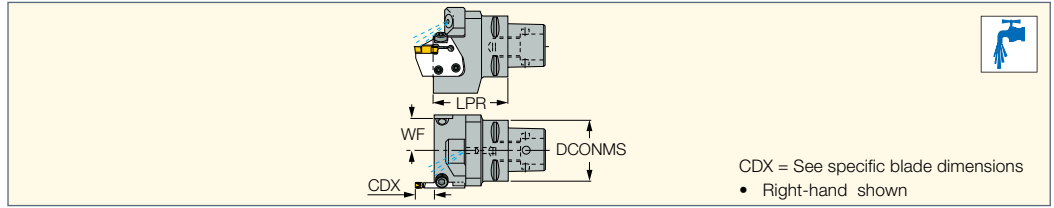
• SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72)

## MODULAR-GRIP

### CAMFIX

#### C#-MAHD

Holders with CAMFIX  
Exchangeable Shanks for  
Parting, Grooving, Turning  
and Facing Adapters



CDX = See specific blade dimensions  
• Right-hand shown

Designation	DCONMS	LPR	WF	CP <sup>(1)</sup>	CDI <sup>(2)</sup>
C3 MAHD	1.260	1.968	.728	1450	0
C4 MAHD	1.575	1.831	.870	1450	1
C5 MAHD	1.968	1.850	.906	1450	1
C6 MAHD	2.480	1.968	1.142	1450	1
C8 MAHD	3.150	2.362	1.476	1450	1

<sup>(1)</sup> Coolant pressure (PSI)

<sup>(2)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619)  
• HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)

#### Spare Parts

Designation									
C#-MAHD	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	EZ 125	EZA 125	SR 76-1022

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

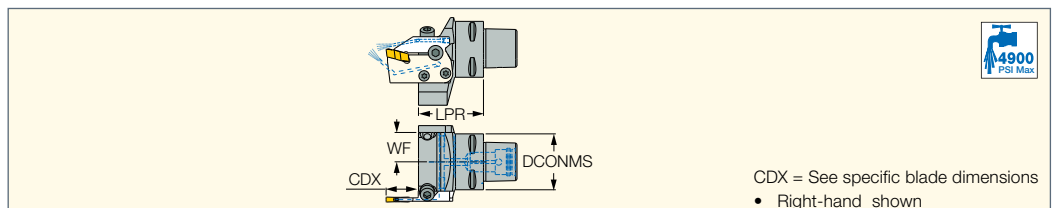
<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole

## MODULAR-GRIP

### JETCUT CAMFIX

#### C#-MAHD-JHP

Holders with CAMFIX  
Exchangeable Shanks and High  
Pressure Coolant Channels for  
MODULAR-GRIP Adapters



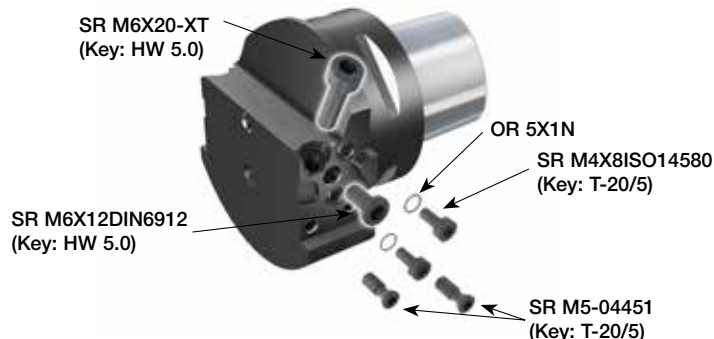
CDX = See specific blade dimensions  
• Right-hand shown

Designation	DCONMS	LPR	WF	CDI <sup>(1)</sup>							
C3 MAHD-JHP	1.260	1.772	.728	0	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C4 MAHD-JHP	1.575	1.831	.827	1	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C5 MAHD-JHP	1.968	1.850	1.024	1	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C6 MAHD-JHP	2.480	1.968	1.280	1	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK

• For user guide and accessories, see pages 76, 677

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • CGPAD-JHP (290) • DGAD-B-D (531) • DGAD/HGAD (531) • DGPAD-JHP (532) • HFPAD-3 (617)  
• HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGPAD (274) • HGPAD-JHP (274) • PCADR/L (330) • PCADR/L-JHP (330)  
• PCADRS/LS-JHP (331) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TAGPAD-JHP (554) • TGAD (552)  
• TGPAD (279) • TGPAD-JHP (280)

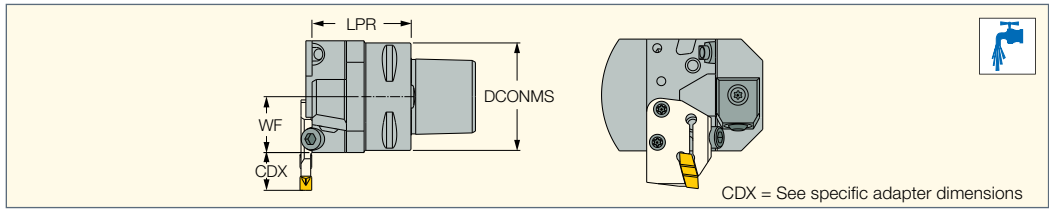


**MODULAR-GRIP**

**CAMFIX**

**C#-MAHPD**

Perpendicular Holders with CAMFIX Exchangeable Shanks Carrying Adapters for Parting, Grooving, Turning and Facing



Designation	DCONMS	LPR	WF	CP <sup>(1)</sup>	CDI <sup>(2)</sup>
C4 MAHPD	1.575	1.811	.984	1450	1
C5 MAHPD	1.968	1.811	1.024	1450	1
C6 MAHPD	2.480	1.850	1.299	1450	1
C8 MAHPD	3.150	2.205	1.654	1450	1

<sup>(1)</sup> Coolant pressure (PSI)

<sup>(2)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)

**Spare Parts**

Designation									
C#-MAHPD	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	EZ 125	SR 76-1022	EZA-21414

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

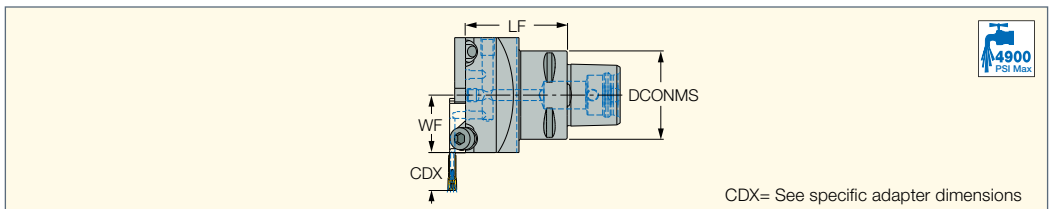
<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole

**MODULAR-GRIP**

**JETCUT CAMFIX**

**C#-MAHPD-JHP**

Perpendicular Holders with CAMFIX Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters



Designation	DCONMS	LF	WF	CDI <sup>(1)</sup>							
C3 MAHPD-JHP	1.260	1.575	1.024	0	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C4 MAHPD-JHP	1.575	1.811	1.024	1	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C5 MAHPD-JHP	1.968	1.811	1.024	1	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK
C6 MAHPD-JHP	2.480	1.811	1.299	1	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	SR M4X8ISO14580 BLACK

• For user guide and accessories, see pages 76, 677

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

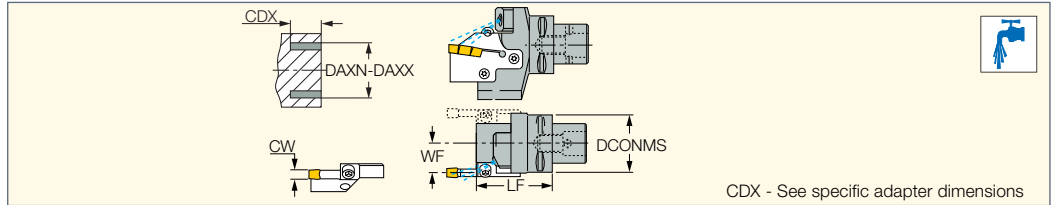
**For tools, see pages:** CGPAD (290) • CGPAD-JHP (290) • DGAD-B-D (531) • DGAD/HGAD (531) • DGPAD-JHP (532) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HFPAD-JHP (617) • HGPAD (274) • HGPAD-JHP (274) • PCADR/L (330) • PCADR/L-JHP (330) • PCADRS/LS-JHP (331) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TAGPAD-JHP (554) • TGAD (552) • TGPAD (279) • TGPAD-JHP (280)



## CUTGRIP CAMFIX

### C#-GHAD-8

Holders with CAMFIX  
Exchangeable Shanks  
for Grooving, Turning  
and Facing Adapters



CDX - See specific adapter dimensions

Designation	DCONMS	LF	WF	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CP <sup>(3)</sup>	CDI <sup>(4)</sup>
C5 GHAD-8	1.968	2.559	1.024	.315	3.15	20.08	1450	1
C6 GHAD-8	2.480	2.559	1.280	.315	3.15	20.08	1450	1

• For user guide and accessories see page 677

<sup>(1)</sup> Minimum axial grooving diameter








<sup>(2)</sup> Maximum axial grooving diameter

<sup>(3)</sup> Coolant pressure (PSI)

<sup>(4)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** GADR/L-8 (295) • GAFG-R/L-8 (633) • PCADR/L 34N-RE (331)

### Spare Parts

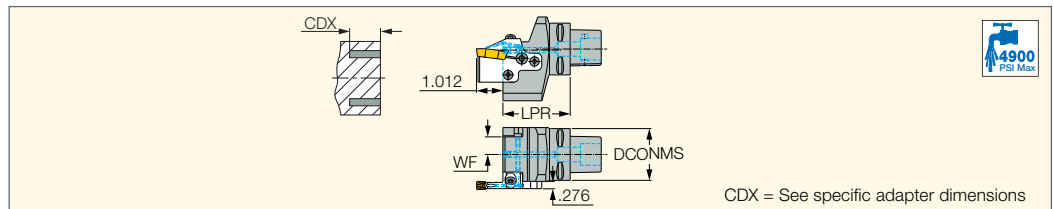
Designation							
C#-GHAD-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	SR 76-1022	EZA 125	EZ 125

## CUTGRIP JETCUT

### CAMFIX

### C#-GHAD-JHP

Holders with High Pressure  
Coolant Channels and CAMFIX  
Exchangeable Shanks for  
Grooving and Turning



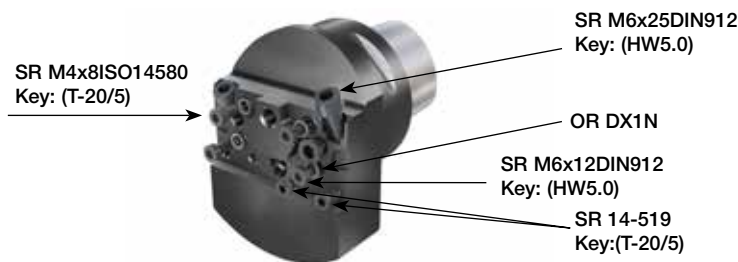
CDX = See specific adapter dimensions

Designation	DCONMS	LPR	WF	CDI <sup>(1)</sup>
C5 GHAD-8-JHP	1.968	2.559	.669	1
C6 GHAD-8-JHP	2.480	2.559	.925	1
C8 GHAD-8-JHP	3.150	2.913	1.516	1








• For user guide and accessories see pages 76, 677

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** GADR/L-JHP (296)



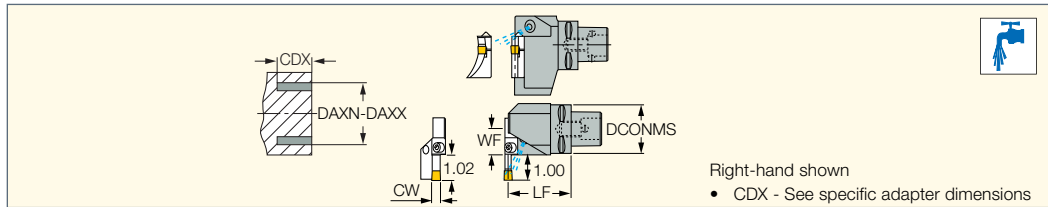
### Spare Parts

Designation							
C5 GHAD-8-JHP	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	SR M6X12DIN6912	OR 5X1N	SR M4X8ISO14580 BLACK
C6 GHAD-8-JHP	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0X120 MM	SR M6X12DIN6912	OR 5X1N	SR M4X8ISO14580 BLACK
C8 GHAD-8-JHP	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0X120 MM	SR M6X12DIN6912	OR 5X1N	SR M4X8ISO14580 BLACK

**CAMFIX**

**C#-GHAPR/L-8**

Perpendicular Holders with CAMFIX Exchangeable Shanks for Grooving, Turning and Facing Adapters



Designation	DCONMS	LF	WF	CW	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CP <sup>(3)</sup>	CDI <sup>(4)</sup>
<b>C5 GHAPR/L-8</b>	1.968	2.520	1.024	.315	3.15	20.08	1450	1
<b>C6 GHAPR/L-8</b>	2.480	2.953	1.299	.315	3.15	20.08	1450	1

• For user guide and accessories see page 677

<sup>(1)</sup> Minimum axial grooving diameter






<sup>(2)</sup> Maximum axial grooving diameter

<sup>(3)</sup> Coolant pressure (PSI)

<sup>(4)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** GADR/L-8 (295) • GAFG-R/L-8 (633) • PCADR/L 34N-RE (331)

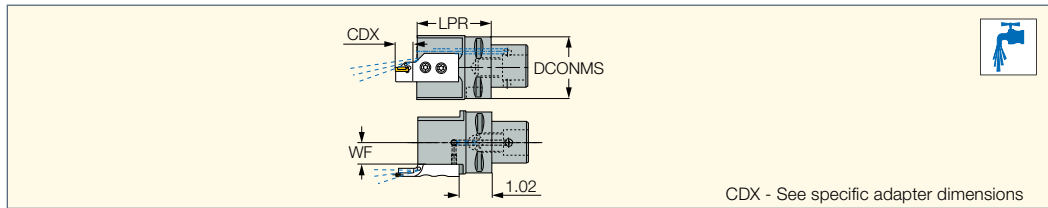
**Spare Parts**





Designation					
<b>C5 GHAPR/L-8</b>	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	EZ 125
<b>C6 GHAPR/L-8</b>	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	

**CAMFIX**

**C#-HAD**

Holders with CAMFIX Exchangeable Tapered Shanks for Internal Facing Adapters



Designation	DCONMS	LPR	WF	CDI <sup>(1)</sup>				
<b>C4 HAD</b>	1.575	2.362	.709	1	SR 14-519	T-20/3	SR M4X6DIN912	HW 3.0
<b>C5 HAD</b>	1.968	2.362	.709	1	SR 14-519	T-20/3	SR M4X6DIN912	HW 3.0
<b>C6 HAD</b>	2.480	2.362	.866	1	SR 14-519	T-20/3	SR M4X6DIN912	HW 3.0

• For user guide and accessories see page 677

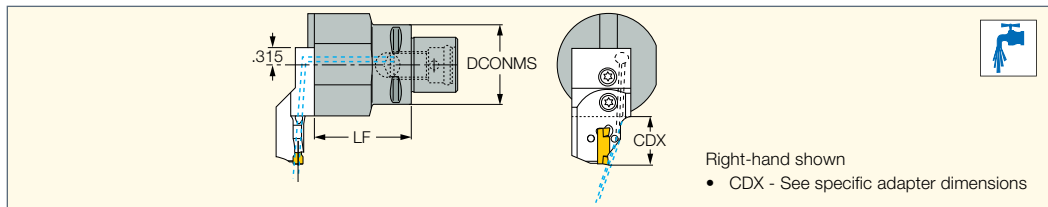
<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip



**For tools, see pages:** HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAER/L-3 (621) • HGAIR/L-3 (624)

**CAMFIX**

**C#-HAPR/L**

Perpendicular Holders with CAMFIX Exchangeable Shanks for Internal Facing Adapters



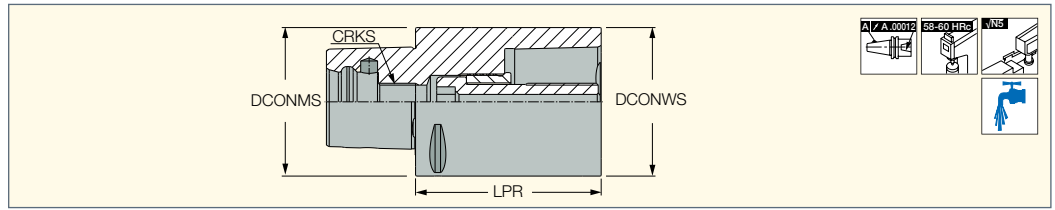
Designation	DCONMS	LF	CDI <sup>(1)</sup>		
<b>C4 HAPR/L</b>	1.575	1.968	1	SR 14-519	T-20/3
<b>C6 HAPR/L</b>	2.480	1.968	1	SR 14-519	T-20/3

• For user guide and accessories see page 677

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAER/L-3 (621) • HGAIR/L-3 (624)

**EX C#**  
**(CAMFIX extension)**  
CAMFIX Extension Adapters



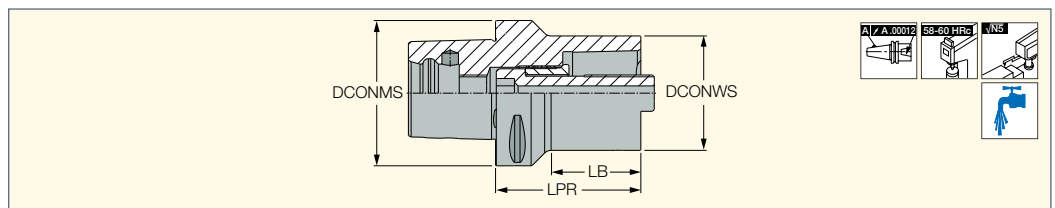
Designation	DCONMS	DCONWS	LPR	CRKS	CDI <sup>(1)</sup>	Lbs
<b>C3 EX C3X060</b>	1.260	1.2598	2.362	M12	0	.88
<b>C3 EX C3X080</b>	1.260	1.2598	3.150	M12	0	1.10
<b>C4 EX C4X060</b>	1.575	1.5748	2.362	M14	0	1.10
<b>C4 EX C4X080</b>	1.575	1.5748	3.150	M14	0	1.54
<b>C5 EX C5X080</b>	1.968	1.9685	3.150	M16	0	2.49
<b>C5 EX C5X100</b>	1.968	1.9685	3.937	M16	0	3.13
<b>C6 EX C6X100</b>	2.480	2.4803	3.937	M20	0	4.92
<b>C6 EX C6X140</b>	2.480	2.4803	5.512	M20	0	6.90
<b>C8 EX C8X100</b>	3.150	3.1496	3.937	M20	0	8.05
<b>C8 EX C8X125</b>	3.150	3.1496	4.921	M20	0	10.14

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**Spare Parts**

Designation						
<b>C3 EX C3X060</b>	SR M12X50 C3	HW 7.0*	MT RING M18X15XC3	COOLING TUBE C3*	WRENCH COOL TUBE C3*	WRENCH C3 DRW NUT*
<b>C3 EX C3X080</b>	SR M12X50 C3	HW 7.0*	MT RING M18X15XC3	COOLING TUBE C3*	WRENCH COOL TUBE C3*	WRENCH C3 DRW NUT*
<b>C4 EX C4X060</b>	SR M14X58 C4	HW 8.0*	MT RING M22X17XC4	COOLING TUBE C4*	WRENCH COOL TUBE C4*	WRENCH C4 DRW NUT*
<b>C4 EX C4X080</b>	SR M14X58 C4	HW 8.0*	MT RING M22X17XC4	COOLING TUBE C4*	WRENCH COOL TUBE C4*	WRENCH C4 DRW NUT*
<b>C5 EX C5X080</b>	SR M16X70 C5	HW 10.0*	MT RING M25X20XC5	COOLING TUBE C5*	WRENCH COOL TUBE C5*	WRENCH C5 DRW NUT*
<b>C5 EX C5X100</b>	SR M16X70 C5	HW 10.0*	MT RING M25X20XC5	COOLING TUBE C5*	WRENCH COOL TUBE C5*	WRENCH C5 DRW NUT*
<b>C6 EX C6X100</b>	SR M20X87 C6/8	HW 14.0*	MT RING M30X24XC6/8	COOLING TUBE C6*	WRENCH COOL TUBE C6*	WRENCH C6-8 DRW NUT*
<b>C6 EX C6X140</b>	SR M20X87 C6/8	HW 14.0*	MT RING M30X24XC6/8	COOLING TUBE C6*	WRENCH COOL TUBE C6*	WRENCH C6-8 DRW NUT*
<b>C8 EX C8X100</b>	SR M20X87 C6/8	HW 14.0*	MT RING M30X24XC6/8	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C6-8 DRW NUT*
<b>C8 EX C8X125</b>	SR M20X87 C6/8	HW 14.0*	MT RING M30X24XC6/8	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C6-8 DRW NUT*

**RE-C#**  
CAMFIX Reduction Adapters



Designation	DCONMS	DCONWS	LPR	LB	CDI <sup>(1)</sup>	Lbs
<b>C6 RE C3X070</b>	2.480	1.2598	2.756	1.535	0	2.43
<b>C8 RE C3X060</b>	3.150	1.2598	2.362	1.154	0	3.75
<b>C6 RE C4X080</b>	2.480	1.5748	3.150	2.024	0	2.65
<b>C8 RE C4X070</b>	3.150	1.5748	2.756	1.437	0	4.19
<b>C6 RE C5X080</b>	2.480	1.9685	3.150	2.028	0	3.31
<b>C8 RE C5X080</b>	3.150	1.9685	3.150	1.941	0	4.85
<b>C8 RE C6X080</b>	3.150	2.4803	3.150	2.091	0	5.51
<b>C8 RE C6X120</b>	3.150	2.4803	4.724	.472	0	8.82

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**Spare Parts**

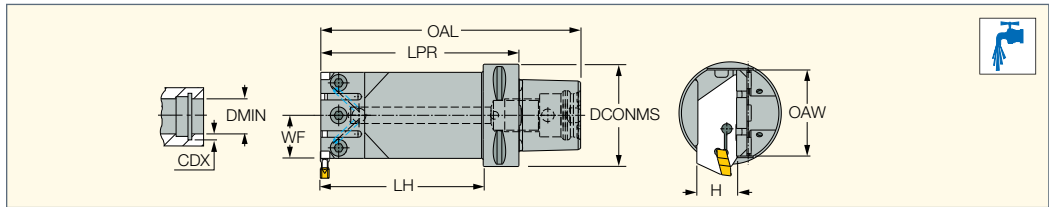
Designation						
<b>C6 RE C3X070</b>	SR M12X50 C3	HW 7.0*	MT RING M18X15XC3	COOLING TUBE C6*	WRENCH COOL TUBE C6*	WRENCH C3 DRW NUT*
<b>C8 RE C3X060</b>	SR M12X50 C3	HW 7.0*	MT RING M18X15XC3	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C3 DRW NUT*
<b>C6 RE C4X080</b>	SR M14X58 C4	HW 8.0*	MT RING M22X17XC4	COOLING TUBE C6*	WRENCH COOL TUBE C6*	WRENCH C4 DRW NUT*
<b>C8 RE C4X070</b>	SR M14X58 C4	HW 8.0*	MT RING M22X17XC4	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C4 DRW NUT*
<b>C6 RE C5X080</b>	SR M16X70 C5	HW 10.0*	MT RING M25X20XC5	COOLING TUBE C6*	WRENCH COOL TUBE C6*	WRENCH C5 DRW NUT*
<b>C8 RE C5X080</b>	SR M16X70 C5	HW 10.0*	MT RING M25X20XC5	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C5 DRW NUT*
<b>C8 RE C6X080</b>	SR M20X87 C6/8	HW 14.0*	MT RING M30X24XC6/8	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C6-8 DRW NUT*
<b>C8 RE C6X120</b>	SR M20X87 C6/8	HW 14.0*	MT RING M30X24XC6/8	COOLING TUBE C8*	WRENCH COOL TUBE C8*	WRENCH C6-8 DRW NUT*




**MODULAR-GRIP**

**CAMFIX**

**C#-GHIC**

CUT-GRIP holders with CAMFIX  
Exchangeable Shanks for Internal  
Grooving and Turning Blades



Designation	DCONMS	LPR	H	OAW	WF	OAL	LH	CDI <sup>(1)</sup>			
<b>C5 GHIC-70</b>	1.968	4.724	1.024	2.087	1.043	5.906	3.937	1	SR M8X6 DIN913	SR M6X16 DIN912	SR M3X4 DIN913
<b>C6 GHIC-70</b>	2.480	4.803	1.024	2.087	1.043	6.299	3.937	1	SR M8X6 DIN913	SR M6X16 DIN912	SR M3X4 DIN913

• Data for DMIN and CDX parameters presents in CGHN 26-M, SGFH 26-M, TGHN 26-M adapters

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

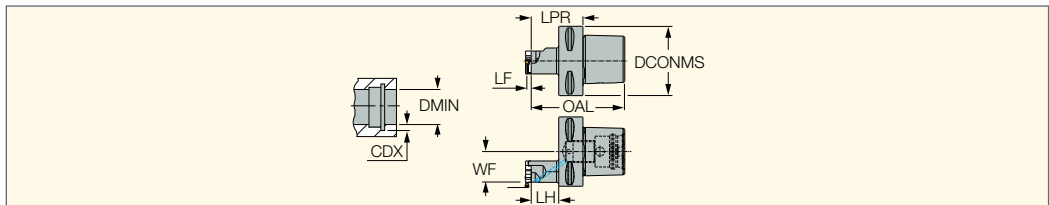
For tools, see pages: CGHN 26-M (380) • TGHN 26-M (378)

**MODULAR-GRIP**

**CAMFIX**

**C#-GHAIR/L**

Boring Bars with CAMFIX  
Exchangeable Shanks for  
Internal Grooving and Turning





Designation	DCONMS	LH	LPR	WF	Adapter	OAL	CDI <sup>(1)</sup>
<b>C3 GHAIR-20</b>	1.260	.787	1.378	.630	GEAIL-20	2.126	0
<b>C3 GHAIR-20</b>	1.260	.787	1.378	.630	GEAIR-20	2.126	0
<b>C4 GHAIR-20</b>	1.575	.787	1.575	.787	GEAIL-20	2.520	1
<b>C4 GHAIR-20</b>	1.575	.787	1.575	.787	GEAIR-20	2.520	1
<b>C4 GHAIR-25</b>	1.575	.984	1.772	.787	GEAIL-25	2.717	1
<b>C4 GHAIR-25</b>	1.575	.984	1.772	.787	GEAIR-25	2.811	1
<b>C4 GHAIR-32</b>	1.575	1.260	2.047	.787	GAIL-32	2.992	1
<b>C4 GHAIR-32</b>	1.575	1.260	2.047	.787	GAIR-32	2.992	1
<b>C5 GHAIR-20</b>	1.968	.787	1.575	.984	GEAIL-20	2.756	1
<b>C5 GHAIR-20</b>	1.968	.787	1.575	.984	GEAIR-20	2.756	1
<b>C5 GHAIR-25</b>	1.968	.984	1.772	.984	GEAIL-25	2.953	1
<b>C5 GHAIR-25</b>	1.968	.984	1.772	.984	GEAIR-25	2.953	1
<b>C5 GHAIR-40</b>	1.968	1.575	2.362	.984	GEAIL-40	3.543	1
<b>C5 GHAIR-40</b>	1.968	1.575	2.362	.984	GEAIR-40	3.543	1
<b>C6 GHAIR-25</b>	2.480	.984	1.850	1.240	GEAIL-25	3.346	1
<b>C6 GHAIR-25</b>	2.480	.984	1.850	1.240	GEAIR-25	3.346	1
<b>C6 GHAIR-40</b>	2.480	1.575	2.441	1.240	GAIL-40	3.937	1
<b>C6 GHAIR-40</b>	2.480	1.575	2.441	1.240	GAIR-40	3.937	1

• DMIN, CDX, LF data present in GAIR, GEAIR adapters

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

For tools, see pages: GAIR/L (370) • GEAIR/L (364)

**Spare Parts**

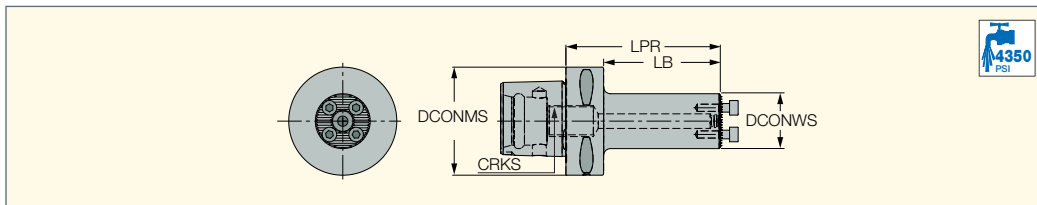
Designation		
<b>C3 GHAIR-20</b>	SR 76-2057	T-8/5
<b>C4 GHAIR-20</b>	SR 76-2057	T-8/5
<b>C4 GHAIR-25</b>	SR 16-236 P	T-15/5
<b>C4 GHAIR/L-32</b>	SR 16-236 P	T-15/5
<b>C5 GHAIR-20</b>	SR 76-2057	T-8/5
<b>C5 GHAIR-25</b>	SR 16-236 P	T-15/5
<b>C5 GHAIR/L-40</b>	SR 16-212	T-20/5
<b>C6 GHAIR-25</b>	SR 16-236 P	T-15/5
<b>C6 GHAIR/L-40</b>	SR 16-212	T-20/5



# CAMFIX

## C#-SH-JHP

Serrated Connection  
Shanks with a CAMFIX  
Exchangeable Adaptation





Designation	DCONMS	DCONWS	LPR	LB	CRKS	Lbs	CDI <sup>(1)</sup>
C4-SH-D16-2.5D-JHP	1.575	.6300	1.575	.787	M14	.69	1
C4-SH-D20-2.5D-JHP	1.575	.7870	1.969	1.181	M14	.77	1
C4-SH-D25-2.5D-JHP	1.575	.9840	2.165	1.378	M14	.91	1
C4-SH-D32-2.5D-JHP	1.575	1.2600	2.953	2.165	M14	1.38	1
C4-SH-D40-3D-JHP	1.575	1.5750	3.150	3.150	M14	1.94	1
C5-SH-D16-2.5D-JHP	1.968	.6300	1.575	.787	M16	1.10	1
C5-SH-D20-2.5D-JHP	1.968	.7870	1.969	1.181	M16	1.18	1
C5-SH-D25-2.5D-JHP	1.968	.9840	2.165	1.378	M16	1.34	1
C5-SH-D32-2.5D-JHP	1.968	1.2600	2.953	2.165	M16	.00	1
C5-SH-D40-3D-JHP	1.968	1.5750	3.937	3.150	M16	2.79	1
C6-SH-D16-2.5D-JHP	2.480	.6300	1.575	.709	M20	1.83	1
C6-SH-D20-2.5D-JHP	2.480	.7870	1.969	1.102	M20	1.92	1
C6-SH-D25-2.5D-JHP	2.480	.9840	2.559	1.693	M20	.00	1
C6-SH-D32-3D-JHP	2.480	1.2600	3.543	2.677	M20	2.78	1
C6-SH-D32-4D-JHP	2.480	1.2600	4.921	4.055	M20	.00	1
C6-SH-D40-3D-JHP	2.480	1.5750	3.937	3.071	M20	3.55	1
C6-SH-D40-4D-JHP	2.480	1.5750	5.512	4.646	M20	4.38	1

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

For tools, see pages: AVC-D-SIR/L (773) • AVC-DDUNR/L (94) • AVC-DVUNR/L (94) • AVC-GAIR/L (371) • AVC-GEAIR/L (371) • AVC-PCLNR/L (93) • AVC-PCLXR/L (93) • AVC-SCLCR/L (91) • AVC-SDJCN-Y (74) • AVC-SDUCR/L (92) • AVC-SRDCN-Y (75) • AVC-SVLCR/L (92) • AVC-SVUCR/L (92)

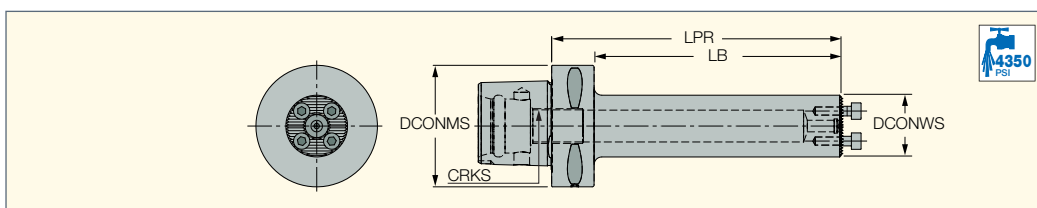
### Spare Parts

Designation		
C4-SH-D16-2.5D-JHP	SR M3X10DIN912	HW 2.5
C4-SH-D20-2.5D-JHP	SR M3.5XL10-D5.5	HW 2.5
C5-SH-D16-2.5D-JHP	SR M3X10DIN912	HW 2.5
C5-SH-D20-2.5D-JHP	SR M3.5XL10-D5.5	HW 2.5
C5-SH-D32-2.5D-JHP	SR M3X10DIN912	HW 2.5
C6-SH-D16-2.5D-JHP	SR M3X10DIN912	HW 2.5
C6-SH-D20-2.5D-JHP	SR M3.5XL10-D5.5	HW 2.5

# CAMFIX

## C#-SH-E-JHP

Serrated Connection Shanks  
with Carbide Core and a CAMFIX  
Exchangeable Adaptation





Designation	DCONMS	DCONWS	LPR	LB	CRKS	Lbs	CDI <sup>(1)</sup>
C6-SH-D16-5D-E-JHP	2.480	.6300	3.150	2.283	M20	2.06	1
C6-SH-D20-5D-E-JHP	2.480	.7870	3.937	3.071	M20	2.33	1
C6-SH-D25-5D-E-JHP	2.480	.9840	4.528	3.661	M20	2.85	1
C6-SH-D32-5D-E-JHP	2.480	1.2600	5.906	5.039	M20	.00	1
C6-SH-D40-5D-E-JHP	2.480	1.5750	7.283	6.417	M20	5.91	1

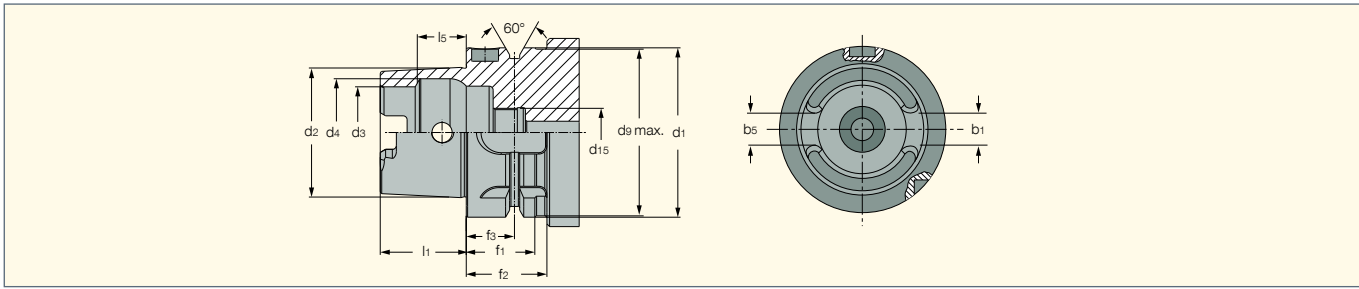
<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

For tools, see pages: AVC-D-SIR/L (773) • AVC-DDUNR/L (94) • AVC-DVUNR/L (94) • AVC-GAIR/L (371) • AVC-GEAIR/L (371) • AVC-PCLNR/L (93) • AVC-PCLXR/L (93) • AVC-SCLCR/L (91) • AVC-SDJCN-Y (74) • AVC-SDUCR/L (92) • AVC-SRDCN-Y (75) • AVC-SVLCR/L (92) • AVC-SVUCR/L (92)

### Spare Parts

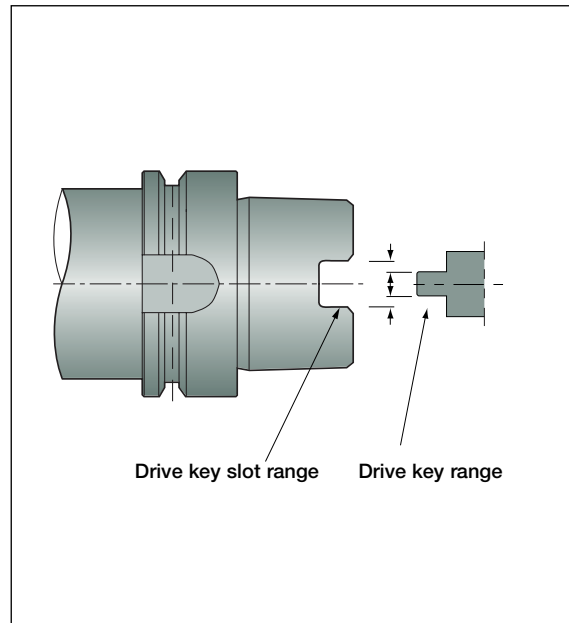
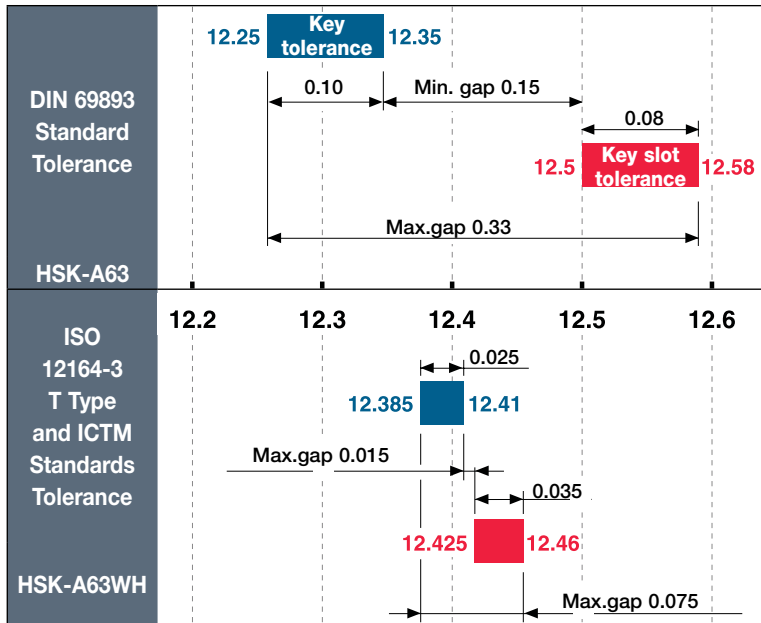
Designation		
C6-SH-D16-5D-E-JHP	HW 2.5	SR M3X10DIN912
C6-SH-D20-5D-E-JHP	HW 2.5	SR M3.5XL10-D5.5

### HSK-T (ISO 12164-3 T Type and ICTM Standards)



HSK-A WH	d1 h10	d2	d3 H10	d4 H11	d9 max	d15	l1-0.2	l5 Js10	b1±0.04	b5±0.035	f1 -0.1	f2 min	f3 ±0.1
63	63	48	34	40	62	M18X1	32	18.13	12.54	12.425	26	30	18
100	100	75	53	63	99	M24X1.5	50	28.56	20.02	19.91	29	34	20

### HSK A Vs HSK A WH Tolerance

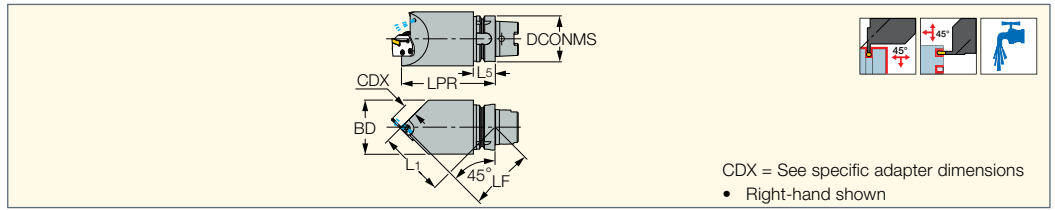


# MODULAR-GRIP

## HSK

### HSK A63WH-MAHDR-45

Holders with HSK Tapered Shanks for MODULAR-GRIP, Parting, Grooving and Facing Adapters



CDX = See specific adapter dimensions  
 • Right-hand shown

Designation	DCONMS	LPR	L1	L5	LF	BD	CP <sup>(1)</sup>	CDI <sup>(2)</sup>
<b>HSK A63WH MAHDR 45</b>	2.480	5.118	3.618	1.181	3.504	2.953	1450	1

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with ICTM standard (ISO 12164-3)

<sup>(1)</sup> Coolant pressure (PSI)

<sup>(2)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)



### Spare Parts

Designation							
<b>HSK A63WH MAHDR 45</b>	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT	HW 5.0	SR M6X6DIN551 14H/22H <sup>(b)</sup>	SATZ-M8X1-M3

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

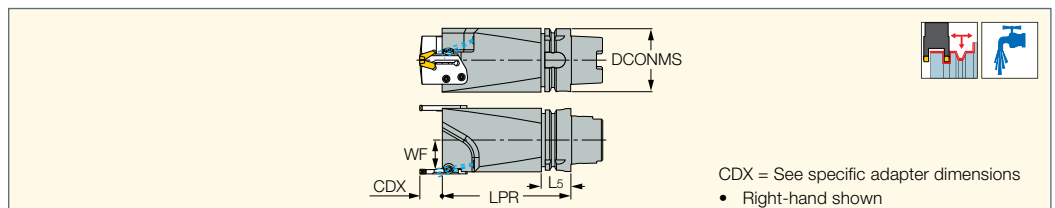
<sup>(b)</sup> Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag

# MODULAR-GRIP

## HSK

### HSK A63WH-MAHDOR

Holders with HSK Exchangeable Shanks for Parting, Grooving, Turning and Facing Adapters



CDX = See specific adapter dimensions  
 • Right-hand shown

Designation	DCONMS	WF	LPR	L5	CDI <sup>(1)</sup>							
<b>HSK A63WH MAHDOR</b>	2.480	1.142	5.118	1.181	1	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	EZ 125

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with ICTM standard (ISO 12164-3)

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in the attached plastic bag

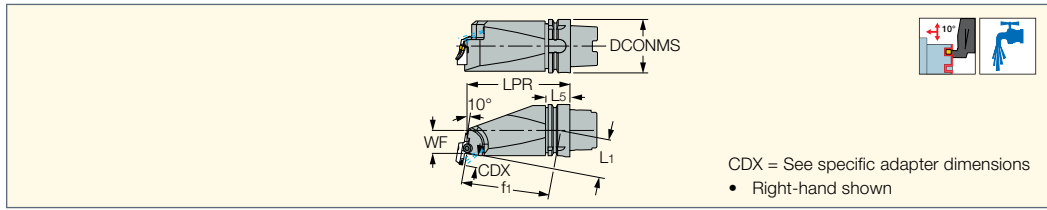
**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)

## MODULARGRIP

### HSK

#### HSK A63WH-MAHUR/L

Holders with HSK-T Shanks for 10° Mounting on Mill-Turn Machines for Parting, Grooving, Turning and Facing Adapters



CDX = See specific adapter dimensions  
• Right-hand shown

Designation	DCONMS	f1	WF	LPR	L1	L5	CP <sup>(1)</sup>	CDI <sup>(2)</sup>
<b>HSK A63WH MAHUR/L 10</b>	2.480	4.453	1.142	5.118	1.945	1.181	1450	1

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately) • Complies with ICTM standard (ISO 12164-3)

<sup>(1)</sup> Coolant pressure (PSI)

<sup>(2)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619) • HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)

### Spare Parts

Designation							
<b>HSK A63WH MAHUR/L 10</b>	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	EZ 125

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

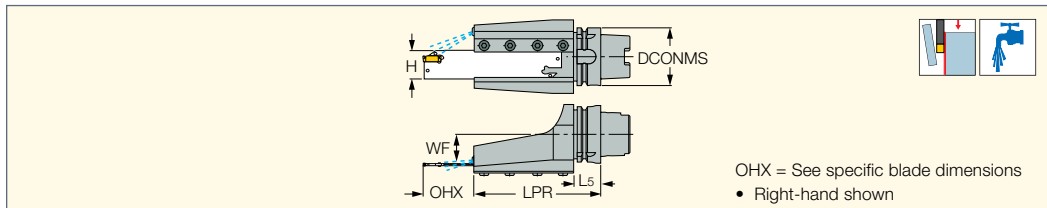
<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in a plastic bag

## TOOL BLOCKS HSK

### HSK A-WH-TBK-R/L

Blocks with HSK Exchangeable Tapered Shanks for Parting and Grooving Blades



OHX = See specific blade dimensions  
• Right-hand shown

Designation	DCONMS	LPR	L5	WF	H <sup>(1)</sup>	CP <sup>(2)</sup>	CDI <sup>(3)</sup>				
<b>HSK A63WH TBK 32R/L</b>	2.480	5.433	1.181	1.260	1.260	1450	1	BK 32-9 WEDG	SR M6X16 DIN912	HW 5.0	EZ 125

• Complies with ICTM standard (ISO 12164-3) • Not suitable for ATC for some Multi-Tasking Machine models, please consult your MTB

• A cooling tube must be used with all coolant through HSK spindles (should be ordered separately)

<sup>(1)</sup> Blade size H has to fit this dimension

<sup>(2)</sup> Coolant pressure (PSI)

<sup>(3)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGHN-DG (292) • CGHR/L-P8DG (292) • DGFH (275) • DGFHR/L (519) • DGFHR/L-B-D..(R/L) (521) • HFFH (613)

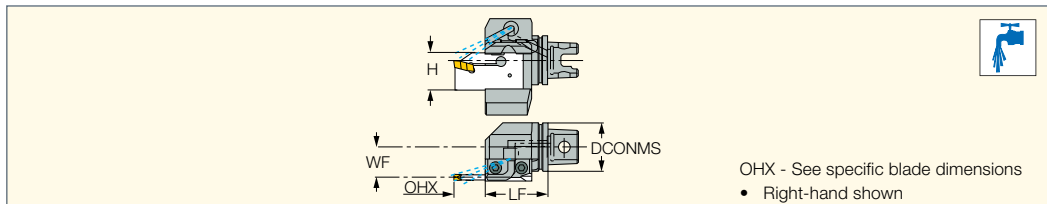
• HGFH (274) • PCHBR/L (332) • TGFH/R/L (356) • TGFHR/L (549) • TNFFH-IQ (638)

## ISO 26622-1 XMZ

### ISCARGRIP

#### IM-TBU

Blocks with an ISO 26622-1(\*) Tapered Shank for Parting and Grooving Blades



OHX = See specific blade dimensions  
• Right-hand shown

Designation	DCONMS	H	LF	WF	CDI <sup>(1)</sup>						
<b>IM40 TBU-32R</b>	1.575	1.260	2.008	.906	0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X6 DIN913	EZP 5	EZ 125
<b>IM50 TBU-32R</b>	1.968	1.260	2.402	1.181	0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X6 DIN913	EZP 5	EZ 125
<b>IM63 TBU-32L</b>	2.480	1.260	2.480	1.496	0	BKU 176 307	SR M6X25 DIN912	HW 5.0	SR M6X6 DIN913	EZP 5	EZ 125

• (\*) Tools with orientation holes in the flange groove can be supplied on request

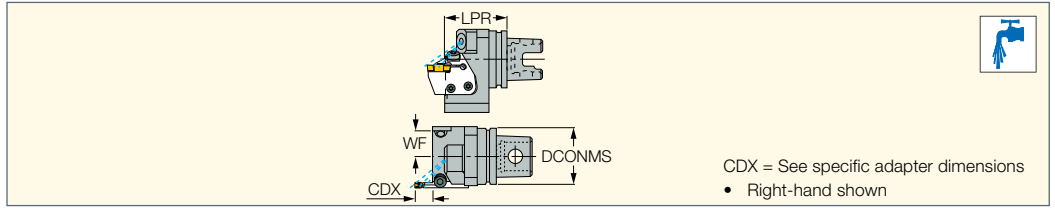
<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGHN-S (291) • TGHN-S (281)

**MODULARGRIP**  
**ISO 26622-1 XMZ**

**IM-MAHD**

Holders with an ISO 26622-1(\*) Tapered Shank for Parting, Grooving, Turning and Facing Adapters



CDX = See specific adapter dimensions  
• Right-hand shown

Designation	DCONMS	LPR	WF	CDI <sup>(1)</sup>
IM40 MAHD	1.575	1.693	.709	0
IM50 MAHD	1.968	1.850	.906	0
IM63 MAHD	2.480	2.047	1.142	0

• (\*) Tools with orientation holes in the flange groove can be supplied on request

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619)  
• HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)

**Spare Parts**

Designation									
IM-MAHD	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	SR 76-1022	EZA 125	EZ 125

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

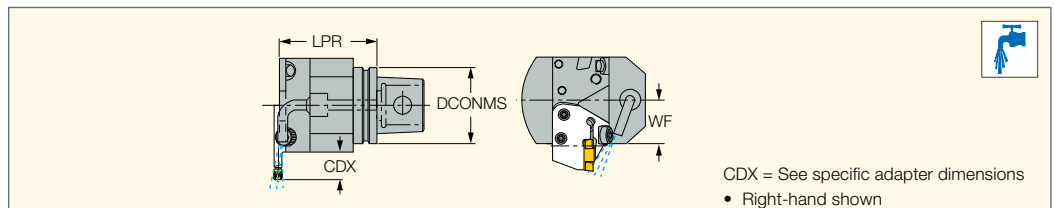
<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools bag

<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in a plastic bag

**MODULARGRIP**  
**ISO 26622-1 XMZ**

**IM-MAHPD**

Perpendicular Holders with an ISO 26622-1(\*) Tapered Shank for Parting, Grooving, Turning and Facing Adapters



CDX = See specific adapter dimensions  
• Right-hand shown

Designation	DCONMS	LPR	WF	CDI <sup>(1)</sup>
IM40 MAHPD	1.575	1.732	.984	0
IM50 MAHPD	1.968	1.772	1.024	0
IM63 MAHPD	2.480	1.772	1.299	0

• (\*) Tools with orientation holes in the flange groove can be supplied on request

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

**For tools, see pages:** CGPAD (290) • DGAD-B-D (531) • DGAD/HGAD (531) • HFPAD-3 (617) • HFPAD-4 (618) • HFPAD-5 (618) • HFPAD-6 (619)  
• HGPAD (274) • PCADR/L (330) • SCLCR-PAD (54) • SDJCR-PAD (59) • SVJCR-PAD (65) • SWAPR-PAD (72) • TGAD (552) • TGPAD (279)

**Spare Parts**

Designation								
IM-MAHPD	SR M5-04451	T-20/5	SR 14-519 <sup>(a)</sup>	SR M6X20-XT <sup>(b)</sup>	HW 5.0	SR M6X6DIN551 14H/22H <sup>(c)</sup>	EZP 5	EZ 125

<sup>(a)</sup> For DGAD, HGAD and PCADR/L adapters; supplied in the attached plastic bag

<sup>(b)</sup> For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

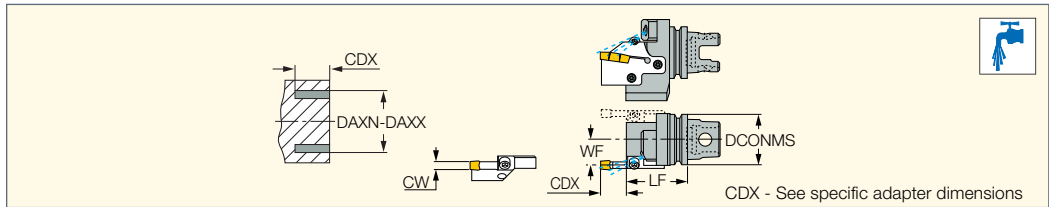
<sup>(c)</sup> Used to prevent chips from entering the upper locking screw hole when it is not used for the adaptation; supplied in a plastic bag

**ISO 26622-1 XMZ**

**ISCAR-GRIP**

**IM-GHAD-8**

Holders with an ISO 26622-1(\*)  
Tapered Shank for Grooving,  
Turning and Facing Adapters



Designation	DCONMS	CW	LF	WF	DAXN <sup>(1)</sup>	DAXX <sup>(2)</sup>	CDI <sup>(3)</sup>
IM50 GHAD-8	1.968	.315	2.362	1.024	3.15	20.08	0
IM63 GHAD-8	2.480	.315	2.559	1.280	3.15	20.08	0

• (\*) Tools with orientation holes in the flange groove can be supplied on request








<sup>(1)</sup> Minimum axial grooving diameter

<sup>(2)</sup> Maximum axial grooving diameter

<sup>(3)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

For tools, see pages: GADR/L-8 (295) • GAFG-R/L-8 (633) • PCADR/L 34N-RE (331)

**Spare Parts**

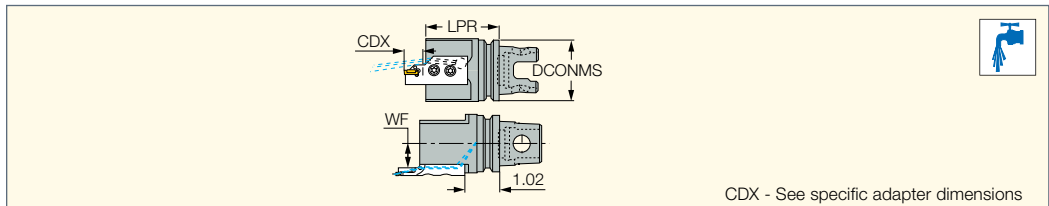
Designation							
IM-GHAD-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0	SR 76-1022	EZA 125	EZ 125





**ISO 26622-1 XMZ**

**ISCAR-GRIP**

**IM-HAD**

Holders with an ISO 26622-1(\*)  
Tapered Shank for Internal  
Facing Adapters



Designation	DCONMS	LPR	WF	CDI <sup>(1)</sup>				
IM40 HAD	1.575	2.362	.709	0	SR 14-519	T-20/3	HW 3.0	SR M4X6DIN912
IM50 HAD	1.968	2.362	.709	0	SR 14-519	T-20/3	HW 3.0	SR M4X6DIN912

• (\*) Tools with orientation holes in the flange groove can be supplied on request

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

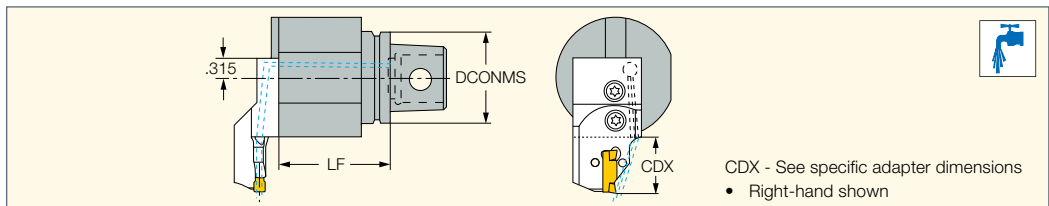
For tools, see pages: HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAER/L-3 (621) • HGAIR/L-3 (624)



**ISO 26622-1 XMZ**

**ISCAR-GRIP**

**IM-HAPR/L**

Perpendicular Holders with an  
ISO 26622-1 (\*) Tapered Shank  
for Internal Facing Adapters



Designation	DCONMS	LF	CDI <sup>(1)</sup>		
IM40 HAPR/L	1.575	1.968	0	SR 14-519	T-20/3
IM50 HAPR/L	1.968	1.968	0	SR 14-519	T-20/3

• (\*) Tools with orientation holes in the flange groove can be supplied on request

<sup>(1)</sup> 1 - Hole for data chip, 0 - Without hole for data chip

For tools, see pages: HFAER/L-4 (622) • HFAER/L-5T, 6T (622) • HFAIR/L-4 (624) • HFAIR/L-DG (625) • HGAER/L-3 (621) • HGAIR/L-3 (624)