

GROOVE-TURN



TABLE OF CONTENTS

Groove-Turn

Selection Guide	258
-----------------------	-----

External Tools and Inserts

HELI-GRIP Tools and Inserts	265
TOP-GRIP Tools and Inserts	270
CUT-GRIP Tools and Inserts	273
Tools, Adapters and Blades (short pocket).....	275
Tools, Adapters and Blades (long pocket)	285
Utility Inserts	287
Precision Ground Inserts.....	292

Inserts for Specific Applications and Materials

Cast Iron.....	298
Hardened Steel.....	299
High Temperature Alloys	300
Aluminum	300
Next to Shoulder.....	302
Undercutting.....	303
Pulley V Grooves	304
T/L Grooves	305
GDMW Tools and Inserts.....	306

Multi-Corner Grooving Tools and Inserts

PENTACUT (5 cutting edges).....	307
GTGA (3 cutting edges)	325

Tools and Inserts for Heavy Duty Grooving and Turning

DOVE-IQ-GRIP Tools and Inserts.....	328
SUMO-GRIP Tools and Inserts	330
CUT-GRIP Tools and Inserts	333
PENTA-CUT Tools and Inserts.....	335

Internal Tools and Inserts

CUT-GRIP Boring Bars Dmin 12.5 mm (GEPI Inserts)	337
CUT-GRIP Boring Bars Dmin 20 mm (GIPI/GIFI/GINI Inserts)	344
TOP-GRIP Boring Bars Dmin 20.5 mm	353
HELI-GRIP Boring Bars Dmin 26 mm	355
CUT-GRIP Boring Bars Dmin 64 mm (GDMY/F/N 8 mm Inserts).....	355
CUT-GRIP Blades Dmin 70 mm.....	355

Form Tools	360
------------------	-----

Broaching Tools.....	439
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Tools For Aluminum Wheels.....	443
--------------------------------	-----

Tools for Miniature Parts	361
---------------------------------	-----

External Tools and Inserts

Holders

Internal Boring Bars and Inserts

USER GUIDE	419
-------------------------	------------

PARTING.....	459
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FACE GROOVING AND TURNING.....	549
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TOOL BLOCKS.....	615
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EXCHANGEABLE HEAD HOLDERS	621
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Information to Select the Correct Insert

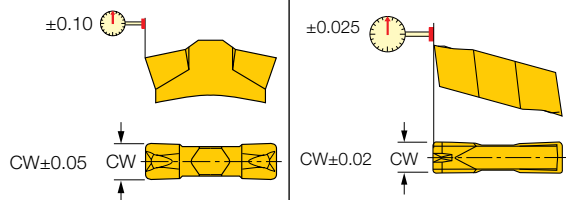
ISCAR has an extensive variety of GROOVE-TURN products. In many cases, you can perform your operation by using several different products. In order to make the optimal selection, these basic parameters need to be defined:


- Insert width [CW]
- Necessary tolerance on the insert
- Maximum depth of grooving [CDX]
- Application requirement grooving and turning, or only grooving (E-Type or not)

According to these parameters:

- Select the most suitable product according to the tables on pages 259-260.
- Select the most suitable chipformer according to the information on pages 261-262.

Utility Inserts		Precision Grooving Inserts	
Pressed to Size Inserts		Peripheral Ground Inserts	
Width	± 0.05	Width	± 0.02
Repeatability	± 0.10	Repeatability	± 0.025



 If you don't need the tight tolerance, save money and select a utility insert (less expensive).

What is an E-type GROOVE-TURN Insert?

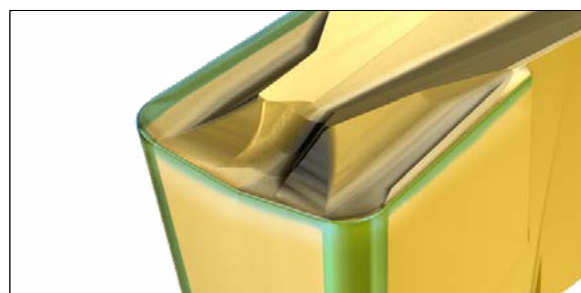
E-type inserts are precision ground grooving inserts with **turning** capability.

These inserts include the letter **E** in their description. (example: GIP 3.00**E**-0.4). This is to distinguish them from precision ground inserts which are not suitable for turning operations and don't include an **E** in their description. (example: GIP 3.00-0.2)

- E-type inserts usually have a larger corner radius
- E-type inserts have a larger honing size



Precision Grooving Insert



E-Type GROOVE-TURN

External GROOVE-TURN Insert Type

	Insert		Properties				CW range	CDX	Page
			Precision Ground	Utility	Number of Cutting Edges	Option for Turning			
PENTACUT		PENTACUT Size 17	✓		5		0.25-3.18	4	309-311
		PENTACUT Size 24	✓		5		0.5-4.23	1-6.5	319-323
		PENTACUT Size 34	✓		5		1.5-4.0	5-10	324-325
HELI-GRIP		HELI-GRIP		✓	2	✓	3-6.35	No depth limit	269-270
TOP-GRIP		TOP-GRIP		✓	2	✓	3-6.35	10.5-18.6	272
CUT-GRIP		Short Pocket		✓	1	✓	3-12	No depth limit	287-291
		Short Pocket	✓		2	✓*	0.5-11.0	13**	292-301
		Long Pocket		✓	2	✓*	8.0	27	288-291
		Long Pocket	✓		2	✓	8.0-11.0	27	292-298
HEAVY DUTY		SUMO-GRIP		✓	1	✓	6-14	No depth limit	333
		TIGER		✓	1		10-20	No depth limit	329, 334

* Not on all the products

** On most items

Internal GROOVE-TURN Insert Type

	Insert	Tool	Insert	Utility	Precision	Dmin	CDX	CW	Page
PICCO CUT		PICCO/ MG PCO	PICCO		✓	2.0-7.0	0.4-2.5	0.5-2	399-411
CHAMGROOVE		MG/MGCH	GIQR 8		✓	8.0	0.7-1.5	0.5-4	414-415
		MG/MGCH	GIQR 11		✓	11.0	1.5-2.3	0.75-5	416
		MGCH	GIQR 11-15		✓	15.0	6.3	1-3	417
CUTGRIP		GEHIR/L	GEPI/ GEMI	✓	✓	12.5-16	2.4-3.0	1-3.18	340-343
		GHIR/L	GIF/GIPI/ GINI/GIMIY	✓	✓	20-49	2.5-8.0	1.53-6.35	344, 349-352
TOPGRIP		TGIR/L	TGMF	✓		20.5-57	5.5-17.5	3-6.35	353, 272
HELI GRIP		HELIIR/L	GRIP	✓		26-53	5-12	3-6.35	355, 269-270
CUTGRIP		GHIR/L 40-8	GDMF/ GDMY/ GDMN...	✓	✓	65	15-20	8-11	355, 288-289
		GHIC/CGHN	GIP/GIF/GIMN/GIMF/ GIA...	✓	✓	70-250	10-26	2.8-6.35	355-358, 292-300

Chipbreaker Selection

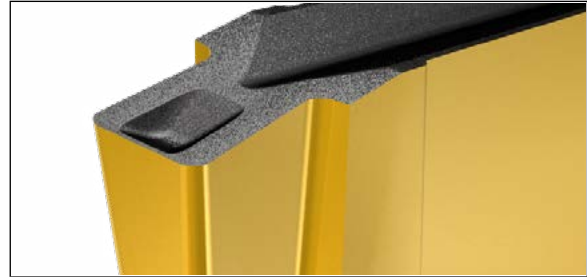
T-Type

- Optimal performance in a wide range of materials and cutting conditions
- High efficiency in full grooving, partial grooving and turning applications
- Utility inserts only
- Width range External: 2.39-6.35 mm



G-Type

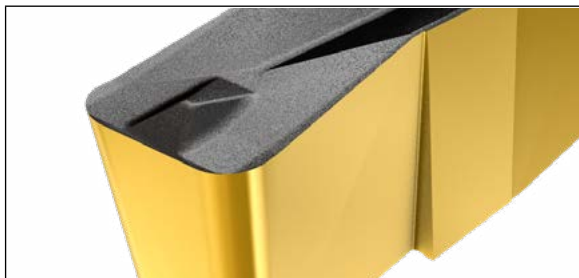
- Efficient chipbreaker for narrow width grooves
- Width range: 1-2.3 mm
- No option for turning



General Use

P-Type

- Very "open" geometry
- Medium to high feed in turning and grooving
- Large variety of standard sizes
- Precision ground inserts only
- Width range External: 2.39-6.35 mm
Internal: 2.39-6.35 mm



Y-Type

- General use in grooving and turning
- Positive top rake reduces cutting forces
- Excellent for long shafts
- Eliminates vibrations
- Both precision ground and utility inserts
- Width range External: 8-20 mm



F-Type

- First choice in grooving
- Low to medium feeds in grooving and turning
- Both precision ground and utility inserts
- Width range External: 3.0-10 mm Internal: 3-6 mm



HG-Y-Type

- General use in grooving and turning
- Efficient for a wide range of materials and cutting conditions
- Utility inserts only
- Width range External: 3-6.35 mm Internal: 3-6.35 mm



Chipbreaker Selection**Problematic and Specific Materials****N-Type**

- First choice in grooving of problematic, soft & gummy materials
- Very low to medium feeds (from 0.05 mm/rev)
- Both precision ground and utility inserts
- Option for turning
- Width range External: 3-8 mm Internal: 2-5 mm

**M-Type**

- Unique chipbreaker with splitter chips are split into 3 segments
- Efficient for problematic, soft & gummy materials
- Option for light turning
- Width 8 mm

**A-Type**

- First choice for machining cast Iron
- Peripheral 15° T-land on a flat top
- Exerts high cutting forces, therefore suitable for stable conditions
- Precision ground inserts only
- Width range External: 3-8 mm

**PA-Type**

- First choice for machining aluminum
- High positive rake
- Peripheral ground and polished top rake with a very sharp edge
- Suitable also for finish operations on titanium and heat resistant alloys
- Width range External: 3-8 mm

**CW-Type**

- Unique chipformer for heavy-duty grooving
- Very wide chipbreaking range on carbon and alloy steel
- Width range 14, 17 and 20 mm



Chipbreaker Selection

Profiling (full radius)

Y-Type

- First choice in profiling
- Positive top rake reduces cutting forces
- Excellent for long shafts
- Eliminates vibrations
- Both precision ground and utility inserts
- Width range External: 3-12 mm Internal: 2-3 mm



YF-Type

- First choice for profiling ductile materials
- Utility inserts only
- Width range External: 3-8 mm



PA-Type

- First choice for profiling aluminum
- High positive rake
- Peripheral ground and polished top rake with a very sharp edge
- Suitable also for finish operations on titanium and heat resistant alloys
- Width range External: 3-8 mm



YZ-Type

- First choice for profiling ductile aluminum
- Peripheral ground and polished top rake with a very sharp edge
- Width range External: 3-8 mm



H-Type

- Unique chipbreaker for heavy-duty profiling
- Negative T-land for extra edge toughness
- Suitable for heavy interrupted cuts and cast iron machining
- Width: 12 mm



Chipbreaker Width Range







External

Insert Width										
12				20						
11										
10										
9										
8										
7										
6		6.35				6.35				
5										
4										
3			3.48							
2	2.3	2.39								
1										
	G	P	F	Y	N	HG-Y	M	A	PA	T

Internal

Insert Width				
7				
6	6.35			6.35
5				
4				
3				
2	2.39			
1				
	P	F	N	HG-Y

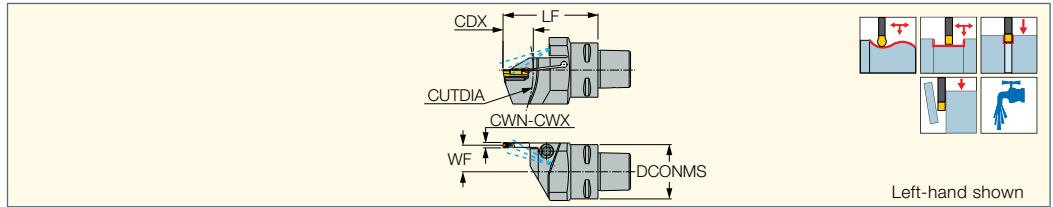
Suitable Chipbreaker and Required Feed Range for Workpiece Material




	Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
High	 P	P	P		
	 HG-Y	HG-Y	Y	PA*	A*
	 Y	Y	F	P	P
	 F	F	PA (finish only)		HG
	 T*	T*	T	T	
Low	 N				F

* First Choice

C#-HELIR/L

External Tools for Turning,
Grooving and Parting with
CAMFIX Exchangeable Shanks



Designation	DCONMS	CWN ⁽¹⁾	CWX ⁽²⁾	WF	LF	CUTDIA ⁽³⁾	Insert	CP ⁽⁴⁾	CDI			
C4 HELIR/L 3T20	40.00	3.00	3.18	20.00	65.00	40.0	GRIP 3, HGN 3	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C4 HELIR/L 4T25	40.00	4.00	4.76	19.60	70.00	50.0	GRIP 4, DGN 4	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C5 HELIR/L 3T20	50.00	3.00	3.18	25.30	65.00	40.0	GRIP 3, HGN 3	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C5 HELIR/L 4T25	50.00	4.00	4.76	24.90	70.00	50.0	GRIP 4, DGN 4	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C5 HELIR/L 5T25	50.00	5.00	5.00	24.40	70.00	50.0	GRIP 5, DGN 5	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 3T20	63.00	3.00	3.18	31.80	65.00	40.0	GRIP 3, HGN 3	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 4T25	63.00	4.00	4.76	31.40	70.00	50.0	GRIP 4, DGN 4	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 5T25	63.00	5.00	5.00	30.90	70.00	50.0	GRIP 5, DGN 5	100	1	SR M6X16 DIN912	HW 5.0	EZ 104
C6 HELIR/L 6T30	63.00	6.00	6.35	30.40	85.00	60.0	GRIP 6, DGN 6	100	1	SR M6X16 DIN912	HW 5.0	EZ 104

• The depth of cut (CDX) for grooving is limited by the part diameter Dmax, for grooving depth capacity, see table below

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Maximum parting diameter

⁽⁴⁾ Coolant pressure (Bar)

For inserts, see pages: GRIP (269) • GRIP (full radius) (270) • DGN/DGNC/DGNM-C (481) • HGN-C (489) • DGR/L-C DGRC/LC-C (482)

• DGN/DGNM-J/JS/JT (483) • HGN-J (489) • HGR/L-C (489) • HGR/L-J/JS (490) • DGR/L-J/JS (484) • DGN-MF (485) • DGN-UT/UA (487)

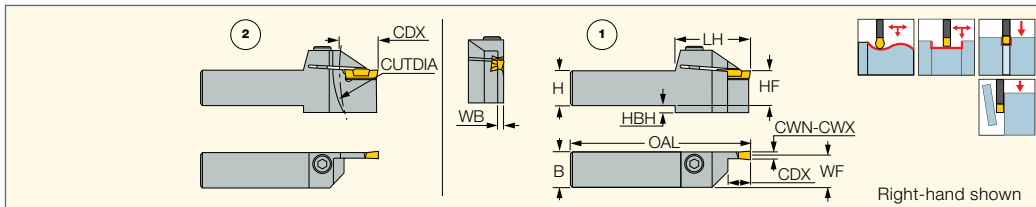
• DGN-W (482) • HGN-UT (490)

Grooving Depth Capacity

Designation	ØDmax																			
	∞	∞	∞	∞	1151	384	231	167	131	109	94	83	—	—	—	—	—	—	—	—
C4 HELIR/L 3T20	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1127	376	227	163	128	107	—	—	—
C4 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞
C5 HELIR/L 3T20	∞	∞	∞	∞	1277	426	257	185	145	120	103	91	82	—	—	—	—	—	—	—
C5 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1301	434	261	188	148	122	105	—	—
C5 HELIR/L 5T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1301	434	261	188	148	122	105	—	—
C6 HELIR/L 3T20	∞	787	394	264	199	161	136	118	105	95	87	81	—	—	—	—	—	—	—	—
C6 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	∞	1957	653	393	282	221	182	156	137	122	111	102	—	—
C6 HELIR/L 5T25	∞	∞	∞	∞	∞	∞	∞	∞	1957	653	393	282	221	182	156	137	122	111	102	—
C6 HELIR/L 6T30	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1879	627	377	271	212	175	150	131
CDX	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28



HELIR/L
External Holders for Turning,
Grooving and Parting



Designation	CDX ⁽²⁾	CWN ⁽³⁾	CWX ⁽⁴⁾	Fig.	CUTDIA ⁽⁵⁾	H	HF	B	WF	OAL	LH	WB	HBH	Insert
HELIR/L 1212-3T12	12.00	3.00	3.18	1.	-	12.0	12.0	12.0	10.80	135.00	30.0	2.40	4.0	GRIP-3..., HG.-3
HELIR/L 1616-3T12	12.00	3.00	3.18	1.	-	16.0	16.0	16.0	14.80	135.00	30.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 2020-3T12	12.00	3.00	3.18	1.	-	20.0	20.0	20.0	18.80	135.00	29.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 2525-3T12	12.00	3.00	3.18	1.	-	25.0	25.0	25.0	23.80	135.00	29.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 1616-4T12	12.00	4.00	4.76	1.	-	16.0	16.0	16.0	14.40	135.00	29.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2020-4T12	12.00	4.00	4.76	1.	-	20.0	20.0	20.0	18.40	135.00	29.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2525-4T12	12.00	4.00	4.76	1.	-	25.0	25.0	25.0	23.40	135.00	29.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2020-5T12	12.00	5.00	5.00	1.	-	20.0	20.0	20.0	17.90	135.00	29.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-5T12	12.00	5.00	5.00	1.	-	25.0	25.0	25.0	22.90	135.00	29.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-6T12	12.00	6.00	6.35	1.	-	25.0	25.0	25.0	22.40	135.00	29.0	5.20	-	GRIP-6..., DG.-6
HELIR/L 1616-3T20 ⁽¹⁾	-	3.00	3.18	2.	40.0	16.0	16.0	16.0	14.80	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 2020-3T20 ⁽¹⁾	-	3.00	3.18	2.	40.0	20.0	20.0	20.0	18.80	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 2525-3T20 ⁽¹⁾	-	3.00	3.18	2.	40.0	25.0	25.0	25.0	23.80	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 3232-3T20 ⁽¹⁾	-	3.00	3.18	2.	40.0	32.0	32.0	32.0	30.80	150.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 1616-4T20	-	4.00	4.76	2.	40.0	16.0	16.0	16.0	14.40	140.00	38.0	3.20	4.0	GRIP-4..., DG.-4
HELIR/L 2020-4T25	-	4.00	4.76	2.	50.0	20.0	20.0	20.0	18.40	140.00	42.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2525-4T25	-	4.00	4.76	2.	50.0	25.0	25.0	25.0	23.40	140.00	42.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 3232-4T25	-	4.00	4.76	2.	50.0	32.0	32.0	32.0	30.40	150.00	43.0	3.20	-	GRIP-4..., DG.-4
HELIR/L 2020-5T25	-	5.00	5.00	2.	50.0	20.0	20.0	20.0	17.90	140.00	42.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-5T25	-	5.00	5.00	2.	50.0	25.0	25.0	25.0	22.90	140.00	42.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 3232-5T25	-	5.00	5.00	2.	50.0	32.0	32.0	32.0	29.90	150.00	43.0	4.20	-	GRIP-5..., DG.-5
HELIR/L 2525-6T30	-	6.00	6.35	2.	60.0	25.0	25.0	25.0	22.40	140.00	51.4	5.20	-	GRIP-6..., DG.-6
HELIR/L 3232-6T30	-	6.00	6.35	2.	60.0	32.0	32.0	32.0	29.40	150.00	51.4	5.20	-	GRIP-6..., DG.-6

• For tool type as shown in Fig.2, CDX for grooving is limited by the part diameter Dmax, for grooving depth capacity, see table below

• For user guide, see pages 419-428, 432-436

⁽¹⁾ DGN inserts are not suitable for this tool

⁽²⁾ Does not depend on the workpiece diameter

⁽³⁾ Minimum cutting width

⁽⁴⁾ Maximum cutting width

⁽⁵⁾ Maximum parting diameter

For inserts, see pages: GRIP (269) • GRIP (full radius) (270) • DGN/DGNC/DGNM-C (481) • HGN-C (489) • DGR/L-C DGRC/LC-C (482)

• DGN/DGNM-J/JS/JT (483) • HGN-J (489) • HGR/L-C (489) • HGR/L-J/JS (490) • DGR/L-J/JS (484) • DGN-UT/UA (487) • DGN-W (482)

• HGN-UT (490) • DGN-MF (485)

Spare Parts

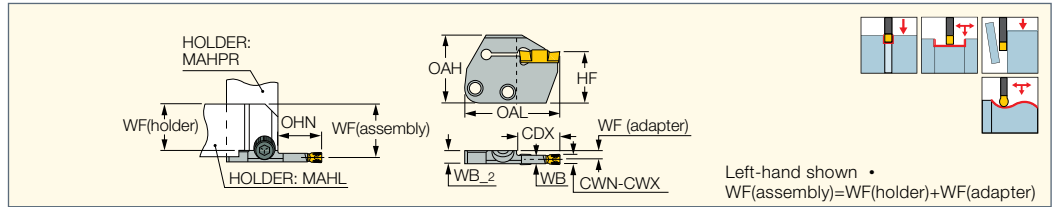
Designation		
HELIR/L 1212-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 1616-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2525-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 1616-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2525-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-5T12	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-5T12	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-5T12	SR M6X20 DIN912	HW 5.0
HELIR/L 2525-6T12	SR M6X20 DIN912	HW 5.0
HELIR/L 1616-3T20	SR M6X20 DIN912	HW 5.0
HELIR/L 2020-3T20	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-3T20	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-3T20	SR M6X20 DIN912	HW 5.0
HELIR/L 1616-4T20	SR M6X20 DIN912	HW 5.0
HELIR/L 2020-4T25	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-4T25	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-4T25	SR M6X20 DIN912	HW 5.0
HELIR/L 2020-5T25	SR M6X16 DIN912	HW 5.0
HELIR/L 2525-5T25	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-5T25	SR M6X20 DIN912	HW 5.0
HELIR/L 2525-6T30	SR M6X20 DIN912	HW 5.0
HELIR/L 3232-6T30	SR M6X20 DIN912	HW 5.0

Depth Capacity

Designation	ØDmax														
HELIR/L 1616-3T20	∞	∞	∞	∞	∞	∞	194	80	-	-	-	-	-	-	-
HELIR/L 2020-3T20	∞	∞	∞	∞	∞	299	123	80	-	-	-	-	-	-	-
HELIR/L 2525-3T20	∞	∞	∞	815	229	136	99	79	-	-	-	-	-	-	-
HELIR/L 3232-3T20	∞	604	261	169	127	103	89	79	-	-	-	-	-	-	-
HELIR/L 1616-4T20	∞	∞	∞	∞	∞	505	132	78	-	-	-	-	-	-	-
HELIR/L 2020-4T20	∞	∞	∞	∞	∞	∞	∞	∞	∞	185	98	-	-	-	-
HELIR/L 2525-4T20	∞	∞	∞	∞	∞	∞	∞	368	233	136	98	-	-	-	-
HELIR/L 3232-4T20	∞	∞	∞	∞	∞	626	270	175	149	-	98	-	-	-	-
HELIR/L 2020-5T20	∞	∞	∞	∞	∞	∞	∞	∞	∞	182	98	-	-	-	-
HELIR/L 2525-5T20	∞	∞	∞	∞	∞	∞	∞	368	233	136	98	-	-	-	-
HELIR/L 3232-5T20	∞	∞	∞	∞	∞	626	270	175	149	-	98	-	-	-	-
HELIR/L 2525-6T20	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	354	135	98	-	-
HELIR/L 3232-6T20	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1718	345	194	121	98
CDX	6.5	8.0	10.0	12.0	14.0	16.0	18.0	20.0	21.0	23.0	25.0	28.0	30.0	-	-

HELI-GRIP
MODULAR-GRIP

HGPAD
Adapters for Turning,
Grooving and Parting

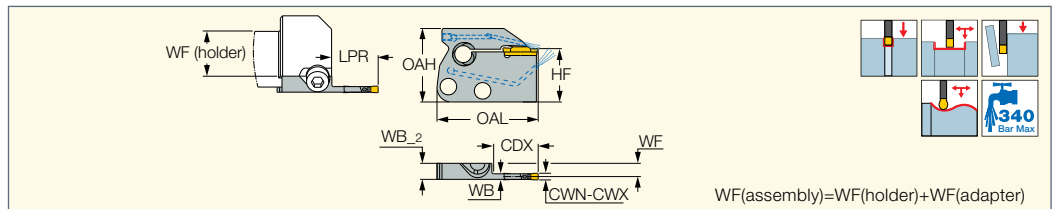


Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	OAH ⁽⁴⁾	WF ⁽⁵⁾	WB	WB_2	OAL	OAH	HF	Insert
HGPAD 3R/L-T12	3.00	3.20	12.00	15.2	4.80	2.50	6.0	39.70	32.0	24.0	GRIP 3, HGN 3
HGPAD 3R/L-T20	3.00	3.20	20.00	21.2	4.80	2.50	6.0	45.70	32.0	24.0	GRIP 3, HGN 3
HGPAD 4R/L-T12	4.00	4.76	12.00	18.7	4.40	3.30	6.0	43.20	32.0	24.0	GRIP 4, DGN 4
HGPAD 4R/L-T20	4.00	4.76	20.00	21.2	4.40	3.30	6.0	45.70	32.0	24.0	GRIP 4, DGN 4
HGPAD 5R/L-T12	5.00	5.00	12.00	18.7	3.90	4.20	6.0	43.20	32.0	24.0	GRIP 5, DGN 5
HGPAD 5R/L-T20	5.00	5.00	20.00	21.2	3.90	4.20	6.0	45.70	32.0	24.0	GRIP 5, DGN 5
HGPAD 6R/L-T12	6.00	6.35	12.00	18.7	3.40	5.20	6.0	43.20	32.0	24.0	GRIP 6, DGN 6
HGPAD 6R/L-T22	6.00	6.35	22.00	23.2	3.40	5.20	6.0	47.70	32.0	24.0	GRIP 6, DGN 6

- DO-GRIP DGN, HGN inserts can be used for grooving only • For user guide, see pages 419-428, 432-436
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- (4) Minimum overhang
- (5) WF(adapter)
- For inserts, see pages: GRIP (269) • GRIP (full radius) (270) • DGN/DGNC/DGNM-C (481) • HGN-C (489) • DGN/DGNM-J/JS/JT (483) • HGN-J (489) • HGR/L-C (489) • HGR/L-J/JS (490) • DGN-MF (485) • DGN-UT/JA (487) • DGN-W (482) • HGN-UT (490)

HELI-GRIP JETCUT
MODULAR-GRIP

HGPAD-JHP
Adapters with High-Pressure
Coolant Channels Carrying
HELI-GRIP Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	LPR	WF	WB	WB_2	OAL	OAH	HF
HGPAD 3R/L-T20-JHP	3.00	3.20	20.00	21.0	5.95	2.50	7.2	45.70	33.0	24.0
HGPAD 4R/L-T20-JHP	4.00	4.76	20.00	21.0	5.55	3.30	7.2	45.70	33.0	24.0
HGPAD 5R/L-T20-JHP	5.00	5.00	20.00	21.0	5.10	4.20	7.2	45.70	33.0	24.0
HGPAD 6R/L-T22-JHP	6.00	6.35	22.00	23.0	4.60	5.20	7.2	47.70	33.0	24.0

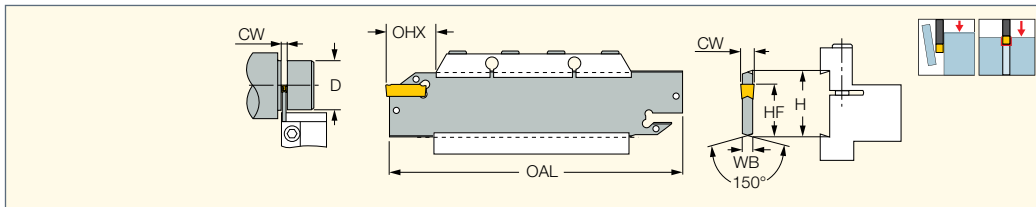
- For user guide and accessories, see pages 419-436
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- For inserts, see pages: DGN-MF (485) • GRIP (269) • GRIP (full radius) (270) • DGN/DGNC/DGNM-C (481) • HGN-C (489) • DGN/DGNM-J/JS/JT (483) • HGN-J (489) • HGR/L-C (489) • HGR/L-J/JS (490) • DGN-UT/JA (487) • HGN-UT (490) • DGN-W (482)
- For holders, see pages: ABC MAHDR-#-XL-JHP (782) • C#-MAHD-JHP (624) • C#-MAHPD-JHP (625) • MAHR/L-JHP-MC (280) • MS##-##-MG-JHP (757) • MS-ES#####-GWS-MG-JHP (759) • TR TNK36 MAHDL-R-XL-JHP (782) • TR45 MAHDR-#-XL-JHP (781) • TR45TNL MAHDN-R-XL-JHP (781) • V## MAHD#-#-XL-##-JHP (778) • V## MAHD-XL-JHP (779) • MAHPR/L-JHP (281) • MAHR/L-JHP (279)

Flow Rate vs. Pressure

Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
HGPAD 3R/L-T20-JHP	5-7	6-8	7-9
HGPAD 4R/L-T20-JHP	9-11	10-12	11-13
HGPAD 5R/L-T20-JHP	11-13	12-14	13-15
HGPAD 6R/L-T22-JHP	16-18	16-18	19-21



HGFH
Parting and Grooving Blades
for 3 mm GRIP Inserts



Designation	H	CW	WB	OAL	HF	OHX ⁽¹⁾	CUTDIA ⁽²⁾	
HGFH 26-3	26.0	3.00	2.40	110.00	21.4	37.5	75.0	EDG 23B*
HGFH 32-3	32.0	3.00	2.40	150.00	24.8	50.0	100.0	EDG 23B*

⁽¹⁾ Maximum overhang

⁽²⁾ Maximum parting diameter

* Optional, should be ordered separately

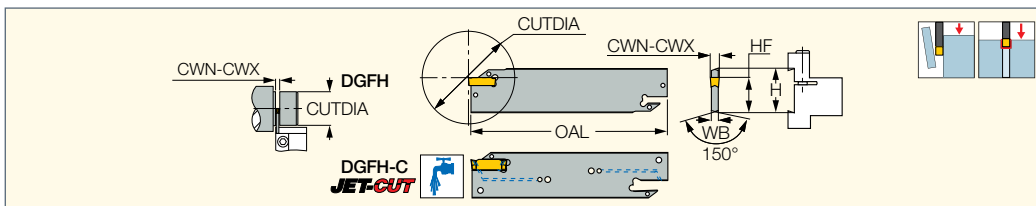
For inserts, see pages: GRIP (269) • GRIP (full radius) (270) • HGN-C (489) • HGR/L-C (489) • HGN-J (489) • HGN-UT (490)

• HGR/L-J/JS (490)

For holders, see pages: C#-TBK-R/L (623) • HSK A-WH-TBK-R/L (632) • SGTBF (618) • SGTBR/L (617) • SGTBU/SGTBN (616) • UBHCR/L (618)



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



Designation	H	CWN ⁽⁴⁾	CWX ⁽⁵⁾	WB	OAL	HF	CUTDIA	Insert
DGFH 26-1.4	26.0	1.40	1.40	2.50 ⁽⁷⁾	110.00	21.4	26.0	DG. 14..
DGFH 26-2 ⁽¹⁾	26.0	1.90 ⁽⁶⁾	2.50	1.60	110.00	21.4	39.0 ⁽⁶⁾	DG. 1.../DG. 2...
DGFH 26-3 ⁽¹⁾	26.0	3.00 ⁽⁶⁾	3.18	2.40	110.00	21.4	39.0 ⁽⁶⁾	DG. 1.../DG. 3...
DGFH 26C-3 ⁽²⁾	26.0	3.00	3.18	2.40	110.00	21.4	39.0 ⁽⁶⁾	DGNC/DGRC/DGLC 3...
DGFH 26-4	26.0	4.00	4.00	3.20	110.00	21.4	80.0	DG. 4.../GRIP 4...
DGFH 32-1.4	32.0	1.40	1.40	2.50 ⁽⁷⁾	150.00	24.8	26.0	DG. 14
DGFH 32-2 ⁽¹⁾	32.0	1.90 ⁽⁶⁾	2.50	1.80	150.00	24.8	39.0 ⁽⁶⁾	DG. 1.../DG. 2...
DGFH 32-3 ⁽¹⁾	32.0	3.00 ⁽⁶⁾	3.18	2.40	150.00	24.8	39.0 ⁽⁶⁾	DG. 1.../DG. 3...
DGFH 32C-3 ⁽²⁾	32.0	3.00	3.18	2.40	150.00	24.8	39.0 ⁽⁶⁾	DGNC/DGRC/DGLC 3...
DGFH 32-4	32.0	4.00	4.00	3.20	150.00	24.8	100.0	DG. 4.../GRIP 4...
DGFH 32C-4 ⁽³⁾	32.0	4.00	4.00	3.20	150.00	24.8	69.0	DGNC/DGRC/DGLC 4...
DGFH 32-5	32.0	5.00	5.00	4.00	150.00	24.8	120.0	DG. 5.../GRIP 5...
DGFH 32-6	32.0	6.00	6.35	5.20	150.00	24.8	120.0	DG. 6.../GRIP 6...
DGFH 45-3	45.0	3.00 ⁽⁶⁾	3.18	2.40	225.00	38.0	160.0	DG. 1.../DG. 3...
DGFH 45-4	45.0	4.00	4.10	3.20	225.00	38.0	160.0	DG. 4.../GRIP 4...
DGFH 45-5	45.0	4.80	5.00	4.00	225.00	38.0	160.0	DG. 5.../GRIP 5...
DGFH 45-6	45.0	6.00	6.40	5.20	225.00	38.0	160.0	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 419-428, 432-436

⁽¹⁾ For CUTDIA 50 mm, use single-ended insert (should be modified by the user)

⁽²⁾ Blades with frontal coolant holes (JET-CUT) • For CUTDIA 50 mm, 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 1.0 mm ⁽⁸⁾ Maximum diameter with double-sided inserts.

For inserts, see pages: DGN-LF/LFT (485) • DGN-MF (485) • DGN/DGNC/DGNM-C (481) • DGR/L-C DGRC/LC-C (482) • DGN/DGNM-J/JS/JT (483)

• DGR/L-J/JS (484) • DGN-P (487) • DGN-UT/UA (487) • DGN-W (482) • DGN-WP (488) • DGN-Z (486) • DGR-P (488) • DGR-WP (488)

• DGR-Z/ZS (486) • GRIP (269) • GRIP (full radius) (270)

For holders, see pages: C#-TBK-R/L (623) • HSK A-WH-TBK-R/L (632) • SGTBF (618) • SGTBK (617) • SGTBR/L (617) • SGTBU/SGTBN (616) • UBHCR/L (618)

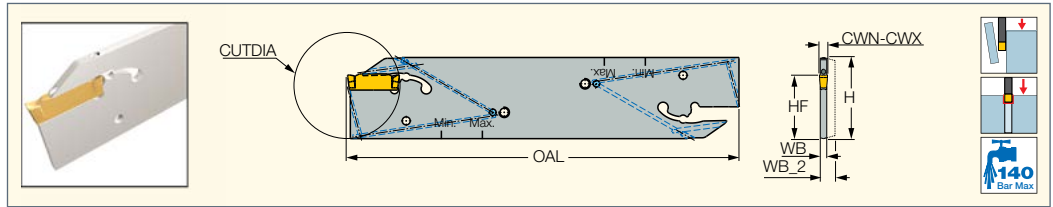
Spare Parts

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

DGFH-JHP

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



Designation	CWN ⁽²⁾	CWX ⁽³⁾	WB	WB_2	OAL	H	HF	CUTDIA	Insert			
DGFH 32-2-JHP ⁽¹⁾	1.90 ⁽⁴⁾	2.50	1.80	2.5	150.00	32.0	24.8	39.0	DG. 1.../DG. 2...		SGC 340	EDG 33A-JHP*
DGFH 32-3-JHP	3.00 ⁽⁴⁾	3.18	2.50	-	152.00	32.0	24.8	90.0	DG. 1.../DG. 3... SR M2.0X2.5DIN916		SGC 340	EDG 33A-JHP*
DGFH 32-4-JHP	4.00	4.00	3.20	-	152.00	32.0	24.9	90.0	DG. 4.../GRIP 4... SR M2.0X2.5DIN916		SGC 340	EDG 33A-JHP*
DGFH 32-5-JHP	5.00	5.00	4.00	-	152.00	32.0	24.9	90.0	DG. 5.../GRIP 5... SR M2.0X2.5DIN916		SGC 340	EDG 33A-JHP*
DGFH 32-6-JHP ⁽¹⁾	6.00	6.35	5.20	-	160.00	32.0	24.9	90.0	DG. 6.../GRIP 6...		SGC 340	EDG 33A-JHP*

• For user guide and accessories, see pages 419-436

⁽¹⁾ Only an upper channel

⁽²⁾ Minimum cutting width

⁽³⁾ Maximum cutting width

⁽⁴⁾ For DG. 1... insert, modify holder

* Optional, should be ordered separately

For inserts, see pages: DGN-LF/LFT (485) • DGN-MF (485) • DGN-P (487) • DGN-UT/UA (487) • DGN-W (482) • DGN-WP (488) • DGN-Z (486)

• DGN/DGNC/DGNM-C (481) • DGN/DGNM-J/JS/JT (483) • DGR-P (488) • DGR-WP (488) • DGR-Z/ZS (486) • DGR/L-C DGRC/LC-C (482)

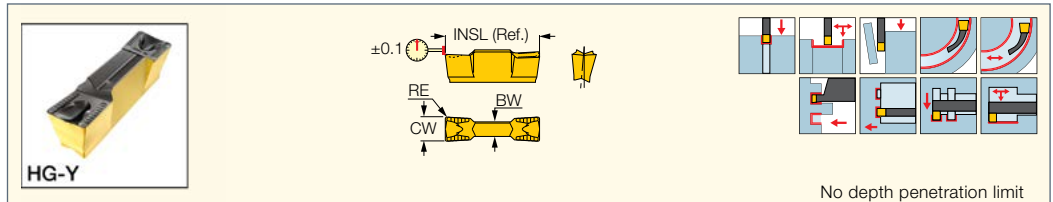
• DGR/L-J/JS (484) • GRIP (269) • GRIP (full radius) (270)

For holders, see pages: TGTBU-JHP (497)

HELIGRIP

GRIP

Utility Double-Ended Inserts for External, Internal and Face Machining



No depth penetration limit

Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data						
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	INSL	BW	IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC806	IC807	IC804	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3002Y	3.00	0.20	0.05	0.050	15.80	2.30	●	●	●	●	●	●	●	●	●	●	0.25-1.80	0.14-0.18	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 3003Y	3.00	0.30	0.05	0.050	15.80	2.30	●	●	●	●	●	●	●	●	●	●	0.40-1.80	0.15-0.19	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 318-040Y	3.18	0.40	0.05	0.050	15.80	2.30	●	●	●	●	●	●	●	●	●	●	0.50-1.90	0.17-0.22	0.07-0.12	0.08-0.20	0.10-0.20
GRIP 4002Y	4.00	0.20	0.05	0.050	19.00	2.80	●	●	●	●	●	●	●	●	●	●	0.25-2.40	0.16-0.21	0.09-0.14	0.10-0.24	0.15-0.30
GRIP 4004Y	4.00	0.40	0.05	0.050	19.00	2.80	●	●	●	●	●	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15	0.10-0.24	0.15-0.30
GRIP 476-080Y	4.76	0.80	0.05	0.050	19.00	3.10	●	●	●	●	●	●	●	●	●	●	1.00-2.80	0.21-0.33	0.10-0.20	0.10-0.24	0.15-0.30
GRIP 5005Y	5.00	0.50	0.05	0.050	19.00	3.30	●	●	●	●	●	●	●	●	●	●	0.60-3.00	0.20-0.30	0.11-0.20	0.12-0.24	0.15-0.35
GRIP 5008Y	5.00	0.80	0.05	0.050	19.00	3.40	●	●	●	●	●	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21	0.12-0.24	0.15-0.35
GRIP 6005Y	6.00	0.50	0.05	0.050	19.00	4.20	●	●	●	●	●	●	●	●	●	●	0.60-3.60	0.22-0.36	0.13-0.23	0.12-0.28	0.15-0.40
GRIP 6008Y	6.00	0.80	0.05	0.050	19.00	4.20	●	●	●	●	●	●	●	●	●	●	1.00-3.60	0.24-0.42	0.13-0.25	0.12-0.28	0.15-0.40
GRIP 635-080Y	6.35	0.80	0.05	0.050	19.00	4.20	●	●	●	●	●	●	●	●	●	●	1.00-3.80	0.25-0.44	0.14-0.27	0.12-0.28	0.15-0.40

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: C#-HELIR/L (265) • C#-HFIR/L-MC (573) • CR HFIR-M (575) • D/HGAD RE/LE-JHP (499) • DGAD/HGAD (479)

• DGFH (268) • DGFH-JHP (269) • DGFS (469) • DGTR/L (476) • HELIIR/L (355) • HELIR/L (266) • HFAER/L-4 (565) • HFAER/L-5T, 6T (566)

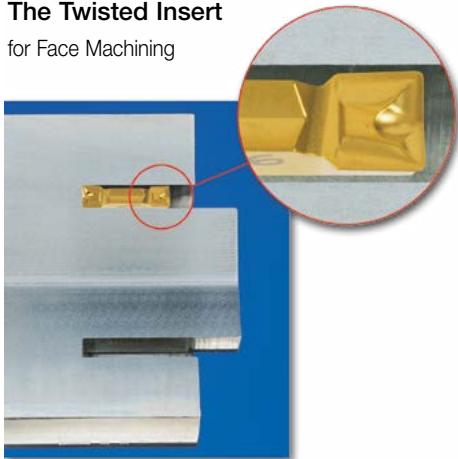
• HFAIR/L-4 (572) • HFAIR/L-DG (573) • HFFR/L-T (564) • HFHR/L-4T (559) • HFHR/L-5T (560) • HFIR/L-MC (574) • HFPAD-3 (562)

• HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564) • HFPAD-JHP (562) • HGAER/L-3 (565) • HGAIIR/L-3 (568) • HGFH (268) • HGHR/L-3 (558)

• HGPAD (267) • HGPAD-JHP (267) • IM-HFIR-MC (574)

The Twisted Insert

for Face Machining

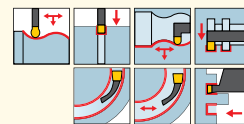
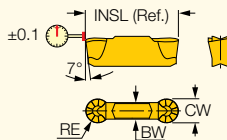


The double-ended, twisted insert body makes it possible to machine deeper than the insert's length. A unique chipformer for controlled chip flow in axial and radial directions. The rear angle is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface as the tool penetrates deeply into the workpiece.



HELIGRIP

GRIP (full radius)
Utility Double-Ended Full Radius Inserts for External, Internal and Face Machining



No depth penetration limit

Designation	Dimensions						Tough ← Hard									Recommended Machining Data					
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	INSL	BW	IC880	IC8250	IC08	IC808	IC908	IC418	IC5010	IC806	IC807	IC804	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3015Y	3.00	1.50	0.05	0.050	15.80	2.10	●	●	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 318-159Y	3.18	1.59	0.05	0.050	15.80	2.30	●	●	●	●	●	●	●	●	●	●	0.00-1.50	0.19-0.28	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 4020Y	4.00	2.00	0.05	0.050	19.00	2.80	●	●	●	●	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17	0.10-0.24	0.15-0.30
GRIP 476-238Y	4.76	2.38	0.05	0.050	19.00	3.20	●	●	●	●	●	●	●	●	●	●	0.00-2.30	0.21-0.40	0.10-0.20	0.10-0.24	0.15-0.30
GRIP 5025Y	5.00	2.50	0.05	0.050	19.00	3.40	●	●	●	●	●	●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21	0.12-0.24	0.15-0.35
GRIP 6030Y	6.00	3.00	0.05	0.050	19.00	4.20	●	●	●	●	●	●	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25	0.12-0.28	0.15-0.40
GRIP 635-318Y	6.35	3.18	0.05	0.050	19.00	4.00	●	●	●	●	●	●	●	●	●	●	0.00-3.10	0.25-0.53	0.14-0.27	0.12-0.28	0.15-0.40

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: C#-HELIR/L (265) • C#-HFIR/L-MC (573) • CR HFIR-M (575) • D/HGAD RE/LE-JHP (499) • DGAD/HGAD (479)

• DGFH (268) • DGFH-JHP (269) • DGFS (469) • DGTR/L (476) • HELIR/L (355) • HELIR/L (266) • HFAER/L-4 (565) • HFAER/L-5T, 6T (566)

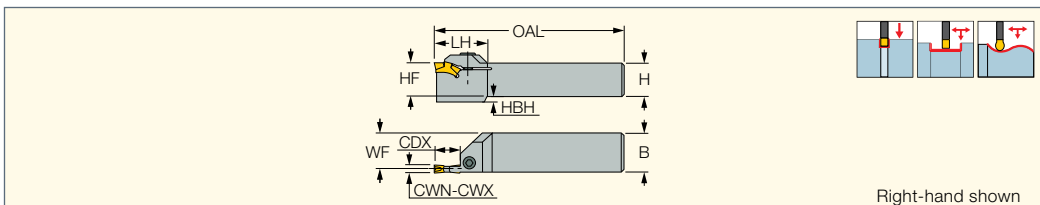
• HFAIR/L-4 (572) • HFAIR/L-DG (573) • HFFR/L-T (564) • HFHR/L-4T (559) • HFHR/L-5T (560) • HFHR/L-6T (561) • HFIR/L-MC (574)

• HFPAD-3 (562) • HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564) • HFPAD-JHP (562) • HGAER/L-3 (565) • HGAIR/L-3 (568) • HGFH (268)

• HGHR/L-3 (558) • HGPAD (267) • HGPAD-JHP (267) • IM-HFIR-MC (574)

TOPGRIP

TGDR/L
External Holders for Turning, Grooving and Profiling



Right-hand shown

Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	H	HF	B	OAL	LH	WF	HBH	Insert		
TGDR/L 1616-3M	3.00	3.00	7.50	16.0	16.0	16.0	100.00	30.5	14.80	6.0	TGMF 3	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 2020-3M	3.00	3.00	7.50	20.0	20.0	20.0	125.00	30.5	18.70	-	TGMF 3	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 2525-3M	3.00	3.00	7.50	25.0	25.0	25.0	140.00	30.5	23.70	-	TGMF 3	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 1616-4M	4.00	5.00	9.00	16.0	16.0	16.0	100.00	32.2	14.20	6.0	TGMF 4/TGMF 5	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 2020-4M	4.00	5.00	9.00	20.0	20.0	20.0	125.00	32.2	18.20	6.0	TGMF 4/TGMF 5	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 2525-4M	4.00	5.00	15.50	25.0	25.0	25.0	140.00	34.0	23.20	-	TGMF 4/TGMF 5	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 2525-5M	5.00	5.00	18.00	25.0	25.0	25.0	140.00	37.0	22.70	-	TGMF 5	SR M5X12 DIN912	HW 4.0 ^(a)
TGDR/L 3232-5M	5.00	5.00	22.00	32.0	32.0	32.0	150.00	45.0	29.80	-	TGMF 5	SR M6X12DIN912	HW 5.0 ^(a)
TGDR/L 2525-6M	6.00	6.35	22.00	25.0	25.0	25.0	150.00	43.0	22.50	-	TGMF 6	SR M6X16 DIN912	HW 5.0 ^(a)
TGDR/L 3232-6M	6.00	6.35	22.00	32.0	32.0	32.0	150.00	43.0	29.50	-	TGMF 6	SR M6X16 DIN912	HW 5.0 ^(a)

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Grooving depth is limited by the insert

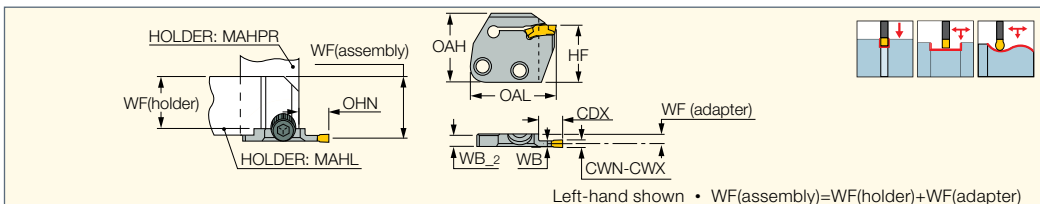
^(a) For optional key with limited tightening torque see page 427

For inserts, see pages: TGMA (272) • TGMF (full radius) (272) • TGMF/P (272)

TOPGRIP

MODULARGRIP

TGPAD
Adapters Carrying TGMF / TGMP Groove-Turn Inserts



Left-hand shown • WF(assembly)=WF(holder)+WF(adapter)

Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WF ⁽⁴⁾	WB	WB_2	OAHN ⁽⁵⁾	OAL	HF	OAH
TGPAD 3R/L-T9	3.00	3.00	9.00	4.00	2.40	5.2	12.7	37.20	24.0	30.0
TGPAD 4R/L-T16	4.00	5.00	16.00	3.50	3.40	5.2	17.2	41.70	24.0	30.0
TGPAD 5R/L-T16	5.00	5.00	16.00	3.00	4.40	5.2	17.2	41.70	24.0	30.0
TGPAD 6R/L-T22	6.00	6.35	22.00	3.50	5.00	6.0	23.2	47.10	24.0	32.0

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Grooving depth is limited by the insert

⁽⁴⁾ WF(adapter)

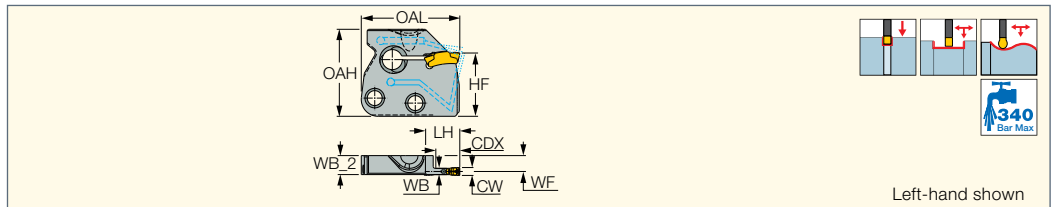
⁽⁵⁾ Minimum overhang

For inserts, see pages: TGMA (272) • TGMF (full radius) (272) • TGMF/P (272)

TOP-GRIP JET CUT MODULAR-GRIP

TGPAD-JHP

Adapters with Channels
for High-Pressure Coolant
Carrying TGMF / TGMP
Groove-Turn Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WF	WB	WB_2	LH	OAL	HF	OAH
TGPAD 3R/L-T9-JHP	3.00	3.00	9.00	4.00	2.40	5.2	12.7	37.20	24.0	30.00
TGPAD 4R/L-T16-JHP	4.00	5.00	16.00	3.50	3.40	5.2	17.2	41.70	24.0	30.00
TGPAD 5R/L-T16-JHP	5.00	5.00	16.00	3.00	4.40	5.2	17.2	41.70	24.0	30.00
TGPAD 6R/L-T22-JHP	6.00	6.35	22.00	3.50	5.00	6.0	23.2	47.10	24.0	32.00

• For user guide, see pages 419-436

⁽¹⁾ Minimum cutting width

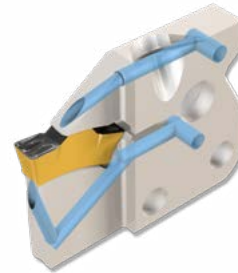
⁽²⁾ Maximum cutting width

⁽³⁾ Grooving depth is limited by the insert

For inserts, see pages: TGMF (full radius) (272) • TGMF/P (272)

Flow Rate vs. Pressure

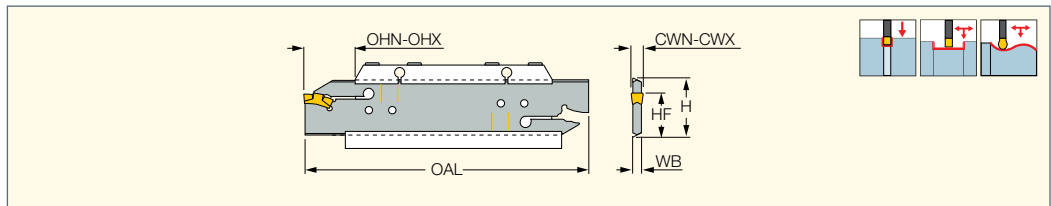
Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
tgpad 3R/L-T9-JHP	11-17	17-23	23-26
tgpad 4R/L-T16-JHP	20-25	25-31	31-34
tgpad 5R/L-T16-JHP	27-33	33-39	39-43
tgpad 6R/L-T22-JHP	30-35	35-41	41-44



TOP-GRIP

TGHN-D

Double-Ended Blades
Carrying Utility Inserts for
Grooving and Turning



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	OHN ⁽³⁾	OHX ⁽⁴⁾	HF	OAL	WB	Insert
TGHN 26-3D	26.0	3.00	3.00	10.0	15.0	21.4	110.00	2.40	TGMF 3
TGHN 26-4D	26.0	4.00	5.00	10.0	15.0	21.4	110.00	3.20	TGMF 4, TGMF/P 5
TGHN 26-5D	26.0	5.00	5.00	10.0	20.0	21.4	110.00	4.00	TGMF/P 5
TGHN 32-3D	32.0	3.00	3.00	10.0	18.0	24.8	150.00	2.40	TGMF 3
TGHN 32-4D	32.0	4.00	5.00	12.0	21.0	24.8	150.00	3.20	TGMF 4, TGMF/P 5
TGHN 32-5D	32.0	5.00	5.00	12.0	26.0	24.8	150.00	4.00	TGMF/P 5
TGHN 32-6D	32.0	6.00	6.35	16.0	26.0	24.8	150.00	5.20	TGMF 6

• Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Minimum overhang

⁽⁴⁾ Maximum overhang

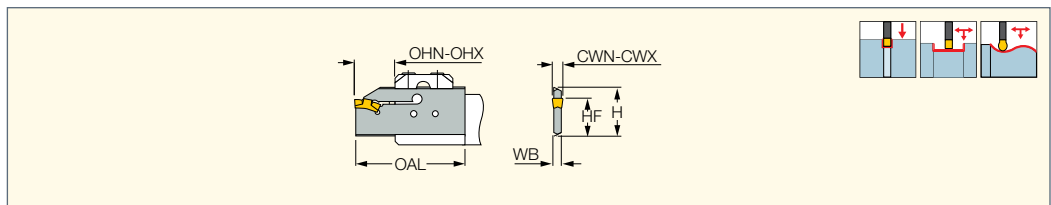
For inserts, see pages: TGMA (272) • TGMF (full radius) (272) • TGMF/P (272)

For holders, see pages: SGTBU/SGTBN (616) • UBHCR/L (618)

TOP-GRIP

TGHN-S

Single-Ended Blades
Carrying Utility Inserts for
Grooving and Turning



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	OHN ⁽³⁾	OHX ⁽⁴⁾	HF	OAL	WB	Insert
TGHN 32-3S	32.0	3.00	3.00	10.0	18.0	24.8	48.30	2.40	TGMF 3
TGHN 32-5S	32.0	5.00	5.00	12.0	25.0	24.8	54.00	4.00	TGMF/P 5
TGHN 32-6S	32.0	6.00	6.35	16.0	25.0	24.8	55.70	5.20	TGMF 6

• Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Minimum overhang

⁽⁴⁾ Maximum overhang

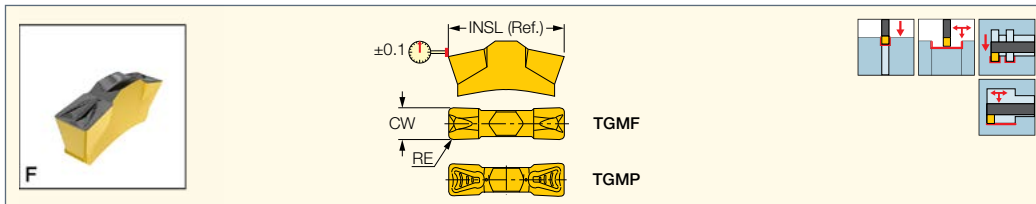
For inserts, see pages: TGMA (272) • TGMF (full radius) (272) • TGMF/P (272)

For holders, see pages: C#-TBU (623) • IM-TBU (633) • UBHCR/L (618)

TOP-GRIP

TGMF/P

Utility Double-Ended Inserts for External and Internal Grooving and Turning



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	INSL	CDX ⁽³⁾	IC830	IC8250	IC808	IC20	IC20N	IC428	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMF 302	3.00	0.20	0.05	0.050	13.50	10.50	●	●	●	●	●	●	0.25-1.80	0.14-0.18	0.07-0.11
TGMF 304	3.00	0.40	0.05	0.050	13.55	10.30	●	●	●	●	●	●	0.50-1.80	0.16-0.20	0.07-0.12
TGMF 402	4.00	0.20	0.05	0.050	17.70	14.70	●	●	●	●	●	●	0.20-2.40	0.16-0.21	0.09-0.14
TGMF 404	4.00	0.40	0.05	0.050	17.70	14.60	●	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15
TGMP 506	5.00	0.60	0.05	0.050	17.60	15.00		●			●		0.75-3.00	0.21-0.32	0.11-0.20
TGMF 508	5.00	0.80	0.05	0.050	17.80	14.20	●	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21
TGMF 635-080	6.35	0.80	0.05	0.050	22.15	18.60	●	●	●	●	●	●	1.00-3.80	0.25-0.44	0.14-0.27

• DMIN for internal application=20.5 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

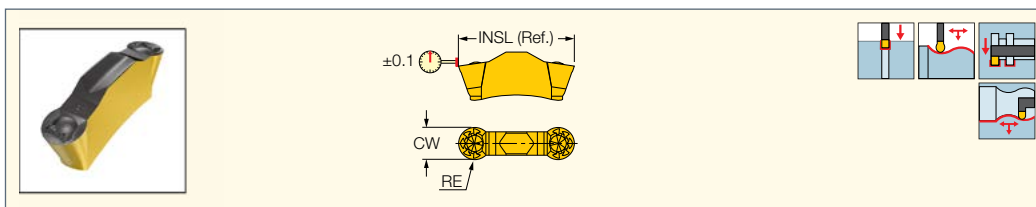
⁽³⁾ Cutting depth maximum

For tools, see pages: TGDR/L (270) • TGHN 26-M (354) • TGHN-D (271) • TGHN-S (271) • TGIR/L-C (353) • TGPAD (270) • TGPAD-JHP (271)

TOP-GRIP

TGMF (full radius)

Utility Double-Ended Full Radius Inserts for External and Internal Grooving and Profiling



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	INSL	CDX ⁽³⁾	IC830	IC8250	IC808	IC20	IC5010	IC428	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMF 315	3.00	1.50	0.05	0.050	13.50	11.40	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13
TGMF 420	4.00	2.00	0.05	0.050	17.80	14.90	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17
TGMF 525	5.00	2.50	0.05	0.050	17.75	14.30	●	●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21
TGMF 630	6.00	3.00	0.05	0.050	22.15	18.30	●	●	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25

• Can cut arcs to 250° • DMIN for internal application=20.5 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

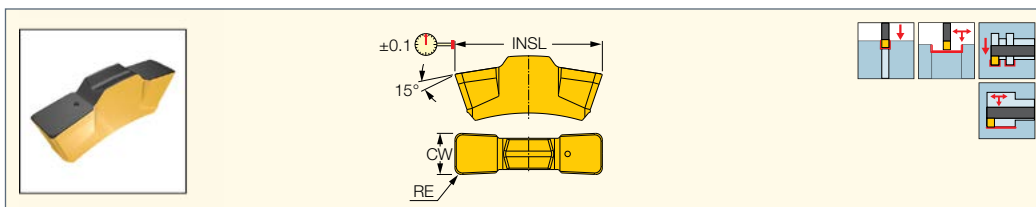
⁽³⁾ Cutting depth maximum

For tools, see pages: TGDR/L (270) • TGHN 26-M (354) • TGHN-D (271) • TGHN-S (271) • TGIR/L-C (353) • TGPAD (270) • TGPAD-JHP (271)

TOP-GRIP

TGMA

Utility Double-Ended Inserts for External and Internal Grooving and Turning of Cast Iron



Designation	Dimensions						IC5010	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	INSL	CDX ⁽³⁾		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMA 304K	3.00	0.40	0.05	0.050	13.50	10.30	●	0.50-1.80	0.12-0.20	0.07-0.13
TGMA 404K	4.00	0.40	0.05	0.050	18.00	14.60	●	0.50-2.40	0.16-0.27	0.09-0.18
TGMA 408K	4.00	0.80	0.05	0.050	18.00	14.50	●	1.00-2.40	0.18-0.32	0.09-0.19
TGMA 508K	5.00	0.80	0.05	0.050	18.00	15.00	●	1.00-3.00	0.23-0.40	0.11-0.24
TGMA 608K	6.00	0.80	0.05	0.050	22.40	18.60	●	1.00-3.60	0.27-0.48	0.14-0.29

⁽¹⁾ Cutting width tolerance (+/-)

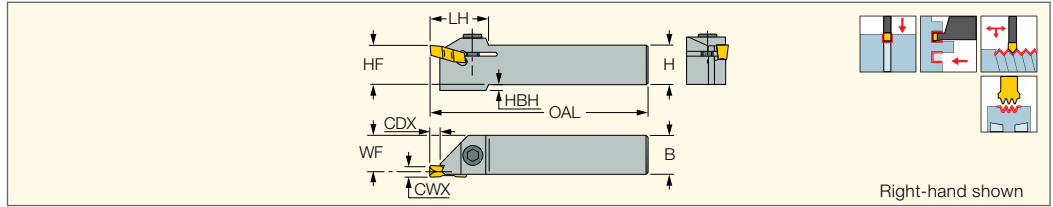
⁽²⁾ Corner radius tolerance (+/-)



⁽³⁾ Cutting depth maximum

For tools, see pages: TGDR/L (270) • TGHN 26-M (354) • TGHN-D (271) • TGHN-S (271) • TGIR/L-C (353) • TGPAD (270)

GHMR/L

Toolholders for Shallow Radial and Axial Grooving with Narrow and Special Profile Inserts



Designation	CWX ⁽²⁾	CDX ⁽³⁾	H	HF	B	OAL	LH	WF	HBH		
GHML 12	4.00	4.80	12.0	12.0	12.0	110.00	25.0	10.80	4.0	SR 76-1021	T-20/5
GHMR 12	4.80	4.80	12.0	12.0	12.0	110.00	25.0	10.80	4.0		
GHMR/L 16	4.80	4.80	16.0	16.0	16.0	115.00	25.0	14.50	-	SR M6X16 DIN912	HW 5.0
GHMR 16-3 ST ⁽¹⁾	5.00	4.80	16.0	16.0	16.0	78.00	25.0	15.00	-	SR M6X16 DIN912	HW 5.0
GHMR/L 20	6.40	4.80	20.0	20.0	20.0	125.00	25.0	18.50	-	SR M6X16 DIN912	HW 5.0
GHMR/L 25	6.40	4.80	25.0	25.0	25.0	140.00	25.0	23.50	-	SR M6X16 DIN912	HW 5.0
GHMR/L 32	6.40	4.80	32.0	32.0	32.0	150.00	25.0	30.20	-	SR M6X16 DIN912	HW 5.0

• Use for recessing: light turning, small depth of cut ($a_p=0.1-0.5$ mm) and small feed ($f=0.1$ mm/rev) • For user guide, see pages 419-428, 432-436

⁽¹⁾ For Star and multi-spindle machines

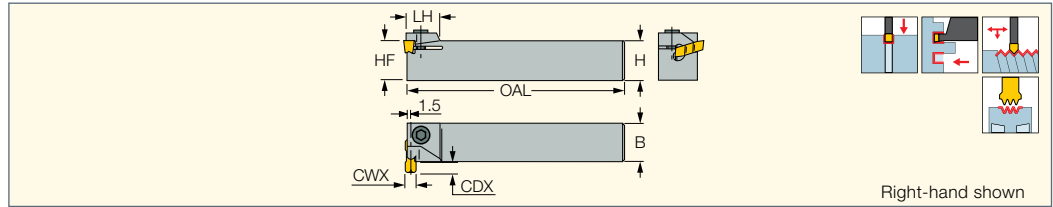
⁽²⁾ Maximum cutting width



⁽³⁾ Cutting depth maximum

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIG (296) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (flat top W<M) (295) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-RX/LX (302) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

GHMPR/L

Perpendicular Toolholders for Shallow Radial and Axial Grooving with Narrow and Special Profile Inserts



Designation	CWX ⁽¹⁾	CDX ⁽²⁾	H	HF	B	OAL	LH		
GHMPR/L 16	4.80	4.80	16.0	16.0	16.0	110.00	17.0	SR M6X16 DIN912	HW 5.0
GHMPR/L 20	6.40	4.80	20.0	20.0	20.0	120.00	17.0	SR M6X16 DIN912	HW 5.0
GHMPR/L 25	6.40	4.80	25.0	25.0	25.0	135.00	17.0	SR M6X16 DIN912	HW 5.0

• Use for recessing: light turning, small depth of cut ($a_p=0.1-0.5$ mm) and small feed ($f=0.1$ mm/rev) • For user guide, see pages 419-428, 432-436

⁽¹⁾ Maximum cutting width

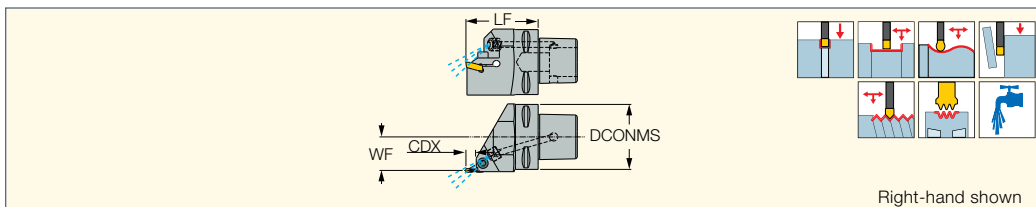
⁽²⁾ Cutting depth maximum

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIG (296) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (flat top W<M) (295) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-RX/LX (302) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

CUTGRIP CAMFIX

C#-GHDR/L

External Grooving, Turning and Parting Toolholders with CAMFIX Exchangeable Tapered Shanks



Designation	CWN ⁽²⁾	CWX ⁽³⁾	DCONMS	CDX ⁽⁴⁾	LF	WF	CP ⁽⁵⁾	CDI
C4 GHDR/L-3	2.80	4.00	40.00	9.00	55.00	20.00	100	1
C5 GHDR/L-3	2.80	4.00	50.00	9.00	55.00	24.00	100	1
C6 GHDR-3	2.80	4.00	63.00	9.00	55.00	32.00	100	1
C4 GHDR/L-4	4.00	5.00	40.00	10.00	55.00	20.00	100	1
C5 GHDR/L-4	4.00	5.00	50.00	10.00	55.00	24.00	100	1
C6 GHDR/L-4	4.00	5.00	63.00	10.00	55.00	32.00	100	1
C5 GHDR/L-5	5.00	6.40	50.00	12.00	55.00	24.00	100	1
C6 GHDR/L-5	5.00	6.40	63.00	12.00	55.00	32.00	100	1
C6 GHDR/L-8 ⁽¹⁾	7.00	8.40	63.00	25.00	70.00	30.00	100	1

• When using GPV and TIP inserts, toolholder must be modified according to insert profile to ensure clearance

⁽¹⁾ Used with GIF 8, GIA 8, GIPA 8, GDMM, GIDA, GDMY, GDMF, GDMU inserts

⁽²⁾ Minimum cutting width

⁽³⁾ Maximum cutting width

⁽⁴⁾ Cutting depth maximum

⁽⁵⁾ Coolant pressure (Bar)

For inserts, see pages: GDMF (288) • GDMM-CC (583) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291) • GDMY-F (291)

• GIA-K (long pocket) (299) • GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF (long pocket) (298) • GIF-E (W=4-6 full radius) (294)

• GIF-E (W=4-6) (292) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522)

• GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288)




• GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294)

• GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPA/GIDA 8 (full radius) (302) • GIPM-A46 / GIP-1250 (375)

• GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658)

• TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

Spare Parts

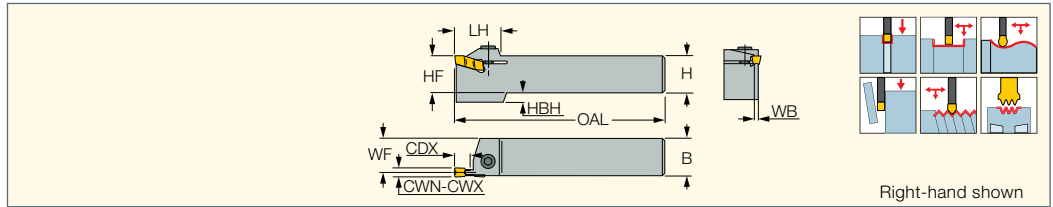
Designation			
C4 GHDR/L-3	SR M5X20DIN912	HW 4.0 ^(a)	EZ 104
C5 GHDR/L-3	SR M5X20DIN912	HW 4.0 ^(a)	EZ 104
C6 GHDR-3	SR M5X16 DIN912	HW 4.0 ^(a)	EZ 125
C4 GHDR/L-4	SR M6X20 DIN912	HW 5.0 ^(a)	EZ 104
C5 GHDR/L-4	SR M6X20 DIN912	HW 5.0 ^(a)	EZ 104
C6 GHDR/L-4	SR M6X16 DIN912	HW 5.0 ^(a)	EZ 125
C5 GHDR/L-5	SR M6X25 DIN912	HW 5.0 ^(a)	EZ 104
C6 GHDR/L-5	SR M6X16 DIN912	HW 5.0 ^(a)	EZ 125
C6 GHDL-8	SR M6X20 DIN912	HW 5.0 ^(a)	EZ 146
C6 GHDR-8	SR M6X25 DIN912	HW 5.0 ^(a)	EZ 146



^(a) For optional key with limited tightening torque see page 428



GHDR/L (short pocket)

External Tools for Turning,
Grooving and Parting



Designation	CWN ⁽⁴⁾	CWX ⁽⁵⁾	CDX ⁽⁶⁾	H	HF	B	OAL	LH	WF	WB	HBH		
GHDR/L 12-3	2.80	4.00	8.00	12.0	12.0	12.0	110.00	25.0	10.80	2.40	4.0	SR 76-1021	T-20/5 ^(a)
GHDR/L 16-3	2.80	4.00	9.00	16.0	16.0	16.0	110.00	26.0	14.80	2.40	4.0	SR M5X16 DIN912	HW 4.0 ^(a)
GHDR/L 16-3 ST ⁽¹⁾	2.80	4.00	9.00	16.0	16.0	16.0	78.00	24.0	15.00	2.20	4.0	SR M5X16 DIN912	HW 4.0 ^(a)
GHDR/L 20-3	2.80	4.00	9.00	20.0	20.0	20.0	120.00	26.0	18.80	2.40	-	SR M5X16 DIN912	HW 4.0 ^(a)
GHDR/L 25-3	2.80	4.00	9.00	25.0	25.0	25.0	135.00	26.0	23.80	2.40	-	SR M5X16 DIN912	HW 4.0 ^(a)
GHDR/L 16-4	4.00	5.00	10.00	16.0	16.0	16.0	110.00	26.0	14.40	3.20	4.0	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 16-4 ST ⁽¹⁾	4.00	5.40	10.00	16.0	16.0	16.0	78.00	24.6	14.00	3.40	4.0	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 20-4	4.00	5.00	10.00	20.0	20.0	20.0	120.00	26.0	18.40	3.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 25-4	4.00	5.00	10.00	25.0	25.0	25.0	135.00	27.0	23.40	3.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 32-4	4.00	5.00	10.00	32.0	32.0	32.0	150.00	27.0	30.40	3.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 20-5	5.00	6.40	12.00	20.0	20.0	20.0	120.00	29.0	17.90	4.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 25-5	5.00	6.40	12.00	25.0	25.0	25.0	135.00	29.0	22.90	4.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 32-5	5.00	6.40	12.00	32.0	32.0	32.0	150.00	29.0	29.90	4.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 25-6	6.00	6.40	12.00	25.0	25.0	25.0	135.00	29.0	22.30	5.40	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHDR/L 25-P8 ⁽²⁾	7.00	10.00	16.50	25.0	25.0	25.0	150.00	35.7	21.80	6.50	-	SR M8X20DIN912	HW 6.0 ^(a)
GHDR/L 32-P8 ⁽³⁾	7.00	10.00	16.50	32.0	32.0	32.0	170.00	35.7	28.80	6.50	-	SR M8X20DIN912	HW 6.0 ^(a)

- For using TIP and GPV inserts, toolholder seat needs to be modified according to insert profile to ensure clearance.
- For user guide, see pages 419-428, 432-436

⁽¹⁾ For Star and multi-spindle machines.

⁽²⁾ Used with GIMF, GIMY, GIPY, GIMM, GITM, GPV inserts.

⁽³⁾ Used with GIMT, GIMN, GIMF, GIMY, GIPY, GIMM, GITM, GPV Inserts

⁽⁴⁾ Minimum cutting width

⁽⁵⁾ Maximum cutting width

⁽⁶⁾ Cutting depth maximum

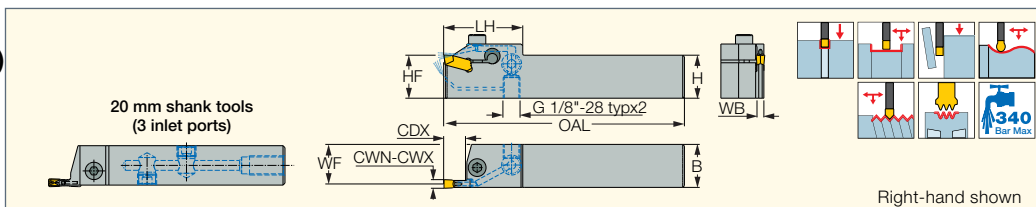
^(a) For optional key with limited tightening torque see page 428

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIG (296) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMM 8CC (583) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (flat top W<M) (295) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

CUTGRIP JETCUT

GHDR/L-JHP (short pocket)

Grooving and Turning Tools
with Channels for High-Pressure
Coolant



Designation	CWN ⁽²⁾	CWX ⁽³⁾	H	CDX ⁽⁴⁾	B	OAL	LH	WF	WB	HF
GHDR/L 20-3-JHP	2.80	4.00	20.0	9.00	20.0	120.00	29.0	18.80	2.40	20.0
GHDR/L 25-3-JHP	2.80	4.00	25.0	9.00	25.0	140.00	44.0	23.80	2.40	25.0
GHDR/L 20-4-JHP	4.00	5.00	20.0	10.00	20.0	120.00	29.0	18.40	3.20	20.0
GHDR/L 25-4-JHP	4.00	5.00	25.0	10.00	25.0	140.00	45.0	23.40	3.20	25.0
GHDR/L 25-5-JHP	5.00	6.40	25.0	12.00	25.0	140.00	46.0	22.90	4.20	25.0
GHDR/L 25-P8-JHP ⁽¹⁾	7.00	10.00	25.0	16.50	25.0	150.00	50.0	21.80	6.50	25.0

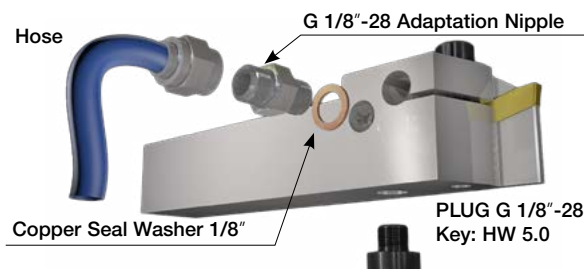
- For using TIP and GPV inserts, toolholder seat needs to be modified according to insert profile to ensure clearance
- For user guide and accessories see pages 419-436
- ⁽¹⁾ Used with GIMF, GIMY, GIPY, GIMM, GITM, GPV, GIMY-F, GIMM 8CC, GIMT, GIMN, GITM (full radius), GIMY (full radius) inserts.
- ⁽²⁾ Minimum cutting width
- ⁽³⁾ Maximum cutting width
- ⁽⁴⁾ Cutting depth maximum

For inserts, see pages: GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMM 8CC (583) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)





Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GHDR/L 20-3-JHP	5-7	7-9	9-11
GHDR/L 20-4-JHP	6-8	10-12	12-14
GHDR/L 25-3-JHP	6-8	8-10	10-12
GHDR/L 25-4-JHP	10-12	14-16	16-18
GHDR/L 25-5-JHP	13-16	19-21	22-24

GHDR...-JHP



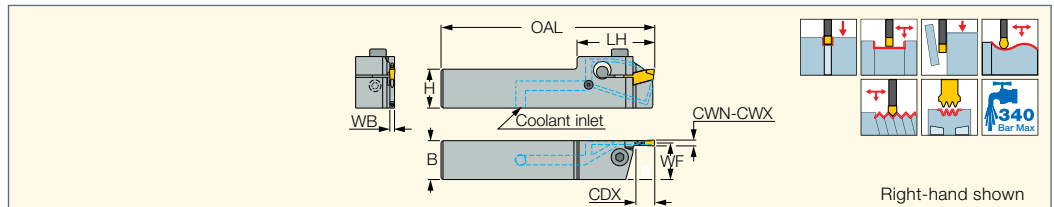
Spare Parts

Designation				
GHDR/L 20-3-JHP	SR M5X16 DIN912	HW 4.0 ^(a)	PLG G1/8 TL360	HW 5.0
GHDR/L 25-3-JHP	SR M5X20 DIN912	HW 4.0 ^(a)	PLG 1/8 ISO1179	HW 5.0
GHDR/L 20-4-JHP	SR M6X16 DIN912		PLG G1/8 TL360	HW 5.0
GHDR/L 25-4-JHP	SR M6X20 DIN912		PLG 1/8 ISO1179	HW 5.0
GHDR/L 25-5-JHP	SR M6X20 DIN912		PLG 1/8 ISO1179	HW 5.0
GHDR/L 25-P8-JHP	SR M6X20 DIN912		PLG 1/8 ISO1179	HW 5.0

^(a) For optional key with limited tightening torque see page 428

GHDR/L-JHP-MC (short pocket)

Grooving and Turning Tools with Bottom Inlet Coolant Channels



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	H	CDX	B	OAL	LH	WF	WB
GHDR/L 20-3-JHP-MC	2.80	4.00	20.0	9.00	20.0	110.00	40.0	18.80	2.40
GHDR/L 25-3-JHP-MC	2.80	4.00	25.0	9.00	25.0	123.00	37.0	23.80	2.40
GHDR/L 20-4-JHP-MC	4.00	5.00	20.0	10.00	20.0	110.00	40.0	18.40	3.20
GHDR/L 25-4-JHP-MC	4.00	5.00	25.0	10.00	25.0	123.00	37.0	23.40	3.20
GHDR/L 25-5-JHP-MC	5.00	6.40	25.0	12.00	25.0	123.00	37.0	22.90	4.20



- For using TIP and GPV inserts, toolholder seat needs to be modified according to insert profile to ensure clearance
- For user guide and accessories see pages 419-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMM 8CC (583) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

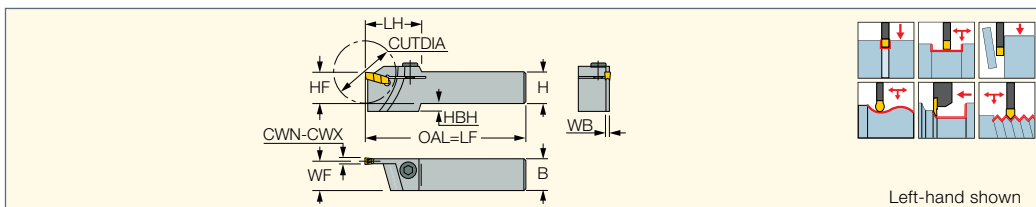
Spare Parts

Designation		
GHDR/L 20-3-JHP-MC	SR M5X16 DIN912	HW 4.0
GHDR/L 25-3-JHP-MC	SR M5X20DIN912	HW 4.0
GHDR/L 20-4-JHP-MC	SR M6X20 DIN912	HW 5.0
GHDR/L 25-4-JHP-MC	SR M6X20 DIN912	HW 5.0
GHDR/L 25-5-JHP-MC	SR M6X20 DIN912	HW 5.0



CUTGRIP

GHGR/L External Holders for Deep Grooving and Parting



Designation	CWN ⁽³⁾	CWX ⁽⁴⁾	CUTDIA ⁽⁵⁾	H	HF	B	OAL	LH	WF	WB	HBH		
GHGR/L 20-2 ⁽¹⁾	0.40	2.40	34.0	20.0	20.0	20.0	120.00	33.0	19.20	1.70	-	SR M5X16 DIN912	HW 4.0 ^(a)
GHGR/L 25-2 ⁽¹⁾	0.40	2.40	34.0	25.0	25.0	25.0	140.00	33.0	24.20	1.70	-	SR M5X16 DIN912	HW 4.0 ^(a)
GHGL 16-3	3.00	4.00	40.0	16.0	16.0	16.0	110.00	36.0	14.70	2.50	4.0	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR 16-3	3.00	4.00	40.0	16.0	16.0	16.0	110.00	36.0	14.70	2.50	-	-	-
GHGR/L 16-3 ST ⁽²⁾	3.00	4.00	34.0	16.0	16.0	16.0	78.00	33.0	15.00	2.40	4.0	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 20-3	3.00	4.00	40.0	20.0	20.0	20.0	120.00	36.0	18.70	2.50	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 25-3	3.00	4.00	40.0	25.0	25.0	25.0	140.00	36.0	23.70	2.50	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR 16-4	4.00	5.00	40.0	16.0	16.0	16.0	110.00	36.0	14.40	3.20	4.0	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 20-4	4.00	5.00	40.0	20.0	20.0	20.0	120.00	36.0	18.20	3.50	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 25-4	4.00	5.00	40.0	25.0	25.0	25.0	140.00	36.0	23.20	3.50	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 25-425	4.00	5.00	50.0	25.0	25.0	25.0	140.00	41.0	23.20	3.50	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 25-5	5.00	6.40	50.0	25.0	25.0	25.0	140.00	41.0	22.90	4.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 32-5	5.00	6.40	50.0	32.0	32.0	32.0	150.00	41.0	29.90	4.20	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 25-630	6.00	8.00	60.0	25.0	25.0	25.0	140.00	45.0	22.30	5.40	-	SR M6X16 DIN912	HW 5.0 ^(a)
GHGR/L 32-632	6.00	8.00	64.0	32.0	32.0	32.0	170.00	50.0	29.40	5.40	-	SR M6X16 DIN912	HW 5.0 ^(a)

- For machining depth over 13 mm, a single-ended insert is required (GIM, GIMF, GIMY, GIMT, GIMN) • CDX for grooving depth depends on part diameter Dmax
- For grooving a part with a diameter larger than CUTDIA, see next table
- For using TIP inserts, tool holder seat needs to be modified according to insert profile to ensure clearance
- For user guide, see pages 419-428, 432-436

⁽¹⁾ In the case of inserts with CW<2 mm, tool pocket should be ground to 0.3 mm thinner than the insert's grooving width.

⁽²⁾ For Star and multi-spindle machines.

⁽³⁾ Minimum cutting width

⁽⁴⁾ Maximum cutting width

⁽⁵⁾ Maximum parting diameter

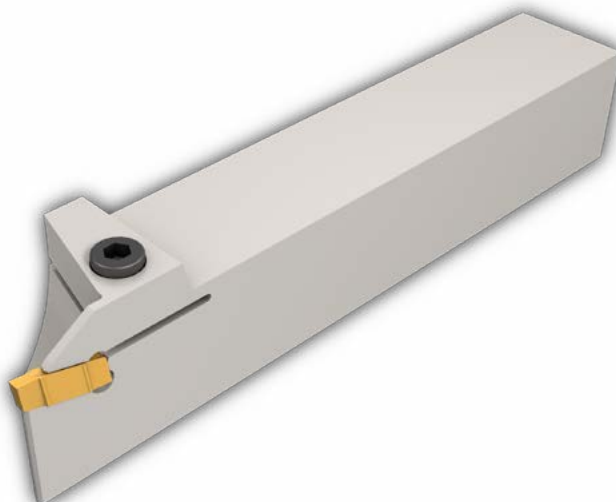
^(a) For optional key with limited tightening torque see page 428

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292)
- GIG (296) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523)
 - GIMF (288) • GIMM 8CC (583) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297)
 - GIP (flat top W<M) (295) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294)
 - GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299)
 - TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

Depth Capacity*

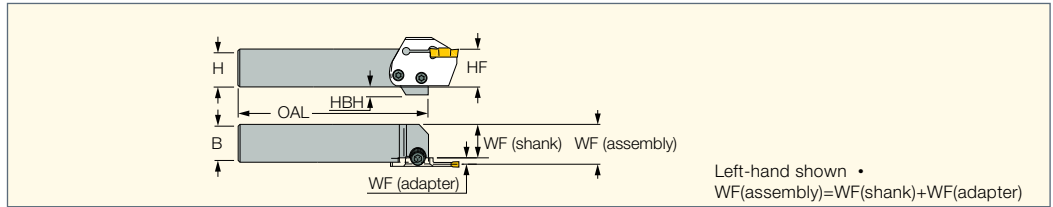
Designation	ØDmax												
GHGR/L 16-3	—	—	—	—	40	50	68	80	120	290	1000	—	—
GHGR/L 20-2	—	—	—	—	—	—	66	80	120	270	1000	—	—
GHGR/L 20-3	—	—	—	—	40	50	68	80	120	290	1000	—	—
GHGR/L 20-4	—	—	—	—	40	50	68	80	120	290	1000	—	—
GHGR/L 25-2	—	—	—	—	—	—	66	72	86	110	130	220	320
GHGR/L 25-3	—	—	—	—	40	80	105	120	190	450	1500	—	—
GHGR/L 25-4	—	—	—	—	40	80	105	120	190	450	1500	—	—
GHGR/L 25-425	—	—	99	135	350	700	—	—	—	—	—	—	—
GHGR/L 25-5	—	—	50	130	300	600	—	—	—	—	—	—	—
GHGR/L 25-630	—	100	350	—	—	—	—	—	—	—	—	—	—
GHGR/L 32-5	—	—	50	130	300	600	—	—	—	—	—	—	—
GHGR 32-632	—	—	—	—	—	—	—	—	—	—	—	—	—
CDX	32	30	25	23	20	19	17	16	14	12	11	9	8

* For over 13 mm depth: GIM, GIMF, GIMT, GIMN and GIMY, GPV (single ended insert) only.



MODULARGRIP

MAHR/L
Adapter Holders for all GRIP Systems



Designation	H	B	HF	OAL	HBH	WF ⁽¹⁾
MAHR/L 20	20.0	20.0	20.0	130.00	10.0	17.1
MAHR/L 25	25.0	25.0	25.0	130.00	5.0	22.1
MAHR/L 32	32.0	32.0	32.0	140.00	-	29.1

⁽¹⁾ WF(shank)

For tools, see pages: CGPAD (281) • DGAD-B-D (479) • DGAD/HGAD (479) • HFPAD-3 (562) • HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564) • HGPAD (267) • PCADR/L (316) • SCLCR-PAD (55) • SDJCR-PAD (59) • SVJCR-PAD (67) • SWAPR-PAD (73) • TGAD (498) • TGPAD (270)

Spare Parts

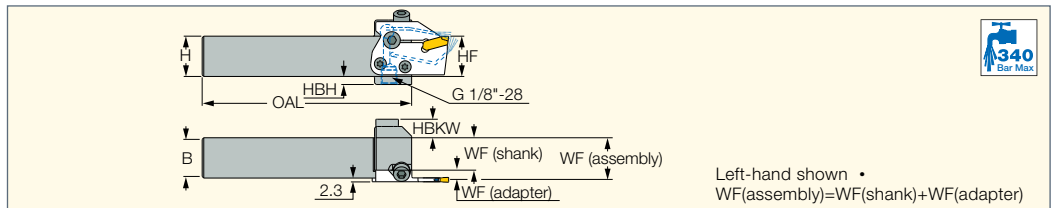
Designation						
MAHR/L	SR M5-04451	T-20/5	SR 14-519	SR M6X20-XT ^(a)	HW 5.0	SR M6X6DIN551 14H/22H

^(a) For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

MODULARGRIP

JETCUT

MAHR/L-JHP
Holders with High-Pressure Coolant Channels for MODULAR-GRIP Adapters

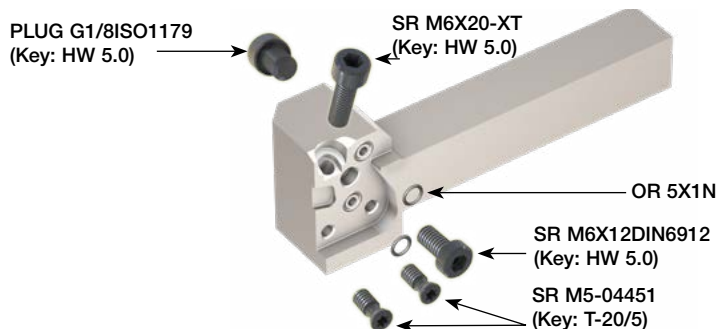


Designation	H	B	OAL	HBH	WF ⁽¹⁾	HBKW	HF
MAHR/L 20-JHP	20.0	20.0	130.00	10.0	15.1	16.50	20.0
MAHR/L 25-JHP	25.0	25.0	130.00	5.0	20.1	11.50	25.0
MAHR/L 32-JHP	32.0	32.0	140.00	-	27.1	4.50	32.0

For user guide and accessories, see pages 419-436

⁽¹⁾ WF(shank)

For tools, see pages: HFPAD-JHP (562) • PCADRS/LS-JHP (317) • TGPAD-JHP (271) • CGPAD-JHP (282) • DGPAD-JHP (480) • TAGPAD-JHP (500) • HGPAD-JHP (267) • PCADR/L-JHP (317) • CGPAD (281) • DGAD-B-D (479) • DGAD/HGAD (479) • HFPAD-3 (562) • HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564) • HGPAD (267) • PCADR/L (316) • SCLCR-PAD (55) • SDJCR-PAD (59) • SVJCR-PAD (67) • SWAPR-PAD (73) • TGAD (498) • TGPAD (270)

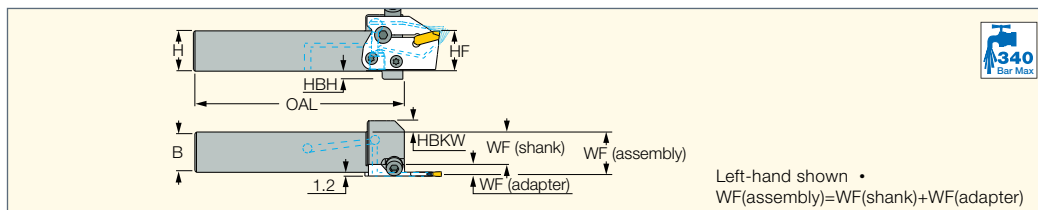


Spare Parts

Designation							
MAHR/L-JHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	PLG 1/8ISO1179

MODULAR-GRIP
JETCUT

MAHR/L-JHP-MC
Holders with Bottom Inlets for High-Pressure Coolant Channels Carrying MODULAR-GRIP Grooving and Turning Adapters



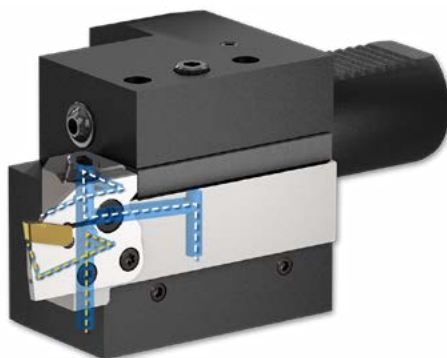
Left-hand shown •
WF(assembly)=WF(shank)+WF(adapter)

Designation	H	B	OAL	HBH	WF ⁽¹⁾	HBKW	HF
MAHR/L 20-JHP-MC	20.0	20.0	98.00	10.0	14.0	6.00	20.0
MAHR/L 25-JHP-MC	25.0	25.0	98.00	5.0	19.0	-	25.0







• For CDX, refer to the adapters data.

⁽¹⁾ WF(shank)

For tools, see pages: HFPAD-JHP (562) • PCADRS/LS-JHP (317) • TGPAD-JHP (271) • CGPAD-JHP (282) • DGPAD-JHP (480) • HGPAD-JHP (267)
 • PCADR/L-JHP (317) • TAGPAD-JHP (500) • CGPAD (281) • DGAD-B-D (479) • DGAD/HGAD (479) • HFPAD-3 (562) • HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564)
 • HGPAD (267) • PCADR/L (316) • SCLCR-PAD (55) • SDJCR-PAD (59) • SVJCR-PAD (67)
 • SWAPR-PAD (73) • TGAD (498) • TGPAD (270)

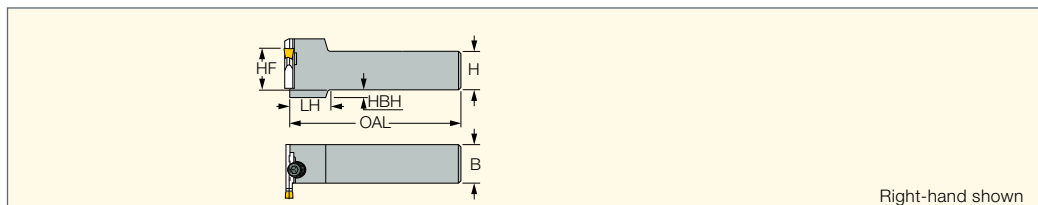


Spare Parts

Designation						
MAHR/L-JHP-MC	SR M6X20-XT	HW 5.0	SR M5-04451	T-20/5	SR M6X12DIN6912	OR 5X1N

MODULAR-GRIP







MAHPR/L
Holders for Perpendicularly Mounted Adapters for all GRIP Systems



Designation	H	B	HF	OAL	LH	HBH
MAHPR/L 20	20.0	20.0	20.0	140.00	25.0	10.0
MAHPR/L 25	25.0	25.0	25.0	140.00	25.0	5.0
MAHPR/L 32	32.0	32.0	32.0	150.00	25.0	-

For tools, see pages: CGPAD (281) • DGAD-B-D (479) • DGAD/HGAD (479) • HFPAD-3 (562) • HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564)
 • HGPAD (267) • PCADR/L (316) • SCLCR-PAD (55) • SDJCR-PAD (59) • SVJCR-PAD (67) • SWAPR-PAD (73) • TGAD (498) • TGPAD (270)

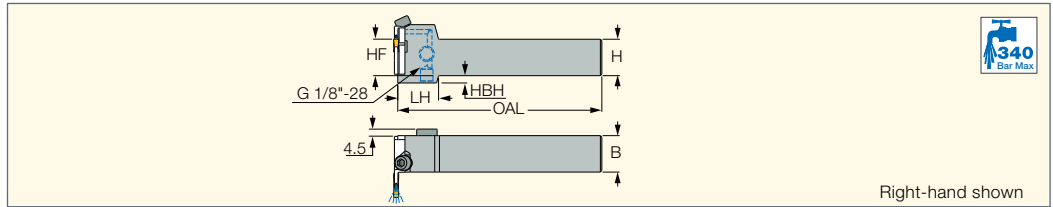
Spare Parts

Designation						
MAHPR/L	SR M5-04451	T-20/5	SR 14-519	SR M6X20-XT ^(a)	HW 5.0	SR M6X6DIN551 14H/22H

^(a) For CGPAD, HGPAD, TGPAD and HFPAD adapters. Supplied with the tools.

MAHPR/L-JHP

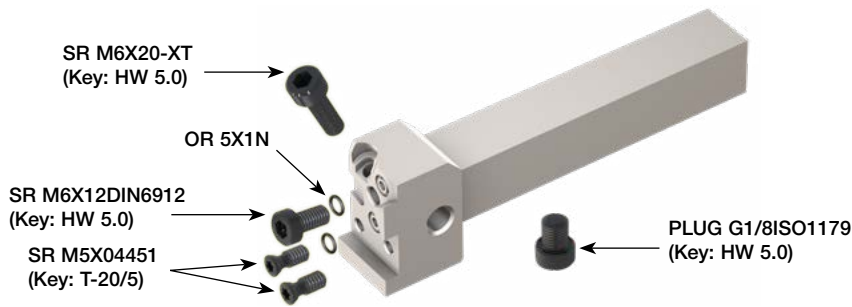
Holders with High-Pressure Coolant Channels for MODULAR-GRIP Perpendicularly Mounted Adapters



Designation	H	B	OAL	LH	HBH	HF
MAHPR/L 20-JHP	20.0	20.0	140.00	28.0	10.0	20.0
MAHPR/L 25-JHP	25.0	25.0	140.00	28.0	5.0	25.0
MAHPR/L 32-JHP	32.0	32.0	150.00	-	-	32.0

• For user guide and accessories, see pages 419-436

For tools, see pages: DGPAD-JHP (480) • HFPAD-JHP (562) • PCADRS/LS-JHP (317) • TAGPAD-JHP (500) • TGPAD-JHP (271) • CGPAD-JHP (282) • HGPAD-JHP (267) • PCADR/L-JHP (317) • CGPAD (281) • DGAD-B-D (479) • DGAD/HGAD (479) • HFPAD-3 (562) • HFPAD-4 (563) • HFPAD-5 (563) • HFPAD-6 (564) • HGPAD (267) • PCADR/L (316) • SCLCR-PAD (55) • SDJCR-PAD (59) • SVJCR-PAD (67) • SWAPR-PAD (73) • TGAD (498) • TGPAD (270)

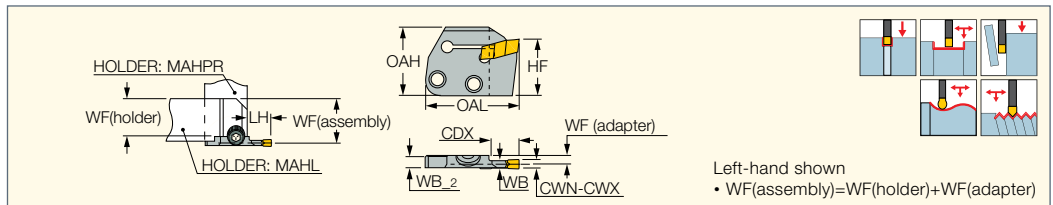


Spare Parts

Designation							
MAHPR/L-JHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	PLG 1/8ISO1179

CGPAD

Adapters for CUT-GRIP Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	LH	WF ⁽⁴⁾	WB	WB_2	OAL	OAH	HF
CGPAD 3R/L-T16	2.80	4.00	16.00	17.3	4.00	2.40	5.2	42.00	30.0	24.0
CGPAD 3R/L-T22	2.80	4.00	22.00	23.0	4.00	2.40	5.2	47.70	30.0	24.0
CGPAD 4R/L-T16	4.00	5.00	16.00	17.3	3.60	3.50	5.2	42.00	30.0	24.0
CGPAD 4R/L-T22	4.00	5.00	22.00	23.0	3.50	3.50	5.2	47.70	30.0	24.0
CGPAD 5R/L-T16	5.00	6.40	16.00	17.3	3.10	4.50	5.2	42.00	30.0	24.0
CGPAD 5R/L-T22	5.00	6.40	22.00	23.0	3.00	4.50	5.2	47.70	30.0	24.0
CGPAD 8R/L-T16	6.40	8.00	16.00	17.3	3.00	6.00	6.0	42.00	30.0	24.0
CGPAD 8R/L-T22	6.40	8.00	22.00	23.0	3.00	6.00	6.0	47.70	30.0	24.0

• For using TIP insert, toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide, see pages 419-428, 432-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- (4) WF(adapter)

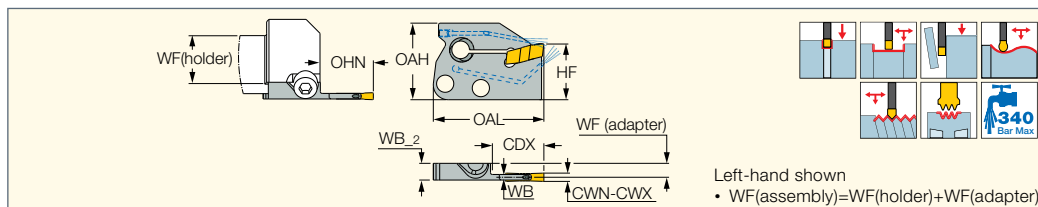
For inserts, see pages: GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMM 8CC (583) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

For holders, see pages: C#-MAHD-JHP (624) • C#-MAHPD-JHP (625) • MAHR/L-JHP-MC (280) • MAHPR/L-JHP (281) • MAHR/L-JHP (279) • MAHR/L (279) • MAHPR/L (280) • C#-MAHD (624) • C#-MAHPD (625) • C#-MAHDR-45 (623) • HSK A63WH-MAHUR/L (632) • HSK A63WH-MAHDR-45 (631) • HSK A63WH-MAHDOR (631) • IM-MAHD (633) • IM-MAHPD (633)

CUTGRIP JETCUT MODULARGRIP

CGPAD-JHP

Adapters with High-Pressure Coolant Channels Carrying CUT-GRIP Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	OHN ⁽⁴⁾	WF ⁽⁵⁾	WB	WB_2	OAL	OAH	HF
CGPAD 3R/L-T16-JHP	2.80	4.00	16.00	17.3	6.00	2.40	7.2	42.00	33.0	24.0
CGPAD 3R/L-T22-JHP	2.80	4.00	22.00	23.0	6.00	2.40	7.2	47.70	33.0	24.0
CGPAD 4R/L-T16-JHP	4.00	5.00	16.00	17.3	5.45	3.50	7.2	42.00	33.0	24.0
CGPAD 4R-T22-JHP	4.00	5.00	22.00	23.0	5.45	3.50	7.2	47.70	33.0	24.0
CGPAD 5R/L-T16-JHP	5.00	6.40	16.00	17.3	4.95	4.50	7.2	42.00	33.0	24.0
CGPAD 5R-T22-JHP	5.00	6.40	22.00	23.0	4.95	4.50	7.2	47.70	33.0	24.0
CGPAD 8R/L-T22-JHP	6.40	8.00	22.00	23.0	4.20	6.00	7.2	47.00	33.0	24.0

• For using TIP insert, toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide and accessories see pages 419-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- (4) Minimum overhang
- (5) WF(adapter)

For inserts, see pages: GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • GPV (304) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

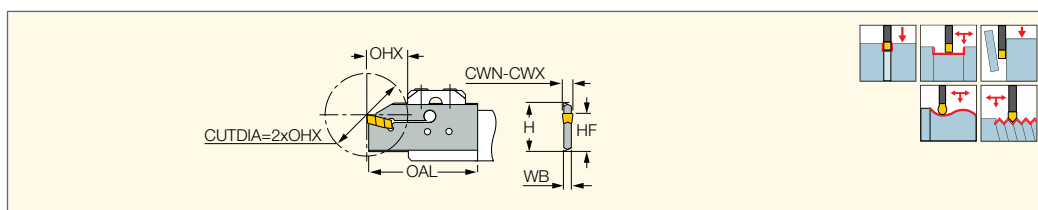
Flow Rate vs. Pressure

Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
CGPAD 3R/L-T16-JHP	6-8	7-9	8-10
CGPAD 3R-T22-JHP	5-7	6-8	7-9
CGPAD 4R/L-T16-JHP	10-12	11-13	12-14
CGPAD 5R/L-T16-JHP	12-14	16-18	19-21

CUTGRIP

CGHN-S

Single-Ended Blades for External Machining



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	OHN ⁽³⁾	OHX ⁽⁴⁾	HF	OAL	WB
CGHN 32-3S	32.0	2.80	4.00	10.0	19.0	24.8	51.00	2.40
CGHN 32-4S	32.0	3.50	5.00	12.0	21.0	24.8	53.00	3.20
CGHN 32-5S	32.0	4.40	6.40	12.0	25.0	24.8	56.00	4.00
CGHN 32-6S	32.0	5.50	6.40	12.0	25.0	24.8	56.00	5.20

• When using a double-ended insert, grooving depth is limited by the insert • For user guide, see pages 419-428, 432-436

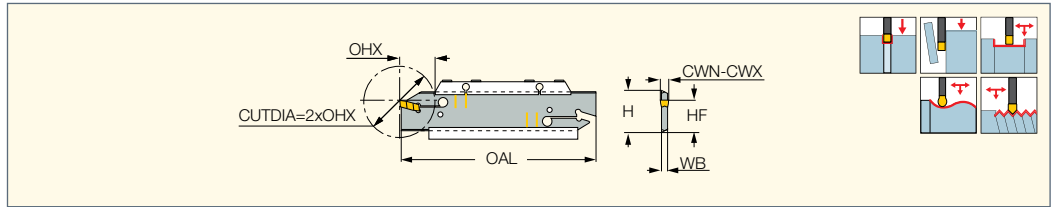
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Minimum overhang
- (4) Maximum overhang

For inserts, see pages: GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

For holders, see pages: C#-TBU (623) • IM-TBU (633) • UBHCR/L (618)

CUTGRIP

CGHN-D
Double-Ended Blades for
External Grooving and Turning



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	OHN ⁽³⁾	OHX ⁽⁴⁾	HF	OAL	WB
CGHN 26-3D	26.0	2.80	4.00	10.0	15.0	21.4	110.00	2.40
CGHN 26-4D	26.0	3.50	4.50	10.0	15.0	21.4	110.00	3.20
CGHN 26-5D	26.0	4.40	6.40	10.0	20.0	21.4	110.00	4.00
CGHN 32-3D	32.0	2.80	4.00	10.0	19.0	24.8	150.00	2.40
CGHN 32-4D	32.0	3.50	5.00	12.0	21.0	24.8	150.00	3.20
CGHN 32-5D	32.0	4.40	6.40	12.0	26.0	24.8	150.00	4.00
CGHN 32-6D	32.0	5.50	6.40	12.0	26.0	24.8	150.00	5.20

- Use the yellow lines on blade for min. and max. overhang
- When using TIP inserts, toolholder seat needs to be modified according to insert profile to ensure clearance
- When using a double-ended insert, grooving depth is limited by the insert
- For user guide, see pages 419-428, 432-436

(1) Minimum cutting width

(2) Maximum cutting width

(3) Minimum overhang

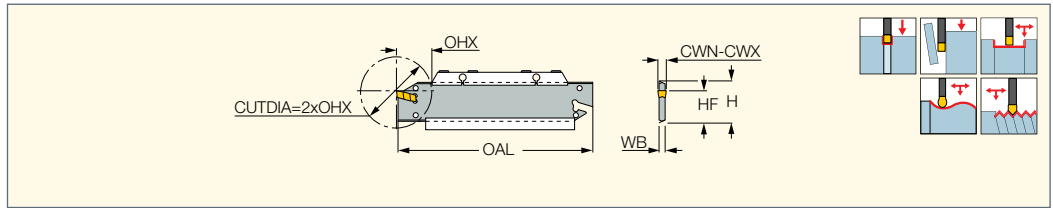
(4) Maximum overhang

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

For holders, see pages: SGTBU/SGTBN (616) • UBHCR/L (618)

CUTGRIP

CGHN-DG
Double-Ended Blades for
External Grooving and Turning
Self-Clamped Inserts



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	OHX_2 ⁽⁴⁾	HF	OAL	WB	
CGHN 32-3DG	32.0	2.80	4.00	50.0	25.0	24.8	150.00	2.40	EDG 44A*
CGHN 32-4DG	32.0	3.50	5.00	50.0	30.0	24.8	150.00	3.20	EDG 44A*
CGHN 32-5DG	32.0	4.40	6.40	60.0	33.0	24.8	150.00	4.00	EDG 44A*
CGHN 32-6DG	32.0	5.50	6.40	60.0	35.0	24.8	150.00	5.20	EDG 44A*

- DO-GRIP clamping insert is self-retained for long overhang
- When using TIP inserts, toolholder seat needs to be modified according to insert profile to ensure clearance
- When using a double-ended insert, grooving depth is limited by the insert
- For user guide, see pages 419-428, 432-436

(1) Minimum cutting width

(2) Maximum cutting width

(3) Maximum overhang for grooving

(4) Maximum overhang for turning

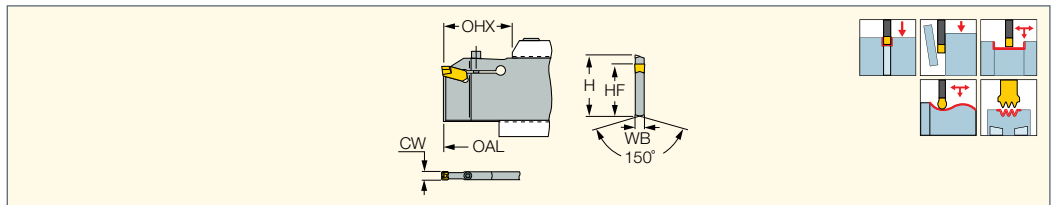
* Optional, should be ordered separately

- For inserts, see pages:** GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIP-UN (303) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

For holders, see pages: C#-TBK-R/L (623) • HSK A-WH-TBK-R/L (632) • SGTBU/SGTBN (616) • UBHCR/L (618)

CUTGRIP

CGHN-P8
Blades for Deep Grooving
and Turning



Designation	CW	OHX ⁽³⁾	CDX ⁽⁴⁾	WB	HF	H	OAL		
CGHN 52-P8 ⁽¹⁾	8.00	50.0	43.00	7.40	45.0	52.6	190.00	SR 76-1637	HW 4.0
CGHN 53-P8 ⁽²⁾	8.00	70.0	63.00	7.40	45.0	52.6	260.00	SR 76-1637	HW 4.0

- For user guide, see pages 419-428, 432-436

(1) If CUTDIA (workpiece) is smaller than 200 mm, then CDX=48; if CUTDIA (workpiece) is larger than 200 mm, then CDX=43

(2) If CUTDIA (workpiece) is smaller than 200 mm, then CDX=68; if CUTDIA (workpiece) is larger than 200 mm, then CDX=63

(3) Maximum overhang

(4) Cutting depth maximum

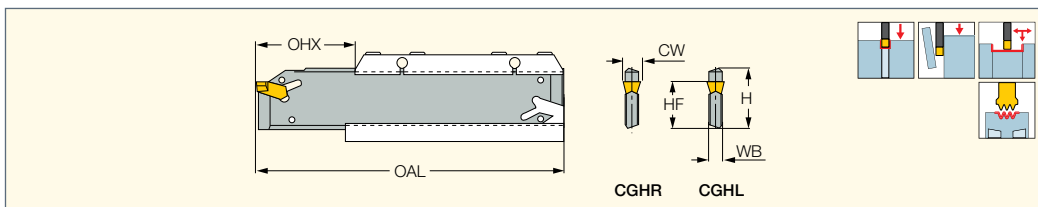
- For inserts, see pages:** GIMF (288) • GIMM 8CC (583) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIPY (300)

For holders, see pages: SGTBK (617) • SGTBU/SGTBN (616)

CUTGRIP

CGHR/L-P8DG

Double-Ended Heavy Duty Self-Clamped Grooving and Turning Blades



Designation	CW	OHX ⁽¹⁾	WB	HF	H	OAL	
CGHR/L 32-P8DG	8.00	40.0	6.80	24.8	32.0	150.00	EDG 44A*

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum overhang • If CUTDIA (workpiece) is smaller than 200 mm, then CDX=48; if CUTDIA (workpiece) is larger than 200 mm, then CDX=43

* Optional, should be ordered separately

For inserts, see pages: GIMF (288) • GIMM 8CC (583) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIPY (300)

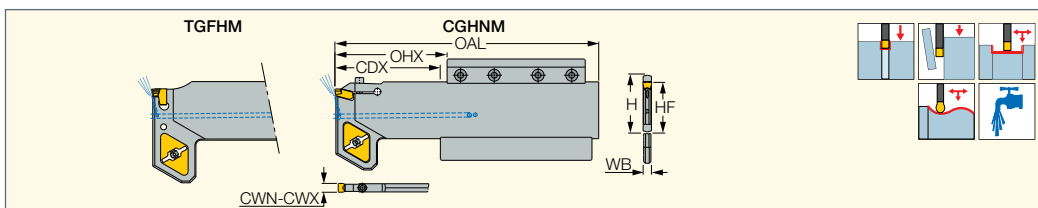
For holders, see pages: C#-TBK-R/L (623) • HSK A-WH-TBK-R/L (632) • SGTBK (617) • SGTBU/SGTBN (616)

CUTGRIP

WHISPERLINE ANTI-VIBRATION

Anti-Vibration Blades

Anti-Vibration Blades for Deep Grooving and Turning



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	CDX ⁽⁴⁾	WB	HF	H	OAL	Insert						
CGHNM 53-6DG-AV	5.50	6.40	100.0	93.00	5.20	45.0	52.6	235.00	GIMF/N/T/Y 6 GIM 6	SGCU 341	OR 30X3 NBR	EDG 44A*	T-6/5	SGC 340	
TGFHM 53K-8-AV	7.70	9.00	100.0	93.00	7.40	45.0	52.6	235.00	TAG/TAGB 8	SGCU 341	OR 30X3 NBR	ETG 8-12*	T-6/5	SGC 340	
CGHNM 53-P8-AV	8.00	8.00	100.0	93.00 ⁽⁵⁾	7.40	45.0	52.6	235.00	GIMY/F/MM 8	SGCU 341	OR 30X3 NBR		T-6/5	SGC 340	HW 4.0

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Maximum overhang

⁽⁴⁾ Cutting depth maximum

⁽⁵⁾ For CUTDIA < 200 CDX=98

* Optional, should be ordered separately

For inserts, see pages: GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIMF (288)

• GIMM 8CC (583) • GIMM (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP-E (293) • GIPA (full radius W=3-6) (301)

• GIPA (W=3-6) (300) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TAG N-C/W/M (506) • TAGB/TAGBA (333)

For holders, see pages: SGTBK (617) • SGTBU/SGTBN (616)

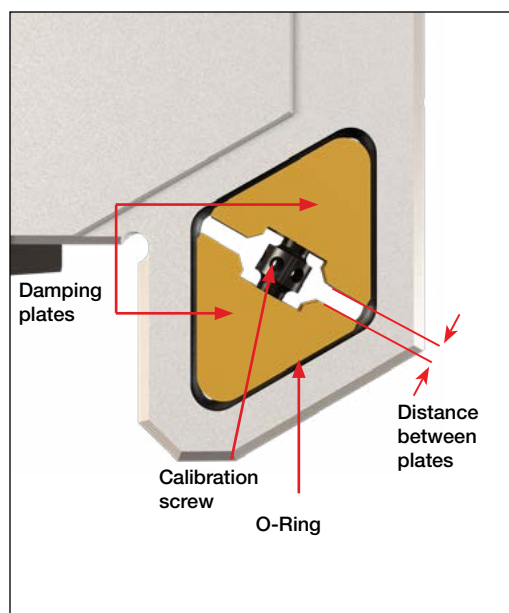
User Guide

- To maintain a stable and controlled machining process use constant RPM (G97).
- Each blade is pre-calibrated in laboratory conditions for an overhang of 100 mm.
- Although the pre-calibration is suitable for a wide range of overhangs, sometimes fine-tuning calibration is necessary, depends on the overhang and clamping rigidity of the machine.
- Before making fine tuning calibration try to optimize the cutting conditions. First step should be reducing the RPM.

Fine-Tuning Calibration

For shorter overhangs / more rigid clamping conditions, it is recommended to increase the compression of the O-ring by rotating the calibration screw clockwise (make sure the distance between the damping plates increases).

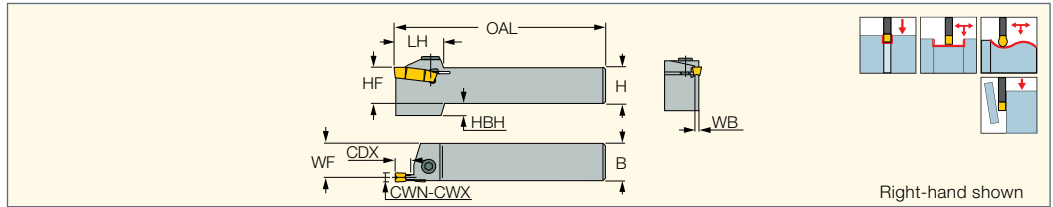
- For longer overhangs / less rigid clamping conditions, it is recommended to decrease the compression of the O-ring by rotating the calibration screw counter clockwise (make sure the distance between the damping plates decreases).
- The fine-tuning resolution should be about a half-turn for each 30 mm difference in the overhang.
- To restore the initial setup, use the distance between the damping plates imprinted on the blade.



CUTGRIP

GHDR/L (long pocket)

External Tools for Grooving, Turning and Parting



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	H	B	OAL	WF	WB	LH	HBH	HF		
GHDR/L 25-8	6.60	8.30	25.00	25.0	25.0	150.00	22.00	6.00	40.0	7.6	25.0	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾
GHDR/L 3225-8	6.60	8.30	25.00	32.0	25.0	168.50	22.00	5.90	40.0	-	32.0	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾
GHDR/L 25-812	6.60	8.30	12.00	25.0	25.0	140.00	22.00	5.90	33.0	-	25.0	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾
GHDR/L 32-8	6.60	8.30	25.00	32.0	32.0	170.00	29.00	6.00	40.0	-	32.0	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾
GHD 32-812	6.60	8.30	12.00	32.0	32.0	160.00	29.00	5.90	33.0	-	32.0	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾
GHDR/L 32-836	7.00	8.30	36.00	32.0	32.0	170.00	28.90	6.30	56.0	8.0	32.0	SR M8X20DIN912	HW 6.0 ⁽⁴⁾
GHDR/L 25-10	8.60	11.10	25.00	25.0	25.0	150.00	21.30	7.40	43.0	7.6	25.0	SR M8X20DIN912	HW 6.0 ⁽⁴⁾
GHDR/L 32-10	8.60	11.10	25.00	32.0	32.0	170.00	28.30	7.40	43.0	-	32.0	SR M8X20DIN912	HW 6.0 ⁽⁴⁾
GHDR/L 40-10	8.60	11.10	25.00	40.0	40.0	200.00	36.30	7.40	43.0	-	40.0	SR M8X20DIN912	HW 6.0 ⁽⁴⁾

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

⁽⁴⁾ For optional key with limited tightening torque see page 428

For inserts, see pages: GDMF (288) • GDMM-CC (583) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291) • GDMY-F (291)

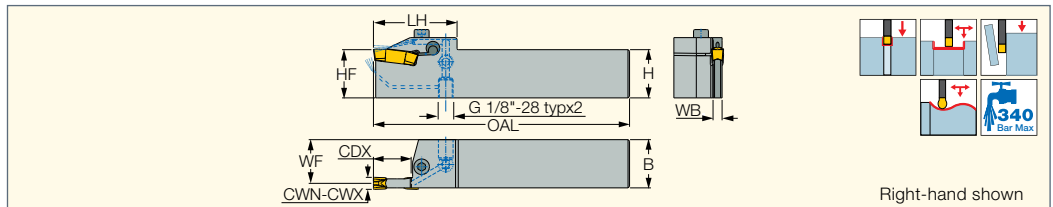
• GDPY (293) • GIA-K (long pocket) (299) • GIF (long pocket) (298) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292)

• GIPA/GIDA 8 (full radius) (302)

CUTGRIP JETCUT

GHDR/L-JHP (long pocket)

CUT-GRIP Tools with Channels for High-Pressure Coolant for Grooving and Turning



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	H	B	OAL	LH	WF	WB	HF
GHD 32-8-JHP	6.60	8.30	25.00	32.0	32.0	170.00	55.5	29.00	6.00	32.0
GHDR 32-8-JHP	6.60	8.30	25.00	32.0	32.0	170.00	55.0	29.00	6.00	32.0

• For user guide and accessories see pages 419-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

For inserts, see pages: GDMF (288) • GDMM-CC (583) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291) • GDMY-F (291)

• GIA-K (long pocket) (299) • GIF (long pocket) (298) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292) • GIPA/GIDA 8 (full radius) (302)

Flow Rate vs. Pressure

Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
GHDR/L 32-8-JHP	13-16	19-21	22-24

Spare Parts

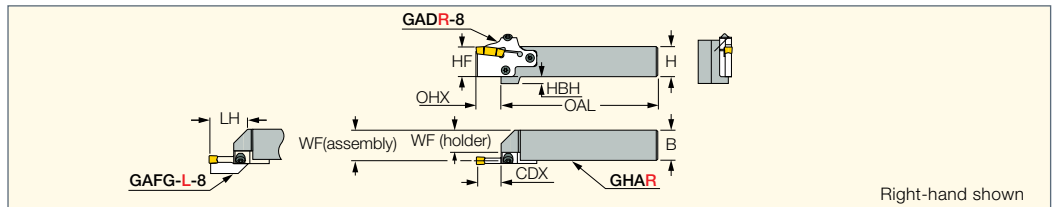
Designation			
GHDR/L 32-8-JHP	SR M6X25 DIN912	HW 5.0 ⁽⁴⁾	PLG 1/8ISO1179

⁽⁴⁾ For optional key with limited tightening torque see page 428

CUTGRIP

GHAR/L-8

External Holders for Grooving and Turning Adapters



Designation	H	HF	B	WF ⁽¹⁾	OAL	LH	OHX ⁽²⁾	HBH	TGA ⁽³⁾	CDX ⁽⁴⁾	FG ⁽⁵⁾				
GHAR/L 25-8	25.0	25.0	25.0	16.0	124.50	45.0	25.50	14.0	GADR/L 8	25.50	GAFG...R/L-8	SR 14-519	T-20/5	SR M6X25 DIN912	HW 5.0
GHAR/L 32-8	32.0	32.0	32.0	23.0	144.50	45.0	25.50	7.0	GADR/L 8	25.50	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 (to be ordered separately)

⁽¹⁾ WF(holder)

⁽²⁾ Maximum overhang

⁽³⁾ Adapter for Turning & Grooving

⁽⁴⁾ See specific adapter dimensions

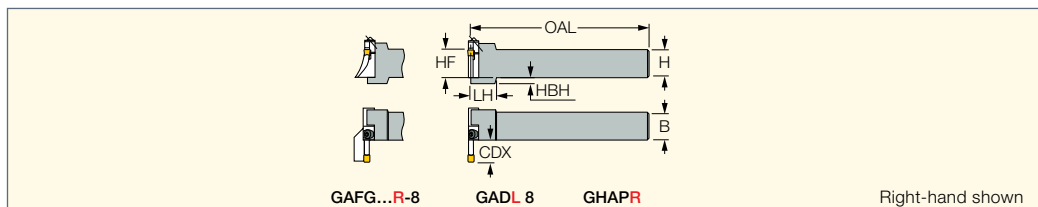
⁽⁵⁾ Adapter for Face Grooving

For tools, see pages: GADR/L-8 (286) • GAFG-R/L-8 (580) • PCADR/L 34N-RE (318)

CUTGRIP

GHAPR/L-8

External Holders for Grooving and Turning Perpendicularly Oriented Adapters



Designation	H	HF	B	OAL	LH	HBH	TGA ⁽¹⁾	CDX ⁽²⁾	FG ⁽³⁾				
GHAPR/L 32-8	32.0	32.0	32.0	155.00	30.0	7.0	GADR/L 8	25.50	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 (to be ordered separately)

⁽¹⁾ Adapter for Turning & Grooving

⁽²⁾ See specific adapter dimensions

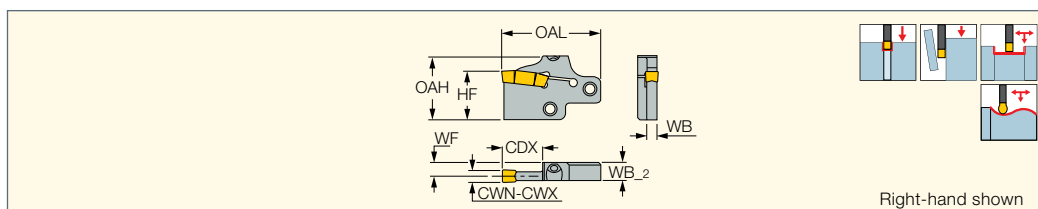
⁽³⁾ Adapter for Face Grooving

For tools, see pages: GADR/L-8 (286) • GAFG-R/L-8 (580) • PCADR/L 34N-RE (318)

CUTGRIP

GADR/L-8

Adapters for up to 25 mm Deep Machining



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WB	HF	OAH	OAL	WB_2	WF
GADR/L 8	6.60	8.30	25.50	6.00	32.0	42.0	63.00	12.0	9.00

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

For inserts, see pages: GDMA (300) • GDMF (288) • GDMM-CC (583) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291)

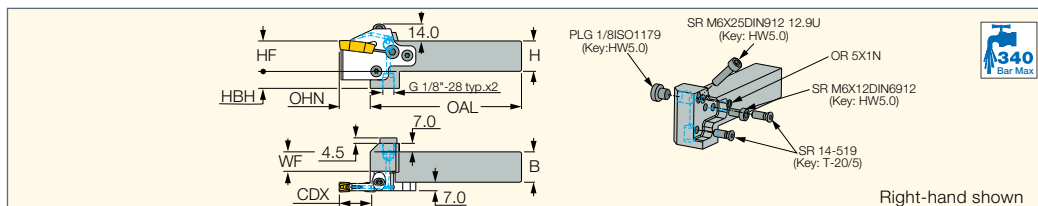
• GDMY-F (291) • GIA-K (long pocket) (299) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292) • GIPA/GIDA 8 (full radius) (302)

For holders, see pages: C#-GHAD-8 (625) • C#-GHAPR/L-8 (626) • GHAPR/L-8 (286) • GHAR/L-8 (285) • IM-GHAD-8 (634)

CUTGRIP JETCUT

GHAR/L-JHP

Holders with High-Pressure Coolant Channels for Grooving and Turning Adapters



Designation	H	HF	B	WF	OAL	OAH ⁽¹⁾	HBH	CDX ⁽²⁾
GHAR/L 25-8-JHP	25.0	25.0	25.0	16.0	124.50	25.00	14.0	25.50

• For user guide and accessories see pages 419-438

⁽¹⁾ Minimum overhang

⁽²⁾ See specific adapter dimensions

For tools, see pages: GADR/L-JHP (287)

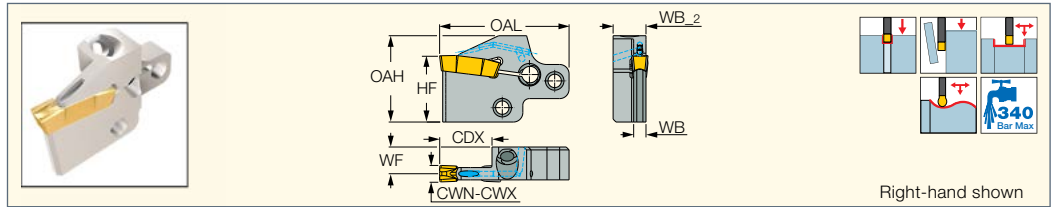
Spare Parts

Designation							
GHAR/L-JHP	SR 14-519	T-20/5	OR 5X1N	SR M6X12DIN6912	SR M6X25 DIN912	PLG 1/8ISO1179	HW 5.0X120 MM

CUTGRIP JETCUT

GADR/L-JHP

Adapters with High-Pressure Coolant Channels Carrying Groove-Turn Inserts for up to 25 mm Deep Machining



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WB	HF	OAH	OAL	WB_2	WF
GADR/L 8-JHP	6.60	8.30	25.50	6.00	32.0	42.0	63.00	17.0	14.00
GADR/L 10-JHP	8.60	10.30	25.50	7.40	32.0	42.0	63.00	17.7	14.00

• For user guide and accessories see pages 419-438

- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ Cutting depth maximum

For inserts, see pages: GDMA (300) • GDMF (288) • GDMM-CC (583) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291) • GDMY-F (291) • GDPY (293) • GIA-K (long pocket) (299) • GIF (long pocket) (298) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292) • GIPA/GIDA 8 (full radius) (302)

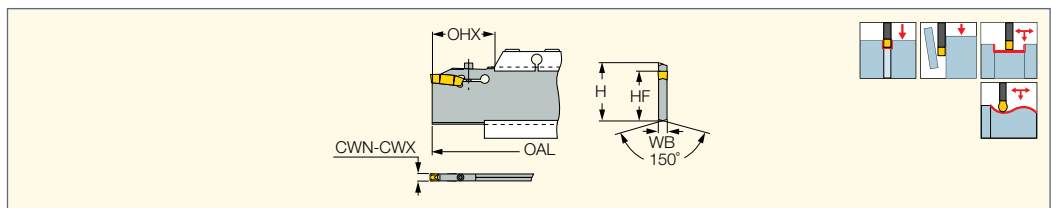
Flow Rate vs. Pressure

Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
GADR/L-JHP	15-17	23-25	27-29

CUTGRIP

CGHN-8-10D

Heavy Duty Deep Grooving and Turning Blades



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	WB	HF	H	OAL	SR	HW
CGHN 52-8D	8.00	8.30	50.0	7.40	45.0	52.6	190.00	SR 76-1637	HW 4.0
CGHN 53-8D	8.00	8.30	70.0	7.40	45.0	52.6	260.00	SR 76-1637	HW 4.0
CGHN 52-10D	10.00	11.00	70.0	9.20	45.0	52.6	190.00	SR 76-1289	HW 5.0
CGHN 53-10D	10.00	11.00	100.0	9.20	45.0	52.6	260.00	SR 76-1289	HW 5.0

• For user guide, see pages 419-428, 432-436

- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ Minimum overhang • When using a double-ended insert, grooving depth is limited by the insert

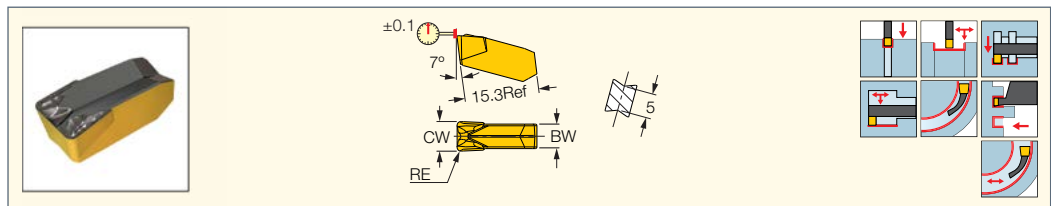
For inserts, see pages: GDMF (288) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291) • GDMY-F (291) • GDPY (293) • GIA-K (long pocket) (299) • GIF (long pocket) (298) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292) • GIPA/GIDA 8 (full radius) (302)

For holders, see pages: SGTBK (617) • SGTBU/SGTBN (616)

CUTGRIP

GIMT

Utility Single-Ended Inserts for Grooving and Turning



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	IC808	IC07	IC806	a _p (mm)	f _{turn} (mm/rev)	f _{groove} (mm/rev)
						•	•	•	•	•			
GIMT 302	3.00	0.20	0.05	0.050	2.40	•	•	•	•	•	0.50-1.80	0.10-0.22	0.07-0.15
GIMT 304	3.00	0.40	0.05	0.050	2.40	•	•	•	•	•	0.50-1.80	0.10-0.22	0.07-0.15
GIMT 402	4.00	0.20	0.05	0.050	3.40	•	•	•	•	•	0.50-2.40	0.15-0.25	0.09-0.20
GIMT 404	4.00	0.40	0.05	0.050	3.40	•	•	•	•	•	0.50-2.40	0.15-0.25	0.09-0.20
GIMT 508	5.00	0.80	0.05	0.050	4.00	•	•	•	•	•	1.00-3.00	0.20-0.35	0.11-0.22
GIMT 608	6.00	0.80	0.05	0.050	5.00	•	•	•	•	•	1.00-3.60	0.22-0.40	0.13-0.25

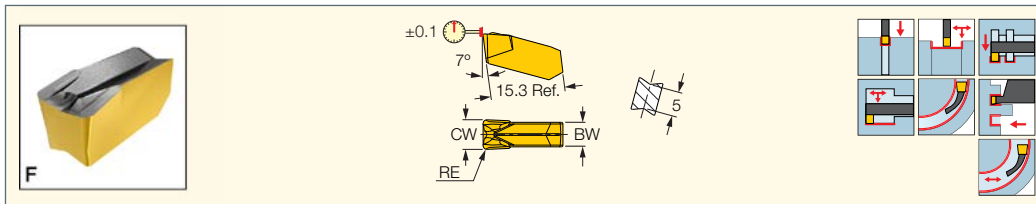
• DMIN for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GIMF
Utility Single-Ended Inserts
for Grooving and Turning



Designation	Dimensions					Tough ↔ Hard										Recommended Machining Data					
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC1030	IC8250	IC1010	IC808	IC908	IC20	IC5010	IC428	IC806	IC907	IC4	IC804	a _p (mm)	f _{turn} (mm/rev)	f _{groove} (mm/rev)
GIMF 406	4.00	0.60	0.05	0.050	3.40	●		●		●	●	●	●	●	●	●	●	●	0.75-2.40	0.19-0.25	0.09-0.16
GIMF 502	5.00	0.20	0.05	0.050	4.00			●			●								0.25-3.00	0.18-0.26	0.11-0.18
GIMF 508	5.00	0.80	0.05	0.050	4.00	●		●		●	●	●	●	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21
GIMF 605	6.00	0.50	0.05	0.050	5.00	●				●									0.60-3.60	0.22-0.36	0.13-0.23
GIMF 608	6.00	0.80	0.05	0.050	5.00	●	●	●	●	●	●	●	●	●	●	●	●	●	1.00-3.60	0.24-0.42	0.13-0.25
GIMF 808	8.00	0.80	0.05	0.050	6.00	●		●		●									1.00-4.80	0.32-0.56	0.18-0.34

• DMIN for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

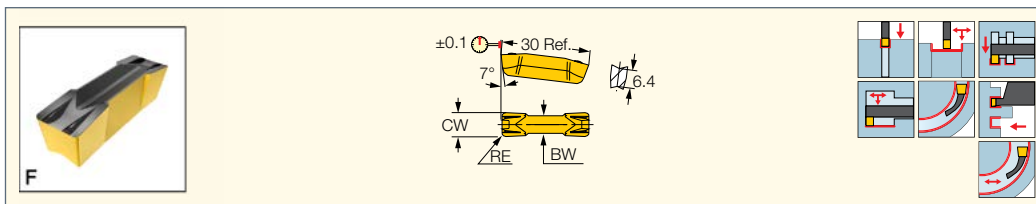
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGFG 51-P8 (580) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-P8 (283) • CGHN-S (282) • CGHR/L-P8DG (284) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GDMF
Utility Double-Ended Inserts
for Grooving and Turning



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC8250	IC808	IC5010	IC428	a _p (mm)	f _{turn} (mm/rev)	f _{groove} (mm/rev)
GDMF 808	8.00	0.80	0.05	0.050	27.00	6.00	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

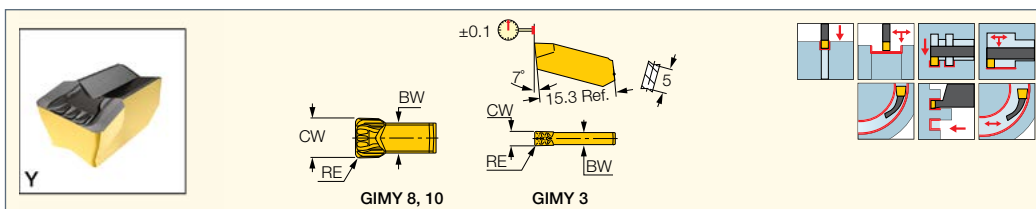
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285) • GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GIMY
Utility Single-Ended Inserts
for Grooving and Turning



Designation	Dimensions					Tough ↔ Hard								Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	IC808	IC908	IC20	IC806	IC4	IC804	a _p (mm)	f _{turn} (mm/rev)	f _{groove} (mm/rev)
GIMY 304	3.00	0.40	0.05	0.050	2.40	●	●	●	●	●	●	●	●	0.50-1.80	0.16-0.20	0.07-0.12
GIMY 808	8.00	0.80	0.05	0.050	6.00	●	●	●	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34
GIMY 1008	10.00	0.80	0.05	0.050	8.00	●		●						1.00-6.00	0.35-0.65	0.22-0.40

• DMIN for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

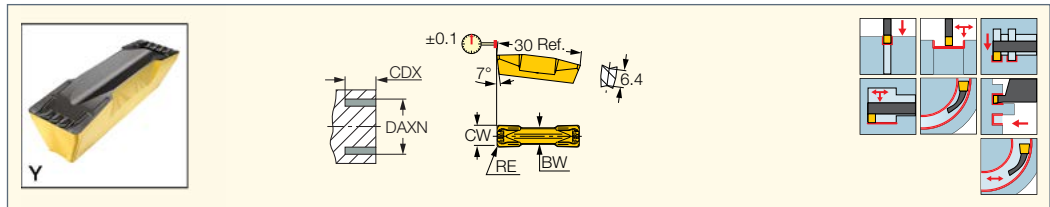
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGFG 51-P8 (580) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-P8 (283) • CGHN-S (282) • CGHR/L-P8DG (284) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSLR/L (373) • GHSLR/L-JHP-SL (374) • NQCH-GHSLR/L-JHP (374)

CUTGRIP

GDMY
Utility Double-Ended Inserts
for Grooving and Turning



Designation	Dimensions							Tough ↔ Hard				Recommended Machining Data					
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	DAXN ⁽³⁾	CDX ⁽⁴⁾	IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 808	8.00	0.80	0.05	0.050	6.00	50.0	27.00	•	•	•	•	•	•	•	1.00-4.80	0.32-0.56	0.18-0.34

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Minimum axial grooving diameter

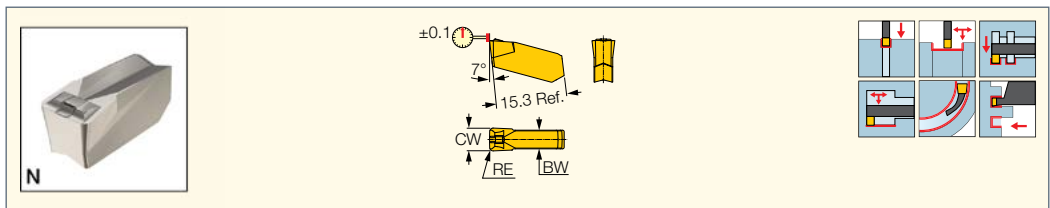
⁽⁴⁾ Cutting depth maximum

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GIMN
Utility Single-Ended Inserts
for Grooving and Turning
Ductile Materials



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC908	IC907	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMN 302	3.00	0.20	0.05	0.050	2.40	•	•	0.30-1.20	0.07-0.11	0.04-0.09
GIMN 406	4.00	0.60	0.05	0.050	3.40	•	•	0.75-1.60	0.11-0.18	0.05-0.14
GIMN 508	5.00	0.80	0.05	0.050	4.10	•	•	1.00-2.00	0.15-0.25	0.06-0.18
GIMN 608	6.00	0.80	0.05	0.050	5.00	•	•	1.00-2.40	0.18-0.30	0.07-0.22

• DMIN for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

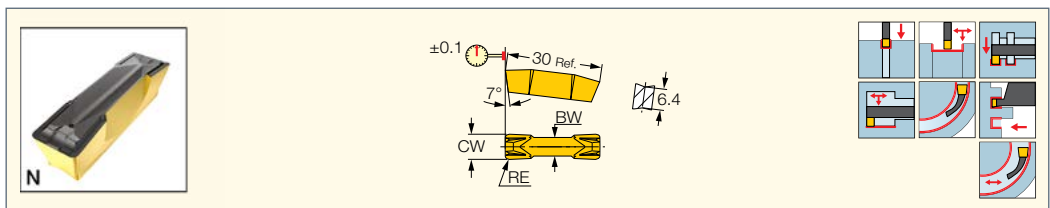
For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)

• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)

• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GDMN
Utility Double-Ended Inserts
for Grooving and Turning
Ductile Materials



Designation	Dimensions						Tough ↔ Hard				Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC8250	IC808	IC907	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMN 808	8.00	0.80	0.05	0.050	27.00	6.00	•	•	•	•	1.00-3.20	0.20-0.35	0.10-0.30

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

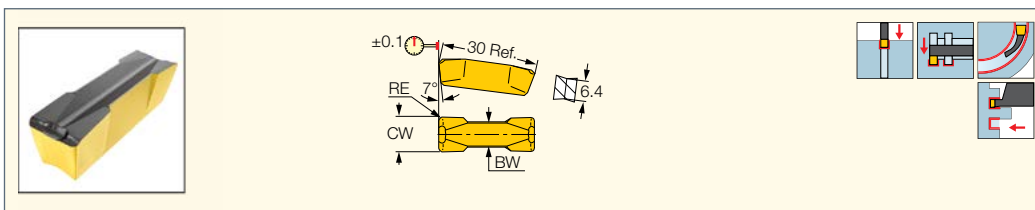
⁽³⁾ Cutting depth maximum

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GDMU
Utility Inserts for Heavy
Grooving on Ductile Materials



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	
GDMU 808	8.00	0.80	0.05	0.050	6.00	●	●	f groove (mm/rev) 0.10-0.24

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

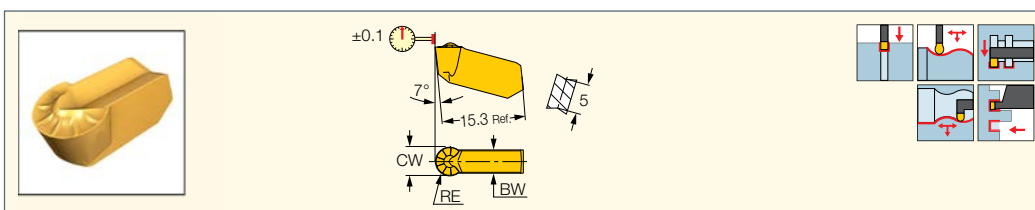
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GIMY (full radius)
Utility Single-Ended Inserts
for Grooving and Profiling



Designation	Dimensions					Tough ↔ Hard								Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	IC808	IC908	IC20	IC20N	IC806	IC804	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 315	3.00	1.50	0.05	0.050	2.40	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13
GIMY 420	4.00	2.00	0.05	0.050	3.20	●	●	●	●	●	●	●	●	0.00-2.00	0.20-0.28	0.09-0.17
GIMY 525	5.00	2.50	0.05	0.050	3.90	●	●	●	●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21
GIMY 630	6.00	3.00	0.05	0.050	5.00	●	●	●	●	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25
GIMY 635-318	6.35	3.18	0.05	0.050	5.10	●	●	●	●	●	●	●	●	0.00-3.10	0.25-0.53	0.14-0.27
GIMY 840	8.00	4.00	0.05	0.050	5.60	●	●	●	●	●	●	●	●	0.00-4.00	0.32-0.67	0.18-0.34

• DMIN for internal application=70 mm • Can cut arcs to 250° • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGFG 51-P8 (580) • CGHN 26-M (356) • CGHN 32-DGM (358)

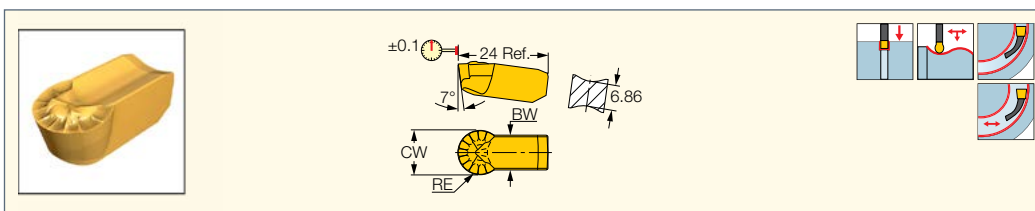
• CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-P8 (283) • CGHN-S (282) • CGHR/L-P8DG (284) • CGPAD (281) • CGPAD-JHP (282)

• GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273)

• GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSLR/L-JHP (374)

CUTGRIP

GIMY 1260
Utility Single-Ended Inserts for
External Grooving and Profiling



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	IC808	IC908	IC20	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 1260	12.00	6.00	0.05	0.050	9.50	●	●	●	●	●	0.00-6.00	0.42-0.86	0.26-0.45

• Toolholder seat needs to be modified according to insert profile to ensure clearance • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

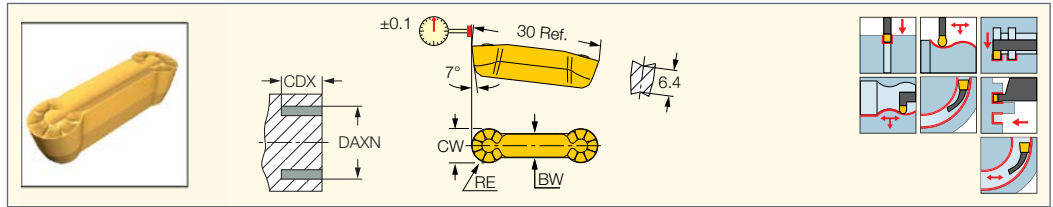
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: CGHR/L-12-14D (333) • GHDR/L/N 12/14 (333)

CUTGRIP

GDMY (full radius)

Utility Double-Ended Full Radius Inserts for Grooving and Profiling



Designation	Dimensions							Tough ↔ Hard						Recommended Machining Data				
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	DAXN ⁽³⁾	CDX	IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 840	8.00	4.00	0.05	0.050	5.60	50.0	25.00	●	●	●	●	●	●	●	●	0.00-4.00	0.32-0.67	0.18-0.34

• Can cut arcs to 250° • DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Minimum axial grooving diameter

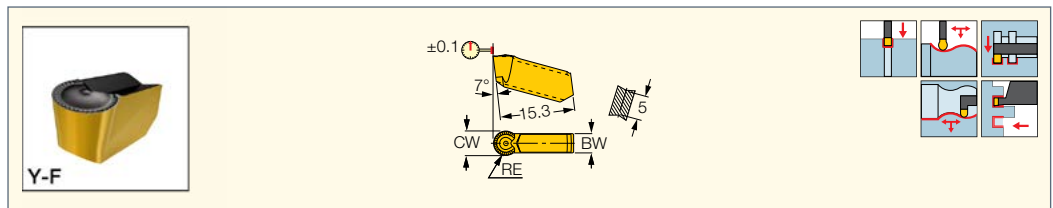
For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDKR/L (446)

• GHDR/L (long pocket) (285) • GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GIMY-F

Utility Single-Ended Inserts for Grooving and Profiling Ductile Materials



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC8250	IC808	IC908	IC806	IC804	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 315F	3.00	1.50	0.05	0.050	2.40		●				0.00-1.50	0.18-0.26	0.07-0.13
GIMY 525F	5.00	2.50	0.05	0.050	3.90		●		●		0.00-2.50	0.23-0.42	0.11-0.21
GIMY 630F	6.00	3.00	0.05	0.050	5.00		●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25
GIMY 840F	8.00	4.00	0.05	0.050	5.60	●					0.00-4.00	0.32-0.67	0.18-0.34

• DMIN for internal applications = 70 mm • Can cut arcs to 250° • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGFG 51-P8 (580) • CGHN 26-M (356) • CGHN 32-DGM (358)

• CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-P8 (283) • CGHN-S (282) • CGHR/L-P8DG (284) • CGPAD (281) • CGPAD-JHP (282)

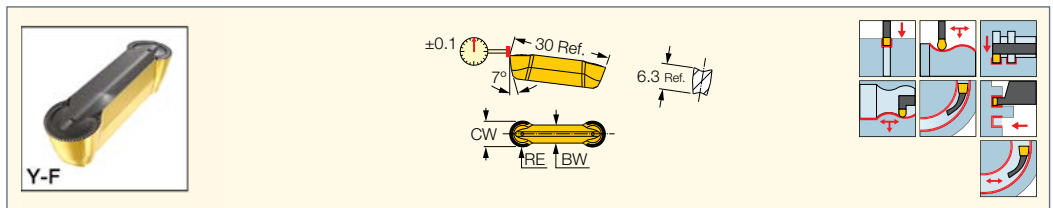
• GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273)

• GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

CUTGRIP

GDMY-F

Utility Double-Ended Inserts for Grooving and Profiling Ductile Materials



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC808	IC908	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 840F	8.00	4.00	0.05	0.050	5.60	25.00	●	●	0.00-4.00	0.32-0.67	0.18-0.34

• DMIN for internal applications = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

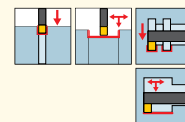
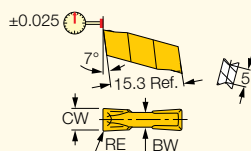
For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GIF-E (W=4-6)

Precision Double-Ended Inserts for Grooving and Turning



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC908	IC20	IC807	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-0.40	4.00	0.40	0.02	0.030	3.20	13.00	●	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15
GIF 4.00E-0.60	4.00	0.60	0.02	0.050	3.20	13.00	●	●	●	●	●	●	0.75-2.40	0.19-0.25	0.09-0.16
GIF 4.00E-0.80	4.00	0.80	0.02	0.050	3.20	13.00	●	●	●	●	●	●	1.00-2.40	0.20-0.28	0.09-0.17
GIF 5.00E-0.40	5.00	0.40	0.02	0.030	4.00	13.00	●	●	●	●	●	●	0.50-3.00	0.20-0.30	0.11-0.19
GIF 5.00E-0.60	5.00	0.60	0.02	0.050	4.00	13.00	●	●	●	●	●	●	0.75-3.00	0.21-0.32	0.11-0.20
GIF 5.00E-0.80	5.00	0.80	0.02	0.050	4.00	13.00	●	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21
GIF 6.00E-0.40	6.00	0.40	0.02	0.030	4.80	13.00	●	●	●	●	●	●	0.50-3.60	0.22-0.36	0.13-0.23
GIF 6.00E-0.80	6.00	0.80	0.02	0.050	4.80	13.00	●	●	●	●	●	●	1.00-3.60	0.24-0.42	0.13-0.25
GIF 6.00E-1.20	6.00	1.20	0.02	0.050	4.80	13.00	●	●	●	●	●	●	1.45-3.60	0.24-0.46	0.13-0.25

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)

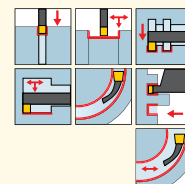
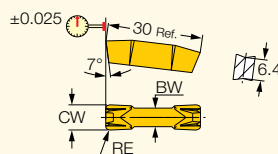
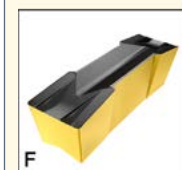
• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)

• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GIF-E (W=8,10)

Precision Double-Ended Inserts for Grooving and Turning



Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data			
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	IC807	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 8.00E-0.40	8.00	0.40	0.02	0.030	6.00	27.00	●	●	●	●	●	●	●	●	●	0.50-4.80	0.29-0.48	0.18-0.31
GIF 8.00E-0.80	8.00	0.80	0.02	0.050	6.00	27.00	●	●	●	●	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34
GIF 8.00E-1.20	8.00	1.20	0.02	0.050	6.00	27.00	●	●	●	●	●	●	●	●	●	1.45-4.80	0.32-0.62	0.18-0.34
GIF 10.00E-0.80	10.00	0.80	0.02	0.050	8.00	27.00	●	●	●	●	●	●	●	●	●	1.00-6.00	0.35-0.65	0.22-0.40
GIF 10.00E-1.20	10.00	1.20	0.02	0.050	8.00	27.00	●	●	●	●	●	●	●	●	●	1.45-6.00	0.35-0.72	0.22-0.40

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

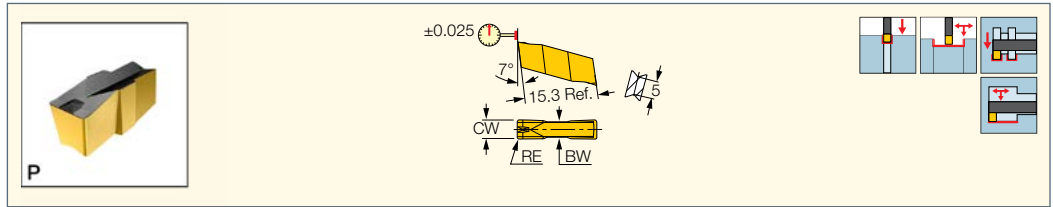
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

GIP-E
Precision Double-Ended Inserts
for Grooving and Turning



Designation	Dimensions						Tough ↔ Hard										Recommended Machining Data			
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC908	IC20	IC20N	IC5010	IC428	IC806	IC807	IC804	a _p (mm)	f _{turn} (mm/rev)	f _{groove} (mm/rev)
GIP 3.00E-0.00	3.00	0.00	0.02	0.030	2.40	13.00	●											0.00-1.80	0.12-0.16	0.07-0.11
GIP 3.00E-0.20	3.00	0.20	0.02	0.030	2.40	13.00	●	●	●	●		●			●	●	●	0.25-1.80	0.15-0.20	0.08-0.13
GIP 3.00E-0.40	3.00	0.40	0.02	0.030	2.40	13.00	●	●	●	●	●	●	●	●	●	●		0.50-1.80	0.17-0.22	0.08-0.14
GIP 3.00E-0.80	3.00	0.80	0.02	0.050	2.40	13.00		●										1.00-1.80	0.19-0.26	0.08-0.15
GIP 4.00E-0.40	4.00	0.40	0.02	0.030	3.20	13.00	●	●	●	●	●	●	●	●	●	●		0.50-2.40	0.19-0.26	0.10-0.18
GIP 4.00E-0.60	4.00	0.60	0.02	0.050	3.20	13.00	●	●	●	●	●	●	●	●	●	●		0.75-2.40	0.21-0.28	0.10-0.19
GIP 4.00E-0.80	4.00	0.80	0.02	0.050	3.20	13.00	●	●	●	●	●	●	●	●	●	●		1.00-2.40	0.22-0.31	0.10-0.20
GIP 4.78E-0.55	4.78	0.55	0.02	0.050	4.00	13.00	●	●	●	●	●	●	●	●	●	●		0.70-2.80	0.21-0.31	0.12-0.20
GIP 5.00E-0.40	5.00	0.40	0.02	0.030	4.00	13.00	●	●	●		●				●			0.50-3.00	0.22-0.33	0.13-0.21
GIP 5.00E-0.60	5.00	0.60	0.02	0.050	4.00	13.00	●	●	●		●				●			0.75-3.00	0.23-0.35	0.13-0.22
GIP 5.00E-0.80	5.00	0.80	0.02	0.050	4.00	13.00	●	●	●		●		●	●				1.00-3.00	0.24-0.39	0.13-0.23
GIP 5.55E-0.55	5.55	0.55	0.02	0.050	4.80	13.00		●										0.70-3.30	0.21-0.36	0.14-0.23
GIP 6.00E-0.80	6.00	0.80	0.02	0.050	4.80	13.00		●	●		●		●	●				1.00-3.60	0.26-0.46	0.15-0.27
GIP 6.00E-1.20	6.00	1.20	0.02	0.050	4.80	13.00		●			●							1.45-3.60	0.26-0.51	0.15-0.27
GIP 6.35E-0.80	6.35	0.80	0.02	0.050	4.80	13.00	●	●	●		●							1.00-3.80	0.27-0.49	0.16-0.29

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

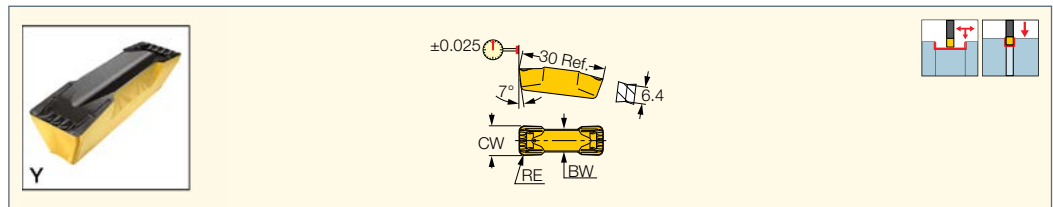
For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)

• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)

• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374)

• NQCH-GHSR/L-JHP (374)

GDPY
Precision Double-Ended
Inserts for External Heavy-
Duty Grooving and Turning



Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	IC20	a _p (mm)	f _{turn} (mm/rev)	f _{groove} (mm/rev)
GDPY 10.00-0.80	10.00	0.80	0.02	0.050	8.00	●	●	●	1.00-6.00	0.35-0.65	0.22-0.40
GDPY 10.00-1.20	10.00	1.20	0.02	0.050	8.00	●			1.45-6.00	0.45-0.80	0.22-0.40
GDPY 10.00-2.00	10.00	2.00	0.02	0.050	8.00	●		●	2.40-6.00	0.35-0.78	0.22-0.40
GDPY 11.00-1.20	11.00	1.20	0.02	0.050	8.00	●			1.45-6.60	0.39-0.73	0.24-0.41
GDPY 11.00-2.00	11.00	2.00	0.02	0.050	8.00	●			2.40-6.60	0.39-0.79	0.24-0.41

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

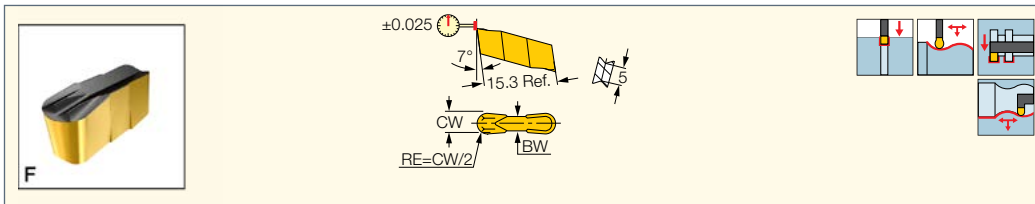
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: CGHN-8-10D (287) • GADR/L-JHP (287) • GHDR/L (long pocket) (285)

CUTGRIP

GIF-E (W=4-6 full radius)

Precision Double-Ended
Full Radius Inserts for
Profiling and Grooving



Designation	Dimensions						Tough ↔ Hard				Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC880	IC8250	IC808	IC20	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-2.00	4.00	2.00	0.02	0.050	3.20	11.80	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17
GIF 5.00E-2.50	5.00	2.50	0.02	0.050	4.00	11.30	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21
GIF 6.00E-3.00	6.00	3.00	0.02	0.050	4.80	10.80	●	●	●	●	0.00-3.00	0.24-0.50	0.13-0.25

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)

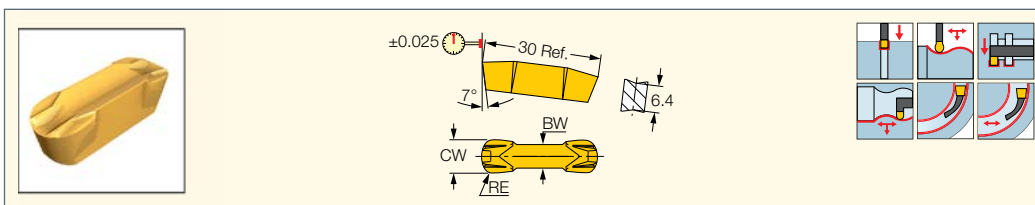
• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)

• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GIF-E (W=8,10 full radius)

Precision Double-Ended
Full Radius Inserts for
Profiling and Grooving



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC830	IC8250	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 8.00E-4.00	8.00	4.00	0.02	0.050	6.00	●	●	0.00-4.00	0.32-0.67	0.18-0.34
GIF 10.00E-5.00	10.00	5.00	0.02	0.050	8.00	●	●	0.00-5.00	0.35-0.78	0.22-0.40

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

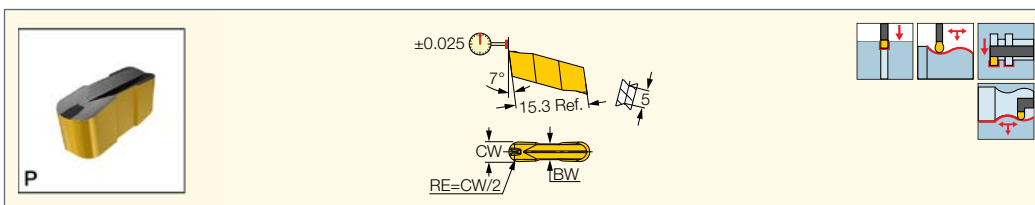
For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GIP-E (full radius)

Precision Double-Ended
Full Radius Inserts for
Profiling and Grooving



Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data			
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC880	IC8250	IC808	IC908	IC20	IC5010	IC428	IC807	IC804	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIP 3.00E-1.50	3.00	1.50	0.02	0.050	2.40	12.30	●	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.28	0.08-0.15
GIP 4.00E-2.00	4.00	2.00	0.02	0.050	3.20	11.80	●	●	●	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.10-0.20
GIP 5.00E-2.50	5.00	2.50	0.02	0.050	4.00	11.30	●	●	●	●	●	●	●	●	●	0.00-2.50	0.25-0.42	0.13-0.23
GIP 6.00E-3.00	6.00	3.00	0.02	0.050	4.80	10.80	●	●	●	●	●	●	●	●	●	0.00-3.00	0.27-0.54	0.15-0.27
GIP 6.35E-3.18	6.35	3.18	0.02	0.050	4.80	10.63	●	●	●	●	●	●	●	●	●	0.00-3.10	0.29-0.57	0.16-0.29

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

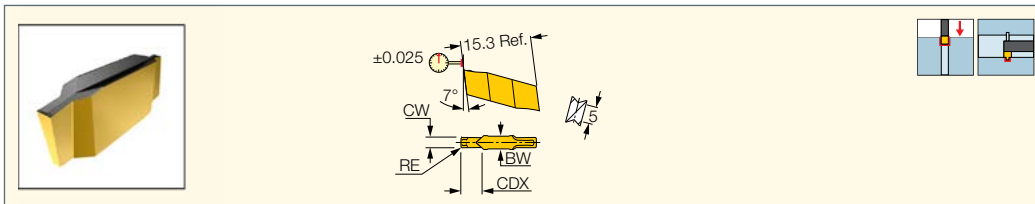
⁽³⁾ Cutting depth maximum

For tools, see pages: C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283)

• CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277)

• GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

GIP (flat top W<M)
Flat Top Precision
Double-Ended Inserts for Grooving



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC808	IC908	IC20	IC20N	IC807	
GIP 0.50-0.00	0.50	0.00	0.02	0.030	1.00	2.20		●		●			0.02-0.04
GIP 0.80-0.00	0.80	0.00	0.02	0.030	1.60	2.20		●		●			0.02-0.04
GIP 1.04-0.00	1.04	0.00	0.02	0.030	2.00	2.20	●	●	●	●		●	0.02-0.05
GIP 1.20-0.00	1.20	0.00	0.02	0.030	2.00	2.20	●	●	●	●		●	0.03-0.05
GIP 1.40-0.00	1.40	0.00	0.02	0.030	2.00	2.20	●	●	●	●		●	0.03-0.06
GIP 1.47-0.00	1.47	0.00	0.02	0.030	2.50	2.20	●	●	●	●		●	0.03-0.06
GIP 1.57-0.15	1.57	0.15	0.02	0.030	2.70	2.20	●	●	●	●		●	0.04-0.06
GIP 1.70-0.10	1.70	0.10	0.02	0.030	3.00	2.20	●	●	●	●	●	●	0.04-0.07
GIP 1.78-0.18	1.78	0.18	0.02	0.030	3.00	2.20	●	●	●	●	●	●	0.04-0.07
GIP 1.96-0.15	1.96	0.15	0.02	0.030	3.00	2.20	●	●	●	●	●	●	0.04-0.08

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

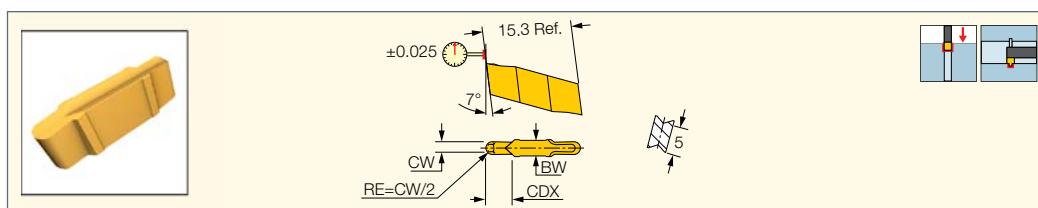
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: GHDR/L (short pocket) (275) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

GIP (full radius W<M)
Flat Top Precision
Double-Ended Inserts with Full Radius for Grooving



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC808	IC908	IC20	IC806	IC807	
GIP 1.00-0.50	1.00	0.50	0.02	0.050	2.00	2.20		●	●			●	0.03-0.06
GIP 1.40-0.70	1.40	0.70	0.02	0.050	2.00	2.20		●	●			●	0.04-0.07
GIP 1.57-0.79	1.57	0.79	0.02	0.050	2.70	2.20	●	●	●	●		●	0.04-0.08
GIP 2.00-1.00	2.00	1.00	0.02	0.050	3.00	2.20	●	●	●	●	●	●	0.05-0.11
GIP 2.39-1.20	2.39	1.20	0.02	0.050	4.70	2.40		●	●	●		●	0.06-0.12

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

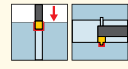
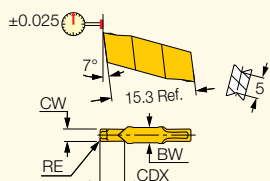
⁽³⁾ Cutting depth maximum

For tools, see pages: GHDR/L (short pocket) (275) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSL/L (373) • GHSL/L-JHP-SL (374)

• NQCH-GHSL/L-JHP (374)

CUTGRIP

GIG
Precision Double-Ended
Inserts for Grooving

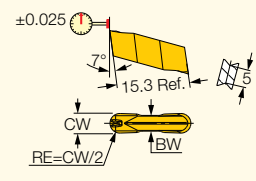
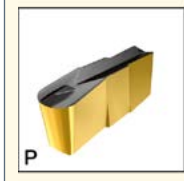


Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC808	IC20	
GIG 1.04-0.00	1.04	0.00	0.02	0.030	2.00	2.20		●		0.02-0.03
GIG 1.20-0.00	1.20	0.00	0.02	0.030	2.00	2.20		●		0.02-0.03
GIG 1.25-0.10	1.25	0.10	0.02	0.030	2.00	2.20	●	●		0.02-0.04
GIG 1.40-0.00	1.40	0.00	0.02	0.030	2.00	2.20		●		0.02-0.04
GIG 1.45-0.10	1.45	0.10	0.02	0.030	2.00	2.20	●	●		0.02-0.04
GIG 1.47-0.00	1.47	0.00	0.02	0.030	2.50	2.20		●		0.02-0.04
GIG 1.50-0.10	1.50	0.10	0.02	0.030	2.50	2.20	●	●		0.02-0.04
GIG 1.57-0.15	1.57	0.15	0.02	0.030	2.70	2.20		●		0.03-0.05
GIG 1.70-0.10	1.70	0.10	0.02	0.030	3.00	2.20		●		0.03-0.05
GIG 1.78-0.18	1.78	0.18	0.02	0.030	3.00	2.20		●		0.03-0.05
GIG 1.85-0.15	1.85	0.15	0.02	0.030	3.00	2.20	●	●		0.03-0.05
GIG 1.86-0.15	1.86	0.15	0.02	0.030	3.00	2.20		●		0.03-0.05
GIG 1.96-0.15	1.96	0.15	0.02	0.030	3.00	2.20		●		0.03-0.06
GIG 2.00-0.20	2.00	0.20	0.02	0.030	3.00	2.20	●	●	●	0.04-0.06
GIG 2.22-0.15	2.22	0.15	0.02	0.030	3.50	2.20		●		0.04-0.06
GIG 2.30-0.20	2.30	0.20	0.02	0.030	3.50	2.20	●	●		0.04-0.07

- DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436
- (1) Cutting width tolerance (+/-)
- (2) Corner radius tolerance (+/-)
- (3) Cutting depth maximum
- For tools, see pages:** GHDR/L (short pocket) (275) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSLR/L-JHP-SL (374)
- NQCH-GHSR/L-JHP (374)

CUTGRIP

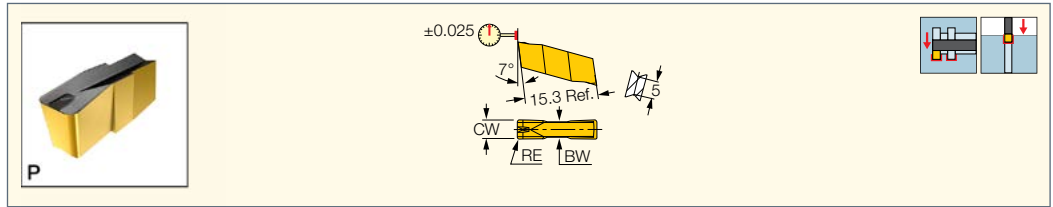
GIP (full radius)
Precision Double-Ended Full
Radius Inserts for Grooving



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC8250	IC808	IC20	IC804	
GIP 3.00-1.50	3.00	1.50	0.02	0.050	12.30	2.40				●	●	0.08-0.15
GIP 3.18-1.59	3.18	1.59	0.02	0.050	12.20	2.40	●	●	●	●		0.08-0.16
GIP 3.98-1.99	3.98	1.99	0.02	0.050	11.80	3.20		●	●	●		0.10-0.20
GIP 4.78-2.39	4.78	2.39	0.02	0.050	11.40	4.80		●	●	●		0.12-0.22
GIP 5.00-2.50	5.00	2.50	0.02	0.050	11.30	4.00			●	●		0.13-0.23

- For cutting speed recommendations and user guide, see pages 419-428, 432-436
- (1) Cutting width tolerance (+/-)
- (2) Corner radius tolerance (+/-)
- (3) Cutting depth maximum
- For tools, see pages:** C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283)
- CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277)
- GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSLR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

GIP
Precision Double-Ended
Inserts for Grooving



Designation	Dimensions						Tough ← Hard								Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC880	IC8250	IC808	IC908	IC20	IC20N	IC806	IC807	
GIP 2.22-0.15	2.22	0.15	0.02	0.030	3.50	2.20	●		●	●	●			●	0.05-0.09
GIP 2.39-0.15	2.39	0.15	0.02	0.030	4.70	2.40	●		●	●	●			●	0.05-0.09
GIP 2.47-0.20	2.47	0.20	0.02	0.030	5.00	2.40	●		●	●	●	●		●	0.06-0.10
GIP 2.70-0.10	2.70	0.10	0.02	0.030	13.00	2.40	●		●	●	●			●	0.06-0.10
GIP 2.70-0.20	2.70	0.20	0.02	0.030	13.00	2.40			●	●	●				0.07-0.11
GIP 2.87-0.20	2.87	0.20	0.02	0.030	13.00	2.40	●		●	●	●				0.07-0.12
GIP 3.00-0.00	3.00	0.00	0.02	0.030	13.00	2.40	●		●	●	●				0.07-0.11
GIP 3.00-0.20	3.00	0.20	0.02	0.030	13.00	2.40	●		●	●	●	●		●	0.08-0.13
GIP 3.00-0.40	3.00	0.40	0.02	0.030	13.00	2.40			●	●	●		●	●	0.08-0.14
GIP 3.15-0.15	3.15	0.15	0.02	0.030	13.00	2.40	●	●	●	●	●	●			0.07-0.12
GIP 3.18-0.20	3.18	0.20	0.02	0.030	13.00	2.40	●	●	●	●	●			●	0.08-0.13
GIP 3.30-0.10	3.30	0.10	0.02	0.030	13.00	2.40	●	●	●	●	●				0.07-0.12
GIP 3.48-0.20	3.48	0.20	0.02	0.030	13.00	3.20		●			●				0.09-0.15
GIP 3.56-0.20	3.56	0.20	0.02	0.030	13.00	3.20		●			●				0.09-0.15
GIP 3.74-0.20	3.74	0.20	0.02	0.030	13.00	3.20		●	●		●				0.09-0.16
GIP 3.98-0.20	3.98	0.20	0.02	0.030	13.00	3.20	●	●	●	●	●			●	0.10-0.17
GIP 4.00-0.80	4.00	0.80	0.02	0.050	13.00	3.20					●				0.10-0.20
GIP 4.23-0.10	4.23	0.10	0.02	0.030	13.00	3.20	●	●	●		●				0.10-0.16
GIP 5.00-0.40	5.00	0.40	0.02	0.030	13.00	4.00					●				0.13-0.21
GIP 6.00-0.40	6.00	0.40	0.02	0.030	13.00	4.80					●				0.15-0.25
GIP 6.00-0.80	6.00	0.80	0.02	0.050	13.00	4.80					●				0.15-0.27

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

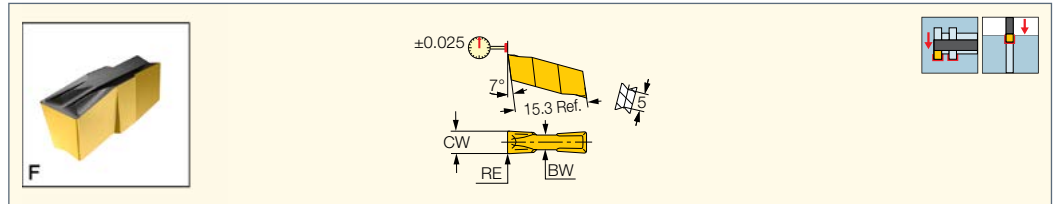
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPRL (273) • GHMR/L (273) • GHSLR/L (373) • GHSLR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

GIF
Precision Double-Ended
Inserts for Grooving



Designation	Dimensions						Tough ← Hard				Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC880	IC8250	IC808	IC20	
GIF 3.48-0.20	3.48	0.20	0.02	0.030	3.20	13.00	●	●	●	●	0.08-0.12
GIF 3.56-0.20	3.56	0.20	0.02	0.030	3.20	13.00		●	●	●	0.08-0.13
GIF 3.74-0.20	3.74	0.20	0.02	0.030	3.20	13.00		●	●	●	0.08-0.13
GIF 3.98-0.20	3.98	0.20	0.02	0.030	3.20	13.00	●	●	●	●	0.09-0.14
GIF 4.23-0.10	4.23	0.10	0.02	0.030	3.20	13.00	●	●	●	●	0.08-0.13
GIF 4.45-0.15	4.45	0.15	0.02	0.030	4.00	13.00	●	●	●	●	0.09-0.14
GIF 4.78-0.55	4.78	0.55	0.02	0.050	4.00	13.00		●	●	●	0.11-0.18
GIF 4.86-0.30	4.86	0.30	0.02	0.030	4.00	13.00		●	●	●	0.11-0.18
GIF 5.28-0.20	5.28	0.20	0.02	0.030	4.00	13.00		●	●	●	0.12-0.18
GIF 5.39-0.20	5.39	0.20	0.02	0.030	4.00	13.00		●	●	●	0.12-0.19
GIF 5.90-0.20	5.90	0.20	0.02	0.030	4.80	13.00		●	●	●	0.12-0.21
GIF 6.35-0.50	6.35	0.50	0.02	0.050	4.80	13.00		●	●	●	0.14-0.24
GIF 6.35-0.55	6.35	0.55	0.02	0.050	4.80	13.00		●	●	●	0.14-0.24

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

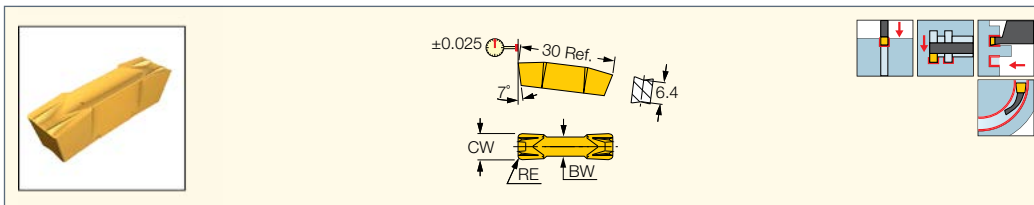
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPRL (273) • GHMR/L (273)

CUTGRIP

GIF (long pocket)
Precision Double-Ended
Inserts for Grooving



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data	
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC20	IC806	f groove (mm/rev)	f face-groove (mm/rev)
GIF 8.00-0.40	8.00	0.40	0.02	0.030	6.00	27.00	●	●	0.18-0.31	0.14-0.23
GIF 8.00-0.80	8.00	0.80	0.02	0.050	6.00	27.00	●	●	0.18-0.34	0.14-0.25

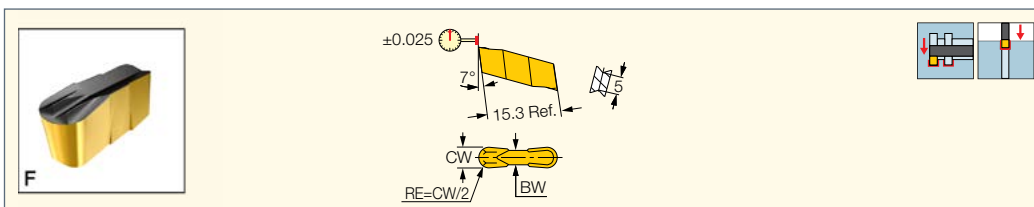
• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)
- ⁽³⁾ Cutting depth maximum

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)
• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579)

CUTGRIP

GIF (full radius)
Precision Double-Ended Full
Radius Inserts for Grooving



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC8250	IC808	IC20	
GIF 4.78-2.39	4.78	2.39	0.02	0.050	4.00	11.40	●	●	●	f groove (mm/rev) 0.11-0.20
GIF 6.35-3.18	6.35	3.18	0.02	0.050	4.80	10.60	●	●	●	0.14-0.27

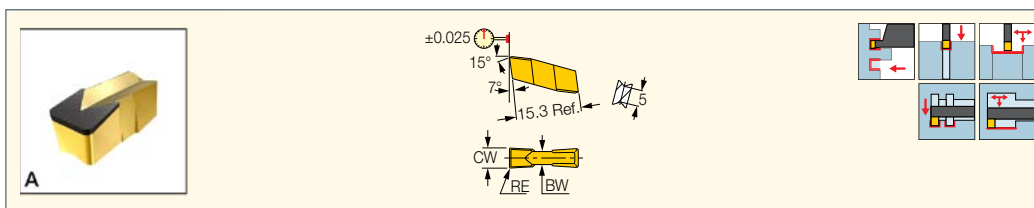
• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)
- ⁽³⁾ Cutting depth maximum

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)
• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)
• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GIA-K (W=3-6)
Flat Top Precision
Double-Ended Inserts with
T-Land for Machining Cast Iron



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC5010	IC428	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIA 3.00K-0.40	3.00	0.40	0.02	0.030	2.40	13.00	●	●	0.50-1.80	0.12-0.20	0.07-0.13
GIA 4.00K-0.40	4.00	0.40	0.02	0.030	3.20	13.00	●	●	0.50-2.40	0.16-0.27	0.09-0.18
GIA 4.00K-0.80	4.00	0.80	0.02	0.050	3.20	13.00	●	●	1.00-2.40	0.18-0.32	0.09-0.19
GIA 5.00K-0.80	5.00	0.80	0.02	0.050	4.00	13.00	●	●	1.00-3.00	0.23-0.40	0.11-0.24
GIA 6.00K-0.80	6.00	0.80	0.02	0.050	4.80	13.00	●	●	1.00-3.60	0.27-0.48	0.14-0.29

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

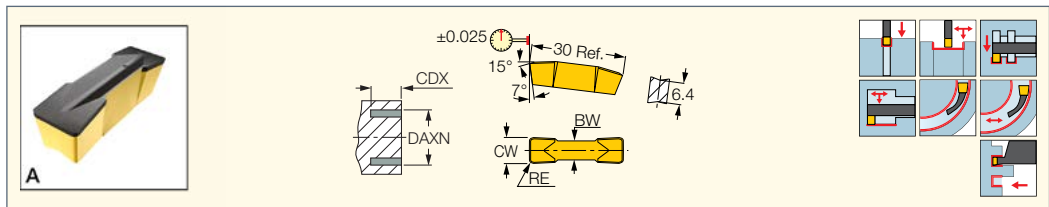
- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)
- ⁽³⁾ Cutting depth maximum

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)
• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)
• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273)

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 ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	DAXN ⁽⁴⁾	IC5010	IC428	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIA 8.00K-0.80	8.00	0.80	0.02	0.050	6.00	25.00	160.0	●	●	1.00-4.80	0.36-0.64	0.18-0.38
GIA 8.00K-1.20	8.00	1.20	0.02	0.050	6.00	25.00	160.0	●	●	1.45-4.80	0.36-0.70	0.18-0.38

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

⁽⁴⁾ Minimum axial grooving diameter

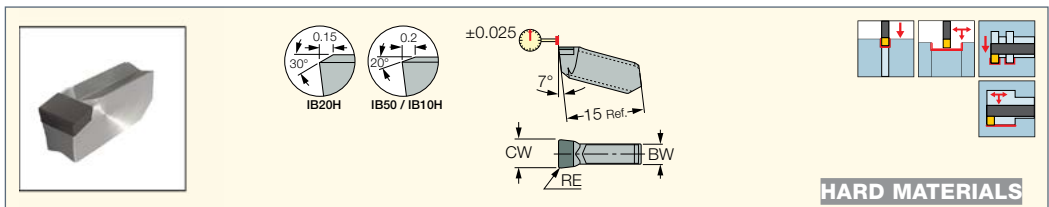
For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDR/L (long pocket) (285)

• GHDR/L-JHP (long pocket) (285) • GHFG-R/L-8 (579) • GHFGR/L-8 (579) • GHIR/L (W=7.0-8.3) (355)

CUTGRIP

GITM

CBN Tipped Inserts for
Turning and Grooving on
Hard Ferrous Materials



HARD MATERIALS

Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data		
	CW	RE	RETOL ⁽¹⁾	CWTOL ⁽²⁾	BW	IB20H	IB50	IB10H	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GITM 3.00K-0.20	3.00	0.20	0.050	0.02	2.40	●	●	●	0.00-0.30	0.02-0.07	0.02-0.05
GITM 4.00K-0.20	4.00	0.20	0.050	0.02	3.20	●	●	●	0.00-0.40	0.03-0.09	0.02-0.07
GITM 5.00K-0.40	5.00	0.40	0.050	0.02	4.00	●	●	●	0.00-0.50	0.05-0.13	0.03-0.10
GITM 6.00K-0.40	6.00	0.40	0.050	0.02	4.95	●	●	●	0.00-0.60	0.05-0.15	0.04-0.12
GITM 8.00K-0.40	8.00	0.40	0.050	0.02	6.00	●	●	●	0.00-0.80	0.07-0.20	0.05-0.16

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Corner radius tolerance (+/-)

⁽²⁾ Cutting width tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (268) • C#-GHDR/L (259) • CGHN 26-M (340) • CGHN 32-DGM (342) • CGHN 32-M (341)

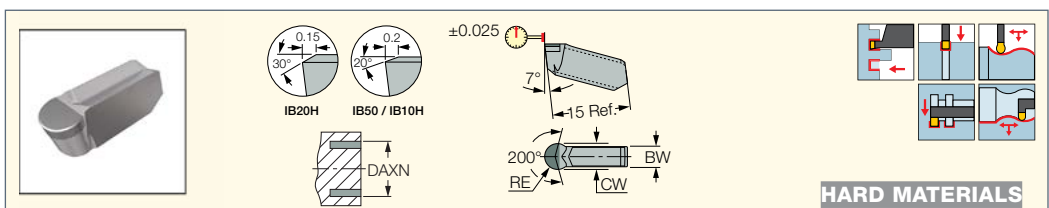
• CGHN-D (266) • CGHN-DG (267) • CGHN-S (266) • CGPAD (265) • CGPAD-JHP (265) • GHDR/L (short pocket) (259) • GHDR/L-JHP (short pocket) (260)

• GHDR/L-JHP-MC (short pocket) (261) • GHGR/L (262) • GHMPR/L (258) • GHMR/L (258) • GHSR/L (357) • GHSR/L-JHP-SL (358)

CUTGRIP

GITM (full radius)

Full Radius CBN Tipped Inserts
for Grooving and Turning on
Hard Ferrous Materials



HARD MATERIALS

Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	DAXN ⁽³⁾	IB20H	IB50	IB10H	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GITM 3.00K-1.50	3.00	1.50	0.02	0.050	2.40	160.0	●	●	●	0.00-0.30	0.03-0.10	0.02-0.06
GITM 4.00K-2.00	4.00	2.00	0.02	0.050	3.20	160.0	●	●	●	0.00-0.40	0.04-0.14	0.02-0.09
GITM 5.00K-2.50	5.00	2.50	0.02	0.050	3.90	160.0	●	●	●	0.00-0.50	0.05-0.18	0.03-0.11
GITM 6.00K-3.00	6.00	3.00	0.02	0.050	5.00	160.0	●	●	●	0.00-0.60	0.06-0.22	0.04-0.13
GITM 8.00K-4.00	8.00	4.00	0.02	0.050	5.60	160.0	●	●	●	0.00-0.80	0.08-0.29	0.05-0.17

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Minimum axial grooving diameter

For tools, see pages: Anti-Vibration Blades (268) • C#-GHDR/L (259) • CGHN 26-M (340) • CGHN 32-DGM (342) • CGHN 32-M (341)

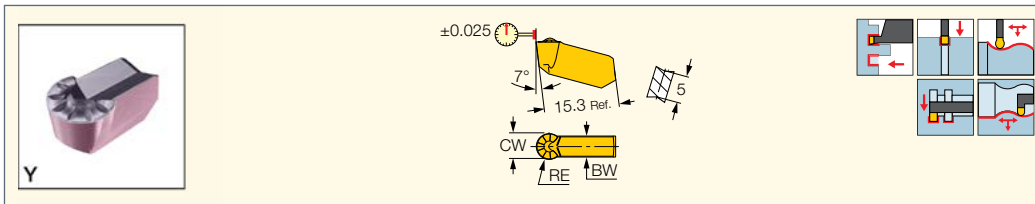
• CGHN-D (266) • CGHN-DG (267) • CGHN-S (266) • CGPAD (265) • CGPAD-JHP (265) • GHDR/L (short pocket) (259) • GHDR/L-JHP (short pocket) (260)

• GHDR/L-JHP-MC (short pocket) (261) • GHGR/L (262) • GHMPR/L (258) • GHMR/L (258) • GHSR/L (357) • GHSR/L-JHP-SL (358)

CUTGRIP

GIPY

Single-Ended Full Radius Sharp Edged Precision Inserts for Profiling High Temperature Alloys



Designation	Dimensions					Tough ↔ Hard						Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC20	IC320	IC07	IC806	IC907	IC4	IC804	f turn (mm/rev)	f groove (mm/rev)
GIPY 3.00-1.50	3.00	1.50	0.02	0.050	2.40	●	●		●	●	●	●	0.19-0.28	0.08-0.15
GIPY 4.00-2.00	4.00	2.00	0.02	0.050	3.20	●	●		●	●	●	●	0.22-0.37	0.10-0.20
GIPY 5.00-2.50	5.00	2.50	0.02	0.050	3.90	●	●		●	●	●	●	0.24-0.46	0.13-0.23
GIPY 6.00-3.00	6.00	3.00	0.02	0.050	5.00	●	●		●	●	●	●	0.26-0.55	0.15-0.27
GIPY 8.00-4.00	8.00	4.00	0.02	0.050	5.60	●	●	●	●	●	●	●	0.34-0.74	0.20-0.36

• Can cut arcs to 250° • DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

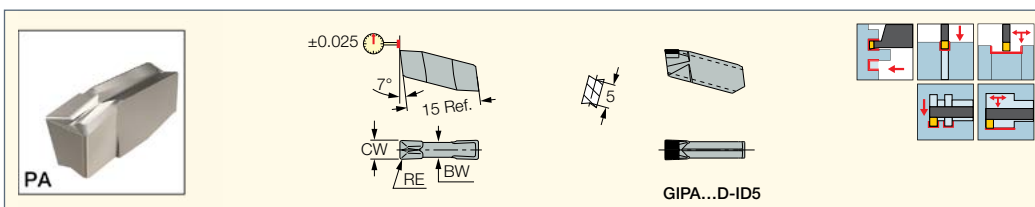
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGFG 51-P8 (580) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-P8 (283) • CGHN-S (282) • CGHR/L-P8DG (284) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

CUTGRIP

GIPA (W=3-6)

Double-Ended Precision Ground Inserts with a Polished Top Rake for Machining Aluminum



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽²⁾	RETOL ⁽³⁾	BW	IC20	ID5	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-0.20	3.00	0.20	0.02	0.030	2.40	●		0.25-1.80	0.12-0.20	0.08-0.14
GIPA 3.00-0.20-D⁽¹⁾	3.00	0.20	0.02	0.030	2.40		●	0.25-1.80	0.12-0.25	0.09-0.16
GIPA 4.00-0.40	4.00	0.40	0.02	0.030	3.20	●		0.50-2.40	0.14-0.31	0.10-0.20
GIPA 5.00-0.40	5.00	0.40	0.02	0.030	4.00	●		0.50-3.00	0.16-0.34	0.11-0.23
GIPA 6.00-0.40	6.00	0.40	0.02	0.030	4.80	●		0.50-3.60	0.19-0.41	0.11-0.26

• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Single-ended PCD tipped insert

⁽²⁾ Cutting width tolerance (+/-)

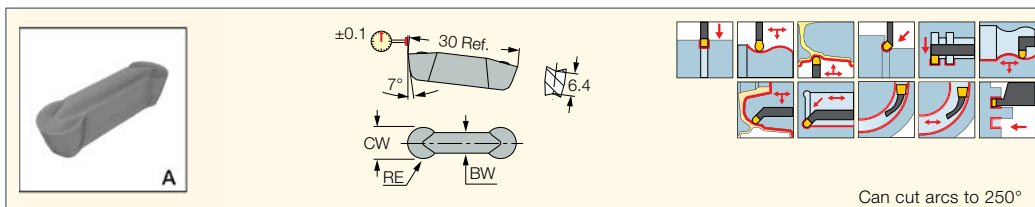
⁽³⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

CUTGRIP

GDMA

Utility Double-Ended Insert with a Polished Top Rake for Machining Aluminum



Can cut arcs to 250°

Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC07	IC507	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMA 840	8.00	4.00	0.05	0.050	5.60	●	●	0.00-4.00	0.24-0.67	0.14-0.38

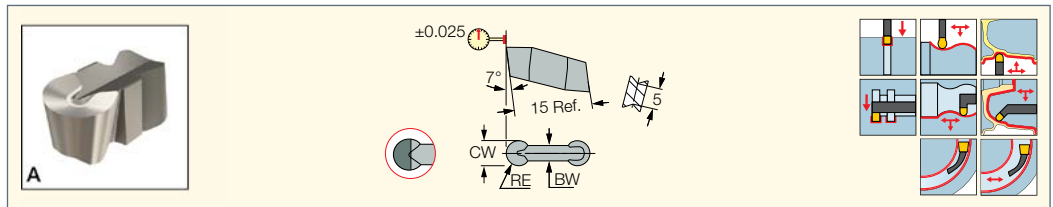
• For heavy-duty machining • DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDKR/L (446) • GHIFR/L-A (445) • GHIR/L (W=7.0-8.3) (355) • GHIUR/L-C-A (15° & 27.5°) Bars (444) • GHIUR/L-UC (444)

GIPA (full radius W=3-6)
Precision Double-Ended
Inserts with Polished Top Rake
for Machining Aluminum



Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data		
	CW	RE	CWTOL ⁽⁴⁾	RETOL ⁽⁵⁾	BW	IC20	IC806	IC4	ID5	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-1.50	3.00	1.50	0.02	0.050	2.40	●				0.00-1.50	0.15-0.30	0.08-0.16
GIPA 3.00-1.50-D ⁽¹⁾	3.00	1.50	0.02	0.050	2.40				●	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 4.00-2.00	4.00	2.00	0.02	0.050	3.20	●	●			0.00-2.00	0.20-0.43	0.10-0.22
GIPA 4.00-2.00-D ⁽¹⁾	4.00	2.00	0.02	0.050	3.20				●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 4.00-2.00YZ-D ⁽²⁾	4.00	2.00	0.02	0.050	3.20				●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 5.00-2.50	5.00	2.50	0.02	0.050	3.90	●	●			0.00-2.50	0.21-0.48	0.09-0.24
GIPA 5.00-2.50-D ⁽¹⁾	5.00	2.50	0.02	0.050	3.90				●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 5.00-2.50YZ-D ⁽²⁾	5.00	2.50	0.02	0.050	3.90				●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 6.00-3.00	6.00	3.00	0.02	0.050	4.80	●		●		0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00-D ⁽¹⁾	6.00	3.00	0.02	0.050	4.80				●	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00YZ	6.00	3.00	0.02	0.050	4.80	●				0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00YZ-D ⁽²⁾	6.00	3.00	0.02	0.050	4.80				●	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00CB ⁽³⁾	6.00	3.00	0.02	0.050	4.80				●	0.00-3.00	0.21-0.58	0.11-0.29

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Single-ended PCD tipped insert

⁽²⁾ Single-ended molded PCD chipformer tipped insert

⁽³⁾ Single-ended flat PCD tipped insert with chip deflector

⁽⁴⁾ Cutting width tolerance (+/-)

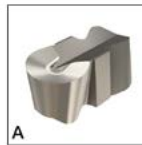
⁽⁵⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357)

• CGHN-D (283) • CGHN-DG (283) • CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDKR/L (446) • GHDR/L (short pocket) (275)

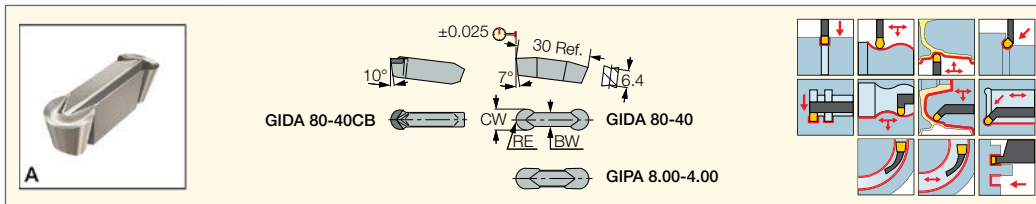
• GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHIFR/L-A (445) • GHIUR/L-C-A (15° & 27.5°) Bars (444)

• GHIUR/L-UC (444) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)



CUTGRIP

GIPA/GIDA 8 (full radius)
Precision Double-Ended
Inserts with Polished Top Rake
for Machining Aluminum



Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽²⁾	RETOL ⁽³⁾	BW	IC20	IC4	ID5	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIDA 80-40	8.00	4.00	0.02	0.050	5.60	●	●		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40-D	8.00	4.00	0.02	0.050	5.60			●	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40CB-D⁽¹⁾	8.00	4.00	0.02	0.050	5.60			●	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ	8.00	4.00	0.02	0.050	5.60	●	●		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ-D	8.00	4.00	0.02	0.050	5.60			●	0.00-4.00	0.35-0.96	0.18-0.48
GIPA 8.00-4.00	8.00	4.00	0.02	0.050	6.00	●			0.00-4.00	0.24-0.67	0.14-0.38

• ID5 is a single-ended PCD tipped insert • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Should not be clamped on tools with "A" suffix

⁽²⁾ Cutting width tolerance (+/-)

⁽³⁾ Corner radius tolerance (+/-)

For tools, see pages: C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDKR/L (446)

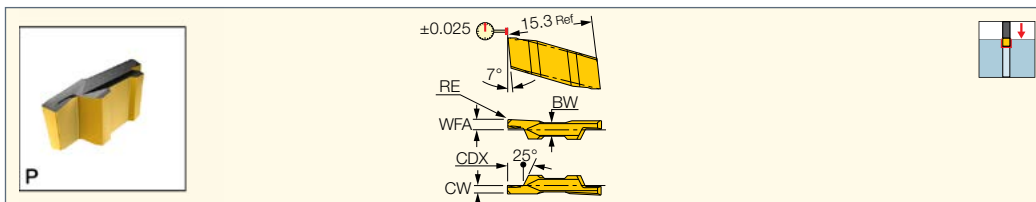
• GHDR/L (long pocket) (285) • GHDR/L-8A (445) • GHDR/L-JHP (long pocket) (285) • GHFGR/L-8 (579) • GHIFR/L-A (445) • GHIR/L (W=7.0-8.3) (355)

• GHIUR/L-C-A (15° & 27.5°) Bars (444) • GHIUR/L-UC (444)



CUTGRIP

GIP-RX/LX
Precision Double-Ended
Inserts for External Grooving
Next to a Shoulder



Designation	Dimensions							Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	WFA	IC830	IC808	f groove (mm/rev)
GIP 0.80-0.00R/LX	0.80	0.00	0.02	0.030	1.60	2.40	1.6	●		0.02-0.04
GIP 1.00-0.00R/LX	1.00	0.00	0.02	0.030	2.00	2.40	1.6	●		0.02-0.05
GIP 1.19-0.1RX	1.19	0.10	0.02	0.030	2.00	2.40	1.6		●	0.03-0.05
GIP 1.57-0.15 R/LX	1.57	0.15	0.02	0.030	2.70	2.40	1.7	●		0.04-0.06
GIP 1.57-0.79RX	1.57	0.79	0.02	0.030	2.80	2.40	1.7		●	0.04-0.08
GIP 2.00-0.15 R/LX	2.00	0.15	0.02	0.030	3.00	2.40	1.7	●		0.05-0.08
GIP 2.39-0.15 RX	2.39	0.15	0.02	0.030	3.50	2.40	1.7	●		0.05-0.09
GIP 2.39-1.19RX	2.39	1.19	0.02	0.050	3.90	2.40	1.7		●	0.06-0.12

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

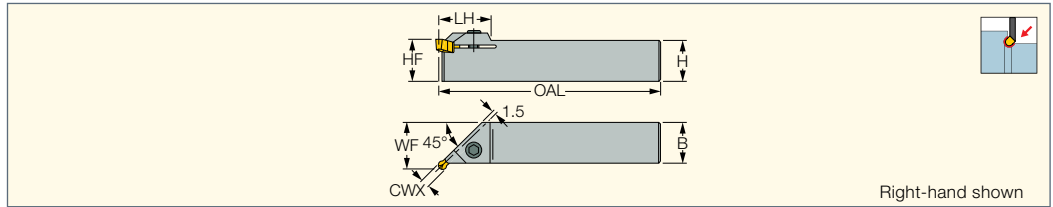
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: GHMPR/L (273) • GHMR/L (273)

CUTGRIP

GHMUR/L
External Holders for
45° Undercutting



Right-hand shown

Designation	CWX ⁽¹⁾	H	HF	B	OAL	LH	WF		
GHMUR/L 16	4.80	16.0	16.0	16.0	112.00	25.0	19.00	SR M6X16 DIN912	HW 5.0
GHMUR/L 20	6.40	20.0	20.0	20.0	122.00	25.0	23.00	SR M6X16 DIN912	HW 5.0
GHMUR/L 25	6.40	25.0	25.0	25.0	137.00	25.0	28.00	SR M6X16 DIN912	HW 5.0

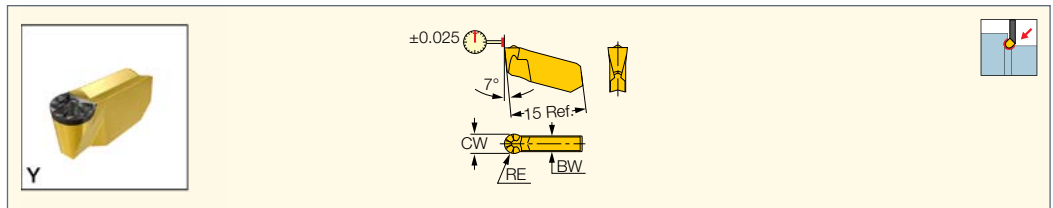
• For D>100 mm, GIP/GIF inserts can be used (clearance types UN, D or G are not required).

⁽¹⁾ Maximum cutting width

For inserts, see pages: GIMY-UN (303) • GIP-UN (303)

CUTGRIP

GIMY-UN
Utility Single-Ended Inserts
for External Undercutting



Designation	Dimensions						IC8250	Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾		
GIMY 315-UN	3.00	1.50	0.05	0.050	2.40	2.00	•	f groove (mm/rev) 0.05-0.15
GIMY 420-UN	4.00	2.00	0.05	0.050	3.20	2.50	•	f groove (mm/rev) 0.05-0.15

• For 45° undercutting on D 100 mm, regular GIMY inserts may be used. • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

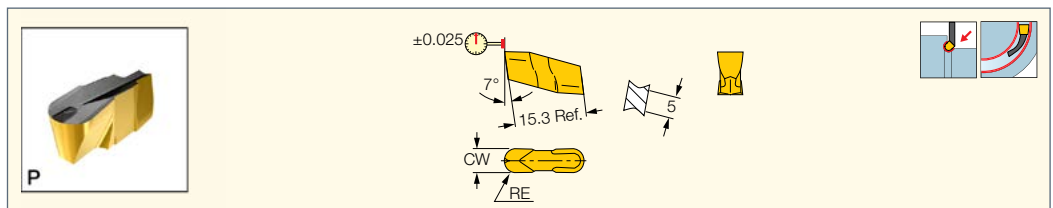
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: GHMUR/L (303)

CUTGRIP

GIP-UN
Precision Double-Ended Inserts
for External Undercutting



Designation	Dimensions							Tough ↔ Hard				Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	DMIN	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC20	
GIP 3.00-1.50UN	3.00	1.50	0.05	0.050	35.00	2.40	4.00	•	•	•	•	f groove (mm/rev) 0.05-0.15
GIP 4.00-2.0UN	4.00	2.00	0.05	0.050	35.00	3.20	4.00	•	•	•	•	f groove (mm/rev) 0.05-0.15

• Not recommended for turning. • For undercutting at 45° and D100 mm, other GIP inserts apply as well

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

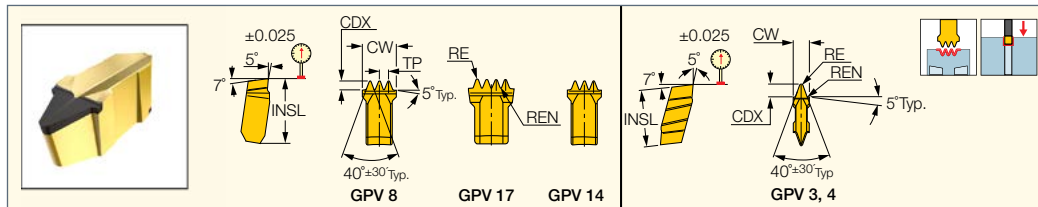
For tools, see pages: C#-GHDR/L (274) • CGHN-DG (283) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)

• GHDR/L-JHP-MC (short pocket) (277) • GHMPR/L (273) • GHMR/L (273) • GHMUR/L (303)

CUTGRIP

GPV

Precision Inserts for Grooving
Multi V-Ribbed Pulleys



Designation	Dimensions							Tough ↔ Hard			Recommended Machining Data f groove (mm/rev)
	CW	TP ⁽⁵⁾	CDX ⁽⁶⁾	RE	REN	NT	INSL	IC8250	IC5010	IC428	
GPV 3-2.34-1 ⁽¹⁾	2.80	2.34	2.21	0.32	0.20	1	15.30	●	●		0.06-0.15
GPV 4-3.56-1 ⁽¹⁾	4.03	3.56	3.42	0.45	0.30	1	15.30	●	●	●	0.06-0.15
GPV 8-2.34-3 ⁽²⁾	7.48	2.34	2.21	0.32	0.20	3	15.30	●	●	●	0.06-0.15
GPV 14-2.34-4 ⁽³⁾	9.82	2.34	2.21	0.32	0.20	4	24.00	●	●	●	0.06-0.15
GPV 14-3.56-3 ⁽³⁾	11.14	3.56	3.42	0.45	0.30	3	24.00	●	●	●	0.06-0.15
GPV 17-3.56-4 ⁽⁴⁾	14.68	3.56	3.42	0.45	0.30	4	24.00	●	●	●	0.06-0.15

• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Use holders which are suitable for GIP 3 / GIP 4

⁽²⁾ Use holders which are suitable for GIMY 808

⁽³⁾ Use holders which are suitable for TIGER 14

⁽⁴⁾ Use holders which are suitable for TIGER 17

⁽⁵⁾ Thread pitch

⁽⁶⁾ Cutting depth maximum

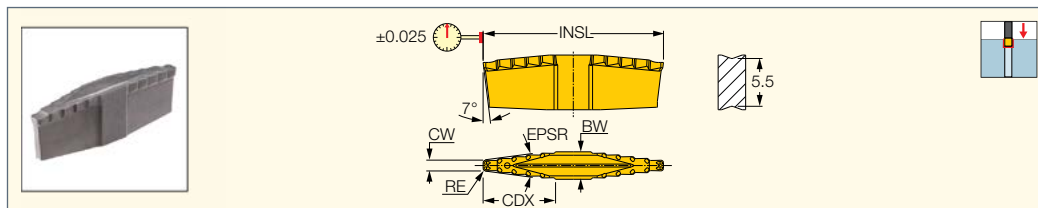
For tools, see pages: C#-GHDR/L (274) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277)

• GHDR/L/N 12/14 (333) • GHMPRL (273) • GHMR/L (273)

CUTGRIP

GDK

Inserts for Rough Grooving
V-Shaped Piston Grooves



Designation	Dimensions								IC808	Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	EPSR	INSL	BW		
GDK 1.5-MS	1.50	0.50	0.02	0.000	8.40	14.0	21.00	3.50	●	0.15-0.25
GDK 1.81-MS	1.81	0.50	0.02	0.000	8.40	12.0	19.70	3.50	●	0.15-0.25

• For steel grooves

⁽¹⁾ Cutting width tolerance (+/-)

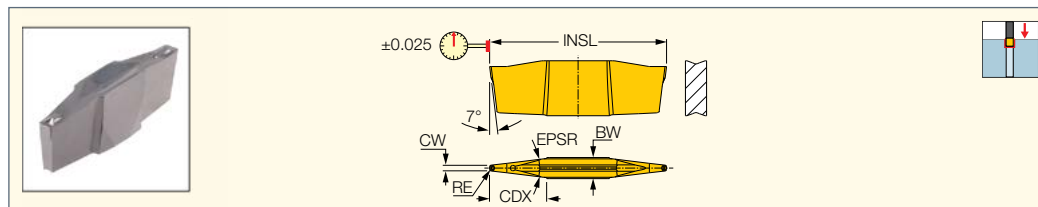
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

CUTGRIP

GDP

Inserts for Precision Grooving
of V-Shaped Piston Grooves



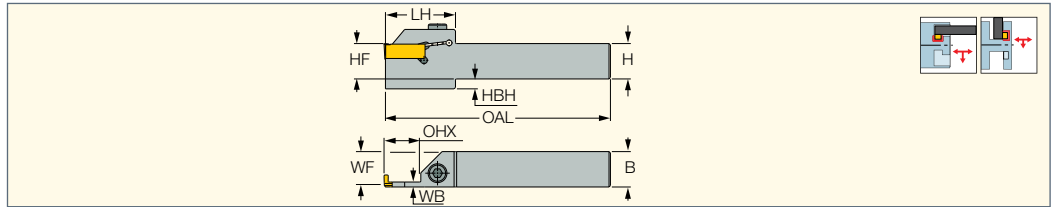
Designation	Dimensions								Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	EPSR	INSL	BW	IC308	IC908	
GDP 1.20-0.30-4768V2Q	1.20	0.30	0.02	0.000	6.50	11.0	25.00	2.40	●		0.12-0.18
GDP 1.55-0.30-1404Q	1.55	0.30	0.02	0.000	6.50	10.0	20.90	3.50		●	0.12-0.18

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

HLPGR/L
Tools for L-Type LPGIR/L Inserts



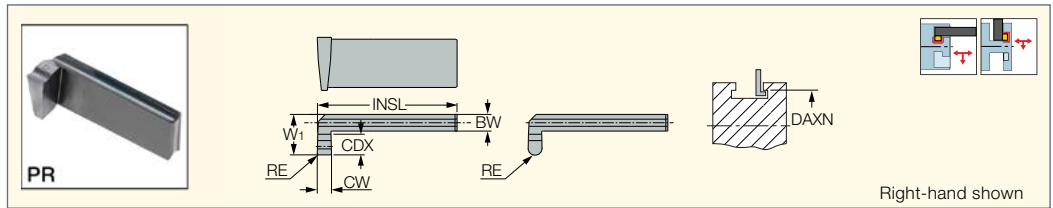
Designation	OHX ⁽¹⁾	H	HF	HBH	B	WB	WF	OAL	LH	Insert		
HLPGR/L 2525-12-A3.5-T25	25.00	25.0	25.0	7.0	25.0	3.50	23.30	160.00	50.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 3225-12-A3.5-T25	25.00	32.0	32.0	-	25.0	3.50	23.30	160.00	50.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 2525-12-A4.5-T30	30.00	25.0	25.0	7.0	25.0	4.50	22.80	160.00	55.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 3225-12-A4.5-T30	30.00	32.0	32.0	-	25.0	4.50	22.80	160.00	55.0	LPGIR/L 12	SR M6X20 DIN912	HW 5.0
HLPGR/L 2525-16-A6-T30	30.00	25.0	25.0	7.0	25.0	6.00	22.00	160.00	55.0	LPGIR/L 16	SR M6X20 DIN912	HW 5.0
HLPGR/L 3225-16-A6-T30	30.00	32.0	32.0	-	25.0	6.00	22.00	160.00	55.0	LPGIR/L 16	SR M6X20 DIN912	HW 5.0

• In case of face penetration prior to radial grooving, please check that the lower insert support is relieved from the groove's outer diameter

⁽¹⁾ Cutting depth maximum

For inserts, see pages: LPGIR/L (305)

LPGIR/L
Inserts for Axial Grooves Inside Radial Grooves and for Radial Grooves Inside Axial Grooves



Designation	Dimensions									IC907
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX	INSL	W1	DAXN ⁽³⁾	
LPGIR/L 12-8-2T4PR	2.00	0.20	0.02	0.030	4.00	3.50	30.00	8.00	200.0	●
LPGIR/L 12-8-210T4	2.00	1.00	0.02	0.030	4.00	3.50	30.00	8.00	200.0	●
LPGIR/L 12-8.5-3T5PR	3.00	0.30	0.02	0.030	3.50	4.50	30.00	8.50	200.0	●
LPGIR/L 12-8.5-315T5	3.00	1.50	0.02	0.030	3.50	4.50	30.00	8.50	200.0	●
LPGIR/L 12-9.5-4T6PR	4.00	0.40	0.02	0.030	3.50	5.50	30.00	9.50	200.0	●
LPGIR/L 12-9.5-420T6	4.00	2.00	0.02	0.030	3.50	5.50	30.00	9.50	200.0	●
LPGIR/L 12-11-5T6.5PR	5.00	0.40	0.02	0.030	4.50	6.00	30.00	11.00	200.0	●
LPGIR/L 12-11-525T6.5	5.00	2.50	0.02	0.030	4.50	6.00	30.00	11.00	200.0	●
LPGIR/L 16-15.5-3T9PR	3.00	0.30	0.02	0.030	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-315T9	3.00	1.50	0.02	0.030	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-4T9PR	4.00	0.40	0.02	0.030	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-420T9	4.00	2.00	0.02	0.030	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-5T9PR	5.00	0.40	0.02	0.030	6.00	8.50	30.60	15.50	200.0	●
LPGIR/L 16-15.5-525T9	5.00	2.50	0.02	0.030	6.00	8.50	30.60	15.50	200.0	●

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

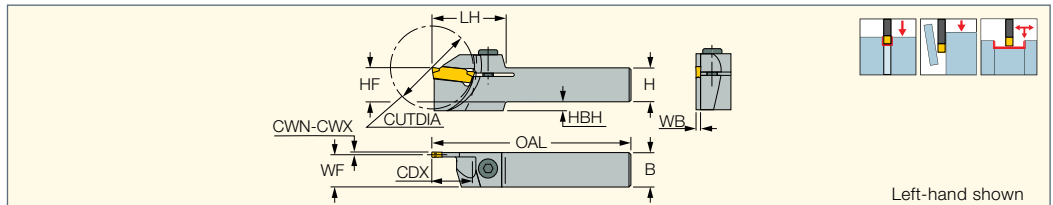
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Minimum axial grooving diameter

For tools, see pages: HLPGR/L (305)

PHGR/L
Holders for External Grooving and Turning



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CUTDIA ⁽³⁾	CDX ⁽⁴⁾	H	HF	B	OAL	LH	WF	HBH	WB	Insert		
PHGR/L 16-2.4	2.40	3.18	34.0	17.00	16.0	16.0	16.0	110.00	33.0	15.10	5.5	1.90	GDMW 2.4	SR M5X16 DIN912	HW 4.0
PHGR/L 20-2.4	2.40	3.18	34.0	17.00	20.0	20.0	20.0	120.00	33.0	19.10	-	1.90	GDMW 2.4	SR M5X16 DIN912	HW 4.0
PHGR/L 25-2.4	2.40	3.18	34.0	17.00	25.0	25.0	25.0	140.00	33.0	24.10	-	1.90	GDMW 2.4	SR M5X16 DIN912	HW 4.0

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

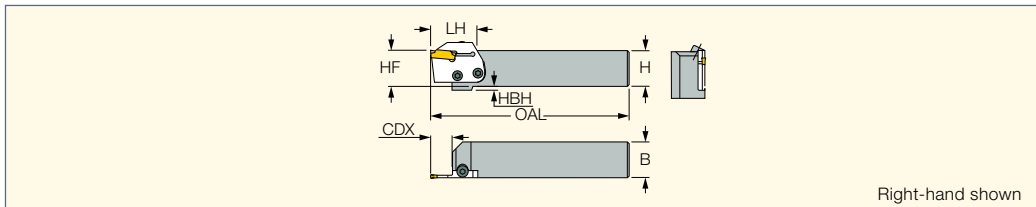
⁽³⁾ Maximum parting diameter.

⁽⁴⁾ Cutting depth maximum

For inserts, see pages: GDMW 2.4 (306)

CUTGRIP

PHAR/L
External Machining Holders
for PADR/L Adapters



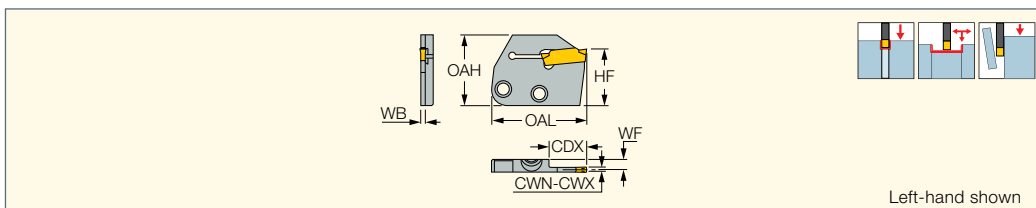
Right-hand shown

Designation	CDX ⁽¹⁾	H	HF	B	OAL	HBH	Adapter ⁽²⁾				
PHAR/L 20	16.30	20.0	20.0	20.0	140.00	10.0	PADR/L 2.4	SR 76-1368	HW 4.0	SR M5-04451	T-20/5
PHAR/L 25	16.30	25.0	25.0	25.0	140.00	5.0	PADR/L 2.4	SR 76-1368	HW 4.0	SR M5-04451	T-20/5

(1) Cutting depth maximum
(2) Adapters to be ordered separately.
For tools, see pages: PADR/L (306)

CUTGRIP

PADR/L
Adapters for GDMW/GDMY
Groove-Turn Inserts



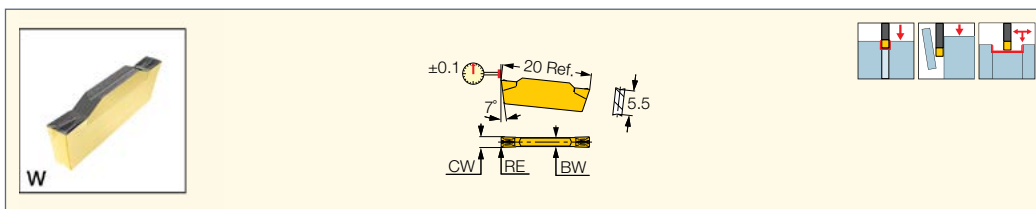
Left-hand shown

Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	OAL	WB	HF	OAH	WF	Insert
PADR/L 2.4	2.40	3.18	16.30	41.00	1.90	24.0	30.0	4.20	GDMW 2.4

• For user guide, see pages 419-428, 432-436
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
For inserts, see pages: GDMW 2.4 (306)
For holders, see pages: PHAR/L (306)

CUTGRIP

GDMW 2.4
Utility Double-Ended
Inserts for External Turning,
Grooving and Parting

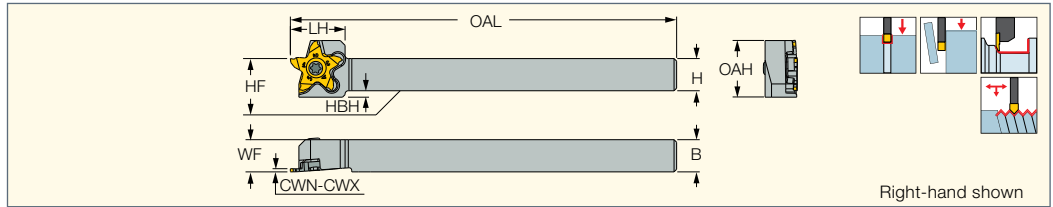


Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC808	IC908	IC20	IC20N	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMW 2.4	2.40	0.18	0.04	0.030	2.00	18.00	●	●	●	●	●	0.25-1.50	0.07-0.12	0.05-0.08

• For cutting speed recommendations and user guide, see pages 419-428, 432-436
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
For tools, see pages: PADR/L (306) • PHGR/L (305) • PHSR/L (373)

PCHRS/LS-17

Tools Carrying Inserts with 5 Cutting Edges for Grooving, Parting and Recessing Next to High Shoulders



Designation	H	B	CWN ⁽¹⁾	CWX ⁽²⁾	WF	OAL	LH	HBH	OAH	HF
PCHR/LS 0810-17	8.0	10.0	0.25	3.18	10.00	120.00	17.0	4.0	13.60	8.0
PCHR/LS 10-17	10.0	10.0	0.25	3.18	10.00	120.00	17.0	2.0	15.60	10.0
PCHR/LS 12-17	12.0	12.0	0.25	3.18	12.00	120.00	17.0	-	17.60	12.0
PCHR/LS 16-17	16.0	16.0	0.25	3.18	16.00	120.00	17.0	-	21.60	16.0
PCHR/LS 20-17	20.0	20.0	0.25	3.18	20.00	120.00	17.0	-	25.60	20.0
PCHR/LS 25-17	25.0	25.0	0.25	3.18	25.00	120.00	17.0	-	30.60	25.0

• Use right-hand inserts on right-hand tools and vice versa



⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)

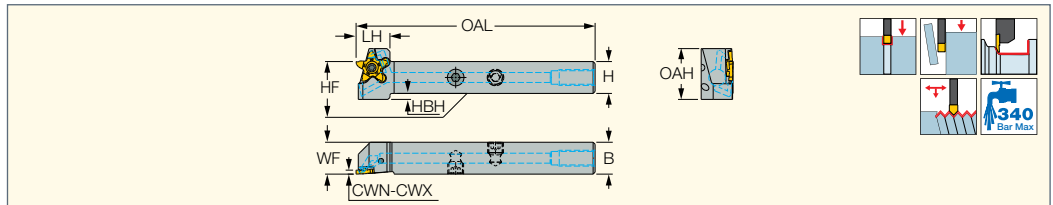
• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

Spare Parts

Designation		
PCHLS 0810-17	SR M4-39432	T-1508/5
PCHRS 0810-17	SR M4-39432L	T-1508/5
PCHLS 10-17	SR M4-39432	T-1508/5
PCHRS 10-17	SR M4-39432L	T-1508/5
PCHLS 12-17	SR M4-39432	T-1508/5
PCHRS 12-17	SR M4-39432L	T-1508/5
PCHLS 16-17	SR M4-39432	T-1508/5
PCHRS 16-17	SR M4-39432L	T-1508/5
PCHLS 20-17	SR M4-39432	T-1508/5
PCHRS 20-17	SR M4-39432L	T-1508/5
PCHLS 25-17	SR M4-39432	T-1508/5
PCHRS 25-17	SR M4-39432L	T-1508/5

PCHRS/LS-17-JHP

Tools Carrying Inserts with 5 Cutting Edges for Shallow Profiling Next to High Shoulders







Designation	H	B	WF	OAL	LH	HBH	HF	OAH
PCHR/LS 10-17-JHP	10.0	10.0	10.00	100.00	17.0	8.0	10.0	24.50
PCHR/LS 12-17-JHP	12.0	12.0	12.00	100.00	17.0	6.0	12.0	24.50
PCHR/LS 16-17-JHP	16.0	16.0	16.00	120.00	17.0	3.0	16.0	25.50
PCHR/LS 20-17-JHP	20.0	20.0	20.00	120.00	17.0	-	20.0	26.50
PCHR/LS 25-17-JHP	25.0	25.0	25.00	120.00	17.0	-	25.0	31.50

• Use right-hand inserts on right-hand tools and vice versa

For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)

• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309) • PENTA 17R/L-SP-RS (310)

Spare Parts

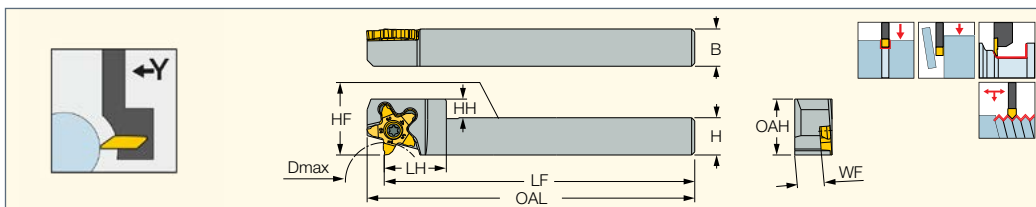
Designation				
PCHLS 10-17-JHP	SR M4-39432	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHRS 10-17-JHP	SR M4-39432L	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHLS 12-17-JHP	SR M4-39432	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHRS 12-17-JHP	SR M4-39432L	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHLS 16-17-JHP	SR M4-39432	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHRS 16-17-JHP	SR M4-39432L	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHLS 20-17-JHP	SR M4-39432	T-1508/5	HW 5.0	PLG G1/8 TL360
PCHRS 20-17-JHP	SR M4-39432L	T-1508/5	HW 5.0	PLG G1/8 TL360
PCHLS 25-17-JHP	SR M4-39432	T-1508/5		
PCHRS 25-17-JHP	SR M4-39432L	T-1508/5		

NEO^{AXIS}SWISS

PENTACUT
PARTING & GROOVING LINE

Y-PCHRS-17

Y Axis Swiss Type Tools
- 5 Cutting Edged Inserts for Grooving, Parting and Recessing Next to High Shoulders



Designation	H	B	HH	LH	HF	WF	OAH	LF	OAL	D _{max}
Y-PCHRS 12-17	12.0	12.0	6.0	20.0	12.0	8.60	18.00	100.00	105.50	25.0 ⁽¹⁾
Y-PCHRS 16-17	16.0	16.0	2.0	20.0	16.0	12.30	18.00	125.00	130.50	38.0 ⁽¹⁾



• Use right-hand inserts on right-hand tools and vice versa

⁽¹⁾ for grooving

For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)

• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

Spare Parts

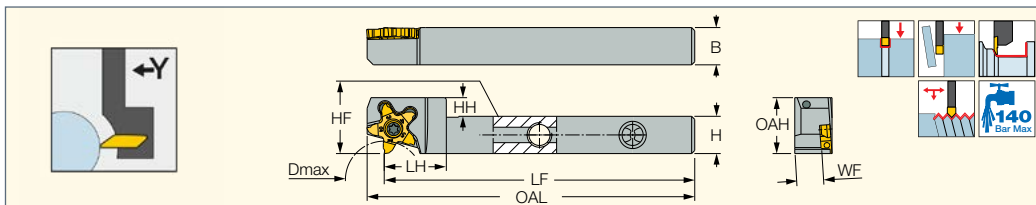
Designation		
Y-PCHRS-17	T-1508/5	SR M4-39432L

NEO^{AXIS}SWISS

PENTACUT
PARTING & GROOVING LINE

Y-PCHRS-17-JHP

Y Axis Swiss Type JETCUT Tools
- 5 Cutting Edged Inserts for Grooving, Parting and Recessing Next to High Shoulders



Designation	H	B	HH	LH	HF	WF	OAH	LF	OAL	D _{max}
Y-PCHRS 12-17-JHP	12.0	12.0	6.0	20.0	12.0	8.60	18.00	100.00	105.50	25.0 ⁽¹⁾
Y-PCHRS 16-17-JHP	16.0	16.0	2.0	20.0	16.0	12.30	18.00	125.00	130.50	38.0 ⁽¹⁾

• Use right-hand inserts on right-hand tools and vice versa

⁽¹⁾ for grooving

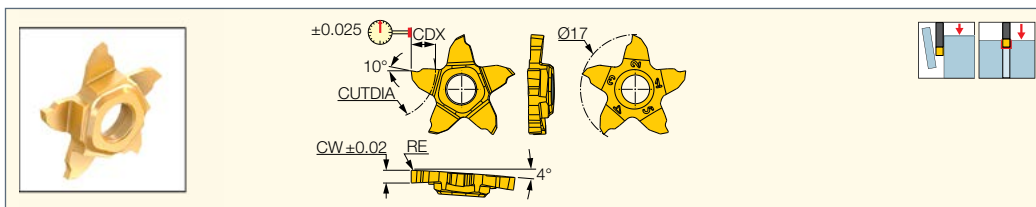
For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)

• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

Spare Parts

Designation		
Y-PCHRS-17-JHP	HW 5/32"	T-1508/5

PENTA 17-P-RS/LS
Pentagonal Inserts for Grooving
and Parting Soft Materials,
Thin and Miniature Parts



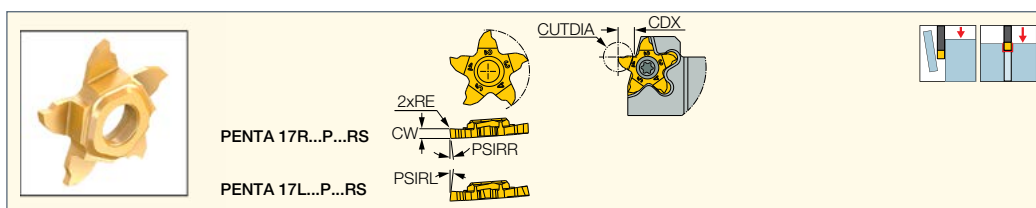
Designation	Dimensions					IC1008	Recommended Machining Data
	CW	RE	CDX	CUTDIA	f groove (mm/rev)		
PENTA 17N025P000R/LS	0.25	0.00	0.60	1.2	●	0.02-0.03	
PENTA 17N030P000R/LS	0.30	0.00	0.60	1.2	●	0.02-0.03	
PENTA 17N033P000R/LS	0.33	0.00	0.60	1.2	●	0.02-0.03	
PENTA 17N043P000R/LS	0.43	0.00	1.00	2.0	●	0.02-0.04	
PENTA 17N050P000R/LS	0.50	0.00	2.00	4.0	●	0.02-0.04	
PENTA 17N075P000R/LS	0.75	0.00	2.50	5.0	●	0.02-0.04	
PENTA 17N080P000R/LS	0.80	0.00	2.50	5.0	●	0.02-0.04	
PENTA 17N095P000R/LS	0.95	0.00	3.00	6.0	●	0.02-0.05	
PENTA 17N100P010R/LS	1.00	0.10	3.00	6.0	●	0.02-0.05	
PENTA 17N120P010R/LS	1.20	0.10	3.00	6.0	●	0.02-0.05	
PENTA 17N140P010R/LS	1.40	0.10	3.00	6.0	●	0.02-0.05	
PENTA 17N150P010R/LS	1.50	0.10	4.00	8.0	●	0.02-0.07	
PENTA 17N157P010R/LS	1.57	0.10	4.00	8.0	●	0.02-0.07	
PENTA 17N170P010R/LS	1.70	0.10	4.00	8.0	●	0.02-0.07	
PENTA 17N178P010R/LS	1.78	0.10	4.00	8.0	●	0.02-0.07	
PENTA 17N196P010R/LS	1.96	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N200P010R/LS	2.00	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N222P010R/LS	2.22	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N230P010R/LS	2.30	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N239P010R/LS	2.39	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N247P010R/LS	2.47	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N250P010R/LS	2.50	0.10	4.00	8.0	●	0.02-0.08	
PENTA 17N270P010R/LS	2.70	0.10	4.00	8.0	●	0.02-0.09	
PENTA 17N287P010R/LS	2.87	0.10	4.00	8.0	●	0.02-0.10	
PENTA 17N300P010R/LS	3.00	0.10	4.00	8.0	●	0.02-0.10	
PENTA 17N318P010R/LS	3.18	0.10	4.00	8.0	●	0.02-0.10	

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCADRS/LS-JHP (317) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308)

• Y-PCHRS-17-JHP (308)

PENTA 17R/L-P-RS
Lead Angle Edge Pentagonal
Inserts (5 edges) for
Parting Miniature Parts



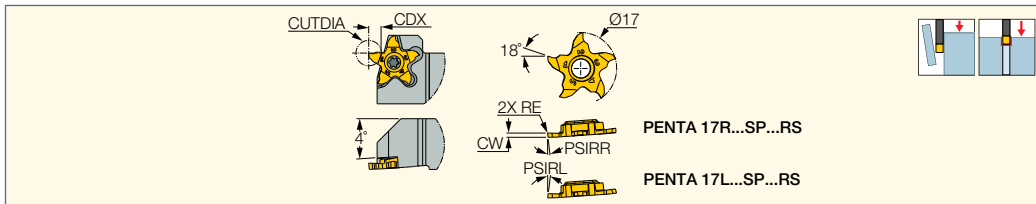
Designation	Dimensions						IC1008	Recommended Machining Data
	CW	RE	CDX	CUTDIA	PSIRL	PSIRR		f groove (mm/rev)
PENTA 17L100P-15D-RS	1.00	0.05	3.00	6.0	15.0	-	●	0.02-0.03
PENTA 17L100P-6D-RS	1.00	0.05	3.00	6.0	6.0	-	●	0.02-0.04
PENTA 17R100P-15D-RS	1.00	0.05	3.00	6.0	-	15.0	●	0.02-0.03
PENTA 17R100P-6D-RS	1.00	0.05	3.00	6.0	-	6.0	●	0.02-0.04
PENTA 17L150P-15D-RS	1.50	0.05	4.00	8.0	15.0	-	●	0.02-0.03
PENTA 17L150P-6D-RS	1.50	0.05	4.00	8.0	6.0	-	●	0.02-0.04
PENTA 17R150P-15D-RS	1.50	0.05	4.00	8.0	-	15.0	●	0.02-0.03
PENTA 17R150P-6D-RS	1.50	0.05	4.00	8.0	-	6.0	●	0.02-0.04
PENTA 17L200P-15D-RS	2.00	0.05	4.00	8.0	15.0	-	●	0.02-0.03
PENTA 17L200P-6D-RS	2.00	0.05	4.00	8.0	6.0	-	●	0.02-0.04
PENTA 17R200P-15D-RS	2.00	0.05	4.00	8.0	-	15.0	●	0.02-0.03
PENTA 17R200P-6D-RS	2.00	0.05	4.00	8.0	-	6.0	●	0.02-0.04

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCADRS/LS-JHP (317) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308)

• Y-PCHRS-17-JHP (308)



PENTA 17R/L-SP-RS
 Pentagonal Inserts (5 edges)
 with a High Positive Rake
 for Parting Soft Materials

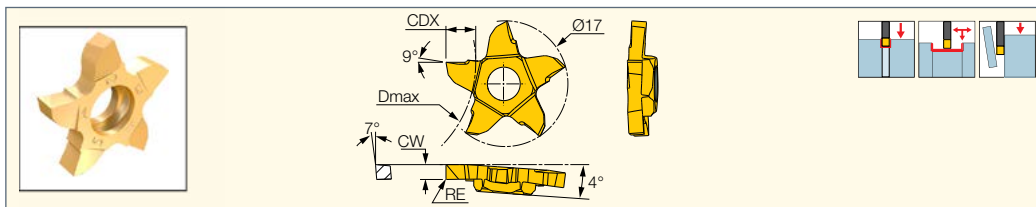


Designation	Dimensions						IC1007	Recommended Machining Data
	CW	RE	CDX	CUTDIA	PSIRL	PSIRR		f groove (mm/rev)
PENTA 17L03SP6D-RS	0.30	0.00	0.60	1.2	6.0	-	●	0.02-0.03
PENTA 17R03SP6D-RS	0.30	0.00	0.60	1.2	-	6.0	●	0.02-0.03
PENTA 17L05SP6D-RS	0.50	0.00	2.00	4.0	6.0	-	●	0.02-0.04
PENTA 17R05SP6D-RS	0.50	0.00	2.00	4.0	-	6.0	●	0.02-0.04
PENTA 17L08SP6D-RS	0.80	0.00	2.50	5.0	6.0	-	●	0.02-0.04
PENTA 17R08SP6D-RS	0.80	0.00	2.50	5.0	-	6.0	●	0.02-0.04
PENTA 17L10SP6D-RS	1.00	0.00	3.00	6.0	6.0	-	●	0.02-0.05
PENTA 17R10SP6D-RS	1.00	0.00	3.00	6.0	-	6.0	●	0.02-0.05

For tools, see pages: PCADRS/LS-JHP (317) • PCHRS/LS-17-JHP (307)



PENTA 17-NP-RS/LS
 Pentagonal Inserts for Precision
 Grooving and Turning Next to
 High Shoulder Applications



Designation	Dimensions						IC1008	Recommended Machining Data		
	CW	CWTOL ⁽¹⁾	RE	RETOL ⁽²⁾	CDX	D _{max}		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
PENTA 17-100NP08R/LS	1.00	0.020	0.08	0.020	3.00	32.0 ⁽³⁾	●	0.05-0.70	0.02-0.06	0.03-0.06
PENTA 17-200NP08R/LS	2.00	0.020	0.08	0.020	4.00	32.0 ⁽³⁾	●	0.05-2.50	0.05-0.15	0.05-0.09
PENTA 17-300NP08R/LS	3.00	0.020	0.08	0.020	4.00	32.0 ⁽³⁾	●	0.05-3.10	0.05-0.19	0.05-0.11

• When turning to the opposite side of chipformer, maximum CDX is 0.5 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

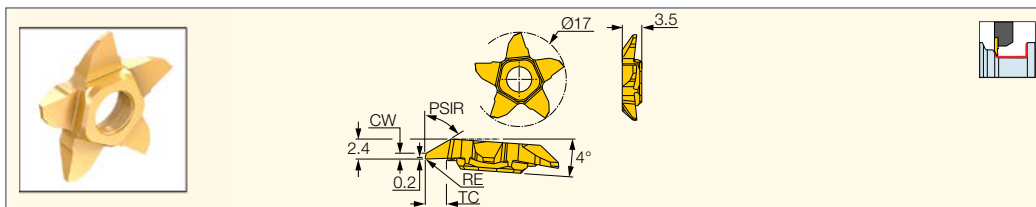
⁽³⁾ for grooving

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308) • Y-PCHRS-17-JHP (308)

Designation	Dimensions			D _{max} as a function of depth of cut (CDX)				
	CW	RE	CDX	CDX≤2.5	CDX≤3.0	CDX≤3.5	CDX≤3.8	CDX≤4.0
PENTA 17-100NP08-R/LS	1.00	0.08	3.00	N.L.	100	-	-	-
PENTA 17-200NP08-R/LS	2.00	0.08	4.00	N.L.	100	75	45	32
PENTA 17-300NP08-R/LS	3.00	0.08	4.00	N.L.	100	75	45	32



PENTA 17-ER/EL
 Back Turning Pentagonal Inserts
 for Short Chipping Materials



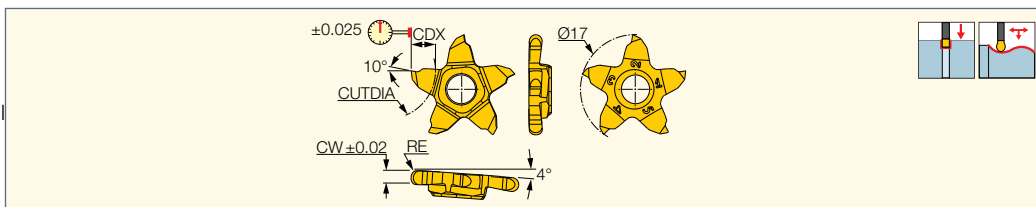
Designation	Dimensions				IC1008	Recommended Machining Data	
	CW	RE	PSIR	T _c		a _p (mm)	f turn (mm/rev)
PENTA 17EL00-07K0LS	0.70	0.00	60.0	4.0	●	0.05-2.50	0.01-0.15
PENTA 17ER00-07K0RS	0.70	0.00	60.0	4.0	●	0.05-2.50	0.01-0.15
PENTA 17EL08-07K0LS	0.70	0.08	60.0	4.0	●	0.05-2.50	0.01-0.15
PENTA 17ER08-07K0RS	0.70	0.08	60.0	4.0	●	0.05-2.50	0.01-0.15

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

For tools, see pages: PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308) • Y-PCHRS-17-JHP (308)

PENTA 17-P-RS/LS
(full radius)

Precision Grooving Pentagonal Full Radius Inserts for Soft Materials



Designation	Dimensions				IC1008	Recommended Machining Data
	CW	RE	CDX	CUTDIA		f groove (mm/rev)
PENTA 17N080P040R/LS	0.80	0.40	2.50	5.0	●	0.02-0.04
PENTA 17N100P050R/LS	1.00	0.50	3.00	6.0	●	0.02-0.05
PENTA 17N157P079R/LS	1.57	0.79	4.00	8.0	●	0.02-0.07
PENTA 17N200P100R/LS	2.00	1.00	4.00	8.0	●	0.02-0.08
PENTA 17N239P120R/LS	2.39	1.20	4.00	8.0	●	0.02-0.08

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308) • Y-PCHRS-17-JHP (308)

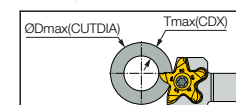
Designation	Dmax as a function of depth of cut (T)									Parting to center Dmax.
	W ±0.02	R	Tmax	T<2.3	T<2.5	T<3.0	T<3.5	T<3.8	T<4.0	
PENTA 17N025P000RS/LS	0.25	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N030P000RS/LS	0.30	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N033P000RS/LS	0.33	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N043P000RS/LS	0.43	0.00	1.0*	---	---	---	---	---	---	2
PENTA 17N050P000RS/LS	0.50	0.00	2.0*	---	---	---	---	---	---	4
PENTA 17N075P000RS/LS	0.75	0.00	2.5	N.L.	---	---	---	---	---	5
PENTA 17N080P000RS/LS	0.80	0.00	2.5	N.L.	---	---	---	---	---	5
PENTA 17N095P000RS/LS	0.95	0.00	---	N.L.	---	---	---	---	---	---
PENTA 17N100P010RS/LS	1.00	0.10	---	N.L.	400	---	---	---	---	---
PENTA 17N100P050RS/LS	1.00	0.50	3.0	N.L.	---	100	---	---	---	6
PENTA 17N120P010RS/LS	1.20	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N140P010RS/LS	1.40	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N150P010RS/LS	1.50	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N157P010RS/LS	1.57	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N157P079RS/LS	1.57	0.79	---	N.L.	---	---	---	---	---	---
PENTA 17N170P010RS/LS	1.70	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N178P010RS/LS	1.78	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N196P010RS/LS	1.96	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N200P010RS/LS	2.00	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N200P100RS/LS	2.00	1.00	---	N.L.	---	---	---	---	---	---
PENTA 17N222P010RS/LS	2.22	0.10	4.0	N.L.	400	100	55	32	20	8
PENTA 17N230P010RS/LS	2.30	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N239P010RS/LS	2.39	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N239P120RS/LS	2.39	1.20	---	N.L.	---	---	---	---	---	---
PENTA 17N247P010RS/LS	2.47	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N250P010RS/LS	2.50	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N270P010RS/LS	2.70	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N287P010RS/LS	2.87	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N300P010RS/LS	3.00	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N318P010RS/LS	3.18	0.10	---	N.L.	400	100	55	32	25	---

1. N.L. = NO LIMIT

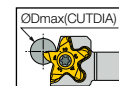
2. *For precision grooving Dmax = N.L.

3. PENTA 17...RS to be clamped on PCHRS ...-17 holders, PENTA 17...LS to be clamped on PCHLS ...-17 holders.

Parting Hollow Bars

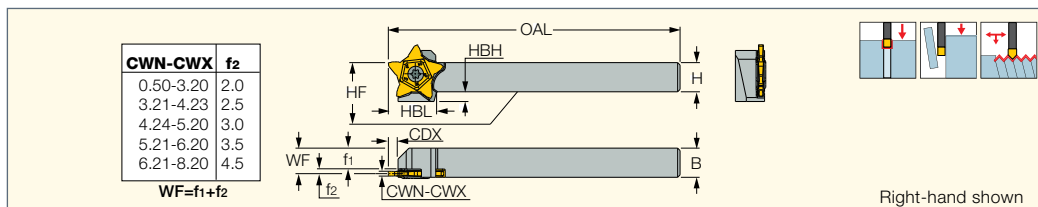


Parting to Center



PCHR/L-24

Grooving, Parting and
Recessing Holders Carrying
Inserts with 5 Cutting Edges



Designation	H	HF	B	CWN ⁽²⁾	CWX ⁽³⁾	f ₁	CDX ⁽⁴⁾	OAL	LH	HBH
PCHR/L 10-24	10.0	10.0	10.0	0.50	3.20	6.5	6.50	120.00	19.5	6.0
PCHR/L 12-24	12.0	12.0	12.0	0.50	3.20	8.5	6.50	120.00	19.5	4.0
PCHR/L 16-24	16.0	16.0	16.0	0.50	3.20	12.5	6.50	120.00	19.5	-
PCHR/L 20-24	20.0	20.0	20.0	0.50	3.20	16.5	6.50	120.00	19.5	-
PCHR/L 25-24	25.0	25.0	25.0	0.50	3.20	21.5	6.50	135.00	19.5	-
PCHR/L 16-24-5	16.0	16.0	16.0	3.21	5.20	11.5	6.40	120.00	21.5	4.0
PCHR/L 20-24-5	20.0	20.0	20.0	3.21	5.20	15.5	6.40	120.00	21.5	-
PCHR/L 25-24-5	25.0	25.0	25.0	3.21	5.20	20.5	6.40	135.00	21.5	-
PCHR/L 25-24-8 ⁽¹⁾	25.0	25.0	25.0	5.21	8.20	18.5	6.50	135.00	19.5	-

• WF=f₁+f₂ (according to insert width (CW) being used)

⁽¹⁾ Used with special inserts only

⁽²⁾ Minimum cutting width

⁽³⁾ Maximum cutting width

⁽⁴⁾ For specific information, refer to insert data

For inserts, see pages: PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)

• PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)

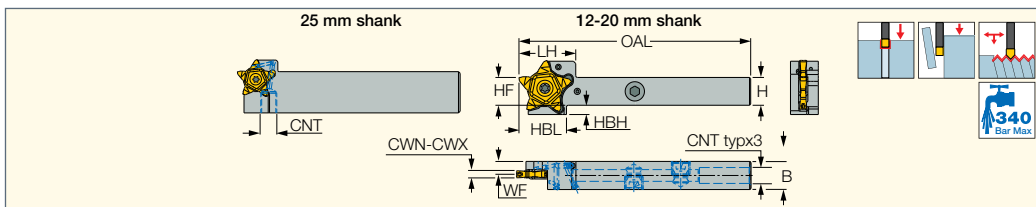
• PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)

• PENTA 24R/L-Z (533)

Spare Parts

Designation		
PCHL 10-24	SR 16-212-01397L	
PCHR 10-24	SR 16-212-01397	
PCHL 12-24	SR 16-212-01397L	
PCHR 12-24	SR 16-212-01397	
PCHL 16-24	SR 16-212-01397L	
PCHR 16-24	SR 16-212-01397	
PCHL 20-24	SR 16-212-01397L	
PCHR 20-24	SR 16-212-01397	
PCHL 25-24	SR 16-212-01397L	
PCHR 25-24	SR 16-212-01397	
PCHR/L 16-24-5	SR PCHR/L-8-06642	T-15/5
PCHR/L 20-24-5	SR PCHR/L-8-06642	T-15/5
PCHR/L 25-24-5	SR PCHR/L-8-06642	T-15/5
PCHR/L 25-24-8	SR PCHR/L-8-06642	T-15/5

PCHR/L-24-JHP
Grooving, Parting and
Recessing Tools Carrying
PENTA Inserts with Channels
for High-Pressure Coolant



Designation	H	HF	B	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WF	OAL	LH	HBL	HBH	CNT	Insert
PCHR/L 12-24-JHP	12.0	12.0	12.0	0.50	3.20	6.50	5.50	100.00	24.5	20.50	4.0	UNF 5/16-24	PENTA 24
PCHR/L 16-24-JHP	16.0	16.0	16.0	0.50	3.20	6.50	9.50	120.00	24.5	-	-	UNF 5/16-24	PENTA 24
PCHR/L 20-24-JHP	20.0	20.0	20.0	0.50	3.20	6.50	13.50	135.00	24.5	-	-	G 1/8-28	PENTA 24
PCHR/L 25-24-JHP	25.0	25.0	25.0	0.50	3.20	6.50	18.50	135.00	24.5	-	-	G 1/8-28	PENTA 24

• For user guide and accessories see pages 419-438

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width • Up to 6.2 mm width may be ordered on request.

⁽³⁾ For specific information, refer to insert data.

For inserts, see pages: PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)

• PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)

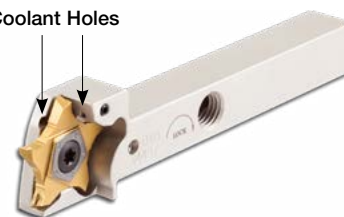
• PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)

• PENTA 24R/L-Z (533)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
PCHR/L 12-24-JHP	5-8	9-11	11-13
PCHR/L 16/20/25-24-JHP	12-14	14-16	16-18

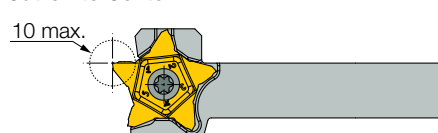
Coolant Holes



⁽²⁾ Grooving Depth CDX Relative to Dmax

CDX	3.5	4	4.5	5
Dmax	No-limit	210	135	50

Cut-off to Center



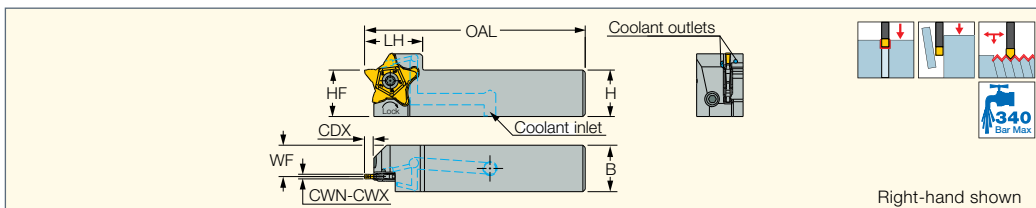
Groove Capacity



Spare Parts

Designation				
PCHL 12-24-JHP	SR 16-212-01397L-L8.5	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHR 12-24-JHP	SR 16-212-01397-L8.5	T-2010/5	SR 5/16UNF TL360	HW 5/32"
PCHL 16-24-JHP	SR 16-212-01397L		SR 5/16UNF TL360	HW 5/32"
PCHR 16-24-JHP	SR 16-212-01397		SR 5/16UNF TL360	HW 5/32"
PCHL 20-24-JHP	SR 16-212-01397L		PLG G1/8 TL360	HW 5.0
PCHR 20-24-JHP	SR 16-212-01397		PLG G1/8 TL360	HW 5.0
PCHL 25-24-JHP	SR 16-212-01397L			
PCHR 25-24-JHP	SR 16-212-01397			

PCHR/L-24-JHP-MC
Grooving, Parting and Recessing
Tools Carrying PENTA
Inserts with Bottom Inlets for
High-Pressure Coolant



Designation	H	HF	B	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WF	OAL	LH	Insert
PCHR/L 20-24-JHP-MC	20.0	20.0	20.0	0.50	3.20	6.50	13.50	95.00	25.0	PENTA 24
PCHR/L 25-24-JHP-MC	25.0	25.0	25.0	0.50	3.20	6.50	18.50	110.00	25.0	PENTA 24

• For user guide and accessories see pages 419-438

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width • Up to 6.2 mm width may be ordered on request.

⁽³⁾ For specific information, refer to insert data.

For inserts, see pages: PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)

• PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)

• PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)

• PENTA 24R/L-Z (533)

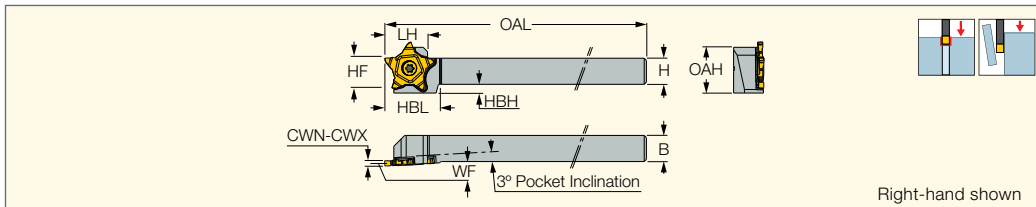
Spare Parts

Designation	
PCHL 20-24-JHP-MC	SR 16-212-01397L
PCHR 20-24-JHP-MC	SR 16-212-01397
PCHL 25-24-JHP-MC	SR 16-212-01397L
PCHR 25-24-JHP-MC	SR 16-212-01397



PCHRS/LS

Holders Carrying Inserts with 5 Cutting Edges for Grooving, Parting and Recessing Next to High Shoulders



Right-hand shown

Designation	H	B	CWN ⁽¹⁾	CWX ⁽²⁾	OAL	LH	HBL	HBH	OAH	HF		
PCHR/LS 12-24	12.0	12.0	0.80	4.80	120.00	19.5	24.50	4.0	21.0	12.0	SR 16-212-01397R/LS	T-2010/5
PCHR/LS 16-24	16.0	16.0	0.80	4.80	120.00	19.5	-	-	21.0	16.0	SR 16-212-01397R/LS	T-2010/5
PCHR/LS 20-24	20.0	20.0	0.80	4.80	120.00	19.5	-	-	25.0	20.0	SR 16-212-01397R/LS	T-2010/5
PCHR/LS 25-24	25.0	25.0	0.80	4.80	135.00	19.5	-	-	30.0	25.0	SR 16-212-01397R/LS	T-2010/5

⁽¹⁾ Minimum cutting width

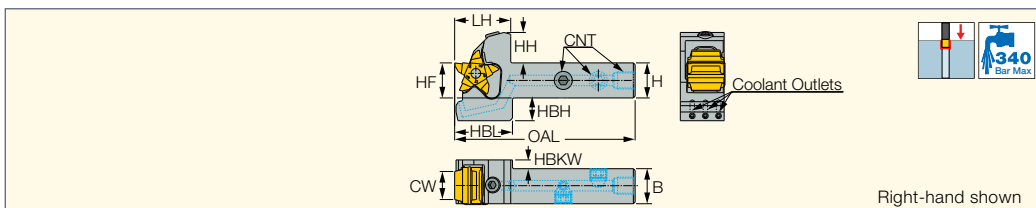
⁽²⁾ Maximum cutting width

For inserts, see pages: PENTA 24N-J-RS (323) • PENTA 24N-RS/LS (323)



PCHR/L-27-JHP-MC

Tools Carrying Pentagonal Wide Inserts for Specially Tailored Profiles



Right-hand shown

Designation	CW	H	B	HF	LH	HBL	HH	HBH	HBKW	OAL	CNT
PCHR/L 20-27-10-JHP-MC	10.00	20.0	20.0	20.0	32.0	33.0	17.4	13.0	5.00	103.00	G1/8
PCHR/L 25-27-10-JHP-MC	10.00	25.0	25.0	25.0	32.0	33.0	17.4	8.0	-	118.00	G1/8
PCHR/L 20-27-15-JHP-MC	15.00	20.0	20.0	20.0	32.0	33.0	17.4	13.0	5.00	103.00	G1/8
PCHR/L 25-27-15-JHP-MC	15.00	25.0	25.0	25.0	32.0	33.0	17.4	8.0	-	118.00	G1/8
PCHR/L 20-27-20-JHP-MC	20.00	20.0	20.0	20.0	32.0	33.0	17.4	13.0	5.00	103.00	G1/8
PCHR/L 25-27-20-JHP-MC	20.00	25.0	25.0	25.0	32.0	33.0	17.4	8.0	-	118.00	G1/8

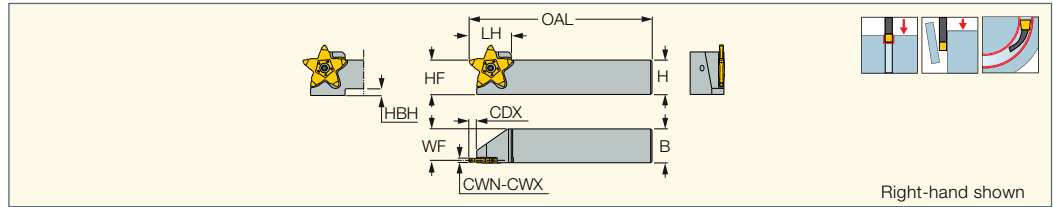
For inserts, see pages: PENTAS 27 blanks (323)

Spare Parts

Designation									
PCHR/L 20-27-20-JHP-MC	SR M3X6 ISO7380 SS	HW 3.0	SR M6X6 DIN913	SR M6X6 DIN913 TL360	PUSH ROD - 40529	HW 4.0	PLG G1/8 TL360	HW 5.0	
PCHL 25-27-20-JHP-MC	SR M3X6 ISO7380 SS	HW 3.0	SR M6X6 DIN913	SR M6X6 DIN913 TL360	PUSH ROD - 40529	HW 4.0	PLG G1/8 TL360	HW 5.0	
PCHR 25-27-20-JHP-MC					PUSH ROD - 40529	HW 4.0			

PCHR/L-34

Grooving, Parting and
Recessing Holders Carrying
Inserts with 5 Cutting Edges



Right-hand shown

Designation	H	HF	B	CWN ⁽²⁾	CWX ⁽³⁾	WF	CDX ⁽⁴⁾	OAL	LH	HBH		
PCHR/L 16-34	16.0	16.0	16.0	1.50	4.00	14.20	10.00	120.00	31.0	9.0	SR 16-212-01397	
PCHR/L 20-34	20.0	20.0	20.0	1.50	4.00	18.20	10.00	120.00	31.0	6.0	SR 16-212-01397	
PCHR/L 25-34	25.0	25.0	25.0	1.50	4.00	23.20	10.00	135.00	31.0	-	SR 16-212-01397	
PCHR/L 25-34-8 ⁽¹⁾	25.0	25.0	25.0	3.19	8.20	22.50	10.00	135.00	31.0	-	SR PCHR-8-06642	T-15/5
PCHR/L 32-34	32.0	32.0	32.0	1.50	4.00	30.10	10.00	135.00	31.0	-	SR 16-212-01397	

⁽¹⁾ Used with special inserts only

⁽²⁾ Minimum cutting width

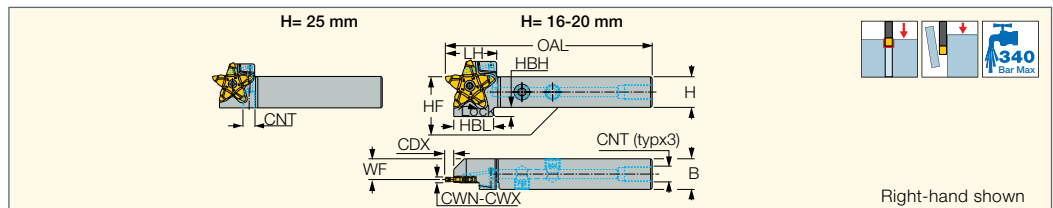
⁽³⁾ Maximum cutting width

⁽⁴⁾ For specific information, refer to insert data

For inserts, see pages: PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
• PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)

PCHR/L-34-JHP

Grooving, Parting and
Recessing Tools Carrying
PENTA Inserts with Channels
for High-Pressure Coolant



Right-hand shown

Designation	H	HF	B	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WF	OAL	LH	HBH	CNT	Insert
PCHR/L 16-34-JHP	16.0	16.0	16.0	1.50	4.00	10.00	9.60	120.00	33.5	9.0	UNF 5/16-24	PENTA 34
PCHR/L 20-34-JHP	20.0	20.0	20.0	1.50	4.00	10.00	13.60	135.00	33.5	6.0	G1/8-28	PENTA 34
PCHR/L 25-34-JHP	25.0	25.0	25.0	1.50	4.00	10.00	18.60	135.00	33.5	-	G1/8-28	PENTA 34

• For user guide and accessories, see pages 419-438

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ For specific information, refer to insert data

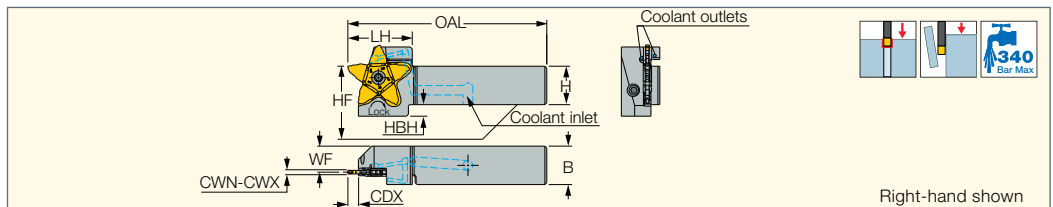
For inserts, see pages: PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
• PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)

Spare Parts

Designation			
PCHR/L 16-34-JHP	SR 16-212-01397	SR 5/16UNF TL360	HW 5/32"
PCHR/L 20-34-JHP	SR 16-212-01397	PLG G1/8 TL360	HW 5.0
PCHR/L 25-34-JHP	SR 16-212-01397		

PCHR/L-34-JHP-MC

Grooving, Parting and Recessing
Tools Carrying PENTA
Inserts with Bottom Inlets for
High-Pressure Coolant



Right-hand shown

Designation	H	HF	B	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	WF	OAL	LH	HBH	Insert
PCHR/L 20-34-JHP-MC	20.0	20.0	20.0	1.50	4.00	10.00	13.55	103.50	33.5	6.0	PENTA 34
PCHR/L 25-34-JHP-MC	25.0	25.0	25.0	1.50	4.00	10.00	18.55	118.50	33.5	-	PENTA 34

• For user guide and accessories, see pages 419-438

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ For specific information, refer to insert data

For inserts, see pages: PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
• PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)

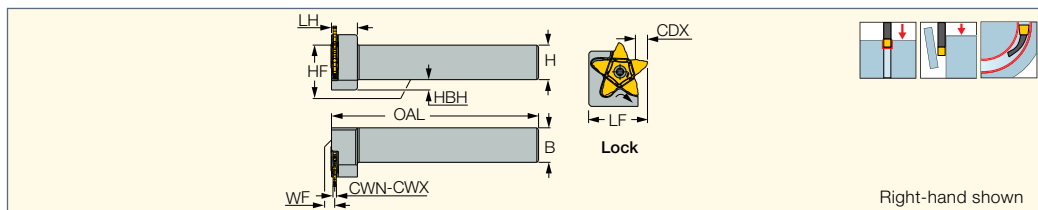
Spare Parts

Designation	
PCHR/L-34-JHP-MC	SR 16-212-01397



PCHPR/L

Perpendicular Holders
Carrying Inserts with 5 Cutting Edges for Facing, Grooving, Parting and Recessing





Designation	H	B	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	HF	WF	LF	OAL	LH	HBH
PCHPR/L 16-24	16.0	16.0	0.50	3.20 ⁽⁴⁾	6.50	16.0	1.50 ⁽⁵⁾	23.5	120.00	11.5	-
PCHPR/L 20-24	20.0	20.0	0.50	3.20 ⁽⁴⁾	6.50	20.0	1.50 ⁽⁵⁾	28.0	120.00	11.5	-
PCHPR/L 25-24	25.0	25.0	0.50	3.20 ⁽⁴⁾	6.50	25.0	1.50 ⁽⁵⁾	33.0	135.00	11.5	-
PCHPR/L 20-34	20.0	20.0	1.40	4.00	10.00	20.0	1.90	34.0	120.00	15.0	6.0
PCHPR/L 25-34	25.0	25.0	1.40	4.00	10.00	25.0	1.90	34.0	135.00	15.0	-

- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ For specific information, refer to insert data
- ⁽⁴⁾ Up to 6.2 mm width may be ordered on request
- ⁽⁵⁾ Valid for inserts with CW<3.2 mm

For inserts, see pages: PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)
 • PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)
 • PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)
 • PENTA 24R/L-Z (533) • PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
 • PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)

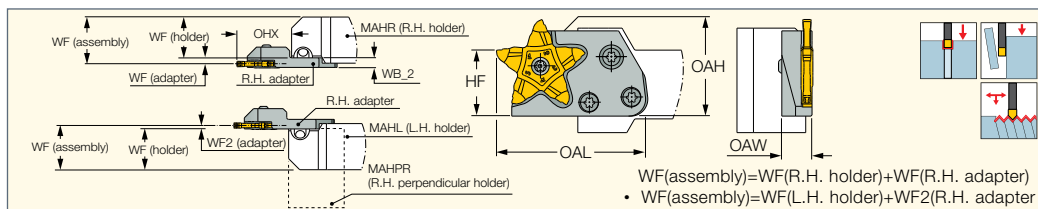
Spare Parts

Designation		
PCHPL 16-24	SR 16-212-01397	T-20/5
PCHPR 16-24	SR 16-212-01397L	T-20/5
PCHPL 20-24	SR 16-212-01397	T-20/5
PCHPR 20-24	SR 16-212-01397L	T-20/5
PCHPL 25-24	SR 16-212-01397	T-20/5
PCHPR 25-24	SR 16-212-01397L	T-20/5
PCHPR/L 20-34	SR 16-212-01397	T-20/5
PCHPR/L 25-34	SR 16-212-01397	T-20/5



PCADR/L


Adapters for PENTACUT Grooving Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	OAL	WF ⁽⁴⁾	WF2	OAW	WB_2	HF	OAH
PCADR/L 24N	0.50	3.18 ⁽⁵⁾	17.00	41.50	3.20	2.00	9.00	5.2	24.0	30.3
PCADR/L 34N	1.50	4.00	29.60	54.20	3.35	1.85	11.00	5.2	24.0	31.0

- CDX and CUTDIA according to insert limitation
 - ⁽¹⁾ Minimum cutting width
 - ⁽²⁾ Maximum cutting width
 - ⁽³⁾ Maximum overhang
 - ⁽⁴⁾ WF (adapter)
 - ⁽⁵⁾ Up to 6.2 mm width may be ordered on request
- For inserts, see pages:** PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)
 • PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)
 • PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)
 • PENTA 24R/L-Z (533) • PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
 • PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)
- For holders, see pages:** MAHPR/L-JHP (281) • MAHR/L-JHP (279) • MAHR/L (279) • MAHPR/L (280) • C#-MAHD (624) • C#-MAHPD (625)
 • C#-MAHDR-45 (623) • HSK A63WH-MAHUR/L (632) • HSK A63WH-MAHDR-45 (631) • HSK A63WH-MAHDOR (631) • IM-MAHD (633) • IM-MAHPD (633)
 • C#-MAHD-JHP (624) • C#-MAHPD-JHP (625) • MAHR/L-JHP-MC (280)

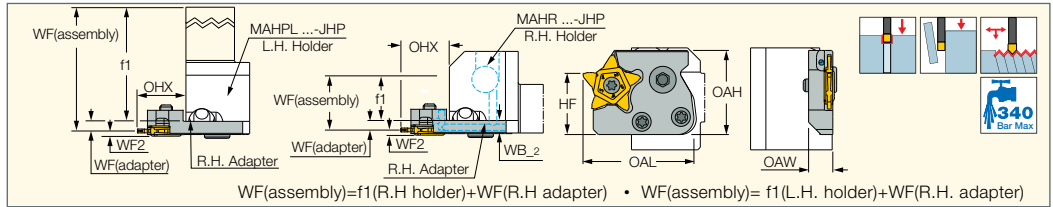
Spare Parts

Designation	
PCADL 24N	SR 16-212-01397L ^(a)
PCADR 24N	SR 16-212-01397
PCADR/L 34N	SR 16-212-01397

- ^(a) For left-hand holders

PCADR/L-JHP

Adapters with High-Pressure Coolant Holes for PENTACUT Grooving Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	OAL	WF ⁽⁴⁾	WF2	OAW	WB_2	HF	OAH	Insert
PCADR/L 24-JHP	0.50	3.18 ⁽⁵⁾	19.30	43.80	5.20	2.00	10.00	7.2	24.0	33.0	PENTA 24
PCADR/L 34-JHP	1.50	4.00	27.80	54.20	5.35	2.15	11.00	7.2	24.0	33.0	PENTA 34

• CDX and CUTDIA according to insert limitation • For user guide and accessories, see pages 419-438

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Maximum overhang

⁽⁴⁾ WF(adapter)

⁽⁵⁾ Up to 6.2 mm width can be ordered on request

For inserts, see pages: PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)

• PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)

• PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)

• PENTA 24R/L-Z (533) • PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)

• PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)

For holders, see pages: ABC MAHDR-#-XL-JHP (782) • C#-MAHD-JHP (624) • C#-MAHPD-JHP (625) • MAHPR/L-JHP (281) • MAHR/L-JHP (279)


• MAHR/L-JHP-MC (280) • MS##-##-MG-JHP (757) • MS-ES#####-GWS-MG-JHP (759) • TR TNK36 MAHDL-R-XL-JHP (782) • TR45 MAHDR-#-XL-JHP (781)

• TR45TNL MAHDN-R-XL-JHP (781) • V## MAHD#-#-XL-##-JHP (778) • V## MAHD-XL-JHP (779)

Flow Rate vs. Pressure

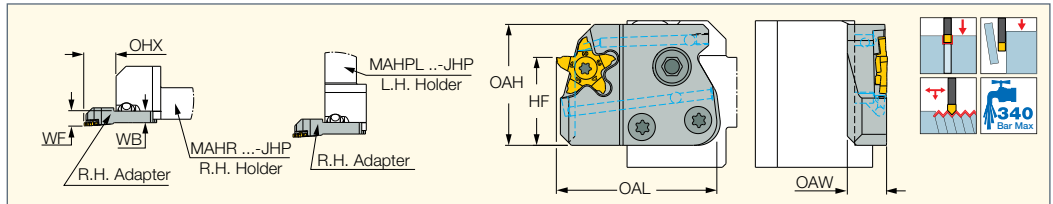
Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
PCADR/L 24-JHP	9-11	11-13	12-14

Spare Parts

Designation	
PCADL 24-JHP	SR 16-212-01397L
PCADR 24-JHP	SR 16-212-01397
PCADR/L 34-JHP	SR 16-212-01397

PCADRS/LS-JHP

Adapters with High-Pressure Coolant Holes for PENTACUT 17



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	OAL	WF	OAW	WB	HF	OAH	Insert
PCADR/LS 17-JHP	0.25	3.18	19.30	43.80	8.95	10.70	7.0	24.0	33.0	PENTA 17

• CDX and CUTDIA according to insert limitation • For user guide and accessories, see pages 419-438

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Maximum overhang

For inserts, see pages: PENTA 17-MT-RS/LS (383) • PENTA 17-P-RS/LS (309) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)



• PENTA 17R/L-SP-RS (310)

For holders, see pages: ABC MAHDR-#-XL-JHP (782) • C#-MAHD-JHP (624) • C#-MAHPD-JHP (625) • DT##/2 MAHD#-#-XL-JHP (758) • MAHPR/L-JHP (281)

• MAHR/L-JHP (279) • MAHR/L-JHP-MC (280) • MS##-##-MG-JHP (757) • MS-ES#####-GWS-MG-JHP (759) • TR TNK36 MAHDL-R-XL-JHP (782)

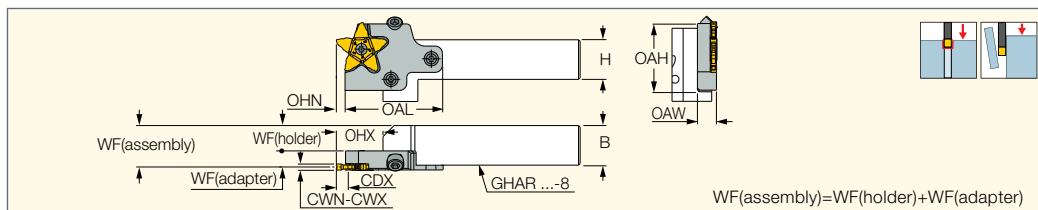
• TR45 MAHDR-#-XL-JHP (781) • TR45TNL MAHDN-R-XL-JHP (781) • V## MAHD#-#-XL-##-JHP (778) • V## MAHD-XL-JHP (779)

Spare Parts

Designation		
PCADLS 17-JHP	SR M4-39432	T-1508/5
PCADRS 17-JHP	SR M4-39432L	T-1508/5



PCADR/L 34N-RE
Reinforced Adapters for
PENTACUT Grooving Inserts



WF(assembly)=WF(holder)+WF(adapter)

Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHN ⁽³⁾	OHX ⁽⁴⁾	OAL	WF ⁽⁵⁾	OAH	OAW	
PCADR/L 34N-RE	1.50	4.00	5.50	29.50	61.50	10.15	42.0	12.00	SR 16-212-01397

• CDX and CUTDIA according to insert limitation • H, B, and WF(holder) according to holder being used

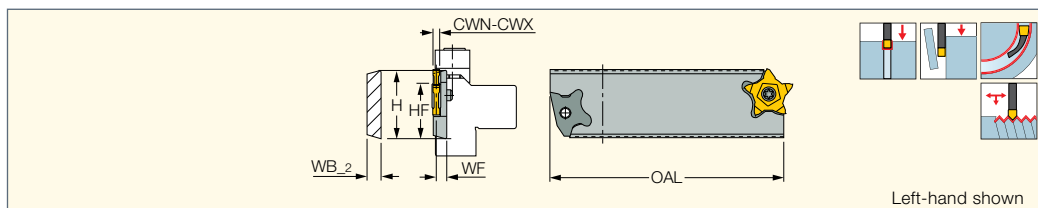
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Minimum overhang
- (4) Maximum overhang
- (5) WF(adapter)

For inserts, see pages: PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
• PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)

For holders, see pages: C#-GHAD-8 (625) • C#-GHAPR/L-8 (626) • GHAPR/L-8 (286) • GHAR/L-8 (285) • IM-GHAD-8 (634)



PCHBR/L
Double-Ended Parting
and Grooving Blades for
PENTACUT Inserts



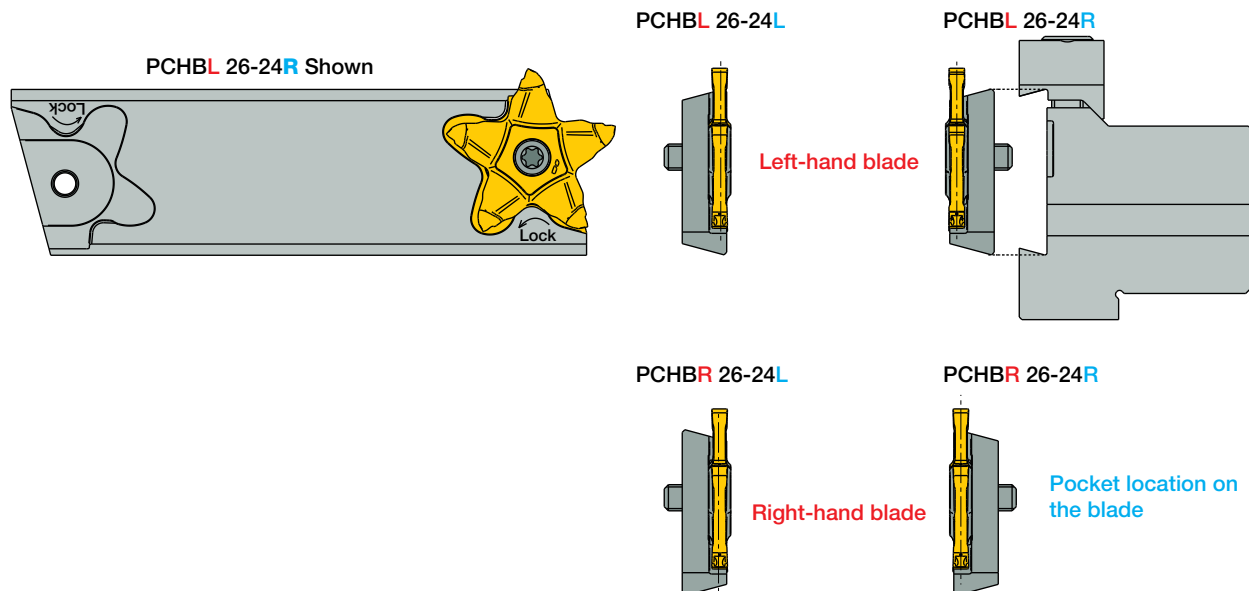
Left-hand shown

Designation	H	CWN ⁽²⁾	CWX ⁽³⁾	HF	WF ⁽⁴⁾	OAL	WB_2	Insert	
PCHBL 26-24R	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24	SR 16-212-01397L
PCHBR 26-24L	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24	SR 16-212-01397
PCHBR 26-24R	26.0	0.50	6.20	21.4	1.50	110.00	8.5	PENTA 24	
PCHBL 32-24R	32.0	0.50	6.20	24.8	7.00	110.00	8.5	PENTA 24	SR 16-212-01397L
PCHBR 32-24L	32.0	0.50	6.20	24.8	7.00	110.00	8.5	PENTA 24	SR 16-212-01397
PCHBL 26-34R ⁽¹⁾	26.0	1.50	4.00	21.4	7.15	110.00	8.5	PENTA 34	SR 16-212-01397
PCHBR 26-34L ⁽¹⁾	26.0	1.50	4.00	21.4	7.15	110.00	8.5	PENTA 34	SR 16-212-01397
PCHBR 26-34R ⁽¹⁾	26.0	1.50	4.00	21.4	1.35	110.00	8.5	PENTA 34	
PCHBL 32-34R	32.0	1.50	4.00	24.8	7.15	110.00	8.5	PENTA 34	SR 16-212-01397
PCHBR 32-34L	32.0	1.50	4.00	24.8	7.15	110.00	8.5	PENTA 34	SR 16-212-01397

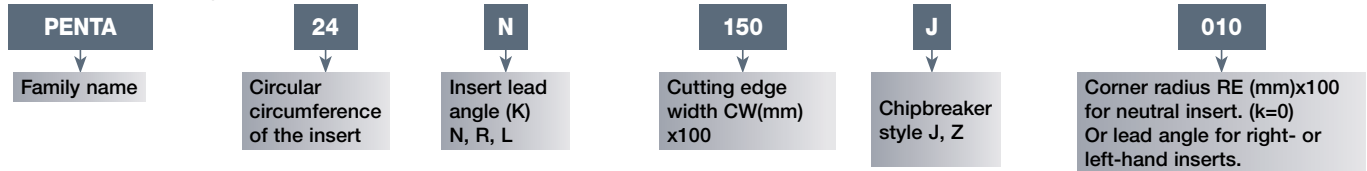
• For insert/blade orientation, see the following drawings

- (1) Single pocket blade
- (2) Minimum cutting width
- (3) Maximum cutting width
- (4) To the center of inserts up to 4.15 mm width

For inserts, see pages: PENTA 24-BSPT (674) • PENTA 24-ISO (657) • PENTA 24-MT (646) • PENTA 24-NPT (670) • PENTA 24-UN (664)
• PENTA 24-W (668) • PENTA 24-WT (641) • PENTA 24N-C (320) • PENTA 24N-C (full radius) (321) • PENTA 24N-J (319) • PENTA 24N-J (full radius) (320)
• PENTA 24N-PF (full radius) (322) • PENTA 24N-PF/P (321) • PENTA 24N-Z (322) • PENTA 24R-C (531) • PENTA 24R-P (534) • PENTA 24R/L-J (530)
• PENTA 24R/L-Z (533) • PENTA 34F-R/L (589) • PENTA 34N-C (324) • PENTA 34N-J (325) • PENTA 34N-PB (324) • PENTA 34R/L-C (535)
• PENTA 34R/L-J (536) • PENTA 34R/L-PB (537)



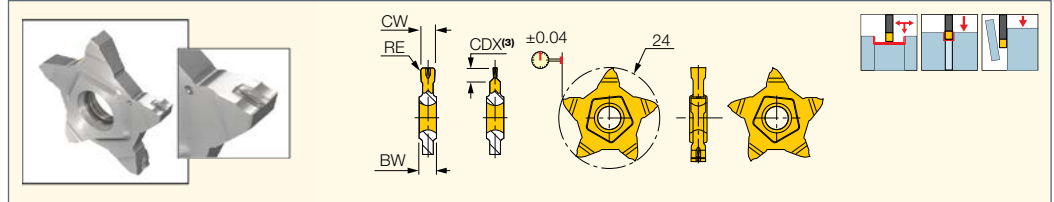
Identification System for Standard Inserts



PENTACUT
PARTING & GROOVING LINE

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 ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC1010	IC1008	IC908	IC807G	
PENTA 24N050J000	0.50	0.00	0.02	0.020	4.00	1.00			•		0.02-0.04
PENTA 24N050J004	0.50	0.04	0.02	0.020	4.00	2.50		•			0.02-0.05
PENTA 24N080J000	0.80	0.00	0.02	0.020	4.00	1.60			•		0.02-0.05
PENTA 24N100J004	1.00	0.04	0.02	0.020	4.00	3.50			•		0.03-0.07
PENTA 24N100J006	1.00	0.06	0.02	0.020	4.00	3.50		•		•	0.03-0.07
PENTA 24N104J000	1.04	0.00	0.02	0.020	4.00	2.00			•		0.02-0.07
PENTA 24N120J000	1.20	0.00	0.02	0.020	4.00	2.00			•	•	0.03-0.07
PENTA 24N125J010	1.25	0.10	0.02	0.020	4.00	2.00			•		0.03-0.07
PENTA 24N140J000	1.40	0.00	0.02	0.020	4.00	2.00			•		0.03-0.08
PENTA 24N147J000	1.47	0.00	0.02	0.020	4.00	2.50			•		0.03-0.08
PENTA 24N150J010	1.50	0.10	0.00	0.020	4.00	5.00	•	•	•	•	0.03-0.10
PENTA 24N157J015	1.57	0.15	0.02	0.030	4.00	3.00			•	•	0.00-0.12
PENTA 24N170J010	1.70	0.10	0.02	0.030	4.00	3.00			•	•	0.03-0.12
PENTA 24N178J018	1.78	0.18	0.02	0.030	4.00	3.00			•	•	0.04-0.12
PENTA 24N185J015	1.85	0.15	0.02	0.030	4.00	3.00			•		0.04-0.12
PENTA 24N196J015	1.96	0.15	0.02	0.030	4.00	3.00			•	•	0.04-0.12
PENTA 24N196J040	1.96	0.40	0.02	0.030	4.00	3.00			•		0.03-0.10
PENTA 24N200J020	2.00	0.20	0.02	0.030	4.00	6.00	•	•	•	•	0.04-0.12
PENTA 24N222J015	2.22	0.15	0.02	0.030	4.00	3.50			•	•	0.04-0.16
PENTA 24N230J020	2.30	0.20	0.02	0.030	4.00	3.50			•	•	0.04-0.16
PENTA 24N239J015	2.39	0.15	0.02	0.030	4.00	5.00			•	•	0.04-0.16
PENTA 24N247J020	2.47	0.20	0.02	0.030	4.00	5.00			•	•	0.04-0.16
PENTA 24N270J010	2.70	0.10	0.02	0.020	4.00	5.00			•		0.04-0.16
PENTA 24N287J020	2.87	0.20	0.02	0.030	4.00	6.50			•		0.04-0.16
PENTA 24N300J000	3.00	0.00	0.02	0.020	4.00	6.50			•		0.04-0.10
PENTA 24N300J020	3.00	0.20	0.02	0.030	4.00	6.50	•		•	•	0.04-0.16
PENTA 24N300J040	3.00	0.40	0.02	0.030	4.00	6.50			•	•	0.04-0.16
PENTA 24N315J015	3.15	0.15	0.02	0.030	4.00	6.50			•		0.04-0.16
PENTA 24N318J020	3.18	0.20	0.02	0.030	4.00	6.50			•	•	0.04-0.16
PENTA 24N330J010	3.30	0.10	0.02	0.030	5.00	6.40			•		0.04-0.16
PENTA 24N348J020	3.48	0.20	0.02	0.030	5.00	6.40			•		0.04-0.18
PENTA 24N356J020	3.56	0.20	0.02	0.030	5.00	6.40			•		0.04-0.18
PENTA 24N374J020	3.74	0.20	0.02	0.030	5.00	6.40			•		0.04-0.18
PENTA 24N398J020	3.98	0.20	0.02	0.030	5.00	6.20			•		0.04-0.18
PENTA 24N400J040	4.00	0.40	0.02	0.030	5.00	6.20			•		0.04-0.18
PENTA 24N423J010	4.23	0.10	0.02	0.030	5.00	6.20			•		0.04-0.18

• Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

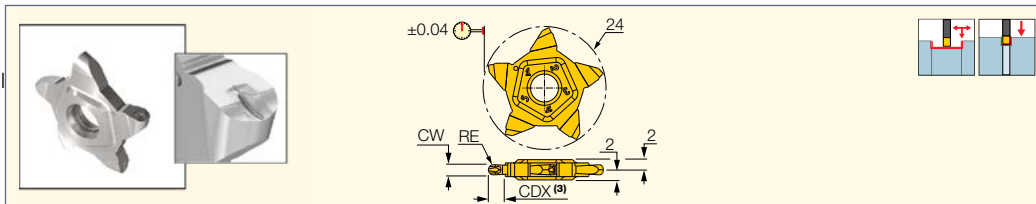
⁽³⁾ For grooving and parting depth relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)



PENTA 24N-J (full radius)
Precision Grooving Pentagonal Full Radius Inserts for Soft Materials



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	IC908	IC807G	
PENTA 24N100J050	1.00	0.50	0.02	0.050	3.50	●		f groove (mm/rev)
PENTA 24N120J060	1.20	0.60	0.02	0.050	2.00	●		0.03-0.07
PENTA 24N140J070	1.40	0.70	0.02	0.050	2.00	●		0.03-0.07
PENTA 24N157J079	1.57	0.79	0.02	0.050	3.00	●	●	0.05-0.08
PENTA 24N200J100	2.00	1.00	0.02	0.050	3.00	●	●	0.05-0.08
PENTA 24N239J120	2.39	1.20	0.02	0.050	5.00	●		0.05-0.12
PENTA 24N300J150	3.00	1.50	0.02	0.050	6.50	●	●	0.06-0.16
PENTA 24N318J159	3.18	1.59	0.02	0.050	6.50	●	●	0.06-0.20
PENTA 24N400J200	4.00	2.00	0.02	0.050	6.25	●		0.06-0.20

• Recessing is possible only with 2.39 mm and wider inserts. • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

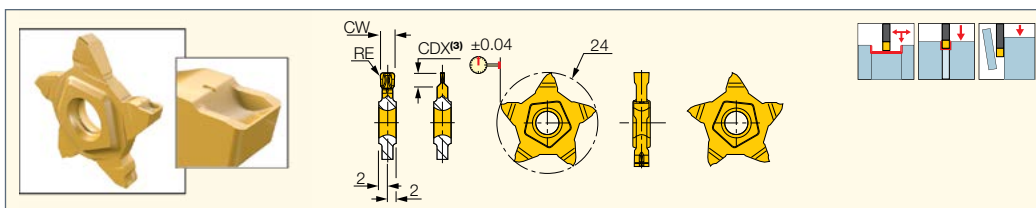
⁽³⁾ For grooving depth relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)



PENTA 24N-C
Parting and Grooving Inserts with 5 Cutting Edges for Parting Bars, Hard Materials and Tough Applications



Designation	Dimensions					IC908	Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾		
PENTA 24N150C010	1.50	0.10	0.02	0.050	5.00	●	f groove (mm/rev)
PENTA 24N157C015	1.57	0.15	0.02	0.050	3.00	●	0.05-0.11
PENTA 24N170C010	1.70	0.10	0.02	0.050	3.00	●	0.05-0.12
PENTA 24N178C018	1.78	0.18	0.02	0.050	3.00	●	0.05-0.13
PENTA 24N196C015	1.96	0.15	0.02	0.050	3.00	●	0.05-0.14
PENTA 24N200C020	2.00	0.20	0.02	0.050	6.00	●	0.05-0.15
PENTA 24N222C015	2.22	0.15	0.02	0.050	3.50	●	0.05-0.16
PENTA 24N230C020	2.30	0.20	0.02	0.050	3.50	●	0.05-0.16
PENTA 24N239C015	2.39	0.15	0.02	0.050	5.00	●	0.06-0.17
PENTA 24N247C020	2.47	0.20	0.02	0.050	5.00	●	0.07-0.18
PENTA 24N270C010	2.70	0.10	0.02	0.050	6.20	●	0.08-0.18
PENTA 24N287C020	2.87	0.20	0.02	0.050	6.20	●	0.09-0.18
PENTA 24N300C020	3.00	0.20	0.02	0.050	6.20	●	0.10-0.18
PENTA 24N300C040	3.00	0.40	0.02	0.050	6.20	●	0.10-0.20
PENTA 24N318C020	3.18	0.20	0.02	0.050	6.20	●	0.10-0.20
PENTA 24N478C055	4.78	0.55	0.02	0.050	6.20	●	0.10-0.25
PENTA 24N486C040	4.86	0.40	0.02	0.050	6.20	●	0.10-0.25
PENTA 24N500C040	5.00	0.40	0.02	0.050	6.20	●	0.10-0.25

• Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

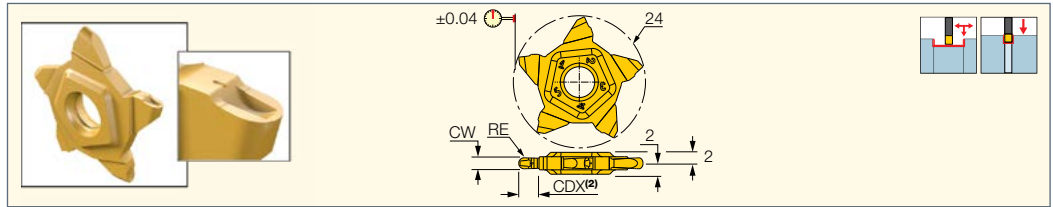
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ For grooving and parting depths relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)

PENTA 24N-C (full radius)
Full Radius Grooving Inserts
with 5 Cutting Edges for Hard
Materials and Tough Applications



Designation	Dimensions				IC908	Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	CDX ⁽²⁾		f groove (mm/rev)
PENTA 24N157C079	1.57	0.79	0.02	3.00	●	0.04-0.12
PENTA 24N200C100	2.00	1.00	0.02	3.00	●	0.04-0.16
PENTA 24N239C120	2.39	1.20	0.02	5.00	●	0.06-0.18
PENTA 24N300C150	3.00	1.50	0.02	6.20	●	0.10-0.25

• Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 419-428, 432-436

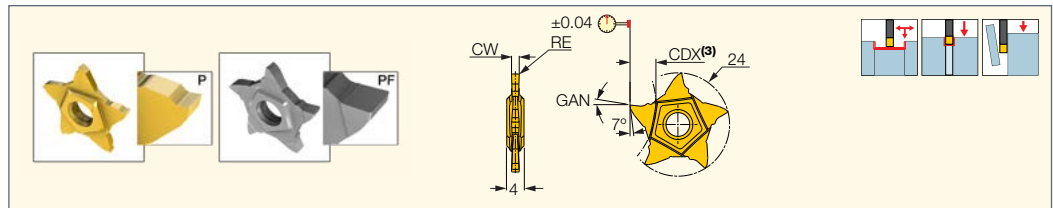
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ For grooving depth relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)

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 ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	GAN	IC1008	IC908	IC30N	
PENTA 24N050PF005	0.50	0.05	0.02	0.020	2.50	6.0			●	0.01-0.04
PENTA 24N075PF005	0.75	0.05	0.02	0.020	2.50	6.0			●	0.02-0.05
PENTA 24N095PF005	0.95	0.05	0.02	0.020	4.00	6.0			●	0.02-0.05
PENTA 24N100PF010	1.00	0.10	0.02	0.020	4.00	6.0	●	●	●	0.02-0.05
PENTA 24N125PF020	1.25	0.20	0.02	0.020	5.00	6.0		●	●	0.03-0.06
PENTA 24N145PF020	1.45	0.20	0.02	0.020	6.20	6.0		●	●	0.03-0.06
PENTA 24N150PF020	1.50	0.20	0.02	0.030	6.00	6.0	●	●	●	0.02-0.07
PENTA 24N150PF020	1.50	0.20	0.02	0.030	6.00	6.0		●	●	0.03-0.09
PENTA 24N175PF020	1.75	0.20	0.02	0.030	6.20	6.0			●	0.02-0.08
PENTA 24N185PF020	1.85	0.20	0.02	0.030	6.00	6.0			●	0.03-0.10
PENTA 24N200PF020	2.00	0.20	0.02	0.030	6.00	6.0	●		●	0.02-0.08
PENTA 24N200PF020	2.00	0.20	0.02	0.030	6.50	6.0		●	●	0.04-0.10
PENTA 24N230PF020	2.30	0.20	0.02	0.030	6.20	6.0			●	0.04-0.14
PENTA 24N239PF015	2.39	0.15	0.02	0.030	6.50	6.0		●	●	0.04-0.14
PENTA 24N250PF020	2.50	0.20	0.02	0.030	6.50	6.0		●	●	0.04-0.14
PENTA 24N300PF030	3.00	0.30	0.02	0.030	6.20	6.0		●	●	0.04-0.14
PENTA 24N300PF030	3.00	0.30	0.02	0.030	6.20	6.0			●	0.04-0.15
PENTA 24N400PF020	4.00	0.20	0.02	0.030	6.50	6.0			●	0.04-0.16
PENTA 24N400PF040	4.00	0.40	0.02	0.030	6.20	6.0			●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

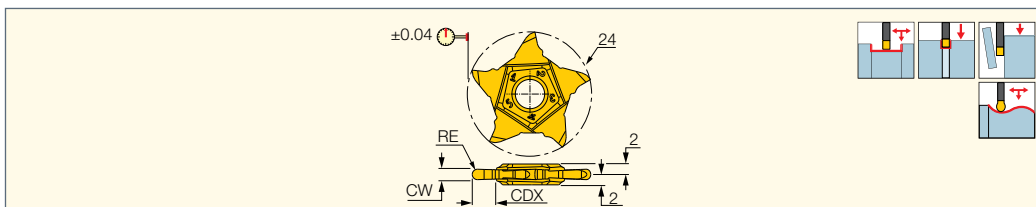
⁽³⁾ For grooving and parting depths relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)



PENTA 24N-PF (full radius)
Full Radius Pentagonal Inserts
with a High Positive Flat Rake for
Parting and Precision Grooving



Designation	Dimensions					IC30N	Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	CDX ⁽²⁾	GAN		f groove (mm/rev)
PENTA 24N100PF050	1.00	0.50	0.02	4.50	6.0	●	0.03-0.06
PENTA 24N150PF075	1.50	0.75	0.02	6.20	6.0	●	0.03-0.06
PENTA 24N200PF100	2.00	1.00	0.02	6.20	6.0	●	0.04-0.10
PENTA 24N250PF125	2.50	1.25	0.02	6.20	6.0	●	0.04-0.14
PENTA 24N300PF150	3.00	1.50	0.02	6.20	6.0	●	0.04-0.15
PENTA 24N400PF200	4.00	2.00	0.02	6.20	6.0	●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

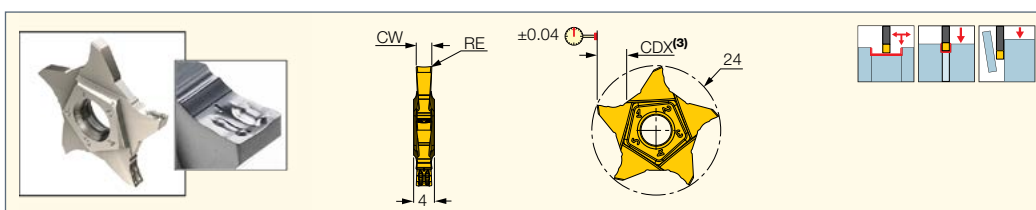
⁽²⁾ For grooving and parting depths relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)



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 ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾		f groove (mm/rev)
PENTA 24N150Z010	1.50	0.10	0.02	0.020	5.00	●	0.05-0.08
PENTA 24N200Z020	2.00	0.20	0.02	0.030	6.40	●	0.04-0.12
PENTA 24N300Z020	3.00	0.20	0.02	0.000	6.40	●	0.04-0.16

• 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 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

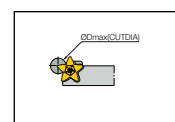
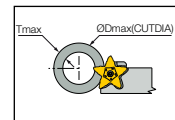
⁽³⁾ For grooving and parting depths relative to part diameter, see page 322

For tools, see pages: PCAD RE/LE-JHP (499) • PCADR/L (316) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-24 (312)

• PCHR/L-24-JHP (313) • PCHR/L-24-JHP-MC (313)

ØDmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts

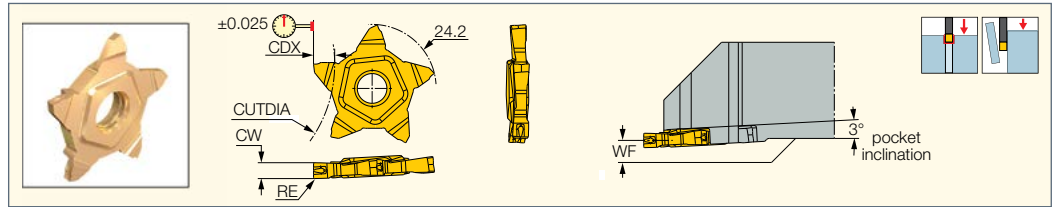
CW ^{+0.02}	CDX ⁽³⁾	CDX / ØDmax	T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.5	T≤6.4
CW=0.50 ⁽¹⁾	1.0	1.0 / N.L.	-	-	-	-	-	-	-	-
CW=0.50 ⁽²⁾	2.5			250						
CW=0.80	1.6	1.6 / N.L.	-	-	-	-	-	-	-	-
CW=1.00	3.5		N.L.	250	-	-	-	-	-	-
1.04≤CW≤1.40	2.0	2.0 / N.L.	-	-	-	-	-	-	-	-
CW=1.47	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-
CW=1.50	5.0		N.L.	470	210	70	30	-	-	-
1.57≤CW≤1.96	3.0		N.L.	-	-	-	-	-	-	-
CW=2.00	6.0 ⁽⁴⁾		N.L.	470	210	130	75	45	20	-
2.22≤CW≤2.30	3.5		N.L.	250	-	-	-	-	-	-
2.39≤CW≤2.50	5.0		N.L.	470	210	70	30	-	-	-
2.70≤CW≤3.18	6.4		N.L.	470	210	135	100	70	40	20



⁽¹⁾ Refers to PENTA 24N050J000 - a precision grooving insert ⁽²⁾ Refers to PENTA 24N050J004 - a parting insert ⁽³⁾ CUTDIA for parting = 2 x CDX

⁽⁴⁾ For full radius insert, CDX = 3.0, ØDmax = No limit

PENTA 24N-J-RS
Parting and Precision Grooving
Pentagonal Inserts for Next to
High Shoulder Applications



Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	CDX ⁽²⁾	CUTDIA	WF		f groove (mm/rev)
PENTA 24N157J020RS	1.57	0.20	0.20	3.00	-	1.20	●	0.03-0.10
PENTA 24N157J079RS	1.57	0.79	0.20	3.00	-	1.20	●	0.04-0.12
PENTA 24N200J020RS	2.00	0.20	0.20	3.00	-	1.00	●	0.04-0.12
PENTA 24N239J020RS	2.39	0.20	0.20	5.00	30.0 ⁽³⁾	0.80	●	0.04-0.14
PENTA 24N239J119RS	2.39	1.19	0.20	5.00	30.0 ⁽³⁾	0.80	●	0.04-0.16
PENTA 24N300J020RS	3.00	0.20	0.20	6.20	16.0 ⁽³⁾	0.40	●	0.04-0.16
PENTA 24N318J020RS	3.18	0.20	0.20	6.20	16.0 ⁽³⁾	0.40	●	0.04-0.16
PENTA 24N318J159RS	3.18	1.59	0.20	6.20	16.0 ⁽³⁾	0.40	●	0.04-0.16

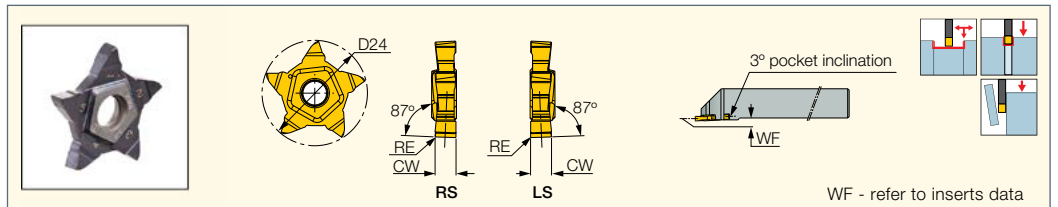
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Cutting depth maximum

⁽³⁾ for grooving

For tools, see pages: PCHRS/LS (314)

PENTA 24N-RS/LS
Pentagonal Inserts for Parting
and Precision Grooving Next to
High Shoulder Applications



Designation	Dimensions						IC908	Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	CDX ⁽²⁾	CUTDIA	WF		f groove (mm/rev)
PENTA 24N080NF010R/LS	0.80	0.10	0.02	1.60	- ⁽³⁾	1.60	●	0.03-0.05
PENTA 24N100NF010R/LS	1.00	0.10	0.02	1.80	- ⁽³⁾	1.50	●	0.03-0.06
PENTA 24N119NF010R/LS	1.19	0.10	0.02	2.00	- ⁽³⁾	1.40	●	0.03-0.06
PENTA 24N157NF020R/LS	1.57	0.20	0.02	3.00	- ⁽³⁾	1.20	●	0.03-0.08
PENTA 24N157NF079R/LS	1.57	0.79	0.02	3.00	- ⁽³⁾	1.20	●	0.03-0.08
PENTA 24N200NF020R/LS	2.00	0.20	0.02	3.00	- ⁽³⁾	1.00	●	0.03-0.10
PENTA 24N239NF020R/LS	2.39	0.20	0.02	5.00	40.0	0.80	●	0.03-0.12
PENTA 24N239NF119R/LS	2.39	1.19	0.02	5.00	40.0	0.80	●	0.03-0.12
PENTA 24N300NF020R/LS	3.00	0.20	0.02	6.20	16.0	0.50	●	0.04-0.14
PENTA 24N318NF020R/LS	3.18	0.20	0.02	6.50	13.0	0.40	●	0.04-0.14
PENTA 24N318NF159R/LS	3.18	1.59	0.02	6.50	13.0	0.40	●	0.04-0.14
PENTA 24N400NF020RS	4.00	0.20	0.02	6.50	13.0	1.00	●	0.04-0.16
PENTA 24N480NF020R/LS	4.80	0.20	0.02	6.50	13.0	1.60	●	0.04-0.16

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

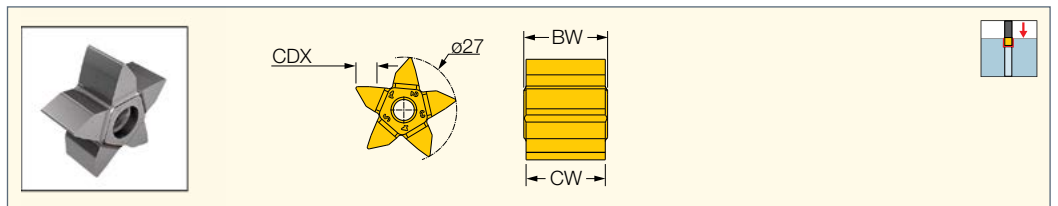
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Cutting depth maximum

⁽³⁾ No limit

For tools, see pages: PCHRS/LS (314)

PENTAS 27 blanks
Blank Inserts with 5 Wide Cutting
Edges for the Production of
Special Profile Contours



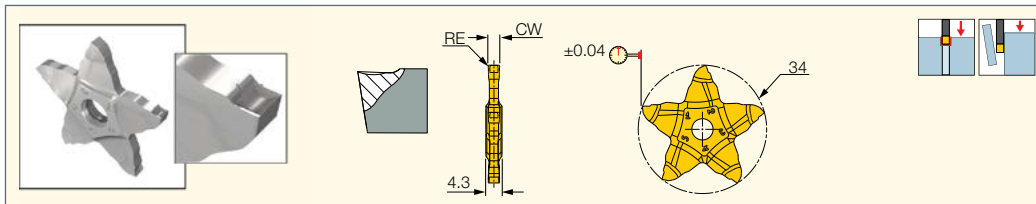
Designation	Dimensions			IC08
	CW	CDX	BW	
PENTAS 27-10FT	10.00	4.00	11.80	●
PENTAS 27-15FT	15.00	4.00	16.80	●
PENTAS 27-20FT	20.00	4.00	21.80	●

For tools, see pages: PCHR/L-27-JHP-MC (314)

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 ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾		f groove (mm/rev)
PENTA 34N150PB015	1.50	0.15	0.02	0.030	8.50	●	0.03-0.06
PENTA 34N200PB020	2.00	0.20	0.02	0.030	8.50	●	0.03-0.08
PENTA 34N300PB020	3.00	0.20	0.02	0.030	9.50	●	0.03-0.10

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

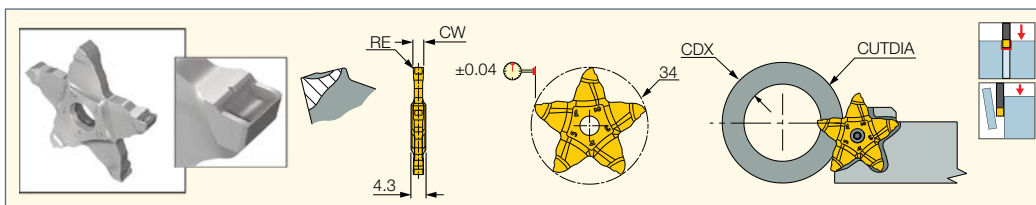
⁽³⁾ For grooving and parting depths relative to part diameter, see page 324

For tools, see pages: PCADR/L (316) • PCADR/L 34N-RE (318) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-34 (315) • PCHR/L-34-JHP (315)

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
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾		f groove (mm/rev)
PENTA 34N150C015	1.50	0.15	0.02	0.030	8.00	●	0.03-0.07
PENTA 34N200C020	2.00	0.20	0.02	0.030	8.00	●	0.04-0.14
PENTA 34N200C100	2.00	1.00	0.02	0.050	8.00	●	0.05-0.16
PENTA 34N222C015	2.22	0.15	0.02	0.030	8.00	●	0.05-0.14
PENTA 34N230C020	2.30	0.20	0.02	0.030	8.00	●	0.05-0.14
PENTA 34N239C015	2.39	0.15	0.02	0.030	8.00	●	0.05-0.15
PENTA 34N239C120	2.39	1.20	0.02	0.050	8.00	●	0.05-0.18
PENTA 34N247C020	2.47	0.20	0.02	0.030	8.00	●	0.05-0.18
PENTA 34N250C020	2.50	0.20	0.02	0.030	8.00	●	0.05-0.18
PENTA 34N270C010	2.70	0.10	0.02	0.030	10.00	●	0.05-0.18
PENTA 34N287C020	2.87	0.20	0.02	0.030	10.00	●	0.05-0.18
PENTA 34N300C000	3.00	0.00	0.02	0.000	10.00	●	0.04-0.10
PENTA 34N300C020	3.00	0.20	0.02	0.030	10.00	●	0.06-0.22
PENTA 34N300C040	3.00	0.40	0.02	0.030	10.00	●	0.06-0.25
PENTA 34N300C150	3.00	1.50	0.02	0.050	10.00	●	0.06-0.20
PENTA 34N315C015	3.15	0.15	0.02	0.030	10.00	●	0.06-0.20
PENTA 34N318C020	3.18	0.20	0.02	0.030	10.00	●	0.06-0.22
PENTA 34N330C010	3.30	0.10	0.02	0.020	10.00	●	0.06-0.20
PENTA 34N348C020	3.48	0.20	0.02	0.030	10.00	●	0.06-0.25
PENTA 34N350C025	3.50	0.25	0.02	0.030	10.00	●	0.06-0.30
PENTA 34N398C020	3.98	0.20	0.02	0.030	10.00	●	0.06-0.30
PENTA 34N400C030	4.00	0.30	0.02	0.030	10.00	●	0.06-0.30

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

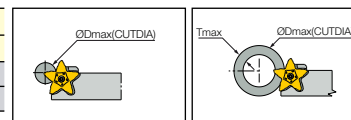
⁽³⁾ For grooving and parting depths relative to part diameter, see page 324

For tools, see pages: PCADR/L (316) • PCADR/L 34N-RE (318) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-34 (315) • PCHR/L-34-JHP (315)

CW±0.02	ØDmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts						
	T≤5.0	T≤6.0	T≤7.0	T≤8.0	T≤8.5	T≤9.0	T≤10.0
1.50 ≤ CW ≤ 2.69	N.L.	350	165	100	55	-	-
2.70 ≤ CW ≤ 4.00	N.L.	350	165	100	55	55	20

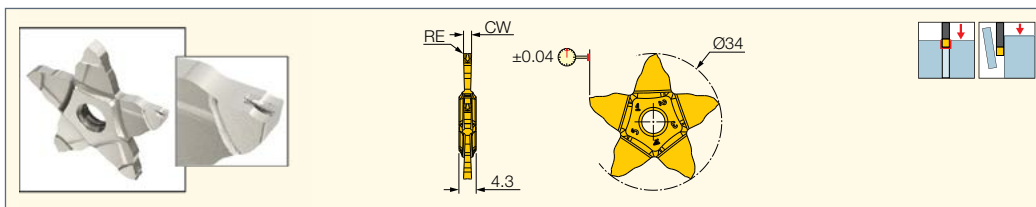
CUTDIA for parting = 2 x CDX

N.L. = No Limit



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 ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾		f groove (mm/rev)
PENTA 34N150J015	1.50	0.15	0.02	0.002	8.50	●	0.03-0.10
PENTA 34N200J020	2.00	0.20	0.02	0.002	8.50	●	0.04-0.12
PENTA 34N200J100	2.00	1.00	0.02	0.002	8.50	●	0.05-0.12
PENTA 34N239J015	2.39	0.15	0.02	0.002	8.50	●	0.04-0.16
PENTA 34N239J120	2.39	1.20	0.02	0.002	8.50	●	0.06-0.16
PENTA 34N250J020	2.50	0.20	0.02	0.002	8.50	●	0.04-0.16
PENTA 34N270J010	2.70	0.10	0.02	0.002	10.00	●	0.04-0.16
PENTA 34N300J000	3.00	0.00	0.02	0.000	10.00	●	0.04-0.10
PENTA 34N300J020	3.00	0.20	0.02	0.002	10.00	●	0.04-0.16
PENTA 34N300J040	3.00	0.40	0.02	0.002	10.00	●	0.04-0.16
PENTA 34N300J150	3.00	1.50	0.02	0.002	10.00	●	0.06-0.20
PENTA 34N318J020	3.18	0.20	0.02	0.002	10.00	●	0.20-0.16

• Recessing is possible only with 2.39 mm and wider inserts • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

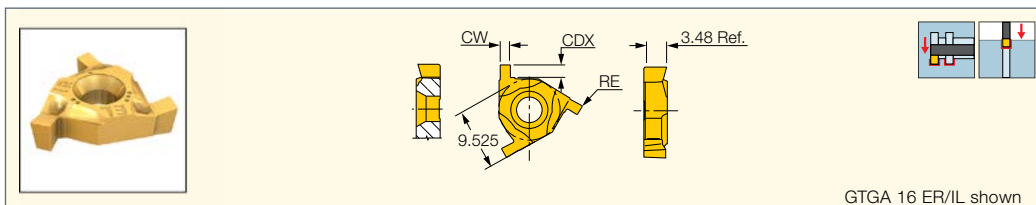
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ For grooving and parting depths relative to part diameter, see page 324

For tools, see pages: PCADR/L (316) • PCADR/L 34N-RE (318) • PCADR/L-JHP (317) • PCHBR/L (318) • PCHPR/L (316) • PCHR/L-34 (315) • PCHR/L-34-JHP (315)

GTGA

Precision Shallow Grooving Inserts with 3 Cutting Edges



GTGA 16 ER/IL shown

Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	CW	CDX ⁽¹⁾	CWTOL ⁽²⁾	RE	RETOL ⁽³⁾	IC528	IC508	f groove (mm/rev)
GTGA 16EL/IR 100	1.00	1.55	0.02	0.10	0.030	●	●	0.02-0.03
GTGA 16ER/IL 100	1.00	1.55	0.02	0.10	0.030	●	●	0.02-0.03
GTGA 16EL/IR 120	1.20	1.60	0.02	0.10	0.030	●	●	0.02-0.03
GTGA 16ER/IL 120	1.20	1.60	0.02	0.10	0.030	●	●	0.02-0.03
GTGA 16EL/IR 140	1.40	1.80	0.02	0.10	0.030	●	●	0.02-0.04
GTGA 16ER/IL 140	1.40	1.80	0.02	0.10	0.030	●	●	0.02-0.04
GTGA 16EL/IR 170	1.70	2.00	0.02	0.10	0.030	●	●	0.03-0.05
GTGA 16ER/IL 170	1.70	2.00	0.02	0.10	0.030	●	●	0.03-0.05
GTGA 16EL/IR 195	1.95	2.00	0.02	0.10	0.030	●	●	0.03-0.06
GTGA 16ER/IL 195	1.95	2.00	0.02	0.10	0.030	●	●	0.03-0.06
GTGA 16EL/IR 225	2.25	2.10	0.02	0.10	0.030	●	●	0.04-0.06
GTGA 16ER/IL 225	2.25	2.10	0.02	0.10	0.030	●	●	0.04-0.06

• Inserts for right-hand external grooving can be used as left-hand internal grooving • Use with anvil AE 16-0 on external tools and with anvil AI 16-0 on internal tools

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

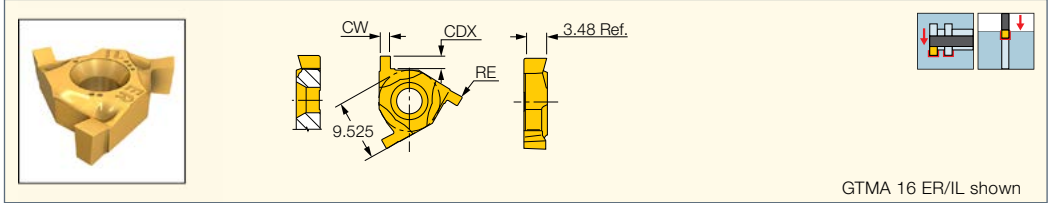
⁽¹⁾ Cutting depth maximum

⁽²⁾ Cutting width tolerance (+/-)

⁽³⁾ Corner radius tolerance (+/-)

For tools, see pages: AVC-D-SIR/L (707) • C#-SER/L (701) • C#-SIR/L (705) • SER-D (702) • SER/L (700) • SER/L-JHP (701) • SER/L-JHP-MC (702) • SIR/L (703)

GTMA
Utility Shallow Grooving Inserts
with 3 Cutting Edges



GTMA 16 ER/IL shown

Designation	Dimensions					IC508	Recommended Machining Data
	CW	CDX ⁽¹⁾	CWTOL ⁽²⁾	RE	RETOL ⁽³⁾		f groove (mm/rev)
GTMA 16ER/IL 120	1.20	1.60	0.05	0.10	0.050	●	0.02-0.03
GTMA 16ER/IL 140	1.40	1.80	0.05	0.10	0.050	●	0.02-0.04
GTMA 16ER/IL 160	1.60	2.00	0.05	0.10	0.050	●	0.03-0.05
GTMA 16ER/IL 175	1.75	2.00	0.05	0.10	0.050	●	0.03-0.05
GTMA 16ER/IL 195	1.95	2.00	0.05	0.10	0.050	●	0.03-0.06
GTMA 16ER/IL 222	2.22	2.10	0.05	0.10	0.050	●	0.04-0.06

- Inserts for right-hand external grooving can be used as left-hand internal grooving
- Use with anvil AE 16-0 on external tools and with anvil AI 16-0 on internal tools
- For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting depth maximum
⁽²⁾ Cutting width tolerance (+/-)
⁽³⁾ Corner radius tolerance (+/-)

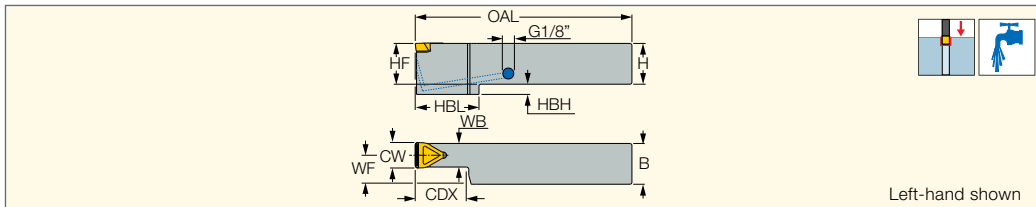
For tools, see pages: AVC-D-SIR/L (707) • C#-SER/L (701) • C#-SIR/L (705) • SER-D (702) • SER/L (700) • SER/L-JHP (701) • SER/L-JHP-MC (702) • SIR/L (703)

HEAVY DUTY





THDR/L-IQ
External Holders for Wide Grooving Inserts



Left-hand shown

Designation	CW	CDX ⁽¹⁾	H	HF	B	OAL	WB	WF	HBH	HBL
THDR/L 2525-10T20-IQ	10.00	20.00	25.0	25.0	25.0	170.00	9.20	20.40	8.0	30.0
THDR/L 3232-10T20-IQ	10.00	20.00	32.0	32.0	32.0	170.00	9.20	27.40	8.0	30.0
THDR/L 2525-12T20-IQ	12.00	20.00	25.0	25.0	25.0	170.00	11.00	19.50	8.0	30.0
THDR/L 3232-12T20-IQ	12.00	20.00	32.0	32.0	32.0	170.00	11.00	26.50	8.0	30.0
THDR/L 2525-14T20-IQ	14.00	20.00	25.0	25.0	25.0	170.00	13.00	18.50	8.0	30.0
THDR/L 3232-14T20-IQ	14.00	20.00	32.0	32.0	32.0	170.00	13.00	25.50	8.0	30.0
THDR/L 3232-16T40-IQ	16.00	40.00	32.0	32.0	32.0	170.00	14.80	24.60	8.0	48.0
THDR/L 4040-16T50-IQ	16.00	50.00	40.0	40.0	40.0	180.00	14.80	32.60	-	-
THDR 3232-18T40-IQ	18.00	40.00	32.0	32.0	32.0	170.00	16.50	23.80	8.0	48.0
THDR 4040-18T50-IQ	18.00	50.00	40.0	40.0	40.0	180.00	16.50	31.80	-	-
THDR/L 3232-20T40-IQ	20.00	40.00	32.0	32.0	32.0	170.00	18.00	23.00	8.0	48.0
THDR/L 4040-20T50-IQ	20.00	50.00	40.0	40.0	40.0	180.00	18.00	31.00	-	-





• For grooving only

⁽¹⁾ Cutting depth maximum

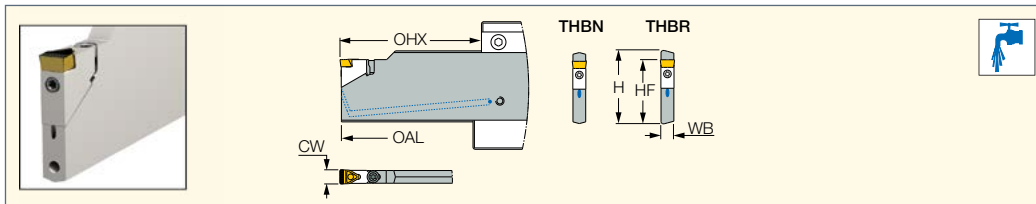
For inserts, see pages: TIGER-IQ (329)



Spare Parts

Designation				
THDR/L 2525-10T20-IQ	PIN 5.5 INJ	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-10T20-IQ	PIN 5.5 INJ	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 2525-12T20-IQ	PIN 5.5 INJ	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-12T20-IQ	PIN 5.5 INJ	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 2525-14T20-IQ	PIN 5.5 INJ	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-14T20-IQ	PIN 5.5 INJ	SR M6-26392	BLD T15/S7	SW6-T
THDR/L 3232-16T40-IQ	PIN 6.5 INJ 7000944	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 4040-16T50-IQ	PIN 6.5 INJ 7000944	SR M8-26393	BLD T20/S7	SW6-T
THDR 3232-18T40-IQ	PIN 6.5 INJ 7000944	SR M8-26393	BLD T20/S7	SW6-T
THDR 4040-18T50-IQ	PIN 6.5 INJ 7000944	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 3232-20T40-IQ	PIN 6.5 INJ 7000944	SR M8-26393	BLD T20/S7	SW6-T
THDR/L 4040-20T50-IQ	PIN 6.5 INJ 7000944	SR M8-26393	BLD T20/S7	SW6-T

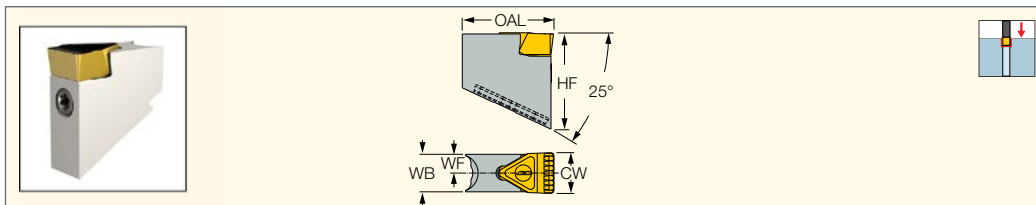
THBR/L/N-IQ
Blades Carrying Cartridges
for Wide Grooving Inserts



Designation	CW	OHX ⁽³⁾	CDX ⁽⁴⁾	WB	OAL	HF	H						
THBN 53K-10-IQ ⁽¹⁾	10.00	100.0	93.00	9.00	260.00	45.2	52.6	SR M5X3.5PL	SR M5X23-A90	BLD IP20/S7	SW6-T	SGC 340	SGCU 341
THBR/L 53K-12-IQ ⁽²⁾	12.00	100.0	93.00	10.80	260.00	45.2	52.6	SR M5X3.5PL	SR M5X23-A90	BLD IP20/S7	SW6-T	SGC 340	SGCU 341
THBR/L 53K-14-IQ ⁽²⁾	14.00	100.0	93.00	12.60	260.00	45.2	52.6	SR M5X3.5PL	SR M5X23-A90	BLD IP20/S7	SW6-T	SGC 340	SGCU 341

- For user guide, see pages 419-428, 432-436
 - ⁽¹⁾ Cartridges have to be ordered separately.
 - ⁽²⁾ For best performance use SGTBU...-14 holder blocks
 - ⁽³⁾ Maximum overhang
 - ⁽⁴⁾ If workpiece diameter is smaller than 200 mm, then CDX=98, if workpiece diameter is larger than 200 mm, then CDX=93.
- For tools, see pages:** CR THDN-IQ (329)

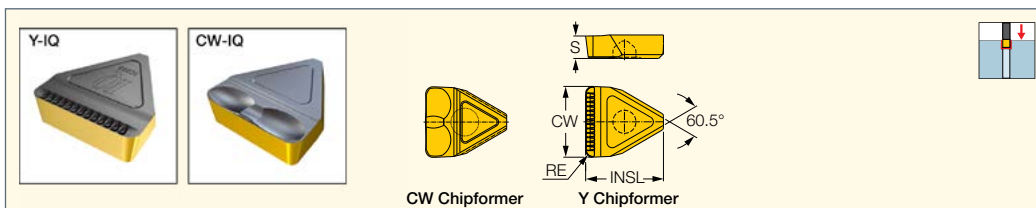
CR THDN-IQ
Cartridges for Blades Carrying
Wide Grooving Inserts



Designation	CW	WF	HF	OAL	WB				
CR THDN-10-IQ	10.00	4.60	24.0	22.60	9.20	SR M6-26392	PIN 5.5 INJ	BLD T15/S7	SW6-T
CR THDN-12-IQ	12.00	5.50	23.7	23.60	11.00	SR M6-26392	PIN 5.5 INJ	BLD T15/S7	SW6-T
CR THDN-14-IQ	14.00	6.50	23.7	24.20	13.00	SR M6-26392	PIN 5.5 INJ	BLD T15/S7	SW6-T

- For user guide, see pages 419-428, 432-436
- For inserts, see pages:** TIGER-IQ (329)
For holders, see pages: THBR/L/N-IQ (329)

TIGER-IQ
Utility Single-Ended Inserts
for External Heavy Grooving
and Deep Machining



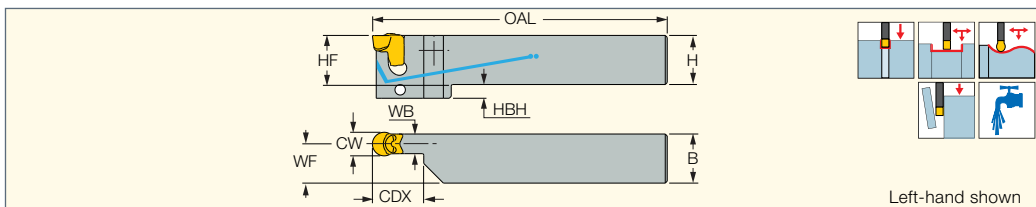
Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	S	INSL	IC880	IC808	
TIGER 1008Y-IQ	10.00	0.80	0.08	0.050	5.05	13.30	●	●	0.20-0.35
TIGER 1212Y-IQ	12.00	1.20	0.08	0.050	5.05	14.00	●	●	0.20-0.40
TIGER 1415-CW-IQ	14.00	1.50	0.08	0.050	5.15	16.10	●	●	0.22-0.45
TIGER 1415Y-IQ	14.00	1.50	0.08	0.050	5.15	16.10	●	●	0.22-0.45
TIGER 1615Y-IQ	16.00	1.50	0.08	0.050	6.35	20.00	●	●	0.22-0.50
TIGER 1820Y-IQ	18.00	2.00	0.08	0.050	6.35	20.90	●	●	0.25-0.55
TIGER 2020-CW-IQ	20.00	2.00	0.08	0.050	6.35	22.00	●	●	0.25-0.60
TIGER 2020Y-IQ	20.00	2.00	0.08	0.050	6.35	22.00	●	●	0.25-0.60

- For cutting speed recommendations and user guide, see pages 419-428, 432-436
 - ⁽¹⁾ Cutting width tolerance (+/-)
 - ⁽²⁾ Corner radius tolerance (+/-)
- For tools, see pages:** CR THDN-IQ (329) • THDR/L-IQ (328)



TGBHR/L

Toolholders for Heavy Duty Groove-Turn and Parting Applications



Left-hand shown

Designation	CW	H	HF	B	WB	OAL	CDX ⁽²⁾	WF	HBH
TGBHR/L 20C-6 ⁽¹⁾	6.00	20.0	20.0	20.0	5.20	135.00	12.00	17.40	5.0
TGBHR/L 25C-6 ⁽¹⁾	6.00	25.0	25.0	25.0	5.20	135.00	12.00	22.40	-
TGBHR/L 32C-6 ⁽¹⁾	6.00	32.0	32.0	32.0	5.20	150.00	12.00	29.40	-
TGBHR/L 25C-8	8.00	25.0	25.0	25.0	7.00	150.00	25.00	21.50	12.0
TGBHR/L 32C-8	8.00	32.0	32.0	32.0	7.00	170.00	30.00	28.50	5.0
TGBHR/L 25C-10	10.00	25.0	25.0	25.0	8.00	150.00	25.00	21.00	12.0
TGBHR/L 32C-10	10.00	32.0	32.0	32.0	8.00	170.00	30.00	28.00	5.0
TGBHR/L 25C-12	12.00	25.0	25.0	25.0	10.00	150.00	25.00	20.00	12.0
TGBHR/L 32C-12	12.00	32.0	32.0	32.0	10.00	170.00	30.00	27.00	5.0
TGBHR/L 25C-14T20	14.00	25.0	25.0	25.0	12.00	140.00	20.00	19.00	12.0
TGBHL 32C-14T40	14.00	32.0	32.0	32.0	12.00	170.00	40.00	26.00	5.0
TGBHR/L 40C-14T40	14.00	40.0	40.0	40.0	12.00	170.00	40.00	34.00	-

• The tools for the 14 mm inserts feature a 1/8" port thread for standard tube fittings • For user guide, see pages 419-428, 432-436

⁽¹⁾ For detailed depth capacity, see table below

⁽²⁾ Cutting depth maximum

For inserts, see pages: TAG N-C/W/M (506) • TAG N-J/JS/JT (508) • TAG N-UT (510) • TAG R/L-C (507) • TAG R/L-J/JS (509) • TAGB/TAGBA (333)

Depth Capacity for TGBHR/L...C-6

	28	26	24	22	20	18	16	14	12
CDX	28	26	24	22	20	18	16	14	12
Dmax	35	55	75	100	120	150	200	350	∞

CW ≥ 14

Coolant outlets



1/8" BSPP
Adaptation nipple

CW = 6-12

Coolant outlet



Coolant inlet accessory
SGCU 341

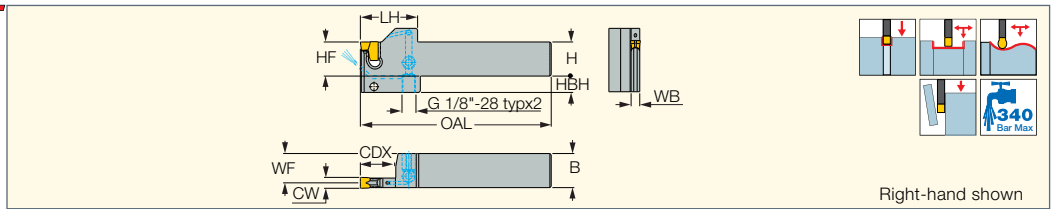
Spare Parts

Designation				
TGBHR/L 20C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 25C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 32C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 25C-8	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-8	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-10	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-10	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-12	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-12	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-14T20	ETG 8-12*		PLG G1/8 TL360	JHP NIPPLE G1/8*-7/16"UNF*
TGBHL 32C-14T40	ETG 8-12*		PLG G1/8 TL360	JHP NIPPLE G1/8*-7/16"UNF*
TGBHR/L 40C-14T40	ETG 8-12*		PLG G1/8 TL360	JHP NIPPLE G1/8*-7/16"UNF*

* Optional, should be ordered separately

TGBHR/L-JHP

Grooving and Turning
SUMO-GRIP Tools with Channels
for High-Pressure Coolant



Designation	H	CW	HF	B	LH	WB	OAL	CDX ⁽¹⁾	WF	HBH
TGBHR/L 25-8-JHP	25.0	8.00	25.0	25.0	42.0	7.00	150.00	25.00	21.50	12.0
TGBHR/L 32-8-JHP	32.0	8.00	32.0	32.0	42.0	7.00	170.00	25.00	28.50	12.0

• For user guide see pages 419-436

⁽¹⁾ Cutting depth maximum

For inserts, see pages: TAG N-C/W/M (506) • TAGB/TAGBA (333)

Flow Rate vs. Pressure

Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
TGBHR/L-JHP	13-16	19-21	22-24

ETG 8-12 Extractor for 8 to 12.7 mm Inserts



Spare Parts

Designation			
TGBHL 25-8-JHP	ETG 8-12		
TGBHR/L 25-8-JHP		PLG 1/8ISO1179	HW 5.0
TGBHR 25-8-JHP	ETG 8-12*		
TGBHL 32-8-JHP		PLG 1/8ISO1179	HW 5.0
TGBHR 32-8-JHP	ETG 8-12*	PLG 1/8ISO1179	HW 5.0

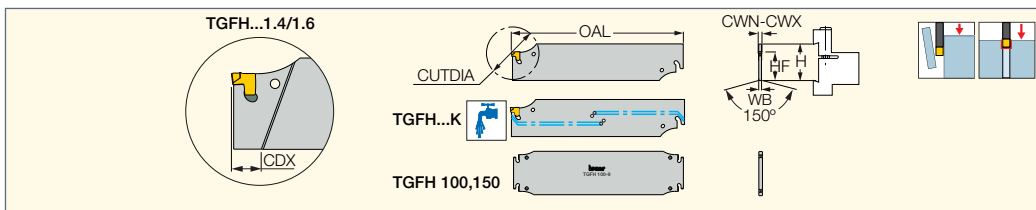
* Optional, should be ordered separately





TGFH/R/L

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



Designation	H	CWN ⁽²⁾	CWX ⁽³⁾	WB	OAL	CDX	HF	CUTDIA	CSP ⁽⁴⁾	Insert	ETG	SGC
TGFH 19-1.4	19.0	1.40	1.40	1.05 ⁽⁵⁾	86.00	9.60	15.7	30.0	0	TAG 1.4	ETG 1.4/1.6*	
TGFH 19-1.6	19.0	1.60	1.60	1.30 ⁽⁵⁾	86.00	11.00	15.7	32.0	0	TAG 1.6	ETG 1.4/1.6*	
TGFH 19-2	19.0	1.80	2.40	1.65	86.00	-	15.7	38.0	0	TAG 2	ETG 2*	
TGFH 26-1.4	26.0	1.40	1.40	1.05 ⁽⁵⁾	110.00	8.30	21.4	29.0	0	TAG 1.4	ETG 1.4/1.6*	
TGFH 26-1.6	26.0	1.60	1.60	1.30 ⁽⁵⁾	110.00	10.00	21.4	35.0	0	TAG 1.6	ETG 1.4/1.6*	
TGFH 26-2	26.0	1.80	2.40	1.65	110.00	-	21.4	50.0	0	TAG 2	ETG 2*	
TGFH 26-3	26.0	2.80	3.50	2.50	110.00	-	21.4	75.0	0	TAG 3	ETG 3-4*	
TGFH 26K-3 ⁽¹⁾	26.0	2.80	3.50	2.50	110.00	-	21.4	75.0	1	TAG 3	ETG 3-4-SH*	SGC 340
TGFH 26-4	26.0	3.70	4.50	3.40	110.00	-	21.4	80.0	0	TAG 4	ETG 3-4*	
TGFH 26-5	26.0	4.70	5.50	4.00	150.00	-	21.4	80.0	0	TAG 5	ETG 5-7*	
TGFH 32-1.4	32.0	1.40	1.40	1.05 ⁽⁵⁾	150.00	7.10	24.8	29.0	0	TAG 1.4	ETG 1.4/1.6*	
TGFH 32-1.6	32.0	1.60	1.60	1.30 ⁽⁵⁾	150.00	10.00	24.8	38.0	0	TAG 1.6	ETG 1.4/1.6*	
TGFH 32-2	32.0	1.80	2.40	1.65 ⁽⁵⁾	150.00	-	24.8	50.0	0	TAG 2	ETG 2*	
TGFH 32-3	32.0	2.80	3.50	2.50	150.00	-	24.8	100.0	0	TAG 3	ETG 3-4*	
TGFH 32K-3 ⁽¹⁾	32.0	2.80	3.50	2.50	150.00	-	24.8	100.0	1	TAG 3	ETG 3-4-SH*	SGC 340
TGFH 32-4	32.0	3.70	4.50	3.40	150.00	-	24.8	100.0	0	TAG 4	ETG 3-4*	
TGFH 32K-4 ⁽¹⁾	32.0	3.70	4.50	3.40	150.00	-	24.8	100.0	1	TAG 4	ETG 3-4-SH*	SGC 340
TGFH 32-5	32.0	4.70	5.50	4.00	150.00	-	24.8	120.0	0	TAG 5	ETG 5-7*	
TGFH 32-6	32.0	5.70	6.50	5.20	150.00	-	24.8	120.0	0	TAG 6	ETG 5-7*	
TGFH 32-7	32.0	6.80	7.50	6.00	148.00	-	24.8	120.0	0	TAG 7	ETG 5-7*	
TGFH 45-3	45.0	2.80	3.50	2.50	225.00	-	38.1	160.0	0	TAG 3	ETG 3-4*	
TGFH 45-4	45.0	3.70	4.50	3.40	225.00	-	38.1	160.0	0	TAG 4	ETG 3-4*	
TGFH 45-5	45.0	4.70	5.50	4.00	225.00	-	38.1	160.0	0	TAG 5	ETG 5-7*	
TGFH 45-6	45.0	5.70	6.50	5.20	225.00	-	38.1	160.0	0	TAG 6	ETG 5-7*	
TGFH 45-7	45.0	6.80	7.50	6.00	225.00	-	38.1	160.0	0	TAG 7	ETG 5-7*	
TGFH 52-7	52.6	6.80	7.50	6.00	190.00	-	45.2	190.0	0	TAG 7	ETG 5-7*	
TGFH 53-7	52.6	6.80	7.50	6.00	260.00	-	45.2	220.0	0	TAG 7	ETG 5-7*	
TGFH 52K-8 ⁽¹⁾	52.6	7.70	8.50	7.20	190.00	-	45.2	190.0	1	TAG 8	ETG 8-12*	
TGFH 53K-8 ⁽¹⁾	52.6	7.70	8.50	7.20	260.00	-	45.2	215.0	1	TAG 8	ETG 8-12*	
TGFH 52K-9 ⁽¹⁾	52.6	8.70	10.00	8.20	190.00	-	45.2	190.0	1	TAG 9	ETG 8-12*	
TGFH 53K-9 ⁽¹⁾	52.6	8.70	10.00	8.20	260.00	-	45.2	215.0	1	TAG 9	ETG 8-12*	
TGFHR/L 53K-12 ⁽¹⁾	52.6	11.70	12.70	10.00	260.00	-	45.2	215.0	1	TAG 12	ETG 8-12*	
TGFH 100-9	100.0	8.70	10.00	8.20	460.00	-	92.5	450.0	0	TAG 9	ETG 8-12*	
TGFH 100-12	100.0	11.70	12.70	10.00	460.00	-	92.5	450.0	0	TAG 12	ETG 8-12*	
TGFH 150-12	150.0	11.70	12.70	10.00	610.00	-	142.5	600.0	0	TAG 12	ETG 8-12*	

• For user guide, see pages 419-428, 432-436

⁽¹⁾ With coolant holes, the recommended coolant pressure is 10 bar min.; cooling tube SGCU 341 should be ordered separately

⁽²⁾ Minimum cutting width

⁽³⁾ Maximum cutting width

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

⁽⁵⁾ Thickness beyond the D.O.C. area is 2.50 mm

⁽⁶⁾ Thickness beyond the D.O.C. area is 1.60 mm

* Optional, should be ordered separately

For inserts, see pages: TAG N-A (510) • TAG N-C/W/M (506) • TAG N-HF (506) • TAG N-J/JS/JT (508) • TAG N-LF (509) • TAG N-MF (507)

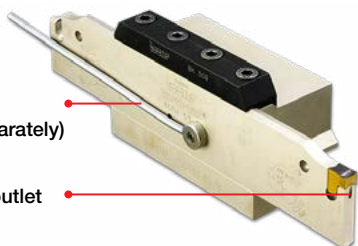
• TAG N-UT (510) • TAG R/L-C (507) • TAG R/L-J/JS (509) • TAGB/TAGBA (333)

For holders, see pages: C#-TBK-R/L (623) • HSK A-WH-TBK-R/L (632) • SGTBF (618) • SGTBK (617) • SGTBR/L (617) • SGTBU/SGTBN (616) • UBHCR/L (618)

K TYPE COOLANT

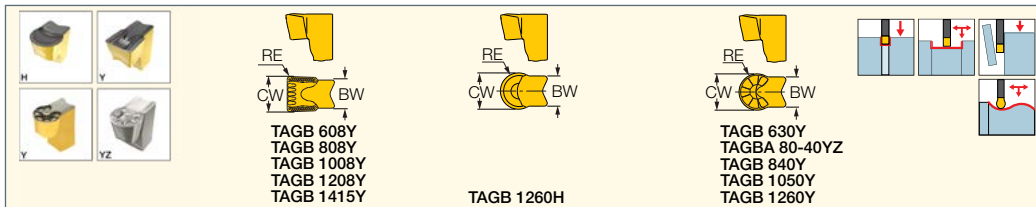
Coolant inlet SGCU-341
(should be ordered separately)

Coolant outlet



TAGB/TAGBA

Single-Ended Utility Inserts for Grooving, Turning and Parting



Designation	Dimensions					Tough ↔ Hard					Recommended Machining Data		
	CW	CWTOL ⁽³⁾	RE	RETOL ⁽⁴⁾	BW	IC8250	IC908	IC07	IC906	IC807	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
TAGB 608Y	6.00	0.05	0.80	0.050	5.20		●		●		1.00-3.60	0.20-0.60	0.18-0.30
TAGB 630Y	6.00	0.05	3.00	0.050	5.20		●		●		0.00-3.00	0.25-0.55	0.18-0.32
TAGB 808Y	8.00	0.05	0.80	0.050	6.20	●	●		●	●	1.00-5.60	0.25-0.55	0.18-0.32
TAGB 840Y ⁽¹⁾	8.00	0.05	4.00	0.050	6.20	●	●		●	●	0.00-4.00	0.24-0.67	0.18-0.32
TAGBA 80-40YZ ⁽¹⁾	8.00	0.05	4.00	0.050	6.00			●			0.00-4.00	0.40-0.70	0.25-0.40
TAGB 1008Y	10.00	0.05	0.80	0.050	8.00	●	●				1.00-7.00	0.30-0.70	0.22-0.40
TAGB 1050Y ⁽²⁾	10.00	0.05	5.00	0.050	8.00	●	●				0.00-5.00	0.30-0.85	0.22-0.40
TAGB 1208Y	12.00	0.07	0.80	0.050	10.00	●	●				1.00-8.40	0.35-0.85	0.26-0.48
TAGB 1260Y ⁽²⁾	12.00	0.07	6.00	0.050	10.00	●	●				0.00-6.00	0.35-0.90	0.26-0.48
TAGB 1260H ⁽²⁾	12.00	0.07	6.00	0.050	10.00	●	●				0.00-6.00	0.45-1.00	0.35-0.55
TAGB 1415Y	14.00	0.07	1.50	0.050	12.00	●	●				1.80-8.40	0.35-0.85	0.26-0.50

• H-type chipformer with a negative T-land for machining heavy interrupted applications and cast iron parts

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Blade's pocket must be modified

⁽²⁾ Tool's pocket must be modified

⁽³⁾ Cutting width tolerance (+/-)

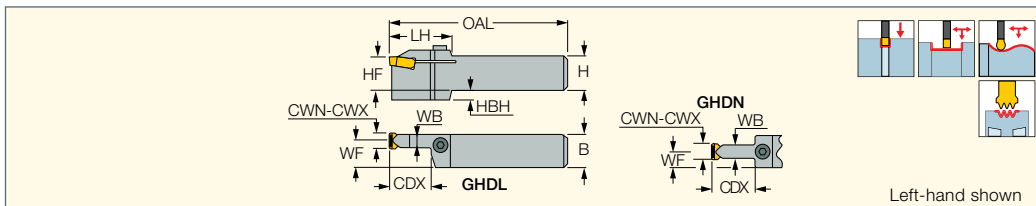
⁽⁴⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • TGBHR/L (330) • TGBHR/L-JHP (331) • TGFH-JHP (494) • TGFH/R/L (332) • TGSU (496) • TGTR/L-IQ (502)

CUTGRIP

GHDR/L/N 12/14

External Tools for Wide Grooving Inserts



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	H	HF	B	OAL	WF	WB	LH	HBH	Insert		
GHDR/L 32-12	12.00	14.53	30.00	32.0	32.0	32.0	170.00	27.30	9.50	50.0	-	GIMY 1260, TIGER 1453	SR M8X20DIN912	HW 6.0
GHDR/L 2525-14T12	13.00	17.40	12.00	25.0	25.0	25.0	150.00	19.00	12.00	41.0	-	TIGER/GPV 14/16/17	SR M8X20DIN912	HW 6.0
GHDR 3232-14T12	13.00	17.40	12.00	32.0	32.0	32.0	170.00	26.00	12.00	41.0	-	TIGER/GPV 14/16/17	SR M8X20DIN912	HW 6.0
GHDR/L 3232-14T38	13.00	17.40	38.00	32.0	32.0	32.0	170.00	26.00	12.00	59.0	8.0	TIGER 14/16/17	SR M8X20DIN912	HW 6.0
GHDN 3232-14T38	13.00	17.40	38.00	32.0	32.0	32.0	170.00	16.00	12.00	57.5	8.0	TIGER 14/16/17	SR M8X20DIN912	HW 6.0
GHDR/L 4040-14T38	13.00	17.40	38.00	40.0	40.0	40.0	170.00	34.00	12.00	59.0	-	TIGER 14/16/17	SR M8X20DIN912	HW 6.0
GHDN 4040-14T45	14.50	17.40	45.00	40.0	40.0	40.0	170.00	20.00	12.00	55.5	-	TIGER 14/16/17	SR 76-1289	HW 5.0

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

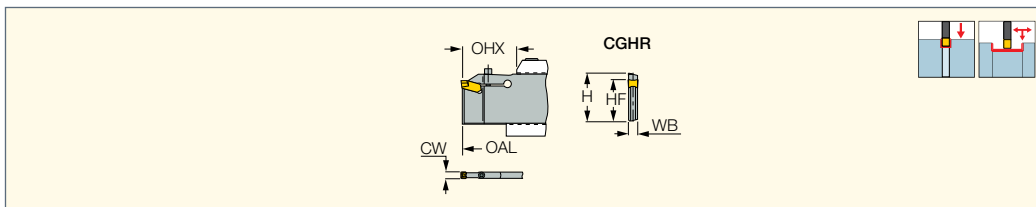
⁽³⁾ Cutting depth maximum

For inserts, see pages: GIMY 1260 (290) • GPV (304) • TIGER (334)

CUTGRIP

CGHR/L-12-14D

Deep Machining Screw-Clamped Blades for Wide Grooving and Heavy Turning Applications



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	OHX ⁽³⁾	CDX ⁽⁴⁾	WB	OAL	HF	H		
CGHR/L 53-12D	12.00	14.50	100.0	93.00	9.50	260.00	45.0	52.6	SR 76-4002	HW 5.0
CGHR/L 53-14D	12.50	17.40	100.0	93.00	11.10	260.00	45.0	52.6	SR M6X25 DIN912	HW 5.0

• If the diameter of the workpiece is smaller than 200 mm, then CDX=98 mm • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Maximum overhang

⁽⁴⁾ If workpiece diameter is smaller than 200 mm, then CDX=98, if workpiece diameter is larger than 200 mm, then CDX=93.

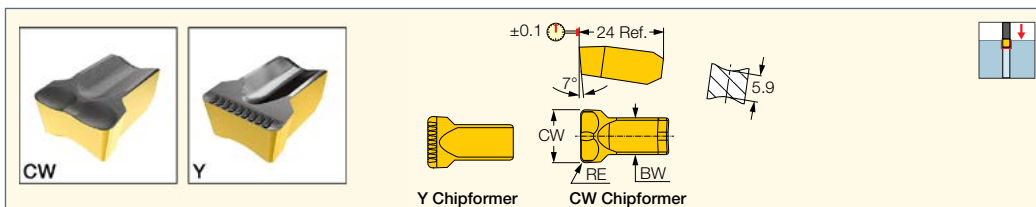
For inserts, see pages: GIMY 1260 (290) • TIGER (334)

For holders, see pages: SGTBK (617) • SGTBU/SGTBN (616)

CUTGRIP

TIGER

Utility Single-Ended Inserts for External Heavy Grooving and Deep Machining



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data f groove (mm/rev)
	CW	CWTOL ⁽¹⁾	RE	RETOL ⁽²⁾	BW	INSL	IC830	IC808	IC20	
TIGER 1453-152	14.53	0.08	1.52	0.050	10.00	24.00	●	●	●	0.22-0.44
TIGER 1453-152-CW	14.53	0.08	1.52	0.050	10.00	24.00		●		0.15-0.50
TIGER 16.63-1.52	16.63	0.02	1.52	0.050	12.70	24.00		●		0.25-0.50
TIGER 1740-200	17.40	0.08	2.00	0.100	12.70	24.00		●		0.26-0.52

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

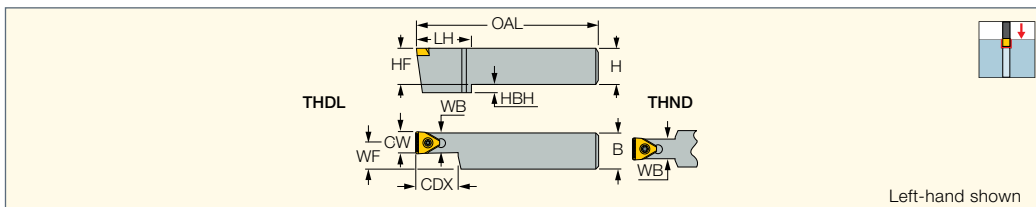
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: CGHR/L-12-14D (333) • GHDR/L/N 12/14 (333)

CUTGRIP

THDR/L/N

External Holders for Wide (20 mm) Grooving Inserts



Designation	CW	CDX ⁽¹⁾	H	HF	B	OAL	WB	WF	HBH	LH	Insert			
THDR 3232-17T38	17.00	38.00	32.0	32.0	32.0	170.00	16.00	24.00	8.0	50.0	TIGERV 1740	SR 14-519	BLD T20/M7	SW6-T
THDR/L 4040-17T45	17.00	45.00	40.0	40.0	40.0	170.00	15.00	32.50	-	-	TIGERV 1740	SR 14-519	BLD T20/M7	SW6-T
THDR/L 3232-20T38	20.06	38.00	32.0	32.0	32.0	170.00	17.50	23.30	8.0	50.0	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T
THDN 3232-20T38	20.06	38.00	32.0	32.0	32.0	170.00	17.50	16.00	8.0	50.0	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T
THDR/L 4040-20T45	20.06	45.00	40.0	40.0	40.0	170.00	17.50	31.30	-	-	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T
THDN 4040-20T45	20.06	45.00	40.0	40.0	40.0	170.00	17.50	20.00	-	-	TIGERV 2006	SR 14-519	BLD T20/M7	SW6-T

• For grooving only

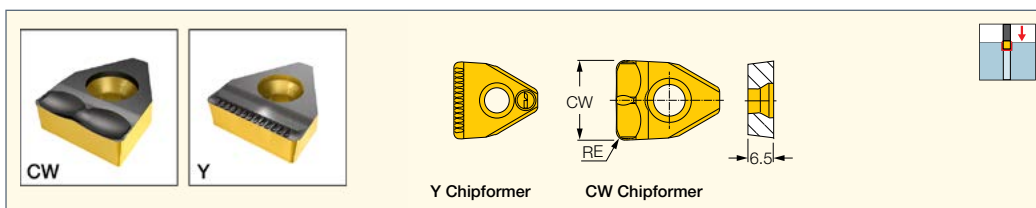
⁽¹⁾ Cutting depth maximum

For inserts, see pages: TIGERV (334)

CUTGRIP

TIGERV

Utility Single-Ended Inserts for External Deep Grooving and Heavy Machining



Designation	Dimensions				Tough ↔ Hard			Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	IC830	IC808	IC20	
TIGERV 1700-200-CW	17.00	2.00	0.08	0.050	●	●	●	0.20-0.60
TIGERV 2006-152	20.06	1.52	0.08	0.050	●	●	●	0.30-0.60

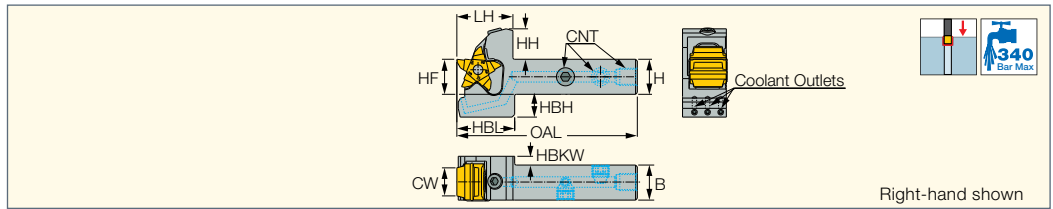
• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: THDR/L/N (334)

PCHR/L-27-JHP-MC
Tools Carrying Pentagonal
Wide Inserts for Specially
Tailored Profiles



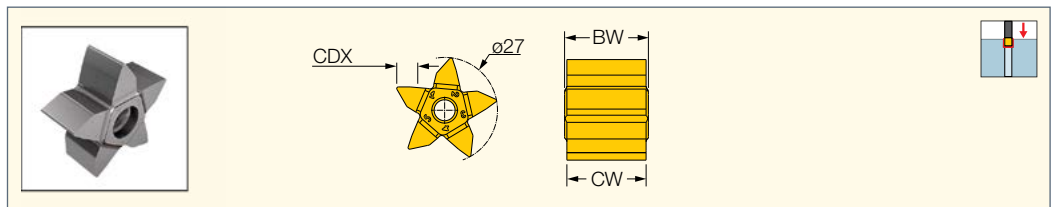
Designation	CW	H	HF	B	HBKW	OAL	LH	HBH	HBL	CNT	HH
PCHR/L 20-27-10-JHP-MC	10.00	20.0	20.0	20.0	5.00	102.00	32.0	13.0	33.0	G1/8x9	17.4
PCHR/L 25-27-10-JHP-MC	10.00	25.0	25.0	25.0	-	117.00	32.0	8.0	33.0	G1/8x9	17.4
PCHR/L 20-27-15-JHP-MC	15.00	20.0	20.0	20.0	5.00	102.00	32.0	13.0	33.0	G1/8x9	17.4
PCHR/L 25-27-15-JHP-MC	15.00	25.0	25.0	25.0	-	117.00	32.0	8.0	33.0	G1/8x9	17.4
PCHR/L 20-27-20-JHP-MC	20.00	20.0	20.0	20.0	5.00	102.00	32.0	13.0	33.0	G1/8x9	17.4
PCHR/L 25-27-20-JHP-MC	20.00	25.0	25.0	25.0	-	117.00	32.0	8.0	33.0	G1/8x9	17.4

For inserts, see pages: PENTAS 27 blanks (323)

Spare Parts

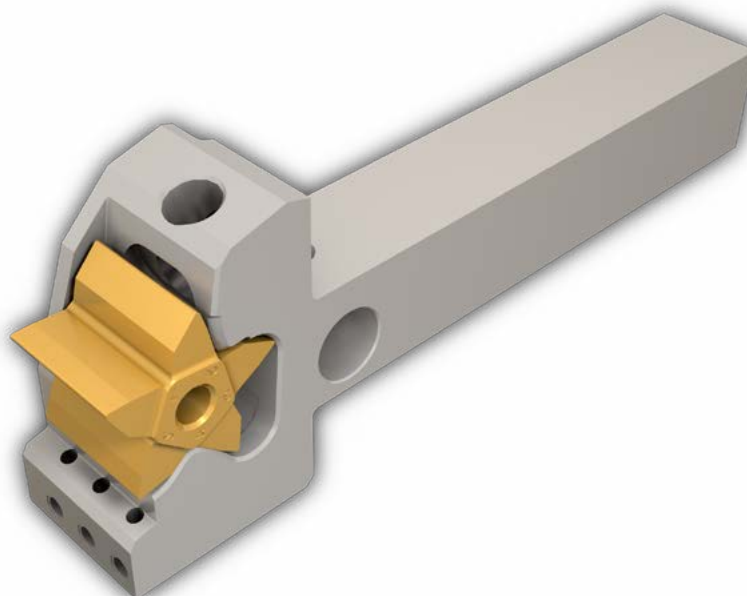
Designation								
PCHR/L 20-27-20-JHP-MC	SR M3x6 ISO7380 SS	HW 3.0	SR M6x6 DIN913	SR M6x6 DIN913 TL360	PUSH ROD - 40529	HW 4.0	PLG G1/8 TL360	HW 5.0
PCHL 25-27-20-JHP-MC	SR M3x6 ISO7380 SS	HW 3.0	SR M6x6 DIN913	SR M6x6 DIN913 TL360	PUSH ROD - 40529	HW 4.0	PLG G1/8 TL360	HW 5.0
PCHR 25-27-20-JHP-MC					PUSH ROD - 40529	HW 4.0		

PENTAS 27 blanks
Blank Inserts with 5 Wide Cutting
Edges for the Production of
Special Profile Contours



Designation	Dimensions			IC08
	CW	CDX	BW	
PENTAS 27-10FT	10.00	4.00	11.80	•
PENTAS 27-15FT	15.00	4.00	16.80	•
PENTAS 27-20FT	20.00	4.00	21.80	•

For tools, see pages: PCHR/L-27-JHP-MC (314)



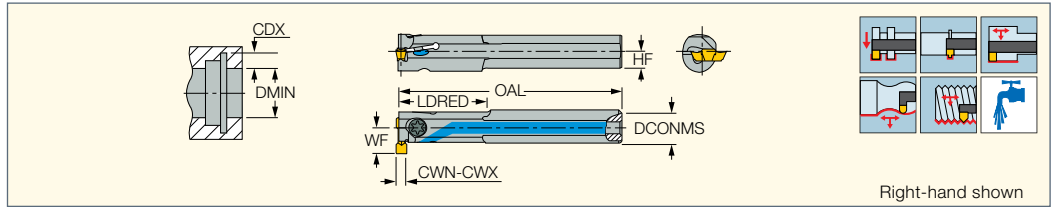
INTERNAL TOOLS AND INSERTS



CUTGRIP

GEHIMR/L

Internal Machining Boring Bars with Coolant Holes for Insert Widths Less than 1.9 mm



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	LDRED	WF	HF	CND ⁽⁴⁾			
GEHIMR/L 10-13	0.80	1.90	10.00	12.50	2.50	125.00	25.0	7.60	5.0	3.50	SR 16-236	T-15/5	
GEHIMR/L 12-14	0.80	1.90	12.00	14.00	2.50	150.00	35.0	9.00	6.0	6.00	SR 16-236	T-15/5	
GEHIMR/L 16-13	0.80	1.90	16.00	12.50	2.50	125.00	20.0	10.60	7.5	8.00	SR 16-236	T-15/5	PL 16
GEHIMR/L 16-14	0.80	1.90	16.00	14.00	2.50	125.00	25.0	10.90	7.5	8.00	SR 16-236	T-15/5	PL 16
GEHIMR/L 16-16	0.80	1.90	16.00	16.00	2.50	160.00	40.0	10.50	7.5	8.00	SR M5-04451	T-20/5	PL 16

• For user guide, see pages 419-428, 432-436

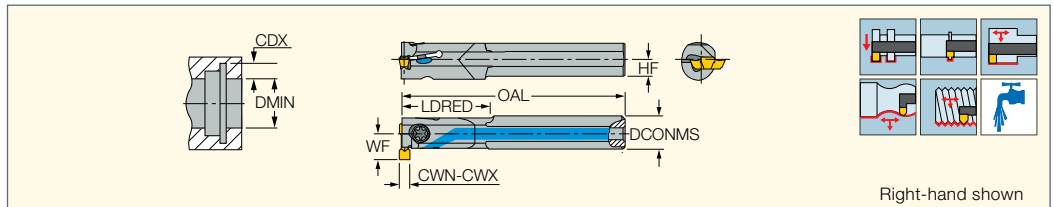
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- (4) Coolant inlet diameter

For inserts, see pages: GEPI (342) • GEPI (W<M) (341) • GEPI-MT (648) • GEPI-RX/LX (343) • GEPI-WT (642)

CUTGRIP

GEHIMR/L-SC

Internal Machining Solid Carbide Bars with Coolant Holes for Insert Widths Less than 1.9 mm



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	LDRED	WF	HF	CND ⁽⁴⁾			
GEHIMR/L 10SC-13	0.80	1.90	10.00	12.50	2.50	125.00	30.0	7.60	5.0	3.50	SR 16-236	T-15/5	
GEHIMR/L 12SC-14	0.80	1.90	12.00	14.00	2.50	125.00	40.0	9.00	6.0	6.00	SR 16-236	T-15/5	
GEHIMR/L 16SC-13	0.80	1.90	16.00	12.50	2.50	125.00	35.0	10.60	7.5	8.00	SR 16-236	T-15/5	PL 16
GEHIMR/L 16SC-16	0.80	1.90	16.00	16.00	2.50	160.00	70.0	10.50	7.5	8.00	SR M5-04451	T-20/5	PL 16

• For user guide, see pages 419-428, 432-436

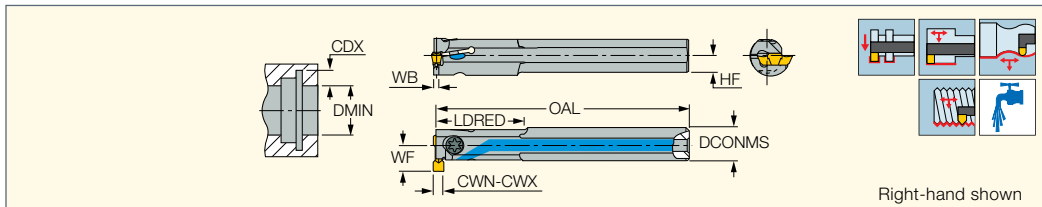
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- (4) Coolant inlet diameter

For inserts, see pages: GEPI (342) • GEPI (W<M) (341) • GEPI-MT (648) • GEPI-RX/LX (343) • GEPI-WT (642)



CUTGRIP

GEHIR/L
Internal Machining Bars
with Coolant Holes



Right-hand shown




Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	LDRED	WF	WB	HF	CND ⁽⁴⁾
GEHIR/L 10-11.5-2-T3	1.90	2.40	10.00	11.50	3.00	125.00	25.0	8.80	1.60	5.0	3.50
GEHIR/L 10-13-2-T2.4	1.90	2.40	10.00	12.50	2.40	125.00	25.0	7.50	1.60	5.0	3.50
GEHIR/L 12-11.5-2-T3*	1.90	2.40	12.00	11.50	3.00	125.00	20.0	11.60	1.60	6.0	6.00
GEHIR/L 12-14-2-T2.6	1.90	2.40	12.00	14.00	2.60	150.00	35.0	9.10	1.60	6.0	6.00
GEHIR/L 12-14-2-T4	1.90	2.40	12.00	14.00	4.00	150.00	35.0	10.30	1.60	6.0	6.00
GEHIR/L 12-15-2-T6	1.90	2.40	12.00	15.00	6.00	150.00	29.0	12.30	1.60	6.0	6.00
GEHIR 16-11.5-2-T3	1.90	2.40	16.00	11.50	3.00	125.00	20.0	11.60	1.60	7.5	8.00
GEHIR 16-11.5-2-T3	1.90	2.40	16.00	11.50	3.00	125.00	20.0	11.10	1.60	7.5	8.00
GEHIR/L 16-13-2-T2.4	1.90	2.40	16.00	12.50	2.40	125.00	20.0	10.50	1.60	7.5	8.00
GEHIR/L 16-14-2-T2.6	1.90	2.40	16.00	14.00	2.60	125.00	25.0	11.00	1.60	7.5	8.00
GEHIR/L 16-14-2-T4	1.90	2.40	16.00	14.00	4.00	125.00	25.0	12.40	1.60	7.5	8.00
GEHIR/L 16-16-2-T3	1.90	2.40	16.00	16.00	3.00	160.00	40.0	11.00	1.60	7.5	8.00
GEHIR/L 16-20-2-T8	1.90	2.40	16.00	20.00	8.00	160.00	40.0	16.10	1.60	7.5	8.00
GEHIR/L 12-14-3-T2.6	2.40	3.20	12.00	14.00	2.60	150.00	35.0	9.10	2.00	6.0	6.00
GEHIR/L 12-14-3-T4	2.40	3.20	12.00	14.00	4.00	150.00	35.0	10.30	2.00	6.0	6.00
GEHIR/L 12-15-3-T6	2.40	3.20	12.00	15.00	6.00	150.00	29.0	12.30	2.00	6.0	6.00
GEHIR 16-11.5-3-T3	2.40	3.20	16.00	11.50	3.00	125.00	20.0	11.60	2.00	7.5	8.00
GEHIR 16-11.5-3-T3	2.40	3.20	16.00	11.50	3.00	125.00	20.0	11.10	2.00	7.5	8.00
GEHIR/L 16-13-3-T2.4	2.40	3.20	16.00	12.50	2.40	125.00	20.0	10.50	2.00	7.5	8.00
GEHIR/L 16-14-3-T2.6	2.40	3.20	16.00	14.00	2.60	125.00	25.0	11.00	2.00	7.5	8.00
GEHIR/L 16-14-3-T4	2.40	3.20	16.00	14.00	4.00	125.00	25.0	12.40	2.00	7.5	8.00
GEHIR/L 16-16-3-T3	2.40	3.20	16.00	16.00	3.00	160.00	40.0	11.00	2.00	7.5	8.00
GEHIR/L 16-20-3-T8	2.40	3.20	16.00	20.00	8.00	160.00	40.0	16.10	2.00	7.5	8.00

• For user guide, see pages 419-428, 432-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum
- (4) Coolant inlet diameter

For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI-MT (648) • GEPI-WT (642)

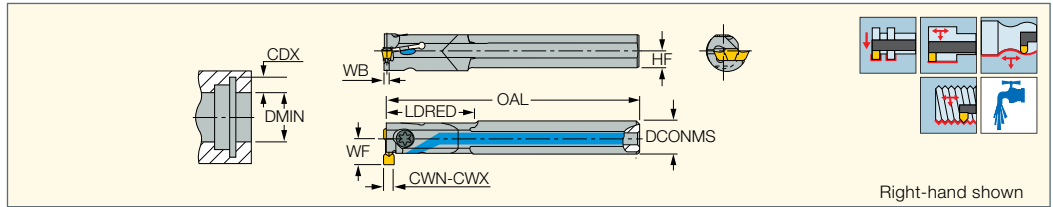
Spare Parts

Designation			
GEHIR/L 10-11.5-2-T3	SR 14-513	T-8/5	
GEHIR/L 10-13-2-T2.4	SR 16-236	T-15/5	
GEHIR 12-11.5-2-T3	SR 14-513	T-8/5	
GEHIR 12-11.5-2-T3*	SR 14-513		
GEHIR/L 12-14-2-T2.6	SR 16-236	T-15/5	
GEHIR/L 12-14-2-T4	SR 14-562	T-10/5	
GEHIR/L 12-15-2-T6	SR 14-513	T-8/5	
GEHIR/L 16-11.5-2-T3	SR 14-513	T-8/5	PL 16
GEHIR/L 16-13-2-T2.4	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-2-T2.6	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-2-T4	SR 14-562	T-10/5	PL 16
GEHIR/L 16-16-2-T3	SR M5-04451	T-20/5	PL 16
GEHIR/L 16-20-2-T8	SR M5-04451	T-20/5	PL 16
GEHIR/L 12-14-3-T2.6	SR 16-236	T-15/5	
GEHIR/L 12-14-3-T4	SR 14-562	T-10/5	
GEHIR/L 12-15-3-T6	SR 14-513	T-8/5	
GEHIR/L 16-11.5-3-T3	SR 14-513	T-8/5	PL 16
GEHIR/L 16-13-3-T2.4	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-3-T2.6	SR 16-236	T-15/5	PL 16
GEHIR/L 16-14-3-T4	SR 14-562	T-10/5	PL 16
GEHIR/L 16-16-3-T3	SR M5-04451	T-20/5	PL 16
GEHIR/L 16-20-3-T8	SR M5-04451	T-20/5	PL 16

CUTGRIP

GEHIR/L-SC

Internal Machining Solid Carbide Bars with Coolant Holes



Right-hand shown

Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	LDRED	WF	WB	HF	CND ⁽⁴⁾			
GEHIR/L 10SC-13-2	1.90	2.40	10.00	12.50	2.40	125.00	30.0	7.50	1.60	5.0	3.50			
GEHIR/L 12SC-14-2	1.90	2.40	12.00	14.00	2.60	125.00	40.0	9.10	1.60	6.0	6.00			
GEHIR/L 16SC-16-2	1.90	2.40	16.00	16.00	3.00	160.00	70.0	11.00	1.60	7.5	8.00			
GEHIR/L 12SC-14-3	2.40	3.20	12.00	14.00	2.60	125.00	40.0	9.10	2.00	6.0	6.00			
GEHIR/L 16SC-13-3	2.40	3.20	16.00	12.50	2.40	125.00	35.0	10.50	2.00	7.5	8.00			
GEHIR/L 16SC-14-3	2.40	3.20	16.00	14.00	2.60	140.00	40.0	11.00	2.00	7.5	8.00			
GEHIR/L 16SC-16-3	2.40	3.20	16.00	16.00	3.00	160.00	70.0	11.00	2.00	7.5	8.00			

• For user guide, see pages 419-428, 432-436

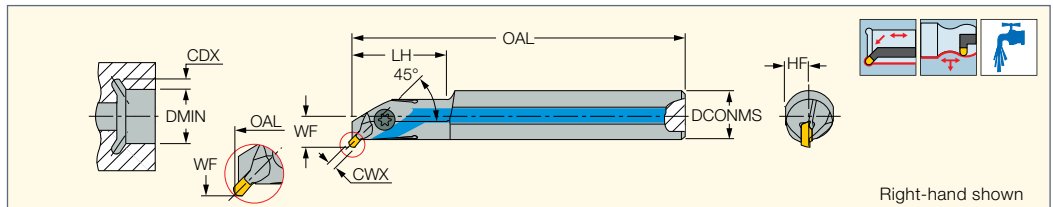
- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ Cutting depth maximum
- ⁽⁴⁾ Coolant inlet diameter

For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI-MT (648) • GEPI-WT (642)

CUTGRIP

GEHIUR/L

Boring Bars with Coolant Holes for Undercutting and Turning



Right-hand shown

Designation	CWX ⁽¹⁾	DCONMS	DMIN	CDX ⁽²⁾	OAL	LH	WF	HF	CND ⁽³⁾			
GEHIUR/L 12U	3.20	12.00	14.00	2.00	125.00	20.0	8.70	6.0	6.00			
GEHIUR/L 16U	3.20	16.00	16.00	2.00	125.00	32.0	9.70	7.5	8.00			

• For profiling use GEPI (full radius) inserts only, for undercutting use GEPI - UN/UR/UL

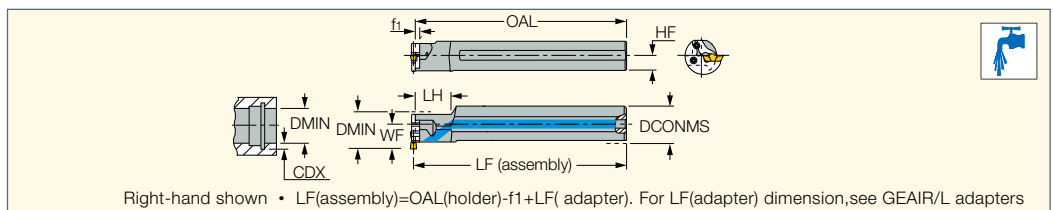
- ⁽¹⁾ Maximum cutting width
- ⁽²⁾ Cutting depth maximum
- ⁽³⁾ Coolant inlet diameter

For inserts, see pages: GEPI (full radius) (342) • GEPI-UN/UR/UL (343)

CUTGRIP

GHAIR/L-GE

Bars with Coolant Holes for Internal Grooving and Turning Adapters



Right-hand shown • LF(assembly)=OAL(holder)-f1+LF(adapter). For LF(adapter) dimension, see GEAIR/L adapters

Designation	DCONMS	LH	OAL	WF	HF	f1	Adapter			
GHAIR/L 16-20	16.00	-	150.00	11.50	7.5	2.4	GEAIR/L 20..			
GHAIR/L 20-20	20.00	20.0	150.00	13.50	9.0	2.4	GEAIR/L 20..			
GHAIR/L 25-20	25.00	25.0	200.00	16.00	11.5	2.4	GEAIR/L 20..			
GHAIR/L 32-20	32.00	32.0	200.00	19.50	14.5	2.4	GEAIR/L 20..			
GHAIR/L 20-25	20.00	-	150.00	14.50	9.0	2.4	GEAIR/L 25..			
GHAIR/L 25-25	25.00	25.0	200.00	17.00	11.5	2.4	GEAIR/L 25..			
GHAIR/L 32-25	32.00	32.0	200.00	20.50	14.5	2.4	GEAIR/L 25..			

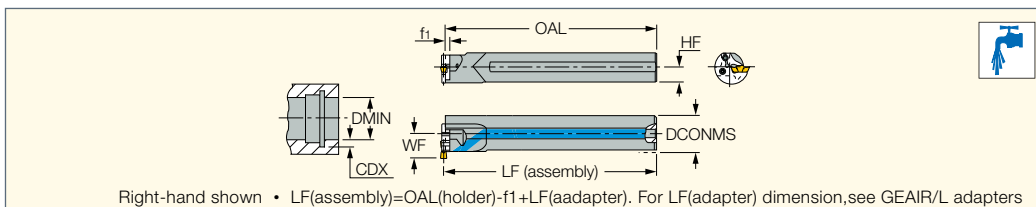
• For DMIN & CDX refer to GEAIR/L adapters

For tools, see pages: GEAIR/L (340)

CUTGRIP

GHAIR/L-SC-GE

Solid Carbide Bars with Coolant Holes for Internal Grooving and Turning Adapters



Designation	DCONMS	OAL	WF	HF	f1	Adapter			
GHAIR/L 25SC-25	25.00	200.00	17.00	11.5	2.4	GEAIR/L 25-...	SR 16-236 P	T-15/5	PL 25

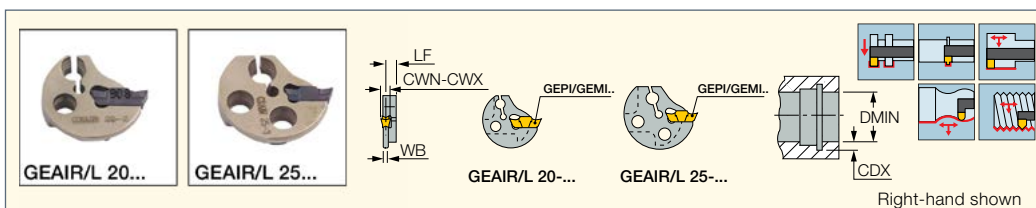
• For DMIN & CDX refer to GEAIR/L adapters.

For tools, see pages: GEAIR/L (340)

CUTGRIP

GEAIR/L

Internal Grooving and Turning Adapters



Designation	DMIN	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	LF	WB	MIID ⁽⁴⁾
GEAIR/L 20-2	20.00	1.90	2.40	3.00	3.40	1.60	GEPI 2.00-0.10
GEAIR/L 20-3	20.00	2.40	3.00	3.00	3.60	2.00	GEPI 3.00-0.20
GEAIR/L 20-4	20.00	3.00	4.00	3.00	3.90	2.50	GEPI 3.18-0.20
GEAIR/L 25-2	25.00	1.90	2.40	4.00	3.40	1.60	GEPI 2.00-0.10
GEAIR/L 25-3	25.00	2.40	3.00	4.00	3.60	2.00	GEPI 3.00-0.20
GEAIR/L 25-4	25.00	3.00	4.00	4.00	3.90	2.50	GEPI 3.18-0.20

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

⁽⁴⁾ Master insert identification

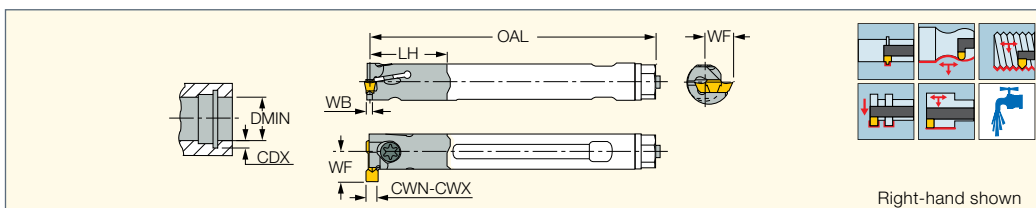
For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI-MT (648) • GEPI-WT (642)

For holders, see pages: C#-GHAIR/L (629) • GHAIR/L-GE (339) • GHAIR/L-SC-GE (340)

CUTGRIP

E-GEHIR / E-GHIR

Interchangeable Heads for Internal Grooving and Turning



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DMIN	CDX ⁽³⁾	OAL	LH	WF	WB	Insert		
E12 GEHIR 16-1	1.50	1.90	16.00	2.20	174.00	21.0	9.00	1.20	GEPI, GEMI	SR M5-04451-L10.5	T-20/5
E12 GEHIR 16-2	1.90	2.40	16.00	2.20	174.00	21.0	9.00	1.60	GEPI, GEMI	SR M5-04451-L10.5	T-20/5
E12 GEHIR 16-3	2.40	3.00	16.00	2.20	174.00	21.0	9.00	2.00	GEPI, GEMI	SR M5-04451-L10.5	T-20/5
E16 GEHIR 25-3	2.40	3.00	25.00	4.00	209.00	28.7	12.80	2.00	GIPI, GIMY, GIFI, TIPI	SR M5-04451	T-20/5

• Left-hand heads on request • The shank assembly is the same for right- and left-hand heads • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

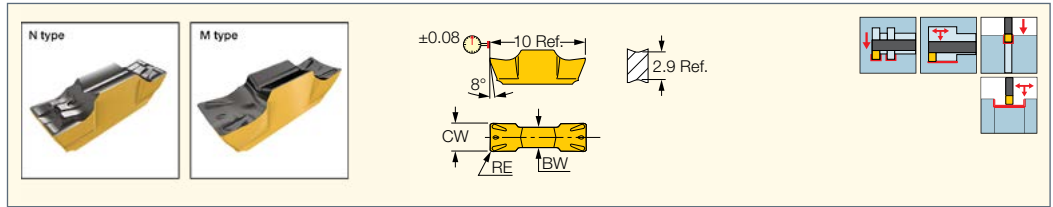
⁽³⁾ Cutting depth maximum

For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI (W<M) (341)

• GEPI-MT (648) • GEPI-WT (642) • GIMY (349) • GINI-E (350) • GIPI (351) • GIPI-E (349)

CUTGRIP

GEMI
Utility Double-Ended Inserts
for Internal and External
Grooving and Turning



Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC808	IC908	IC807	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEMI 2002N	2.00	0.20	0.02	0.050	1.60	●			0.25-0.80	0.05-0.10	0.04-0.08
GEMI 3002M	3.00	0.20	0.02	0.050	2.20	●	●		0.25-1.30	0.10-0.14	0.05-0.09
GEMI 3002N	3.00	0.20	0.02	0.050	2.20	●		●	0.25-1.00	0.07-0.12	0.04-0.08

• GEMI N inserts for ductile materials and low feed • DMIN for internal application=11.5 mm

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

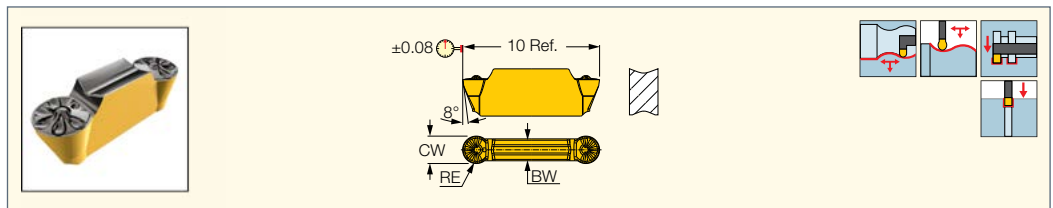
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: AVC-GEAIR/L (346) • E-GEHIR / E-GHIR (340) • GEAIR/L (340) • GEHIR/L (338) • GEHIR/L-SC (339) • GEHSR (373) • GEHSR/L-SL (372)

CUTGRIP

GEMI (full radius)
Utility Double-Ended Full Radius
Inserts for Internal and External
Grooving and Profiling



Designation	Dimensions					IC808	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEMI 2010Y	2.00	1.00	0.02	0.050	1.60	●	0.10-1.00	0.06-0.12	0.03-0.08
GEMI 3015Y	3.00	1.50	0.04	0.050	2.20	●	0.10-1.50	0.10-0.18	0.05-0.10

• DMIN for internal application=11.5 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

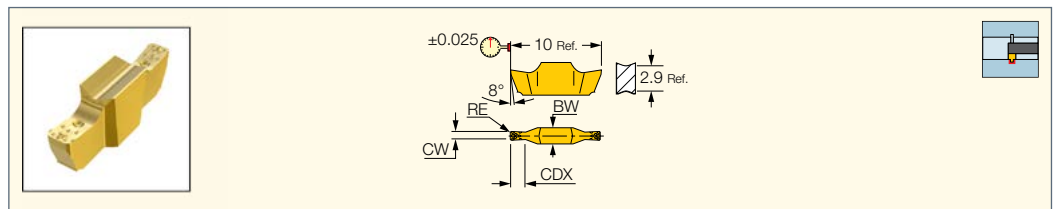
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: AVC-GEAIR/L (346) • E-GEHIR / E-GHIR (340) • GEAIR/L (340) • GEHIR/L (338) • GEHIR/L-SC (339) • GEHSR (373) • GEHSR/L-SL (372)

CUTGRIP

GEPI (W<M)
Precision Ground Double-Ended
Inserts for Internal Grooving



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC528	IC08	IC908	
GEPI 1.00-0.10	1.00	0.10	0.00	0.030	1.60	1.80	●	●	●	0.01-0.03
GEPI 1.00-0.50	1.00	0.50	0.00	0.030	1.60	1.80	●	●	●	0.01-0.04
GEPI 1.04-0.00	1.04	0.00	0.00	0.030	1.60	1.80	●	●	●	0.01-0.03
GEPI 1.20-0.00	1.20	0.00	0.00	0.030	1.80	1.80	●	●	●	0.01-0.03
GEPI 1.25-0.10	1.25	0.10	0.00	0.030	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.40-0.00	1.40	0.00	0.00	0.030	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.47-0.00	1.47	0.00	0.00	0.030	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.50-0.10	1.50	0.10	0.00	0.030	2.00	1.80	●	●	●	0.02-0.04
GEPI 1.57-0.15	1.57	0.15	0.00	0.030	2.00	1.80	●	●	●	0.02-0.05
GEPI 1.70-0.05	1.70	0.05	0.02	0.030	2.50	1.80	●	●	●	0.02-0.05
GEPI 1.78-0.15	1.78	0.15	0.02	0.030	2.50	1.80	●	●	●	0.02-0.05

• Toolholder seat needs to be modified according to insert profile to ensure clearance • DMIN for internal application=11.5mm

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

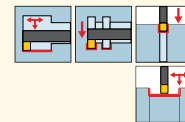
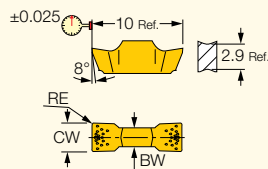
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: E-GEHIR / E-GHIR (340) • GEHIMR/L (337) • GEHIMR/L-SC (337) • GEHSR (373) • GEHSR/L-SL (372)

CUTGRIP

GEPI
Precision Ground
Double-Ended Inserts for
Internal and External Grooving



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽²⁾	RETOL ⁽³⁾	CDX ⁽⁴⁾	BW	IC528	IC08	IC908	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEPI 1.85-0.10 ⁽¹⁾	1.85	0.10	0.02	0.030	2.50	1.80	●	●	●	0.15-0.50	0.05-0.07	0.03-0.05
GEPI 1.96-0.10	1.96	0.10	0.02	0.030	2.50	1.80	●	●	●	0.15-0.50	0.05-0.07	0.03-0.05
GEPI 1.96-0.15	1.96	0.15	0.02	0.030	2.50	1.80	●	●	●	0.20-0.50	0.05-0.07	0.03-0.05
GEPI 2.00-0.10	2.00	0.10	0.02	0.030	9.00	1.80	●	●	●	0.15-0.60	0.05-0.07	0.03-0.05
GEPI 2.22-0.10	2.22	0.10	0.02	0.030	9.00	1.80	●	●	●	0.15-0.60	0.06-0.08	0.04-0.06
GEPI 2.22-0.15	2.22	0.15	0.02	0.030	9.00	1.80	●	●	●	0.20-0.60	0.06-0.08	0.04-0.06
GEPI 2.39-0.10	2.39	0.10	0.02	0.030	9.00	2.20	●	●	●	0.15-1.00	0.07-0.09	0.04-0.06
GEPI 2.39-0.15	2.39	0.15	0.02	0.030	9.00	2.20	●	●	●	0.20-1.00	0.07-0.09	0.04-0.06
GEPI 2.47-0.20	2.47	0.20	0.02	0.030	9.00	2.20	●	●	●	0.25-1.10	0.08-0.11	0.04-0.07
GEPI 2.50-0.10	2.50	0.10	0.02	0.030	9.00	2.20	●	●	●	0.15-1.10	0.07-0.09	0.04-0.07
GEPI 2.50-0.20	2.50	0.20	0.02	0.030	9.00	2.20	●	●	●	0.25-1.10	0.08-0.11	0.05-0.08
GEPI 2.70-0.20	2.70	0.20	0.02	0.030	9.00	2.20	●	●	●	0.25-1.20	0.09-0.12	0.05-0.08
GEPI 3.00-0.20	3.00	0.20	0.02	0.030	9.00	2.20	●	●	●	0.25-1.30	0.10-0.14	0.05-0.09
GEPI 3.18-0.20	3.18	0.20	0.02	0.030	9.00	2.20	●	●	●	0.25-1.40	0.11-0.14	0.06-0.10

• DMIN for internal application=11.5mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Tool pocket should be modified

⁽²⁾ Cutting width tolerance (+/-)

⁽³⁾ Corner radius tolerance (+/-)

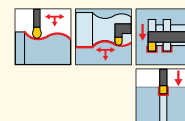
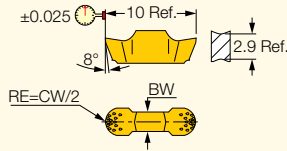
⁽⁴⁾ Cutting depth maximum

For tools, see pages: AVC-GEAIR/L (346) • E-GEHIR / E-GHIR (340) • GEAIR/L (340) • GEHIR/L (337) • GEHIR/L-SC (337) • GEHIR/L (338)

• GEHIR/L-SC (339) • GEHSR (373) • GEHSR/L-SL (372)

CUTGRIP

GEPI (full radius)
Precision Double-Ended Full
Radius Inserts for Internal and
External Profiling and Grooving



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC528	IC08	IC908	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GEPI 2.00-1.00	2.00	1.00	0.02	0.050	5.00	1.80	●	●	●	0.00-0.60	0.08-0.12	0.04-0.07
GEPI 3.00-1.50	3.00	1.50	0.02	0.050	5.00	2.20	●	●	●	0.00-1.50	0.13-0.20	0.05-0.11
GEPI 3.18-1.59	3.18	1.59	0.02	0.050	5.00	2.20	●	●	●	0.00-1.59	0.13-0.21	0.06-0.11

• DMIN for internal application=11.5mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

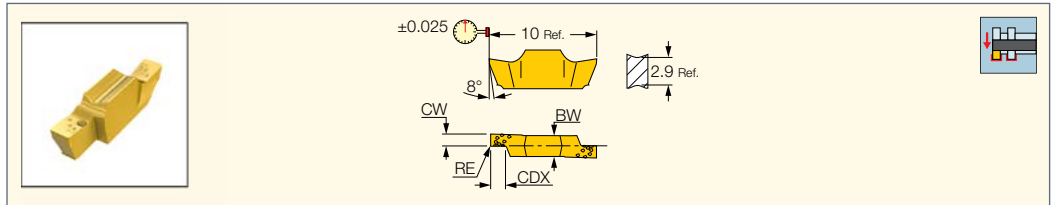
For tools, see pages: AVC-GEAIR/L (346) • E-GEHIR / E-GHIR (340) • GEAIR/L (340) • GEHIR/L (338) • GEHIR/L-SC (339) • GEHIUR/L (339)

• GEHSR (373) • GEHSR/L-SL (372)

CUTGRIP

GEPI-RX/LX

Precision Double-Ended
Inserts for Internal Grooving
Next to Shoulder



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC528	IC908	
GEPI 0.80-0.00RX	0.80	0.00	0.02	0.030	1.50	1.80		•	0.01-0.02
GEPI 1.00-0.10 R/LX	1.00	0.10	0.02	0.030	1.50	1.80	•		0.01-0.03
GEPI 1.57-0.15RX	1.57	0.15	0.02	0.030	2.00	1.80		•	0.02-0.05

- Toolholder seat needs to be modified according to insert profile to ensure clearance
- DMIN for internal application=11.5mm
- For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

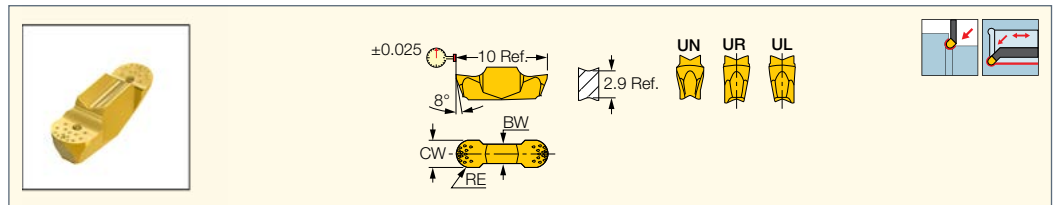
⁽³⁾ Cutting depth maximum

For tools, see pages: GEHIMR/L (337) • GEHIMR/L-SC (337)

CUTGRIP

GEPI-UN/UR/UL

Precision Double-Ended Inserts
for Internal Undercutting



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data f groove (mm/rev)
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC528	IC08	
GEPI 3.00-1.50UN	3.00	1.50	0.02	0.050	2.00	2.20	•		0.03-0.12
GEPI 2.00-1.00UR/L	2.00	1.00	0.02	0.050	2.00	1.80	•	•	0.03-0.12

- For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

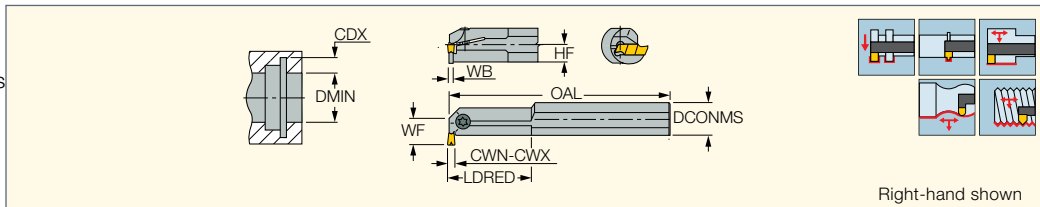
For tools, see pages: GEHIUR/L (339)



CUTGRIP

GHIR/L (W=1.9-6.4)

Internal Grooving and Turning Bars





Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	LDRED	WF	HF	WB
GHIR/L 20-3	1.90	3.50	20.00	20.00	4.50	160.00	16.0	14.50	9.0	1.55
GHIR/L 20-20-3	2.00	3.50	20.00	20.00	4.50	200.00	40.0	14.50	9.0	1.60
GHIR/L 20-4	3.00	4.80	20.00	20.00	4.50	160.00	25.0	14.50	9.0	2.60
GHIR/L 20-20-4	3.00	4.80	20.00	20.00	4.50	200.00	40.0	14.50	9.0	2.60
GHIR/L 25-25-4	2.50	4.00	25.00	25.00	5.00	200.00	50.0	17.50	11.5	2.10
GHIR/L 32-4	2.50	4.00	32.00	38.00	5.00	250.00	-	21.30	14.5	2.10
GHIR/L 25-5	3.20	5.30	25.00	26.00	6.00	160.00	25.0	18.50	11.5	2.80
GHIR/L 25-25-6	4.00	6.40	25.00	25.00	5.00	200.00	50.0	17.50	11.5	3.60
GHIR/L 32-6	4.00	6.40	32.00	39.00	6.50	250.00	-	22.80	14.5	3.60
GHIR/L 40-6	4.00	6.40	40.00	49.00	8.00	300.00	-	28.30	18.0	3.60

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 419-428, 432-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum

For inserts, see pages: GIF (352) • GIF-E (349) • GIF-E (full radius) (350) • GIMIY (349) • GINI-E (350) • GIPI (351)
 • GIPI (full radius W<M) (351) • GIPI (full radius) (352) • GIPI (W<M) (350) • GIPI-E (349) • GIPI-RX/LX (352) • TIPI-MT (648) • TIPI-WT (642)

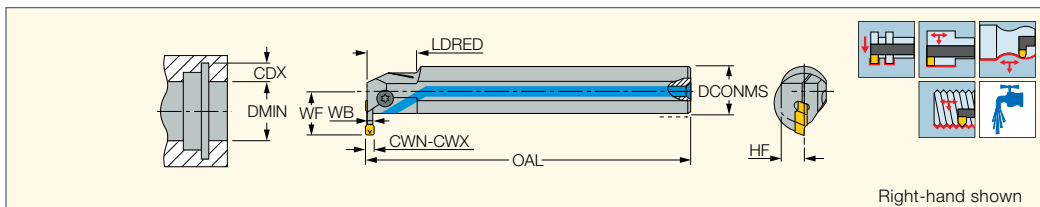
Spare Parts




Designation		
GHIR/L 20-3	SR 76-1021	T-20/5
GHIR/L 20-20-3	SR 76-1021	T-20/5
GHIR/L 20-4	SR 76-1021	T-20/5
GHIR/L 20-20-4	SR 76-1021	T-20/5
GHIR/L 25-25-4	SR 76-1022	T-20/5
GHIL 32-4	SR 76-1021	T-20/5
GHIR 32-4	SR 76-1022	T-20/5
GHIR/L 25-5	SR 76-1022	T-20/5
GHIR/L 25-25-6	SR 76-1022	T-20/5
GHIR/L 32-6	SR 76-1022	T-20/5
GHIL 40-6	SR 76-1022	T-20/5
GHIR 40-6	SR 76-1021	T-20/5

CUTGRIP

GHIR/L-C (W=4-6.4)

Grooving and Turning Bars with Internal Coolant Holes



Designation	DCONMS	CWN ⁽¹⁾	CWX ⁽²⁾	DMIN	CDX ⁽³⁾	HF	OAL	LDRED	WF	WB	Inlet			
GHIR/L 25C-510	25.00	4.00	5.30	32.00	10.00	11.5	160.00	25.0	22.50	3.50	R1/8	SR 76-1022	T-20/5	PL 25
GHIR/L 32C-610	32.00	4.80	6.40	43.00	10.00	14.5	200.00	-	26.20	4.40	R1/8	SR 76-1022	T-20/5	PL 32
GHIR/L 40C-612	40.00	4.80	6.40	53.00	12.00	18.0	250.00	-	32.20	4.40	R1/8	SR 76-1022	T-20/5	PL 40

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • For user guide, see pages 419-428, 432-436

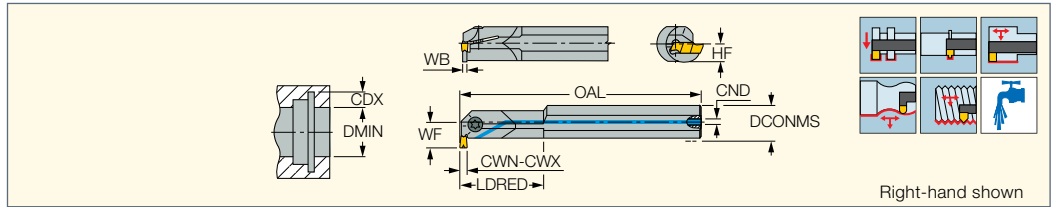
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum

For inserts, see pages: GIF (352) • GIF-E (349) • GIF-E (full radius) (350) • GIMIY (349) • GINI-E (350) • GIPI (351)
 • GIPI (full radius) (352) • GIPI-E (349) • TIPI-MT (648)

CUTGRIP

GHIR/L-SC (W=2-4.8)

Grooving and Turning
Solid Carbide Bars with
Internal Coolant Holes



Right-hand shown

Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	LDRED	WF	HF	CND	WB			
GHIR/L 20SC-3	2.00	3.50	20.00	20.00	4.50	200.00	60.0	14.50	9.0	8.5	1.60	SR 76-1021	T-20/5	PL 20
GHIR/L 20SC-4	3.00	4.80	20.00	20.00	4.50	200.00	60.0	14.50	9.0	8.5	2.60	SR 76-1021	T-20/5	PL 20

- Tool head is made of steel. • When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance.
- For user guide, see pages 419-428, 432-436

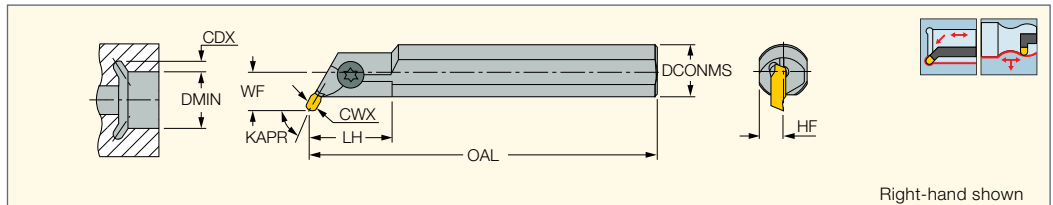
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Cutting depth maximum

For inserts, see pages: GIFL (352) • GIFL-E (349) • GIFL-E (full radius) (350) • GIMIY (349) • GINI-E (350) • GIPI (351)
• GIPI (full radius W<M) (351) • GIPI (full radius) (352) • GIPI-E (349) • GIPI-RX/LX (352) • TIPI-MT (648) • TIPI-WT (642)

CUTGRIP

GHIUR/L

Undercutting and
Turning Boring Bars



Right-hand shown

Designation	CWX ⁽¹⁾	DCONMS	DMIN	CDX ⁽²⁾	OAL	LH	WF	HF	KAPR ⁽³⁾		
GHIUR/L 20U	4.80	20.00	20.00	2.50	160.00	40.0	12.50	9.0	45.0	SR 76-1021	T-20/5
GHIUR/L 20-20-5	4.80	20.00	20.00	3.00	200.00	51.0	13.00	9.0	60.0	SR 76-1021	T-20/5
GHIUR/L 25U	6.40	25.00	25.00	3.00	160.00	50.0	15.50	11.5	45.0	SR 76-1022	T-20/5
GHIUR/L 25-25-6	6.40	25.00	25.00	3.50	200.00	60.0	16.00	11.5	60.0	SR 76-1022	T-20/5

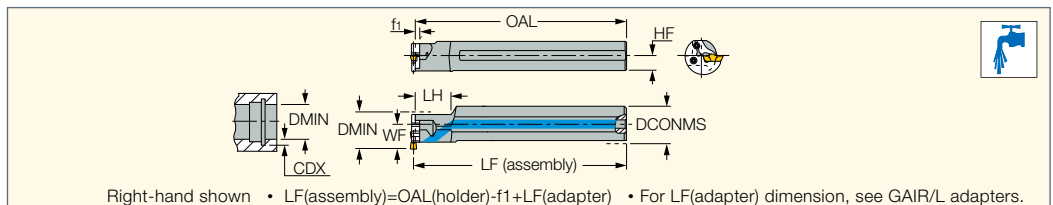
- (1) Maximum cutting width
- (2) Cutting depth maximum
- (3) Tool cutting edge angle

For inserts, see pages: GIPI-UR/UL (353)

CUTGRIP

GHAIR/L-GI

Bars with Coolant Holes
for Internal Grooving and
Turning Adapters



Right-hand shown • LF(assembly)=OAL(holder)-f1+LF(adapter) • For LF(adapter) dimension, see GAIR/L adapters.

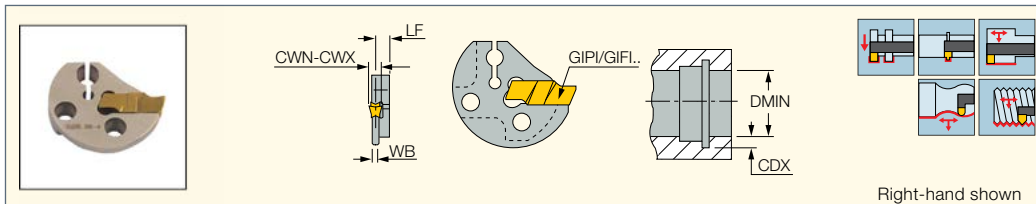
Designation	DCONMS	LH	OAL	WF	HF	f1	Adapter				
GHAIR/L 25-32	25.00	25.0	200.00	19.70	11.5	3.0	GAIR/L 32..	SR 16-236 P	T-15/5	PL 25	
GHAIR/L 32-32	32.00	32.0	200.00	23.20	14.5	3.0	GAIR/L 32..	SR 16-236 P	T-15/5	PL 32	
GHAIR/L 32-40	32.00	40.0	200.00	24.00	14.5	3.0	GAIR/L 40..	SR 16-212	T-20/5	PL 32	SR 14-519

- For DMIN & CDX refer to GAIR/L adapters

For tools, see pages: GAIR/L (346)

CUTGRIP

GAIR/L Internal Grooving and Turning Adapters



Right-hand shown

Designation	DMIN	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	LF	WB
GAIR/L 32-2	32.00	1.50	2.10	3.00	3.80	1.20
GAIR/L 32-3	32.00	2.10	3.00	3.00	4.10	1.80
GAIR/L 32-4	32.00	3.00	4.50	5.00	4.50	2.50
GAIR/L 32-5	32.00	4.50	6.40	5.00	5.20	4.00
GAIR/L 40-2	40.00	1.50	2.10	3.00	3.80	1.20
GAIR/L 40-3	40.00	2.10	3.00	4.00	4.10	1.80
GAIR/L 40-4	40.00	3.00	4.50	7.00	4.50	2.50
GAIR/L 40-5	40.00	4.50	6.40	7.00	5.20	4.00

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

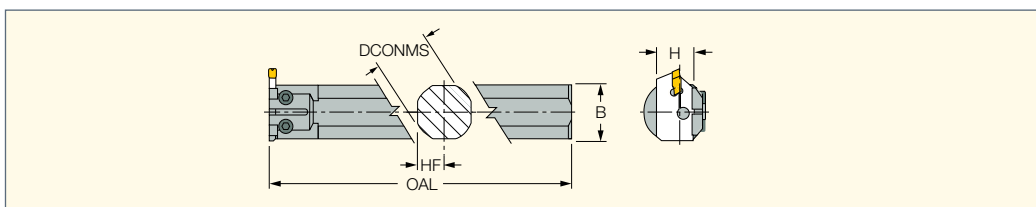
For inserts, see pages: GIMIY (332) • GIPI-E (333) • GIFI-E (333) • GIFI-E (full radius) (333) • GINI-E (334) • GIPI (W<M) (334)



• GIPI (335) • GIPI (full radius W<M) (335) • GIPI (full radius) (336) • GIFI (336) • GIPI-RX/LX (336) • TIPI-MT (337) • TIPI-WT (337)

For holders, see pages: C#-GHAIR/L (629) • GHAIR/L-GI (331)

CUTGRIP

GHIC-50 Boring Bars for Internal Grooving and Turning Blades, DMIN=50 mm



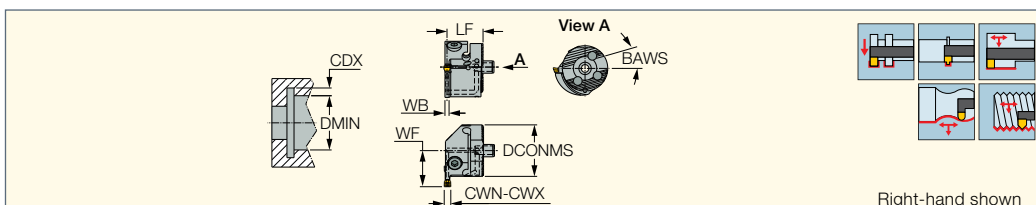
Designation	H	DCONMS	OAL	HF	B		
GHIC 32-50	26.0	32.00	220.00	14.5	29.0	SR M5X16 DIN912	HW 4.0
GHIC 40-50	26.0	40.00	260.00	18.0	36.0	SR M5X16 DIN912	HW 4.0

• For both right and left hand applications

For tools, see pages: CGIN 26 (348)

CUTGRIP

AVC-GEAIR/L Internal Grooving, Turning and Threading Adapters



Right-hand shown

Designation	DMIN	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	CDX ⁽³⁾	WF	LF	WB	BAWS	MIID ⁽⁴⁾
AVC-D16-GEAIR/L-2	21.00	1.90	2.40	16.00	3.00	12.00	14.50	1.60	45	GEPI 2.00-0.10
AVC-D16-GEAIR/L-3	21.00	2.40	2.70	16.00	3.00	12.00	14.50	2.00	45	GEPI 3.00-0.20
AVC-D20-GEAIR/L-2	26.00	1.90	2.40	20.00	3.00	14.70	13.50	1.60	15	GEPI 2.00-0.10
AVC-D20-GEAIR/L-3	26.00	2.40	3.18	20.00	3.00	14.70	13.50	2.00	15	GEPI 3.00-0.20
AVC-D25-GEAIR/L-2	31.00	1.90	2.40	25.00	4.00	17.50	17.50	1.60	15	GEPI 2.00-0.10
AVC-D25-GEAIR/L-3	31.00	2.40	3.18	25.00	4.00	17.50	17.50	2.00	15	GEPI 3.00-0.20

• Using the adapters with CAMFIX holders is only possible in case the machine has an option for rotating the CAMFIX Axis.

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width






⁽³⁾ Cutting depth maximum

⁽⁴⁾ Master insert identification

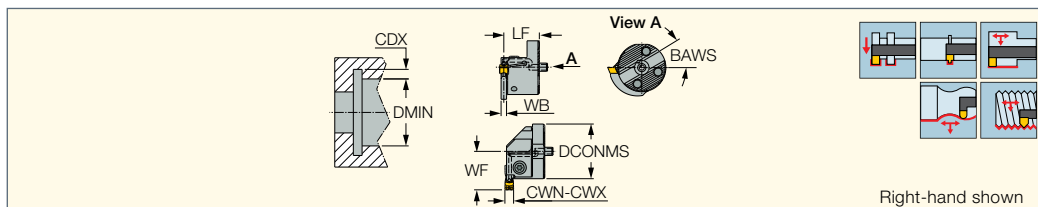
For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI-MT (648) • GEPI-WT (642)

For holders, see pages: AV-D (93) • C#-SH-E-JHP (630) • C#-SH-JHP (630) • SH-D (92) • SH-S#-N-AVC (90)

Spare Parts

Designation					
AVC-D16-GEAIR/L-2	SR 14-551				T-9/5
AVC-D16-GEAIR/L-3	SR 14-551				T-9/5
AVC-D20-GEAIR/L-2	SR 34-510		SW6-SD	BLD T15/M7	
AVC-D20-GEAIR/L-3	SR 34-510		SW6-SD	BLD T15/M7	
AVC-D25-GEAIR/L-2	SR M4X14 DIN912	HW 3.0			
AVC-D25-GEAIR/L-3	SR M4X14 DIN912	HW 3.0			

AVC-GAIR/L
Internal Grooving, Turning
and Threading Adapters



Designation	DMIN	CWN ⁽²⁾	CWX ⁽³⁾	DCONMS	CDX ⁽⁴⁾	WF	LF	WB	BAWS
AVC-D32-GAIR/L-2	37.00	1.50	2.10	32.00	3.00	20.00	23.00	1.20	30
AVC-D32-GAIR/L-3	37.00	2.10	3.00	32.00	3.00	20.00	23.00	1.80	30
AVC-D32-GAIR/L-4	39.00	3.00	4.50	32.00	5.00	22.00	23.00	2.50	30
AVC-D32-GAIR/L-5	39.00	4.50	6.40	32.00	5.00	22.00	26.00	4.00	30
AVC-D40-GAIR/L-2 ⁽¹⁾	45.00	1.50	2.10	40.00	3.00	24.00	23.00	1.20	30
AVC-D40-GAIR/L-3 ⁽¹⁾	46.00	2.10	3.00	40.00	4.00	25.00	23.00	1.80	30
AVC-D40-GAIR/L-4	49.00	3.00	4.50	40.00	7.00	28.00	23.00	2.50	30
AVC-D40-GAIR/L-5	49.00	4.50	6.40	40.00	7.00	28.00	26.00	4.00	30

• When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance • Using the adapters with CAMFIX holders is only possible in case the machine has an option for rotating the CAMFIX Axis.

• For user guide, see pages 419-428, 432-436

⁽¹⁾ DMIN of 50mm shank is DMIN of requested head + 10mm • DMIN of 60mm shanks is DMIN of requested head + 20mm

⁽²⁾ Minimum cutting width

⁽³⁾ Maximum cutting width




⁽⁴⁾ Cutting depth maximum

For inserts, see pages: GIF1 (352) • GIF1-E (349) • GIF1-E (full radius) (350) • GINI-E (350) • GIPI (351) • GIPI (full radius W<M) (351)

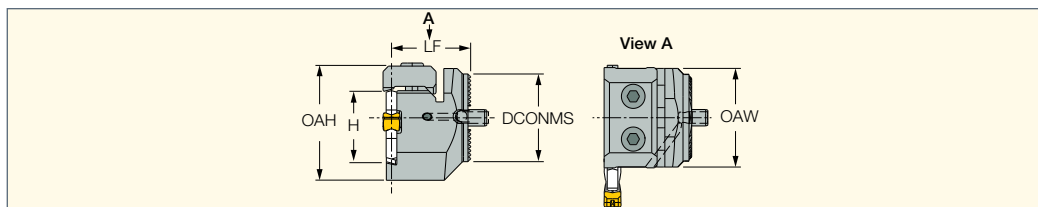
• GIPI (full radius) (352) • GIPI (W<M) (350) • GIPI-E (349) • GIPI-RX/LX (352) • TIPI-MT (648) • TIPI-WT (642)

For holders, see pages: AV-D (93) • C#-SH-E-JHP (630) • C#-SH-JHP (630) • SH-D (92) • SH-S#-N-AVC (90)

Spare Parts

Designation			
AVC-GAIR/L	SR 76-1021	T-20/5	SR M3X3DIN913

AVC-GAIC
Adapters for Internal Grooving,
Turning and Threading Blades









Designation	DCONMS	LF	H	OAH	OAW
AVC-D32-GAIC-50	32.00	29.50	26.0	41.70	36.00
AVC-D40-GAIC-50 ⁽¹⁾	40.00	29.50	26.0	41.70	36.00

• For CGIN 26 blades

⁽¹⁾ When using 50mm shank, DMIN=DMIN of CGIN blade + 10mm • When using 60mm shank, DMIN=DMIN of CGIN blade + 20mm

For tools, see pages: CGIN 26 (348)

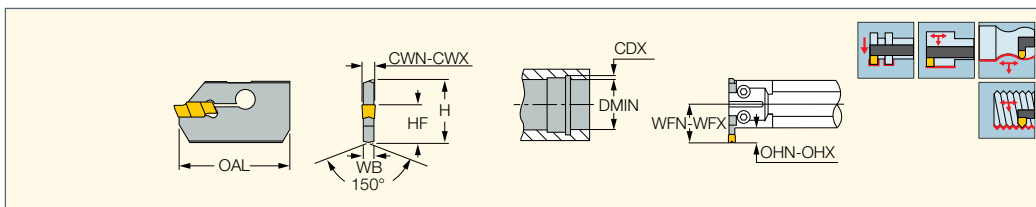
Spare Parts

Designation						
AVC-GAIC	SR M3X8 DIN913	SR M5X20DIN912	HW 2.0	SR M4X8 DIN913	HW 4.0	HW 1.5

CUTGRIP

CGIN 26

Internal Grooving and Turning
Blades for GHIC...-50 Bars



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	WB	WFN ⁽³⁾	WFX ⁽⁴⁾	OHN ⁽⁵⁾	OHX ⁽⁶⁾	HF	OAL	H	DMIN
CGIN 26K-3	2.80	4.00	2.40	28.0	33.0	10.0	15.0	15.8	45.00	26.0	50.00
CGIN 26K-4	3.60	4.50	3.20	28.0	33.0	10.0	15.0	15.8	45.00	26.0	50.00
CGIN 26K-5	4.40	6.40	4.00	28.0	33.0	10.0	15.0	15.8	45.00	26.0	54.00
CGIN 26A-3	2.80	4.00	2.40	32.5	37.5	14.5	19.5	15.8	49.50	26.0	54.00
CGIN 26A-4	3.60	4.50	3.20	32.5	37.5	14.5	19.5	15.8	49.50	26.0	54.00
CGIN 26A-5	4.40	6.40	4.00	32.5	37.5	14.5	19.5	15.8	49.50	26.0	54.00

• WFN-WFX and OHN-OHX are the blade's extension range • Grooving depth (CDX) varies in conformance with blade's overhang (OHN-OHX) and depends on the bore diameter(D). For grooving capacity, see chart below

• When using TIPI inserts toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Adjustable extension

⁽⁴⁾ Adjustable extension

⁽⁵⁾ Minimum overhang for adjustable extension

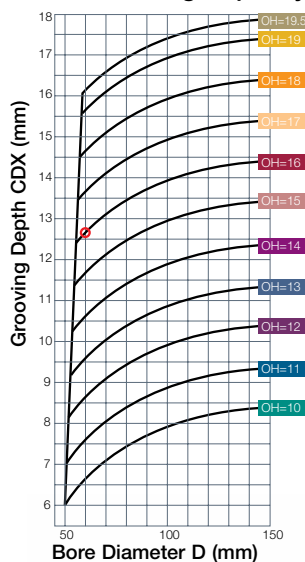
⁽⁶⁾ Maximum overhang for adjustable extension

For inserts, see pages: GIF1 (352) • GIF1-E (349) • GIF1-E (full radius) (350) • GIMIY (349) • GINI-E (350) • GIPI (351)

• GIPI (full radius) (352) • GIPI-E (349) • TIPI-MT (648)

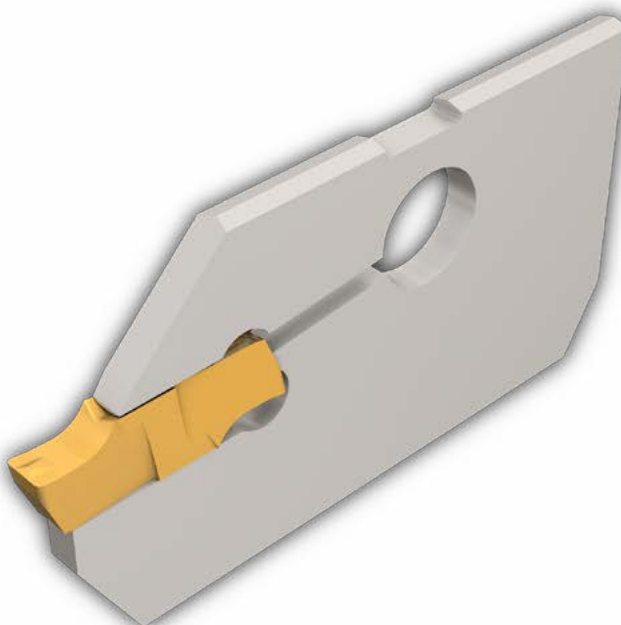
For holders, see pages: AVC-GAIC (347) • GHIC-50 (346)

Internal Grooving Capacity for CGIN Blades



Example:

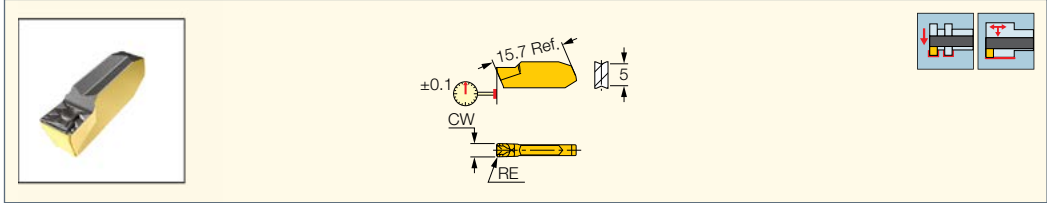
For grooving depth CDX=12.7 mm and grooving width=4 mm in bore øD=60, use blade CGIN 26A-4 and adjust overhang to OH=16 mm.



CUTGRIP

GIMIY

Utility Single-Ended Inserts for Internal Grooving and Turning



Designation	Dimensions				Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	IC830	IC808	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMIY 304	3.00	0.40	0.02	0.050	●	●	0.50-1.50	0.10-0.14	0.05-0.08
GIMIY 404	4.00	0.40	0.02	0.050	●	●	0.50-2.00	0.13-0.19	0.06-0.11

• DMIN for internal applications=20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

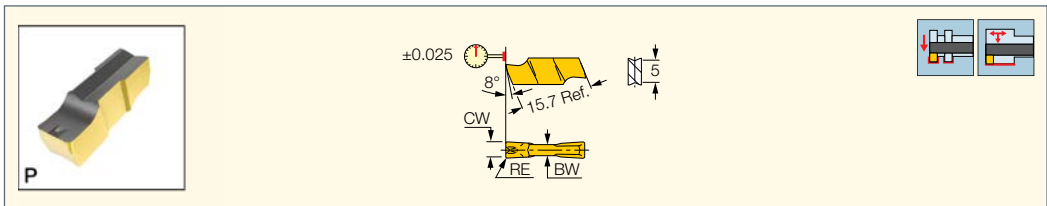
For tools, see pages: CGIN 26 (348) • E-GEHIR / E-GHIR (340) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-C (W=4-6.4) (344)

• GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIPI-E

Precision Double-Ended Inserts for Internal Grooving and Turning



Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC908	IC20	IC20N	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPI 3.00E-0.40	3.00	0.40	0.02	0.030	2.40	15.50	●	●	●	●	●	●	0.50-1.50	0.14-0.18	0.06-0.12
GIPI 4.00E-0.40	4.00	0.40	0.02	0.030	3.20	15.50	●	●	●	●	●	●	0.50-2.00	0.15-0.21	0.08-0.15
GIPI 5.00E-0.50	5.00	0.50	0.02	0.050	4.00	15.50	●	●	●	●	●	●	0.70-3.10	0.19-0.33	0.11-0.20
GIPI 6.35E-0.55	6.35	0.55	0.02	0.050	4.80	15.50	●	●	●	●	●	●	0.70-3.10	0.23-0.30	0.13-0.21

• DMIN for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

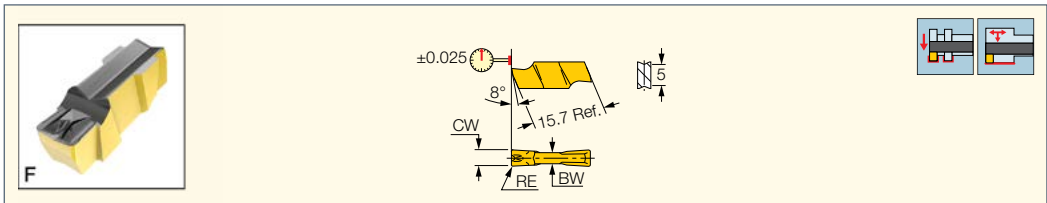
For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • E-GEHIR / E-GHIR (340) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344)

• GHIR/L-C (W=4-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIFI-E

Precision Double-Ended Inserts for Internal Grooving and Turning



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC908	IC20	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIFI 4.00E-0.40	4.00	0.40	0.02	0.050	3.20	15.50	●	●	●	●	●	0.50-2.00	0.13-0.19	0.06-0.11
GIFI 5.00E-0.50	5.00	0.50	0.02	0.050	4.00	15.50	●	●	●	●	●	0.60-2.50	0.16-0.24	0.08-0.14
GIFI 6.00E-0.80	6.00	0.80	0.02	0.050	4.80	15.50	●	●	●	●	●	1.00-3.00	0.19-0.34	0.09-0.18

• DMIN for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

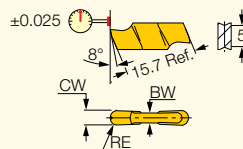
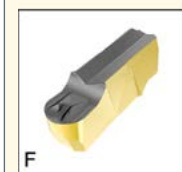
⁽³⁾ Cutting depth maximum

For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-C (W=4-6.4) (344)

• GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIFI-E (full radius)
Precision Double-Ended Full Radius Inserts for Internal Profiling and Grooving



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC808	IC908	IC20	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIFI 4.00E-2.00	4.00	2.00	0.02	0.050	3.20	14.00	●	●	●	●	●	0.00-2.00	0.14-0.27	0.06-0.12
GIFI 5.00E-2.50	5.00	2.50	0.02	0.050	4.00	13.50	●	●	●	●	●	0.00-2.50	0.18-0.34	0.08-0.15

• DMIN for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

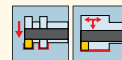
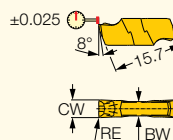
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-C (W=4-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GINI-E
Precision Double-Ended Inserts for Internal Grooving and Turning of Ductile Materials



Designation	Dimensions						IC808	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GINI 3.00E-0.40	3.00	0.40	0.02	0.050	2.40	15.50	●	0.50-1.20	0.08-0.13	0.03-0.09
GINI 4.00E-0.40	4.00	0.40	0.02	0.050	3.20	15.50	●	0.50-1.60	0.10-0.17	0.04-0.12
GINI 5.00E-0.50	5.00	0.50	0.02	0.050	4.00	15.50	●	0.50-2.00	0.12-0.20	0.05-0.14

• DMIN for internal applications=20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

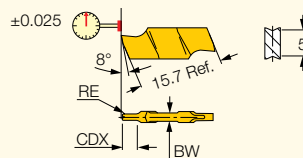
⁽³⁾ Cutting depth maximum

For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • E-GEHIR / E-GHIR (340) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344)

• GHIR/L-C (W=4-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIPI (W<M)
Precision Double-Ended Inserts for Internal Grooving and Recessing



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC830	IC808	IC908	IC20	IC806	
GIPI 1.57-0.15	1.57	0.15	0.02	0.030	2.50	2.20	●	●	●	●	●	0.03-0.05
GIPI 1.70-0.00	1.70	0.00	0.02	0.030	2.50	2.20	●	●	●	●	●	0.03-0.06
GIPI 1.78-0.10	1.78	0.10	0.02	0.030	2.50	2.20	●	●	●	●	●	0.03-0.06
GIPI 1.96-0.10	1.96	0.10	0.02	0.030	2.50	2.20	●	●	●	●	●	0.04-0.06
GIPI 1.96-0.15	1.96	0.15	0.02	0.030	2.50	2.20	●	●	●	●	●	0.04-0.06

• The tool pocket should be modified • DMIN for internal application=20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

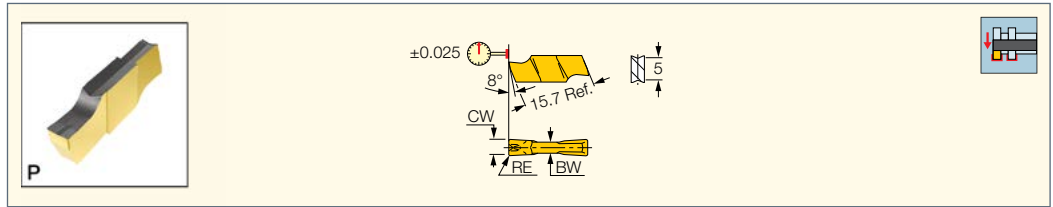
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: AVC-GAIR/L (347) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344)

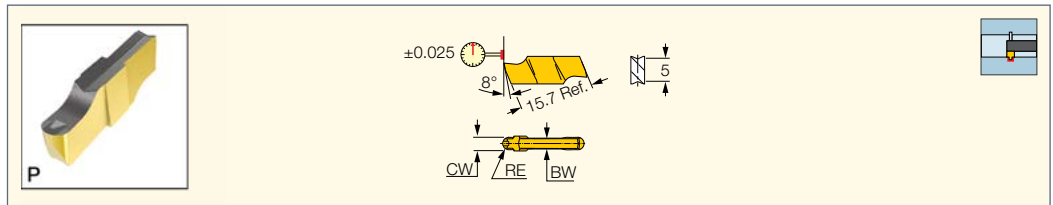
GIPI
Precision Double-Ended
Inserts for Internal Grooving
and Recessing



Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data	
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC890	IC8250	IC808	IC908	IC20	IC20N	f groove (mm/rev)
GIPI 2.22-0.10	2.22	0.10	0.02	0.030	2.50	2.20	●		●	●	●		0.04-0.07
GIPI 2.22-0.15	2.22	0.15	0.02	0.030	2.50	2.20			●	●			0.04-0.07
GIPI 2.30-0.20	2.30	0.20	0.02	0.030	3.00	2.20	●				●		0.05-0.08
GIPI 2.39-0.15	2.39	0.15	0.02	0.030	6.40	2.40	●		●	●	●		0.04-0.07
GIPI 2.50-0.20	2.50	0.20	0.02	0.030	6.00	2.40	●				●		0.05-0.09
GIPI 2.70-0.10	2.70	0.10	0.02	0.030	-	2.40	●		●	●	●	●	0.05-0.08
GIPI 2.70-0.15	2.70	0.15	0.02	0.030	-	2.40			●	●			0.05-0.08
GIPI 3.00-0.40	3.00	0.40	0.02	0.030	-	2.40					●		0.06-0.11
GIPI 3.18-0.20	3.18	0.20	0.02	0.030	-	2.40	●	●	●	●		●	0.06-0.11
GIPI 3.30-0.10	3.30	0.10	0.02	0.030	-	2.40	●	●	●		●		0.06-0.10
GIPI 3.96-0.20	3.96	0.20	0.02	0.030	-	3.20		●			●		0.08-0.13
GIPI 4.23-0.10	4.23	0.10	0.02	0.030	-	3.20		●			●		0.08-0.13
GIPI 4.78-0.55	4.78	0.55	0.02	0.050	-	4.00	●	●	●		●		0.08-0.15

- DMIN for internal application = 20 mm
- For cutting speed recommendations and user guide, see pages 419-428, 432-436
- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)
- ⁽³⁾ Cutting depth maximum
- For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • E-GEHIR / E-GHIR (340) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344)
- GHIR/L-C (W=4-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

GIPI (full radius W<M)
Precision Double-Ended Full
Radius Inserts for Internal
Grooving and Recessing



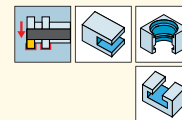
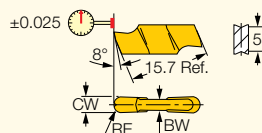
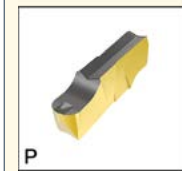
Designation	Dimensions						Tough ↔ Hard				Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	BW	IC890	IC808	IC908	IC20	f groove (mm/rev)
GIPI 2.39-1.20	2.39	1.20	0.02	0.050	6.40	2.40	●	●	●	●	0.05-0.10

- The tool pocket should be modified
- DMIN for internal applications= 20 mm
- For cutting speed recommendations and user guide, see pages 419-428, 432-436
- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)
- ⁽³⁾ Cutting depth maximum
- For tools, see pages: AVC-GAIR/L (347) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIPI (full radius)

Precision Double-Ended Full Radius Inserts for Internal Grooving and Recessing



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC8250	IC20	
GIPI 3.18-1.59	3.18	1.59	0.02	0.050	2.40	●	●	f groove (mm/rev) 0.06-0.13
GIPI 3.96-1.98	3.96	1.98	0.02	0.050	3.20	●	●	0.08-0.16
GIPI 4.78-2.39	4.78	2.39	0.02	0.050	4.00	●	●	0.08-0.16
GIPI 6.35-3.18	6.35	3.18	0.02	0.050	4.80	●	●	0.11-0.21

• Dmin for internal application= 20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

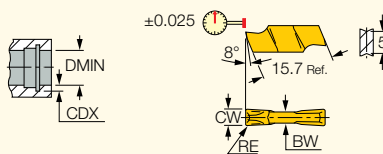
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • E-GEHIR / E-GHIR (340) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-C (W=4-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIFI

Precision Double-Ended Inserts for Internal Grooving and Recessing



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	CDX ⁽³⁾	IC830	IC8250	IC20	
GIFI 4.78-0.55	4.78	0.55	0.02	0.050	4.00	15.50	●	●	●	f groove (mm/rev) 0.07-0.13
GIFI 5.28-0.20	5.28	0.20	0.02	0.030	4.00	15.50	●	●	●	0.08-0.13

• DMIN for internal applications = 20 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

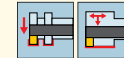
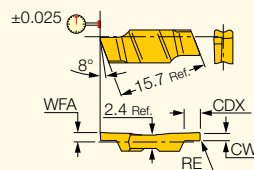
⁽³⁾ Cutting depth maximum

For tools, see pages: AVC-GAIR/L (347) • CGIN 26 (348) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-C (W=4-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIPI-RX/LX

Precision Double-Ended Inserts for Internal Grooving Next to a Shoulder



RX shown

Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	WFA	CDX ⁽³⁾	IC830	IC808	
GIPI 0.78-0.1LX	0.78	0.10	0.02	0.030	1.60	1.30		●	f groove (mm/rev) 0.02-0.04
GIPI 1.00-0.00R/LX	1.00	0.00	0.02	0.030	1.60	2.00	●		0.02-0.04
GIPI 1.19-0.1LX	1.19	0.10	0.02	0.030	1.60	2.00		●	0.03-0.05
GIPI 1.57-0.15LX	1.57	0.15	0.02	0.030	1.70	2.80		●	0.03-0.05
GIPI 1.57-0.79LX	1.57	0.79	0.02	0.050	1.70	2.80		●	0.03-0.06
GIPI 2.00-0.10R/LX	2.00	0.10	0.02	0.030	1.70	2.70	●		0.04-0.06
GIPI 2.39-0.2LX	2.39	0.20	0.02	0.030	1.70	3.90		●	0.05-0.08
GIPI 2.39-1.19LX	2.39	1.19	0.02	0.050	1.70	3.90		●	0.05-0.10

• Tool's pocket should be modified • For grooving and recessing only • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

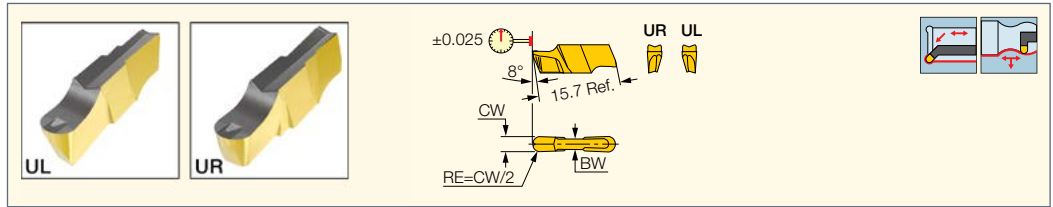
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: AVC-GAIR/L (347) • GAIR/L (346) • GHIR/L (W=1.9-6.4) (344) • GHIR/L-SC (W=2-4.8) (345)

CUTGRIP

GIPI-UR/UL
Precision Double-Ended Inserts
for Internal Undercutting

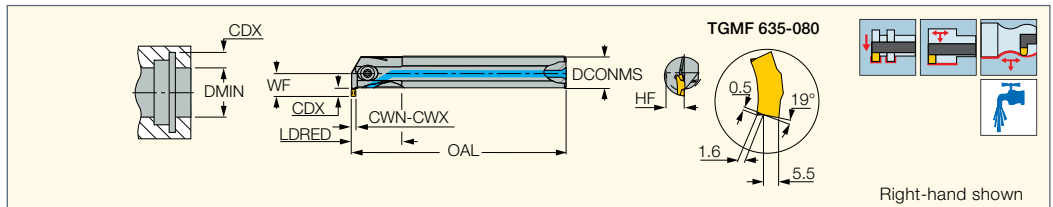


Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC8250	IC20	
GIPI 3.00-1.5UR/L	3.00	1.50	0.02	0.050	2.40	●	●	f groove (mm/rev) 0.05-0.15
GIPI 4.00-2.0UR/L	4.00	2.00	0.02	0.050	3.20	●	●	0.05-0.15

- Tool's pocket should be modified
- For cutting speed recommendations and user guide, see pages 419-428, 432-436
- ⁽¹⁾ Cutting width tolerance (+/-)
- ⁽²⁾ Corner radius tolerance (+/-)
- For tools, see pages:** GHIUR/L (345)

TOPGRIP

TGIR/L-C
Grooving and Turning Bars
with Coolant Holes Carrying
TOP-GRIP Utility Inserts



Designation	DCONMS	CWN ⁽¹⁾	CWX ⁽²⁾	DMIN	CDX ⁽³⁾	HF	OAL	LDRED	WF	Inlet	Insert
TGIR/L 16C-3	16.00	3.00	3.00	20.50	5.50	7.5	150.00	25.0	12.00	M6	TGMF 3
TGIR/L 20C-3	20.00	3.00	3.00	25.00	5.50	9.0	180.00	32.0	14.20	M6	TGMF 3
TGIR/L 25C-3	25.00	3.00	3.00	32.00	8.00	11.5	200.00	40.0	18.80	R1/8	TGMF 3
TGIR/L 25C-4	25.00	4.00	5.00	32.50	8.50	11.5	200.00	40.0	19.50	R1/8	TGMF 4, TGMF/P 5
TGIR/L 32C-4	32.00	4.00	5.00	42.00	11.00	14.5	220.00	50.0	25.50	R1/8	TGMF 4, TGMF/P 5
TGIR/L 32C-6	32.00	6.00	6.35	57.00 ⁽⁴⁾	17.50	14.5	220.00	50.0	29.00	R1/8	TGMF 6
TGIR/L 40C-6	40.00	6.00	6.35	57.00	17.50	18.0	300.00	60.0	35.20	R1/8	TGMF 6

- For user guide, see pages 419-428, 432-436
- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ Cutting depth maximum
- ⁽⁴⁾ For Dmin 47 mm, modify insert according to sketch
- For inserts, see pages:** TGMA (272) • TGMF (full radius) (272) • TGMF/P (272)

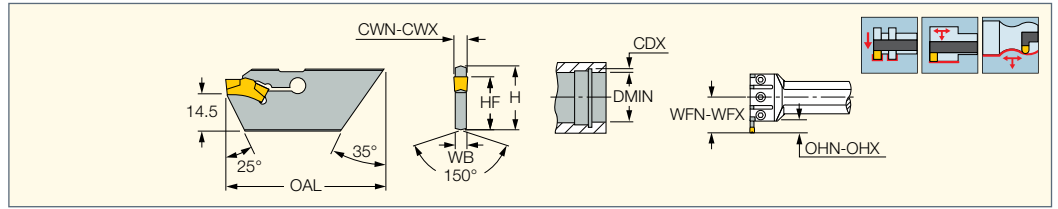
Spare Parts

Designation				
TGIR/L 16C-3	SR 76-1400	T-20/5		PL 16
TGIR/L 20C-3	SR 76-1400	T-20/5		PL 20
TGIR/L 25C-3	SR M5X16 DIN912		HW 4.0	PL 25
TGIR/L 25C-4	SR M5X16 DIN912		HW 4.0	PL 25
TGIR/L 32C-4	SR M6X20 DIN912		HW 5.0	PL 32
TGIR/L 32C-6	SR M6X20 DIN912		HW 5.0	PL 32
TGIR/L 40C-6	SR M6X25 DIN912		HW 5.0	PL 40

TOPGRIP

TGHN 26-M

Internal Grooving and Turning
Blades for GHIC...-70 Bars



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	WB	WFN ⁽³⁾	WFX ⁽⁴⁾	OHN ⁽⁵⁾	OHX ⁽⁶⁾	DMIN	HF	OAL	H
TGHN 26-3M	3.00	3.00	2.40	40.0	41.5	13.5	15.0	70.00	21.4	63.00	26.0
TGHN 26-4M	4.00	5.00	3.20	40.0	41.5	13.5	15.0	70.00	21.4	63.00	26.0
TGHN 26-5M	5.00	5.00	4.00	40.0	46.5	13.5	20.0	70.00	21.4	63.00	26.0

• Grooving depth (CDX) varies in conformance with blade's overhang (WFN-WFX and OHN-OHX) and depends on the bore diameter (D)

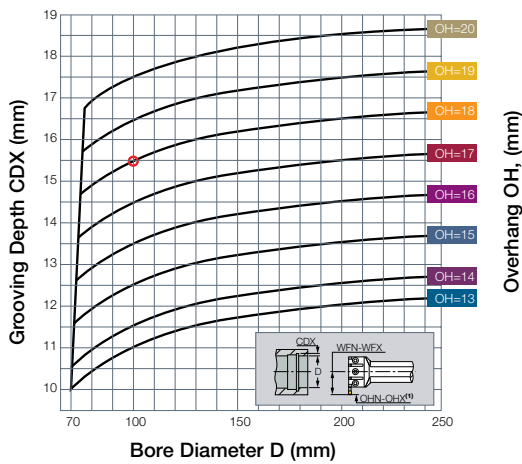
• TGHN 26...-M can be modified from external double-sided TGHN blades • For user guide, see pages 419-428, 432-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Adjustable extension
- (4) Adjustable extension
- (5) Minimum overhang for adjustable extension
- (6) Maximum overhang for adjustable extension

For inserts, see pages: TGMA (272) • TGMF (full radius) (272) • TGMF/P (272)

For holders, see pages: C#-GHIC (629) • GHIC-70 (355)

Internal Grooving Capacity for TGHN Blades



Example:

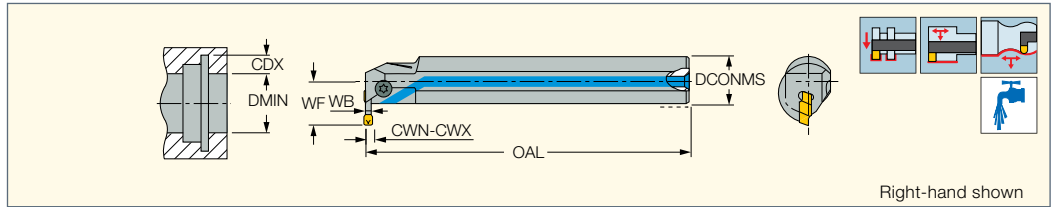
For grooving depth CDX=15.5 mm
and grooving width=5 mm
in bore $\varnothing D=100$, use blade
TGHN 26-5M and adjust overhang to OH=18 mm.



TGHN 26-...M



HELIIR/L
Grooving and Turning Bars
with Coolant Holes for
HELI-GRIP Utility Inserts



Designation	DCONMS	CWN ⁽¹⁾	CWX ⁽²⁾	DMIN	CDX ⁽³⁾	OAL	WF	Inlet	Insert ⁽⁴⁾			
HELIIR/L 20C-305	20.00	3.00	3.18	26.00	5.00	160.00	15.20	M6	GRIP 3	SR 76-1400	PL 20	T-20/5
HELIIR/L 25C-305	25.00	3.00	3.18	31.00	5.00	160.00	17.70	R1/8	GRIP 3	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 25C-410	25.00	4.00	4.76	43.00	10.00	160.00	22.70	R1/8	GRIP 4	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 25C-510	25.00	5.00	5.00	43.00	10.00	160.00	22.70	R1/8	GRIP 5	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 25C-610	25.00	6.00	6.35	43.00	10.00	160.00	22.70	R1/8	GRIP 6	SR M5X16 DIN912	PL 25	HW 4.0
HELIIR/L 32C-410	32.00	4.00	4.76	43.00	10.00	200.00	26.20	R1/8	GRIP 4	SR M5X16 DIN912	PL 32	HW 4.0
HELIIR/L 32C-510	32.00	5.00	5.00	43.00	10.00	200.00	26.20	R1/8	GRIP 5	SR M5X16 DIN912	PL 32	HW 4.0
HELIIR/L 32C-610	32.00	6.00	6.35	43.00	10.00	200.00	26.20	R1/8	GRIP 6	SR M5X16 DIN912	PL 32	HW 4.0
HELIIR/L 40C-412	40.00	4.00	4.76	53.00	12.00	250.00	32.20	R1/8	GRIP 4	SR M5X16 DIN912	PL 40	HW 4.0
HELIIR/L 40C-512	40.00	5.00	5.00	53.00	12.00	250.00	32.20	R1/8	GRIP 5	SR M5X16 DIN912	PL 40	HW 4.0
HELIIR/L 40C-612	40.00	6.00	6.35	53.00	12.00	250.00	32.20	R1/8	GRIP 6	SR M5X16 DIN912	PL 40	HW 4.0

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

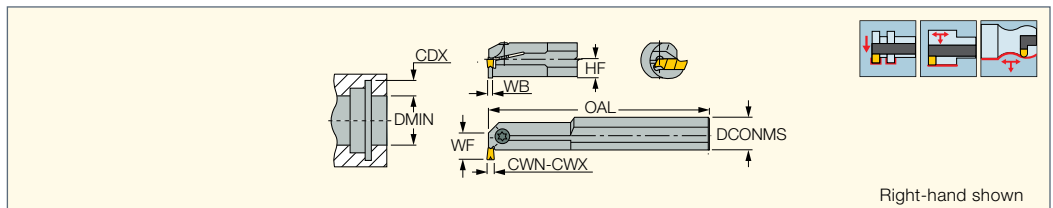
⁽³⁾ Cutting depth maximum

⁽⁴⁾ DO-GRIP DGN inserts may be used only for grooving: DGN 4.. (DMIN=51 mm), DGN 5.. (DMIN=57 mm) and DGN 6.. (DMIN=62 mm)

For inserts, see pages: GRIP (269) • GRIP (full radius) (270)

CUTGRIP

GHIR/L (W=7.0-8.3)
Internal Grooving and
Turning Boring Bars



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	DCONMS	DMIN	CDX ⁽³⁾	OAL	WF	HF	WB		
GHIR/L 40-815	7.00	8.30	40.00	64.00	15.00	300.00	36.00	18.0	6.00	SR M8X20DIN912	HW 6.0
GHIR/L 40-820	7.00	8.30	40.00	65.00	20.00	300.00	41.00	18.0	6.00	SR M8X20DIN912	HW 6.0

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

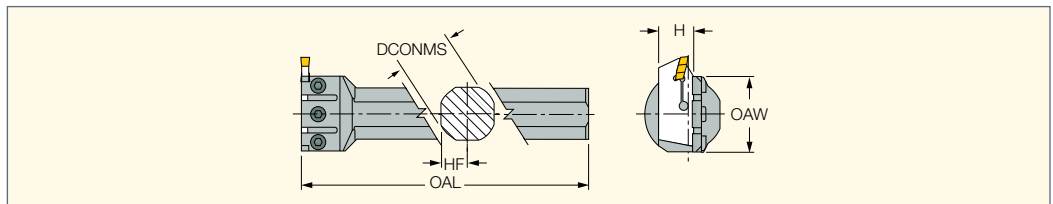
⁽³⁾ Cutting depth maximum

For inserts, see pages: GDMA (300) • GDMF (288) • GDMM-CC (583) • GDMN (289) • GDMU (290) • GDMY (289) • GDMY (full radius) (291)

• GDMY-F (291) • GIA-K (long pocket) (299) • GIF-E (W=8,10 full radius) (294) • GIF-E (W=8,10) (292) • GIPA/GIDA 8 (full radius) (302)

CUTGRIP

GHIC-70
Boring Bars for Internal
Grooving and Turning
Blades, DMIN=70 mm



Designation	H	DCONMS	OAL	HF	OAW		
GHIC 40-70	26.0	40.00	260.00	18.0	53.0	SR M6X16 DIN912	HW 5.0
GHIC 50-70	26.0	50.00	300.00	23.0	53.0	SR M6X16 DIN912	HW 5.0

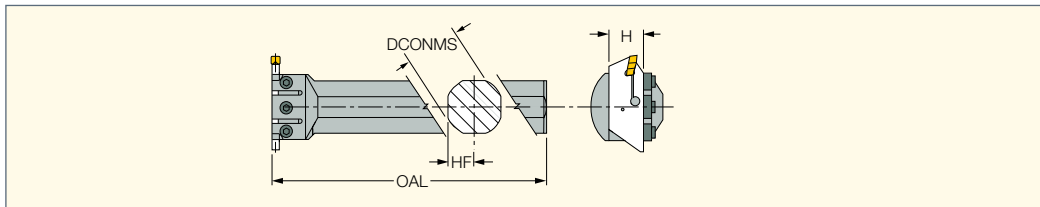
• For both right and left hand applications

For tools, see pages: CGHN 26-M (356) • TGHN 26-M (354)

CUTGRIP

GHIC-85

Boring Bars for Internal Grooving and Turning
Blades, DMIN=85 mm



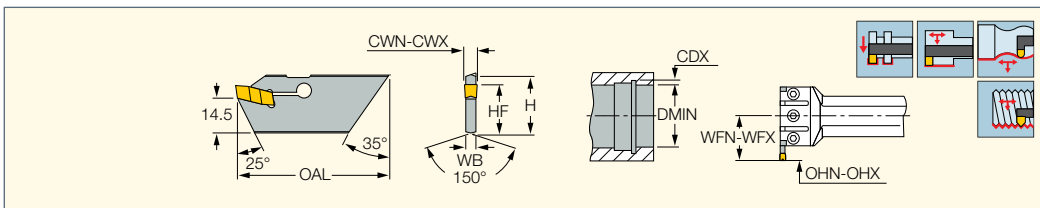
Designation	H	DCONMS	OAL	HF		
GHIC 40-85	32.0	40.00	260.00	18.0	SR M6X16 DIN912	HW 5.0
GHIC 50-85	32.0	50.00	300.00	23.0	SR M6X16 DIN912	HW 5.0

• For both right and left hand applications
For tools, see pages: CGHN 32-DGM (358) • CGHN 32-M (357)

CUTGRIP

CGHN 26-M

Internal Grooving and Turning
Blades for GHIC...-70 Bars



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	WB	DMIN	WFN ⁽³⁾	OHN ⁽⁴⁾	WFX ⁽⁵⁾	OHX ⁽⁶⁾	HF	OAL	H
CGHN 26-3M	2.80	4.00	2.40	70.00	40.0	13.5	46.5	20.0	21.4	63.00	26.0
CGHN 26-4M	3.60	4.50	3.20	70.00	40.0	13.5	46.5	20.0	21.4	63.00	26.0
CGHN 26-5M	4.40	6.40	4.00	70.00	40.0	13.5	46.5	20.0	21.4	63.00	26.0

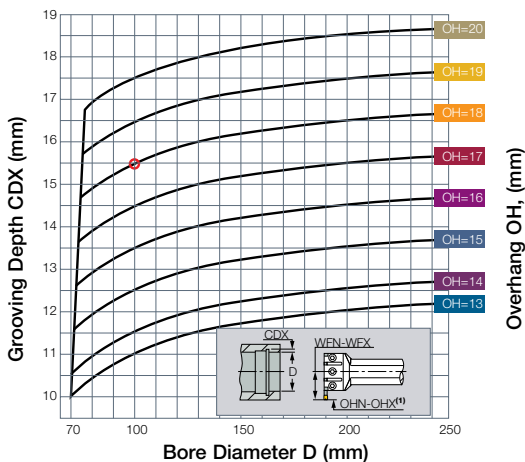
• Grooving depth (CDX) varies in conformance with blade's overhang (WFN-WFX and OHN-OHX) and depends on the bore diameter (D)
• CGHN 26...-M can be modified from external double-sided CGHN blades • When TIP inserts are used the seat needs to be modified to ensure clearance
• For user guide, see pages 419-428, 432-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Adjustable extension
- (4) Minimum overhang for adjustable extension
- (5) Adjustable extension
- (6) Maximum overhang for adjustable extension

For inserts, see pages: GIMF (288) • GIMY (288) • GIMN (289) • GIMY (full radius) (290) • GIMY-F (291) • GIF-E (W=4-6) (292)
• GIF-E (W=4-6 full radius) (294) • GIP-E (293) • GIP-E (full radius) (294) • GIP (297) • GIP (full radius) (296) • GIF (297)
• GIF (full radius) (298) • GIA-K (W=3-6) (298) • GITM (299) • GITM (full radius) (299) • GIPY (300) • GIPA (full radius W=3-6) (301)
• GIPA (W=3-6) (300) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523)
• GIMT (287) • GIPM-A46 / GIP-1250 (375) • TIP-MT (647) • TIP-WT (641)

For holders, see pages: C#-GHIC (629) • GHIC-70 (355)

Internal Grooving Capacity for CGHN 26 Blades



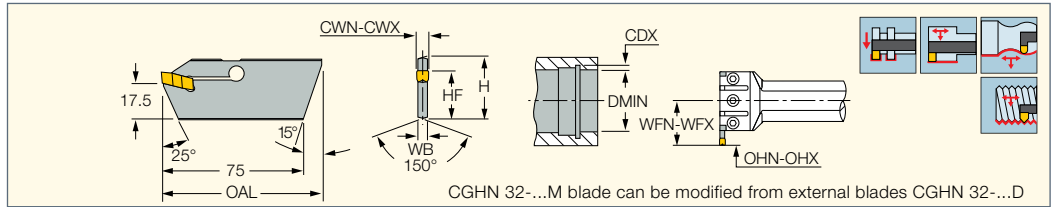
Example:

For grooving depth CDX=15.5 mm and grooving width=5 mm in bore øD=100, use blade CGHN 26-5M and adjust overhang to OH=18 mm.



CGHN 26-...M

CGHN 32-M
Internal Grooving and
Turning Blades



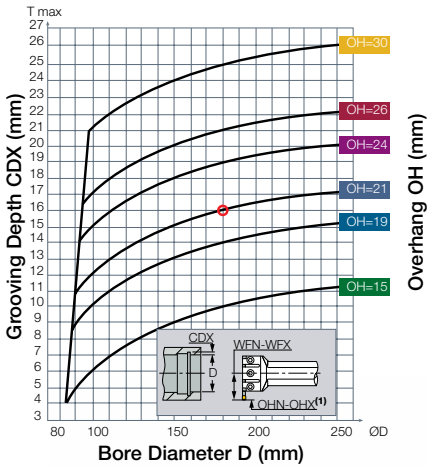
Designation	CWN ⁽¹⁾	CWX ⁽²⁾	WB	WFN ⁽³⁾	WFX ⁽⁴⁾	OHN ⁽⁵⁾	OHX ⁽⁶⁾	HF	OAL	H	DMIN
CGHN 32-3M	2.80	4.00	2.40	44.0	48.0	15.0	19.0	24.8	82.00	32.0	85.00
CGHN 32-4M	3.60	5.00	3.20	44.0	50.0	15.0	21.0	24.8	82.00	32.0	85.00
CGHN 32-5M	4.40	6.40	4.00	44.0	55.0	15.0	26.0	24.8	82.00	32.0	85.00
CGHN 32-6M	5.60	6.40	5.20	44.0	55.0	15.0	26.0	24.8	82.00	32.0	85.00

- WFN-WFX and OHN-OHX are the blade's extension range
- Grooving depth (CDX) varies in conformance with blade's overhang (OHN-OHX) and depends on the bore diameter(D). For grooving capacity, see graph
- When using TIP inserts, the toolholder seat needs to be modified
- For user guide, see pages 419-428, 432-436

- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Adjustable extension
- (4) Adjustable extension
- (5) Minimum overhang for adjustable extension
- (6) Maximum overhang for adjustable extension

For inserts, see pages: GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292)
 • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288)
 • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293)
 • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300)
 • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-WT (641)
For holders, see pages: GHIC-85 (356)

Internal Machining Grooving Capacity for CGHN 32 Blades

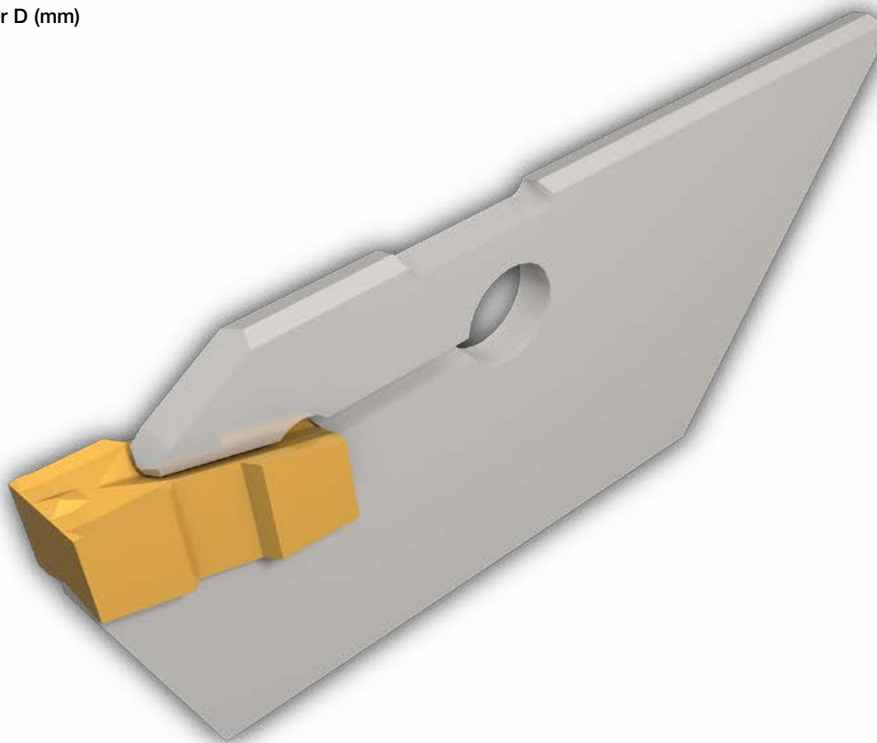


Example:

For grooving depth CDX=16 and grooving width= 4 in bore $\varnothing D=180$, use blade CGHN-32-4M and adjust overhang to OH=21 mm.



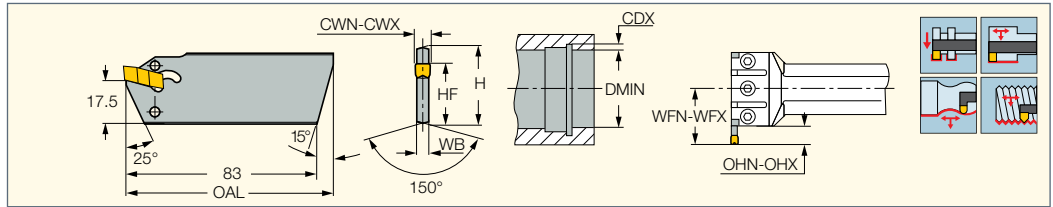
CGHN 32-...M/DGM



CUTGRIP

CGHN 32-DGM

Internal Grooving and Turning Blades for GHIC...-85 Bars (self-clamping)



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	WB	WFN ⁽³⁾	WFX ⁽⁴⁾	OHN ⁽⁵⁾	OHX ⁽⁶⁾	HF	OAL	H	DMIN	
CGHN 32-3DGM	2.80	4.00	2.40	53.0	59.0	24.0	30.0	24.8	90.00	32.0	93.00	EDG 44A*
CGHN 32-4DGM	3.50	5.00	3.20	53.0	59.0	24.0	30.0	24.8	90.00	32.0	93.00	EDG 44A*
CGHN 32-5DGM	4.40	6.40	4.00	53.0	59.0	24.0	30.0	24.8	90.00	32.0	93.00	EDG 44A*
CGHN 32-6DGM	5.60	6.40	5.20	53.0	59.0	24.0	30.0	24.8	90.00	32.0	93.00	EDG 44A*

- Grooving depth (CDX) varies in conformance with blade's overhang (WFN-WFX and OHN-OHX) and it depends on the bore diameter (D)
- CGHN 32...DGM can be modified from external double-sided CGHN -DG blades
- When TIP inserts are used, the seat needs to be modified to ensure clearance
- For user guide, see pages 419-428, 432-436

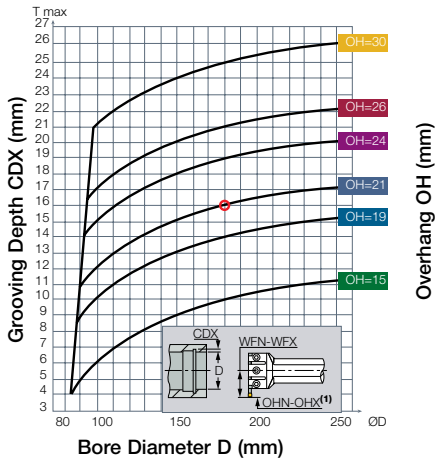
- (1) Minimum cutting width
- (2) Maximum cutting width
- (3) Adjustable extension
- (4) Adjustable extension
- (5) Minimum overhang for adjustable extension
- (6) Maximum overhang for adjustable extension

* Optional, should be ordered separately

For inserts, see pages: GIA-K (W=3-6) (298) • GIF (297) • GIF (full radius) (298) • GIF-E (W=4-6 full radius) (294) • GIF-E (W=4-6) (292) • GIM-C (521) • GIM-J (522) • GIM-J-RA/LA (522) • GIM-UT (524) • GIM-UT-RA/LA (524) • GIM-W (523) • GIM-W-RA/LA (523) • GIMF (288) • GIMN (289) • GIMT (287) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-WT (641)

For holders, see pages: GHIC-85 (356)

Internal Machining Grooving Capacity for CGHN 32 Blades

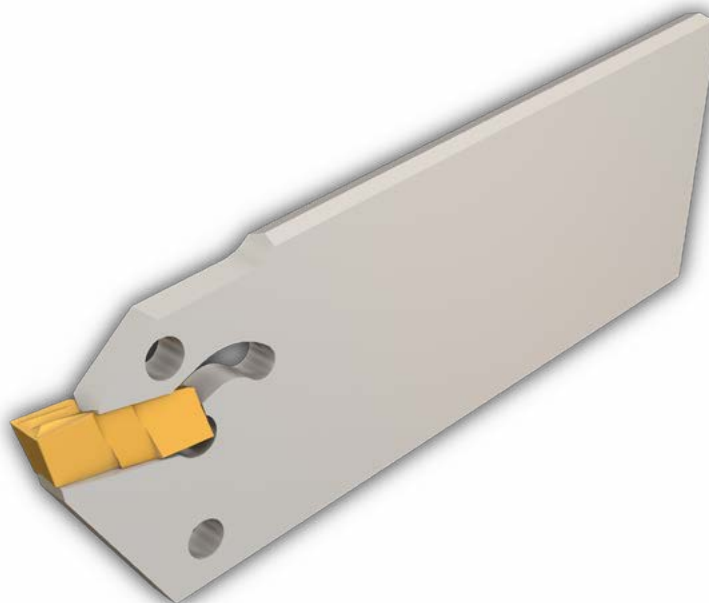


Example:

For grooving depth CDX=16 and grooving width= 4 in bore $\phi D=180$, use blade CGHN-32-4DGM and adjust overhang to OH=21 mm.



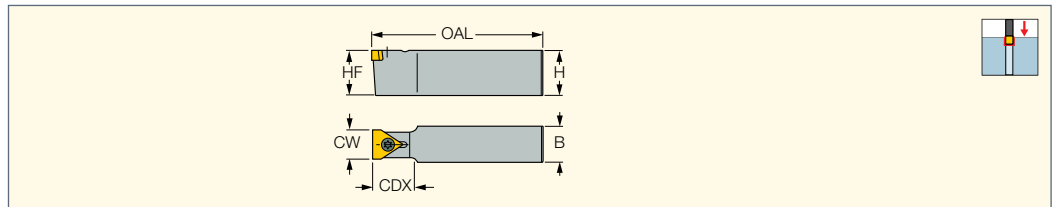
CGHN 32-...M/DGM



V-LOCK

SXCNN

External Toolholders for Specially Tailored Wide Profile Grooving Inserts



Designation	CW	CDX ⁽¹⁾	HF	H	B	OAL	Insert		
SXCNN 1212 K10-06	10.40	17.00	12.0	12.0	12.0	125.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 1616 K10-06	10.40	17.00	16.0	16.0	16.0	125.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 2020 P10-06	10.40	17.00	20.0	20.0	20.0	170.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 2525 P10-06	10.40	17.00	25.0	25.0	25.0	170.00	XNUW 10	SR 76-2067	T-15/5
SXCNN 1212 K13-05	13.00	20.00	12.0	12.0	12.0	125.00	XNUW 13	SR 76-2068	T-20/5
SXCNN 1414 K13-05	13.00	23.00	14.0	14.0	14.0	125.00	XNUW 13	SR 76-2068	T-20/5
SXCNN 1616 K13-05	13.00	23.00	16.0	16.0	16.0	125.00	XNUW 13	SR 14-591	T-20/5
SXCNN 2020 P13-05	13.00	23.00	20.0	20.0	20.0	170.00	XNUW 13	SR 14-591	T-20/5
SXCNN 2525 P13-05	13.00	23.00	25.0	25.0	25.0	170.00	XNUW 13	SR 14-591	T-20/5
SXCNN 1212 K14-03	14.50	-	12.0	12.0	12.0	125.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 1616 K14-03	14.50	17.00	16.0	16.0	16.0	125.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 2020 P14-03	14.50	17.00	20.0	20.0	20.0	170.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 2525 P14-03	14.50	17.00	25.0	25.0	25.0	170.00	XNUW 14	SR 76-2067	T-15/5
SXCNN 1616 K20-05	20.50	-	16.0	16.0	16.0	125.00	XNUW 20	SR 14-591	T-20/5
SXCNN 2020 P20-05	20.50	24.00	20.0	20.0	20.0	170.00	XNUW 20	SR 14-591	T-20/5
SXCNN 2525 P20-05	20.50	24.00	25.0	25.0	25.0	170.00	XNUW 20	SR 14-591	T-20/5
SXCNN 3232 P20-05	20.50	24.00	32.0	32.0	32.0	170.00	XNUW 20	SR 14-591	T-20/5
SXCNN 2525 P24-05	24.50	28.00	25.0	25.0	25.0	170.00	XNUW 24	SR 14-591	T-20/5
SXCNN 3232 P36-10	36.50	-	32.0	32.0	32.0	170.00	XNUW 36	SR 14-591	T-20/5

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

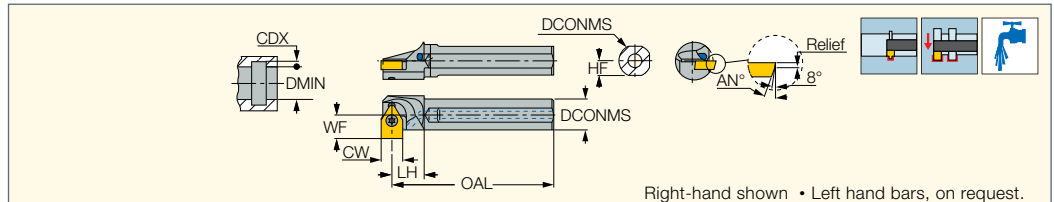
⁽¹⁾ Cutting depth maximum

For inserts, see pages: XNUW (360)

V-LOCK

SXCIR

Internal Toolholders for Specially Tailored Profile Inserts



Designation	CW	DCONMS	OAL	LH	WF	DMIN	CDX ⁽²⁾	HF	AN ⁽³⁾	Relief ⁽⁴⁾			
SXCIR 16-10 ⁽¹⁾	10.40	16.00	125.00	20.0	11.50	25.00	3.00	7.5	15.0	1.5	SR 76-2067	T-15/5	PL 16
SXCIR 20-10 ⁽¹⁾	10.40	20.00	150.00	25.0	13.00	25.00	3.00	9.0	15.0	1.5	SR 76-2067	T-15/5	PL 20
SXCIR 16-13	13.00	16.00	125.00	20.0	13.00	30.00	4.00	7.5	20.0	2.0	SR 76-2068	T-20/5	PL 16
SXCIR 20-13	13.00	20.00	150.00	25.0	14.50	30.00	4.00	9.0	20.0	2.0	SR 76-2068	T-20/5	PL 20
SXCIR 25-13	13.00	25.00	170.00	30.0	17.00	30.50	4.00	11.5	20.0	2.0	SR 76-2068	T-20/5	PL 25
SXCIR 32-13	13.00	32.00	200.00	35.0	20.00	37.00	4.00	14.5	20.0	2.0	SR 76-2068	T-20/5	PL 32
SXCIR 25-14 ⁽¹⁾	14.50	25.00	170.00	30.0	15.50	30.00	3.00	11.5	15.0	2.0	SR 76-2067	T-15/5	PL 25
SXCIR 20-20	20.50	20.00	150.00	25.0	15.00	40.00	4.00	9.0	15.0	2.5	SR 14-591	T-20/5	PL 20
SXCIR 32-20	20.50	32.00	200.00	35.0	20.50	40.00	4.00	14.5	15.0	2.5	SR 14-591	T-20/5	PL 32
SXCIR 25-24	24.50	25.00	170.00	30.0	17.50	40.00	4.00	11.5	15.0	2.5	SR 14-591	T-20/5	PL 25
SXCIR 32-24	24.50	32.00	200.00	35.0	20.50	40.00	4.00	14.5	15.0	2.5	SR 14-591	T-20/5	PL 32

⁽¹⁾ On request.

⁽²⁾ Cutting depth maximum

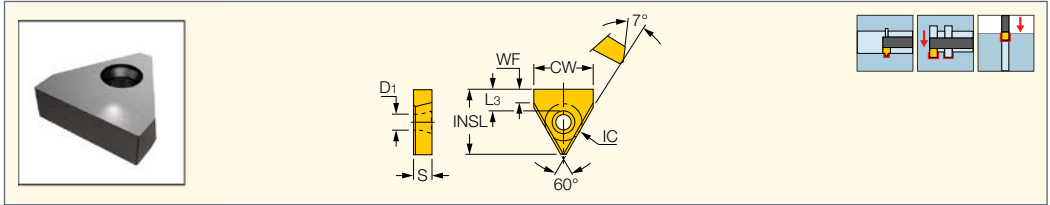
⁽³⁾ Blank insert reference dimensions

⁽⁴⁾ Blank insert reference dimensions

For inserts, see pages: XNUW (360)

V-LOCK

XNUW
Blank Inserts for Wide
Profile Grooving

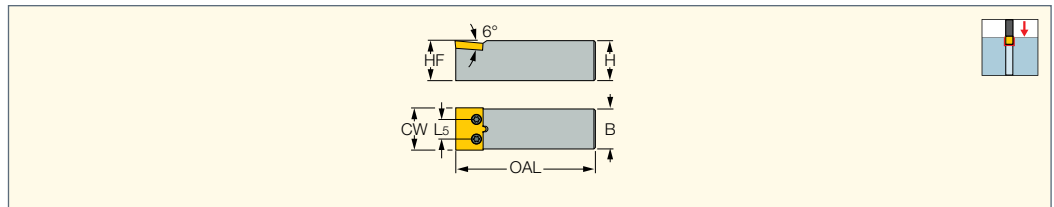


Designation	Dimensions							Tough ↔ Hard			
	CW	WF	L3	IC	S	D1	INSL	IC28	IC08	IC20	IC07
XNUW 1003-06	10.40	6.00	10.50	6.35	3.18	4.53	17.00	●	●		
XNUW 1305-05	13.00	5.00	11.40	12.70	5.35	5.50	20.60	●	●	●	
XNUW 14T3-03	14.50	3.00	3.70	9.52	3.97	4.40	14.00	●	●	●	
XNUW 2006-05	20.50	4.80	5.00	12.70	6.35	5.50	20.30	●	●	●	●
XNUW 2406-05	24.50	5.00	6.00	15.87	6.35	5.50	25.00	●	●	●	●
XNUW 3606-10	36.50	5.40	10.00	19.05	6.35	6.50	34.60	●	●	●	

For tools, see pages: SXCIR (359) • SXCNN (359)

FORMTOOL

FTHN
Square Shank Toolholders for
FTB Profile Turning Inserts

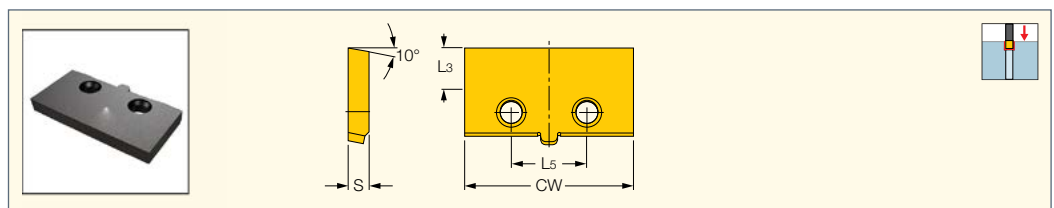


Designation	CW	H	HF	B	OAL	L5		
FTHN 2525M-3010	30.40	25.0	25.0	25.0	150.00	14.00	SR 14-591	T-20/5
FTHN 2525M-3510	35.40	25.0	25.0	25.0	150.00	14.00	SR 14-591	T-20/5
FTHN 3232P-4510	45.40	32.0	32.0	32.0	170.00	18.00	SR 14-591	T-20/5
FTHN 3232P-5107	51.40	32.0	32.0	32.0	170.00	21.90	SR 14-591	T-20/5

For inserts, see pages: FTB (360)

FORMTOOL

FTB
Blank Inserts for Wide
Profile Grooving



Designation	Dimensions					IC08
	CW	L3	S	L5		
FTB 3010	30.40	10.00	5.00	14.00	●	
FTB 3510	35.40	10.00	5.00	14.00	●	
FTB 4010	40.40	10.00	5.00	18.00	●	
FTB 4510	45.40	10.00	5.00	18.00	●	
FTB 5107	51.40	7.00	5.00	21.90	●	

For tools, see pages: FTHN (360)

TOOLS FOR MINIATURE PARTS



TABLE OF CONTENTS

External Tools and Inserts

SWISS-CUT	363
CUT-GRIP	372
SWISS-GRIP	375
PENTA-CUT	376

HOLDERS

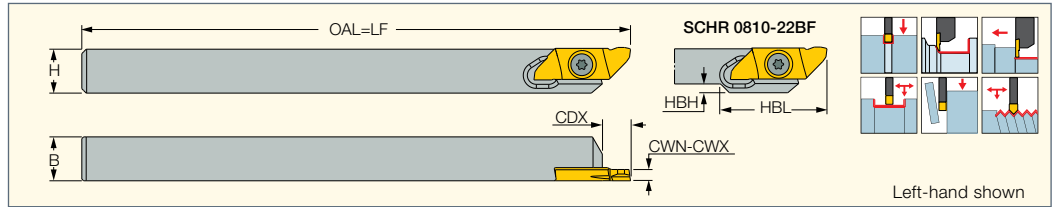
NEOPASS	384
ACEJET	387
PASSJET	388
ACECUT	398
PASSCUT	399

Internal Boring Bars and Inserts

PICCO-INDEX (Dmin 4.5 mm)	386
PICCO-JET (Dmin 0.8 mm)	389
PICCO-CUT (Dmin 0.6 mm)	400
MINICHAM (Dmin 4 mm)	411
MINCUT (Dmin 8 mm)	413
CHAMGROOVE (Dmin 8 mm)	414

SCHR/L-22BF

Grooving and Turning
Tools with Back and Front
Clamping for Swiss-Type
and Automatic Machines



Designation	H	B	OAL	HBH	HBL	CDX ⁽¹⁾	CWN ⁽²⁾	CWX ⁽³⁾		
SCHR/L 0810-22BF	8.0	10.0	125.00	2.0	24.0	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5
SCHR/L 10-22BF	10.0	10.0	125.00	-	-	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5
SCHR/L 12-22BF	12.0	12.0	125.00	-	-	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5
SCHR/L 16-22BF	16.0	16.0	125.00	-	-	8.00	0.50	2.50	SR M4X0.7-19425	T-8/5

⁽¹⁾ See insert dimensions

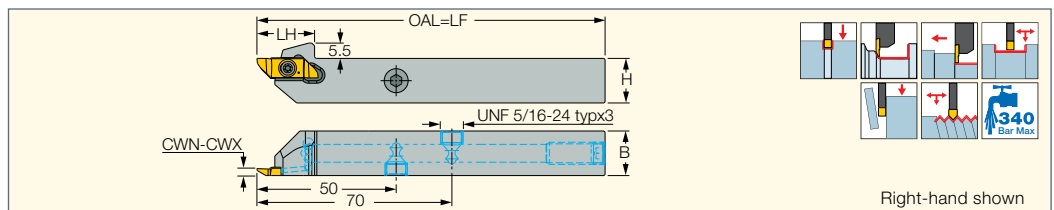
⁽²⁾ Minimum cutting width

⁽³⁾ Maximum cutting width

For inserts, see pages: SCIR/22-MTR-ISO (658) • SCIR/L-22-AD (367) • SCIR/L-22-AR/AL (367) • SCIR/L-22-BR/BL/BRA/BLA (365)
• SCIR/L-22-ER/EL/ERA/ELA (366) • SCIR/L-22-MTR/MTL (646) • SCIR/L-22-N/R/L (368) • SCIR/L-22-NP (369) • SCIR/L-22-NX (369)

SCHR/L-22BF-JHP

Grooving and Turning Tools
with High-Pressure Coolant
Channels for Swiss-Type
and Automatic Machines



Designation	H	B	OAL	LH	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾				
SCHR/L 10-22BF-JHP	10.0	10.0	125.00	20.7	0.50	2.50	8.00	SR M4X0.7-19425	T-8/5	SR 5/16UNF TL360	HW 5/32"
SCHR/L 12-22BF-JHP	12.0	12.0	125.00	20.7	0.50	2.50	8.00	SR M4X0.7-19425	T-8/5	SR 5/16UNF TL360	HW 5/32"
SCHR/L 16-22BF-JHP	16.0	16.0	125.00	20.7	0.50	2.50	8.00	SR M4X0.7-19425	T-8/5	SR 5/16UNF TL360	HW 5/32"

• Note: Coolant ports of the left-hand tools are in the same position as those of the right-hand tools

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ See insert dimensions

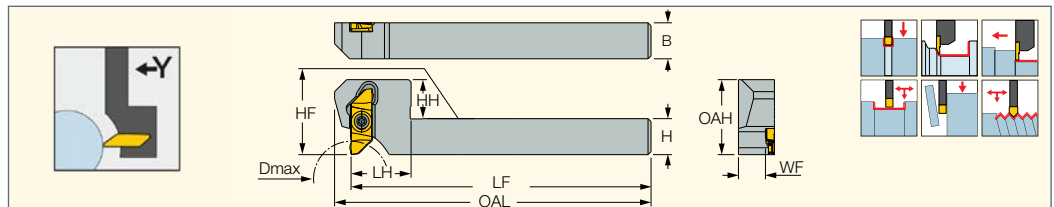
For inserts, see pages: SCIR/22-MTR-ISO (658) • SCIR/L-22-AD (367) • SCIR/L-22-AR/AL (367) • SCIR/L-22-BR/BL/BRA/BLA (365)
• SCIR/L-22-ER/EL/ERA/ELA (366) • SCIR/L-22-MTR/MTL (646) • SCIR/L-22-N/R/L (368) • SCIR/L-22-NP (369) • SCIR/L-22-NX (369)

Flow Rate vs. Pressure

Designation	70 Bar	100 Bar	140 Bar
	Flow Rate (liters/min)	Flow Rate (liters/min)	Flow Rate (liters/min)
SCHR/L 10-22BF-JHP	1-3	2-4	3-5
SCHR/L 12-22BF-JHP	3-5	4-6	5-7
SCHR/L 16-22BF-JHP	6-8	7-9	8-10

Y-SCHR-22BF

Y Axis Tools for Swiss Type
Machines - Back or Front
Clamped Inserts for Grooving
and Turning Operations



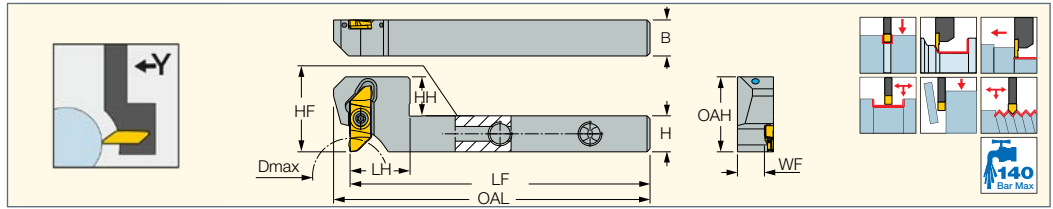
Designation	H	B	HH	LH	HF	WF	OAH	LF	OAL	D _{max}		
Y-SCHR 12-22BF	12.0	12.0	13.0	20.0	12.0	9.00	25.00	100.00	105.50	25.0 ⁽¹⁾	SR M4X0.7-19425	T-8/5
Y-SCHR 16-22BF	16.0	16.0	9.0	20.0	16.0	13.00	25.00	125.00	130.50	38.0 ⁽¹⁾	SR M4X0.7-19425	T-8/5

⁽¹⁾ for grooving

For inserts, see pages: SCIR/22-MTR-ISO (658) • SCIR/L-22-AD (367) • SCIR/L-22-AR/AL (367) • SCIR/L-22-BR/BL/BRA/BLA (365)
• SCIR/L-22-ER/EL/ERA/ELA (366) • SCIR/L-22-MTR/MTL (646) • SCIR/L-22-N/R/L (368) • SCIR/L-22-NP (369) • SCIR/L-22-NX (369)

NEOSWISS
INDEXABLE HEADS
SWISSCUT

Y-SCHR-22BF-JHP
Y Axis JETCUT Tools for Swiss Type Machines - Back or Front Clamped Inserts for Grooving and Turning Operations





Designation	H	B	HH	LH	HF	WF	OAH	LF	OAL	D _{max}
Y-SCHR 12-22BF-JHP	12.0	12.0	13.0	20.0	12.0	9.00	25.00	100.00	105.50	25.0 ⁽¹⁾
Y-SCHR 16-22BF-JHP	16.0	16.0	9.0	20.0	16.0	13.00	25.00	125.00	130.50	38.0 ⁽¹⁾

⁽¹⁾ for grooving

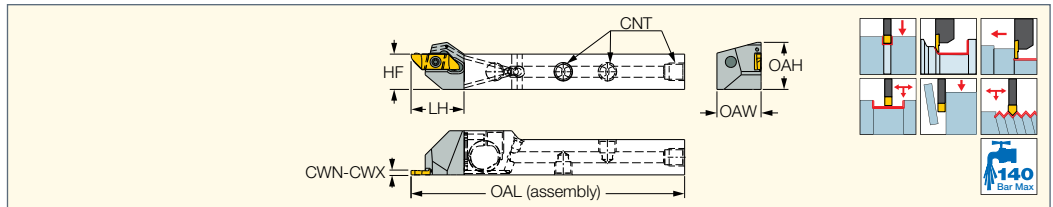
For inserts, see pages: SCIR-22-MTR-ISO (658) • SCIR/L-22-AD (367) • SCIR/L-22-AR/AL (367) • SCIR/L-22-BR/BL/BRA/BLA (365) • SCIR/L-22-ER/EL/ERA/ELA (366) • SCIR/L-22-MTR/MTL (646) • SCIR/L-22-N/R/L (368) • SCIR/L-22-NP (369) • SCIR/L-22-NX (369)



Spare Parts

Designation		
Y-SCHR-22BF-JHP	SR M4X0.7-19425	HW 5/32"

NEOSWISS
INDEXABLE HEADS
SWISSCUT

NQCH-SCHR/L-BF-JHP
Screw Lock JETCUT Modular Heads for Swiss Type Machines - Grooving and Turning, Back or Front Clamped Inserts



Designation	HF	OAW	LH	OAH	OAL	CWN ⁽¹⁾	CWX ⁽²⁾	Insert		
NQCH12-SCHR/L-22BF-JHP	12.0	20.00	24.0	17.30	124.00	0.50	2.50	SCIR/L-22	SR M4X0.7-19425	T-8/5
NQCH16-SCHR/L-22BF-JHP	16.0	20.00	24.0	21.10	124.00	0.50	2.50	SCIR/L-22	SR M4X0.7-19425	T-8/5

⁽¹⁾ Minimum cutting width

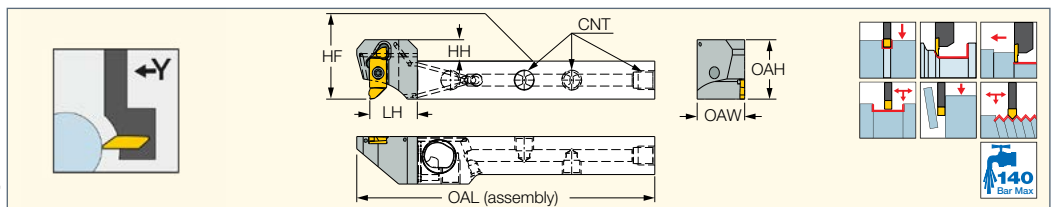
⁽²⁾ Maximum cutting width



For inserts, see pages: SCIR-22-MTR-ISO (658) • SCIR/L-22-AD (367) • SCIR/L-22-AR/AL (367) • SCIR/L-22-BR/BL/BRA/BLA (365) • SCIR/L-22-ER/EL/ERA/ELA (366) • SCIR/L-22-MTR/MTL (646) • SCIR/L-22-N/R/L (368) • SCIR/L-22-NP (369) • SCIR/L-22-NX (369)

For holders, see pages: NQCH-JHP (61)

NEOSWISS
INDEXABLE HEADS
SWISSCUT

NQCH-Y-SCHR-BF-JHP
Y-Axis Screw Lock JETCUT Modular Heads for Swiss Type Machines - Grooving and Turning, Back or Front Clamped Inserts



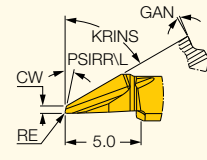
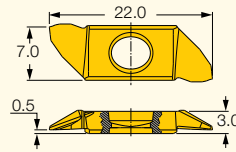
Designation	HF	OAH	LH	OAW	HH	OAL	CWN ⁽¹⁾	CWX ⁽²⁾	Insert		
NQCH12-Y-SCHR-22BF-JHP	12.0	25.00	20.0	20.00	13.0	125.50	0.50	2.50	SCIR/L-22-N/R/L	SR M4X0.7-19425	T-8/5
NQCH16-Y-SCHR-22BF-JHP	16.0	25.00	20.0	20.00	9.0	125.50	0.50	2.50	SCIR/L-22-N/R/L	SR M4X0.7-19425	T-8/5

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

For inserts, see pages: SCIR-22-MTR-ISO (658) • SCIR/L-22-AD (367) • SCIR/L-22-AR/AL (367) • SCIR/L-22-BR/BL/BRA/BLA (365) • SCIR/L-22-ER/EL/ERA/ELA (366) • SCIR/L-22-MTR/MTL (646) • SCIR/L-22-N/R/L (368) • SCIR/L-22-NP (369) • SCIR/L-22-NX (369)

For holders, see pages: NQCH-JHP (61)



Left-hand shown

Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data	
	CW	GAN	RE	PSIRL	PSIRR	KRINS ⁽¹⁾	IC1008	IC07	IC1007	a _p (mm)	f turn (mm/rev)
							•	•	•		
SCIL 22-BL00-05K7	0.50	7.0	0.00	12.0	-	60.0	•			0.05-3.00	0.01-0.15
SCIL 22-BL10-05K7	0.50	7.0	0.10	12.0	-	60.0	•			0.12-3.00	0.01-0.15
SCIR 22-BR00-05K7	0.50	7.0	0.00	-	12.0	60.0	•			0.05-3.00	0.01-0.15
SCIR 22-BR10-05K7	0.50	7.0	0.10	-	12.0	60.0	•			0.12-3.00	0.01-0.15
SCIL 22-BLA00-05K8	0.50	8.0	0.00	20.0	-	60.0		•	•	0.05-3.00	0.01-0.15
SCIL 22-BLA08-05K8	0.50	8.0	0.08	20.0	-	60.0		•	•	0.10-3.00	0.01-0.15
SCIR 22-BRA00-05K8	0.50	8.0	0.00	-	20.0	60.0		•	•	0.05-3.00	0.01-0.15
SCIR 22-BRA08-05K8	0.50	8.0	0.08	-	20.0	60.0		•	•	0.10-3.00	0.01-0.15
SCIR 22-BR10-05K15	0.50	15.0	0.10	-	12.0	60.0	•			0.12-3.00	0.01-0.15
SCIL 22-BL08-10K7	1.00	7.0	0.08	12.0	-	60.0	•			0.10-3.00	0.01-0.15
SCIR 22-BR08-10K7	1.00	7.0	0.08	-	12.0	60.0	•			0.10-3.00	0.01-0.15
SCIR 22-BR08-10K15	1.00	15.0	0.08	-	12.0	60.0	•			0.10-3.00	0.01-0.15

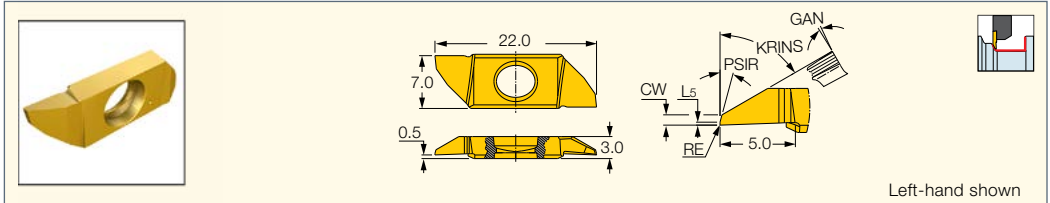
⁽¹⁾ Edge angle related to the wiper

For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363) • Y-SCHR-22BF-JHP (364)





SCIR/L-22-ER/EL/ERA/ELA
Back Turning Inserts for
Short Chipping Materials



Left-hand shown

Designation	Dimensions							Tough ↔ Hard			Recommended Machining Data	
	RE	CW	L5	GAN	KRINS ⁽¹⁾	PSIRL	PSIRR	IC1008	IC07	IC1007	a _p (mm)	f turn (mm/rev)
	SCIL 22-EL00-03K0	0.00	0.30	0.20	0.0	60.0	6.0	-	●			0.05-2.50
SCIR 22-ER00-03K0	0.00	0.30	0.20	0.0	60.0	6.0	-	●			0.05-2.50	0.01-0.15
SCIL 22-EL00-07K0	0.00	0.70	0.20	0.0	60.0	-	15.0	●			0.05-2.50	0.01-0.15
SCIR 22-EL00-07K0	0.00	0.70	0.20	0.0	60.0	-	15.0	●			0.05-2.50	0.01-0.15
SCIR 22-ER00-07K0	0.00	0.70	0.20	0.0	60.0	15.0	-	●			0.05-2.50	0.01-0.15
SCIL 22-EL00-07K10	0.00	0.70	0.20	10.0	60.0	-	3.0	●			0.05-2.50	0.01-0.15
SCIR 22-ER00-07K10	0.00	0.70	0.20	10.0	60.0	3.0	-	●			0.05-2.50	0.01-0.15
SCIL 22-ELA00-08K0	0.00	0.80	0.30	0.0	70.0	-	3.0		●	●	0.05-2.50	0.01-0.15
SCIR 22-ERA00-08K0	0.00	0.80	0.30	0.0	70.0	3.0	-		●	●	0.05-2.50	0.01-0.15

⁽¹⁾ Edge angle related to the wiper

For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363) • Y-SCHR-22BF-JHP (364)

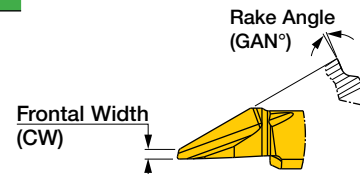
Rake Angle (GAN°) Selection Guide

	Brass	Ledloy	Steel	St. Steel	Titanium	Aluminum
0°						
8°						
15°						

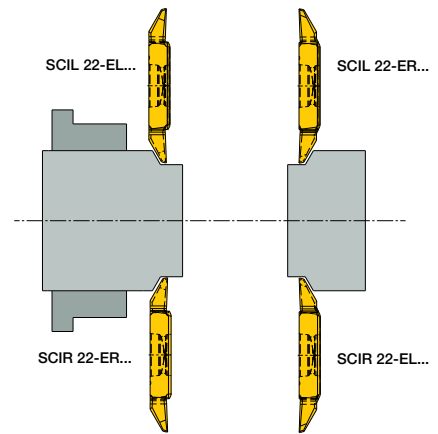
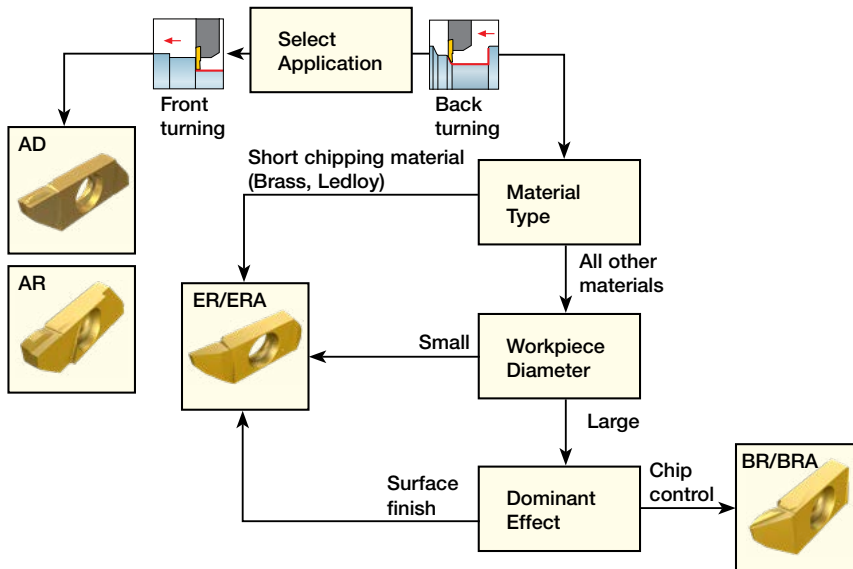
For brittle workpieces and small diameters always prefer GAN=0°

Frontal Width Selection Guide

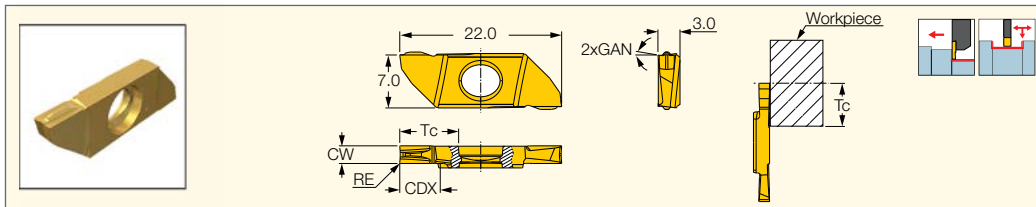
- Small diameters and brittle workpiece: small CW (less radial force)
- Large diameters: larger CW (stronger cutting edge)



Turning Insert Selection Process



SCIR/L-22-AD
Turning Inserts with a
Frontal Relief Angle

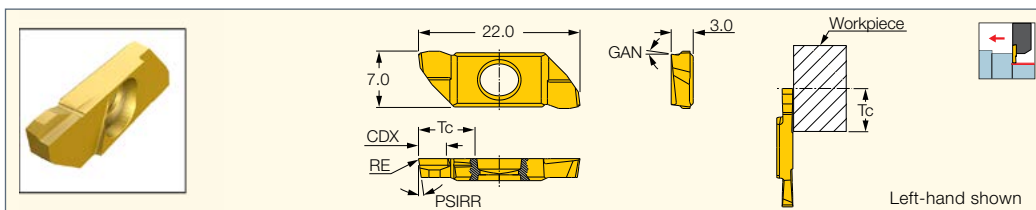


Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data		
	CW	RE	Tc	GAN	CDX ⁽¹⁾	IC1008	IC07	IC1007	ap (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-AD08-24K8	2.40	0.08	8.0	8.0	5.50	●	●	●	0.12-3.80	0.01-0.15	0.01-0.06

⁽¹⁾ Cutting depth maximum

For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363) • Y-SCHR-22BF-JHP (364)

SCIR/L-22-AR/AL
Turning Inserts with a
Frontal Relief Angle

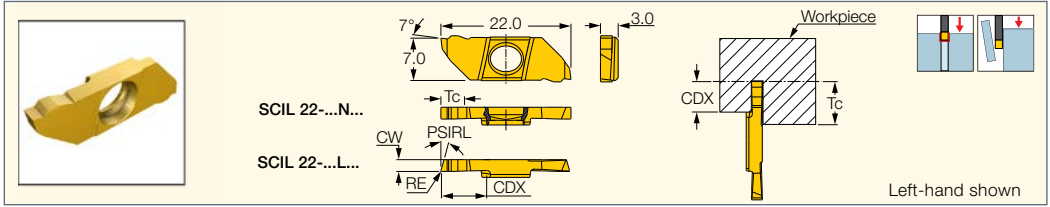


Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data	
	RE	Tc	PSIRL	PSIRR	GAN	CDX ⁽¹⁾	IC1008	IC07	IC1007	ap (mm)	f turn (mm/rev)
SCIL 22-AL00-25K16	0.00	8.0	8.0	-	16.0	3.80	●	●	●	0.05-3.80	0.01-0.15
SCIR 22-AR00-25K16	0.00	8.0	-	8.0	16.0	3.80	●	●	●	0.05-3.80	0.01-0.15
SCIL 22-AL10-25K8	0.10	8.0	12.0	-	8.0	3.80	●	●	●	0.12-3.80	0.01-0.15
SCIR 22-AR10-25K8	0.10	8.0	-	12.0	8.0	3.80	●	●	●	0.12-3.80	0.01-0.15

⁽¹⁾ Cutting depth maximum

For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363) • Y-SCHR-22BF-JHP (364)





Designation	Dimensions								Tough ↔ Hard			Recommended Machining Data
	CW	CWTOL ⁽¹⁾	PSIRL	PSIRR	RE	RETOL ⁽²⁾	CDX ⁽³⁾	Tc	IC1008	IC07	IC1007	
SCIL 22-050N-00	0.50	0.02	0.0	0.0	0.00	0.030	1.80	5.5	●	●	●	0.02-0.04
SCIR 22-050N-00	0.50	0.02	0.0	0.0	0.00	0.030	1.80	5.5	●	●	●	0.02-0.04
SCIL 22-100N-00	1.00	0.02	0.0	0.0	0.00	0.030	4.00	5.5	●	●	●	0.03-0.05
SCIR 22-100N-00	1.00	0.02	0.0	0.0	0.00	0.030	4.00	5.5	●	●	●	0.03-0.05
SCIL 22-150N-00	1.50	0.02	0.0	0.0	0.00	0.030	5.50	8.0	●	●	●	0.03-0.07
SCIR 22-150N-00	1.50	0.02	0.0	0.0	0.00	0.030	5.50	8.0	●	●	●	0.03-0.07
SCIL 22-200N-10	2.00	0.02	0.0	0.0	0.10	0.030	7.00	8.0	●	●	●	0.03-0.09
SCIR 22-200N-10	2.00	0.02	0.0	0.0	0.10	0.030	7.00	8.0	●	●	●	0.03-0.09
SCIL 22-050L12-00	0.50	0.02	12.0	-	0.00	0.030	2.00	5.5	●			0.01-0.03
SCIR 22-050L12-00	0.50	0.02	12.0	-	0.00	0.030	2.00	5.5	●			0.01-0.03
SCIR 22-050R12-00	0.50	0.02	-	12.0	0.00	0.030	2.00	5.5	●			0.01-0.03
SCIL 22-100L16-00	1.00	0.02	16.0	-	0.00	0.030	4.00	5.5	●			0.02-0.04
SCIR 22-100L16-00	1.00	0.02	-	16.0	0.00	0.030	4.00	5.5	●			0.02-0.04
SCIR 22-100R16-00	1.00	0.02	16.0	-	0.00	0.030	4.00	5.5	●			0.02-0.04
SCIR 22-100R16-00	1.00	0.02	-	16.0	0.00	0.030	4.00	5.5	●			0.02-0.04
SCIL 22-150L16-00	1.50	0.02	16.0	-	0.00	0.030	5.50	8.0	●			0.03-0.06
SCIL 22-150R16-00	1.50	0.02	-	16.0	0.00	0.030	5.50	8.0	●			0.03-0.06
SCIR 22-150L16-00	1.50	0.02	16.0	-	0.00	0.030	5.50	8.0	●			0.03-0.06
SCIR 22-150R16-00	1.50	0.02	-	16.0	0.00	0.030	5.50	8.0	●			0.03-0.06
SCIL 22-200L16-00	2.00	0.02	16.0	-	0.00	0.030	7.00	8.0	●			0.03-0.07
SCIL 22-200R16-00	2.00	0.02	-	16.0	0.00	0.030	7.00	8.0	●			0.03-0.07
SCIR 22-200L16-00	2.00	0.02	16.0	-	0.00	0.030	7.00	8.0	●			0.03-0.07
SCIR 22-200R16-00	2.00	0.02	-	16.0	0.00	0.030	7.00	8.0	●			0.03-0.07

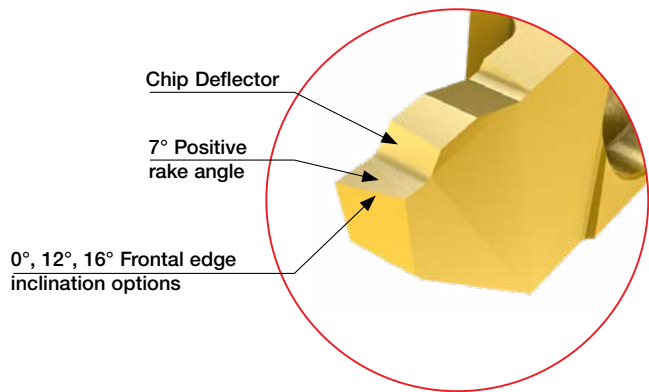
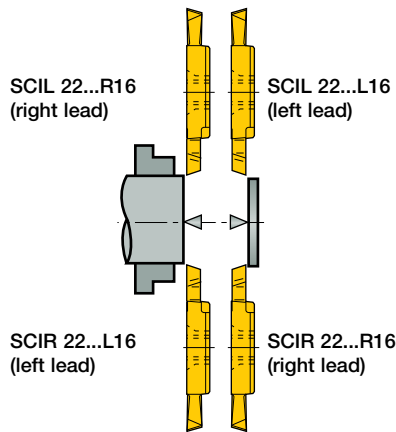
⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

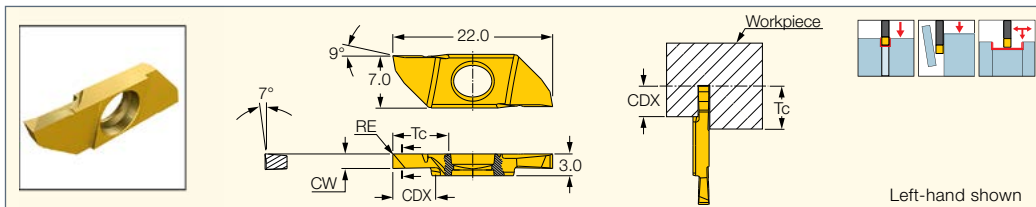
For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363)

• Y-SCHR-22BF-JHP (364)



SCIR/L-22-NP

Grooving, Turning and Parting Inserts



Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	Tc	IC1008	IC07	IC1007	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-080NP00	0.80	0.00	0.02	0.020	2.50	8.0	●	●	●	0.05-0.70	0.02-0.06	0.02-0.05
SCIR/L 22-100NP08	1.00	0.08	0.02	0.020	3.00	8.0	●	●	●	0.05-0.80	0.02-0.08	0.02-0.06
SCIR/L 22-150NP05	1.50	0.05	0.02	0.020	6.00	8.0	●	●	●	0.05-1.80	0.02-0.11	0.02-0.07
SCIR/L 22-200NP05	2.00	0.05	0.02	0.020	6.00	8.0	●	●	●	0.05-2.50	0.03-0.15	0.03-0.09
SCIR/L 22-250NP05	2.50	0.05	0.02	0.020	6.00	8.0	●	●	●	0.05-3.10	0.03-0.19	0.03-0.11

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

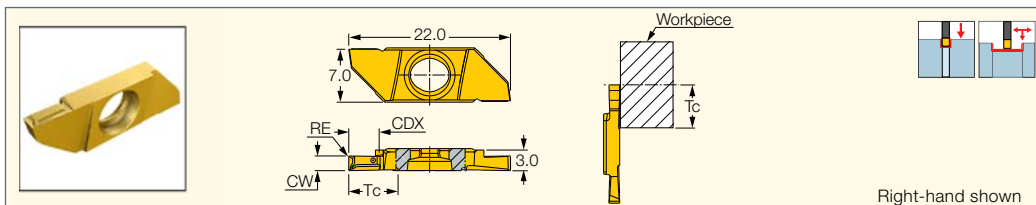
⁽³⁾ Cutting depth maximum

For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363)

• Y-SCHR-22BF-JHP (364)

SCIR/L-22-NX

Grooving and Turning Inserts with a Chipformer



Designation	Dimensions						IC1008	Recommended Machining Data		
	CW	CWTOL ⁽¹⁾	RE	RETOL ⁽²⁾	CDX ⁽³⁾	Tc ⁽⁴⁾		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-150NX080	1.50	0.02	0.08	0.020	4.30	6.8	●	0.05-1.80	0.02-0.11	0.02-0.07
SCIR/L 22-200NX080	2.00	0.02	0.08	0.020	4.30	6.8	●	0.05-2.50	0.03-0.15	0.03-0.09
SCIR/L 22-250NX080	2.50	0.02	0.08	0.020	4.30	6.8	●	0.05-3.10	0.03-0.19	0.03-0.11

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

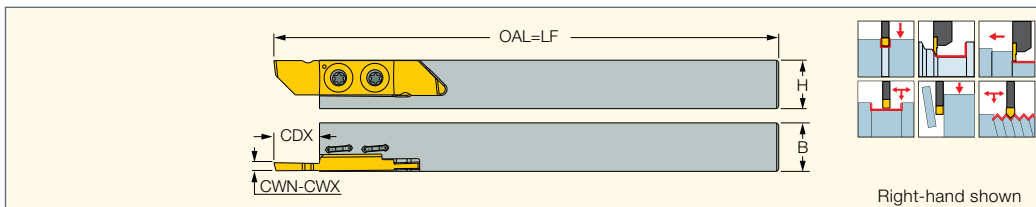
⁽⁴⁾ Maximum 32 mm diameter for face turning

For tools, see pages: NQCH-SCHR/L-BF-JHP (364) • NQCH-Y-SCHR-BF-JHP (364) • SCHR/L-22BF (363) • SCHR/L-22BF-JHP (363) • Y-SCHR-22BF (363)

• Y-SCHR-22BF-JHP (364)

SCHR/L-41BF

Grooving and Turning Tools with Back and Front Clamping for Swiss-Type and Automatic Machines



Designation	CWX ⁽¹⁾	CDX ⁽²⁾	B	OAL					
SCHR/L 12-41BF	3.00	11.00	12.0	125.00	SR M4.5X0.75-L7.9	BLD T15/S7	SR M2X0.4-L3.5	BLD T10/S7	SW6-SD
SCHR/L 16-41BF	3.00	11.00	16.0	125.00	SR M4.5X0.75-L7.9	BLD T15/S7	SR M2X0.4-L3.5	BLD T10/S7	SW6-SD

⁽¹⁾ Maximum cutting width

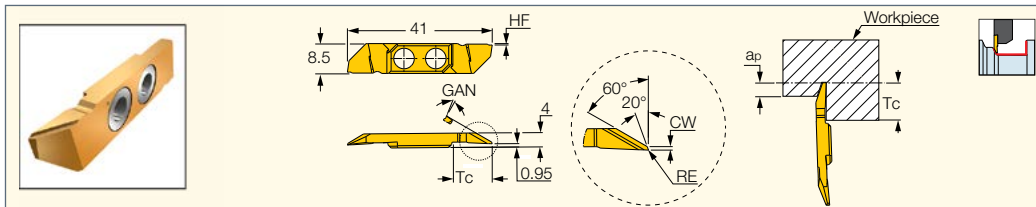
⁽²⁾ See insert data

For inserts, see pages: SCIR/L-41-AD (370) • SCIR/L-41-AR/AL (371) • SCIR/L-41-BRA/BLA (370) • SCIR/L-41-ERA/ELA (370) • SCIR/L-41-MTR/MTL (647)

• SCIR/L-41-N/R/L (371) • SCIR/L-41-NP (372)



SCIR/L-41-BRA/BLA
Back Turning Inserts

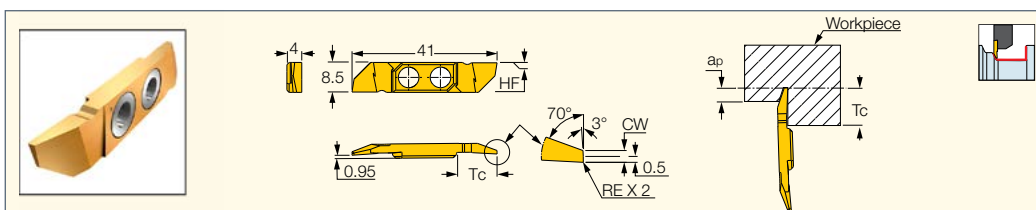


Designation	Dimensions						IC1008	Recommended Machining Data	
	CW	RE	HF ⁽¹⁾	Tc	GAN	a _p (mm)		f turn (mm/rev)	
SCIL 41-BLA08-05K8	0.50	0.08	0.5	11.0	8.0	●	0.10-4.20	0.02-0.15	
SCIR 41-BRA08-05K8	0.50	0.08	0.5	11.0	8.0	●	0.10-4.20	0.02-0.15	
SCIL 41-BLA08-10K8	1.00	0.08	0.5	11.0	8.0	●	0.10-4.20	0.02-0.15	
SCIR 41-BRA08-10K8	1.00	0.08	0.5	11.0	8.0	●	0.10-4.20	0.02-0.15	

⁽¹⁾ Cutting edge below center
For tools, see pages: SCHR/L-41BF (369)



SCIR/L-41-ERA/ELA
Back Turning Inserts for Short Chipping Materials

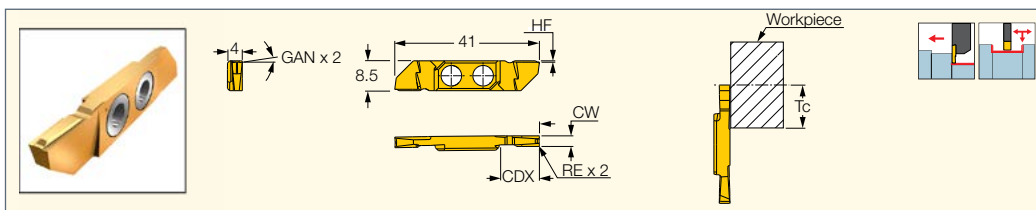


Designation	Dimensions					IC1008	Recommended Machining Data	
	CW	RE	HF ⁽¹⁾	Tc	a _p (mm)		f turn (mm/rev)	
SCIL 41-ELA00-10K0	1.00	0.00	0.2	11.0	●	0.05-5.00	0.02-0.15	
SCIR 41-ERA00-10K0	1.00	0.00	0.2	11.0	●	0.05-5.00	0.02-0.15	
SCIL 41-ELA08-10K0	1.00	0.08	0.2	11.0	●	0.10-5.00	0.02-0.15	
SCIR 41-ERA08-10K0	1.00	0.08	0.2	11.0	●	0.10-5.00	0.02-0.15	

⁽¹⁾ Cutting edge below center
For tools, see pages: SCHR/L-41BF (369)



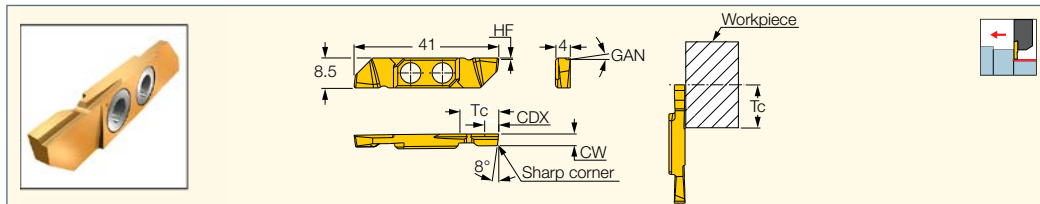
SCIR/L-41-AD
Turning Inserts



Designation	Dimensions								IC1008	Recommended Machining Data		
	CW	CWTOL ⁽¹⁾	RE	RETOL ⁽²⁾	HF ⁽³⁾	CDX	Tc	GAN		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 41-AD08-30K8	3.00	0.020	0.08	0.020	0.5	11.00	11.0	8.0	●	0.12-4.00	0.02-0.15	0.01-0.06

⁽¹⁾ Cutting width tolerance (+/-)
⁽²⁾ Corner radius tolerance (+/-)
⁽³⁾ Cutting edge below center
For tools, see pages: SCHR/L-41BF (369)

SCIR/L-41-AR/AL
Turning Inserts with a
Frontal Relief Angle

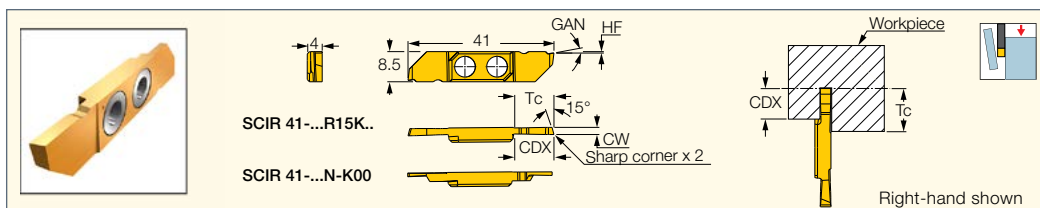


Designation	Dimensions					IC1008	Recommended Machining Data	
	CW	HF ⁽¹⁾	CDX	Tc	GAN		a _p (mm)	f turn (mm/rev)
SCIL 41-AL00-33K16	3.30	0.5	4.00	11.0	16.0	●	0.05-4.00	0.02-0.15
SCIR 41-AR00-33K16	3.30	0.5	4.00	11.0	16.0	●	0.05-4.00	0.02-0.15

⁽¹⁾ Cutting edge below center

For tools, see pages: SCHR/L-41BF (369)

SCIR/L-41-N/R/L
Grooving and Parting Inserts



Designation	Dimensions						IC1008	Recommended Machining Data
	CW	CWTOL ⁽¹⁾	GAN	HF ⁽²⁾	CDX	Tc		f groove (mm/rev)
SCIL 41-100L15K00	1.00	0.020	0.0	0.2	6.00	11.0	●	0.02-0.04
SCIR/L 41-100N-K00	1.00	0.020	0.0	0.1	6.15	11.0	●	0.03-0.05
SCIR 41-100R15K00	1.00	0.020	0.0	0.2	6.00	11.0	●	0.02-0.04
SCIL 41-150L15K00	1.50	0.020	0.0	0.2	8.00	11.0	●	0.03-0.06
SCIR/L 41-150N-K00	1.50	0.020	0.0	0.1	8.15	11.0	●	0.03-0.07
SCIR 41-150R15K00	1.50	0.020	0.0	0.2	8.00	11.0	●	0.03-0.06
SCIL 41-150L15K7	1.50	0.020	7.0	0.5	8.00	11.0	●	0.03-0.06
SCIR 41-150R15K7	1.50	0.020	7.0	0.5	8.00	11.0	●	0.03-0.06
SCIL 41-200L15K00	2.00	0.020	0.0	0.2	10.00	11.0	●	0.03-0.07
SCIR/L 41-200N-K00	2.00	0.020	0.0	0.1	11.00	11.0	●	0.03-0.09
SCIR 41-200R15K00	2.00	0.020	0.0	0.2	10.00	11.0	●	0.03-0.07
SCIL 41-200L15K7	2.00	0.020	7.0	0.5	10.00	11.0	●	0.03-0.07
SCIR 41-200R15K7	2.00	0.020	7.0	0.5	10.00	11.0	●	0.03-0.07
SCIL 41-250L15K00	2.50	0.020	0.0	0.2	10.00	11.0	●	0.03-0.07
SCIR/L 41-250N-K00	2.50	0.020	0.0	0.1	11.00	11.0	●	0.03-0.09
SCIR 41-250R15K00	2.50	0.020	0.0	0.2	10.00	11.0	●	0.03-0.07
SCIL 41-250L15K7	2.50	0.020	7.0	0.5	10.00	11.0	●	0.03-0.07
SCIR 41-250R15K7	2.50	0.020	7.0	0.5	10.00	11.0	●	0.03-0.07
SCIL 41-300L15K00	3.00	0.020	0.0	0.2	10.00	11.0	●	0.03-0.08
SCIR/L 41-300N-K00	3.00	0.020	0.0	0.1	11.00	11.0	●	0.03-0.10
SCIR 41-300R15K00	3.00	0.020	0.0	0.2	10.00	11.0	●	0.03-0.08

⁽¹⁾ Cutting width tolerance (+/-)

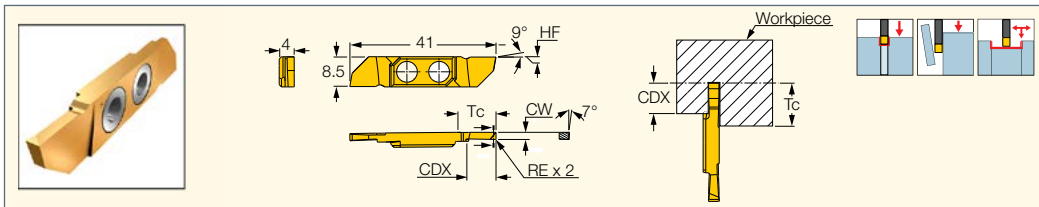
⁽²⁾ Cutting edge below center

For tools, see pages: SCHR/L-41BF (369)

SWISSCUT
EXTRA LONG

SCIR/L-41-NP

Grooving, Turning and Parting Inserts



Designation	Dimensions							IC1008	Recommended Machining Data		
	CW	CWTOL ⁽¹⁾	RE	RETOL ⁽²⁾	HF ⁽³⁾	CDX	Tc		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 41-150NP08	1.50	0.020	0.08	0.020	0.2	8.00	11.0	●	0.10-1.80	0.02-0.10	0.02-0.07
SCIR/L 41-200NP08	2.00	0.020	0.08	0.020	0.2	8.00	11.0	●	0.10-2.50	0.02-0.15	0.02-0.09
SCIR/L 41-250NP08	2.50	0.020	0.08	0.020	0.2	10.00	11.0	●	0.10-3.00	0.02-0.17	0.02-0.11
SCIR/L 41-300NP08	3.00	0.020	0.08	0.020	0.2	10.00	11.0	●	0.10-4.00	0.02-0.20	0.02-0.12

• When turning to the opposite side of chipformer, maximum D.O.C. is 0.5 mm

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

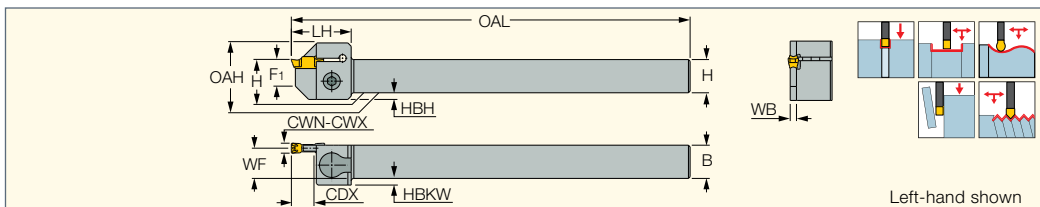
⁽³⁾ Cutting edge below center

For tools, see pages: SCHR/L-41BF (369)

CUTGRIP

GEHSR/L-SL

External Machining Tools with Side Clamping Mechanism for Swiss-Type and Automatic Machines



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	B	OAL	WF	HBH	HBKW	WB	LH	F1	OAH
GEHSR/L 10-2-SL	10.0	2.20	3.20	6.80	10.0	120.00	9.10	2.0	2.00	1.80	18.0	8.0	15.0
GEHSR/L 12-2-SL	12.0	2.20	3.20	6.80	12.0	120.00	11.10	-	-	1.80	18.0	8.0	17.0
GEHSR/L 16-2-SL	16.0	2.20	3.20	6.80	16.0	120.00	15.10	-	-	1.80	18.0	8.0	21.0

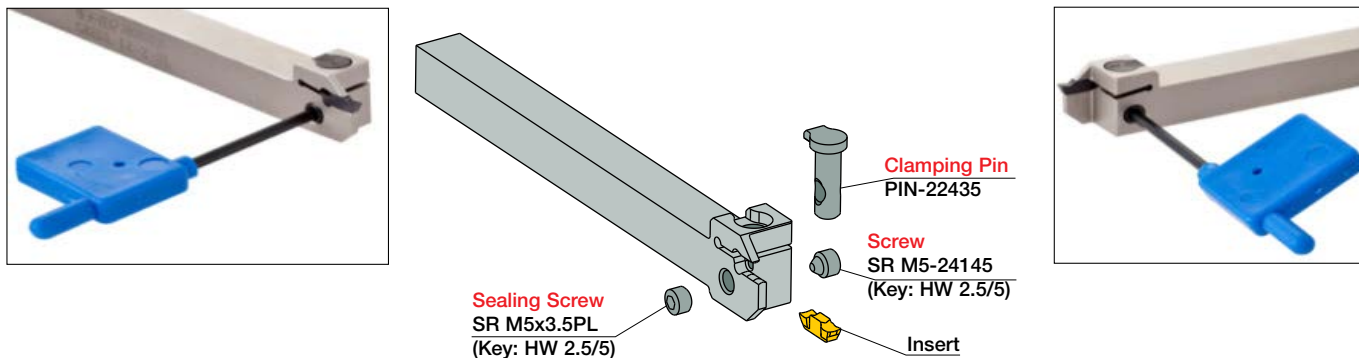
• For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI-MT (648) • GEPI-WT (642)

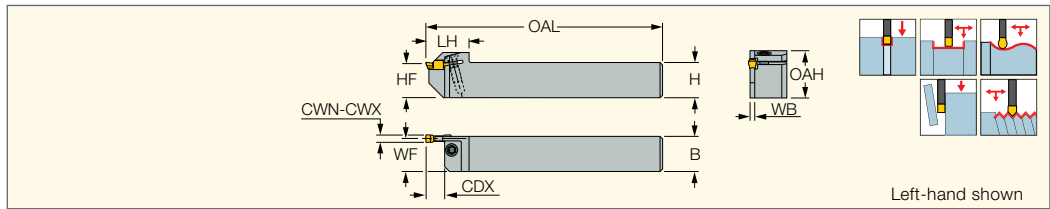




Spare Parts

Designation				
GEHSR/L-SL	PIN-22435 INJ	SR M5-24145	HW 2.5/5	SR M5x3.5PL

CUTGRIP

GEHSR
External Machining Holders
for Swiss-Type and
Automatic Machines



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	HF	B	OAL	WF	WB	LH	OAH		
GEHSR 20-2	20.0	2.20	3.20	6.80	20.0	20.0	120.00	19.10	1.80	20.0	24.0	SR 16-236 P	T-15/3

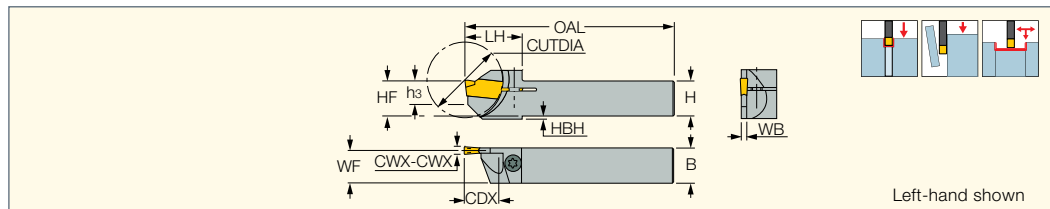
• For user guide, see pages 419-428, 432-436



- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ Cutting depth maximum

For inserts, see pages: GEMI (341) • GEMI (full radius) (341) • GEPI (342) • GEPI (full radius) (342) • GEPI-MT (648) • GEPI-WT (642)

CUTGRIP

PHSR/L
External Machining Holders
for Swiss-Type and
Automatic Machines



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CUTDIA ⁽³⁾	H	HF	B	OAL	WF	h3	LH	HBH	WB		
PHSR/L 10-2.4	2.40	3.18	20.0	10.0	10.0	10.0	150.00	9.00	8.0	18.0	2.0	1.90	SR 16-236 P	T-15/3
PHSR/L 12-2.4	2.40	3.18	25.0	12.0	12.0	12.0	150.00	11.10	7.0	20.0	-	1.90	SR 16-236 P	T-15/3
PHSR/L 16-2.4	2.40	3.18	32.0	16.0	16.0	16.0	150.00	15.10	8.0	24.1	-	1.90	SR 16-236 P	T-15/3

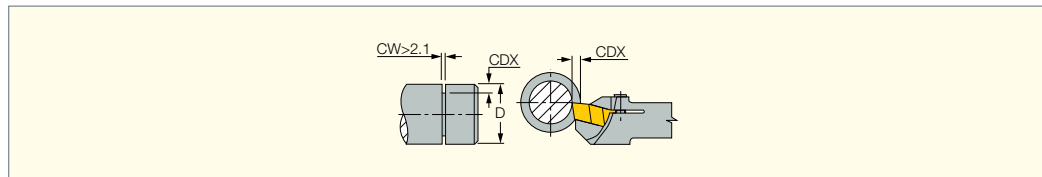
• CDX=Max depth capacity, see chart below • For user guide, see pages 419-428, 432-436

- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ Limited by part diameter

For inserts, see pages: GDMW 2.4 (306)

Grooving Depth

Grooving Depth CDX per
Diameter for Width > 2.1 mm

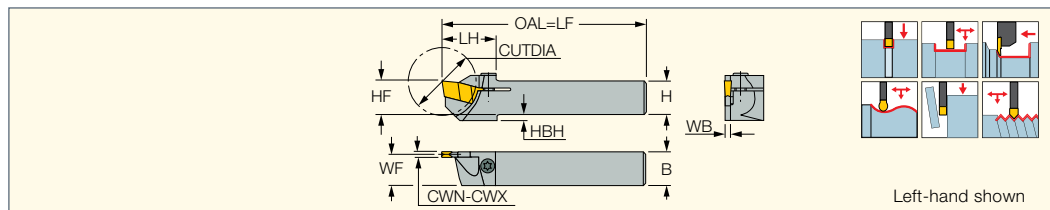




Tmax	5.0	4.5	4.0	3.5	3.0	2.5	2.3	2.0	1.7
D	10.5	10.8	11.5	12.6	14.5	17	20	25	34

Tmax is also limited by insert

CUTGRIP

GHSR/L
External Grooving and Turning
Holders for Swiss-Type and
Automatic Machines



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	CUTDIA ⁽³⁾	H	HF	B	OAL	WF	LH	HBH	WB		
GHSR/L 10-2	2.20	3.15	20.0	10.0	10.0	10.0	120.00	9.10	18.0	2.0	1.80	SR 16-236 P	T-15/3
GHSR/L 12-2	2.20	3.15	25.0	12.0	12.0	12.0	120.00	11.10	20.0	2.0	1.80	SR 16-236 P	T-15/3
GHSR/L 14-2	2.20	3.15	26.0	14.0	14.0	14.0	120.00	13.10	20.0	-	1.80	SR 16-236 P	T-15/3
GHSR/L 16-2	2.20	3.15	32.0	16.0	16.0	16.0	120.00	15.10	26.0	-	1.80	SR 16-212	T-20/3

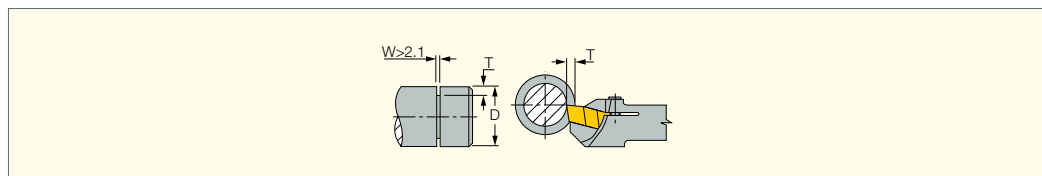
• For user guide, see pages 419-428, 432-436

- ⁽¹⁾ Minimum cutting width
- ⁽²⁾ Maximum cutting width
- ⁽³⁾ For CW>2.1 mm: grooving depth depends on part diameter

For inserts, see pages: GIG (296) • GIM-J (522) • GIM-J-RA/LA (522) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

Grooving Depth

Grooving Depth Tmax per
Diameter for Width > 2.1 mm

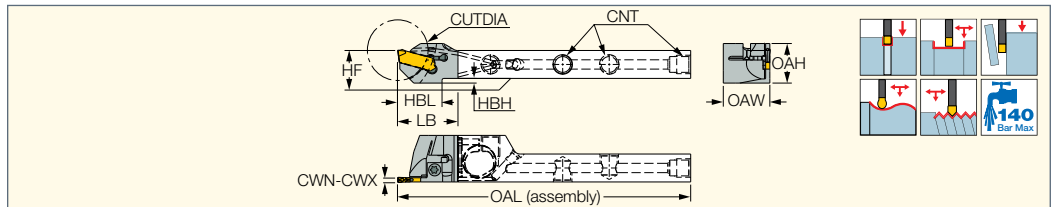


Tmax	5.0	4.5	4.0	3.5	3.0	2.5	2.3	2.0	1.7
D	10.5	10.8	11.5	12.6	14.5	17	20	25	34

Tmax is also limited by insert

NEOSWISS
INDEXABLE HEADS
CUTGRIP

NQCH-GHSR/L-JHP
Screw Lock JETCUT Modular
Heads for Swiss Type Machines
- Grooving and Turning Inserts





Designation	HF	OAW	LB	OAH	HBH	OAL	HBL	CWN ⁽¹⁾	CWX ⁽²⁾	CUTDIA	Insert
NQCH12-GHSR/L-2-JHP	12.0	20.00	26.00	17.00	2.0	126.00	2.0	2.20	3.00	25.0	GIP 2
NQCH16-GHSR/L-2-JHP	16.0	20.00	26.00	19.00	-	126.00	-	2.20	3.00	25.0	GIP 2

⁽¹⁾ Minimum cutting width
⁽²⁾ Maximum cutting width

For inserts, see pages: GIG (296) • GIM-J (522) • GIM-J-RA/LA (522) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (flat top W<M) (295) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

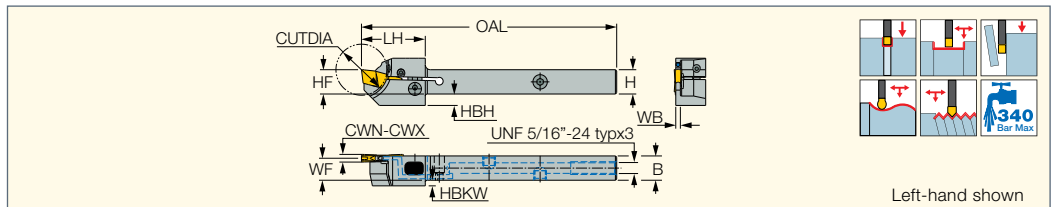
For holders, see pages: NQCH-JHP (61)

Spare Parts

Designation		
NQCH-GHSR/L-JHP	SR 16-236 P	T-15/3

CUTGRIP JETCUT

GHSR/L-JHP-SL
Grooving and Turning Side
Lock Tools with Channels
for High-Pressure Coolant
on Swiss-Type and
Automatic Machines



Designation	CWN ⁽¹⁾	CWX ⁽²⁾	H	B	CUTDIA	OAL	LH	WF	HBKW	WB	HF
GHSR/L 10-2-JHP-SL	2.20	3.00	10.0	10.0	20.0	100.00	25.0	9.10	2.2	1.80	10.0
GHSL 12-2-JHP-SL	2.20	3.00	12.0	12.0	25.0	100.00	25.0	11.10	-	1.80	12.0
GHSR 12-2-JHP-SL	2.20	3.00	12.0	12.0	25.0	100.00	25.0	11.10	-	0.00	12.0
GHSR/L 16-2-JHP-SL	2.20	3.00	16.0	16.0	25.0	120.00	27.0	15.10	-	1.80	16.0
GHSR/L 12-3-JHP-SL	2.80	4.00	12.0	12.0	25.0	100.00	25.0	10.80	-	2.40	12.0
GHSR/L 16-3-JHP-SL	2.80	4.00	16.0	16.0	25.0	120.00	27.0	14.80	-	2.40	16.0

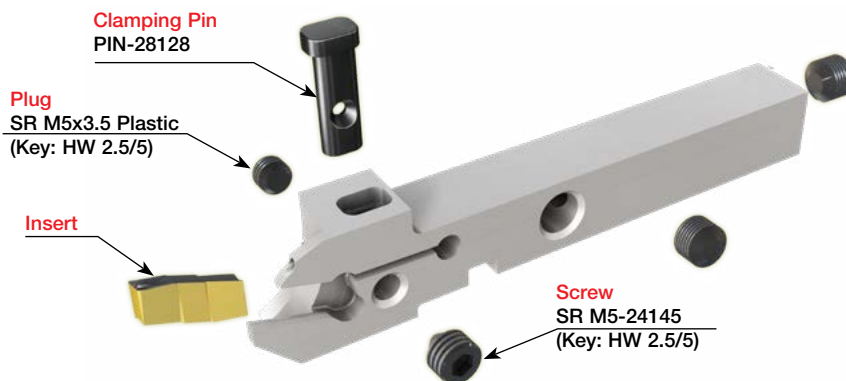
• For user guide and accessories, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width
⁽²⁾ Maximum cutting width







For inserts, see pages: GIG (296) • GIM-J (522) • GIM-J-RA/LA (522) • GIMY (288) • GIMY (full radius) (290) • GIMY-F (291) • GIP (297) • GIP (full radius W<M) (295) • GIP (full radius) (296) • GIP-E (293) • GIP-E (full radius) (294) • GIPA (full radius W=3-6) (301) • GIPA (W=3-6) (300) • GIPM-A46 / GIP-1250 (375) • GIPY (300) • GITM (299) • GITM (full radius) (299) • TIP-MT (647) • TIP-P-BSPT (674) • TIP-P-BSW (668) • TIP-P-ISO (658) • TIP-P-NPT (671) • TIP-P-UN (664) • TIP-WT (641)

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GHSR/L...-JHP-SL	4-6	7-9	9-11

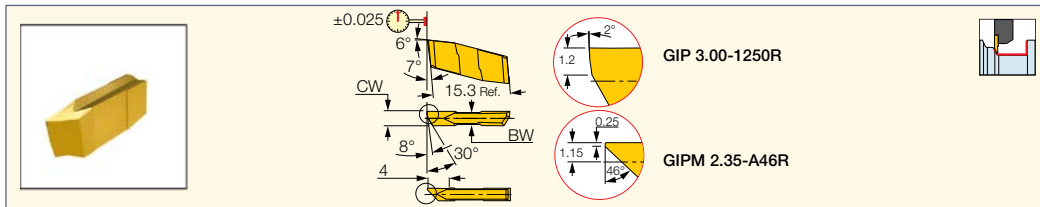


Spare Parts

Designation						
GHSR/L-JHP-SL	PIN-28128 INJ	SR M5-24145	SR M5X3.5PL	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"

CUTGRIP

GIPM-A46 / GIP-1250
Precision Ground Back
Turning Inserts for External
Machining on Swiss-Type
and Automatic Machines



Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data	
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC928	IC908	IC20	a _p (mm)	f _{turn} (mm/rev)
GIPM 2.35-A46R/L	2.35	0.05	0.05	0.030	2.20	●	●	●	0.10-1.00	0.02-0.15
GIP 3.00-1250R/L	3.00	0.00	0.05	0.030	2.40	●	●	●	0.10-1.00	0.02-0.15

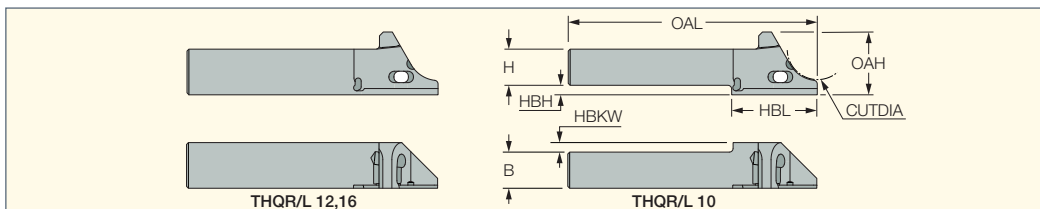
- Toolholder seat needs to be modified according to insert profile to ensure clearance
- For cutting speed recommendations and user guide, see pages 419-428, 432-436
- For grooving, reduce cutting speed by 30% and feed by 50%

⁽¹⁾ Cutting width tolerance (+/-)
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283)
CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276) • GHDR/L-JHP-MC (short pocket) (277)
GHGR/L (278) • GHMPR/L (273) • GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)

SWISSGRIP

THQR/L
Parting and Grooving Holder for a
SELF-GRIP Mini Blades (SGAQ),
Suitable for Swiss-Type Machines

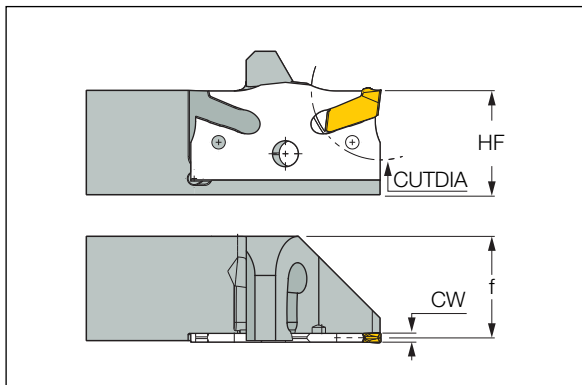


Designation	H	OAL	HF	OAH	HBL	HBH	CUTDIA	HBKW	B
THQR/L 10-D16	10.0	100.00	10.0	16.50	22.6	2.0	16.0	12.00	10.0
THQR/L 12-D16	12.0	100.00	12.0	16.50	-	-	16.0	-	12.0
THQR/L 16-D16	16.0	100.00	16.0	20.50	-	-	16.0	-	16.0

For tools, see pages: SGAQ (376)

Designation	CW	CUTDIA	f
THQL/R 10-D16 + SGAQ 0.6	0.6	10	9.68
THQL/R 10-D16 + SGAQ 0.8	0.8	10	9.68
THQL/R 12-D16 + SGAQ 0.6	0.6	10	11.68
THQL/R 12-D16 + SGAQ 0.8	0.8	10	11.68
THQL/R 16-D16 + SGAQ 0.6	0.6	10	15.68
THQL/R 16-D16 + SGAQ 0.8	0.8	10	15.68

Designation	CW	CUTDIA	f
THQL/R 10-D16 + SGAQ 1.0	1	16	9.60
THQL/R 10-D16 + SGAQ 1.2	1.2	16	9.68
THQL/R 12-D16 + SGAQ 1.0	1	16	11.60
THQL/R 12-D16 + SGAQ 1.2	1.2	16	11.68
THQL/R 16-D16 + SGAQ 1.0	1	16	15.60
THQL/R 16-D16 + SGAQ 1.2	1.2	16	15.68



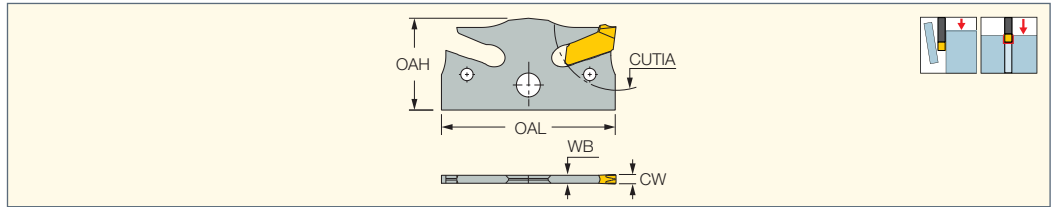
Spare Parts

Designation	
THQR/L	ESG-SWISS 0.6-1.2



SGAQ

SELF-GRIP Mini Blades for Parting and Grooving, Suitable for Swiss-Type Machines



Designation	OAH	OAL	CUTDIA	WB	CW	MIID ⁽¹⁾	
SGAQ D10-0.6	11.50	21.80	10.0	0.50	0.60	GFT 0.6J-0.1	ESG-SLM*
SGAQ D10-0.8	11.50	21.80	10.0	0.68	0.80	GFT 0.8J-0.1	ESG-SLM*
SGAQ D16-1.0	11.50	21.80	16.0	0.85	1.00	GFT 1.0J-0.1	ESG-SLM*
SGAQ D16-1.2	11.50	21.80	16.0	1.00	1.20	GFT 1.2J-0.14	ESG-SLM*

• For user guide, see pages 419-428, 432-436

⁽¹⁾ Master insert identification

* Optional, should be ordered separately

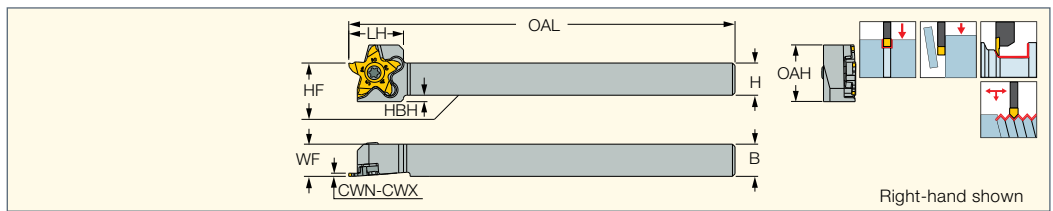
For inserts, see pages: GFT-J (520)

For holders, see pages: THQR/L (375)



PCHRS/LS-17

Tools Carrying Inserts with 5 Cutting Edges for Grooving, Parting and Recessing Next to High Shoulders



Designation	H	B	CWN ⁽¹⁾	CWX ⁽²⁾	WF	OAL	LH	HBH	OAH	HF
PCHR/LS 0810-17	8.0	10.0	0.25	3.18	10.00	120.00	17.0	4.0	13.60	8.0
PCHR/LS 10-17	10.0	10.0	0.25	3.18	10.00	120.00	17.0	2.0	15.60	10.0
PCHR/LS 12-17	12.0	12.0	0.25	3.18	12.00	120.00	17.0	-	17.60	12.0
PCHR/LS 16-17	16.0	16.0	0.25	3.18	16.00	120.00	17.0	-	21.60	16.0
PCHR/LS 20-17	20.0	20.0	0.25	3.18	20.00	120.00	17.0	-	25.60	20.0
PCHR/LS 25-17	25.0	25.0	0.25	3.18	25.00	120.00	17.0	-	30.60	25.0

• Use right-hand inserts on right-hand tools and vice versa

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

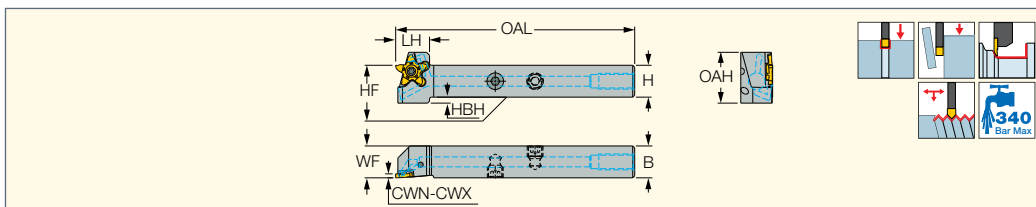
For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)

• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

Spare Parts

Designation		
PCHLS 0810-17	SR M4-39432	T-1508/5
PCHRS 0810-17	SR M4-39432L	T-1508/5
PCHLS 10-17	SR M4-39432	T-1508/5
PCHRS 10-17	SR M4-39432L	T-1508/5
PCHLS 12-17	SR M4-39432	T-1508/5
PCHRS 12-17	SR M4-39432L	T-1508/5
PCHLS 16-17	SR M4-39432	T-1508/5
PCHRS 16-17	SR M4-39432L	T-1508/5
PCHLS 20-17	SR M4-39432	T-1508/5
PCHRS 20-17	SR M4-39432L	T-1508/5
PCHLS 25-17	SR M4-39432	T-1508/5
PCHRS 25-17	SR M4-39432L	T-1508/5

PCHRS/LS-17-JHP
Tools Carrying Inserts with
5 Cutting Edges for Shallow
Profiling Next to High Shoulders







Designation	H	B	WF	OAL	LH	HBH	HF	OAH
PCHR/LS 10-17-JHP	10.0	10.0	10.00	100.00	17.0	8.0	10.0	24.50
PCHR/LS 12-17-JHP	12.0	12.0	12.00	100.00	17.0	6.0	12.0	24.50
PCHR/LS 16-17-JHP	16.0	16.0	16.00	120.00	17.0	3.0	16.0	25.50
PCHR/LS 20-17-JHP	20.0	20.0	20.00	120.00	17.0	-	20.0	26.50
PCHR/LS 25-17-JHP	25.0	25.0	25.00	120.00	17.0	-	25.0	31.50

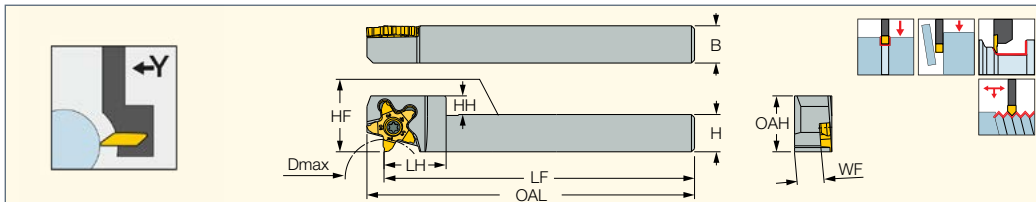
• Use right-hand inserts on right-hand tools and vice versa

For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)
• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309) • PENTA 17R/L-SP-RS (310)

Spare Parts

Designation				
PCHLS 10-17-JHP	SR M4-39432	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHRS 10-17-JHP	SR M4-39432L	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHLS 12-17-JHP	SR M4-39432	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHRS 12-17-JHP	SR M4-39432L	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHLS 16-17-JHP	SR M4-39432	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHRS 16-17-JHP	SR M4-39432L	T-1508/5	HW 5/32"	SR 5/16UNF TL360
PCHLS 20-17-JHP	SR M4-39432	T-1508/5	HW 5.0	PLG G1/8 TL360
PCHRS 20-17-JHP	SR M4-39432L	T-1508/5	HW 5.0	PLG G1/8 TL360
PCHLS 25-17-JHP	SR M4-39432	T-1508/5		
PCHRS 25-17-JHP	SR M4-39432L	T-1508/5		

Y-PCHRS-17
Y Axis Swiss Type Machine
Tools - 5 Cutting Edged Inserts -
Grooving, Parting and Recessing
Next to High Shoulders





Designation	H	B	HH	LH	HF	WF	OAH	LF	OAL	D _{max}
Y-PCHRS 12-17	12.0	12.0	6.0	20.0	12.0	8.60	18.00	100.00	105.50	25.0 (1)
Y-PCHRS 16-17	16.0	16.0	2.0	20.0	16.0	12.30	18.00	125.00	130.50	38.0 (1)

• Use right-hand inserts on right-hand tools and vice versa

(1) for grooving

For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)
• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

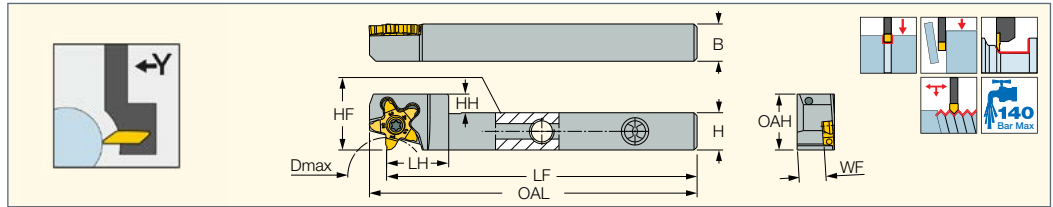
Spare Parts

Designation		
Y-PCHRS-17	T-1508/5	SR M4-39432L



NEO^{AXIS}SWISS

Y-PCHRS-17-JHP
Y Axis Swiss Type JETCUT
Tools - 5 Cutting Edged Inserts
for Grooving, Parting and
Recessing Next to Shoulders





Designation	H	B	HH	LH	HF	WF	OAH	LF	OAL	D _{max}
Y-PCHRS 12-17-JHP	12.0	12.0	6.0	20.0	12.0	8.60	18.00	100.00	105.50	25.0 ⁽¹⁾
Y-PCHRS 16-17-JHP	16.0	16.0	2.0	20.0	16.0	12.30	18.00	125.00	130.50	38.0 ⁽¹⁾

• Use right-hand inserts on right-hand tools and vice versa

⁽¹⁾ for grooving

For inserts, see pages: PENTA 17-ER/EL (310) • PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309)
• PENTA 17-P-RS/LS (full radius) (311) • PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

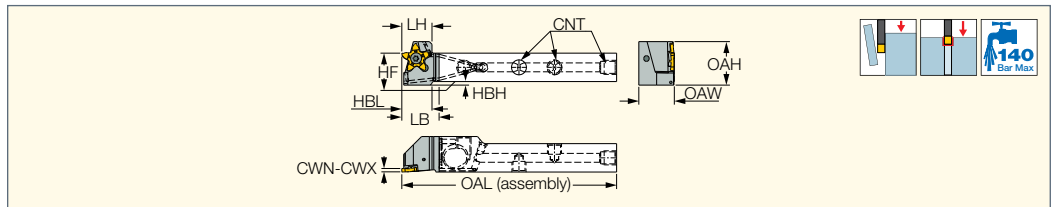
Spare Parts

Designation		
Y-PCHRS-17-JHP	HW 5/32"	T-1508/5

NEOSWISS

PENTACUT

NQCH-PCHR/L-S-JHP
Screw Lock JETCUT Modular
Heads for Swiss Type Machines
- Grooving, Parting, Recessing
5 Cutting Edged Inserts



Designation	HF	OAW	LB	OAH	HBH	LH	OAL	HBL	CWN ⁽¹⁾	CWX ⁽²⁾	Insert
NQCH12-PCHR/LS-17-JHP	12.0	20.00	21.00	24.40	6.0	17.0	121.00	17.0	0.25	3.18	PENTA 17
NQCH16-PCHR/LS-17-JHP	16.0	20.00	21.00	24.50	2.0	17.0	121.00	17.0	0.25	3.18	PENTA 17



⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

For inserts, see pages: PENTA 17-MT-RS/LS (383) • PENTA 17-NP-RS/LS (310) • PENTA 17-P-RS/LS (309) • PENTA 17-P-RS/LS (full radius) (311)
• PENTA 17-WT-RS/LS (383) • PENTA 17R/L-P-RS (309)

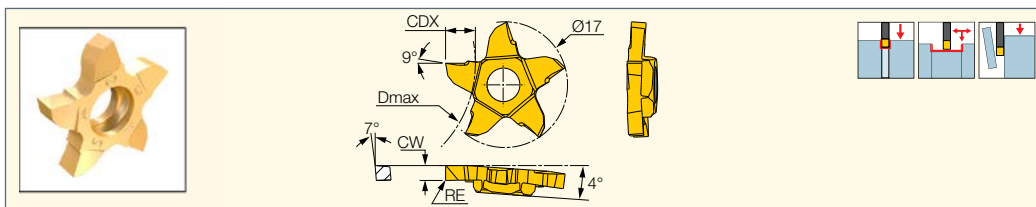
For holders, see pages: NQCH-JHP (61)

Spare Parts

Designation		
NQCH12-PCHLS-17-JHP	SR M4-39432	T-1508/5
NQCH12-PCHRS-17-JHP	SR M4-39432L	T-1508/5
NQCH16-PCHLS-17-JHP	SR M4-39432	T-1508/5
NQCH16-PCHRS-17-JHP	SR M4-39432L	T-1508/5



PENTA 17-NP-RS/LS
Pentagonal Inserts for Precision Grooving and Turning Next to High Shoulder Applications



Designation	Dimensions						IC1008	Recommended Machining Data		
	CW	CWTOL ⁽¹⁾	RE	RETOL ⁽²⁾	CDX	D _{max}		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
PENTA 17-100NP08R/LS	1.00	0.020	0.08	0.020	3.00	32.0 ⁽³⁾	●	0.05-0.70	0.02-0.06	0.03-0.06
PENTA 17-200NP08R/LS	2.00	0.020	0.08	0.020	4.00	32.0 ⁽³⁾	●	0.05-2.50	0.05-0.15	0.05-0.09
PENTA 17-300NP08R/LS	3.00	0.020	0.08	0.020	4.00	32.0 ⁽³⁾	●	0.05-3.10	0.05-0.19	0.05-0.11

• When turning to the opposite side of chipformer, maximum CDX is 0.5 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

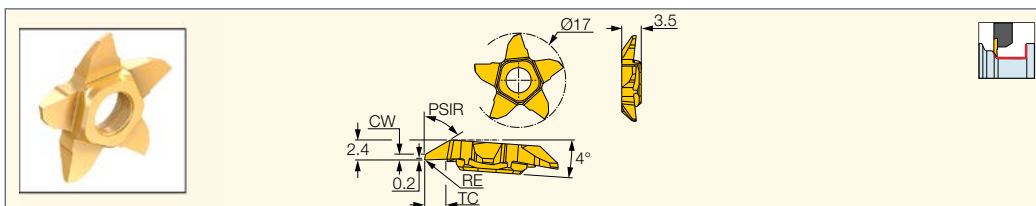
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ for grooving

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308) • Y-PCHRS-17-JHP (308)

Designation	Dimensions			D _{max} as a function of depth of cut (CDX)				
	CW	RE	CDX	CDX ≤ 2.5	CDX ≤ 3.0	CDX ≤ 3.5	CDX ≤ 3.8	CDX ≤ 4.0
PENTA 17-100NP08-R/LS	1.00	0.08	3.00	N.L.	100	-	-	-
PENTA 17-200NP08-R/LS	2.00	0.08	4.00	N.L.	100	75	45	32
PENTA 17-300NP08-R/LS	3.00	0.08	4.00	N.L.	100	75	45	32

PENTA 17-ER/EL
Back Turning Pentagonal Inserts for Short Chipping Materials



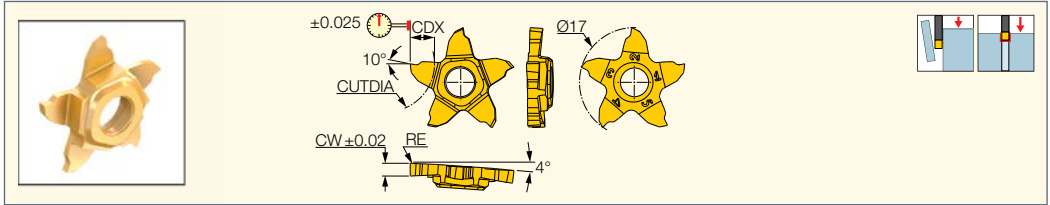
Designation	Dimensions					IC1008	Recommended Machining Data	
	CW	RE	PSIR	Tc	a _p (mm)		f turn (mm/rev)	
PENTA 17EL00-07K0LS	0.70	0.00	60.0	4.0	●	0.05-2.50	0.01-0.15	
PENTA 17ER00-07K0RS	0.70	0.00	60.0	4.0	●	0.05-2.50	0.01-0.15	
PENTA 17EL08-07K0LS	0.70	0.08	60.0	4.0	●	0.05-2.50	0.01-0.15	
PENTA 17ER08-07K0RS	0.70	0.08	60.0	4.0	●	0.05-2.50	0.01-0.15	

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

For tools, see pages: PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308) • Y-PCHRS-17-JHP (308)



PENTA 17-P-RS/LS
 Pentagonal Inserts for Grooving
 and Parting Soft Materials,
 Thin and Miniature Parts



Designation	Dimensions				IC1008	Recommended Machining Data
	CW	RE	CDX	CUTDIA		f groove (mm/rev)
PENTA 17N025P000R/LS	0.25	0.00	0.60	1.2	●	0.02-0.03
PENTA 17N030P000R/LS	0.30	0.00	0.60	1.2	●	0.02-0.03
PENTA 17N033P000R/LS	0.33	0.00	0.60	1.2	●	0.02-0.03
PENTA 17N043P000R/LS	0.43	0.00	1.00	2.0	●	0.02-0.04
PENTA 17N050P000R/LS	0.50	0.00	2.00	4.0	●	0.02-0.04
PENTA 17N075P000R/LS	0.75	0.00	2.50	5.0	●	0.02-0.04
PENTA 17N080P000R/LS	0.80	0.00	2.50	5.0	●	0.02-0.04
PENTA 17N095P000R/LS	0.95	0.00	3.00	6.0	●	0.02-0.05
PENTA 17N100P010R/LS	1.00	0.10	3.00	6.0	●	0.02-0.05
PENTA 17N120P010R/LS	1.20	0.10	3.00	6.0	●	0.02-0.05
PENTA 17N140P010R/LS	1.40	0.10	3.00	6.0	●	0.02-0.05
PENTA 17N150P010R/LS	1.50	0.10	4.00	8.0	●	0.02-0.07
PENTA 17N157P010R/LS	1.57	0.10	4.00	8.0	●	0.02-0.07
PENTA 17N170P010R/LS	1.70	0.10	4.00	8.0	●	0.02-0.07
PENTA 17N178P010R/LS	1.78	0.10	4.00	8.0	●	0.02-0.07
PENTA 17N196P010R/LS	1.96	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N200P010R/LS	2.00	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N222P010R/LS	2.22	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N230P010R/LS	2.30	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N239P010R/LS	2.39	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N247P010R/LS	2.47	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N250P010R/LS	2.50	0.10	4.00	8.0	●	0.02-0.08
PENTA 17N270P010R/LS	2.70	0.10	4.00	8.0	●	0.02-0.09
PENTA 17N287P010R/LS	2.87	0.10	4.00	8.0	●	0.02-0.10
PENTA 17N300P010R/LS	3.00	0.10	4.00	8.0	●	0.02-0.10
PENTA 17N318P010R/LS	3.18	0.10	4.00	8.0	●	0.02-0.10

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

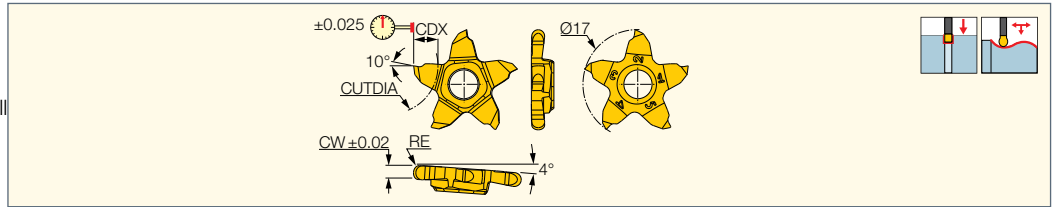
For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCADRS/LS-JHP (317) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308)

• Y-PCHRS-17-JHP (308)



PENTA 17-P-RS/LS (full radius)

Precision Grooving Pentagonal Full Radius Inserts for Soft Materials



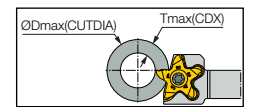
Designation	Dimensions					IC1008	Recommended Machining Data
	CW	RE	CDX	CUTDIA	f groove (mm/rev)		
PENTA 17N080P040R/LS	0.80	0.40	2.50	5.0	●	0.02-0.04	
PENTA 17N100P050R/LS	1.00	0.50	3.00	6.0	●	0.02-0.05	
PENTA 17N157P079R/LS	1.57	0.79	4.00	8.0	●	0.02-0.07	
PENTA 17N200P100R/LS	2.00	1.00	4.00	8.0	●	0.02-0.08	
PENTA 17N239P120R/LS	2.39	1.20	4.00	8.0	●	0.02-0.08	

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

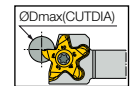
For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308) • Y-PCHRS-17-JHP (308)

Designation	Dmax as a function of depth of cut (T)									Parting to center Dmax.
	W ±0.02	R	Tmax	T<2.3	T<2.5	T<3.0	T<3.5	T<3.8	T<4.0	
PENTA 17N025P000RS/LS	0.25	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N030P000RS/LS	0.30	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N033P000RS/LS	0.33	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N043P000RS/LS	0.43	0.00	1.0*	---	---	---	---	---	---	2
PENTA 17N050P000RS/LS	0.50	0.00	2.0*	---	---	---	---	---	---	4
PENTA 17N075P000RS/LS	0.75	0.00	2.5	N.L.	---	---	---	---	---	5
PENTA 17N080P000RS/LS	0.80	0.00	2.5	N.L.	---	---	---	---	---	5
PENTA 17N095P000RS/LS	0.95	0.00	---	N.L.	---	---	---	---	---	---
PENTA 17N100P010RS/LS	1.00	0.10	---	N.L.	400	---	---	---	---	---
PENTA 17N100P050RS/LS	1.00	0.50	3.0	N.L.	---	100	---	---	---	6
PENTA 17N120P010RS/LS	1.20	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N140P010RS/LS	1.40	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N150P010RS/LS	1.50	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N157P010RS/LS	1.57	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N157P079RS/LS	1.57	0.79	---	N.L.	---	---	---	---	---	---
PENTA 17N170P010RS/LS	1.70	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N178P010RS/LS	1.78	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N196P010RS/LS	1.96	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N200P010RS/LS	2.00	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N200P100RS/LS	2.00	1.00	---	N.L.	---	---	---	---	---	---
PENTA 17N222P010RS/LS	2.22	0.10	4.0	N.L.	400	100	55	32	20	8
PENTA 17N230P010RS/LS	2.30	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N239P010RS/LS	2.39	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N239P120RS/LS	2.39	1.20	---	N.L.	---	---	---	---	---	---
PENTA 17N247P010RS/LS	2.47	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N250P010RS/LS	2.50	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N270P010RS/LS	2.70	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N287P010RS/LS	2.87	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N300P010RS/LS	3.00	0.10	---	N.L.	---	---	---	---	---	---
PENTA 17N318P010RS/LS	3.18	0.10	---	N.L.	400	100	55	32	25	---

Parting Hollow Bars



Parting to Center



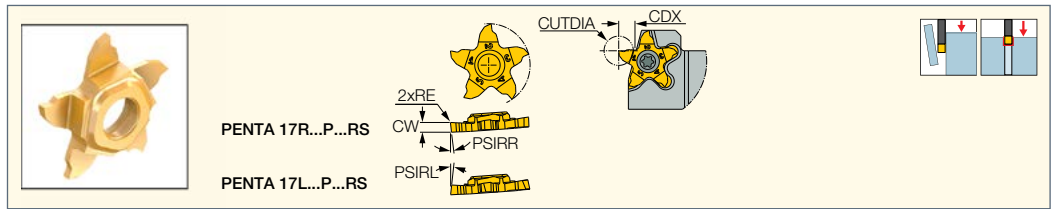
1. N.L. = NO LIMIT

2. *For precision grooving Dmax = N.L.

3. PENTA 17...RS to be clamped on PCHRS ...-17 holders, PENTA 17...LS to be clamped on PCHLS ...-17 holders.



PENTA 17R/L-P-RS
Lead Angle Edge Pentagonal
Inserts (5 edges) for
Parting Miniature Parts

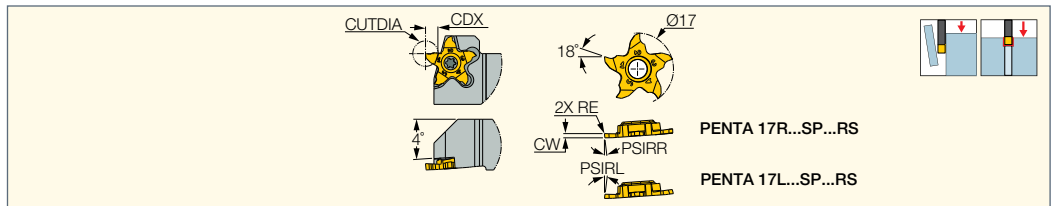


Designation	Dimensions						IC1008	Recommended Machining Data f groove (mm/rev)
	CW	RE	CDX	CUTDIA	PSIRL	PSIRR		
PENTA 17L100P-15D-RS	1.00	0.05	3.00	6.0	15.0	-	●	0.02-0.03
PENTA 17L100P-6D-RS	1.00	0.05	3.00	6.0	6.0	-	●	0.02-0.04
PENTA 17R100P-15D-RS	1.00	0.05	3.00	6.0	-	15.0	●	0.02-0.03
PENTA 17R100P-6D-RS	1.00	0.05	3.00	6.0	-	6.0	●	0.02-0.04
PENTA 17L150P-15D-RS	1.50	0.05	4.00	8.0	15.0	-	●	0.02-0.03
PENTA 17L150P-6D-RS	1.50	0.05	4.00	8.0	6.0	-	●	0.02-0.04
PENTA 17R150P-15D-RS	1.50	0.05	4.00	8.0	-	15.0	●	0.02-0.03
PENTA 17R150P-6D-RS	1.50	0.05	4.00	8.0	-	6.0	●	0.02-0.04
PENTA 17L200P-15D-RS	2.00	0.05	4.00	8.0	15.0	-	●	0.02-0.03
PENTA 17L200P-6D-RS	2.00	0.05	4.00	8.0	6.0	-	●	0.02-0.04
PENTA 17R200P-15D-RS	2.00	0.05	4.00	8.0	-	15.0	●	0.02-0.03
PENTA 17R200P-6D-RS	2.00	0.05	4.00	8.0	-	6.0	●	0.02-0.04

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCADRS/LS-JHP (317) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308)
• Y-PCHRS-17-JHP (308)



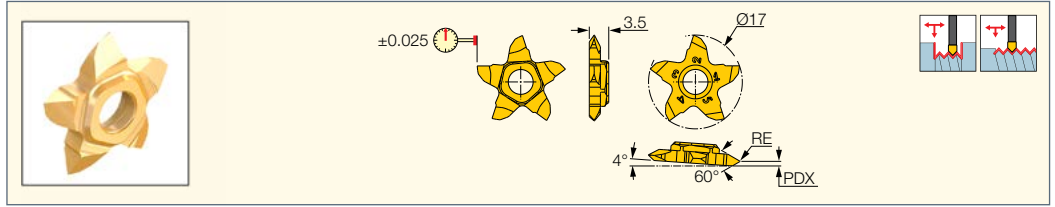
PENTA 17R/L-SP-RS
Pentagonal Inserts (5 edges)
with a High Positive Rake
for Parting Soft Materials



Designation	Dimensions						IC1007	Recommended Machining Data f groove (mm/rev)
	CW	RE	CDX	CUTDIA	PSIRL	PSIRR		
PENTA 17L03SP6D-RS	0.30	0.00	0.60	1.2	6.0	-	●	0.02-0.03
PENTA 17R03SP6D-RS	0.30	0.00	0.60	1.2	-	6.0	●	0.02-0.03
PENTA 17L05SP6D-RS	0.50	0.00	2.00	4.0	6.0	-	●	0.02-0.04
PENTA 17R05SP6D-RS	0.50	0.00	2.00	4.0	-	6.0	●	0.02-0.04
PENTA 17L08SP6D-RS	0.80	0.00	2.50	5.0	6.0	-	●	0.02-0.04
PENTA 17R08SP6D-RS	0.80	0.00	2.50	5.0	-	6.0	●	0.02-0.04
PENTA 17L10SP6D-RS	1.00	0.00	3.00	6.0	6.0	-	●	0.02-0.05
PENTA 17R10SP6D-RS	1.00	0.00	3.00	6.0	-	6.0	●	0.02-0.05

For tools, see pages: PCADRS/LS-JHP (317) • PCHRS/LS-17-JHP (307)

PENTA 17-MT-RS/LS
Precision Ground Pentagonal
External Threading Inserts
with a 60° Partial Profile
for General Industry

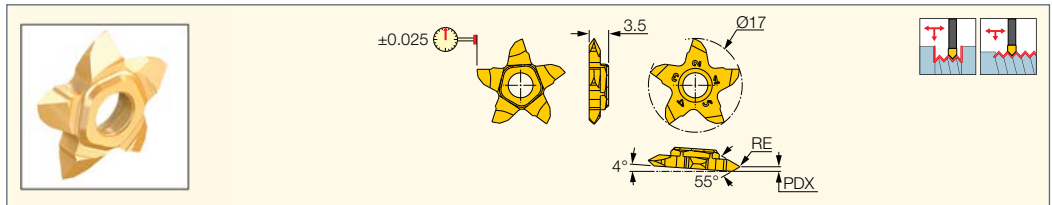


Designation	Dimensions						IC1008
	TPIN ⁽¹⁾	TPIX ⁽²⁾	TPN ⁽³⁾	TPX ⁽⁴⁾	RE	PDX	
PENTA 17-MTL008LS	8.00	36.00	0.700	3.000	0.08	1.40	•
PENTA 17-MTR008RS	8.00	36.00	0.700	3.000	0.08	1.40	•
PENTA 17-MTL003LS	17.00	80.00	0.300	1.500	0.03	0.80	•
PENTA 17-MTR003RS	17.00	80.00	0.300	1.500	0.03	0.80	•

- (1) Threads per inch minimum
- (2) Threads per inch maximum
- (3) Thread pitch minimum (mm)
- (4) Thread pitch maximum (mm)

For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCADRS/LS-JHP (317) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308)
• Y-PCHRS-17-JHP (308)

PENTA 17-WT-RS/LS
Precision Ground Pentagonal
External Threading Inserts
with a 55° Partial Profile
for General Industry



Designation	Dimensions				IC1008
	TPIX ⁽¹⁾	TPIN ⁽²⁾	RE	PDX	
PENTA 17-WTL003LS	72.00	16.00	0.03	0.80	•
PENTA 17-WTR003RS	72.00	16.00	0.03	0.80	•
PENTA 17-WTL008LS	31.00	8.00	0.08	1.40	•
PENTA 17-WTR008RS	31.00	8.00	0.08	1.40	•

- (1) Threads per inch maximum
- (2) Threads per inch minimum

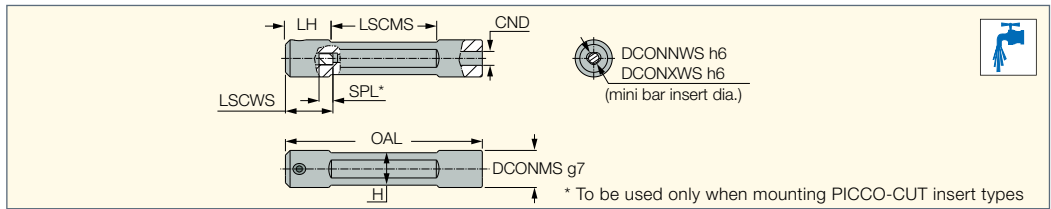
For tools, see pages: NQCH-PCHR/L-S-JHP (378) • PCADRS/LS-JHP (317) • PCHRS/LS-17 (307) • PCHRS/LS-17-JHP (307) • Y-PCHRS-17 (308)
• Y-PCHRS-17-JHP (308)





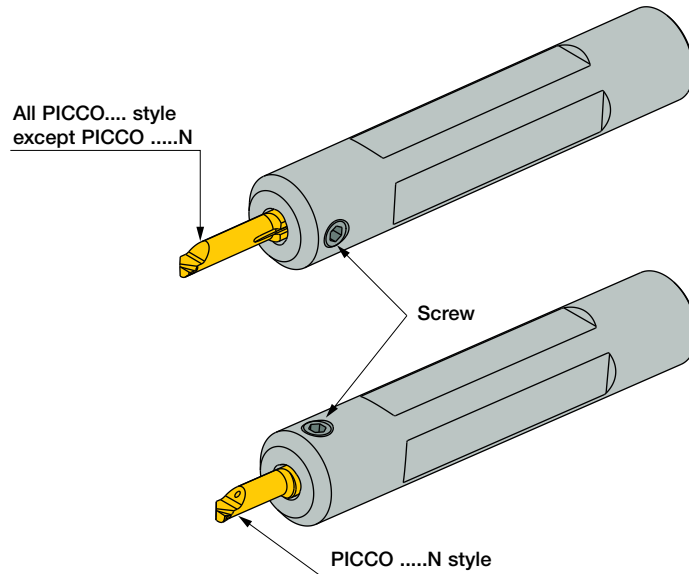
PICMU

Holders with Improved Cooling Supply Suitable for Mounting PICCO-CUT, PICCO-JET Inserts and PICCO-INDEX Tools.



Designation	DCONMS	DCONNWS ⁽¹⁾	DCONXWS ⁽²⁾	OAL	LH	LSCMS	H	LSCWS	CND	SPL ⁽³⁾
PICMU 12-4	12.00	4.00	4.05	85.00	19.7	45.60	11.0	19.00	5.00	6.00
PICMU 12-5	12.00	5.00	5.05	85.00	19.7	45.60	11.0	20.50	6.00	6.00
PICMU 16-4	16.00	4.00	4.05	85.00	19.7	45.60	14.0	19.00	5.00	6.00
PICMU 16-5	16.00	5.00	5.05	85.00	19.7	45.60	14.0	20.50	6.00	6.00
PICMU 16-6	16.00	6.00	6.05	85.00	19.7	45.60	14.0	20.50	6.00	6.00
PICMU 16-7	16.00	7.00	7.05	85.00	19.7	45.60	14.0	20.80	8.00	7.00
PICMU 20-4	20.00	4.00	4.05	85.00	19.7	45.60	18.0	19.00	5.00	6.00
PICMU 20-5	20.00	5.00	5.05	85.00	19.7	45.60	18.0	20.50	6.00	6.00
PICMU 20-6	20.00	6.00	6.05	85.00	19.7	45.60	18.0	20.50	6.00	6.00
PICMU 20-7	20.00	7.00	7.05	85.00	19.7	45.60	18.0	20.80	8.00	7.00
PICMU 20-8	20.00	8.00	8.00	85.00	19.7	45.60	18.0	20.00	8.00	-
PICMU 22-4	22.00	4.00	4.05	85.00	19.7	45.60	20.0	19.00	5.00	6.00
PICMU 22-5	22.00	5.00	5.05	85.00	19.7	45.60	20.0	20.50	6.00	6.00
PICMU 22-6	22.00	6.00	6.05	85.00	19.7	45.60	20.0	20.50	6.00	6.00
PICMU 22-7	22.00	7.00	7.05	85.00	19.7	45.60	20.0	20.80	8.00	7.00

- Holders are suitable for right- and left-hand inserts, and boring bars
- ⁽¹⁾ Minimum diameter
- ⁽²⁾ Maximum diameter
- ⁽³⁾ Spacer length

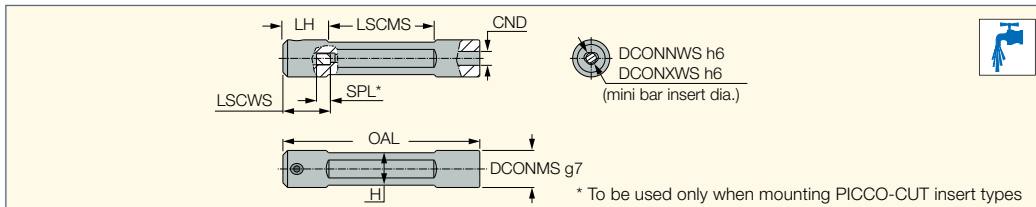


Spare Parts

Designation				
PICMU 12-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 12-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 16-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	
PICMU 16-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 16-6	SPACER D5.7X6	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 16-7	SPACER D6.7X7	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 20-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 20-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 20-6	SPACER D5.7X6	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 20-7	SPACER D6.7X7	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 20-8		SR M8X0.5X6.5-PF	HW 4.0	PL 16 M6-D5
PICMU 22-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 22-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 22-6	SPACER D5.7X6	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 22-7	SPACER D6.7X7	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5

PICMU

Holders with Improved Cooling Supply Suitable for Mounting PICCO-CUT, PICCO-JET Inserts and PICCO-INDEX Heads



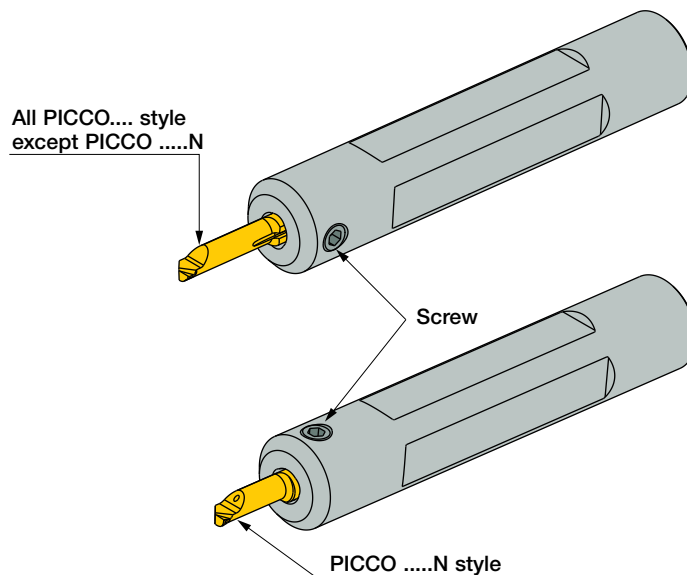
Designation	DCONMS	DCONNWS ⁽¹⁾	DCONXWS ⁽²⁾	OAL	LH	LSCMS	H	LSCWS	CND	SPL ⁽³⁾
PICMU 12.7-4	.500	.158	.160	3.346	.776	1.795	.433	.7480	.197	.2363
PICMU 12.7-5	.500	.197	.199	3.346	.776	1.795	.433	.8070	.236	.2363
PICMU 15.9-4	.625	.158	.160	3.346	.776	1.795	.551	.7480	.197	.2363
PICMU 15.9-5	.625	.197	.199	3.346	.776	1.795	.551	.8070	.236	.2363
PICMU 15.9-6	.625	.236	.238	3.346	.776	1.795	.551	.8070	.236	.2363
PICMU 15.9-7	.625	.276	.278	3.346	.776	1.795	.551	.8190	.315	.2756
PICMU 19-4	.750	.158	.160	3.346	.776	1.795	.709	.7480	.197	.2363
PICMU 19-5	.750	.197	.199	3.346	.776	1.795	.709	.8070	.236	.2363
PICMU 19-6	.750	.236	.238	3.346	.776	1.795	.709	.8070	.236	.2363
PICMU 19-7	.750	.276	.278	3.346	.776	1.795	.709	.8190	.315	.2756
PICMU 25.4-4	1.000	.158	.160	3.346	.776	1.795	.787	.7480	.197	.2363
PICMU 25.4-5	1.000	.197	.199	3.346	.776	1.795	.787	.8070	.236	.2363
PICMU 25.4-6	1.000	.236	.238	3.346	.776	1.795	.787	.8070	.236	.2363
PICMU 25.4-7	1.000	.276	.278	3.346	.776	1.795	.787	.8190	.315	.2756

• Holders are suitable for left- and right-hand inserts, and boring bars

⁽¹⁾ Minimum diameter

⁽²⁾ Maximum diameter

⁽³⁾ Spacer length

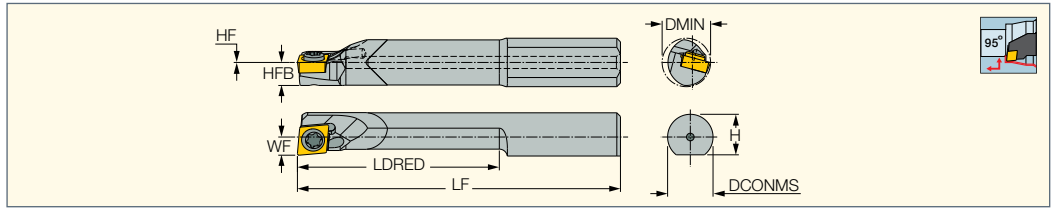


Spare Parts

Designation				
PICMU 12.7-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 12.7-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 15.9-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 15.9-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 15.9-6	SPACER D5.7X6	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 15.9-7	SPACER D6.7X7	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 19-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 19-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 19-6	SPACER D5.7X6	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 19-7	SPACER D6.7X7	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5
PICMU 25.4-4	SPACER D3.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 25.4-5	SPACER D4.7X6	SR M5X0.5X6-PF	HW 2.5	PL 16 M6-D5
PICMU 25.4-6	SPACER D5.7X6	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5*
PICMU 25.4-7	SPACER D6.7X7	SR M6X0.5X6 PF	HW 3.0	PL 16 M6-D5

PICCOINDEX
INDEXABLE INSERTS

PICIN-SCLCR/L
Solid Carbide PICCO Tools
Carrying 80° Rhombic Inserts



Designation	DCONMS	LF	LDRED	H	HFB	WF	DMIN	HF	CSP ⁽¹⁾	MIID ⁽²⁾
PICIN E05-T20-SCLCR/L-03	5.00	35.00	20.0	4.5	2.1	1.85	4.50	0.0	1	CCGT 03X101-F1P
PICIN E06-T25-SCLCR/L-03	6.00	40.00	25.0	5.4	2.9	2.25	6.00	0.0	1	CCGT 03X101-F1P



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

⁽²⁾ Master insert identification

For inserts, see pages: CCGT-F1P (184) • CCGW/CCMT (CBN) (227)

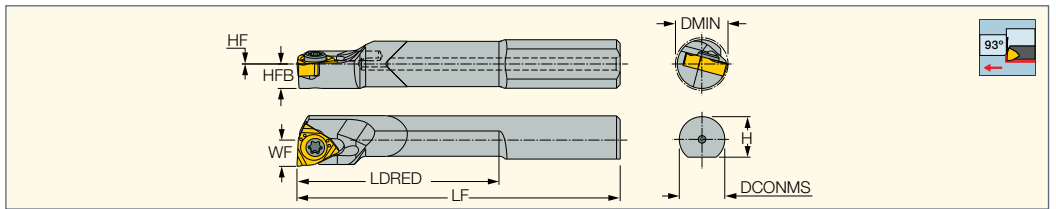
For holders, see pages: GHPCOR (409) • PICCO ACE (398) • PICCO/MG PCO (Holder) (399)

Spare Parts

Designation		
PICIN-SCLCR/L	CSTA-1.6	T-6/5

PICCOINDEX
INDEXABLE INSERTS

PICIN-SWUBR/L
Solid Carbide PICCO Tools
Carrying Small WBMT/
WBGT Trigon Inserts



Designation	DCONMS	LF	LDRED	H	HFB	WF	DMIN	HF	CSP ⁽¹⁾	MIID ⁽²⁾
PICIN E06-T25-SWUBL-06	6.00	40.00	25.0	5.4	3.0	3.25	6.50	0.0	1	WBMT 060101R
PICIN E06-T25-SWUBR-06	6.00	40.00	25.0	5.4	3.0	3.25	6.50	0.0	1	WBMT 060101L

• Use right-hand WBMT 06...R inserts on left-hand tools and left-hand WBMT 06...L inserts on right-hand tools.



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

⁽²⁾ Master insert identification

For inserts, see pages: WBGT (207) • WBMT (207)

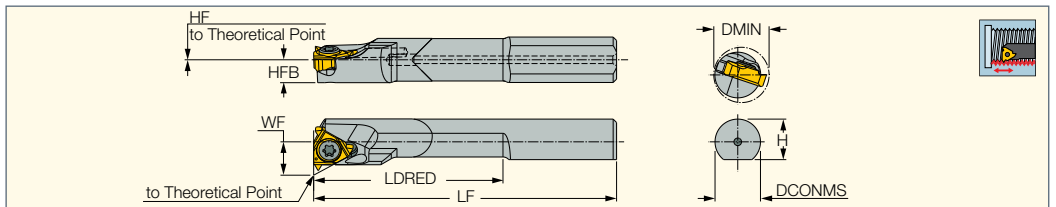
For holders, see pages: GHPCOR (409) • PICCO ACE (398) • PICCO/MG PCO (Holder) (399)

Spare Parts

Designation		
PICIN-SWUBR/L	SR 14-552	T-6/5

PICCOINDEX
INDEXABLE INSERTS

PICIN-MGSIR/L
Solid Carbide PICCO Tools
Carrying Internal Laydown
Threading Inserts



Designation	DCONMS	LF	LDRED	H	WF	DMIN	HF	HFB	CSP ⁽¹⁾	MIID ⁽²⁾
PICIN E06-T25-MGSIL-06	6.00	40.00	25.0	5.4	4.41	7.30	0.0	3.0	1	06IL A 55
PICIN E06-T25-MGSIR-06	6.00	40.00	25.0	5.4	4.41	7.30	0.0	3.0	1	06IR A 55

• B-steel shank with coolant hole, CB-carbide shank with coolant hole • All toolholders provide 1.5° helix angle, either via the pocket or the anvil supplied

• For GTGA inserts, use anvil AL 16-0

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



⁽²⁾ Master insert identification

For inserts, see pages: IR/L-55° (640) • IR/L-60° (645) • IR/L-BSPT (673) • IR/L-ISO (655) • IR/L-NPT (670) • IR/L-NPTF (672)

• IR/L-UN (662) • IR/L-W (667)

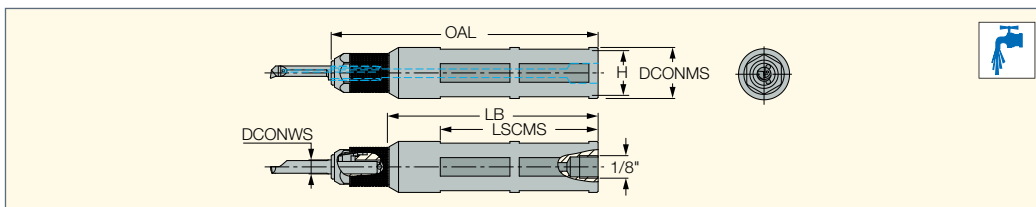
For holders, see pages: GHPCOR (409) • PICCO ACE (398) • PICCO/MG PCO (Holder) (399)

Spare Parts

Designation		
PICIN-MGSIR/L	SR 14-552	T-6/5

PICCO ACE-N

Holders for PICCO-JET Inserts with Internal Coolant Channels



Designation	DCONMS	DCONWS	OAL	LSCMS	LB	H
PICCO ACE 16-4N	16.00	4.05	115.00	68.00	90.00	14.0
PICCO ACE 16-5N	16.00	5.05	115.00	68.00	90.00	14.0
PICCO ACE 16-6N	16.00	6.05	115.00	68.00	90.00	14.0
PICCO ACE 16-7N	16.00	7.05	115.00	68.00	90.00	14.0
PICCO ACE 20-4N	20.00	4.05	115.00	68.00	90.00	18.0
PICCO ACE 20-5N	20.00	5.05	115.00	68.00	90.00	18.0
PICCO ACE 20-6N	20.00	6.05	115.00	68.00	90.00	18.0
PICCO ACE 20-7N	20.00	7.05	115.00	68.00	90.00	18.0
PICCO ACE 22-4N	22.00	4.05	115.00	68.00	90.00	20.0
PICCO ACE 22-6N	22.00	6.05	115.00	68.00	90.00	20.0
PICCO ACE 25-4N	25.00	4.05	115.00	68.00	90.00	23.0
PICCO ACE 25-5N	25.00	5.05	115.00	68.00	90.00	23.0
PICCO ACE 25-6N	25.00	6.05	115.00	68.00	90.00	23.0
PICCO ACE 25-7N	25.00	7.05	115.00	68.00	90.00	23.0

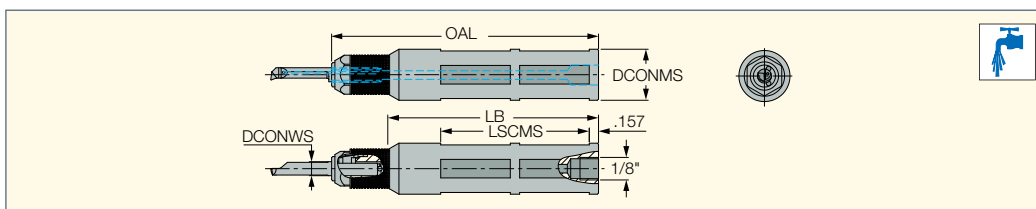
• Holders are suitable for right and left-hand PICCO...-N type solid tools only

Spare Parts

Designation			
PICCO ACE 16-4N	UM600H.K	UM600H.M4	PIN 2X10 DIN6325
PICCO ACE 16-5N	UM600H.K	UM600H.M5	PIN 2X10 DIN6325
PICCO ACE 16-6N	UM600H.K	UM600H.M6	ZAD 2X12 DIN 6325 m6
PICCO ACE 16-7N	UM600H.K	UM600H.M7	ZAD 2X12 DIN 6325 m6
PICCO ACE 20-4N	UM600H.K	UM600H.M4	PIN 2X10 DIN6325
PICCO ACE 20-5N	UM600H.K	UM600H.M5	PIN 2X10 DIN6325
PICCO ACE 20-6N	UM600H.K	UM600H.M6	ZAD 2X12 DIN 6325 m6
PICCO ACE 20-7N	UM600H.K	UM600H.M7	ZAD 2X12 DIN 6325 m6
PICCO ACE 22-4N	UM600H.K	UM600H.M4	PIN 2X10 DIN6325
PICCO ACE 22-6N	UM600H.K	UM600H.M6	ZAD 2X12 DIN 6325 m6
PICCO ACE 25-4N	UM600H.K	UM600H.M4	PIN 2X10 DIN6325
PICCO ACE 25-5N	UM600H.K	UM600H.M5	PIN 2X10 DIN6325
PICCO ACE 25-6N	UM600H.K	UM600H.M6	ZAD 2X12 DIN 6325 m6
PICCO ACE 25-7N	UM600H.K	UM600H.M7	ZAD 2X12 DIN 6325 m6

PICCO ACE-N

Holders for PICCO-JET Inserts with Internal Coolant Channels



Designation	DCONMS	I N C H DCONWS	OAL	LSCMS	LB
PICCO ACE 15.9-7N	.625	.278	4.528	2.520	3.543
PICCO ACE 19-4N	.750	.159	4.528	2.520	3.543
PICCO ACE 19-5N	.750	.199	4.528	2.520	3.543
PICCO ACE 19-6N	.750	.238	4.528	2.520	3.543
PICCO ACE 19-7N	.750	.278	4.528	2.520	3.543
PICCO ACE 25.4-6N	1.000	.238	4.528	2.520	3.543
PICCO ACE 25.4-7N	1.000	.278	4.528	2.520	3.543

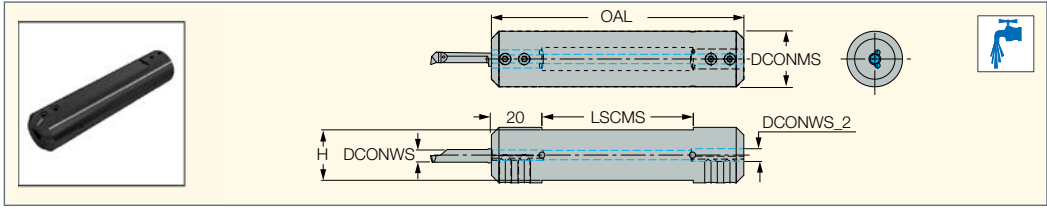
• Holders are suitable for right and left-hand PICCO...-N type solid tools only

Spare Parts

Designation			
PICCO ACE 15.9-7N	UM600H.K	UM600H.M7	ZAD 2X12 DIN 6325 m6
PICCO ACE 19-4N	UM600H.K	UM600H.M4	PIN 2X10 DIN6325
PICCO ACE 19-5N	UM600H.K	UM600H.M5	PIN 2X10 DIN6325
PICCO ACE 19-6N	UM600H.K	UM600H.M6	ZAD 2X12 DIN 6325 m6
PICCO ACE 19-7N	UM600H.K	UM600H.M7	ZAD 2X12 DIN 6325 m6
PICCO ACE 25.4-6N	UM600H.K	UM600H.M6	ZAD 2X12 DIN 6325 m6
PICCO ACE 25.4-7N	UM600H.K	UM600H.M7	ZAD 2X12 DIN 6325 m6



PICCO-N (Holder)
 Holders for PICCO-JET Inserts
 with Internal Coolant Channels

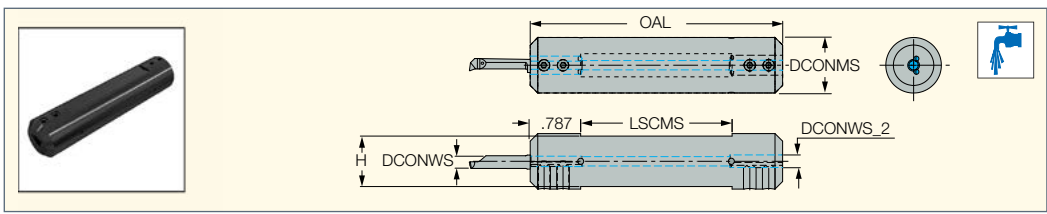


Designation	DCONMS	DCONWS	DCONWS_2	OAL	LSCMS	H	
PICCO 16-4-5N	16.00	4.05	5.05	85.00	45.00	14.0	SR M5X0.5X6 T10
PICCO 20-4-5N	20.00	4.05	5.05	100.00	60.00	18.0	SR M5X0.5X8 T10
PICCO 22-4-5N	22.00	4.05	5.05	100.00	60.00	20.0	SR M5X0.5X8 T10
PICCO 16-6-7N	16.00	6.05	7.05	85.00	45.00	14.0	SR M5X0.5X6 T10
PICCO 16-6-8N	16.00	6.05	8.00	85.00	45.00	14.0	SR M5X0.5X6 T10
PICCO 20-6-7N	20.00	6.05	7.05	100.00	60.00	18.0	SR M5X0.5X8 T10
PICCO 20-6-8N	20.00	6.05	8.00	100.00	60.00	18.0	SR M5X0.5X8 T10
PICCO 22-6-7N	22.00	6.05	7.05	100.00	60.00	20.0	SR M5X0.5X8 T10

• Holders are suitable for right- and left-hand inserts, and boring bars

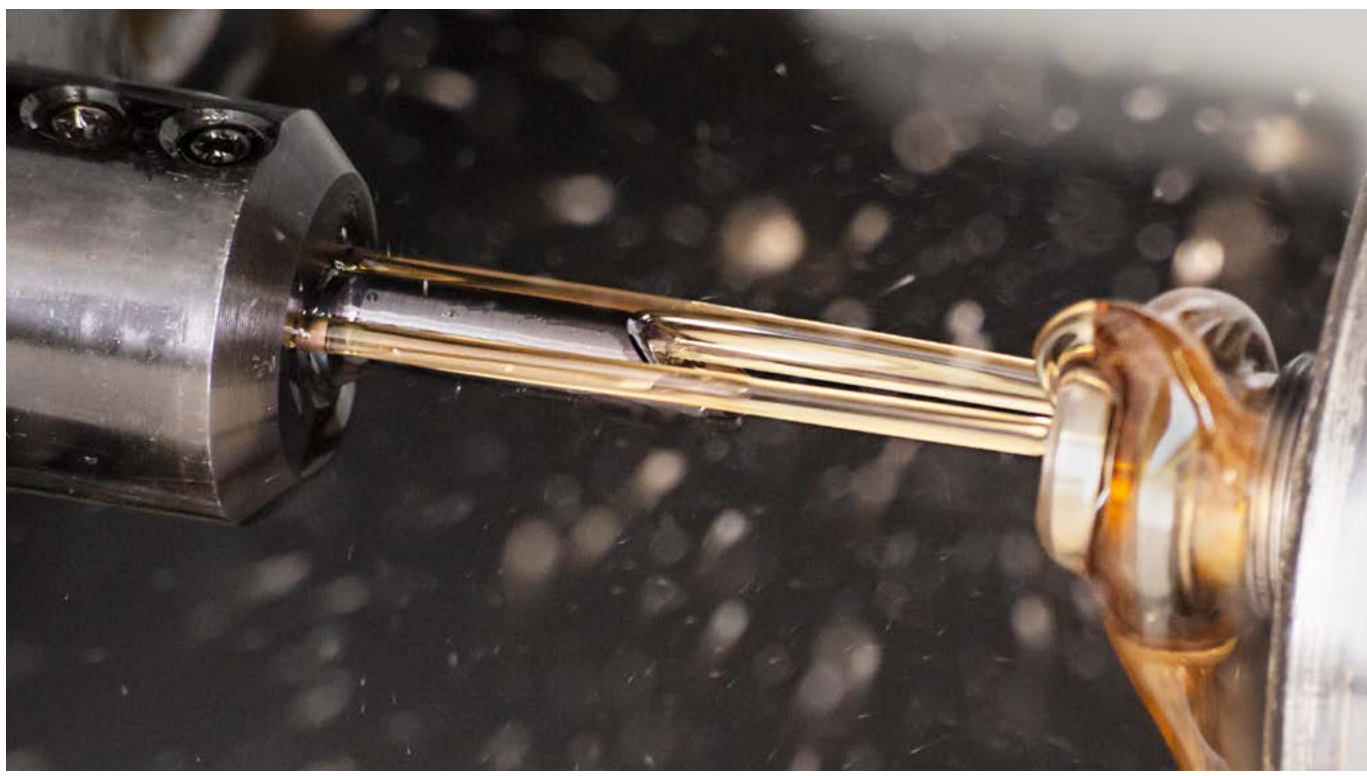


PICCO-N (Holder)
 Holders for PICCO-JET Inserts
 with Internal Coolant Channels



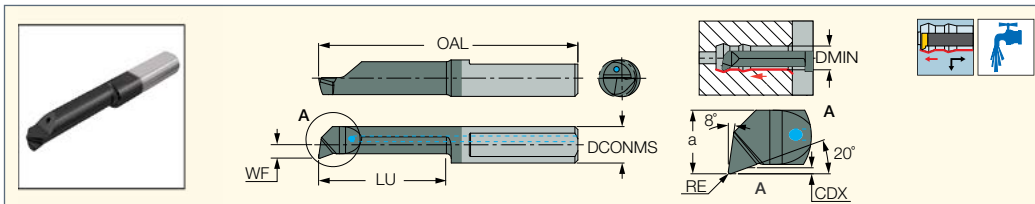
I N C H							
Designation	DCONMS	DCONWS	DCONWS_2	OAL	LSCMS	H	
PICCO 19-4-5N	.750	.159	.199	3.937	2.362	.677	SR M5X0.5X6 T10
PICCO 25.4-4-5N	1.000	.159	.199	4.134	2.559	.921	SR M5X0.5X10 T10
PICCO 16-6-8N	.630	.238	.315	3.346	1.772	.551	SR M5X0.5X6 T10
PICCO 19-6-7N	.750	.238	.278	3.937	2.362	.677	SR M5X0.5X6 T10
PICCO 20-6-8N	.787	.238	.315	3.937	2.362	.709	SR M5X0.5X8 T10
PICCO 25.4-6-7N	1.000	.238	.278	4.134	2.559	.921	SR M5X0.5X10 T10

• Holders are suitable for left- and right-hand inserts, and boring bars



PICCO R/L 050, 053, 055-N
(Turning)

Inserts with Internal Coolant Channel for Internal Turning and Chamfering



Designation	Dimensions								IC908
	DCONMS	WF	a	OAL	LU	RE	CDX ⁽¹⁾	DMIN	
PICCO R 050.08-4N	4.05	-	0.70	26.00	4.0	0.04	0.08	0.80	●
PICCO R 050.1-5N	4.05	-	0.90	26.00	4.5	0.05	0.10	1.00	●
PICCO R 050.1-7N	4.05	-	0.90	31.00	6.5	0.05	0.10	1.00	●
PICCO R 050.15-5N	4.05	-	1.30	26.00	4.5	0.05	0.10	1.50	●
PICCO R 050.15-10N	4.05	-	1.30	31.00	9.0	0.05	0.10	1.50	●
PICCO R 050.2-5N	4.05	-	1.70	26.00	4.0	0.05	0.10	2.00	●
PICCO R/L 050.2-10N	4.05	-	1.70	31.00	9.0	0.05	0.10	2.00	●
PICCO R/L 050.2-15N	4.05	-	1.70	36.00	14.0	0.05	0.10	2.00	●
PICCO R 050.25-5N	4.05	0.20	2.20	26.00	4.5	0.05	0.15	2.50	●
PICCO R 050.25-10N	4.05	0.20	2.20	31.00	9.0	0.05	0.15	2.50	●
PICCO R 050.25-16N	4.05	0.20	2.20	36.00	15.0	0.05	0.15	2.50	●
PICCO R 053.3-10N	4.05	0.60	2.60	31.00	9.0	0.03	0.20	2.80	●
PICCO R/L 050.3-10N	4.05	0.60	2.60	31.00	9.0	0.10	0.20	2.80	●
PICCO R 053.3-16N	4.05	0.60	2.60	36.00	15.0	0.03	0.20	2.80	●
PICCO R/L 050.3-16N	4.05	0.60	2.60	36.00	15.0	0.10	0.20	2.80	●
PICCO R 050.3-20N	4.05	0.60	2.60	41.00	19.0	0.10	0.20	2.80	●
PICCO R 050.35-10N	4.05	1.10	3.10	31.00	9.0	0.10	0.25	3.50	●
PICCO R 050.35-16N	4.05	1.10	3.10	36.00	15.0	0.10	0.25	3.50	●
PICCO R 050.35-20N	4.05	1.10	3.10	41.00	19.0	0.10	0.25	3.50	●
PICCO R 050.35-24N	4.05	1.10	3.10	46.00	23.0	0.10	0.25	3.50	●
PICCO R 053.4-10N	4.05	1.50	3.50	31.00	9.0	0.03	0.30	4.00	●
PICCO R/L 050.4-10N	4.05	1.50	3.50	31.00	9.0	0.10	0.30	4.00	●
PICCO R 053.4-16N	4.05	1.50	3.50	36.00	15.0	0.03	0.30	4.00	●
PICCO R 050.4-16N	4.05	1.50	3.50	36.00	15.0	0.10	0.30	4.00	●
PICCO R 053.4-20N	4.05	1.50	3.50	41.00	19.0	0.03	0.30	4.00	●
PICCO R/L 050.4-20N	4.05	1.50	3.50	41.00	19.0	0.10	0.30	4.00	●
PICCO R 050.4-24N	4.05	1.50	3.50	46.00	23.0	0.10	0.30	4.00	●
PICCO R/L 050.4-28N	4.05	1.50	3.50	51.00	27.0	0.10	0.30	4.00	●
PICCO R 055.5-10N	5.05	1.90	4.40	31.00	9.0	0.05	0.50	5.00	●
PICCO R 050.5-10N	5.05	1.90	4.40	31.00	9.0	0.15	0.50	5.00	●
PICCO R 055.5-15N	5.05	1.90	4.40	36.00	14.0	0.05	0.50	5.00	●
PICCO R 050.5-15N	5.05	1.90	4.40	36.00	14.0	0.15	0.50	5.00	●
PICCO R 055.5-20N	5.05	1.90	4.40	41.00	19.0	0.05	0.50	5.00	●
PICCO R 050.5-20N	5.05	1.90	4.40	41.00	19.0	0.15	0.50	5.00	●
PICCO R 055.5-25N	5.05	1.90	4.40	46.00	24.0	0.05	0.50	5.00	●
PICCO R/L 050.5-25N	5.05	1.90	4.40	46.00	24.0	0.15	0.50	5.00	●
PICCO R 050.5-30N	5.05	1.90	4.40	51.00	29.0	0.15	0.50	5.00	●
PICCO R 050.5-35N	5.05	1.90	4.40	56.00	34.0	0.15	0.50	5.00	●
PICCO R 055.6-15N	6.05	2.30	5.30	36.00	14.0	0.05	0.50	6.00	●
PICCO R/L 050.6-15N	6.05	2.30	5.30	36.00	14.0	0.15	0.50	6.00	●
PICCO R 055.6-22N	6.05	2.30	5.30	43.00	21.0	0.05	0.50	6.00	●
PICCO R/L 050.6-22N	6.05	2.30	5.30	43.00	21.0	0.15	0.50	6.00	●
PICCO R 055.6-25N	6.05	2.30	5.30	46.00	24.0	0.05	0.50	6.00	●
PICCO R/L 050.6-25N	6.05	2.30	5.30	46.00	24.0	0.15	0.50	6.00	●
PICCO R 055.6-30N	6.05	2.30	5.30	51.00	29.0	0.05	0.50	6.00	●
PICCO R/L 050.6-30N	6.05	2.30	5.30	51.00	29.0	0.15	0.50	6.00	●
PICCO R 050.6-35N	6.05	2.30	5.30	56.00	34.0	0.15	0.50	6.00	●
PICCO R/L 050.6-42N	6.05	2.30	5.30	63.00	41.0	0.15	0.50	6.00	●
PICCO R/L 050.7-20N	7.05	2.80	6.30	41.00	19.0	0.15	0.60	6.80	●
PICCO R 050.7-25N	7.05	2.80	6.30	46.00	24.0	0.15	0.60	6.80	●
PICCO R/L 050.7-30N	7.05	2.80	6.30	51.00	29.0	0.15	0.60	6.80	●
PICCO R 050.7-35N	7.05	2.80	6.30	56.00	34.0	0.15	0.60	6.80	●
PICCO R 050.7-40N	7.05	2.80	6.30	61.00	39.0	0.15	0.60	6.80	●
PICCO R 050.7-45N	7.05	2.80	6.30	66.00	44.0	0.15	0.60	6.80	●
PICCO R 050.7-50N	7.05	2.80	6.30	71.00	49.0	0.15	0.60	6.80	●

• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

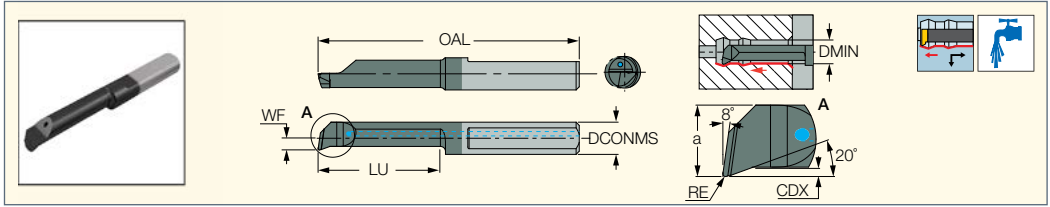
⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R/L 050-NC
(Turning, with Chipbreaker)

Inserts with Chipformers and Internal Coolant Channel for Internal Boring and Profiling



Designation	Dimensions								IC908
	DCONMS	WF	a	OAL	LU	RE	CDX ⁽¹⁾	DMIN	
PICCO R 050.4-10NC	4.05	1.50	3.50	31.00	9.0	0.10	0.30	4.00	●
PICCO R 050.4-20NC	4.05	1.50	3.50	41.00	19.0	0.10	0.30	4.00	●
PICCO R 050.4-28NC	4.05	1.50	3.50	51.00	27.0	0.10	0.30	4.00	●
PICCO R 050.5-20NC	5.05	1.90	4.40	41.00	19.0	0.15	0.50	5.00	●
PICCO R 050.6-15NC	6.05	2.30	5.30	36.00	14.0	0.15	0.50	6.00	●
PICCO R 050.6-22NC	6.05	2.30	5.30	43.00	21.0	0.15	0.50	6.00	●
PICCO R 050.7-20NC	7.05	2.80	6.30	41.00	19.0	0.15	0.60	6.80	●

- All left-hand inserts on request
- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

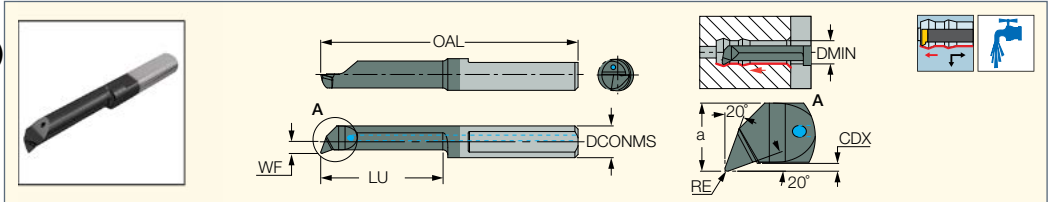
⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R 050.20-N (Turning)

Inserts with Internal Coolant Channel for Internal Turning and Chamfering Next to the Bottom of Blind Holes



Designation	Dimensions								IC908
	DCONMS	WF	a	OAL	LU	RE	CDX ⁽¹⁾	DMIN	
PICCO R 050.20.2-10N	4.05	-	1.70	31.00	9.0	0.05	0.10	2.00	●
PICCO R 050.20.3-10N	4.05	0.60	2.60	31.00	9.0	0.10	0.20	2.80	●
PICCO R 050.20.4-16N	4.05	1.50	3.50	36.00	15.0	0.10	0.30	4.00	●
PICCO R 050.20.5-20N	5.05	1.90	4.40	41.00	19.0	0.15	0.50	5.00	●

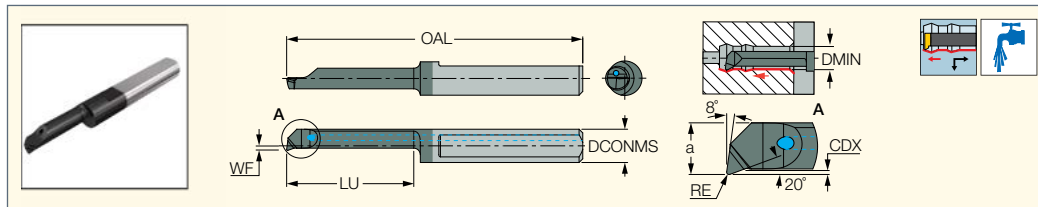
- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

⁽¹⁾ Cutting depth maximum



PICCO R/LHD 050-N
(Turning for Hard Steel)

Inserts with Internal Coolant Channel for Internal Turning and Chamfering of Hard Steel - Up to 65 HRC



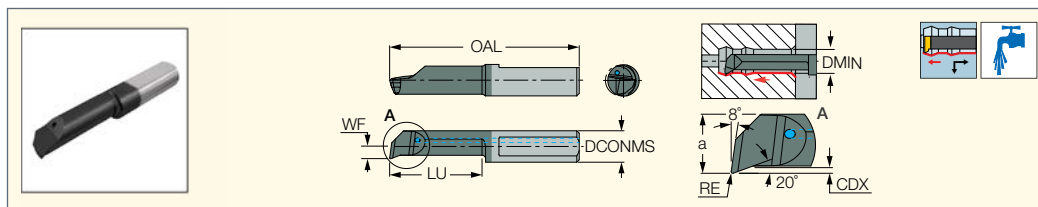
Designation	Dimensions								IC902
	DCONMS	WF	a	OAL	LU	RE	CDX ⁽¹⁾	DMIN	
PICCO RHD 050.3-16N	4.05	0.60	2.60	36.00	15.0	0.10	0.20	2.80	●
PICCO RHD 050.4-20N	4.05	1.50	3.50	41.00	19.0	0.10	0.30	4.00	●
PICCO RHD 050.7-20N	7.05	2.80	6.30	41.00	19.0	0.15	0.60	6.80	●

- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- ⁽¹⁾ Cutting depth maximum



PICCO R 050-N
(Turning with CBN)

CBN Tipped Inserts with Internal Coolant Channel for Internal Turning, Profiling and Chamfering of Hard Steel



Designation	Dimensions								IB55
	DCONMS	WF	a	OAL	RE	LU	CDX ⁽¹⁾	DMIN	
PICCO R 050.7-20NB	7.05	2.80	6.30	42.50	0.15	20.5	0.60	6.80	●

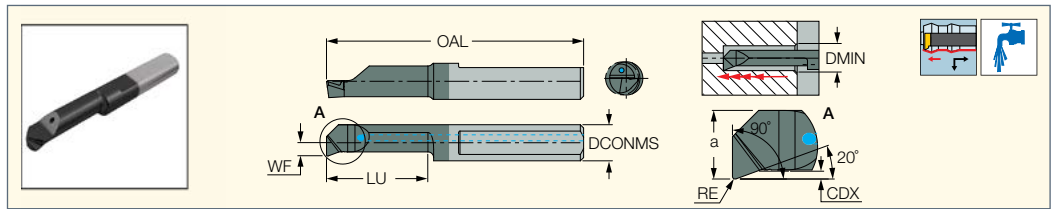
- It is not recommended to use coolant when machining with CBN tipped tools • Available on request only
- Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- ⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R/L 090-N
(Turning 90°)

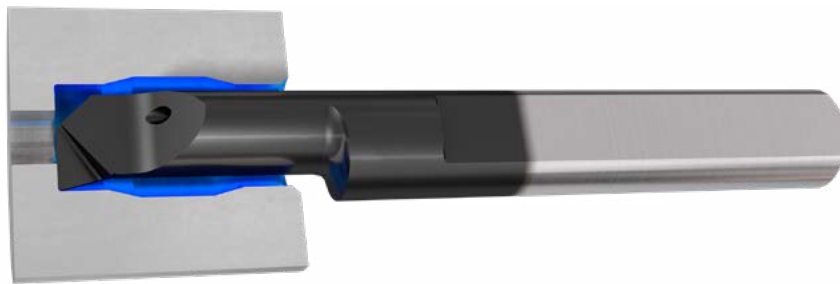
Inserts with Internal Coolant Channel for Internal Turning and Profiling



Designation	Dimensions								IC908
	DCONMS	WF	a	OAL	LU	RE	CDX ⁽¹⁾	DMIN	
PICCO R 090.3-10N	4.05	0.60	2.60	31.00	9.0	0.10	0.20	2.80	●
PICCO R 090.3-16N	4.05	0.60	2.60	36.00	15.0	0.10	0.20	2.80	●
PICCO R 090.4-10N	4.05	1.50	3.50	31.00	9.0	0.10	0.30	4.00	●
PICCO R 090.4-16N	4.05	1.50	3.50	36.00	15.0	0.10	0.30	4.00	●
PICCO R 090.5-10N	5.05	1.90	4.40	31.00	9.0	0.15	0.50	5.00	●
PICCO R 090.5-15N	5.05	1.90	4.40	36.00	14.0	0.15	0.50	5.00	●
PICCO R 090.5-20N	5.05	1.90	4.40	41.00	19.0	0.15	0.50	5.00	●

• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

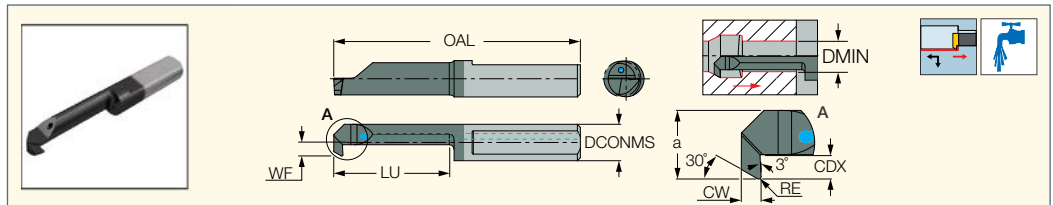
⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R/L 080-N
(Back Turning)

Inserts with Internal Coolant Channel for Internal Back Turning



Designation	Dimensions									IC908
	DCONMS	WF	a	CW	OAL	LU	RE	CDX ⁽¹⁾	DMIN	
PICCO R 080.0003-15N	4.05	0.60	2.60	1.50	36.00	14.0	0.10	0.50	3.00	●
PICCO R 080.0004-15N	4.05	1.50	3.50	1.50	36.00	14.0	0.15	0.80	4.00	●
PICCO R 080.0005-20N	5.05	1.90	4.40	1.50	41.00	19.0	0.20	1.00	5.00	●
PICCO R 080.0006-20N	6.05	2.30	5.30	1.50	41.00	19.0	0.20	1.80	6.00	●
PICCO R 080.0006-30N	6.05	2.30	5.30	1.50	51.00	29.0	0.20	1.80	6.00	●
PICCO R 080.0007-20N	7.05	2.80	6.30	1.50	41.00	19.0	0.20	2.50	7.00	●
PICCO R 080.0007-30N	7.05	2.80	6.30	1.50	51.00	29.0	0.20	2.50	7.00	●

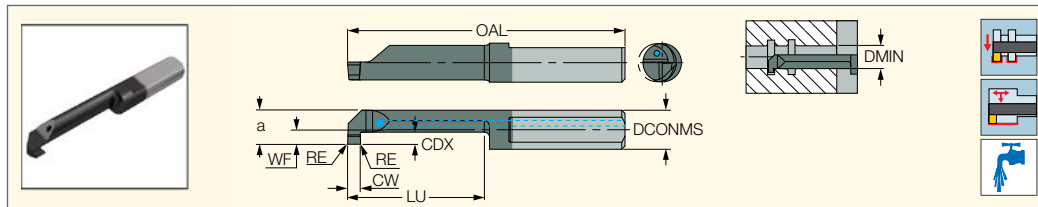
• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

⁽¹⁾ Cutting depth maximum



PICCO R/L 002-007-N
(Grooving and Turning)

Inserts with Internal Coolant Channel for Internal Grooving and Turning



Designation	Dimensions									IC908
	DCONMS	CW	WF	a	RE	OAL	LU	CDX ⁽¹⁾	DMIN	
PICCO R 002.0050-5N	4.05	0.50	0.20	1.80	0.00	26.00	5.0	0.40	2.00	●
PICCO R 002.0050-10N	4.05	0.50	0.20	1.80	0.00	31.00	10.0	0.40	2.00	●
PICCO R 003.0070-5N	4.05	0.70	0.70	2.70	0.00	26.00	5.0	0.60	3.00	●
PICCO R 003.0070-10N	4.05	0.70	0.70	2.70	0.00	31.00	10.0	0.60	3.00	●
PICCO R 003.0070-16N	4.05	0.70	0.70	2.70	0.00	36.00	15.0	0.60	3.00	●
PICCO R 004.0100-10N	4.05	1.00	1.50	3.50	0.00	31.00	9.0	0.80	4.00	●
PICCO R 004.0100-16N	4.05	1.00	1.50	3.50	0.00	36.00	15.0	0.80	4.00	●
PICCO R 004.0100-20N	4.05	1.00	1.50	3.50	0.00	41.00	19.0	0.80	4.00	●
PICCO R 005.0100-10N	5.05	1.00	1.90	4.40	0.00	31.00	9.0	1.00	5.00	●
PICCO R 005.0100-15N	5.05	1.00	1.90	4.40	0.00	36.00	14.0	1.00	5.00	●
PICCO R 005.0100-20N	5.05	1.00	1.90	4.40	0.00	41.00	19.0	1.00	5.00	●
PICCO R 005.0100-25N	5.05	1.00	1.90	4.40	0.00	46.00	24.0	1.00	5.00	●
PICCO R 005.0100-30N	5.05	1.00	1.90	4.40	0.00	51.00	29.0	1.00	5.00	●
PICCO R 005.0150-10N	5.05	1.50	1.90	4.40	0.00	31.00	9.0	1.00	5.00	●
PICCO R 005.0150-15N	5.05	1.50	1.90	4.40	0.00	36.00	14.0	1.00	5.00	●
PICCO R 005.0150-20N	5.05	1.50	1.90	4.40	0.00	41.00	19.0	1.00	5.00	●
PICCO R 005.0150-25N	5.05	1.50	1.90	4.40	0.00	46.00	24.0	1.00	5.00	●
PICCO R 005.0200-10N	5.05	2.00	1.90	4.40	0.00	31.00	9.0	1.00	5.00	●
PICCO R 005.0200-15N	5.05	2.00	1.90	4.40	0.00	36.00	14.0	1.00	5.00	●
PICCO R 005.0200-20N	5.05	2.00	1.90	4.40	0.00	41.00	19.0	1.00	5.00	●
PICCO R 005.0200-30N	5.05	2.00	1.90	4.40	0.00	51.00	29.0	1.00	5.00	●
PICCO R/L 006.0100-10N	6.05	1.00	2.30	5.30	0.00	32.00	9.0	1.80	6.00	●
PICCO R 006.0100-15N	6.05	1.00	2.30	5.30	0.00	36.00	14.0	1.80	6.00	●
PICCO R 006.0100-22N	6.05	1.00	2.30	5.30	0.00	43.00	21.0	1.80	6.00	●
PICCO R 006.0100-25N	6.05	1.00	2.30	5.30	0.00	46.00	24.0	1.80	6.00	●
PICCO R 006.0100-30N	6.05	1.00	2.30	5.30	0.00	51.00	29.0	1.80	6.00	●
PICCO R/L 006.0150-10N	6.05	1.50	2.30	5.30	0.00	32.00	9.0	1.80	6.00	●
PICCO R 006.0150-15N	6.05	1.50	2.30	5.30	0.00	36.00	14.0	1.80	6.00	●
PICCO R 006.0150-22N	6.05	1.50	2.30	5.30	0.00	43.00	21.0	1.80	6.00	●
PICCO R 006.0150-25N	6.05	1.50	2.30	5.30	0.00	46.00	24.0	1.80	6.00	●
PICCO R 006.0150-30N	6.05	1.50	2.30	5.30	0.00	51.00	29.0	1.80	6.00	●
PICCO R 006.0200-10N	6.05	2.00	2.30	5.30	0.00	32.00	9.0	1.80	6.00	●
PICCO R 006.0200-15N	6.05	2.00	2.30	5.30	0.00	36.00	14.0	1.80	6.00	●
PICCO R/L 006.0200-22N	6.05	2.00	2.30	5.30	0.00	43.00	21.0	1.80	6.00	●
PICCO R 006.0200-25N	6.05	2.00	2.30	5.30	0.00	46.00	24.0	1.80	6.00	●
PICCO R 006.0200-30N	6.05	2.00	2.30	5.30	0.00	51.00	29.0	1.80	6.00	●
PICCO R 007.0100-10N	7.05	1.00	2.80	6.30	0.00	32.00	9.0	2.50	6.80	●
PICCO R 007.0100-15N	7.05	1.00	2.80	6.30	0.00	36.00	14.0	2.50	6.80	●
PICCO R 007.0100-22N	7.05	1.00	2.80	6.30	0.00	43.00	21.0	2.50	6.80	●
PICCO R 007.0100-25N	7.05	1.00	2.80	6.30	0.00	46.00	24.0	2.50	6.80	●
PICCO R 007.0100-30N	7.05	1.00	2.80	6.30	0.00	51.00	29.0	2.50	6.80	●
PICCO R 007.0150-10N	7.05	1.50	2.80	6.30	0.00	32.00	9.0	2.50	6.80	●
PICCO R 007.0150-15N	7.05	1.50	2.80	6.30	0.00	36.00	14.0	2.50	6.80	●
PICCO R 007.0150-22N	7.05	1.50	2.80	6.30	0.00	43.00	21.0	2.50	6.80	●
PICCO R 007.0150-25N	7.05	1.50	2.80	6.30	0.00	46.00	24.0	2.50	6.80	●
PICCO R 007.0150-30N	7.05	1.50	2.80	6.30	0.00	51.00	29.0	2.50	6.80	●
PICCO R 007.0200-10N	7.05	2.00	2.80	6.30	0.00	32.00	9.0	2.50	6.80	●
PICCO R/L 007.0200-15N	7.05	2.00	2.80	6.30	0.00	36.00	14.0	2.50	6.80	●
PICCO R 007.0200-22N	7.05	2.00	2.80	6.30	0.00	43.00	21.0	2.50	6.80	●
PICCO R/L 007.0200-25N	7.05	2.00	2.80	6.30	0.00	46.00	24.0	2.50	6.80	●
PICCO R 007.0200-30N	7.05	2.00	2.80	6.30	0.00	51.00	29.0	2.50	6.80	●

• All carbide bars with sharp corners • Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

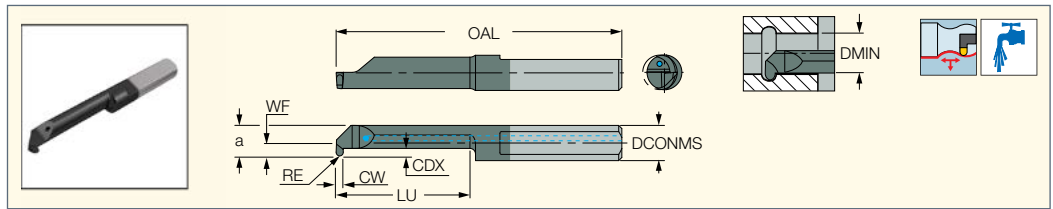
⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R/L 004-007-N
(Full radius)

Full Radius Inserts with Internal Coolant Channel for Internal Profiling



Designation	Dimensions									IC908
	DCONMS	CW	WF	a	RE	OAL	LU	CDX ⁽¹⁾	DMIN	
PICCO R 004.0.50-16N	4.05	1.00	1.50	3.50	0.50	36.00	15.0	0.80	4.00	●
PICCO R 005.0.50-20N	5.05	1.00	1.90	4.40	0.50	41.00	19.0	1.00	5.00	●
PICCO R 006.0.50-25N	6.05	1.00	2.30	5.30	0.50	46.00	24.0	1.80	6.00	●
PICCO R 006.0.75-25N	6.05	1.50	2.30	5.30	0.75	46.00	24.0	1.80	6.00	●
PICCO R 006.1.00-25N	6.05	2.00	2.30	5.30	1.00	46.00	24.0	1.80	6.00	●
PICCO R 007.0.50-30N	7.05	1.00	2.80	6.30	0.50	51.00	29.0	2.50	6.80	●
PICCO R 007.1.00-30N	7.05	2.00	2.80	6.30	1.00	51.00	29.0	2.50	6.80	●

• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

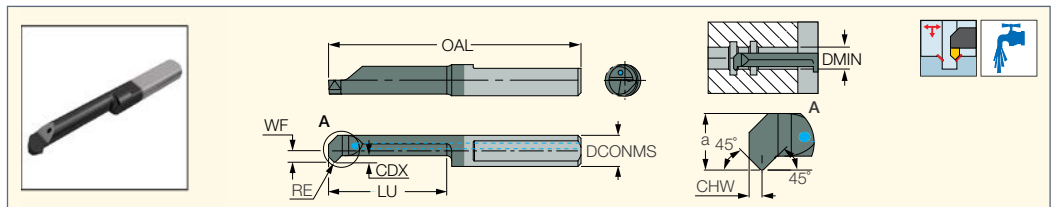
⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R/L 060-N

Inserts with Internal Coolant Channel for Internal Turning and 45° Chamfering



Designation	Dimensions									IC908
	DCONMS	RE	CHW	WF	a	LU	OAL	CDX ⁽¹⁾	DMIN	
PICCO R 060.5-15N	5.05	0.20	1.0	1.90	4.40	14.0	36.00	0.70	5.00	●
PICCO R 060.5-20N	5.05	0.20	1.0	1.90	4.40	19.0	41.00	0.70	5.00	●
PICCO R 060.7-20N	7.05	0.20	1.0	2.80	6.30	19.0	41.00	0.70	6.80	●

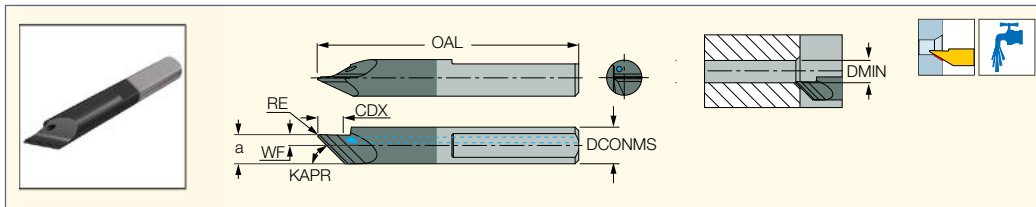
• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

⁽¹⁾ Cutting depth maximum



PICCO R/L 520-N
(Chamfering)

Inserts with Internal Coolant Channel for Internal Chamfering



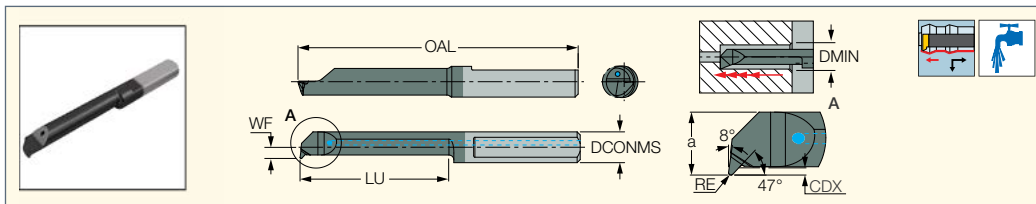
Designation	Dimensions								IC908
	DCONMS	WF	KAPR ⁽¹⁾	OAL	RE	CDX	DMIN		
PICCO R 520.0045-15N	5.05	1.50	45.0	36.00	0.20	3.50	1.00	●	

- Left hand inserts on request
 - Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- ⁽¹⁾ Tool cutting edge angle



PICCO R/L 047-N

Inserts with Internal Coolant Channel for Internal Deep Profiling



Designation	Dimensions									IC908
	DCONMS	WF	a	OAL	LU	CDX ⁽¹⁾	DMIN	RE		
PICCO R 047.4-20N	4.05	1.50	3.50	41.00	19.0	0.30	4.00	0.15	●	
PICCO R 047.5-25N	5.05	1.90	4.40	46.00	24.0	0.50	5.00	0.15	●	
PICCO R 047.T6-22N	6.05	2.30	5.30	43.00	21.0	1.80	6.00	0.15	●	
PICCO R 047.6-30N	6.05	2.30	5.30	51.00	29.0	0.50	6.00	0.15	●	

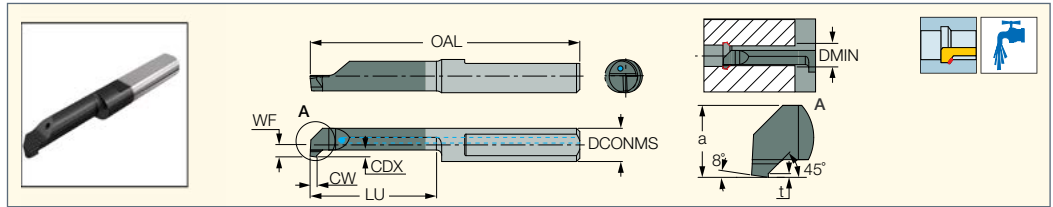
- Left hand inserts on request
 - Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- ⁽¹⁾ Cutting depth maximum



PICCOJET
COOLANT THROUGH

PICCO R/L 070-N
(Back Chamfering)

Back Chamfering Inserts with Internal Coolant Channel for Pre-Parting Operations



Designation	Dimensions									IC908
	DCONMS	CW	WF	a	LU	OAL	t	CDX ⁽¹⁾	DMIN	
PICCO R 070.5-15N	5.05	1.00	1.90	4.40	14.0	36.00	0.20	1.00	5.00	●
PICCO R 070.5-20N	5.05	1.00	1.90	4.40	19.0	41.00	0.20	1.00	5.00	●

• All carbide bars with sharp corners • Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

⁽¹⁾ Cutting depth maximum

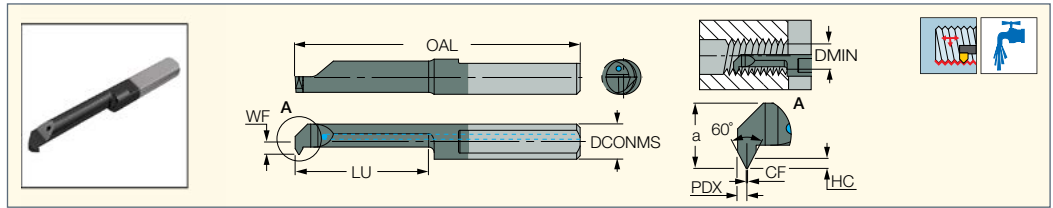


ISCARTHREAD

PICCOJET
COOLANT THROUGH

PICCO R/L60°-N
(60° Threading)

Inserts with a 60° Internal Thread Profile and Internal Coolant Channel for 2.4 mm Min. Bore Diameter



Designation	Dimensions													IC908
	DCONMS	HC	CF	PDX	WF	a	LU	OAL	DMIN	TPN ⁽¹⁾	TPX ⁽²⁾	TPIN ⁽³⁾	TPIX ⁽⁴⁾	
PICCO R 003.0105-8N	4.05	0.27	0.04	0.3	0.30	2.30	7.0	31.00	2.40	0.500	0.700	36.00	48.00	●
PICCO R 004.0105-10N	4.05	0.27	0.09	0.4	1.00	3.00	9.0	31.00	3.20	0.500	0.750	36.00	48.00	●
PICCO R 004.0205-15N	4.05	0.27	0.06	0.4	1.50	3.50	14.0	36.00	4.00	0.500	0.750	36.00	48.00	●
PICCO R 005.0205-15N	5.05	0.27	0.06	0.4	1.90	4.40	14.0	36.00	5.00	0.500	0.750	36.00	48.00	●
PICCO R 005.0407-15N	5.05	0.40	0.09	0.5	1.90	4.40	14.0	36.00	5.00	0.750	1.000	24.00	36.00	●
PICCO R/L 005.0510-15N	5.05	0.55	0.12	0.6	1.90	4.40	14.0	36.00	4.80	1.000	1.250	20.00	24.00	●
PICCO R 005.0510-20N	5.05	0.55	0.12	0.6	1.90	4.40	19.0	41.00	4.80	1.000	1.250	20.00	24.00	●
PICCO R 006.0510-15N	6.05	0.55	0.12	0.6	2.30	5.30	14.0	36.00	6.00	1.000	1.250	20.00	24.00	●
PICCO R 006.0510-22N	6.05	0.55	0.12	0.6	2.30	5.30	21.0	43.00	6.00	1.000	1.250	20.00	24.00	●
PICCO R 006.0612-15N	6.05	0.68	0.15	0.7	2.30	5.30	14.0	36.00	6.00	1.250	1.500	16.00	20.00	●
PICCO R 006.0815-15N	6.05	0.81	0.18	0.8	2.30	5.30	14.0	36.00	6.00	1.500	1.750	14.00	16.00	●
PICCO R/L 007.0815-15N	7.05	0.81	0.18	0.8	2.70	6.30	14.0	36.00	7.00	1.500	1.750	14.00	16.00	●

• Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only

⁽¹⁾ Thread pitch minimum (mm)

⁽²⁾ Thread pitch maximum (mm)

⁽³⁾ Threads per inch minimum

⁽⁴⁾ Threads per inch maximum

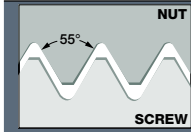
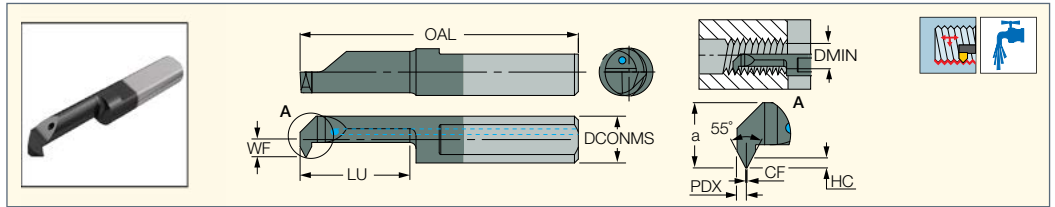


ISCAR THREAD

PICCOJET
COOLANT THROUGH

PICCO-55°-N
(55° Threading)

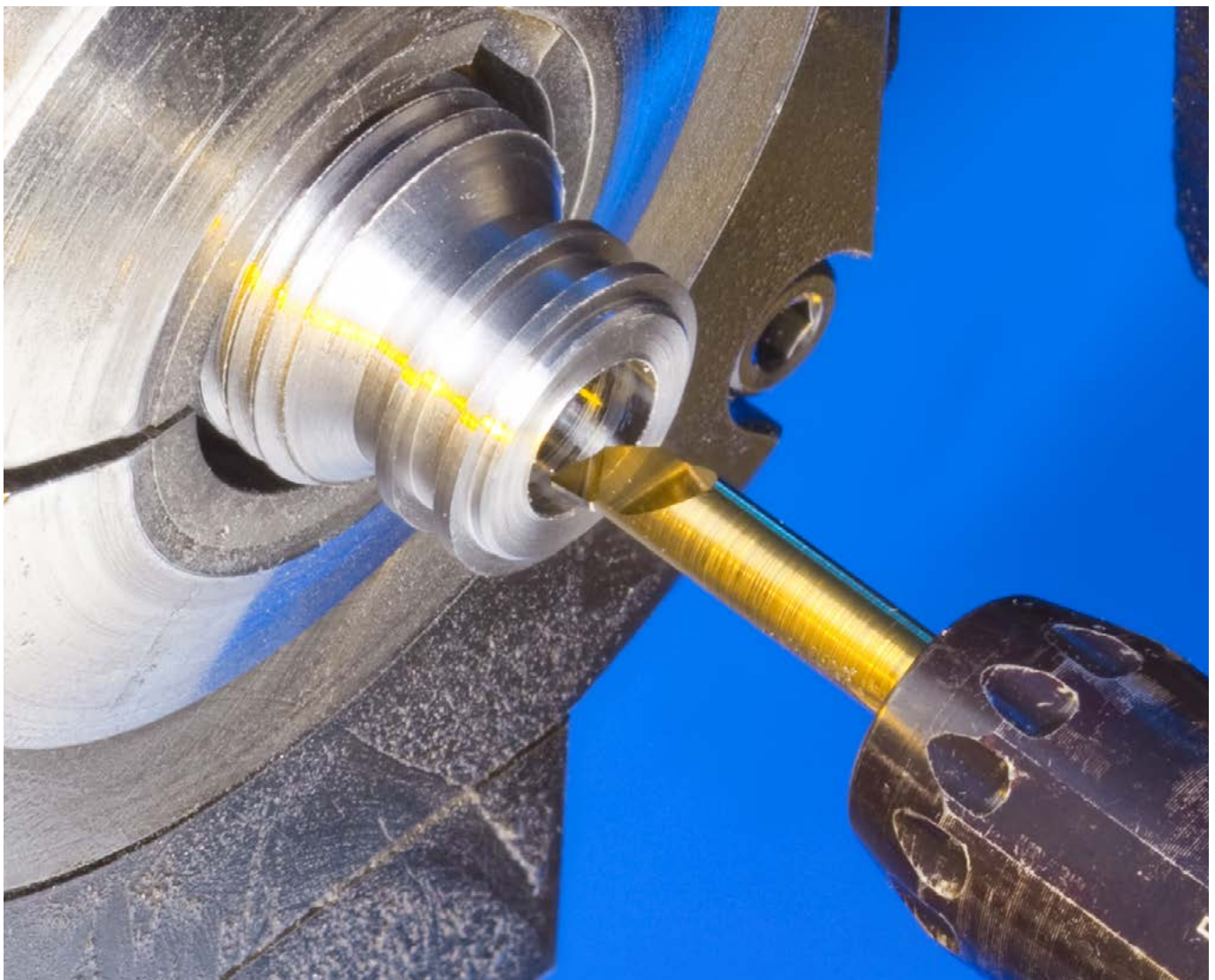
Inserts with Internal Coolant Channel for 55° Internal Threading Profile



Dimensions

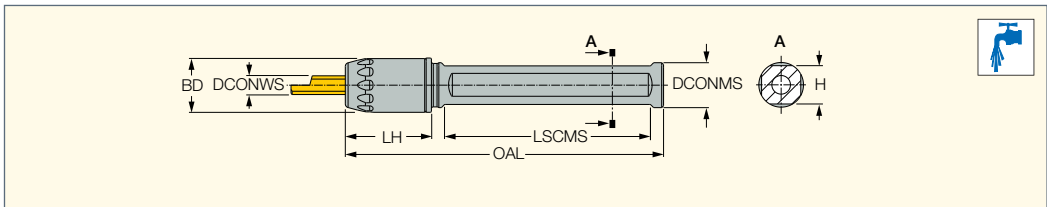
Designation	DCONMS	TPIX ⁽¹⁾	TPIN ⁽²⁾	HC	CF	PDX	WF	a	LU	OAL	DMIN	IC908
PICCO R 006.5524-15N	6.05	24.00	16.00	0.81	0.12	0.8	2.30	5.30	14.0	36.00	6.00	•
PICCO R 007.5524-15N	7.05	24.00	16.00	0.81	0.12	0.8	2.80	6.30	14.0	36.00	7.00	•

- All mini-bars have sharp corners • Solid tools are suitable for PICCO-N / PICCO ACE-N type holders only
- ⁽¹⁾ Threads per inch maximum
- ⁽²⁾ Threads per inch minimum



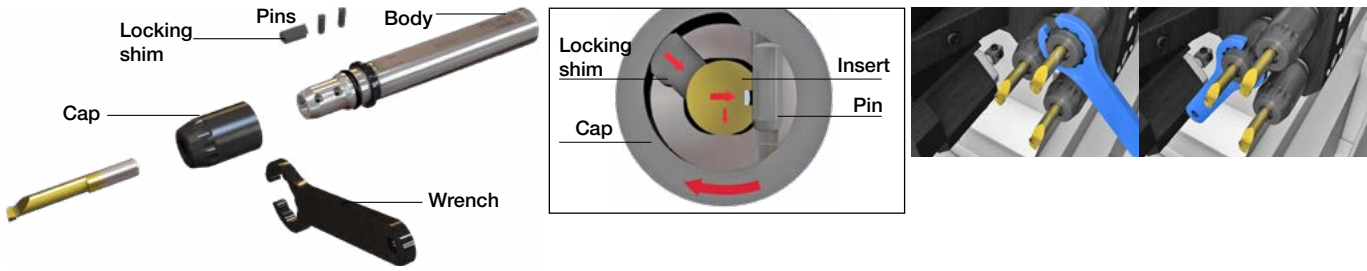


PICCO ACE
Holders for PICCO-CUT Inserts

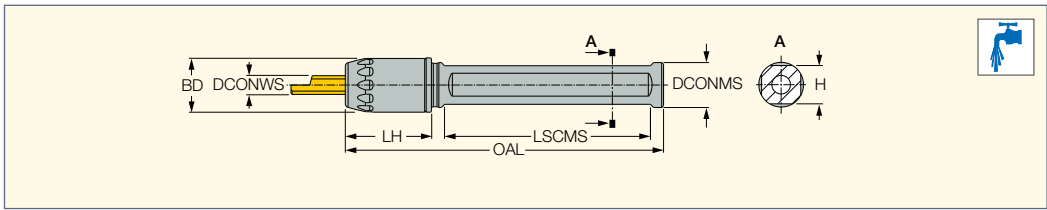


Designation	DCONMS	DCONWS	BD	OAL	LH	LSCMS	H		
PICCO ACE 12-4	12.00	4.00	14.50	85.00	23.00	53.00	10.3	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 12-5	12.00	5.00	14.50	85.00	23.00	53.00	10.3	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-4	16.00	4.00	14.50	85.00	21.50	53.50	14.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-5	16.00	5.00	14.50	85.00	21.50	53.00	14.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 16-6	16.00	6.00	19.90	85.00	23.00	53.50	14.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 16-7	16.00	7.00	19.90	85.00	23.00	53.50	14.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 20-4	20.00	4.00	14.50	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 20-5	20.00	5.00	14.50	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 20-6	20.00	6.00	19.90	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 20-7	20.00	7.00	19.90	150.00	21.50	118.00	18.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 22-4	22.00	4.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 22-5	22.00	5.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 22-6	22.00	6.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 22-7	22.00	7.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25-4	25.00	4.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25-5	25.00	5.00	14.50	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25-6	25.00	6.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25-7	25.00	7.00	19.90	150.00	21.50	118.00	20.0	PL 16 M6-D5	WRENCH ACE 6-7

• Holders are suitable for right- and left-hand PICCO inserts
 For tools, see pages: PICIN-MGSIR/L (386) • PICIN-SCLCR/L (386) • PICIN-SWUBR/L (386)



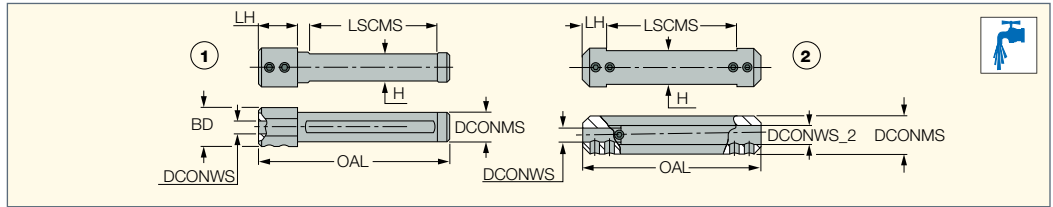
PICCO ACE
Holders for PICCO-CUT Inserts



I N C H									
Designation	DCONMS	DCONWS	BD	OAL	LH	LSCMS	H		
PICCO ACE 12.7-4	.500	.157	.571	3.346	.906	2.087	.457	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 12.7-5	.500	.197	.571	3.346	.906	2.087	.457	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 15.9-4	.625	.157	.571	3.346	.846	2.087	.551	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 15.9-5	.625	.197	.571	3.346	.846	2.087	.551	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 15.9-6	.625	.236	.783	3.346	.906	2.087	.551	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 15.9-7	.625	.276	.783	3.346	.906	2.087	.551	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 19-4	.750	.157	.571	5.906	.846	4.646	.677	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 19-5	.750	.197	.571	5.906	.846	4.646	.677	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 19-6	.750	.236	.783	5.906	.906	4.646	.677	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 19-7	.750	.276	.783	5.906	.906	4.646	.677	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25.4-4	1.000	.157	.571	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25.4-5	1.000	.197	.571	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 4-5
PICCO ACE 25.4-6	1.000	.236	.783	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 6-7
PICCO ACE 25.4-7	1.000	.276	.783	5.906	.846	4.646	.905	PL 16 M6-D5	WRENCH ACE 6-7

• Holders are suitable for right- and left-hand PICCO inserts
 For tools, see pages: PICIN-MGSIR/L (386) • PICIN-SCLCR/L (386) • PICIN-SWUBR/L (386)

PICCO/MG PCO (Holder)
Holders for PICCO-CUT Inserts
and Small Diameter Boring Bars

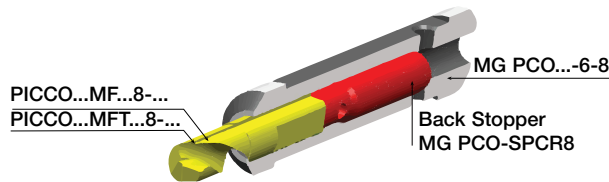


Designation	DCONMS	DCONWS	DCONWS_2	OAL	LH	LSCMS	H	BD	Fig.				
PICCO 12-4-5	12.00	4.00	5.00	75.00	10.00	55.00	10.3	-	2	SR M5X4-PF	HW 2.5		
PICCO 16-4-5	16.00	4.00	5.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 20-4-5	20.00	4.00	5.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 22-4-5 ⁽¹⁾	22.00	4.00	5.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 16-6-7	16.00	6.00	7.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 20-6-7	20.00	6.00	7.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		
PICCO 22-6-7 ⁽¹⁾	22.00	6.00	7.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		
MG PCO-12-6	12.00	6.00	-	75.00	15.00	50.80	11.0	18.00	1	SR M5X6-PF	HW 2.5		
MG PCO-16-6-8	16.00	6.00	8.00	75.00	10.00	55.00	14.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-20-6-8	20.00	6.00	8.00	90.00	10.00	70.00	18.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-22-6-8 ⁽¹⁾	22.00	6.00	8.00	90.00	10.00	70.00	20.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25-6-8	25.00	6.00	8.00	90.00	10.00	70.00	23.0	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	16.00	9.00	-	75.00	15.00	53.00	15.0	20.00	1	SR M5X6-PF	HW 2.5	PL 16	

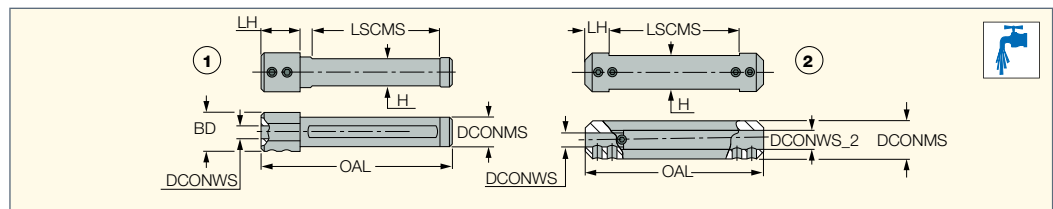
• Holders are suitable for right- and left-hand inserts, and boring bars

⁽¹⁾ Tools for Swiss-type CNC

For tools, see pages: PICIN-MGSIR/L (386) • PICIN-SCLCR/L (386) • PICIN-SWUBR/L (386)



PICCO/MG PCO (Holder)
Holders for PICCO-CUT Inserts
and Small Diameter Boring Bars



I N C H													
Designation	DCONMS	DCONWS	DCONWS_2	OAL	LH	LSCMS	H	BD	Fig.				
PICCO 12.7-4-5	.500	.157	.197	2.950	.394	2.170	.410	-	2	SR M5X4-PF	HW 2.5		
PICCO 15.9-4-5	.625	.157	.197	2.950	.394	2.170	.550	-	2	SR M5X6-PF	HW 2.5		
PICCO 19-4-5	.750	.157	.197	3.540	.394	2.760	.710	-	2	SR M5X6-PF	HW 2.5		
PICCO 25.4-4-5 ⁽¹⁾	1.000	.157	.197	3.543	.394	2.756	.921	-	2	SR M5X6-PF	HW 2.5		
PICCO 15.9-6-7	.625	.236	.276	2.950	.394	2.170	.550	-	2	SR M5X6-PF	HW 2.5		
PICCO 19-6-7	.750	.236	.276	3.540	.394	2.760	.710	-	2	SR M5X6-PF	HW 2.5		
PICCO 25.4-6-7 ⁽¹⁾	1.000	.236	.276	3.543	.394	2.756	.921	-	2	SR M5X6-PF	HW 2.5		
MG PCO-12.7-6	.500	.236	-	3.000	.590	2.090	.460	.709	1	SR M5X6-PF	HW 2.5		
MG PCO-15.9-6-8	.625	.236	.315	3.000	.390	2.170	.551	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-19-6-8	.750	.236	.315	3.500	.390	2.760	.709	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-25.4-6-8 ⁽¹⁾	1.000	.236	.315	3.543	.394	2.756	.921	-	2	SR M5X6-PF	HW 2.5		MG PCO-SPCR8
MG PCO-16-9	.630	.354	-	2.953	.591	2.087	.591	.787	1	SR M5X6-PF	HW 2.5	PL 16	

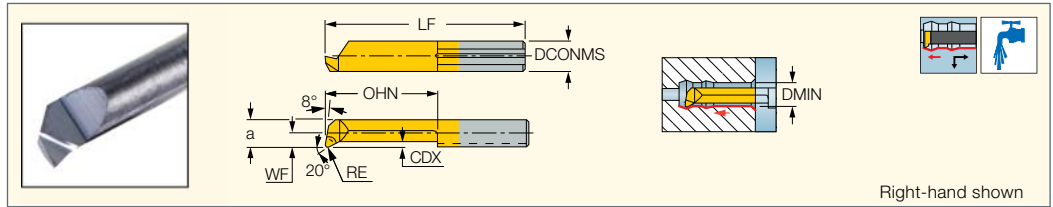
• Holders are suitable for left- and right-hand inserts, and boring bars

⁽¹⁾ Tools for Swiss-type CNC

For tools, see pages: PICIN-MGSIR/L (386) • PICIN-SCLCR/L (386) • PICIN-SWUBR/L (386)

PICCO^{CUT}

PICCO R/L 050, 053, 055
Inserts for Internal Turning
and Chamfering



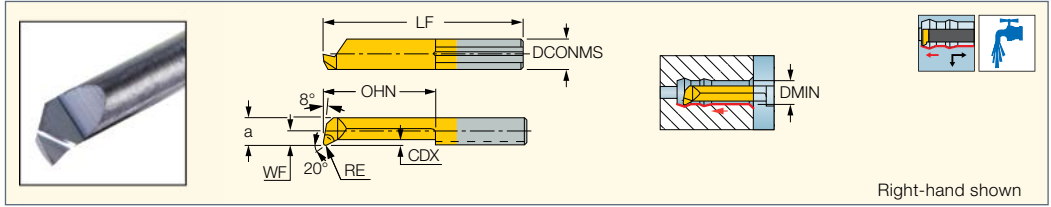
Designation	Dimensions								Tough ↔ Hard	
	DCONMS	WF	a	LF	OHN ⁽²⁾	RE	CDX ⁽³⁾	DMIN	IC228	IC908
PICCO R 050.06-2 ⁽¹⁾	4.00	-	0.50	20.00	2.0	0.04	0.08	0.60	●	●
PICCO R 050.06-3 ⁽¹⁾	4.00	-	0.50	20.00	3.0	0.04	0.08	0.60	●	●
PICCO R 050.08-4	4.00	-	0.70	20.00	4.0	0.04	0.08	0.80		●
PICCO R/L 050.1-5	4.00	-	0.90	20.00	4.5	0.05	0.10	1.00	●	●
PICCO R/L 050.1-7	4.00	-	0.90	22.00	6.5	0.05	0.10	1.00	●	●
PICCO R 050.15-5	4.00	-	1.30	19.00	5.0	0.05	0.10	1.50		●
PICCO R 050.15-10	4.00	-	1.30	24.00	10.0	0.06	0.10	1.50		●
PICCO R/L 050.2-5	4.00	-	1.70	19.00	4.0	0.05	0.10	2.00	●	●
PICCO R 055.2-5	4.00	-	1.70	19.00	5.0	0.05	0.10	2.00		●
PICCO R/L 050.2-10	4.00	-	1.70	24.00	9.0	0.05	0.10	2.00	●	●
PICCO R 055.2-10	4.00	-	1.70	24.00	10.0	0.05	0.10	2.00		●
PICCO L 050.2-15	4.00	-	1.70	29.00	15.0	0.05	0.10	2.00	●	●
PICCO R 050.2-15	4.00	-	1.70	29.00	14.0	0.05	0.10	2.00	●	●
PICCO R 055.2-15	4.00	-	1.70	29.00	15.0	0.05	0.10	2.00		●
PICCO R 050.25-5	4.00	0.20	2.20	19.00	5.0	0.05	0.15	2.50		●
PICCO R 050.25-10	4.00	0.20	2.20	24.00	10.0	0.07	0.15	2.50		●
PICCO R 050.25-16	4.00	0.20	2.20	30.00	16.0	0.07	0.15	2.50		●
PICCO R 053.3-10	4.00	0.60	2.60	24.00	9.0	0.03	0.20	2.80		●
PICCO R 055.3-10	4.00	0.60	2.60	24.00	10.0	0.05	0.20	2.80		●
PICCO R/L 050.3-10	4.00	0.60	2.60	24.00	9.0	0.10	0.20	2.80	●	●
PICCO R 053.3-16	4.00	0.60	2.60	30.00	15.0	0.03	0.20	2.80		●
PICCO R 055.3-16	4.00	0.60	2.60	30.00	16.0	0.05	0.20	2.80		●
PICCO R/L 050.3-16	4.00	0.60	2.60	30.00	15.0	0.10	0.20	2.80	●	●
PICCO R 053.3-20	4.00	0.60	2.60	34.00	19.0	0.03	0.20	2.80		●
PICCO R/L 050.3-20	4.00	0.60	2.60	34.00	19.0	0.10	0.20	2.80	●	●
PICCO R 050.35-10	4.00	1.10	3.10	24.00	10.0	0.10	0.25	3.50		●
PICCO R 050.35-16	4.00	1.10	3.10	30.00	16.0	0.10	0.25	3.50		●
PICCO R 050.35-20	4.00	1.10	3.10	34.00	20.0	0.10	0.25	3.50		●
PICCO R 050.35-24	4.00	1.10	3.10	38.00	24.0	0.10	0.25	3.50		●
PICCO R 053.4-10	4.00	1.50	3.50	24.00	9.0	0.03	0.30	4.00		●
PICCO R 055.4-10	4.00	1.50	3.50	24.00	10.0	0.05	0.30	4.00		●
PICCO R/L 050.4-10	4.00	1.50	3.50	24.00	9.0	0.10	0.30	4.00	●	●
PICCO R 053.4-16	4.00	1.50	3.50	30.00	15.0	0.03	0.30	4.00		●
PICCO R 055.4-16	4.00	1.50	3.50	30.00	16.0	0.05	0.30	4.00		●
PICCO R/L 050.4-16	4.00	1.50	3.50	30.00	15.0	0.10	0.30	4.00	●	●
PICCO R 053.4-20	4.00	1.50	3.50	34.00	19.0	0.03	0.30	4.00		●
PICCO R 055.4-20	4.00	1.50	3.50	34.00	20.0	0.05	0.30	4.00		●
PICCO R/L 050.4-20	4.00	1.50	3.50	34.00	19.0	0.10	0.30	4.00	●	●
PICCO R/L 050.4-24	4.00	1.50	3.50	38.00	23.0	0.10	0.30	4.00	●	●
PICCO R/L 050.4-28	4.00	1.50	3.50	42.00	27.0	0.10	0.30	4.00	●	●
PICCO R 055.4-28	4.00	1.50	3.50	42.00	28.0	0.05	0.50	4.00		●
PICCO R 055.5-10	5.00	1.90	4.40	25.00	9.0	0.05	0.50	5.00		●
PICCO R/L 050.5-10	5.00	1.90	4.40	25.00	9.0	0.15	0.50	5.00	●	●
PICCO R 055.5-15	5.00	1.90	4.40	30.00	14.0	0.05	0.50	5.00		●
PICCO R/L 050.5-15	5.00	1.90	4.40	30.00	14.0	0.15	0.50	5.00	●	●
PICCO R 055.5-20	5.00	1.90	4.40	35.00	19.0	0.05	0.50	5.00		●
PICCO R/L 050.5-20	5.00	1.90	4.40	35.00	19.0	0.15	0.50	5.00	●	●
PICCO R 055.5-25	5.00	1.90	4.40	40.00	24.0	0.05	0.50	5.00		●
PICCO R/L 050.5-25	5.00	1.90	4.40	40.00	24.0	0.15	0.50	5.00	●	●
PICCO R 055.5-30	5.00	1.90	4.40	45.00	29.0	0.05	0.50	5.00		●
PICCO R/L 050.5-30	5.00	1.90	4.40	45.00	29.0	0.15	0.50	5.00	●	●
PICCO R/L 050.5-35	5.00	1.90	4.40	50.00	34.0	0.15	0.50	5.00	●	●
PICCO R 055.6-15	6.00	2.30	5.30	30.00	14.0	0.05	0.50	6.00		●

• Specify right- or left-hand bars
⁽¹⁾ Maximum D.O.C.=0.01-0.03 mm, maximum feed=0.01 mm/rev.
⁽²⁾ Minimum overhang
⁽³⁾ Cutting depth maximum

PICCO^{CUT}

PICCO R/L 050, 053, 055 (Continued)

Inserts for Internal Turning
and Chamfering



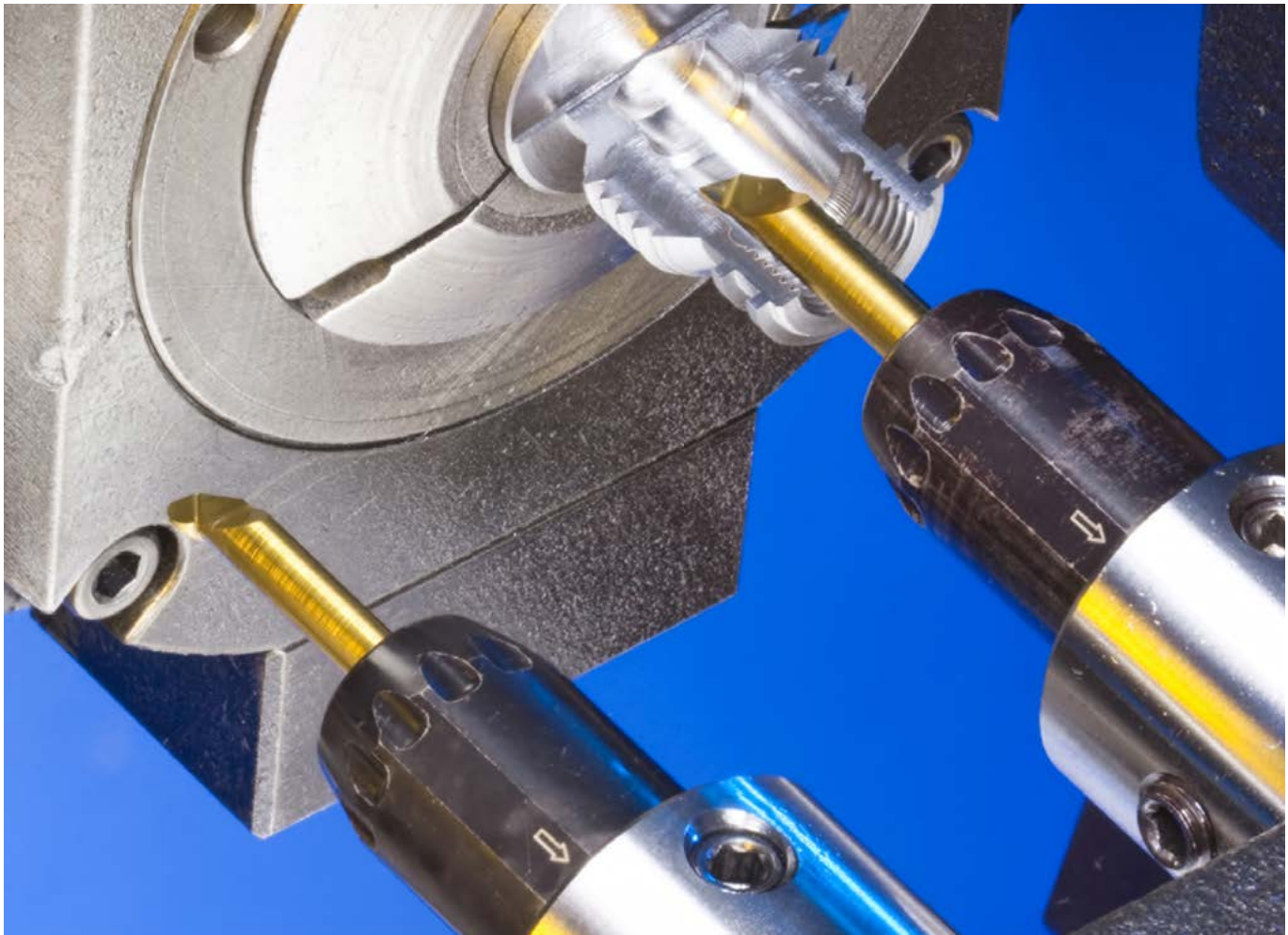
Designation	Dimensions								Tough ↔ Hard	
	DCONMS	WF	a	LF	OHN ⁽²⁾	RE	CDX ⁽³⁾	DMIN	IC228	IC908
PICCO R/L 050.6-15	6.00	2.30	5.30	30.00	14.0	0.15	0.50	6.00	●	●
PICCO R 055.6-22	6.00	2.30	5.30	37.00	21.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-22	6.00	2.30	5.30	37.00	21.0	0.15	0.50	6.00	●	●
PICCO R 055.6-25	6.00	2.30	5.30	40.00	24.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-25	6.00	2.30	5.30	40.00	24.0	0.15	0.50	6.00	●	●
PICCO R 055.6-30	6.00	2.30	5.30	45.00	29.0	0.05	0.50	6.00	●	●
PICCO R/L 050.6-30	6.00	2.30	5.30	45.00	29.0	0.15	0.50	6.00	●	●
PICCO R/L 050.6-35	6.00	2.30	5.30	50.00	34.0	0.15	0.50	6.00	●	●
PICCO R/L 050.6-42	6.00	2.30	5.30	57.00	41.0	0.15	0.50	6.00	●	●
PICCO R/L 050.7-20	7.00	2.80	6.30	35.00	19.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-25	7.00	2.80	6.30	40.00	24.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-30	7.00	2.80	6.30	45.00	29.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-35	7.00	2.80	6.30	50.00	34.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-40	7.00	2.80	6.30	55.00	39.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-45	7.00	2.80	6.30	60.00	44.0	0.15	0.60	6.80	●	●
PICCO R/L 050.7-50	7.00	2.80	6.30	65.00	49.0	0.15	0.60	6.80	●	●

• Specify right- or left-hand bars

⁽¹⁾ Maximum D.O.C.=0.01-0.03 mm, maximum feed=0.01 mm/rev.

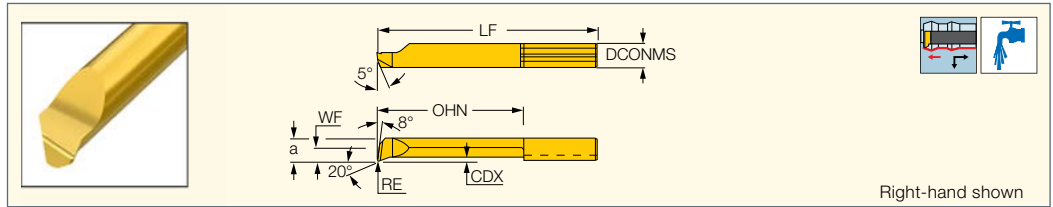
⁽²⁾ Minimum overhang

⁽³⁾ Cutting depth maximum



PICCO^{CUT}

PICCO R/L 050-C
Inserts with Chipformers for
Internal Boring and Profiling



Designation	Dimensions								IC908
	DCONMS	WF	a	LF	OHN ⁽¹⁾	CDX ⁽²⁾	DMIN	RE	
PICCO R/L 050.4-10C	4.00	1.50	3.50	24.00	10.0	0.30	4.00	0.10	●
PICCO R/L 050.4-20C	4.00	1.50	3.50	34.00	20.0	0.30	4.00	0.10	●
PICCO R/L 050.4-24C	4.00	1.50	3.50	38.00	24.0	0.30	4.00	0.10	●
PICCO R/L 050.4-28C	4.00	1.50	3.50	42.00	28.0	0.30	4.00	0.10	●
PICCO R 050.4-16C	4.00	1.50	3.50	30.00	16.0	0.30	4.00	0.10	●
PICCO R/L 050.5-10C	5.00	1.90	4.40	25.00	10.0	0.50	5.00	0.15	●
PICCO R/L 050.5-15C	5.00	1.90	4.40	30.00	15.0	0.50	5.00	0.15	●
PICCO R/L 050.5-20C	5.00	1.90	4.40	35.00	20.0	0.50	5.00	0.15	●
PICCO R/L 050.5-25C	5.00	1.90	4.40	40.00	25.0	0.50	5.00	0.15	●
PICCO R/L 050.5-30C	5.00	1.90	4.40	45.00	30.0	0.50	5.00	0.15	●
PICCO R/L 050.5-35C	5.00	1.90	4.40	50.00	35.0	0.50	5.00	0.15	●
PICCO R/L 050.6-15C	6.00	2.30	5.30	30.00	15.0	0.50	6.00	0.15	●
PICCO R/L 050.6-22C	6.00	2.30	5.30	37.00	22.0	0.50	6.00	0.15	●
PICCO R/L 050.6-25C	6.00	2.30	5.30	40.00	25.0	0.50	6.00	0.15	●
PICCO R/L 050.6-30C	6.00	2.30	5.30	45.00	30.0	0.50	6.00	0.15	●
PICCO R/L 050.6-35C	6.00	2.30	5.30	50.00	35.0	0.50	6.00	0.15	●
PICCO R/L 050.6-42C	6.00	2.30	5.30	57.00	42.0	0.50	6.00	0.15	●
PICCO R/L 050.7-20C	7.00	2.80	6.30	35.00	20.0	0.60	6.80	0.15	●
PICCO R/L 050.7-25C	7.00	2.80	6.30	40.00	25.0	0.60	6.80	0.15	●
PICCO R/L 050.7-30C	7.00	2.80	6.30	45.00	30.0	0.60	6.80	0.15	●
PICCO R/L 050.7-35C	7.00	2.80	6.30	50.00	35.0	0.60	6.80	0.15	●
PICCO R/L 050.7-40C	7.00	2.80	6.30	55.00	40.0	0.60	6.80	0.15	●
PICCO L 050.7-50C	7.00	2.80	6.30	65.00	50.0	0.60	6.80	0.15	●

• All left-hand inserts on request

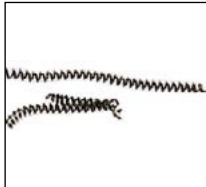
⁽¹⁾ Minimum overhang

⁽²⁾ Cutting depth maximum

Stainless Steel 316L

PICCO R 050.6-35C with Chipbreaker

f= 0.03 mm/rev



f= 0.05 mm/rev



PICCO R 050.6-35 Standard

f= 0.03 mm/rev

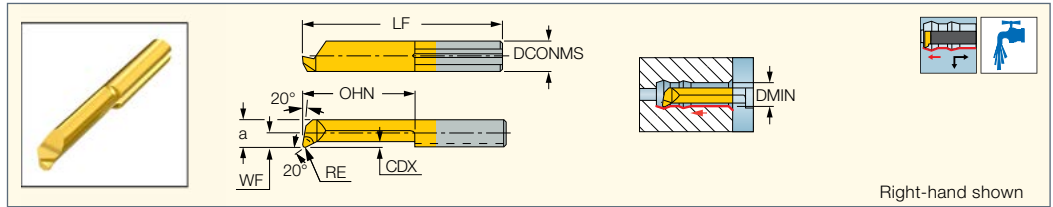


f= 0.05 mm/rev



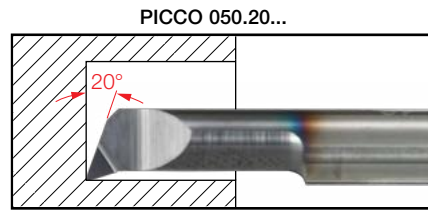
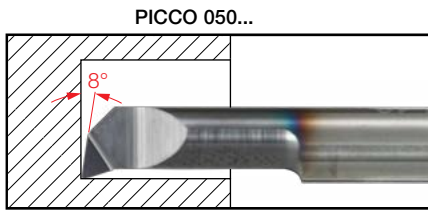
PICCO CUT

PICCO R 050.20
 Inserts for Internal Turning
 and Chamfering Next to
 the Bottom of Blind Holes



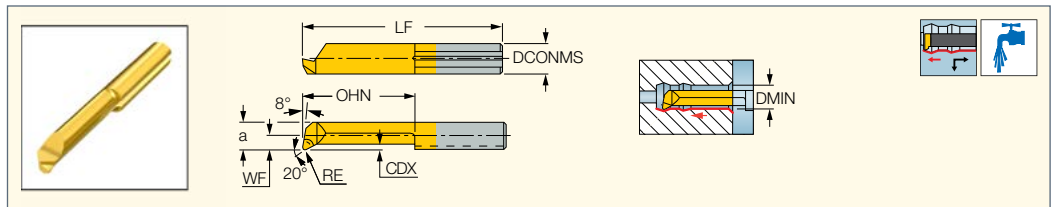
Dimensions									
Designation	DCONMS	WF	a	LF	OHN ⁽¹⁾	RE	CDX ⁽²⁾	DMIN	IC908
PICCO R 050.20.2-10	4.00	-	1.70	24.00	10.0	0.05	0.10	2.00	●
PICCO R 050.20.3-10	4.00	0.60	2.60	24.00	10.0	0.10	0.20	2.80	●
PICCO R 050.20.4-16	4.00	1.50	3.50	30.00	16.0	0.10	0.30	4.00	●
PICCO R 050.20.5-20	5.00	1.90	4.40	35.00	19.0	0.15	0.50	5.00	●

- Specify right- or left-hand bars
- ⁽¹⁾ Minimum overhang
- ⁽²⁾ Cutting depth maximum



PICCO CUT

PICCO R/LHD 050
 Inserts for Internal Turning
 and Chamfering of Hard
 Steel - Up to 65 HRC

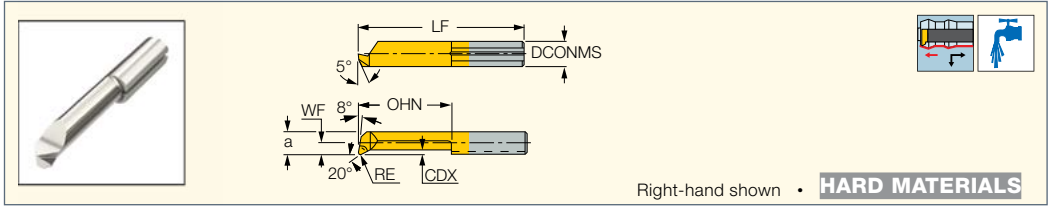


Dimensions									
Designation	DCONMS	WF	a	LF	OHN ⁽¹⁾	RE	CDX ⁽²⁾	DMIN	IC902
PICCO R/LHD 050.2-5	4.00	-	1.70	19.00	4.0	0.05	0.10	2.00	●
PICCO R/LHD 050.3-10	4.00	0.60	2.60	24.00	9.0	0.10	0.20	2.80	●
PICCO R/LHD 050.3-16	4.00	0.60	2.60	30.00	15.0	0.10	0.20	2.80	●
PICCO R/LHD 050.4-10	4.00	1.50	3.50	24.00	9.0	0.10	0.30	4.00	●
PICCO R/LHD 050.4-20	4.00	1.50	3.50	34.00	19.0	0.10	0.30	4.00	●
PICCO R/LHD 050.5-10	5.00	1.90	4.40	25.00	9.0	0.15	0.50	5.00	●
PICCO R/LHD 050.5-15	5.00	1.90	4.40	30.00	14.0	0.15	0.50	5.00	●
PICCO R/LHD 050.6-15	6.00	2.30	5.30	30.00	14.0	0.15	0.50	6.00	●
PICCO R/LHD 050.7-20	7.00	2.80	6.30	35.00	19.0	0.15	0.60	6.80	●
PICCO R/LHD 050.7-25	7.00	2.80	6.30	40.00	24.0	0.15	0.60	6.80	●
PICCO R/LHD 050.7-35	7.00	2.80	6.30	50.00	34.0	0.15	0.60	6.80	●

- Specify right- or left-hand bars
- ⁽¹⁾ Minimum overhang
- ⁽²⁾ Cutting depth maximum

PICCO^{CUT}

PICCO R 050 (CBN)
CBN Tipped Inserts for
Internal Turning, Profiling and
Chamfering of Hard Steel



Right-hand shown • **HARD MATERIALS**

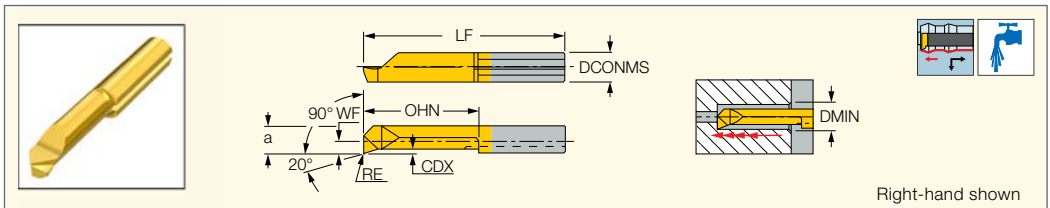
Dimensions									
Designation	DCONMS	WF	a	LF	OHN ⁽¹⁾	CDX ⁽²⁾	DMIN	RE	IB65
PICCO R 050.3-10B	4.00	0.60	2.60	25.50	10.0	0.20	2.80	0.10	●
PICCO R 050.4-10B	4.00	1.50	3.50	25.50	10.0	0.30	4.00	0.10	●
PICCO R 050.5-15B	5.00	1.90	4.40	31.50	15.0	0.50	5.00	0.15	●
PICCO R 050.6-15B	6.00	2.30	5.30	31.50	15.0	0.50	6.00	0.15	●
PICCO R 050.7-20B	7.00	2.80	6.30	36.50	20.0	0.60	6.80	0.15	●

• It is not recommended to use coolant when machining with CBN tipped tools • Available on request only

⁽¹⁾ Minimum overhang
⁽²⁾ Cutting depth maximum

PICCO^{CUT}

PICCO R/L 090
Inserts for Internal
Turning and Profiling



Right-hand shown

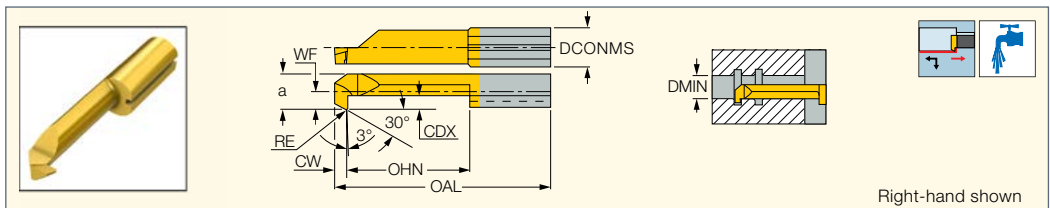
Dimensions									
Designation	DCONMS	WF	a	LF	OHN ⁽¹⁾	RE	CDX ⁽²⁾	DMIN	IC228
PICCO R/L 090.3-10	4.00	0.60	2.60	24.00	9.0	0.10	0.20	2.80	●
PICCO R/L 090.3-16	4.00	0.60	2.60	30.00	15.0	0.10	0.20	2.80	●
PICCO R/L 090.4-10	4.00	1.50	3.50	24.00	9.0	0.10	0.30	4.00	●
PICCO R/L 090.4-16	4.00	1.50	3.50	30.00	15.0	0.10	0.30	4.00	●
PICCO R/L 090.5-10	5.00	1.90	4.40	25.00	9.0	0.15	0.50	5.00	●
PICCO R/L 090.5-15	5.00	1.90	4.40	30.00	14.0	0.15	0.50	5.00	●
PICCO R/L 090.5-20	5.00	1.90	4.40	35.00	19.0	0.15	0.50	5.00	●

• Specify right- or left-hand bars

⁽¹⁾ Minimum overhang
⁽²⁾ Cutting depth maximum

PICCO^{CUT}

PICCO R/L 080
Inserts for Internal Back Turning



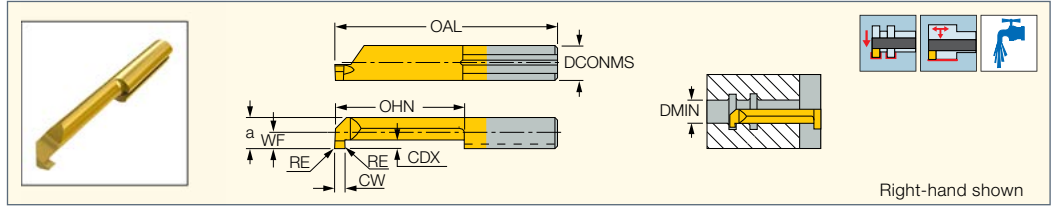
Right-hand shown

Dimensions										
Designation	DCONMS	WF	a	CW	OAL	OHN ⁽¹⁾	RE	CDX ⁽²⁾	DMIN	IC228
PICCO R/L 080.0003-15	4.00	0.60	2.60	1.50	30.00	14.0	0.10	0.50	3.00	●
PICCO R/L 080.0003-20	4.00	0.60	2.60	1.50	34.00	19.0	0.10	0.50	3.00	●
PICCO R/L 080.0004-15	4.00	1.50	3.50	1.50	30.00	14.0	0.15	0.80	4.00	●
PICCO R/L 080.0004-25	4.00	1.50	3.50	1.50	39.00	24.0	0.15	0.80	4.00	●
PICCO R/L 080.0005-20	5.00	1.90	4.40	1.50	35.00	19.0	0.20	1.00	5.00	●
PICCO R/L 080.0005-30	5.00	1.90	4.40	1.50	45.00	29.0	0.20	1.00	5.00	●
PICCO R/L 080.0006-20	6.00	2.30	5.30	1.50	35.00	19.0	0.20	1.80	6.00	●
PICCO R/L 080.0006-30	6.00	2.30	5.30	1.50	45.00	29.0	0.20	1.80	6.00	●
PICCO R/L 080.0007-20	7.00	2.80	6.30	1.50	35.00	19.0	0.20	2.50	7.00	●
PICCO R/L 080.0007-30	7.00	2.80	6.30	1.50	45.00	29.0	0.20	2.50	7.00	●

• Specify right- or left-hand bars

⁽¹⁾ Minimum overhang
⁽²⁾ Cutting depth maximum

For holders, see pages: GHPCOR (409) • PICCO ACE (398) • PICCO/MG PCO (Holder) (399)



Right-hand shown

Designation	Dimensions									Tough ↔ Hard	
	DCONMS	CW	WF	a	RE	OAL	OHN ⁽¹⁾	CDX ⁽²⁾	DMIN	IC228	IC908
PICCO R 002.0050-5	4.00	0.50	0.20	1.80	0.00	19.00	5.0	0.40	2.00		●
PICCO R 002.0050-10	4.00	0.50	0.20	1.80	0.00	24.00	10.0	0.40	2.00		●
PICCO R/L 002.0050-15	4.00	0.50	0.20	1.80	0.00	29.00	15.0	0.40	2.00		●
PICCO R 003.0070-5	4.00	0.70	0.70	2.70	0.00	19.00	5.0	0.60	3.00		●
PICCO R 003.0070-10	4.00	0.70	0.70	2.70	0.00	24.00	10.0	0.60	3.00		●
PICCO R 003.0070-16	4.00	0.70	0.70	2.70	0.00	29.00	15.0	0.60	3.00		●
PICCO R/L 004.0100-10	4.00	1.00	1.50	3.50	0.00	24.00	9.0	0.80	4.00	●	
PICCO R/L 004.0100-16	4.00	1.00	1.50	3.50	0.00	30.00	15.0	0.80	4.00	●	
PICCO R/L 004.0100-20	4.00	1.00	1.50	3.50	0.00	34.00	19.0	0.80	4.00	●	
PICCO R/L 005.0100-10	5.00	1.00	1.90	4.40	0.00	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0100-15	5.00	1.00	1.90	4.40	0.00	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0100-20	5.00	1.00	1.90	4.40	0.00	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0100-25	5.00	1.00	1.90	4.40	0.00	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0100-30	5.00	1.00	1.90	4.40	0.00	45.00	29.0	1.00	5.00	●	
PICCO R/L 005.0150-10	5.00	1.50	1.90	4.40	0.00	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0150-15	5.00	1.50	1.90	4.40	0.00	30.00	14.0	1.00	5.00	●	
PICCO R 005M0150-15	5.00	1.50	1.90	4.00	0.10	30.00	14.0	1.00	5.00		●
PICCO R/L 005.0150-20	5.00	1.50	1.90	4.40	0.00	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0150-25	5.00	1.50	1.90	4.40	0.00	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0150-30	5.00	1.50	1.90	4.40	0.00	45.00	29.0	1.00	5.00	●	
PICCO R/L 005.0200-10	5.00	2.00	1.90	4.40	0.00	25.00	9.0	1.00	5.00	●	
PICCO R/L 005.0200-15	5.00	2.00	1.90	4.40	0.00	30.00	14.0	1.00	5.00	●	
PICCO R/L 005.0200-20	5.00	2.00	1.90	4.40	0.00	35.00	19.0	1.00	5.00	●	
PICCO R/L 005.0200-25	5.00	2.00	1.90	4.40	0.00	40.00	24.0	1.00	5.00	●	
PICCO R/L 005.0200-30	5.00	2.00	1.90	4.40	0.00	45.00	29.0	1.00	5.00	●	
PICCO R/L 006.0100-10	6.00	1.00	2.30	5.30	0.00	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0100-15	6.00	1.00	2.30	5.30	0.00	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0100-22	6.00	1.00	2.30	5.30	0.00	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0100-25	6.00	1.00	2.30	5.30	0.00	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0100-30	6.00	1.00	2.30	5.30	0.00	45.00	29.0	1.80	6.00	●	
PICCO R/L 006.0150-10	6.00	1.50	2.30	5.30	0.00	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0150-15	6.00	1.50	2.30	5.30	0.00	30.00	14.0	1.80	6.00	●	
PICCO R/L 006.0150-22	6.00	1.50	2.30	5.30	0.00	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0150-25	6.00	1.50	2.30	5.30	0.00	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0150-30	6.00	1.50	2.30	5.30	0.00	45.00	29.0	1.80	6.00	●	
PICCO R/L 006.0200-10	6.00	2.00	2.30	5.30	0.00	25.00	9.0	1.80	6.00	●	
PICCO R/L 006.0200-15	6.00	2.00	2.30	5.30	0.00	30.00	14.0	1.80	6.00	●	
PICCO R 006M0200-15	6.00	2.00	2.30	5.30	0.10	30.00	14.0	1.80	6.00		●
PICCO R/L 006.0200-22	6.00	2.00	2.30	5.30	0.00	37.00	21.0	1.80	6.00	●	
PICCO R/L 006.0200-25	6.00	2.00	2.30	5.30	0.00	40.00	24.0	1.80	6.00	●	
PICCO R/L 006.0200-30	6.00	2.00	2.30	5.30	0.00	45.00	29.0	1.80	6.00	●	
PICCO R/L 007.0100-10	7.00	1.00	2.80	6.30	0.00	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0100-15	7.00	1.00	2.80	6.30	0.00	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0100-22	7.00	1.00	2.80	6.30	0.00	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0100-25	7.00	1.00	2.80	6.30	0.00	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0100-30	7.00	1.00	2.80	6.30	0.00	45.00	29.0	2.50	6.80	●	
PICCO R/L 007.0150-10	7.00	1.50	2.80	6.30	0.00	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0150-15	7.00	1.50	2.80	6.30	0.00	30.00	14.0	2.50	6.80	●	
PICCO R/L 007.0150-22	7.00	1.50	2.80	6.30	0.00	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0150-25	7.00	1.50	2.80	6.30	0.00	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0150-30	7.00	1.50	2.80	6.30	0.00	45.00	29.0	2.50	6.80	●	
PICCO R/L 007.0200-10	7.00	2.00	2.80	6.30	0.00	25.00	9.0	2.50	6.80	●	
PICCO R/L 007.0200-15	7.00	2.00	2.80	6.30	0.00	30.00	14.0	2.50	6.80	●	
PICCO R 007M0200-15	7.00	2.00	2.80	6.30	0.10	30.00	14.0	2.50	6.80		●
PICCO R/L 007.0200-22	7.00	2.00	2.80	6.30	0.00	37.00	21.0	2.50	6.80	●	
PICCO R/L 007.0200-25	7.00	2.00	2.80	6.30	0.00	40.00	24.0	2.50	6.80	●	
PICCO R/L 007.0200-30	7.00	2.00	2.80	6.30	0.00	45.00	29.0	2.50	6.80	●	

● All carbide bars with sharp corners ● Specify right- or left-hand bars

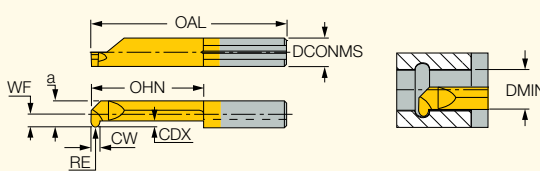
⁽¹⁾ Minimum overhang

⁽²⁾ Cutting depth maximum

PICCO CUT

PICCO R/L 004-007 (radius)

Full Radius Inserts for Internal Profiling



Right-hand shown

Designation	Dimensions									IC228
	DCONMS	CW	WF	a	RE	OAL	OHN ⁽¹⁾	CDX ⁽²⁾	DMIN	
PICCO R/L 004.0.50-16	4.00	1.00	1.50	3.50	0.50	30.00	15.0	0.80	4.00	●
PICCO R/L 005.0.50-20	5.00	1.00	1.90	4.40	0.50	35.00	19.0	1.00	5.00	●
PICCO R/L 005.0.75-20	5.00	1.50	1.90	4.40	0.75	35.00	19.0	1.00	5.00	●
PICCO R/L 005.1.00-20	5.00	2.00	1.90	4.40	1.00	35.00	19.0	1.00	5.00	●
PICCO R/L 006.0.50-25	6.00	1.00	2.30	5.30	0.50	40.00	24.0	1.80	6.00	●
PICCO R/L 006.0.75-25	6.00	1.50	2.30	5.30	0.75	40.00	24.0	1.80	6.00	●
PICCO R/L 006.1.00-25	6.00	2.00	2.30	5.30	1.00	40.00	24.0	1.80	6.00	●
PICCO R/L 007.0.50-30	7.00	1.00	2.80	6.30	0.50	45.00	29.0	2.50	6.80	●
PICCO R/L 007.0.75-30	7.00	1.50	2.80	6.30	0.75	45.00	29.0	2.50	6.80	●
PICCO R/L 007.1.00-30	7.00	2.00	2.80	6.30	1.00	45.00	29.0	2.50	6.80	●

• Specify right- or left-hand bars

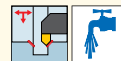
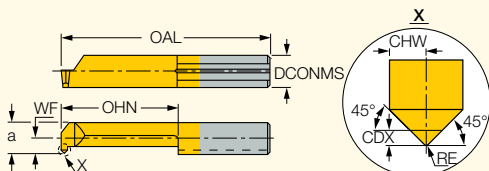
⁽¹⁾ Minimum overhang

⁽²⁾ Cutting depth maximum

PICCO CUT

PICCO R/L 060

Inserts for Internal Turning and 45° Chamfering



Right-hand shown

Designation	Dimensions									Tough ↔ Hard	
	DCONMS	RE	CHW	WF	a	OHN ⁽¹⁾	OAL	CDX ⁽²⁾	DMIN	IC228	IC908
PICCO R/L 060.5-15	5.00	0.20	1.0	1.90	4.40	14.0	30.00	0.70	5.00	●	
PICCO R/L 060.5-20	5.00	0.20	1.0	1.90	4.40	19.0	35.00	0.70	5.00	●	
PICCO R 060.6-20	6.00	0.20	1.0	2.30	5.30	20.0	35.00	0.70	6.00		●
PICCO R 060.6-25	6.00	0.20	1.0	2.30	5.30	25.0	40.00	0.70	6.00		●
PICCO R/L 060.7-20	7.00	0.20	1.0	2.80	6.30	19.0	35.00	0.70	6.80	●	
PICCO R 060.7-40	7.00	0.20	1.0	2.80	6.30	40.0	55.00	0.70	6.80		●

• Specify right- or left-hand bars

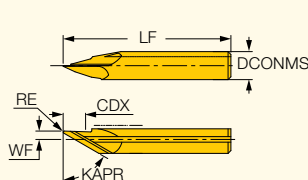
⁽¹⁾ Minimum overhang

⁽²⁾ Cutting depth maximum

PICCO CUT

PICCO R/L 520

Inserts for Internal Chamfering



Right-hand shown

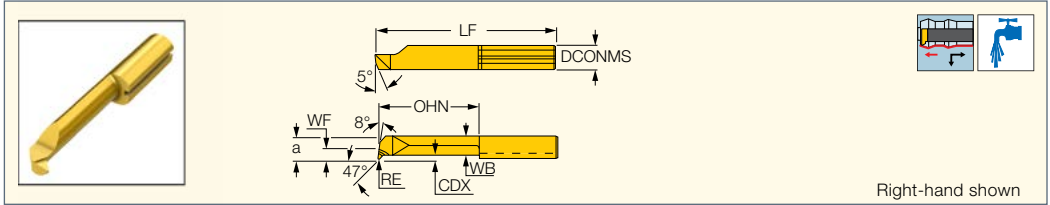
Designation	Dimensions							DMIN	IC908
	DCONMS	WF	KAPR ⁽¹⁾	LF	RE	CDX			
PICCO R/L 520.0045-15	5.00	1.50	45.0	30.00	0.20	3.50	1.00	●	
PICCO R/L 520.0060-15	5.00	1.50	60.0	30.00	0.20	4.00	1.00	●	

• Left hand inserts on request

⁽¹⁾ Tool cutting edge angle

PICCO CUT

PICCO R/L 047
Inserts for Internal Deep Profiling



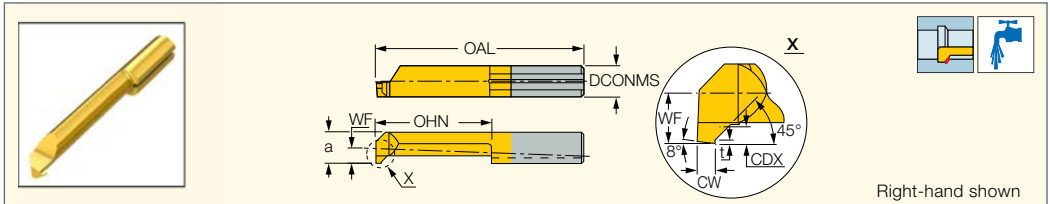
Right-hand shown

Dimensions										
Designation	DCONMS	WF	a	LF	OHN ⁽¹⁾	WB	CDX ⁽²⁾	DMIN	RE	IC908
PICCO R/L 047.4-20	4.00	1.50	3.50	34.00	20.0	3.00	0.30	4.00	0.15	●
PICCO R/L 047.5-25	5.00	1.90	4.40	40.00	25.0	3.80	0.50	5.00	0.15	●
PICCO R/L 047.6-30	6.00	2.30	5.30	45.00	30.0	4.50	0.50	6.00	0.15	●
PICCO R 047.T6-22	6.00	2.30	5.30	37.00	22.0	3.40	1.80	6.00	0.15	●
PICCO R 047.T6-30	6.00	2.30	5.30	45.00	30.0	3.40	1.80	6.00	0.15	●

- Left hand inserts on request
- ⁽¹⁾ Minimum overhang
- ⁽²⁾ Cutting depth maximum

PICCO CUT

PICCO R/L 070
Back Chamfering Inserts for Pre-Parting Operations



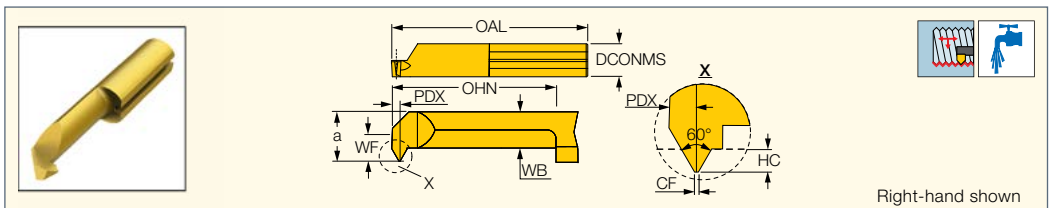
Right-hand shown

Dimensions										
Designation	DCONMS	CW	WF	a	OHN ⁽¹⁾	OAL	t	CDX ⁽²⁾	DMIN	IC228
PICCO R/L 070.5-15	5.00	1.00	1.90	4.40	15.0	30.00	0.20	1.00	5.00	●
PICCO R/L 070.5-20	5.00	1.00	1.90	4.40	20.0	35.00	0.20	1.00	5.00	●

- All carbide bars with sharp corners
- Specify right- or left-hand bars
- ⁽¹⁾ Minimum overhang
- ⁽²⁾ Cutting depth maximum

PICCO CUT

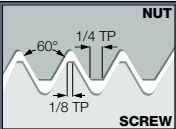
PICCO ISO Full Profile
ISO Standard Inserts for Full Profile Threads



Right-hand shown

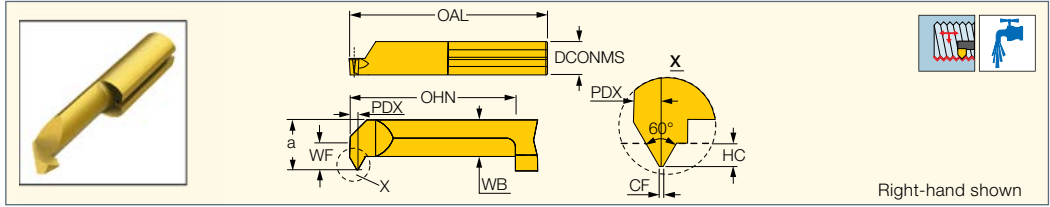
Dimensions												
Designation	TP ⁽¹⁾	DCONMS	WF	a	OAL	OHN ⁽²⁾	WB	PDX	HC	CF	DMIN	IC908
PICCO R/L 105.0510-15	1.000	5.00	1.90	4.40	30.00	15.0	3.30	0.6	0.54	0.12	4.80	●
PICCO R/L 106.0612-15	1.250	6.00	2.30	5.30	30.00	15.0	3.40	0.7	0.67	0.15	6.00	●
PICCO R/L 106.0815-15	1.500	6.00	2.30	5.30	30.00	15.0	3.40	0.8	0.81	0.18	6.00	●
PICCO R/L 107.0815-15	1.500	7.00	2.80	6.30	30.00	15.0	3.80	0.8	0.81	0.18	7.00	●

- ⁽¹⁾ Thread pitch
- ⁽²⁾ Minimum overhang



PICCO CUT

PICCO ISO Full Profile Fine
ISO Fine Pitch Inserts for
Full Profile Threads



Right-hand shown

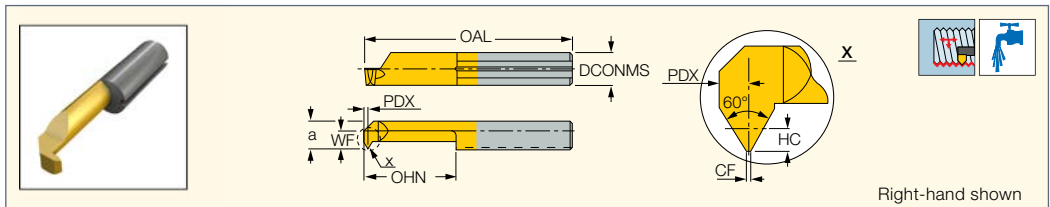
Designation	Dimensions											IC908
	TP ⁽¹⁾	DCONMS	WF	a	OAL	OHN ⁽²⁾	WB	PDX	HC	CF	DMIN	
PICCO R/L 104.0205-15	0.500	5.00	1.50	3.50	30.00	15.0	2.40	0.4	0.27	0.06	4.00	●
PICCO R/L 105.0205-15	0.500	5.00	1.90	4.40	30.00	15.0	3.30	0.4	0.27	0.06	5.00	●
PICCO R/L 105.0407-15	0.750	5.00	1.90	4.40	30.00	15.0	3.30	0.5	0.40	0.09	5.00	●
PICCO R/L 106.0510-15	1.000	6.00	2.30	5.30	30.00	15.0	3.40	0.6	0.54	0.12	6.00	●

⁽¹⁾ Thread pitch
⁽²⁾ Minimum overhang

ISCAR THREAD

PICCO CUT

PICCO R/L-60°-Thread
Inserts with a 60° Internal
Thread Profile for 2.4 mm
Min. Bore Diameter

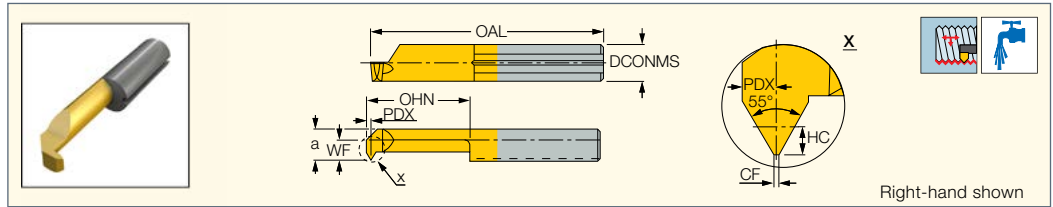


Right-hand shown

Designation	Dimensions														Tough ↔ Hard	
	DCONMS	HC	CF	PDX	WF	a	OHN ⁽¹⁾	OAL	DMIN	TPN ⁽²⁾	TPX ⁽³⁾	TPIN ⁽⁴⁾	TPIX ⁽⁵⁾	IC228	IC908	
PICCO R 003.0105-8	4.00	0.27	0.04	0.3	0.30	2.30	8.0	22.00	2.40	0.500	0.700	36.00	48.00		●	
PICCO R 004.0105-10	4.00	0.27	0.09	0.4	1.00	3.00	10.0	24.00	3.20	0.500	0.750	36.00	48.00		●	
PICCO R/L 004.0205-15	4.00	0.27	0.06	0.4	1.50	3.50	15.0	30.00	4.00	0.500	0.750	36.00	48.00	●		
PICCO R/L 005.0205-15	5.00	0.27	0.06	0.4	1.90	4.40	15.0	30.00	5.00	0.500	0.750	36.00	48.00	●		
PICCO L 005.0407-15	5.00	0.40	0.09	0.5	1.90	4.40	15.0	30.00	5.00	0.750	1.000	24.00	36.00	●		
PICCO R 005.0407-15	5.00	0.40	0.09	0.5	1.90	4.40	15.0	30.00	5.00	0.750	1.000	24.00	36.00	●	●	
PICCO R 005.0407-20	5.00	0.40	0.09	0.5	1.90	4.40	20.0	35.00	5.00	0.750	1.000	24.00	36.00		●	
PICCO R/L 005.0510-15	5.00	0.55	0.12	0.6	1.90	4.40	15.0	30.00	4.80	1.000	1.250	20.00	24.00	●		
PICCO R 005.0510-20	5.00	0.55	0.12	0.6	1.90	4.40	20.0	35.00	4.80	1.000	1.250	20.00	24.00		●	
PICCO R/L 006.0510-15	6.00	0.55	0.12	0.6	2.30	5.30	15.0	30.00	6.00	1.000	1.250	20.00	24.00	●		
PICCO R 006.0510-22	6.00	0.55	0.12	0.6	2.30	5.30	22.0	37.00	6.00	1.000	1.250	20.00	24.00		●	
PICCO R/L 006.0612-15	6.00	0.68	0.15	0.7	2.30	5.30	15.0	30.00	6.00	1.250	1.500	16.00	20.00	●		
PICCO R 006.0612-22	6.00	0.68	0.15	0.7	2.30	5.30	22.0	37.00	6.00	1.250	1.500	16.00	20.00		●	
PICCO R/L 006.0815-15	6.00	0.81	0.18	0.8	2.30	5.30	15.0	30.00	6.00	1.500	1.750	14.00	16.00	●		
PICCO R 006.0815-22	6.00	0.81	0.18	0.8	2.30	5.30	22.0	37.00	6.00	1.500	1.750	14.00	16.00		●	
PICCO R/L 007.0815-15	7.00	0.81	0.18	0.8	2.70	6.30	15.0	30.00	7.00	1.500	1.750	14.00	16.00	●		

⁽¹⁾ Minimum overhang
⁽²⁾ Thread pitch minimum (mm)
⁽³⁾ Thread pitch maximum (mm)
⁽⁴⁾ Threads per inch minimum
⁽⁵⁾ Threads per inch maximum

PICCO-55°-Thread
Inserts for 55° Internal
Thread Profile

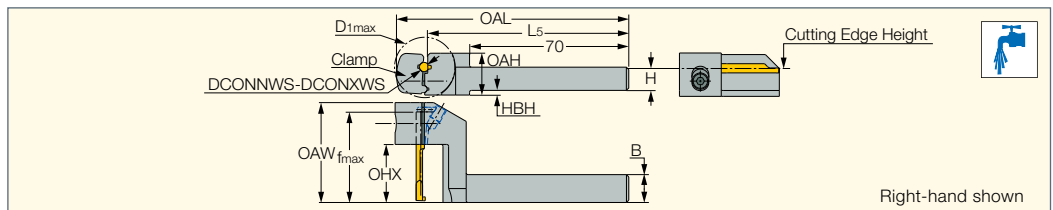


Designation	Dimensions											IC28
	DCONMS	TPIX ⁽¹⁾	TPIN ⁽²⁾	HC	CF	PDX	WF	a	OHN ⁽³⁾	OAL	DMIN	
PICCO R 005.5548-15	5.00	48.00	24.00	0.40	0.06	0.5	1.90	4.40	15.0	30.00	4.80	●
PICCO R 006.5548-15	6.00	48.00	24.00	0.40	0.06	0.5	2.30	5.30	15.0	30.00	6.00	●
PICCO R 006.5524-15	6.00	24.00	16.00	0.81	0.12	0.8	2.30	5.30	15.0	30.00	6.00	●
PICCO R 007.5524-15	7.00	24.00	16.00	0.81	0.12	0.8	2.80	6.30	15.0	30.00	7.00	●

- All mini-bars have sharp corners
- ⁽¹⁾ Threads per inch maximum
- ⁽²⁾ Threads per inch minimum
- ⁽³⁾ Minimum overhang

PICCO **CUT**

GHPCOR
Perpendicular Square-Shank
Tools for Use on Cross
Slide Units of Swiss-Type
and Automatic Machines

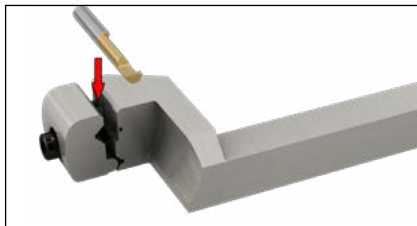


Designation	H	B	OAL	L5	HBH	OAH	OAW	D1 _{max}	OHX ⁽¹⁾	fmax	DCONNWS ⁽²⁾	DCONXWS ⁽³⁾
GHPCOR 08-16-4-5	8.0	8.0	102.00	88.00	4.0	15.0	34.00	26.0	16.00	30.0	4.00	5.00
GHPCOR 10-16-4-5	10.0	10.0	102.00	88.00	2.0	18.0	34.00	26.0	16.00	30.0	4.00	5.00
GHPCOR 12-16-4-6	12.0	12.0	102.00	88.00	-	18.0	34.00	26.0	16.00	30.0	4.00	6.00
GHPCOR 12-25-4-6	12.0	12.0	102.00	88.00	-	18.0	43.00	26.0	25.00	39.0	4.00	6.00
GHPCOR 16-16-4-6	16.0	16.0	112.00	98.00	-	22.0	35.00	36.0	16.00	31.0	4.00	6.00
GHPCOR 16-25-4-6	16.0	16.0	112.00	98.00	-	22.0	44.00	36.0	25.00	40.0	4.00	6.00
GHPCOR 16-30-7-8	16.0	16.0	116.00	98.00	-	22.0	49.00	36.0	30.00	45.0	7.00	8.00

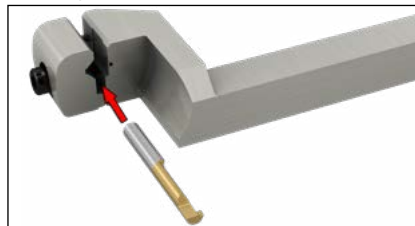
- PICCO-CUT insert should not exceed OAW
- Left-hand holders are available upon request
- Coolant tube adapter: KQ2L06-M5 (for 6 mm coolant tube)
- ⁽¹⁾ Maximum overhang
- ⁽²⁾ Minimum diameter
- ⁽³⁾ Maximum diameter

For tools, see pages: PICIN-MGSIR/L (386) • PICIN-SCLCR/L (386) • PICIN-SWUBR/L (386)

Indexing from the top



Indexing from the front

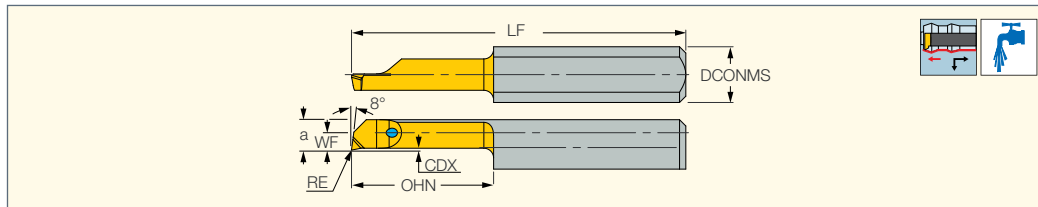


Spare Parts

Designation				
GHPCOR 08-16-4-5	HED 08	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 10-16-4-5	HED 10	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 12-16-4-6	HED 12	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 12-25-4-6	HED 12	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 16-16-4-6	HED 16-4-6	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 16-25-4-6	HED 16-4-6	SR M4X14 DIN912	HW 3.0	KQ2L06-M5
GHPCOR 16-30-7-8	HED 16-7-8	SR M4X14 DIN912	HW 3.0	KQ2L06-M5

PICCO^{CUT}

PICCO R/LM
 Profiling Inserts with Coolant
 Channel Optimized for
 Machining Medical Parts

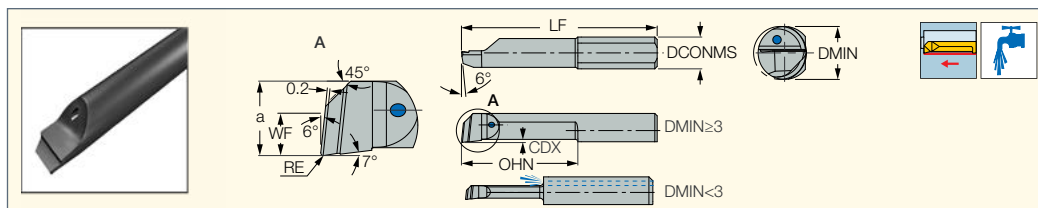


Designation	Dimensions								IC909
	DMIN	OHN ⁽¹⁾	DCONMS	WF	a	CDX ⁽²⁾	RE	LF	
PICCO R/LM050.05-2	0.50	2.0	4.00	0.20	0.40	0.02	0.02	20.00	●
PICCO LM050.08-4	0.80	4.0	4.00	0.20	0.70	0.03	0.02	20.00	●
PICCO RM050.08-4	0.80	4.0	4.00	0.40	0.70	0.03	0.02	20.00	●
PICCO R/LM050.1-5	1.00	5.0	4.00	0.40	0.90	0.05	0.02	20.00	●
PICCO R/LM050.1-7	1.00	7.0	4.00	0.40	0.90	0.05	0.02	22.00	●
PICCO R/LM050.15-5	1.50	5.0	4.00	0.60	1.15	0.08	0.02	19.00	●
PICCO R/LM050.15-10	1.50	10.0	4.00	0.60	1.15	0.08	0.02	24.00	●
PICCO R/LM050.2-5	2.00	5.0	4.00	0.80	1.70	0.08	0.02	19.00	●
PICCO R/LM050.2-10	2.00	10.0	4.00	0.80	1.70	0.08	0.02	24.00	●
PICCO R/LM050.25-5	2.50	5.0	4.00	0.20	2.20	0.10	0.02	19.00	●
PICCO R/LM050.25-10	2.50	10.0	4.00	0.20	2.20	0.10	0.02	24.00	●
PICCO R/LM050.3-10	3.00	10.0	4.00	0.60	2.60	0.15	0.02	24.00	●
PICCO R/LM050.3-16	3.00	16.0	4.00	0.60	2.60	0.15	0.02	30.00	●
PICCO LM050.35-10	3.50	10.0	4.00	1.10	3.40	0.17	0.02	24.00	●
PICCO RM050.35-10	3.50	10.0	4.00	1.10	3.10	0.17	0.02	24.00	●
PICCO R/LM050.35-16	3.50	16.0	4.00	1.10	3.10	0.17	0.02	30.00	●
PICCO R/LM050.35-20	3.50	20.0	4.00	1.10	3.10	0.17	0.02	34.00	●
PICCO R/LM050.4-10	4.00	10.0	4.00	1.50	3.50	0.20	0.02	24.00	●
PICCO R/LM050.4-16	4.00	16.0	4.00	1.50	3.50	0.20	0.02	30.00	●
PICCO R/LM050.4-20	4.00	20.0	4.00	1.50	3.50	0.20	0.02	34.00	●
PICCO R/LM050.4-24	4.00	24.0	4.00	1.50	3.50	0.20	0.02	38.00	●

- An optimized insert geometry and carbide grade for machining medical parts made from titanium, medical standard stainless steel and other difficult to machine materials.
- ⁽¹⁾ Minimum overhang
- ⁽²⁾ Cutting depth maximum

PICCO^{CUT}

PICCO R/LX050
 Reinforced Boring Inserts
 with Internal Coolant Holes



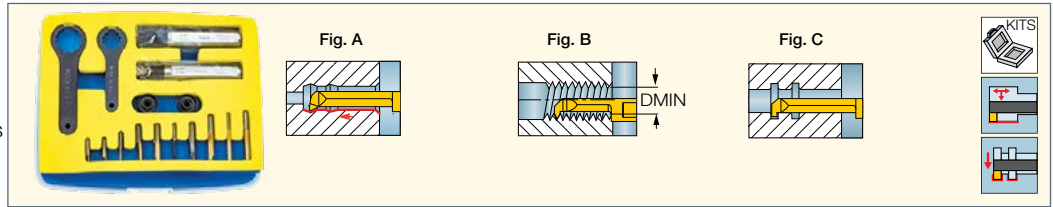
Designation	Dimensions								IC908
	DCONMS	WF	a	RE	LF	OHN ⁽¹⁾	CDX ⁽²⁾	DMIN	
PICCO R/LX050.2-5R15	4.00	-	1.80	0.15	19.00	5.0	0.10	2.00	●
PICCO R/LX050.2-10R05	4.00	-	1.80	0.05	24.00	10.0	0.10	2.00	●
PICCO R/LX050.2-10R15	4.00	-	1.80	0.15	24.00	10.0	0.10	2.00	●
PICCO R/LX050.3-16R10	4.00	0.70	2.70	0.10	30.00	16.0	0.15	3.00	●
PICCO R/LX050.3-16R20	4.00	0.70	2.70	0.20	30.00	16.0	0.15	3.00	●
PICCO R/LX050.4-10R10	4.00	1.60	3.60	0.10	24.00	10.0	0.20	4.00	●
PICCO R/LX050.4-10R20	4.00	1.60	3.60	0.20	24.00	10.0	0.20	4.00	●
PICCO R/LX050.4-16R10	4.00	1.60	3.60	0.10	30.00	16.0	0.20	4.00	●
PICCO R/LX050.4-16R20	4.00	1.60	3.60	0.20	30.00	16.0	0.20	4.00	●
PICCO R/LX050.5-15R10	5.00	2.10	4.60	0.10	30.00	15.0	0.30	5.00	●
PICCO R/LX050.5-15R20	5.00	2.10	4.60	0.20	30.00	15.0	0.30	5.00	●
PICCO R/LX050.5-25R10	5.00	2.10	4.60	0.10	40.00	25.0	0.30	5.00	●
PICCO R/LX050.5-25R20	5.00	2.10	4.60	0.20	40.00	25.0	0.30	5.00	●
PICCO R/LX050.6-15R10	6.00	2.50	5.50	0.10	30.00	15.0	0.40	6.00	●
PICCO R/LX050.6-15R20	6.00	2.50	5.50	0.20	30.00	15.0	0.40	6.00	●
PICCO R/LX050.6-22R20	6.00	2.50	5.50	0.20	37.00	22.0	0.40	6.00	●
PICCO R/LX050.6-35R20	6.00	2.50	5.50	0.20	50.00	35.0	0.40	6.00	●

- Left-hand inserts on request
- ⁽¹⁾ Minimum overhang
- ⁽²⁾ Cutting depth maximum

PICCO^{CUT}

KIT PICCO SET

Contains 2 Toolholders and a Set of Solid Carbide Miniature Turning and Grooving Boring Bars



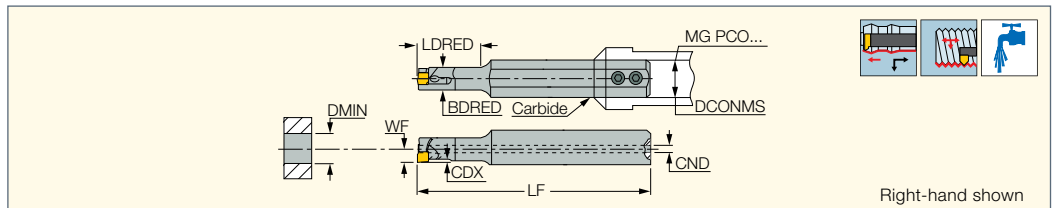
Designation	DMIN	Qty
KIT PICCO SET-1R	3.00	12

Designation	DMIN	OHN	CDX	CW	OAL	Pcs.	Fig.	Description
PICCO ACE 16-4	—	—	—	—	85	1	—	Holder
PICCO ACE 16-6	—	—	—	—	85	1	—	Holder
PICCO R 080.0004-25	4.0	24.0	0.80	1.5	39	1	A	Mini carbide bar
PICCO R 003.0070-16	3.0	15.0	0.60	0.7	29	1	C	Mini carbide bar
PICCO RM050.2-10	2.0	10.0	0.08	—	24	1	A	Mini carbide bar
PICCO R 050.1-5	1.0	4.5	0.10	—	20	1	A	Mini carbide bar
PICCO R 003.0070-5	3.0	5.0	0.60	0.7	19	1	C	Mini carbide bar
PICCO R 006.1.00-25	6.0	24.0	1.80	2.0	40	1	A	Mini carbide bar
PICCO R 006.0100-22	6.0	21.0	1.80	1.0	37	1	C	Mini carbide bar
PICCO R 050.6-15	6.0	14.0	0.50	—	30	1	A	Mini carbide bar
PICCO RX050.6-15R10	6.0	15.0	0.40	—	30	1	A	Mini carbide bar
PICCO R 006.0510-15	6.0	15.0	—	—	30	1	B	Mini carbide bar

MINICHAM

MGUHR

Solid Carbide Bars for Internal Turning and Threading at 4 mm Minimum Bore Diameter



Designation	DMIN	CDX ⁽²⁾	WF ⁽³⁾	DCONMS	LF	LDRED	BDRED	CND
MGUHR 06-04L10 ⁽¹⁾	4.00	0.50	2.17	6.00	62.00	10.0	3.45	1.3
MGUHR 06-04L20	4.00	0.50	2.17	6.00	62.00	20.0	3.45	1.3

⁽¹⁾ DMIN for turning 4.0 mm & CDX 0.43 mm; DMIN for threading 5.0 mm & CDX 1.00 mm

⁽²⁾ Cutting depth maximum

⁽³⁾ WF=2.17 for turning, WF=2.7 for threading

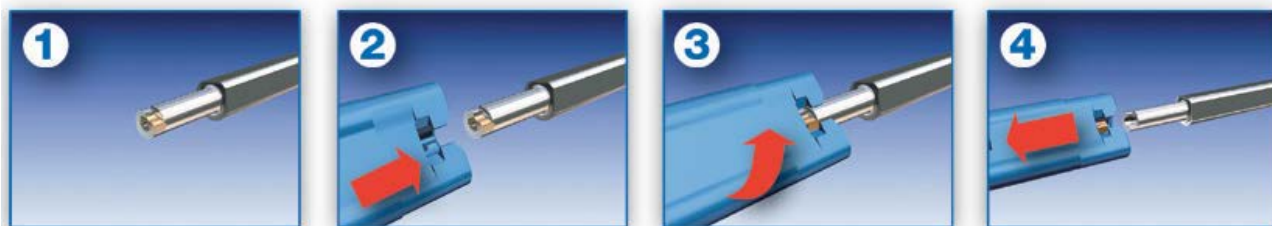
For inserts, see pages: UMGR (412) • UMGR-A55 (412) • UMGR-A60 (412)

For holders, see pages: PICCO/MG PCO (Holder) (399)

Mounting Operation



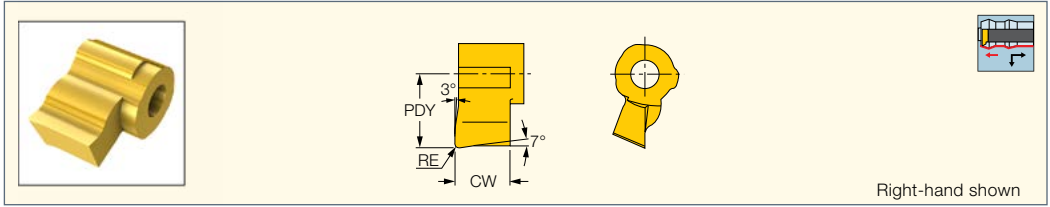
Dismounting Operation



MINICHAM

UMGR

Miniature Indexable Inserts for Internal Turning



Right-hand shown

Dimensions						IC508
Designation	CW	RE	PDY	DMIN		
UMGR 4.0-0.0	1.63	0.00	2.20	4.00	•	
UMGR 4.0-0.1	1.63	0.10	1.60	4.00	•	

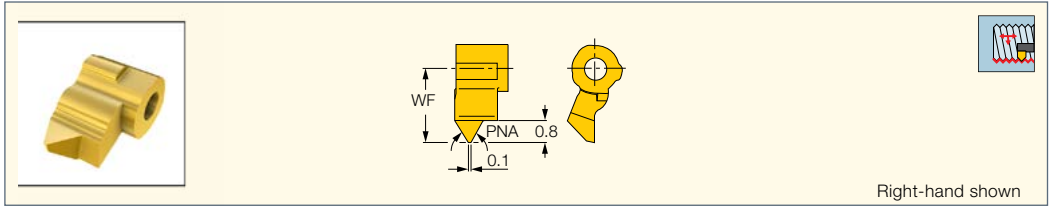
For tools, see pages: MGUHR (411)

ISCARTHREAD

MINICHAM

UMGR-A55

Mini Indexable Inserts with Whitworth Partial Profile for Threading in 5.2 mm and Larger Holes



Right-hand shown

Dimensions								IC508
Designation	WF	PNA	TPIX ⁽¹⁾	TPIN ⁽²⁾	TPN ⁽³⁾	TPX ⁽⁴⁾	DMIN	
UMGR 4.0-A55	2.70	55.0	40.00	24.00	0.500	1.400	5.20	

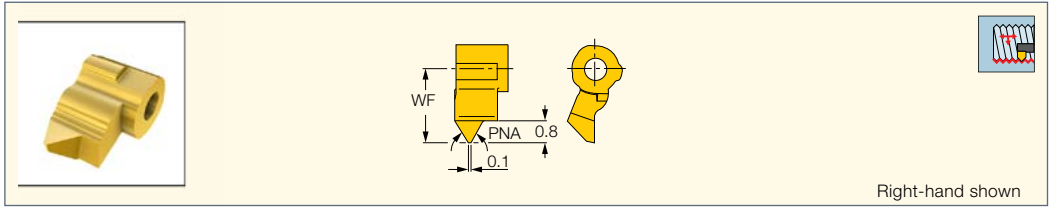
(1) Threads per inch maximum
 (2) Threads per inch minimum
 (3) Thread pitch minimum (mm)
 (4) Thread pitch maximum (mm)
 For tools, see pages: MGUHR (411)

ISCARTHREAD

MINICHAM

UMGR-A60

Mini Indexable Inserts with a 60° Partial Profile for Threading in 5.2 mm and Larger Holes



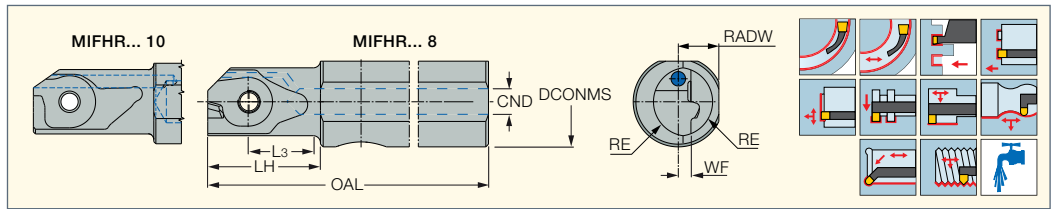
Right-hand shown

Dimensions								IC508
Designation	PNA	WF	DMIN	TPN ⁽¹⁾	TPX ⁽²⁾	TPIN ⁽³⁾	TPIX ⁽⁴⁾	
UMGR 4.0-A60	60.0	2.70	5.20	0.600	1.250	20.00	40.00	

(1) Thread pitch minimum (mm)
 (2) Thread pitch maximum (mm)
 (3) Threads per inch minimum
 (4) Threads per inch maximum
 For tools, see pages: MGUHR (411)

MIFHR

Bars for Face and Internal Grooving, Undercutting and Threading Inserts



Designation	DCONMS	CND	WF	RADW	OAL	L3	LH	RE	Insert			
MIFHR 8SC-8-SRK ⁽¹⁾	8.00	1.2	1.4	3.70	75.00	7.40	11.7	3.80	MI.R 8	SR 14-297	T-8/5	
MIFHR 10C-8	10.00	5.0	1.4	4.50	102.50	7.40	12.5	3.80	MI.R 8	SR 14-297	T-8/5	
MIFHR 12C-8	12.00	5.0	1.4	5.50	102.50	7.40	12.5	3.80	MI.R 8	SR 14-297	T-8/5	
MIFHR 12C-10 ⁽²⁾	12.00	6.0	2.4	5.50	90.00	11.20	17.2	4.60	MI.R 10	SR 34-506 M3X0.5	T-9/5	
MIFHR 16C-10 ⁽²⁾	16.00	6.0	2.4	7.50	90.00	11.20	17.2	4.60	MI.R 10	SR 34-506 M3X0.5	T-9/5	
MIFHR 16C-15	16.00	8.0	2.7	7.50	100.00	12.50	19.0	10.30	MI.R 15	SR 34-506/L	T-9/5	PL 16
MIFHR 20C-15	20.00	8.5	4.7	9.00	100.00	12.50	19.0	11.30	MI.R 15	SR 34-506/L	T-9/5	PL 20

⁽¹⁾ Solid carbide shank

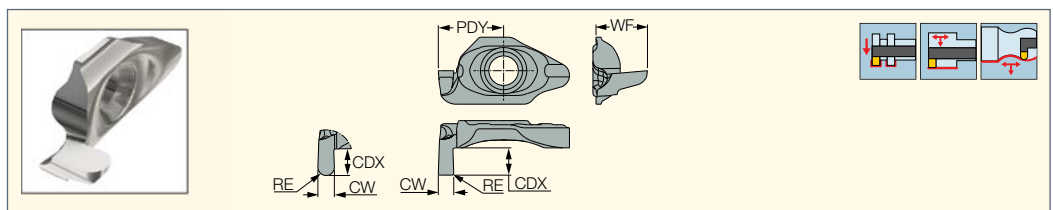
⁽²⁾ Only face grooving inserts are available for this tool

For inserts, see pages: MEFL (600) • MIFR (600) • MIGR 8 (413) • MITR 8-MT (650) • MIUR 8 (413)

For holders, see pages: PICCO/MG PCO (Holder) (399)

MIGR 8

Internal Shallow Grooving Inserts



Designation	Dimensions								IC908	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	DMIN	CDX ⁽³⁾	PDY	WF		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
MIGR 8-0.50-0.00	0.50	-	0.02	0.020	8.50	1.40	6.30	4.00	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.00-0.05	1.00	0.05	0.02	0.020	8.50	1.40	6.80	4.00	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.20-0.05	1.20	0.05	0.02	0.020	9.20	2.10	6.80	4.70	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.20-0.60	1.20	0.60	0.02	0.020	9.20	2.10	6.80	4.70	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.50-0.05	1.50	0.05	0.02	0.020	9.20	2.10	6.80	4.70	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-1.60-0.80	1.60	0.80	0.02	0.020	9.20	2.10	6.80	4.70	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-2.00-0.10	2.00	0.10	0.02	0.020	8.90	1.80	6.80	4.40	●	0.05-0.50	0.03-0.10	0.01-0.03
MIGR 8-2.00-1.00	2.00	1.00	0.02	0.020	9.20	2.10	6.80	4.70	●	0.05-0.50	0.03-0.10	0.01-0.03

⁽¹⁾ Cutting width tolerance (+/-)

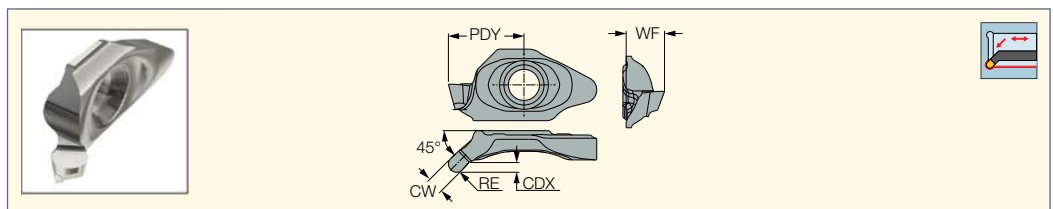
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: MIFHR (413)

MIUR 8

45° Full Radius Internal Undercutting Inserts



Designation	Dimensions								IC908	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	DMIN	CDX ⁽³⁾	PDY	WF		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
MIUR 8-1.00-0.50	1.00	0.50	0.02	0.020	8.00	1.10	6.70	3.60	●	0.03-0.50	0.03-0.10	0.01-0.03
MIUR 8-1.5-0.75	1.50	0.75	0.02	0.020	8.10	1.20	6.70	3.60	●	0.03-0.50	0.03-0.10	0.01-0.03
MIUR 8-2.00-1.00	2.00	1.00	0.02	0.020	8.30	1.36	6.70	3.60	●	0.03-0.50	0.03-0.10	0.01-0.03

⁽¹⁾ Cutting width tolerance (+/-)

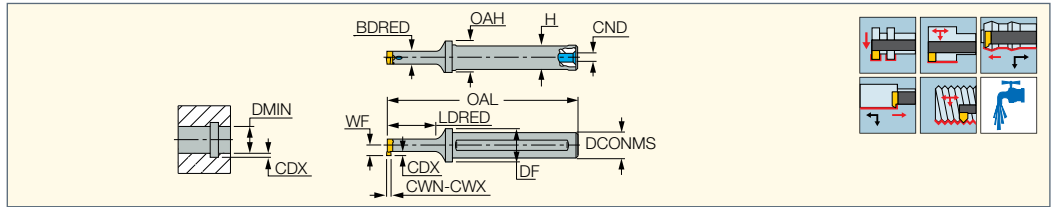
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: MIFHR (413)

CHAMGROOVE

MG
Internal Grooving, Turning
and Threading Bars



Designation	DCONMS	DMIN ⁽¹⁾	CDX ⁽²⁾	BDRED	OAL	LDRED	WF ⁽³⁾	H	CWN ⁽⁴⁾	CWX ⁽⁵⁾	OAH	DF	CND	Insert		
MG 12-08C16	12.00	8.00	1.50	6.00	92.00	16.0	4.80	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 8	SR 76-1499	T-8/5
MG 12-08C23	12.00	8.00	1.50	6.00	92.00	23.0	4.80	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 8	SR 76-1499	T-8/5
MG 12-11C25	12.00	11.00	2.30	8.00	92.50	25.0	6.70	11.0	0.50	3.00	16.3	18.00	6.0	GIQR/L 11	SR M3.5-08134	T-9/5

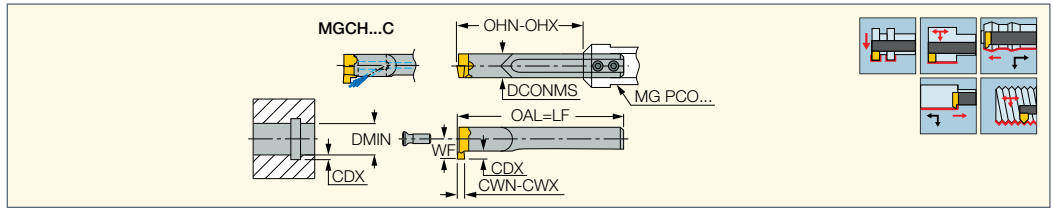
• The same tool applies on right and left machining

- (1) Check according to specific insert data
- (2) Check according to specific insert data
- (3) Cutting edge radius on rotating tool
- (4) Minimum cutting width
- (5) Maximum cutting width

For inserts, see pages: GIQR/L 8 (415) • GIQR/L 8-R (415) • GIQR/L 11 (416) • GIQR/L 11-R (416) • GIQR/L 11-15 (417) • GIQR/L 11-15-R (417)
• GIQR/L-A18 (417) • GIQR/L-B18 (418) • GIQR/L-MT (418) • GIQR/L-WT (418)

CHAMGROOVE

MGCH
Solid Carbide Bars for Internal
Grooving, Turning and
Threading, DMIN 8 mm



Designation	DMIN ⁽¹⁾	CDX ⁽²⁾	DCONMS	OAL	OHN ⁽³⁾	OHX ⁽⁴⁾	WF	CWN ⁽⁵⁾	CWX ⁽⁶⁾	CSP ⁽⁷⁾	Insert		
MGCH 06	8.00	1.50	6.00	62.00	16.0	42.0	4.80	0.50	4.00	0	GIQR/L 8	SR 76-1499	T-8/5
MGCH 06C	8.00	1.50	6.00	62.00	16.0	42.0	4.80	0.50	4.00	1	GIQR/L 8	SR 76-1499	T-8/5
MGCH 06-L100	8.00	1.50	6.00	100.00	16.0	80.0	4.80	0.50	4.00	0	GIQR/L 8	SR 76-1499	T-8/5
MGCH 08	- ⁽⁸⁾	- ⁽⁸⁾	8.00	76.00	20.0	56.0	- ⁽¹⁰⁾	0.50	5.00	0	GIQR/L 11/11-15	SR M3.5-08134	T-9/5
MGCH 08C	- ⁽⁸⁾	- ⁽⁸⁾	8.00	76.00	20.0	56.0	- ⁽¹⁰⁾	0.50	5.00	1	GIQR/L 11/11-15	SR M3.5-08134	T-9/5
MGCH 08-L125	- ⁽⁸⁾	- ⁽⁸⁾	8.00	125.00	70.0	105.0	- ⁽¹⁰⁾	0.50	5.00	0	GIQR/L 11/11-15	SR M3.5-08134	T-9/5

• The same tool applies on right and left machining .

- (1) Check according to specific insert data
- (2) Check according to specific insert data
- (3) Minimum overhang
- (4) Maximum overhang
- (5) Minimum cutting width
- (6) Maximum cutting width

(7) 0 - Without coolant supply, 1 - With coolant supply
 (8) DMIN=11 mm for GIQR 11, DMIN=15 mm for GIQR 11-15
 (9) CDX=2.30 for GIQR 11, CDX=6.3 for GIQR 11-15
 (10) WF=6.70 mm for GIQR 11, WF=10.6 mm for GIQR 11-15

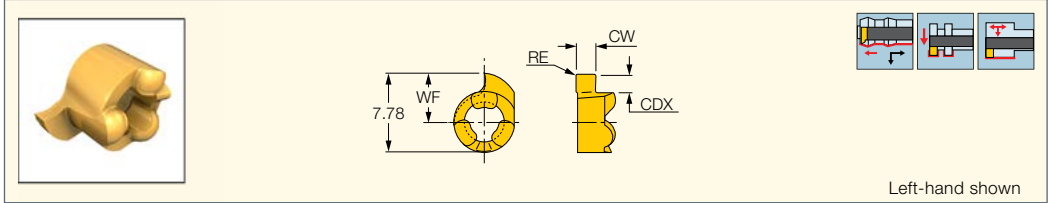
For inserts, see pages: GIQR/L 8 (415) • GIQR/L 8-R (415) • GIQR/L 11 (416) • GIQR/L 11-R (416) • GIQR/L 11-15 (417) • GIQR/L 11-15-R (417)
 • GIQR/L-A18 (417) • GIQR/L-B18 (418) • GIQR/L-MT (418) • GIQR/L-WT (418)

For holders, see pages: PICCO/MG PCO (Holder) (399) • SBB (120)

CHAMGROOVE

GIQR/L 8

Precision Ground
Single-Ended Inserts for
Internal Grooving and Turning



Left-hand shown

Designation	Dimensions								IC528	Recommended Machining Data		
	CW	RE	CWTOL ⁽²⁾	RETOL ⁽³⁾	CDX ⁽⁴⁾	DMIN	WF	a _p (mm)		f turn (mm/rev)	f groove (mm/rev)	
GIQR/L 8-0.50-0.00 ⁽¹⁾	0.50	0.00	0.02	0.030	0.70	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-0.75-0.00 ⁽¹⁾	0.75	0.00	0.02	0.030	1.20	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-0.85-0.00 ⁽¹⁾	0.85	0.00	0.02	0.030	1.20	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-0.95-0.00 ⁽¹⁾	0.95	0.00	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.00-0.00 ⁽¹⁾	1.00	0.00	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.04-0.05 ⁽¹⁾	1.04	0.05	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.20-0.05 ⁽¹⁾	1.20	0.05	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.40-0.05 ⁽¹⁾	1.40	0.05	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.47-0.05 ⁽¹⁾	1.47	0.05	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.50-0.05 ⁽¹⁾	1.50	0.05	0.02	0.030	1.50	8.00	4.80	●	-	-	0.01-0.03	
GIQR/L 8-1.70-0.10	1.70	0.10	0.02	0.030	1.50	8.00	4.80	●	0.12-0.68	0.02-0.05	0.01-0.03	
GIQR/L 8-1.96-0.10	1.96	0.10	0.02	0.030	1.50	8.00	4.80	●	0.12-0.78	0.02-0.05	0.01-0.03	
GIQR/L 8-2.00-0.10	2.00	0.10	0.02	0.030	1.50	8.00	4.80	●	0.12-0.80	0.02-0.05	0.01-0.03	
GIQR/L 8-2.22-0.10	2.22	0.10	0.02	0.030	1.50	8.00	4.80	●	0.12-0.88	0.02-0.05	0.01-0.03	
GIQR/L 8-2.50-0.20	2.50	0.20	0.02	0.030	1.50	8.00	4.80	●	0.24-1.00	0.02-0.05	0.01-0.03	
GIQR/L 8-3.00-0.20	3.00	0.20	0.02	0.030	1.50	8.00	4.80	●	0.24-1.20	0.02-0.05	0.01-0.03	
GIQR 8-3.50-0.20	3.50	0.20	0.02	0.030	1.50	8.00	4.80	●	0.24-1.40	0.02-0.05	0.01-0.03	
GIQR 8-4.00-0.20	4.00	0.20	0.02	0.030	1.50	8.00	4.80	●	0.24-1.60	0.02-0.05	0.01-0.03	

• According to retaining rings standard DIN 471/472. • Can be used for groove milling by circular interpolation

⁽¹⁾ For grooving only

⁽²⁾ Cutting width tolerance (+/-)

⁽³⁾ Corner radius tolerance (+/-)

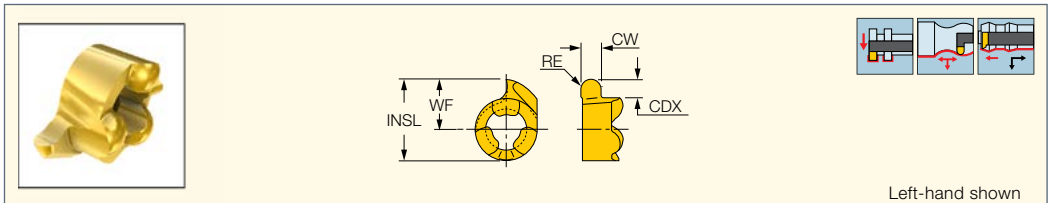
⁽⁴⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L 8-R

Precision Ground Single-Ended
Full Radius Inserts for Internal
Grooving and Profiling



Left-hand shown

Designation	Dimensions								IC528	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	DMIN	WF	INSL		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 8-1.20-R060	1.20	0.60	0.02	0.030	1.50	8.00	4.80	7.78	●	0.30-0.60	0.02-0.05	0.01-0.03
GIQR/L 8-2.00-R100	2.00	1.00	0.02	0.030	1.50	8.00	4.80	7.78	●	0.50-1.00	0.02-0.05	0.01-0.03
GIQR 8-3.00-R150	3.00	1.50	0.02	0.030	1.50	8.00	4.80	7.78	●	0.70-1.50	0.02-0.05	0.01-0.03

• Comply to retaining rings DIN 471/472 • Can be used for groove milling by circular interpolation

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

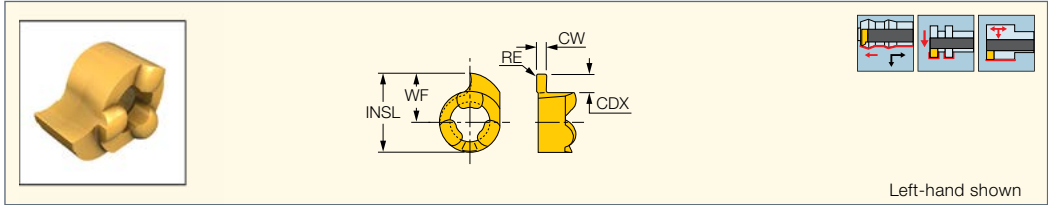
⁽³⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L 11

Precision Ground Single-Ended
Inserts for Internal Grooving
and Turning, DMIN 11 mm



Designation	Dimensions								IC528	Recommended Machining Data		
	CW	RE	CWTOL ⁽²⁾	RETOL ⁽³⁾	CDX ⁽⁴⁾	DMIN	INSL	WF		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-0.50-0.00 ⁽¹⁾	0.50	0.00	0.02	0.030	1.00	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-0.75-0.00 ⁽¹⁾	0.75	0.00	0.02	0.030	1.50	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR 11-0.85-0.00 ⁽¹⁾	0.85	0.00	0.02	0.030	1.50	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-0.95-0.00 ⁽¹⁾	0.95	0.00	0.02	0.030	1.80	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-1.04-0.05 ⁽¹⁾	1.04	0.05	0.02	0.030	2.00	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-1.20-0.05 ⁽¹⁾	1.20	0.05	0.02	0.030	2.30	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-1.40-0.05 ⁽¹⁾	1.40	0.05	0.02	0.030	2.30	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-1.50-0.05 ⁽¹⁾	1.50	0.05	0.02	0.030	2.30	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-1.70-0.05 ⁽¹⁾	1.70	0.05	0.02	0.030	2.30	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-1.96-0.10 ⁽¹⁾	1.96	0.10	0.02	0.030	2.30	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-2.00-0.10 ⁽¹⁾	2.00	0.10	0.02	0.030	2.30	11.00	10.68	6.70	●	-	-	0.01-0.03
GIQR/L 11-2.22-0.10	2.22	0.10	0.02	0.030	2.30	11.00	10.68	6.70	●	0.12-0.88	0.03-0.07	0.02-0.05
GIQR/L 11-2.39-0.15	2.39	0.15	0.02	0.030	2.30	11.00	10.68	6.70	●	0.18-0.95	0.03-0.07	0.02-0.05
GIQR/L 11-2.47-0.20	2.47	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-0.98	0.03-0.07	0.02-0.05
GIQR/L 11-2.50-0.20	2.50	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-1.00	0.03-0.07	0.02-0.05
GIQR/L 11-2.70-0.20	2.70	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-1.08	0.03-0.07	0.02-0.05
GIQR/L 11-3.00-0.20	3.00	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-1.20	0.03-0.07	0.02-0.05
GIQR 11-3.18-0.20	3.18	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-1.27	0.03-0.07	0.02-0.05
GIQR 11-4.00-0.20	4.00	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-1.60	0.03-0.07	0.02-0.05
GIQR 11-5.00-0.20	5.00	0.20	0.02	0.030	2.30	11.00	10.68	6.70	●	0.24-2.00	0.03-0.07	0.02-0.05

● Comply to retaining rings DIN 471/472 • Can be used for groove milling by circular interpolation

⁽¹⁾ For grooving only

⁽²⁾ Cutting width tolerance (+/-)

⁽³⁾ Corner radius tolerance (+/-)

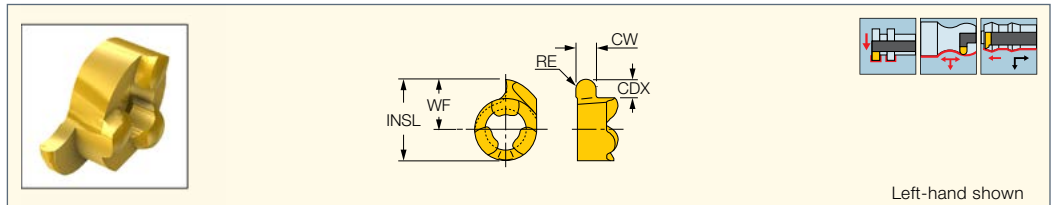
⁽⁴⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L 11-R

Precision Ground Single-Ended
Full Radius Inserts for Internal
Grooving and Profiling



Designation	Dimensions								IC528	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	DMIN	WF	INSL		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-1.20-R060	1.20	0.60	0.02	0.030	2.30	11.00	6.70	10.68	●	0.30-0.60	0.02-0.05	0.01-0.03
GIQR/L 11-1.80-R090	1.80	0.90	0.02	0.030	2.30	11.00	6.70	10.68	●	0.40-0.90	0.02-0.05	0.01-0.03
GIQR/L 11-2.00-R100	2.00	1.00	0.02	0.030	2.30	11.00	6.70	10.68	●	0.50-1.00	0.02-0.05	0.01-0.03
GIQR/L 11-3.00-R150	3.00	1.50	0.02	0.030	2.30	11.00	6.70	10.68	●	0.70-1.50	0.02-0.05	0.01-0.03
GIQR 11-4.00-R200	4.00	2.00	0.02	0.030	2.30	11.00	6.70	10.68	●	1.00-2.00	0.02-0.05	0.01-0.03

● Comply to retaining rings DIN 471/472 • Can be used for groove milling by circular interpolation

⁽¹⁾ Cutting width tolerance (+/-)

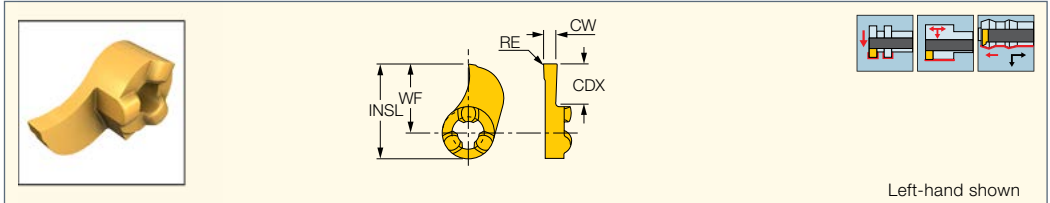
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L 11-15
Precision Ground
Single-Ended Inserts for Internal
Deep Grooving and Turning



Left-hand shown

Designation	Dimensions								IC528	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	DMIN	INSL	WF		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-15-1.50-0.05	1.50	0.05	0.02	0.030	6.30	15.00	14.60	10.60	●	0.10-0.40	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.00-0.10	2.00	0.10	0.02	0.030	6.30	15.00	14.60	10.60	●	0.15-0.50	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.50-0.20	2.50	0.20	0.02	0.030	6.30	15.00	14.60	10.60	●	0.25-0.65	0.02-0.05	0.02-0.06
GIQR/L 11-15-3.00-0.20	3.00	0.20	0.02	0.030	6.30	15.00	14.60	10.60	●	0.25-0.75	0.02-0.05	0.02-0.06

• Comply to retaining rings DIN 471/472 • Can be used for groove milling by circular interpolation

⁽¹⁾ Cutting width tolerance (+/-)

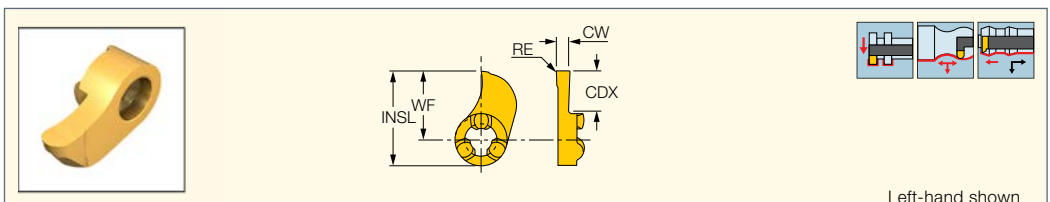
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L 11-15-R
Precision Ground Single-Ended
Full Radius Inserts for Deep
Internal Grooving and Profiling



Left-hand shown

Designation	Dimensions								IC528	Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	CDX ⁽³⁾	DMIN	WF	INSL		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 11-15-2.00-R100	2.00	1.00	0.02	0.030	6.30	15.00	10.60	14.60	●	0.00-0.50	0.02-0.05	0.02-0.06
GIQR/L 11-15-2.50-R125	2.50	1.25	0.02	0.030	6.30	15.00	10.60	14.60	●	0.00-0.65	0.02-0.05	0.02-0.06
GIQR/L 11-15-3.00-R150	3.00	1.50	0.02	0.030	6.30	15.00	10.60	14.60	●	0.00-0.75	0.02-0.05	0.02-0.06

• Comply to retaining rings DIN 471/472 • Can be used for groove milling by circular interpolation

⁽¹⁾ Cutting width tolerance (+/-)

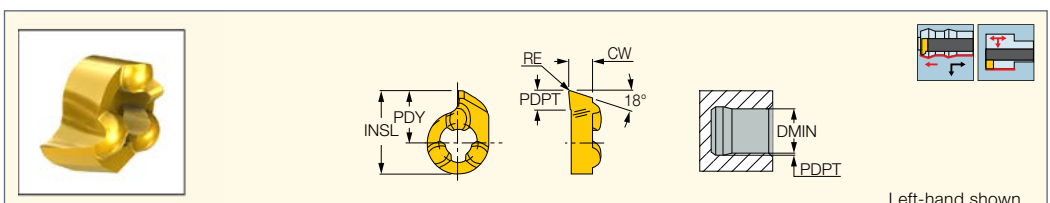
⁽²⁾ Corner radius tolerance (+/-)

⁽³⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L-A18
Internal Boring and
Profiling Inserts



Left-hand shown

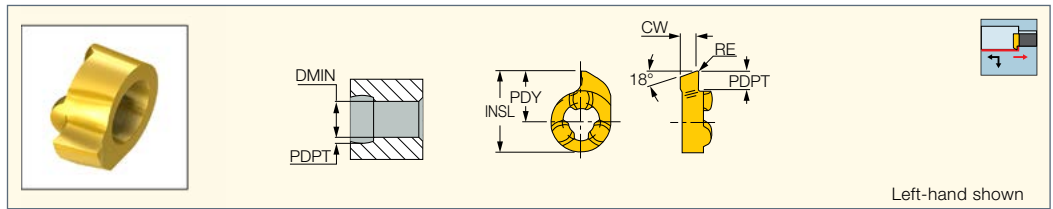
Designation	Dimensions						IC528	Recommended Machining Data		
	DMIN	CW	RE	PDPT ⁽¹⁾	INSL	PDY		a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIQR/L 8-A18-0.15	7.80	3.00	0.15	1.60	7.60	4.60	●	0.02-1.30	0.02-0.05	0.01-0.03
GIQR/L 11-A18-0.15	11.00	3.00	0.15	2.50	10.70	6.70	●	0.02-2.20	0.02-0.05	0.01-0.03

⁽¹⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

CHAMGROOVE

GIQR/L-B18
Internal Back Boring
and Profiling Inserts



Left-hand shown

Designation	Dimensions						IC528	Recommended Machining Data	
	DMIN	CW	RE	PDPT ⁽¹⁾	PDY	INSL		a _p (mm)	f turn (mm/rev)
GIQR/L 8-B18-0.15	7.80	2.50	0.15	1.30	4.60	7.60	●	0.02-1.00	0.02-0.05
GIQR/L 11-B18-0.15	11.00	2.50	0.15	2.30	6.70	10.70	●	0.02-2.00	0.02-0.05

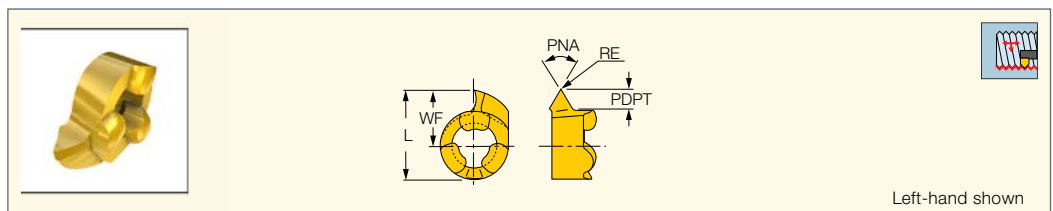
⁽¹⁾ Cutting depth maximum

For tools, see pages: MG (414) • MGCH (414)

ISCARTHREAD

CHAMGROOVE

GIQR/L-MT
Internal Threading Inserts with a
60° Partial Profile for Threading
in 8 mm and Larger Holes



Left-hand shown

Designation	Dimensions										IC528
	L	RE	PNA	PDPT ⁽¹⁾	WF	DMIN ⁽²⁾	TPN ⁽³⁾	TPX ⁽⁴⁾	TPIN ⁽⁵⁾	TPIX ⁽⁶⁾	
GIQR/L 8-MT-0.05	7.78	0.05	60.0	1.50	4.80	8.00	0.500	1.590	16.00	50.00	●
GIQR/L 11-MT-0.05	10.68	0.05	60.0	2.00	6.70	11.00	0.500	2.300	11.00	50.00	●

• Can be used for thread milling by circular interpolation • Pitch max 0.19xD • D-diameter of thread

⁽¹⁾ Cutting depth maximum

⁽²⁾ Minimum diameter

⁽³⁾ Thread pitch minimum (mm)

⁽⁴⁾ Thread pitch maximum (mm)

⁽⁵⁾ Threads per inch minimum

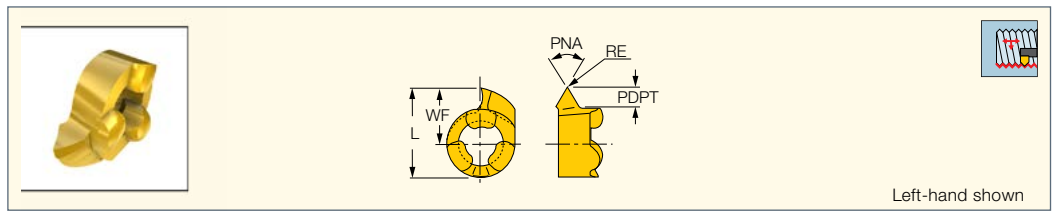
⁽⁶⁾ Threads per inch maximum

For tools, see pages: MG (414) • MGCH (414)

ISCARTHREAD

CHAMGROOVE

GIQR/L-WT
Internal Inserts with Whitworth
Partial Profile for Threading
in 8 mm and Larger Holes



Left-hand shown

Designation	Dimensions									IC528
	L	RE	PNA	PDPT ⁽¹⁾	WF	DMIN	TPIN ⁽²⁾	TPIX ⁽³⁾		
GIQR/L 8-WT-0.05	7.78	0.05	55.0	1.50	4.80	8.00	16.00	50.00	●	
GIQR/L 11-WT-0.05	10.68	0.05	55.0	2.00	6.70	11.00	11.00	50.00	●	

• Can be used for thread milling by circular interpolation • TPI min D/5.9 • D-diameter of thread (pitch max<=W)

⁽¹⁾ Cutting depth maximum

⁽²⁾ Threads per inch minimum

⁽³⁾ Threads per inch maximum

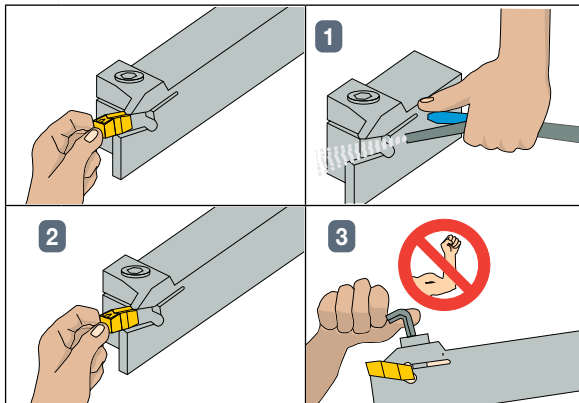
For tools, see pages: MG (414) • MGCH (414)


What is a GRIP Insert?

A grip insert is a grooving, groove-turn or parting insert that is clamped between 2 prisms.

Clamping a grip insert correctly in the holder is necessary for stable machining.

- 1 Ensure that the seat is clean of dirt and swarf.
- 2 In the first stage of clamping, ease the insert gently into place. Make sure that the prismatic surfaces match.
- 3 Always use the wrench supplied with the tool. Use reasonable force to the point of resistance for final clamping. The maximum recommended clamping torque is 1.5xd Nm or 15xd Kgf x cm. d=clamping screw dia. in mm.

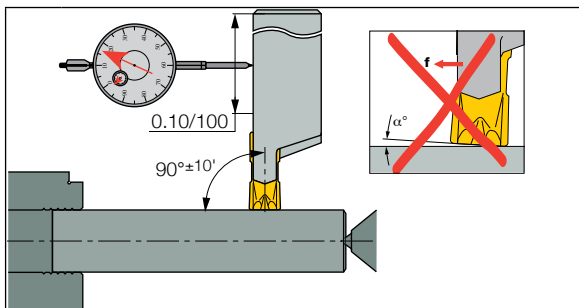



 It is very important not to overtighten a grip insert, even though you may get the impression that the insert is more secure. When overtightened, the insert doesn't clamp into its correct and carefully designed clamping points, and therefore, is less stable.

Positioning the Tool on the Turret

Successful machining can be achieved only if the tool is properly positioned on the turret. The following sequence should be followed:

- Position the grip holder perpendicular to the workpiece; deviation may be 0.10/100 mm along the holder
- Check to ensure that the frontal cutting edge is aligned parallel to the workpiece



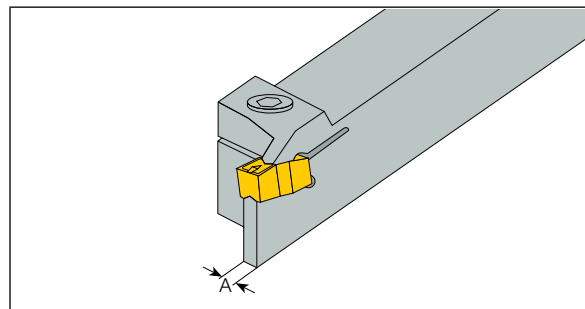
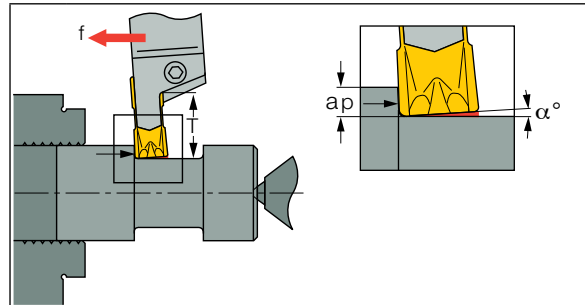
 If the cutting edge is not parallel to the workpiece or is positioned as shown, the deflection during machining (in the indicated direction) will be too small and chatter may occur.


Principles of Turning with Groove-Turn Tools

The basic principle in turning with groove-turn tools is the deflection of the cutting tool, which results in a frontal clearance angle α° between the insert and the workpiece. The clearance angle α° is a function of the side cutting forces and is not constant, as is the case with ISO inserts. The deflection is influenced by the following factors:

- Feed: **f**
- Depth of Cut: **a_p**
- Overhang of Insert Support: **T**
- Width of Insert Support: **A**
- Cutting Speed: **V_c**
- Workpiece Material

When all of the above factors remain constant during turning, a high degree of accuracy with a tolerance up to ± 0.01 mm can be achieved.



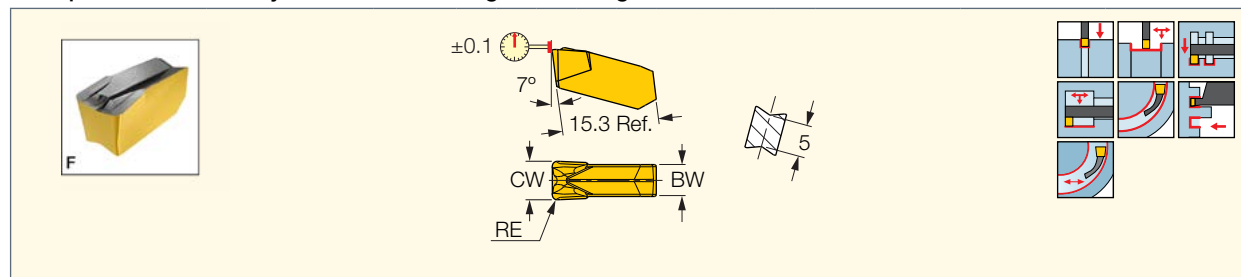
 If the conditions are too light (such as in a super finish operation), there may not be enough deflection and the clearance angle will be very small. This may result in chatter and vibration.

Cutting Conditions

Choosing the correct cutting conditions

Specific cutting conditions are listed in the catalog for every individual insert as shown below:

Example: GIMF 608 Utility Inserts for Grooving and Turning



Designation	Dimensions			Tough ↔ Hard								Recommended Machining Data			
	W±0.05	R±0.05	M	IC830	IC8250	IC808	IC908	IC20	IC428	IC5010	IC907	IC806	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMF 608	6.00	0.80	5.0	●	●	●		●		●		●	1.00-3.60	0.24-0.42	0.13-0.25
													Depth of cut	Turning feed	Grooving feed

Grades for Applications and Materials

Carbide grades and cutting speeds:

- Cutting speed recommendations are derived from the type of workpiece material and choice of carbide grade
- Choose the carbide grade according to the chart below.
- For specific workpiece material and cutting speed recommendations, refer to pages 432-433.

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
<p>GROOVE-TURN</p> <p>Harder ↑ ↓ Tougher</p>	Steel	Stainless Steel Ferritic & Martensitic	Stainless Steel Austenitic & Duplex (Ferritic-Austenitic)	Cast Iron	Non-ferrous	High Temperature Alloys	Hard Steel & Cast Iron
	IC20N	IC807	IC807	IC5010	ID5	IC804	IB50
	IC807	IC808	IC808	IC428		IC806	
	IC808 (IC908) IC8250	IC808 (IC908)	IC808 (IC908)	IC8250	IC20	IC907	IC807
	IC830	IC830	IC830			IC07 IC20	IC808
						IC908	
						IC08	

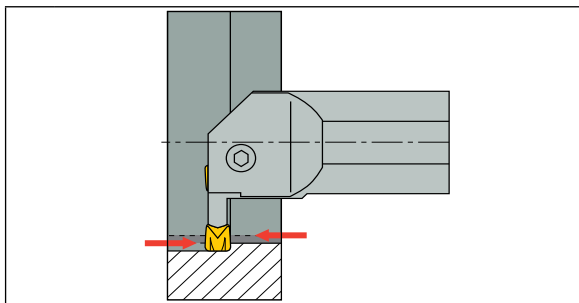
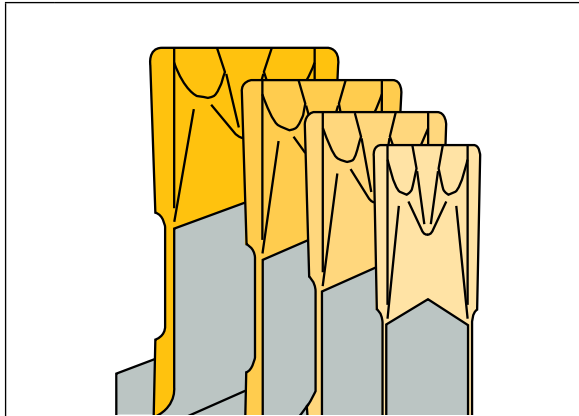
■ First choice

Machining Tips

Insert Width

Generally, the insert width should be as wide as possible as it contributes to its strength. However, there are additional considerations that should be taken into account in order to choose the correct width:

- Workpiece size and clamping stability: A larger width means higher cutting forces during grooving. A width that is too large can cause deformation of the workpiece and/or vibration.
- When using a larger width, make sure your machine has enough power. (see page 426)
- Machining strategy: Grooving in a correct sequence should also affect your choice. (see page 422)
- Required overhang: A larger tool overhang will require a wider insert to maintain stability.
- The larger the insert, the wider the upper and lower jaws can be, therefore, higher forces are required to effect the necessary side deflection.
- If the depth of cut is small, the width of the insert should be proportionately smaller to guarantee the required deflection.



Efficient use of the insert's corners:

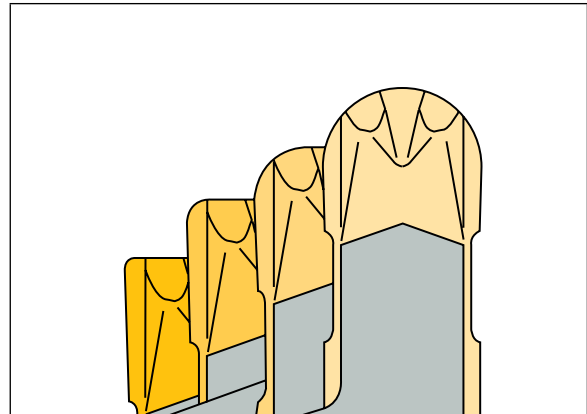
Always try to evenly split machining between the two corners. This optimization will increase the insert's life.

Insert Radius

Choosing the insert radius for a particular application is a combination of many factors.

The corner radius of the groove-turn insert influences the product shape and tool life.

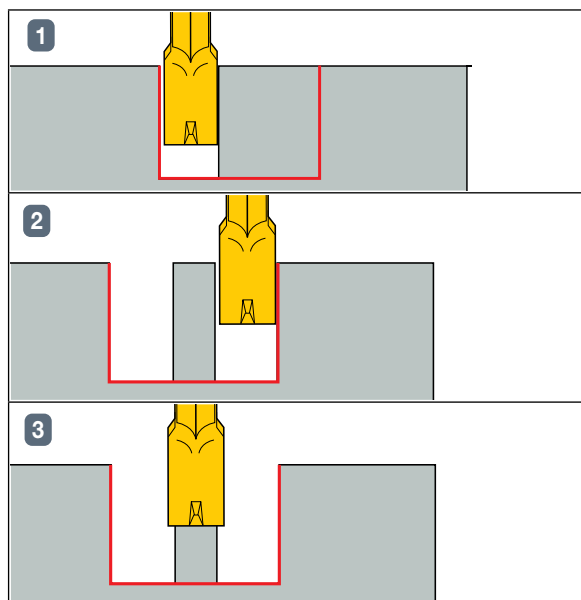
- A larger radius in turning operations normally improves surface quality.
- An insert with a larger radius has a better distribution of the cutting load and of the generated heat. It is stronger and ensures longer tool life.
- Small radii on grip inserts result in increased side forces and side deflection, preventing instability, especially with small depths of cut and feed.
- The best radius to use is basically determined by the geometry and dimensions of the workpiece. The more securely the workpiece is fastened in the machine tool, the larger the radius may be.
- When the ratio of a workpiece's length compared to its diameter is large, inserts with smaller radii will prevent chatter.
- A larger corner radius enables machining at a larger feed rate.
- In profiling operations, inserts with larger corner radii or full radii are required.



Machining Tips

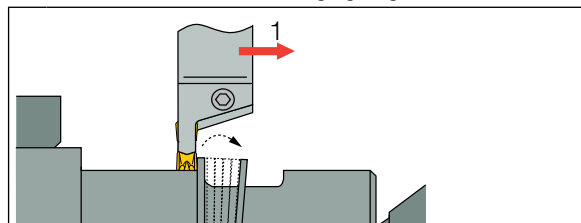
Correct grooving sequence

When making a groove where the insert's width is not identical to the groove, it is recommended to select an insert that will enable grooving symmetrically in such a way that the material is always in the center of the insert. This practice will ensure better chipbreaking and symmetrical cutting forces.

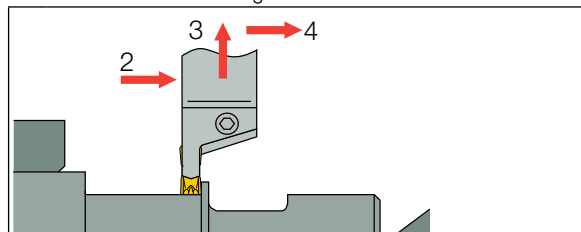
**Eliminating a "Hanging Ring"**

When turning at the end of a bar or towards a recess between two walls, a "hanging ring" may be formed.

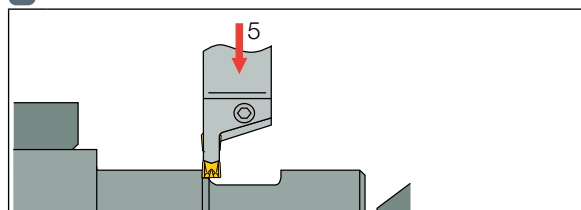
To eliminate the unwanted "hanging ring":



- 1 Turn toward the recess. Stop a short distance before reaching the recess.



- 2 Pull back the groove-turn tool and re-position it.



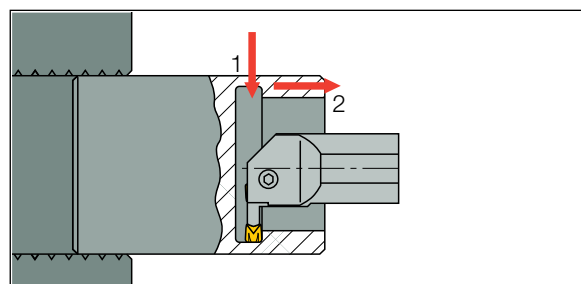
- 3 Machine as shown. This final operation achieves the size and flatness of the side wall.

Internal Machining**Improving Internal Turning in a Blind Hole**

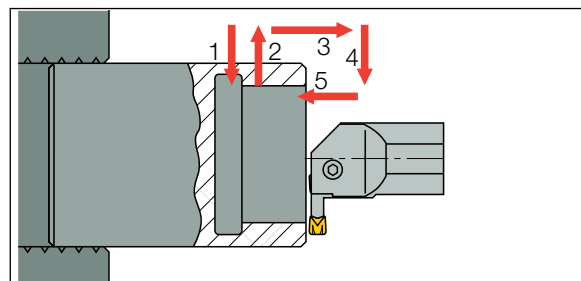
Internal turning in a blind hole brings about the problem of chip exit. When the tool reaches the rear wall, chips may be caught between the wall and the insert, possibly causing insert breakage. Two solutions that can eliminate this problem:

First Solution

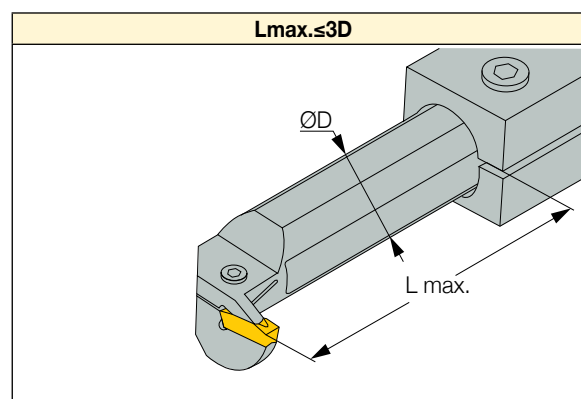
- 1 Start by grooving at the rear wall.
- 2 Continue by turning from the inside toward the outside.

**Second Solution**

- 1 Start by grooving at the rear wall.
- 2 Pull the tool back toward the outside.
- 3 Turn the final diameter from outside, toward the groove.

**Optimizing Internal Machining Toolholder Overhang**

It is always recommended to use the minimum possible overhang in order to maintain maximum toolholder rigidity. As a general rule, maximum overhang should not exceed three times the holder-bar diameter.



Finishing Operation: Diameter Compensation

A compensation factor for the final diameter must be used in the final machining operation.

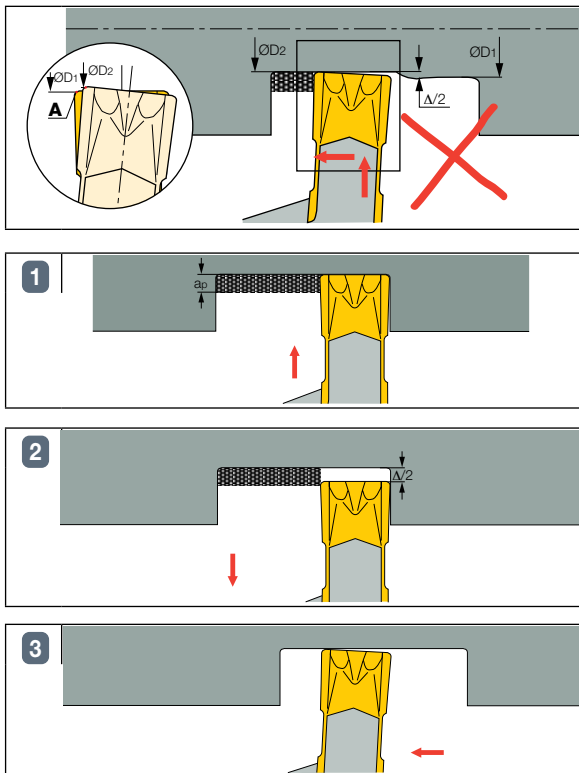
After the initial grooving to the required final diameter, the machining direction is normally changed for longitudinal turning. At this point the deflection occurs. If machining continues without correction, corner A will penetrate the material. This will result in two different diameters: $\varnothing D1$ from the grooving and $\varnothing D2$ from the turning. The difference between $\varnothing D1$ and $\varnothing D2$ is a value we define as Δ . The compensation factor is $\Delta/2$, as shown below.

$$\frac{\Delta}{2} = \frac{\varnothing D1 - \varnothing D2}{2}$$

Using the compensation factor will eliminate the small surface step. Follow this simple procedure during machining:

- 1 Groove to the final diameter
- 2 Pull the tool back, a distance equal to the value of $\Delta/2$
- 3 Continue the finish turning operation

Characteristic values of Δ are shown in the diagrams.

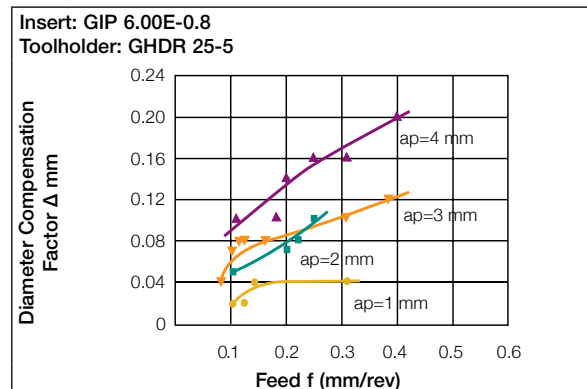
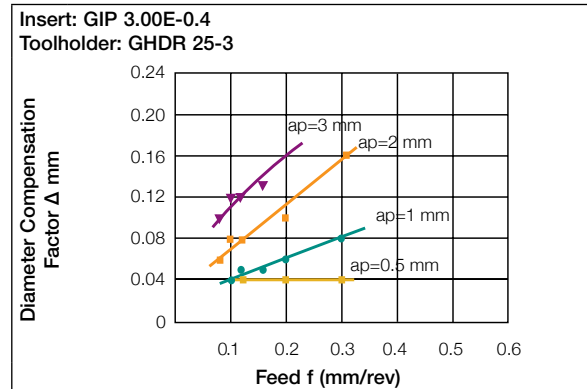
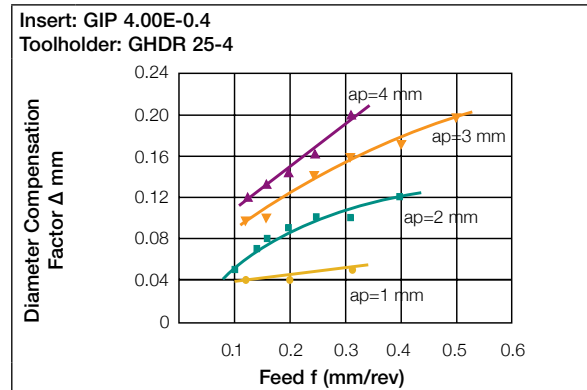


Characteristic Values of Δ

The diagrams show experimental results for specific machining conditions. These are sample values that will vary with different workpiece materials and different holder types.



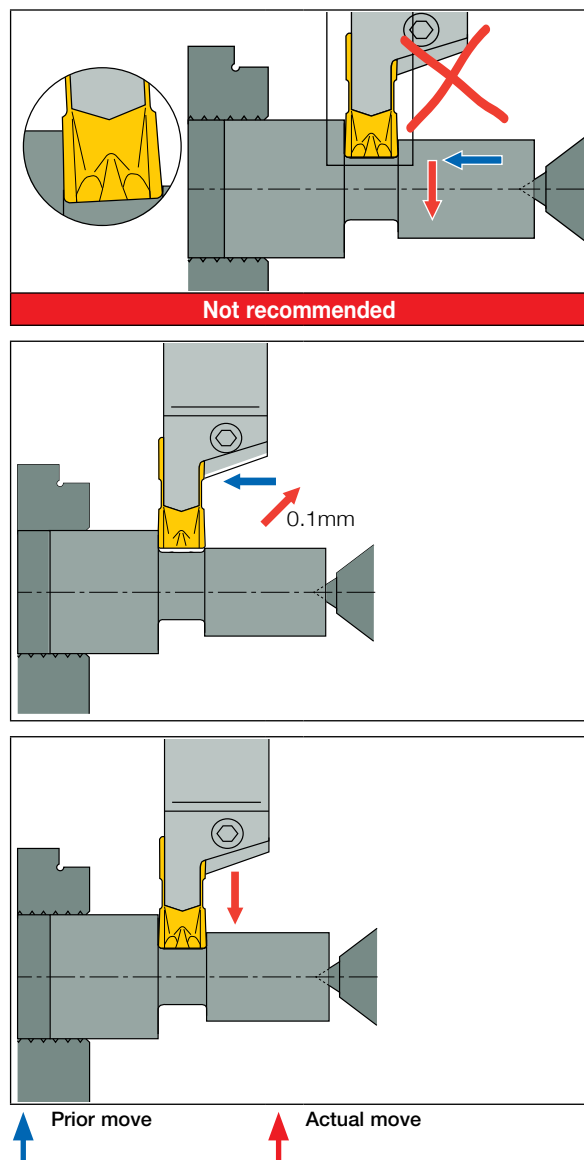
Measure the Δ value for your finishing operation in a short test using your selected finishing conditions. Do not run your test using the final diameter.



Multifunction Operations

The groove-turn tools are multifunction tools, able to operate in a sequence of grooving and turning modes. Moving from turning to grooving requires consideration of the basic Grip principle, thereby eliminating the possibility of insert breakage. In this situation one must release the side deflection which is necessary in turning, but not recommended in grooving.

The following machining sequence is suggested: After completing the longitudinal turning, before starting the grooving, the side deflection must be released. Move the tool in the direction opposite that of the feed, approximately 0.1 mm, and return to the original position without side load. Then, after the deflection has been released and the holder is perpendicular to the workpiece, the grooving operation may start.



Machining Between Walls

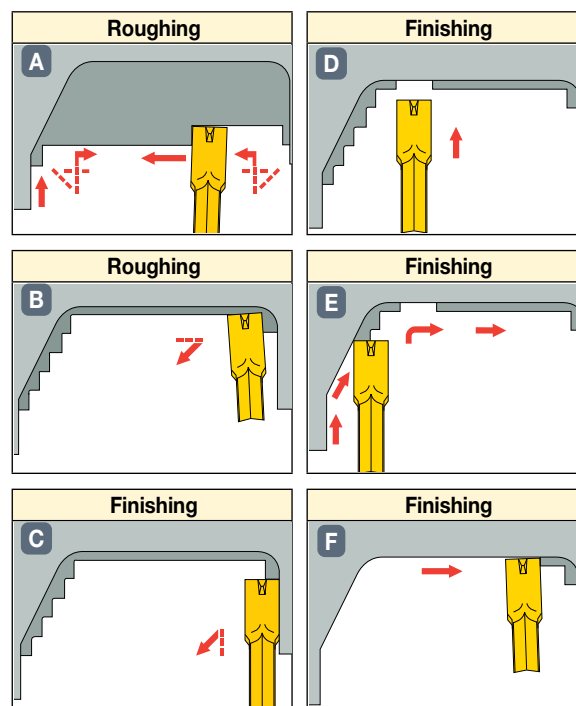
One of the most important advantages of the **GROOVE-TURN** systems is the ability to machine between walls. To achieve the best results, the following sequence is recommended:

Roughing

Plunge to depth of cut. Pull back 0.2 mm radially. Turn longitudinally, retract at the end of the cut by 0.2 mm, simultaneously in radial and axial directions. Plunge again and repeat same cycle leaving steps of 0.2 mm at the shoulders for the finishing cut. Minimum D.O.C. has to be $a_p \geq R \times 1.2$ (corner radius).

Finishing

Plunge on the right side, reaching the tangent of the bottom radius. Retract and relieve the tangent point of the radius on the other side. Retract and machine all of the contour, pulling back by compensation value along the bottom (see page 423).



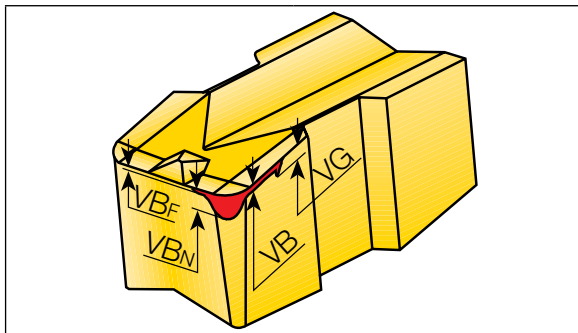
These instructions can be viewed at:
<http://www.youtube.com/watch?v=HXhEtc1z4w>

Recommended Criteria for Replacement of the Cutting Edge

The cutting edge should be replaced in time to save costly downtime. The recommended value of wear at replacement is defined as the wear land size. The insert should be replaced when the wear land size is such that the increase in side forces is still small-not causing the insert to break and still maintaining the required workpiece tolerances. Wear is a function of machining time. The cutting edge should normally be replaced after 15 minutes of machining time.

Insert Wear-Tool Life Wear on the Clearance Face

Wear land on groove turn inserts generally occurs at the corner of the clearance face **VBn**, on the side near the corner **VB**, on the frontal cutting edge **VBf** and at the end of the cutting side **VG**. The effective life of the cutting edge ends when any of the wear land values-**VB**, **VB**, **VBf** or **VG**-exceed the recommended maximum values shown. The largest wear land is normally measured at the corner of the clearance face **VBn**. It has the most influence on the dimensions and tolerances of the final workpiece. The wear land shape on GRIP inserts differs slightly from that of ISO inserts. Although the frontal cutting surface of GRIP inserts absorbs more heat land wear, the wear land **VBf** is generally negligible in turning operations when compared to **VB** and **VBn**. Wear may be found only occasionally at the end of the cutting side **VG**.

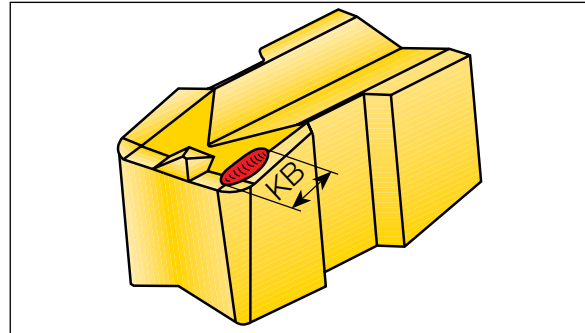


Maximum recommended wear land values relative to insert widths

W Insert Width (mm)	Maximum Wear Land (mm)
≤3	0.20
4	0.22
5	0.25
6	0.27
8	0.27
≥10	0.30

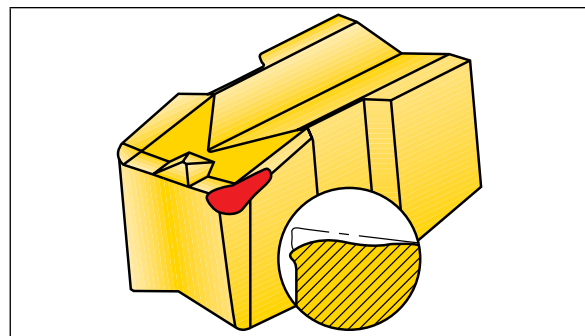
Crater Wear and Tool Life

Crater wear **KB** occurs on the rake face and is mainly affected by feed and cutting speed. Crater wear develops over time toward the frontal cutting edge. If penetration of the frontal cutting edge occurs, it will immediately affect the quality of the machined surface.



Plastic Deformation

Plastic deformation occurs when the hardness of a cutting edge is decreased due to heat and pressure. The so-called "hot hardness" of the cutting tool material limits the feed and the cutting speed. Plastic deformation will affect the dimensions and tolerances of the finished product. It generally occurs when a small corner radius is used with high cutting speeds and high feeds. Using the proper insert geometry and the correct speed and feed ranges should eliminate the problem.



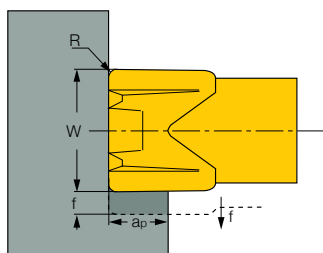
Machine Power Calculation

Calculation of Required Machine Power

Use the formulas below or use our internet web tool at: <http://mpwr.iscar.com/machinimgpwr>

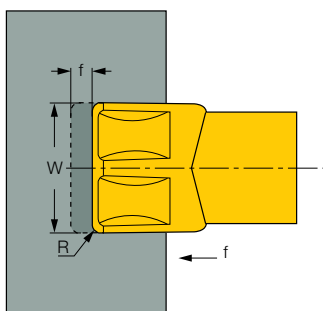
Turning

$$P = \frac{K_c \cdot a_p \cdot f \cdot v_c}{h \cdot 60,000} \text{ [kW]}$$



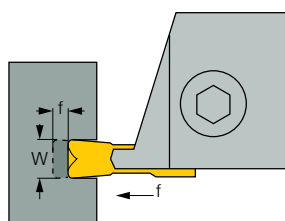
Grooving/Parting

$$P = \frac{K_c \cdot W \cdot f \cdot v_c}{h \cdot 60,000} \text{ [kW]}$$



Face Grooving

$$P = \frac{K_c \cdot W \cdot f \cdot v_c}{h \cdot 60,000} \text{ [kW]}$$



Where:

K_c - Specific cutting forces (N/mm²), turning values could be used

h - Efficiency (h≈0.8)



M-type Tools

- M-type tools have no support under the insert's cutting edge
- For an insert with a width smaller than 2.2 mm, there are no standard catalog tools available. There are 2 options as to how to use these narrow inserts:
 - 1 Modify an existing tool and adjust the support under the insert to the required width
 - 2 Use a standard M-type tool without support
- In wider widths, there are also cases where the support under the insert will disturb machining (threading inserts, pulley-V inserts and various specially tailored inserts) and therefore the above explanation should be considered
- These tools also provide the option for customers to use a very wide range of insert widths on the same tool (up to 6.4 mm)
- **Machining conditions need to be light due to little support and limited gripping forces**

K_c Values

Mtl. Gr. No.	K _c [N/mm ²]
1	2000
2	2100
3	2150
4	2200
5	2100
6	2100
7	2100
8	2100
9	2100
10	2500
11	3250
12	2300
13	2800
14	2600
15	1100
16	1300
17	1100
18	1800
19	900
20	1000
21	500
22	800
23	800
26	700
27	700
28	1700
31	3000
32	3100
33	3300
34	3300
35	3200
36	1700
37	1700
38	4600
39	4700
40	4600
41	4500

For material groups, see page 432

Recommended Clamping Torques and Interchangeable Key Blades and Adjustable Torque Handles (optional) for GROOVE-TURN Tools



TOP-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
TGDR/L			
TGDR/L 1616-3M	6-7	TSA 6 5-14	BLD 6 HEX4
TGDR/L 1616-4M	7-8		BLD 6 HEX4
TGDR/L 2020-3M	7-8		BLD 6 HEX4
TGDR/L 2020-4M	7-8		BLD 6 HEX4
TGDR/L 2525-3M	7-8		BLD 6 HEX4
TGDR/L 2525-4M	6-7		BLD 6 HEX4
TGDR/L 2525-5M	6-7		BLD 6 HEX4
TGDR/L 2525-6M	8-9		BLD 6 HEX5
TGDR/L 3232-5M	7-8		BLD 6 HEX5
TGDR/L 3232-6M	12-13		BLD 6 HEX5

HELI-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
HELIR/L			
HELIR/L 1212-3T12	5-6	TSA 6 5-14	BLD 6 HEX4
HELIR/L 1616-3T12	7-8		BLD 6 HEX4
HELIR/L 1616-3T20	8-9		BLD 6 HEX5
HELIR/L 1616-4T12	5-6		BLD 6 HEX4
HELIR/L 1616-4T20	11-12		BLD 6 HEX5
HELIR/L 2020-3T12	6-7		BLD 6 HEX4
HELIR/L 2020-3T20	7-8		BLD 6 HEX5
HELIR/L 2020-4T12	6-7		BLD 6 HEX4
HELIR/L 2020-4T25	7-8		BLD 6 HEX5
HELIR/L 2020-5T12	7-8		BLD 6 HEX5
HELIR/L 2020-5T25	9-10		BLD 6 HEX5
HELIR/L 2525-3T12	6-7		BLD 6 HEX4
HELIR/L 2525-3T20	10-11		BLD 6 HEX5
HELIR/L 2525-4T12	6-7		BLD 6 HEX4
HELIR/L 2525-4T25	8-9		BLD 6 HEX5
HELIR/L 2525-5T12	8-9		BLD 6 HEX5
HELIR/L 2525-5T25	10-11		BLD 6 HEX5
HELIR/L 2525-6T12	11-12		BLD 6 HEX5
HELIR/L 2525-6T30	10-11		BLD 6 HEX5
HELIR/L 3232-3T20	9-10		BLD 6 HEX5
HELIR/L 3232-4T25	9-10		BLD 6 HEX5
HELIR/L 3232-5T25	10-11		BLD 6 HEX5
HELIR/L 3232-6T30	11-12		BLD 6 HEX5
HELIR/L 4032-4T25	9-10		BLD 6 HEX5
C#-HELIR/L			
C4 HELIR/L 3T20	9-10	TSA 6 5-14	BLD 6 HEX5
C4 HELIR/L 4T25	11-12		BLD 6 HEX5
C5 HELIR/L 3T20	10-11		BLD 6 HEX5
C5 HELIR/L 4T25	11-12		BLD 6 HEX5
C5 HELIR/L 5T25	11-12		BLD 6 HEX5
C6 HELIR/L 3T20	10-11		BLD 6 HEX5
C6 HELIR/L 4T25	12-13		BLD 6 HEX5
C6 HELIR/L 5T25	12-13		BLD 6 HEX5
C6 HELIR/L 6T30	13-14		BLD 6 HEX5

CUT-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
GHDR/L (short pocket)			
GHDR/L 12-3	4-5	TSA 6 5-14	BLD 6 T20
GHDR/L 16-3	5-6		BLD 6 HEX4
GHDR/L 16-3 ST	5-6		BLD 6 HEX4
GHDR/L 16-4	7-8		BLD 6 HEX5
GHDR/L 16-4 ST	7-8		BLD 6 HEX5
GHDR/L 20-3	5-6		BLD 6 HEX4
GHDR/L 20-4	7-8		BLD 6 HEX5
GHDR/L 20-5	8-9		BLD 6 HEX5
GHDR/L 25-3	5-6		BLD 6 HEX4
GHDR/L 25-4	7-8		BLD 6 HEX5
GHDR/L 25-5	8-9		BLD 6 HEX5
GHDR/L 25-6	9-10		BLD 6 HEX5
GHDR/L 32-3	6-7		BLD 6 HEX4
GHDR/L 32-4	8-10		BLD 6 HEX5
GHDR/L 32-5	9-11		BLD 6 HEX5
GHDR/L 25-P8	13-14		BLD 6 HEX6
GHDR/L 32-P8	10-12	BLD 6 HEX6	
GHDR/L-JHP (short pocket)			
GHDR/L 20-3-JHP	5-6	TSA 6 5-14	BLD 6 HEX4
GHDR/L 20-4-JHP	7-8		BLD 6 HEX5
GHDR/L 25-3-JHP	7-8		BLD 6 HEX4
GHDR/L 25-4-JHP	10-11		BLD 6 HEX5
GHDR/L 25-5-JHP	10-12		BLD 6 HEX5
GHDR/L 25-P8-JHP	10-11		BLD 6 HEX5
GHDR/L-JHP (long pocket)			
GHDR/L 32-8-JHP	15-17	Not Available	Not Available
GHDR/L-8A			
GHDR/L 25-8A	10-12	TSA 6 5-14	BLD 6 HEX5
GHDR/L 32-8A	10-12		BLD 6 HEX5
GHDR/L (long pocket)			
GHDR/L 25-8	10-12	TSA 6 5-14	BLD 6 HEX5
GHDR/L 25-812	10-12		BLD 6 HEX5
GHDR/L 32-8	10-12		BLD 6 HEX5
GHDR/L 3225-8	10-12		BLD 6 HEX5
GHDR/L 32-812	11-12		BLD 6 HEX5
GHDR/L 25-10	15-17		Not Available
GHDR/L 32-836	16-17		
GHDR/L 32-10	15-17		
GHDR/L 40-10	16-17		
C#-GHDR/L			
C4 GHDR/L-3	6-7	TSA 6 5-14	BLD 6 HEX4
C4 GHDR/L-4	7-8		BLD 6 HEX5
C5 GHDR/L-3	6-7		BLD 6 HEX4
C5 GHDR/L-4	7-8		BLD 6 HEX5
C5 GHDR/L-5	8-9		BLD 6 HEX5
C6 GHDR/L-3	6-7		BLD 6 HEX4
C6 GHDR/L-4	7-8		BLD 6 HEX5
C6 GHDR/L-5	8-9		BLD 6 HEX5
C6 GHDR/L-8	10-12	BLD 6 HEX5	

CUT-GRIP

Tool	Recommended Torque Range [Nm]	Adjustable Torque Handle	Key Blade
GHDR/L/N 12/14			
GHDR/L 2525-14T12	16-17	Not Available	Not Available
GHDR/L 32-12	15-16		
GHDR/L 3232-14T12	16-17		
GHDR/L 3232-14T38	18-20		
GHDR/L 4040-14T38	18-20		
GHDR/L 4040-14T38	18-20		
GHDR/L 4040-14T38	18-20		
GHGR/L			
GHGR/L 16-3	7-8	TSA 6 5-14	BLD 6 HEX5
GHGR/L 16-3 ST	7-8		BLD 6 HEX5
GHGR/L 16-4	7-8	HSA 4 1-5	BLD 6 HEX5
GHGR/L 20-2	4-6		BLD 4 HEX4
GHGR/L 20-3	7-8	TSA 6 5-14	BLD 6 HEX5
GHGR/L 20-4	7-8		BLD 6 HEX5
GHGR/L 25-2	4-5	HSA 4 1-5	BLD 4 HEX4
GHGR/L 25-3	6-8		BLD 6 HEX5
GHGR/L 25-4	8-10	TSA 6 5-14	BLD 6 HEX5
GHGR/L 25-425	8-10		BLD 6 HEX5
GHGR/L 25-5	9-11		BLD 6 HEX5
GHGR/L 25-630	10-12		BLD 6 HEX5
GHGR/L 32-5	10-12		BLD 6 HEX5
GHGR/L 32-632	10-12		BLD 6 HEX5
GHMR/L			
GHMR/L 12	8-9	TSA 6 5-14	BLD 6 T20
GHMR/L 16	10-12		BLD 6 HEX5
GHMR/L 16-3 ST	10-12		BLD 6 HEX5
GHMR/L 20	10-12		BLD 6 HEX5
GHMR/L 25	10-12		BLD 6 HEX5
GHMR/L 32	10-12		BLD 6 HEX5
GHMPR/L			
GHMPR/L 16	4-5	TSA 6 5-14	BLD 6 HEX5
GHMPR/L 20	5-6		BLD 6 HEX5
GHMPR/L 25	8-9		BLD 6 HEX5
GHMUR/L			
GHMUR/L 16	6-7	TSA 6 5-14	BLD 6 HEX5
GHMUR/L 20	8-10		BLD 6 HEX5
GHMUR/L 25	10-11		BLD 6 HEX5
GHSR/L			
GHSR/L 10-2	2-3	HSA 4 1-5	BLD 4 T15
GHSR/L 12-2	2-3		BLD 4 T15
GHSR/L 14-2	2-3		BLD 4 T15
GHSR/L 16-2	4-5	TSA 6 5-14	BLD 6 T20
CGHN-P8			
CGHN 52-P8	6-7	TSA 6 5-14	BLD 6 HEX4
CGHN 53-P8	6-7		BLD 6 HEX4
CGHN-8-10D			
CGHN 52-8D	7-8	TSA 6 5-14	BLD 6 HEX4
CGHN 53-8D	7-8		BLD 6 HEX4
CGHN 52-10D	9-11		BLD 6 HEX5
CGHN 53-10D	9-11		BLD 6 HEX5
CGHR/L-12-14D			
CGHR/L 53-12D	10-12	TSA 6 5-14	BLD 6 HEX5
CGHR/L 53-14D	10-12		BLD 6 HEX5

All JETCUT tools also provide great advantages to standard low-pressure (7-10 bar) machine tools

The **JETCUT** tools provide a great advantage when standard machine pressure (10-20 bar) is applied and on a wide range of popular materials such as alloy & stainless steel, improving their tool life and in some cases chip control.

The main reasons for the improvement in both high and low pressure are:

- The **JETCUT** coolant is pinpointed exactly to the cutting edge where it is most effective.



- The **JETCUT** coolant is steady and not influenced by the operator's attention or interrupted by the chips.



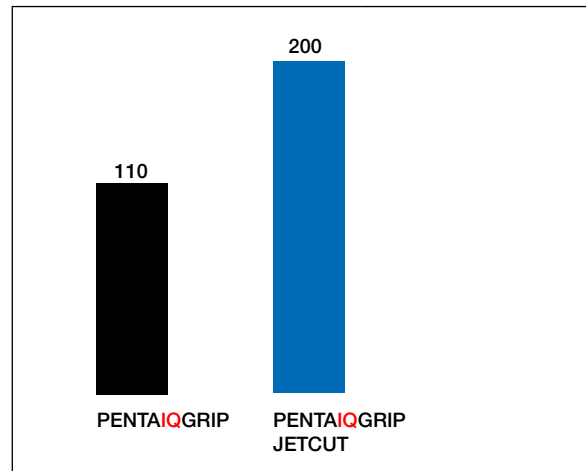
- In parting-off and deep grooving, external coolant loses its effectiveness as the groove becomes deeper.
- With **JETCUT** tools and blades, the coolant delivery is not influenced by the groove's depth.



These advantages were reported by many customers and are presented in various test reports.

	PENTAIQGRIP	PENTAIQGRIP JETCUT
Material	Stainless Steel AISI 316	
Operation	Grooving	
Pressure (bar)	10 (external)	10 (Internal)
Tool	PCHR 25-D40-3	PCHR 25-D40-3-JHP
Insert	PENTA D40N300C020 IC808G	
V _c (mm/min)	180	
f (mm/rev)	0.2	
Tool life (number of grooves)	110	200

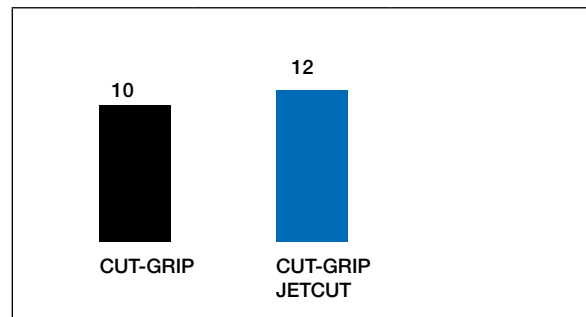
Tool life increase 82%



	CUT-GRIP	CUT-GRIP JETCUT
Material	Stainless Steel 1.4301 (AISI 304)	
Operation	External Grooving	
Pressure (bar)	20 (external)	20 (Internal)
Tool	GHDR 20-4	GHDR 20-4-JHP
Insert	GIP 4.00E-0.4 IC808	
V _c (m/min)	120	140
f (mm/rev)	0.12	0.2
Cycle time (min)	128.5	67.4
Parts/Edge	10	12

Tool life increase 20%

Cycle time improvement 52%



JETCUT Tools High-Pressure (up to 340 bar)

The high-pressure coolant feature has been in existence for a long time in the metal removal world, taking a bigger role in today's machining. **ISCAR** was one of the first cutting tools companies to respond to market needs by designing and producing tools for ultra-high and high-pressure coolant flow. High-pressure coolant was initially implemented mainly for difficult-to-machine materials such as Titanium, Inconel and other heat resistant alloys. Later it was found that tool life, productivity and chip control can be improved when machining stainless and alloyed steel. **JETCUT** tools are essential and important in the aviation, aerospace and medical industries.

How does it work?

The stream velocity of the coolant emitted from the pump increases as the coolant holes become smaller. When it emerges out of the tool through the nozzle, the velocity is very high, exerting considerable force on the chips, lowering their temperature and protecting the cutting edge from thermal shock. High temperature alloys produce a very high temperature as they are being cut. By effectively removing the heat, the chips become less ductile and thus easier to break. Shorter chips are easily managed, they do not tangle around the workpiece or machine parts, so there is no need to stop the process frequently. Usually in conventional cooling the chip prevents the coolant from reaching the insert rake face in the cutting zone. The coolant stream of the **JETCUT** tools is directed precisely between the insert rake face and the flowing chip. This results in longer tool life and a much more reliable process.

The coolant channels of the **JETCUT** tools feature outlets very close to the cutting edges, thus gaining the following advantages:

- Shorter machining time – the cutting speed may be increased by up to 200% when machining Titanium & heat resistant alloys
- Longer tool life – tool life increases by up to 100% not only on Titanium and heat resistant alloys, but also on stainless and alloy steels
- Improved chip control – even on the most ductile and problematic materials, small chips can be obtained
- Very effective cooling down of the cutting edge, which reduces sensitivity to heat fluctuations
- Safer and more stable process



JETCUT tools provide advantageous performance also when conventional pressure is applied.

General Information

Pressure Ranges

Up to 30 bar – Low pressure (LP) may provide some improvement in tool life. Usually will not have an effect on chip control. 30 – 120 bar – High-pressure (HP) the most commonly used pressure range used with **JETCUT** tools. Increase in tool life, increase in cutting speeds, improved chip control. 120 – 400 bar – Ultra high-pressure (UHP) requires special tool design in order to take advantage of the extra pressure. Minor increase in tool life compared to HP range. Ultra high-pressure coolant is usually implemented for machining Titanium and heat resistant alloys when there is a need for very small chips and higher machining rates.

Since 2000, **ISCAR** has provided hundreds of special tools featuring ultra high-pressure coolant capability for various customers and applications.

Pressure vs. Flow

Each **JETCUT** tool is designed to work at a certain flow rate, depending on the pressure. The flow rates are listed in the catalog pages for each tool. The user should verify that the pump can supply the required flow in order to achieve the optimal results. The pump data sheet will usually list the maximum flow rate for each pressure range.

Chips & Pressure

The coolant flow will start to break the chips at a certain pressure, depending on the specific tool and the workpiece material. If the chips are not breaking, the pressure should be increased until chip control is achieved. Above this pressure, as it is increased the chips become smaller and smaller. It is possible to control the size of the chips by modifying the pressure in order to achieve the desired chip size.

High-Pressure Coolant with GROOVE-TURN and Parting Tools

In grooving and parting operations, applying high-pressure coolant provides excellent chip breaking results on all materials. On exotic alloys such as Inconel and Titanium, it is usually impossible to break the chips with standard external coolant pressure.

Applying high coolant pressure provides excellent chip breaking results. On some alloyed and stainless steel, especially when low feeds are applied, high-pressure coolant may solve chip breaking problems.

High-pressure coolant reduces or even eliminates built-up edge phenomenon, especially when machining stainless steel and high temperature alloys.

In turning operations, applying high-pressure coolant is less effective because the jet is directed to the frontal edge.

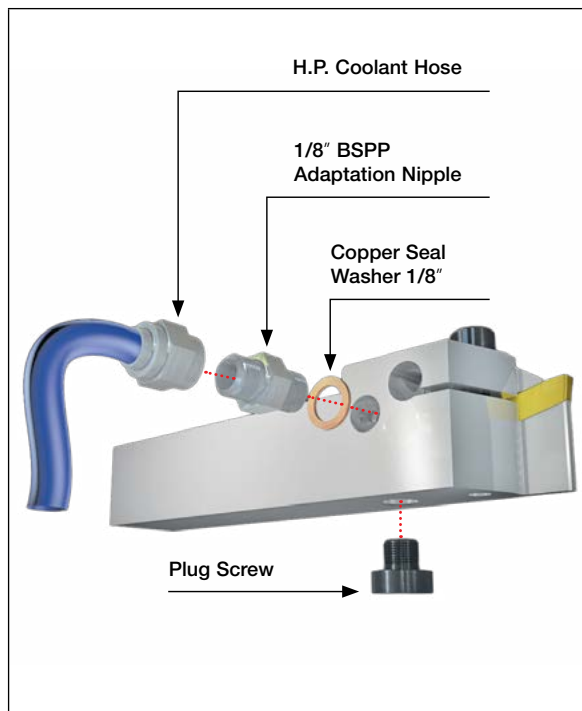
Assembly and Safety Guidelines when Using the JET HP Iso Turning and Grooving Tools

Before use, please ensure that:

- The machine door is in a fully closed position
- The coolant hose is in the correct location and fully tightened with all seals in position
- A blank plug is inserted into the unused coolant hole
- All O-rings and washers are in place
- The coolant hose is tightened securely to the toolholder and tool block to prevent leakage of coolant

Important

Always pay attention not to exceed the maximum safe working pressure for **GROOVE-TURN tools 340 bar** and **PARTING OFF tools 300 bar**.



Grooving Test



Material: Titanium (Ti6Al4v)

Operation: Grooving

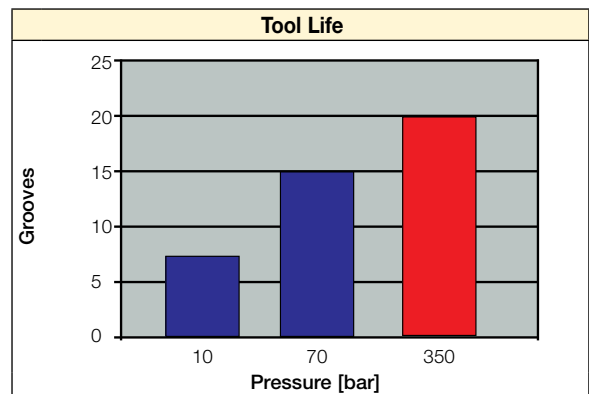
Tool: GHDL 25-6-JHP

Insert: GIMF 608 IC07

Vc: 50 mm/min

f: 0.15 mm/rev

Pressure [bar]		
10 (External)	70	350



Groove-Turn Cutting Speed Recommendations

ISO	Material	Condition	Tensile Strength [N/mm ²]	Hardness HB	Material Group No. ⁽¹⁾	
P	Non-alloy steel and cast steel, free cutting steel	< 0.25 %C	Annealed	420	125	1
		>= 0.25 %C	Annealed	650	190	2
		< 0.55 %C	Quenched and tempered	850	250	3
		>= 0.55 %C	Annealed	750	220	4
		>= 0.55 %C	Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% all elements)	Annealed		600	200	6
		Quenched and tempered		930	275	7
				1000	300	8
	High alloy steel, cast steel, tool steel	Annealed		680	200	10
		Quenched and tempered		1100	325	11
	P	Stainless steel and cast steel	Ferritic/martensitic	680	200	12
Martensitic			820	240	13	
M	Stainless steel and cast steel	Austenitic, duplex	600	180	14	
K	Grey cast iron (GG)	Pearlitic/ferritic		180	15	
		Pearlitic/martensitic		260	16	
	Ductile cast iron (nodular) (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
	Copper alloys	>12% Si	High temperature		130	25
		>1% Pb	Free cutting		110	26
	Non-metallic	Brass			90	27
		Electrolytic copper			100	28
	Duroplastics, fiber plastics				29	
	Hard rubber				30	
S	High temp. 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	400		36	
	Alpha+beta alloys hardened		1050		37	
H	Hardened steel	Hardened		55 HRC	38	
		Hardened		60 HRC	39	
	Chilled cast iron	Cast		400	40	
	Cast iron	Hardened		55 HRC	41	

(1) For material groups, see pages 786-815

Material Group No.	IC20N	IC8250	IC807	IC808	IC908	IC354	IC830	IC228/328/528		
1	225 - 335	210 - 315	160 - 240	145 - 220	140-210	110 - 170	105 - 155	100 - 145		
2	210 - 290	195 - 270	150 - 205	135 - 190	130-180	105 - 145	95 - 135	90 - 125		
3	160 - 240	150 - 225	115 - 170	105 - 155	100-150	80 - 120	75 - 110	70 - 105		
4	175 - 270	165 - 255	125 - 195	115 - 180	110-170	90 - 135	80 - 125	75 - 120		
5	145 - 225	135 - 210	105 - 160	95 - 145	90-140	70 - 110	65 - 105	65 - 100		
6	175 - 270	165 - 255	125 - 195	115 - 180	110-170	90 - 135	80 - 125	75 - 120		
7	145 - 240	135 - 225	105 - 170	95 - 155	90-150	70 - 120	65 - 110	65 - 105		
8	145 - 225	135 - 210	105 - 160	95 - 145	90-140	70 - 110	65 - 105	65 - 100		
9	130 - 210	120 - 195	90 - 150	85 - 135	80-130	65 - 105	60 - 95	55 - 90		
10	210 - 290	195 - 270	150 - 205	135 - 190	130-180	105 - 145	95 - 135	90 - 125		
11	130 - 210	120 - 195	90 - 150	85 - 135	80-130	65 - 105	60 - 95	55 - 90		

	IC20N	IC806	IC907/807	IC8250	IC808	IC908	IC320	IC830	IC354	
12	180 - 320	130 - 240	125 - 230	120 - 220	115 - 210	110-200	100 - 180	80 - 150	90 - 160	
13	160 - 300	120 - 230	115 - 220	110 - 210	105 - 200	100-190	90 - 170	75 - 140	80 - 150	

	IC20N	IC806	IC907/807	IC8250	IC808	IC908	IC320	IC830	IC354	
14	140 - 270	110 - 205	105 - 195	100 - 185	95 - 180	90-170	80 - 155	65 - 125	70 - 135	

	IC5010	IC418	IC428	IC8250	IC907/807	IC908/808				
15	165 - 295	140 - 255	150-270	135 - 245	105 - 190	95 - 175				
16	145 - 210	125 - 180	130-190	115 - 170	90 - 135	85 - 125				
17	155 - 255	135 - 220	140-230	125 - 205	100 - 160	90 - 150				
18	120 - 200	105 - 170	110-180	100 - 160	75 - 125	70 - 115				
19	185 - 310	160 - 265	170-280	155 - 250	120 - 195	110 - 180				
20	155 - 255	135 - 220	140-230	125 - 205	100 - 160	90 - 150				

	ID5	IC04	IC807	IC20	IC04	IC07	IC08			
21	400-2500	460 - 1380	440 - 1320	400-1200	460 - 1380	440 - 1320	320 - 960			
22	400-2500	345 - 1150	330 - 1100	300-1000	345 - 1150	330 - 1100	240 - 800			
23	400-2500	345 - 1150	330 - 1100	300-1000	345 - 1150	330 - 1100	240 - 800			
24	400-2500	230 - 690	220 - 660	200-600	230 - 690	220 - 660	160 - 480			
25	300-1500	230 - 460	220 - 440	200-400	230 - 460	220 - 440	160 - 320			
26	300-1000	230 - 460	220 - 440	200-400	230 - 460	220 - 440	160 - 320			
27	300-800	170 - 345	165 - 330	150-300	170 - 345	165 - 330	120 - 240			
28	300-800	115 - 230	110 - 220	100-200	115 - 230	110 - 220	80 - 160			
29	150-600	55 - 230	55 - 220	50-200	55 - 230	55 - 220	40 - 160			
30										

No.	IC804	IC806	IC807	IC907	IC908	IC808	IC04	IC07	IC20	IC08
31	60 - 95	50 - 80	50 - 80	45 - 75	40-65	40 - 70	30 - 50	30 - 45	25 - 40	25 - 40
32	45 - 65	35 - 55	35 - 55	35 - 50	30-45	30 - 45	25 - 35	20 - 30	20 - 30	20 - 25
33	45 - 65	35 - 55	35 - 55	35 - 50	30-45	30 - 45	25 - 35	20 - 30	20 - 30	20 - 25
34	35 - 60	30 - 50	30 - 50	30 - 45	25-40	25 - 40	20 - 30	15 - 30	15 - 25	15 - 25
35	30 - 45	25 - 35	25 - 35	25 - 35	20-30	20 - 30	15 - 25	15 - 20	15 - 20	10 - 20
36	150 - 255	125 - 210	120 - 205	115 - 195	100-170	105 - 180	80 - 135	70 - 120	65 - 110	60 - 100
37	50 - 65	45 - 60	40 - 50	40 - 50	35-45	35 - 45	50 - 65	40 - 55	40 - 50	35 - 45

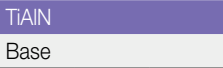
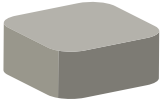





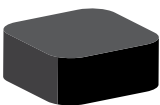


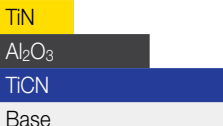
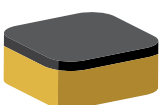
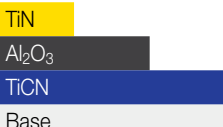
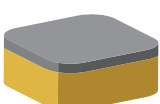
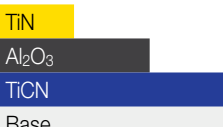
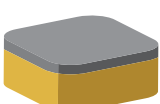
No.	IB10H	IB50	IB20H	IC807	IC907	IC808	IC908			
38	100-155	90-140	80-125	35-45	30-40	30-40	25-35			
39	90-135	80-120	75-110	30-40	25-35	25-35	20-30			
40	110-175	100-160	90-145	45-65	40-60	40-60	30-50			
41	100-135	90-120	80-110	40-50	35-45	35-45	30-40			

ISCAR Groove-Turn Grades Chart

Grade	ISO	Grade Description	Coating Layers	Coating Color*
IC228	P30-P45	A very substrate with PVD coating, suitable for machining steels and stainless steel at low to medium cutting speeds.		
	M25-M40			
IC528	P30-P45	A tough substrate with PVD coating, suitable for machining steels and stainless steel at low to medium cutting speeds. Can be used under unstable conditions.		
	M25-M40			
IC804		A very hard submicron grain size substrate with PVD coating and a special SUMOTEC surface treatment. Suitable for semi-finishing and finishing operations under stable conditions on high temperature alloys and Titanium alloys moderate to relatively high cutting speeds. Features high wear resistance and plastic deformation durability.		
	S05-S15			
IC806		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.		
	M05-M15			
	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			
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			
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			
	H05-H15			










* For coated grades

ISCAR Groove-Turn Grades Chart

	Grade	ISO	Grade Description	Coating Layers	Coating Color*
PVD COATED	IC908	P15-P30	A tough submicron grain size substrate with PVD coating, recommended for general use in a large variety of operations and materials such as steels, alloy steels, austenitic stainless steel and high temperature alloys at moderate cutting speeds. Features high wear resistance and chipping durability.		
		M20-M30			
		K20-K40			
		S15-S30			
		H20-H30			
	IC1007	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 high speeds under stable conditions. Features high wear resistance and plastic deformation durability. Good choice for non-ferrous materials and cast iron.		
		M05-M15			
		K15-K30			
		S10-S20			
	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.		
M20-M30					
K20-K40					
S15-S30					
CVD COATED	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.		
	IC428	K05-K20	A hard substrate with multilayer CVD coating. Recommended for machining gray and nodular cast iron at moderate to high cutting speeds.		
		H15-H25			
	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.		
	IC8150	P10-P25	A hard substrate with a cobalt enriched layer, MTCVD coating with a special SUMOTEC surface treatment. Recommended for high speed machining of steels, alloy steels and martensitic stainless steel with moderate feeds under stable conditions. Features excellent thermal stability, resistance to wear and plastic deformation durability.		
		M10-M20			
		K10-K25			
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.			
	M15-M25				

* For coated grades

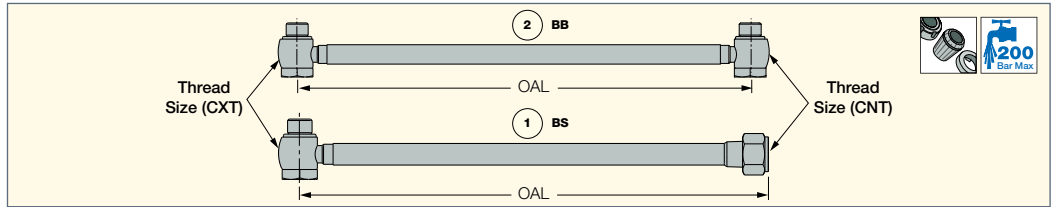
ISCAR Groove-Turn Grades Chart

	Grade	ISO	Grade Description	Coating Layers	Uncoated
CERMET	IC20N	P05-P25	A very hard cermet grade for turning and grooving, recommended for finishing operations on steels and alloy steels at high cutting speeds and low feeds. Features excellent surface finish, high wear resistance, plastic deformation durability and prevents built-up edge.	Base	
		M05-M15			
UNCOATED	IC4	N01-N15	A very hard-uncoated carbide grade, suitable for machining aluminum alloys, aluminum alloys with high silicon content and other non-ferrous materials at high cutting speeds.	Base	
		S05-S15			
	IC07	M10-M20	A hard-uncoated submicron carbide grade, suitable for machining aluminum alloys and other non-ferrous materials at high cutting speeds.	Base	
		N05-N20			
		S10-S25			
	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.	Base	
		N10-N25			
		S20-S30			
	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					
PCBN	IB10H		Extra fine PCBN grain size. Suitable for high speed machining of hardened steels (45-65 HRC) under stable conditions.	Base	
		H10			
	IB20H		A combination of coarse and fine PCBN grain, suitable for general and interrupted cutting of hardened steels.	Base	
		H20			
	IB50	K01-K10	A PCBN grade, suitable for finish turning and grooving operations on hardened steels 45-65 HRC and nodular cast iron in continuous cutting.	Base	
		H01-H10			
PCD	ID5	N01-N10	A PCD brazed tip, suitable for machining aluminum alloys (Si < 12%) and other non-ferrous materials. Features very high wear resistance with high toughness. Suitable for finishing operations and can be used for semi roughing operations and interrupted cut.	Base	

Accessories



JHP HOSE

High-Pressure Coolant Hose



Designation	OAL	Fig.	CXT	CNT
JHP HOSE G1/8-7/16-200BS	200.00	1	G1/8"-28 BSPP	UNF7/16"-20FLARE 37°
JHP HOSE 5/16-G1/8-200BS	200.00	1	5/16"-24 UNF	G1/8"-28 BSPP
JHP HOSE 5/16-7/16-200BS	200.00	1	5/16"-24 UNF	UNF7/16"-20FLARE 37°
JHP HOSE G1/8-G1/8-200BB	200.00	2	G1/8"-28 BSPP	G1/8"-28 BSPP
JHP HOSE G1/8-7/16-250BS	250.00	1	G1/8"-28 BSPP	UNF7/16"-20FLARE 37°
JHP HOSE G1/8-G1/8-250BB	250.00	2	G1/8"-28 BSPP	G1/8"-28 BSPP

Spare Parts

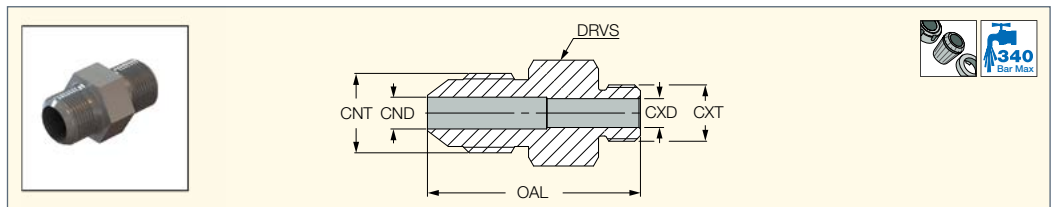
Designation		
JHP HOSE 5/16-7/16-200BS	JHP BANJO BOLT 5/16" UNF	JHP COPPER SEAL 5/16"
JHP HOSE G1/8-G1/8-200BB		JHP COPPER SEAL 1/8**
JHP HOSE G1/8-G1/8-250BB	JHP BANJO BOLT G1/8**	JHP COPPER SEAL 1/8**

* Optional, should be ordered separately

Accessories

JHP NIPPLE

High-Pressure Adaptation Nipple



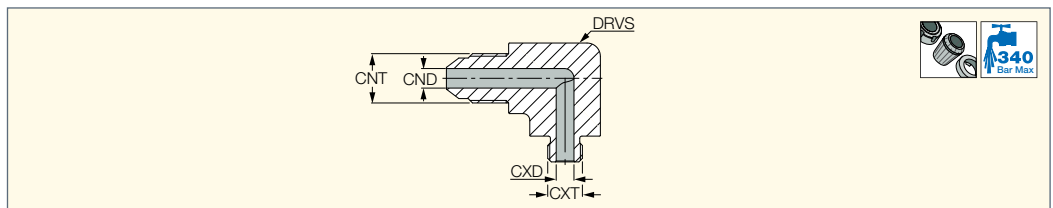
Designation	CXT	CNT	OAL	CND	CXD	DRVS ⁽¹⁾
JHP NIPPLE G1/8"-7/16"UNF	1/8"-28 BSPP	7/16"-20 UNF	28.75	4.00	4.00	14.3
JHP NIPPLE 1/8NPT-7/16UNF	1/8"-27 NPT	7/16"-20 UNF	31.00	4.80	4.40	12.7
JHP NIPPLE 1/4NPT-7/16UNF	1/4"-18 NPT	7/16"-20 UNF	36.00	4.40	4.40	14.3
JHP NIPPLE 5/16UNF-7/16UNF	5/16"-24 UNF	7/16"-20 UNF	29.50	4.40	4.00	12.7

⁽¹⁾ Torque key size

Accessories

JHP ELBOW

High-Pressure Adaptation Elbow




Designation	CNT	CND	CXT	CXD	DRVS ⁽²⁾
JHP ELBOW TUB3/16-5/16UNF ⁽¹⁾	-	3.10	5/16"-24 UNF	4.00	12.7
JHP ELBOW 90-5/16-7/16UNF	7/16"-20 UNF	4.40	5/16"-24 UNF	4.00	12.7
JHP ELBOW 90-G1/8-7/16UNF	7/16"-20 UNF	4.40	1/8"-28 BSPP	4.00	15.9

⁽¹⁾ For connection to a simple 3/16" stainless or copper tube

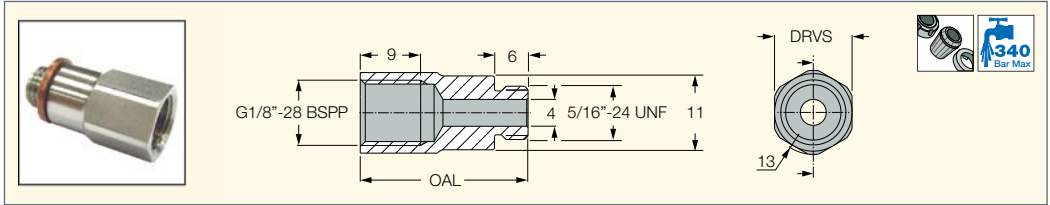
⁽²⁾ Torque key size

Spare Parts

Designation	
JHP ELBOW 90-5/16-7/16UNF	JHP COPPER SEAL 5/16"-2.5
JHP ELBOW 90-G1/8-7/16UNF	JHP COPPER SEAL 1/8"

Accessories

JHP CONNECTOR
High-Pressure Connector

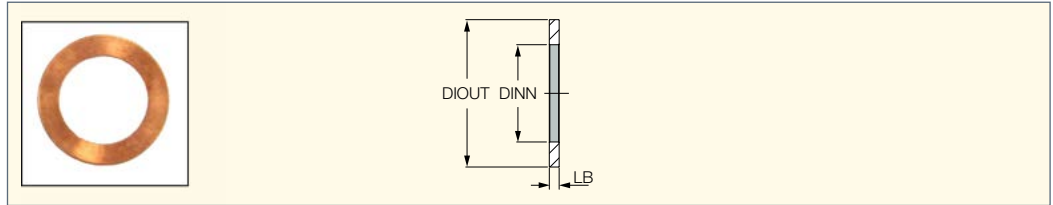


Designation	OAL	DRVS ⁽¹⁾
JHP CONECTOR 5/16"-G1/8"	25.00	12.0

⁽¹⁾ Torque key size

Accessories

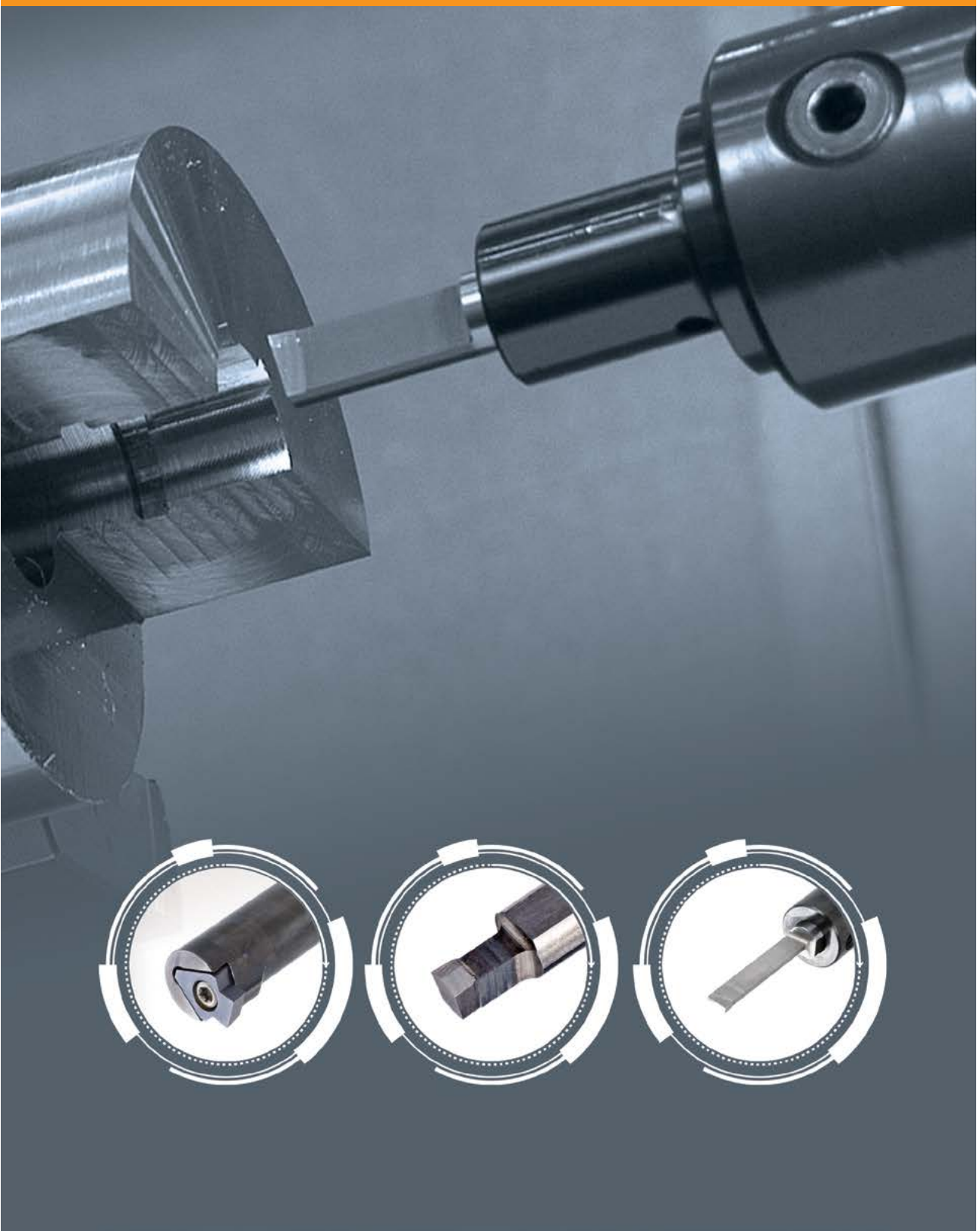
JHP COPPER SEAL
High-Pressure Copper Seal



Designation	DIOUT	DINN	LB
JHP COPPER SEAL 5/16"-2.5	9.40	8.00	2.50
JHP COPPER SEAL 5/16"	11.90	8.15	1.35
JHP COPPER SEAL 1/8"	15.00	10.00	1.00



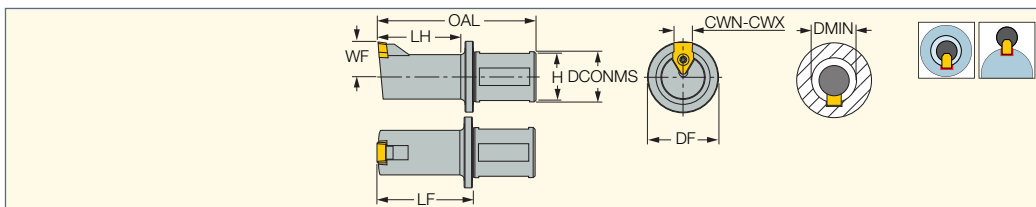
BROACHING TOOLS



ISCARBROACH

SXCIB

Broaching Holders for Lathe and Milling Machines



Designation	DCONMS	OAL	LH	LF	CWN ⁽¹⁾	CWX ⁽²⁾	WF	DMIN	H	DF	Insert		
SXCIB 25-22-50	25.00	100.00	50.0	60.00	5.00	12.00	12.00	22.00	23.0	33.0	Group #1	SR M5X13 T20	T-20/5
SXCIB 32-30-50	32.00	100.00	50.0	60.00	5.00	12.00	16.50	30.00	30.0	45.0	Group #2	SR M5X13 T20	T-20/5
SXCIB 32-38-50	32.00	100.00	50.0	60.00	5.00	12.00	22.00	38.00	30.0	45.0	Group #3	SR M5X13 T20	T-20/5
SXCIB 32-30-75	32.00	125.00	75.0	85.00	5.00	12.00	16.50	30.00	30.0	45.0	Group #2	SR M5X13 T20	T-20/5
SXCIB 32-38-75	32.00	125.00	75.0	85.00	5.00	12.00	22.00	38.00	30.0	45.0	Group #3	SR M5X13 T20	T-20/5

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

For inserts, see pages: XNUWB (440) • XNUWB (light fit) (441) • XNUWB (tight fit) (441)

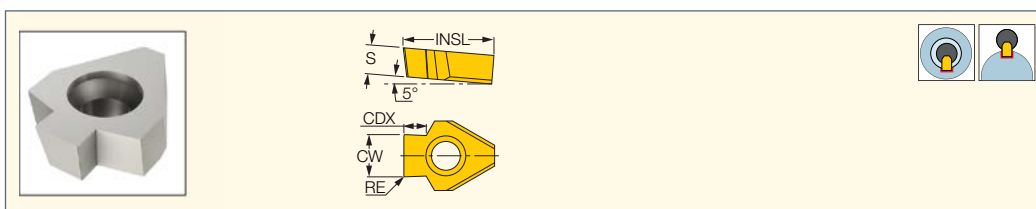
Insert Group #1	Insert Group #2	Insert Group #3
XNUWB 13-4.98-0.2	XNUWB 13-7.98-0.2	XNUWB 13-10.13-1.05
XNUWB 13-5.01-0.2	XNUWB 13-8.13-1.05	XNUWB 13-11.98-0.3
XNUWB 13-5.98-0.2	XNUWB 13-9.98-0.3	XNUWB 13-12.02-0.3
XNUWB 13-6.01-0.2	XNUWB 13-10.01-0.3	XNUWB 13-12.02-0.5
XNUWB 13-6.12-0.85		XNUWB 13-12.15-1.35
XNUWB 13-7.13-0.85		XNUWB 13-12.15-1.75
XNUWB 13-7.98-0.2		XNUWB 13-12.15-2.25
XNUWB 13-8.01-0.2		
XNUWB 13-8.13-1.05		

Spare Parts Clamping screw: SR M5X13 T20 Key: T-20/5

ISCARBROACH

XNUWB

DIN138 (Tolerance C11) Inserts for Keyway Broaching on Lathe and Milling Machines



Designation	Dimensions							IC908
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	INSL	CDX ⁽³⁾	S	
XNUWB 13-6.12-0.85	6.12	0.85	0.02	0.050	17.30	2.60	5.30	●
XNUWB 13-7.13-0.85	7.13	0.85	0.02	0.050	17.30	3.30	5.30	●
XNUWB 13-8.13-1.05	8.13	1.05	0.02	0.050	17.30	3.40	5.30	●
XNUWB 13-10.13-1.05	10.13	1.05	0.02	0.050	20.20	4.20	5.30	●
XNUWB 13-12.15-1.35	12.15	1.35	0.02	0.050	20.20	5.10	5.30	●
XNUWB 13-12.15-1.75	12.15	1.75	0.02	0.050	20.20	6.60	5.30	●
XNUWB 13-12.15-2.25	12.15	2.25	0.02	0.050	20.20	8.50	5.30	●

• Typical conditions: $V_c = 4000-8000$ mm/min, $a_p = 0.02-0.08$ mm

⁽¹⁾ Cutting width tolerance (+/-)

⁽²⁾ Corner radius tolerance (+/-)

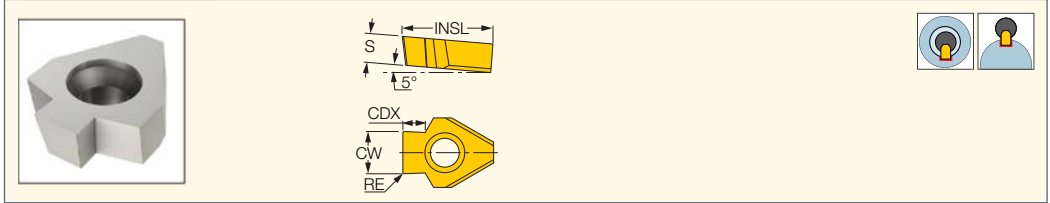
⁽³⁾ Cutting depth maximum

For tools, see pages: SXCIB (440)

ISCARBROACH

XNUWB (light fit)

DIN6885 Inserts for Light Fit (JS9) Keyway Broaching on Lathe and Milling Machines



Designation	Dimensions						IC908
	CW ⁽¹⁾	RE	RETOL ⁽²⁾	INSL	CDX ⁽³⁾	S	
XNUWB 13-5.01-0.2	5.01	0.20	0.030	17.30	2.70	5.30	●
XNUWB 13-6.0-0.2	6.01	0.20	0.030	17.30	3.40	5.30	●
XNUWB 13-8.01-0.2	8.01	0.20	0.030	17.30	4.10	5.30	●
XNUWB 13-10.01-0.3	10.01	0.30	0.030	17.30	4.20	5.30	●
XNUWB 13-12.02-0.3	12.02	0.30	0.030	20.20	5.70	5.30	●
XNUWB 13-12.02-0.5	12.02	0.50	0.050	20.20	8.50	5.30	●

• Typical conditions: $V_c = 4000-8000$ mm/min, $a_p = 0.02-0.08$ mm

⁽¹⁾ Tolerance: +0 -0.03

⁽²⁾ Corner radius tolerance (+/-)

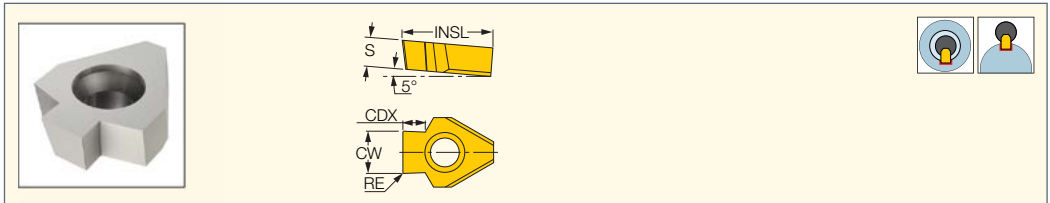
⁽³⁾ Cutting depth maximum

For tools, see pages: SXCIB (440)

ISCARBROACH

XNUWB (tight fit)

DIN6885 Inserts for Tight Fit (P9) Keyway Broaching on Lathe and Milling Machines



Designation	Dimensions					IC908
	CW ⁽¹⁾	RE	INSL	CDX ⁽²⁾	S	
XNUWB 13-4.98-0.2	4.98	0.20	17.30	2.70	5.30	●
XNUWB 13-5.98-0.2	5.98	0.20	17.30	3.40	5.30	●
XNUWB 13-7.98-0.2	7.98	0.20	17.30	4.10	5.30	●
XNUWB 13-9.98-0.3	9.98	0.30	17.30	4.20	5.30	●
XNUWB 13-11.98-0.3	11.98	0.30	20.20	5.70	5.30	●

• Typical conditions: $V_c = 4000-8000$ mm/min, $a_p = 0.02-0.08$ mm

⁽¹⁾ Tolerance: +0 -0.03

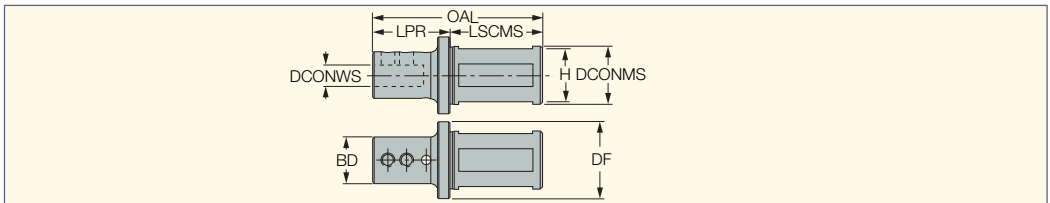
⁽²⁾ Cutting depth maximum



For tools, see pages: SXCIB (440)

ISCARBROACH

BHDN

Broaching Holders for Lathe and Milling Machines

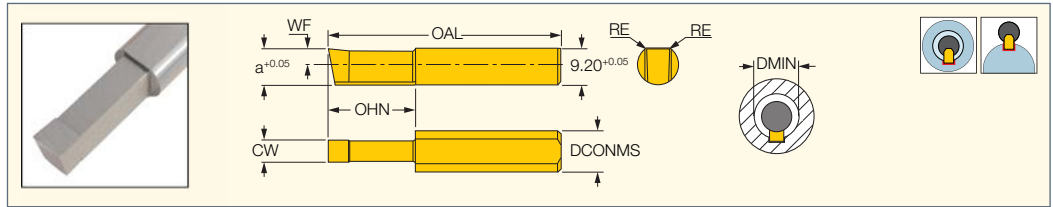


Designation	DCONWS	DCONMS	BD	DF	LPR	OAL	LSCMS	H	Insert		
BHDN 25-10-33	10.00	25.00	20.00	33.00	33.00	73.00	40.00	23.0	SCB 010	SR M5X6 DIN913	HW 2.5
BHDN 32-10-33	10.00	32.00	20.00	40.00	33.00	73.00	40.00	30.0	SCB 010	SR M5X6 DIN913	HW 2.5

• Holders are suitable for left- and right-hand mini-bars and ISO bars

ISCARBROACH

SCB
DIN138 (Tolerance C11) Inserts for Keyway Broaching on Lathe and Milling Machines

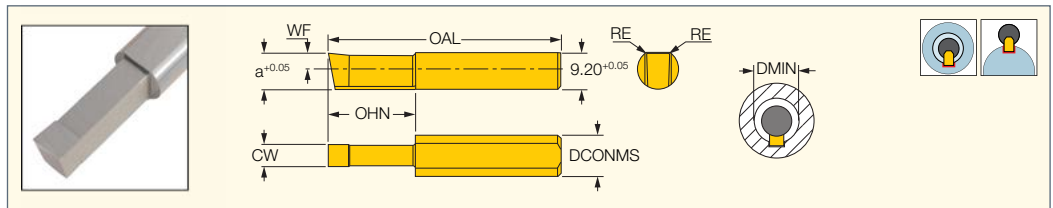


Dimensions									
Designation	CW	RE	DCONMS	WF	a	OAL	OHN ⁽¹⁾	DMIN	IC908
SCB 010.410.050-25	4.10	0.50	10.00	4.00	9.00	50.00	25.0	10.00	●
SCB 010.410.050-41	4.10	0.50	10.00	4.00	9.00	66.00	41.0	10.00	●
SCB 010.510.050-25	5.10	0.50	10.00	4.00	9.00	50.00	25.0	10.00	●
SCB 010.510.050-41	5.10	0.50	10.00	4.00	9.00	66.00	41.0	10.00	●

• Typical conditions: $V_c = 4000-8000$ mm/min, $a_p = 0.02-0.08$ mm
(1) Minimum overhang

ISCARBROACH

SCB (light fit)
DIN6885 Inserts for Light Fit (JS9) Keyway Broaching on Lathe and Milling Machines

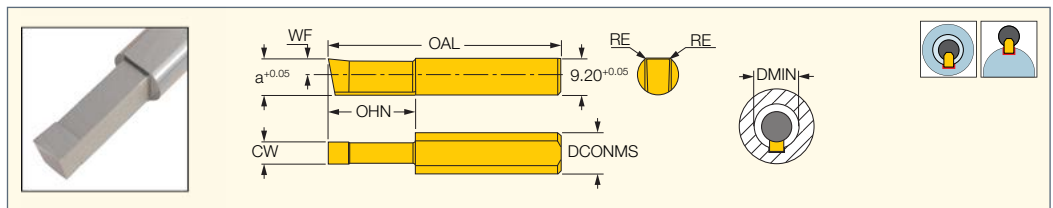


Dimensions									
Designation	CW	RE	DCONMS	WF	a	OAL	OHN ⁽¹⁾	DMIN	IC908
SCB 010.400.020-25	4.00	0.20	10.00	4.00	9.00	50.00	25.0	10.00	●
SCB 010.400.020-41	4.00	0.20	10.00	4.00	9.00	66.00	41.0	10.00	●
SCB 010.500.020-25	5.00	0.20	10.00	4.00	9.00	50.00	25.0	10.00	●
SCB 010.500.020-41	5.00	0.20	10.00	4.00	9.00	66.00	41.0	10.00	●

• Typical conditions: $V_c = 4000-8000$ mm/min, $a_p = 0.02-0.08$ mm
(1) Minimum overhang

ISCARBROACH

SCB (tight fit)
DIN6885 Inserts for Tight Fit (P9) Keyway Broaching on Lathe and Milling Machines



Dimensions									
Designation	CW ⁽¹⁾	RE	DCONMS	WF	a	OAL	OHN ⁽²⁾	DMIN	IC908
SCB 010.398.020-25	3.98	0.20	10.00	4.00	9.00	50.00	25.0	10.00	●
SCB 010.398.020-41	3.98	0.20	10.00	4.00	9.00	66.00	41.0	10.00	●
SCB 010.498.020-25	4.98	0.20	10.00	4.00	9.00	50.00	25.0	10.00	●
SCB 010.498.020-41	4.98	0.20	10.00	4.00	9.00	66.00	41.0	10.00	●

• Typical conditions: $V_c = 4000-8000$ mm/min, $a_p = 0.02-0.08$ mm
(1) Tolerance: +0.01 -0.02
(2) Minimum overhang

TOOLS FOR ALUMINUM WHEELS

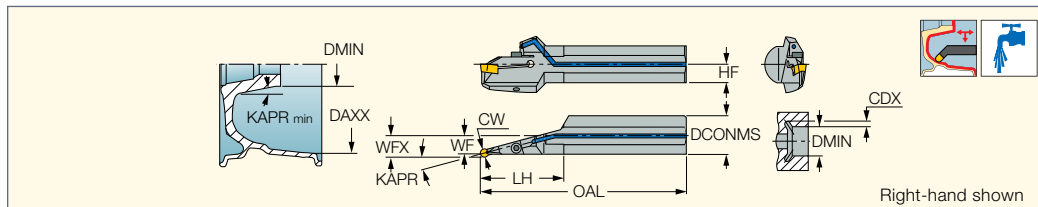


CUTGRIP

GHIUR/L-C-A (15° & 27.5°)

Bars

Internal Grooving and Turning Bars for Machining Aluminum Wheels



Designation	CW	DCONMS	DMIN	CDX ⁽¹⁾	OAL	LH	WFX	WF	HF	KAPR ⁽²⁾
GHIUR/L 40C-15A-6	6.00	40.00	160.00	-	320.00	83.0	21.20	19.0	18.0	15.0
GHIUR/L 40C-15A-8	8.00	40.00	160.00	0.00 ⁽³⁾	320.00	83.0	21.00	18.0	18.0	15.0
GHIUR 50C-15A-8	8.00	50.00	100.00	0.00 ⁽⁴⁾	350.00	83.0	26.00	23.0	23.0	15.0
GHIUR/L 40C-27.5A-6	6.00	40.00	90.00	0.60 ⁽⁵⁾	320.00	80.0	25.10	23.5	18.0	27.5
GHIUR/L 50C-27.5A-8	8.00	50.00	120.00	1.80 ⁽⁵⁾	350.00	82.0	30.20	28.0	23.0	27.5

• Upper jaw with hard coating to sustain chip deflection

⁽¹⁾ Dimension for minimum bore diameter

⁽²⁾ Tool cutting edge angle




⁽³⁾ For bore diameter D>200, CDX is 0.5 mm

⁽⁴⁾ For bore diameter D>200, CDX is 1.4 mm

⁽⁵⁾ For bore diameter D>200, CDX is 4.0 mm

For inserts, see pages: GDMA (300) • GIPA (full radius W=3-6) (301) • GIPA 8-35V (V-shape) (447) • GIPA/GIDA 8 (full radius) (302)

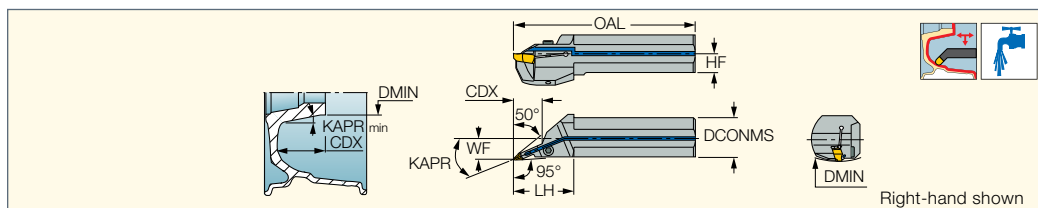
Spare Parts

Designation			
GHIUR/L 40C-15A-6	SR M5X20DIN912	HW 4.0	PL 40
GHIUR/L 40C-15A-8	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR 50C-15A-8	SR M6X25 DIN912	HW 5.0	PL 40
GHIUL 40C-27.5A-6	SR M6X25 DIN912	HW 5.0	PL 40
GHIUR 40C-27.5A-6	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR/L 50C-27.5A-8	SR M6X25 DIN912	HW 5.0	PL 40

CUTGRIP

GHIUR/L-C-22.5A-8V

22.5° Approach Angle Bars for Facing and Internal Machining



Designation	CW	DCONMS	DMIN	CDX	OAL	LH	HF	WF	KAPR ⁽¹⁾
GHIUR/L 40C-22.5A-8V	8.00	40.00	300.00	28.50	250.00	60.0	18.0	21.00	22.5

• Upper jaw with hard coating to sustain chip deflection

⁽¹⁾ Tool cutting edge angle

For inserts, see pages: GIPA 8-35V (V-shape) (447)

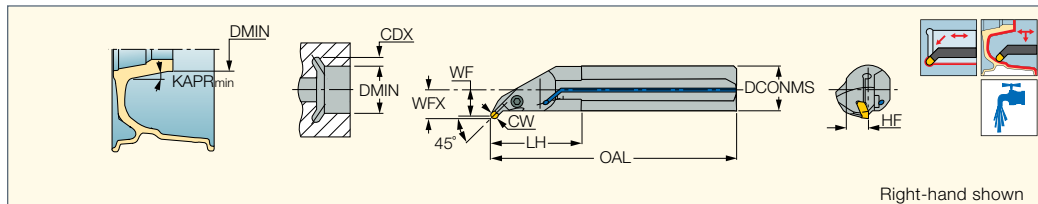
Spare Parts




Designation			
GHIUR/L-C-22.5A-8V	SR M6X20 DIN912	HW 5.0	PL 40

CUTGRIP

GHIUR/L-UC

45° Undercutting Bars for Internal Turning of Aluminum Wheels



Designation	CW	DCONMS	DMIN	CDX ⁽¹⁾	OAL	LH	WFX	WF	HF			
GHIUR/L 40UC-6	6.00	40.00	70.00	0.00 ⁽²⁾	350.00	75.0	23.80	24.7	18.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR 50UC-6	6.00	50.00	78.00	0.00 ⁽³⁾	350.00	75.0	28.80	29.7	23.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR/L 40UC-8	8.00	40.00	68.00	0.00 ⁽⁴⁾	350.00	79.0	28.80	26.0	18.0	SR M6X20 DIN912	HW 5.0	PL 40
GHIUR 50UC-8	8.00	50.00	58.00	0.00 ⁽⁵⁾	350.00	80.0	30.20	31.4	23.0	SR M6X20 DIN912	HW 5.0	PL 40

⁽¹⁾ Cutting depth maximum

⁽²⁾ For bore diameter more than 200, CDX is 1.3 mm

⁽³⁾ For bore diameter more than 200, CDX is 2.0 mm

⁽⁴⁾ For bore diameter more than 200, CDX is 2.8 mm

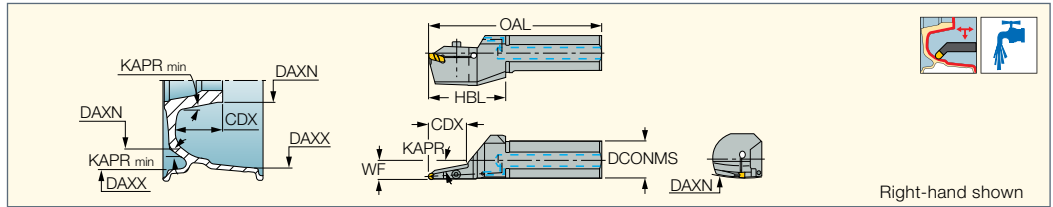
⁽⁵⁾ For bore diameter more than 200, CDX is 6.0 mm

For inserts, see pages: GDMA (300) • GIPA (full radius W=3-6) (301) • GIPA 8-35V (V-shape) (447) • GIPA/GIDA 8 (full radius) (302)

CUTGRIP

GHFR/L-A

8° / 10° Approach Angle Bars for Facing and Internal Machining



Designation	CW	DAXN ⁽¹⁾	DAXX ⁽²⁾	OAL	HBL	CDX	WF	KAPR ⁽³⁾	DCONMS			
GHFR/L 40C-10A-6	6.00	300.00	360.00	300.00	80.00	40.00	19.30	10.00	40.00	SR M5X20DIN912	HW 4.0	PL 40
GHFR/L 40C-8A-8	8.00	300.00	360.00	320.00	100.00	70.00	19.50	8.00	40.00	SR M6X25 DIN912	HW 5.0	PL 40

• Upper jaw with hard coating to sustain chip deflection

⁽¹⁾ Minimum axial grooving diameter

⁽²⁾ Maximum axial grooving diameter

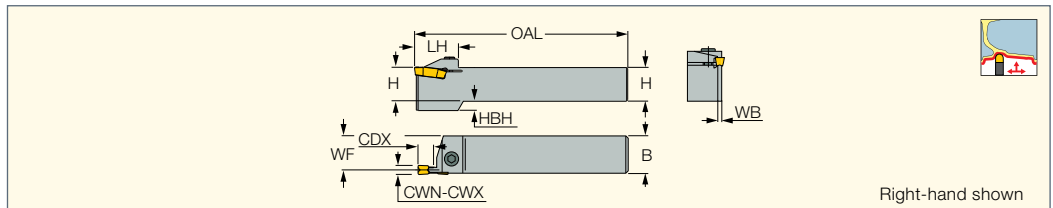
⁽³⁾ Tool cutting edge angle

For inserts, see pages: GDMA (300) • GIPA (full radius W=3-6) (301) • GIPA/GIDA 8 (full radius) (302)

CUTGRIP

GHDR/L-8A

External Tools for Turning, Grooving and Parting; Upper Jaw with Hard Coating to Sustain Chip Deflection



Designation	H	CWN ⁽¹⁾	CWX ⁽²⁾	CDX ⁽³⁾	B	OAL	WF	WB	LH	HBH		
GHDR/L 25-8A	25.0	8.00	8.00	25.00	25.0	150.00	22.00	6.00	40.0	7.6	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾
GHDR 32-8A	32.0	8.00	8.00	25.00	32.0	170.00	29.00	6.00	40.0	-	SR M6X16 DIN912	HW 5.0 ⁽⁴⁾

• Upper jaw with hard coating to sustain chip deflection • For user guide, see pages 419-428, 432-436

⁽¹⁾ Minimum cutting width

⁽²⁾ Maximum cutting width

⁽³⁾ Cutting depth maximum

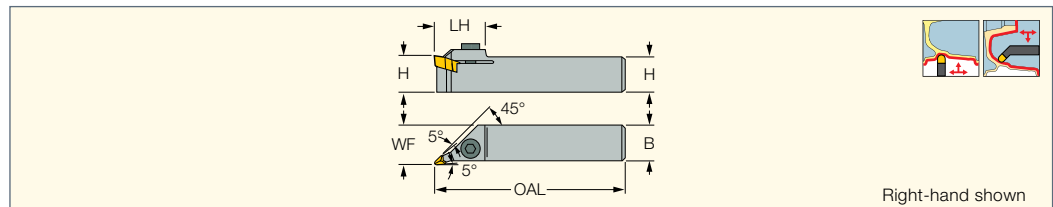
⁽⁴⁾ For optional key with limited tightening torque see page 428

For inserts, see pages: GIPA/GIDA 8 (full radius) (302)

CUTGRIP

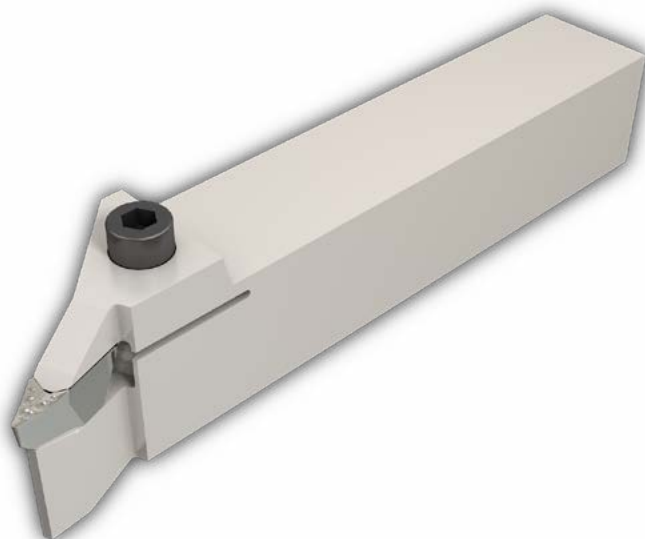
GHVR/L

Internal and External Profiling Holders for Machining Aluminum Wheels



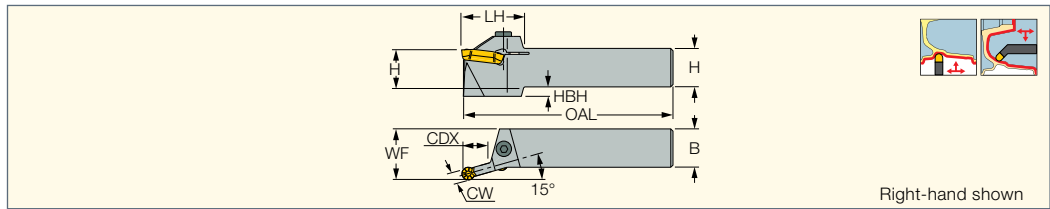
Designation	H	B	OAL	WF	LH		
GHVR/L 25-8	25.0	25.0	150.00	29.00	41.0	SR M6X16 DIN912	HW 5.0

For inserts, see pages: GIPA 8-35V (V-shape) (447)



CUTGRIP

GHDKR/L
External and Internal Profiling
Holders for Machining
Aluminum Wheels



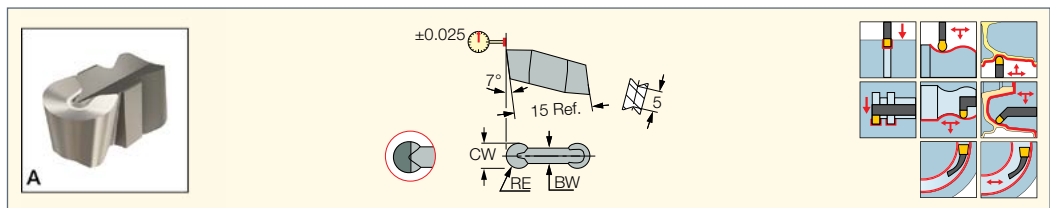
Designation	CW	H	B	OAL	LH	WF	HBH		
GHDKR/L 25-6 ⁽¹⁾	6.00	25.0	25.0	150.00	40.0	32.20	6.0	SR M6X20 DIN912	HW 5.0
GHDKR/L 25-8	8.00	25.0	25.0	150.00	44.0	33.00	6.0	SR M6X20 DIN912	HW 5.0
GHDKR/L 32-8	8.00	32.0	32.0	170.00	44.0	40.00	-	SR M6X20 DIN912	HW 5.0

⁽¹⁾ Only insert GIPA 6.00-3.00 is suitable for this tool.

For inserts, see pages: GDMA (300) • GDMY (full radius) (291) • GIPA (full radius W=3-6) (301) • GIPA/GIDA 8 (full radius) (302)

CUTGRIP

GIPA (full radius W=3-6)
Precision Double-Ended
Inserts with Polished Top Rake
for Machining Aluminum



Designation	Dimensions					Tough ↔ Hard				Recommended Machining Data		
	CW	RE	CWTOL ⁽⁴⁾	RETOL ⁽⁵⁾	BW	IC20	IC806	IC4	ID5	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-1.50	3.00	1.50	0.02	0.050	2.40	●				0.00-1.50	0.15-0.30	0.08-0.16
GIPA 3.00-1.50-D ⁽¹⁾	3.00	1.50	0.02	0.050	2.40	●			●	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 4.00-2.00	4.00	2.00	0.02	0.050	3.20	●	●			0.00-2.00	0.20-0.43	0.10-0.22
GIPA 4.00-2.00-D ⁽¹⁾	4.00	2.00	0.02	0.050	3.20	●			●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 4.00-2.00YZ-D ⁽²⁾	4.00	2.00	0.02	0.050	3.20	●			●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 5.00-2.50	5.00	2.50	0.02	0.050	3.90	●	●			0.00-2.50	0.21-0.48	0.09-0.24
GIPA 5.00-2.50-D ⁽¹⁾	5.00	2.50	0.02	0.050	3.90	●			●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 5.00-2.50YZ-D ⁽²⁾	5.00	2.50	0.02	0.050	3.90	●			●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 6.00-3.00	6.00	3.00	0.02	0.050	4.80	●		●		0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00-D ⁽¹⁾	6.00	3.00	0.02	0.050	4.80	●			●	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00YZ	6.00	3.00	0.02	0.050	4.80	●			●	0.00-3.00	0.21-0.58	0.11-0.29
GIPA 6.00-3.00YZ-D ⁽²⁾	6.00	3.00	0.02	0.050	4.80	●			●	0.00-3.00	0.26-0.72	0.13-0.36
GIPA 6.00-3.00CB ⁽³⁾	6.00	3.00	0.02	0.050	4.80	●			●	0.00-3.00	0.21-0.58	0.11-0.29

• For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Single-ended PCD tipped insert

⁽²⁾ Single-ended molded PCD chipformer tipped insert

⁽³⁾ Single-ended flat PCD tipped insert with chip deflector

⁽⁴⁾ Cutting width tolerance (+/-)

⁽⁵⁾ Corner radius tolerance (+/-)

For tools, see pages: Anti-Vibration Blades (284) • C#-GHDR/L (274) • CGHN 26-M (356) • CGHN 32-DGM (358) • CGHN 32-M (357) • CGHN-D (283) • CGHN-DG (283)

• CGHN-S (282) • CGPAD (281) • CGPAD-JHP (282) • GHDKR/L (446) • GHDR/L (short pocket) (275) • GHDR/L-JHP (short pocket) (276)

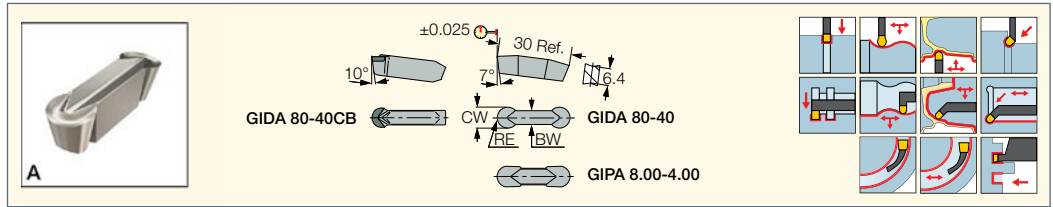
• GHDR/L-JHP-MC (short pocket) (277) • GHGR/L (278) • GHIFR/L-A (445) • GHIUR/L-C-A (15° & 27.5°) Bars (444) • GHIUR/L-UC (444) • GHMPR/L (273)

• GHMR/L (273) • GHSR/L (373) • GHSR/L-JHP-SL (374) • NQCH-GHSR/L-JHP (374)



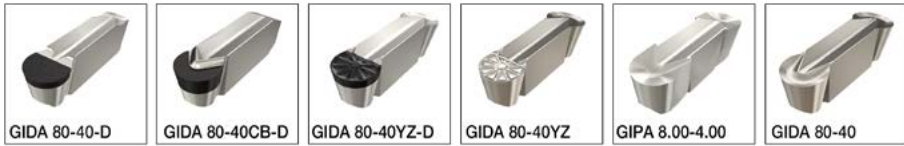
CUTGRIP

GIPA/GIDA 8 (full radius)
Precision Double-Ended
Inserts with Polished Top Rake
for Machining Aluminum



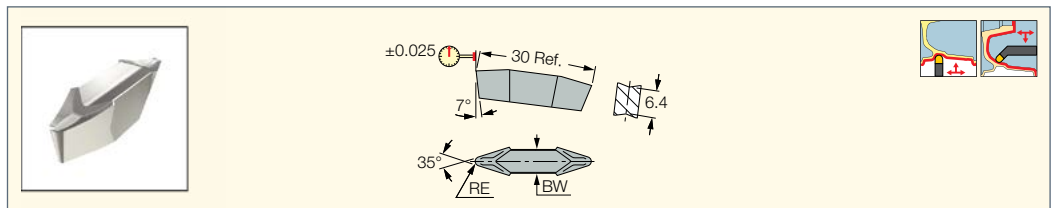
Designation	Dimensions					Tough ↔ Hard			Recommended Machining Data		
	CW	RE	CWTOL ⁽²⁾	RETOL ⁽³⁾	BW	IC20	IC4	ID5	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIDA 80-40	8.00	4.00	0.02	0.050	5.60	●	●		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40-D	8.00	4.00	0.02	0.050	5.60			●	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40CB-D (1)	8.00	4.00	0.02	0.050	5.60			●	0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ	8.00	4.00	0.02	0.050	5.60	●	●		0.00-4.00	0.24-0.67	0.14-0.38
GIDA 80-40YZ-D	8.00	4.00	0.02	0.050	5.60			●	0.00-4.00	0.35-0.96	0.18-0.48
GIPA 8.00-4.00	8.00	4.00	0.02	0.050	6.00	●			0.00-4.00	0.24-0.67	0.14-0.38

- ID5 is a single-ended PCD tipped insert • For cutting speed recommendations and user guide, see pages 419-428, 432-436
- (1) Should not be clamped on tools with "A" suffix
- (2) Cutting width tolerance (+/-)
- (3) Corner radius tolerance (+/-)
- For tools, see pages:** C#-GHDR/L (274) • CGHN-8-10D (287) • GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDKR/L (446)
- GHDR/L (long pocket) (285) • GHDR/L-8A (445) • GHDR/L-JHP (long pocket) (285) • GHFGR/L-8 (579) • GHIFR/L-A (445) • GHIR/L (W=7.0-8.3) (355)
- GHIUR/L-C-A (15° & 27.5°) Bars (444) • GHIUR/L-UC (444)



CUTGRIP

GIPA 8-35V (V-shape)
V-Shaped Inserts for Machining
Aluminum Wheels

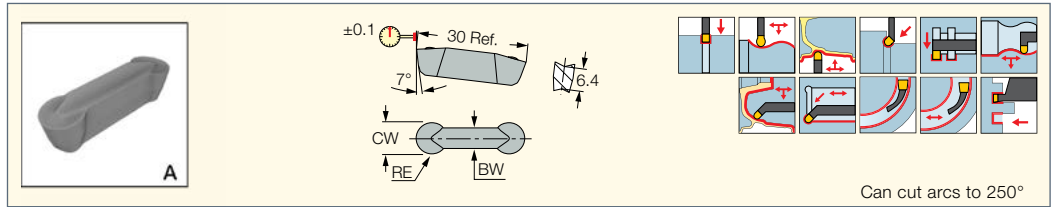


Designation	Dimensions			Tough ↔ Hard			Recommended Machining Data	
	RE	RETOL ⁽²⁾	BW	IC20	IC4	ID5	a _p (mm)	f turn (mm/rev)
GIPA 6.0-35V-0.8	0.80	0.050	4.80	●			1.00-3.60	0.21-0.48
GIPA 8YZ-35V-0.80	0.80	0.050	6.00		●		1.00-4.80	0.24-0.56
GIPA 8YZ-35V-1.20	1.20	0.050	6.00		●		1.45-4.80	0.24-0.62
GIPA 8YZ-35V-1.20-D (1)	1.20	0.050	6.00			●	1.45-4.80	0.35-0.88
GIPA 8-35V-1.20	1.20	0.050	6.00	●			1.45-4.80	0.24-0.62
GIPA 8-35V-1.20-D (1)	1.20	0.050	6.00			●	1.45-4.80	0.35-0.88
GIPA 8-35V-3.0	3.00	0.050	6.00	●			3.60-4.80	0.24-0.67

- Precision ground and polished rake to avoid built-up edge • Toolholder seat needs to be modified according to insert profile to ensure clearance
- (1) Single-ended PCD tipped insert
- (2) Corner radius tolerance (+/-)
- For tools, see pages:** GHIUR/L-C-22.5A-8V (444) • GHIUR/L-C-A (15° & 27.5°) Bars (444) • GHIUR/L-UC (444) • GHVR/L (445)

CUTGRIP

GDMA
Utility Double-Ended Insert
for Machining Aluminum



Can cut arcs to 250°

Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data		
	CW	RE	CWTOL ⁽¹⁾	RETOL ⁽²⁾	BW	IC07	IC507	a _p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMA 840	8.00	4.00	0.05	0.050	5.60	●	●	0.00-4.00	0.24-0.67	0.14-0.38

• For heavy-duty machining • DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 419-428, 432-436

⁽¹⁾ Cutting width tolerance (+/-)

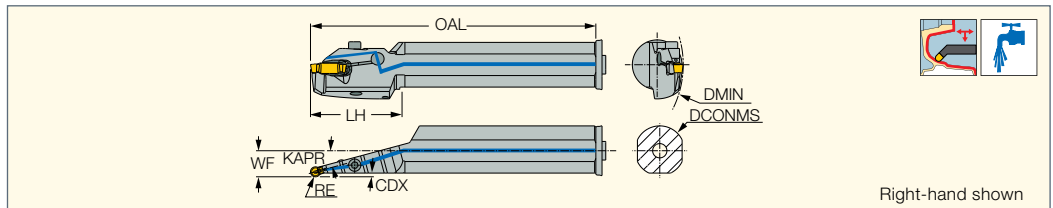
⁽²⁾ Corner radius tolerance (+/-)

For tools, see pages: GADR/L-8 (286) • GADR/L-JHP (287) • GAFG-R/L-8 (580) • GHDKR/L (446) • GHIFR/L-A (445) • GHIR/L (W=7.0-8.3) (355)

• GHIUR/L-C-A (15° & 27.5°) Bars (444) • GHIUR/L-UC (444)

FIXGRIP

FSHIUR
10° / 15° Approach Angle
Bars for Facing and Internal
Profiling of Aluminum



Right-hand shown

Designation	CW	DCONMS	DMIN	OAL	LH	CDX ⁽¹⁾	WF	KAPR ⁽²⁾					
FSHIUR 40C-15A-6	6.00	40.00	160.00	320.00	68.0	2.20	21.00	15.0	SR M6X1-28509	HW 5.0	OR 5X1N	PU SEAL-28510	PL 40
FSHIUR 40C-10A-8	8.00	40.00	160.00	320.00	68.0	2.40	24.30	10.0	SR M6X1-28509	HW 5.0	OR 5X1N	PU SEAL-28510	PL 40
FSHIUR 40C-15A-8	8.00	40.00	160.00	320.00	68.0	3.00	21.00	15.0	SR M6X1-28509	HW 5.0	OR 5X1N	PU SEAL-28510	PL 40

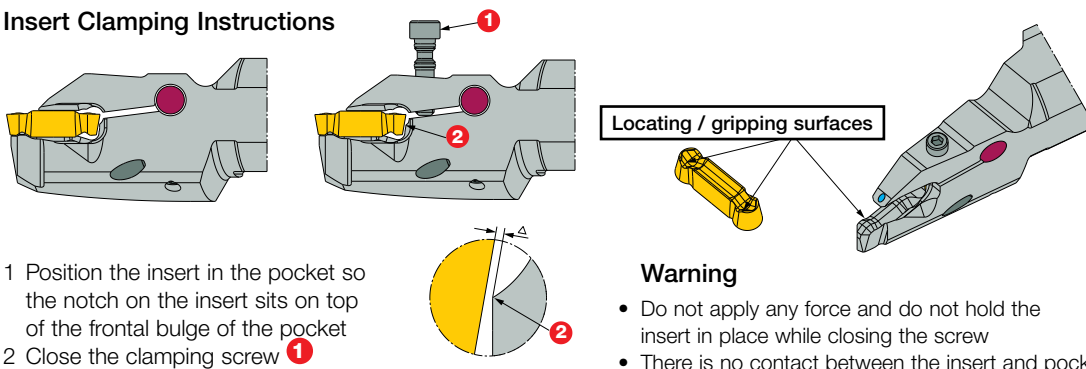
• Clamping torque for FSHIUR...-6: 9 Nxm, for FSHDR...-8: 10.5 Nxm

⁽¹⁾ Cutting depth maximum

⁽²⁾ Tool cutting edge angle

For inserts, see pages: FSPA/FSMA (449)

Insert Clamping Instructions



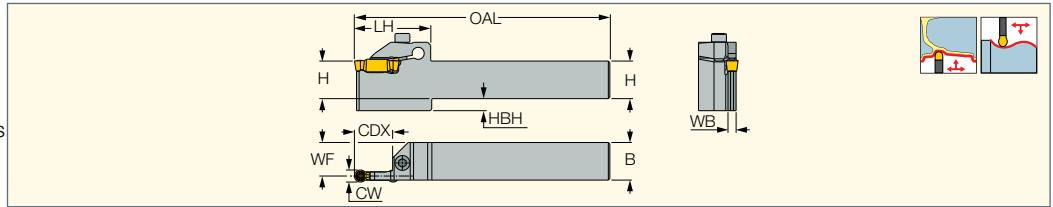
- 1 Position the insert in the pocket so the notch on the insert sits on top of the frontal bulge of the pocket
- 2 Close the clamping screw **1**



Warning

- Do not apply any force and do not hold the insert in place while closing the screw
- There is no contact between the insert and pocket rear wall **2**

FSHDR

Tools with a Very Strong Insert Grip for Interrupted Cuts and Back Turning of Aluminum Wheels



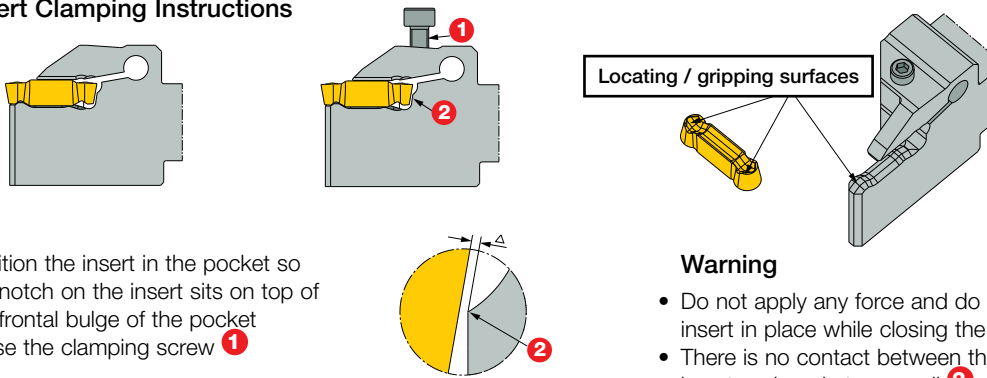
Designation	CW	CDX ⁽¹⁾	H	B	WF	WB	LH	HBH	OAL		
FSHDR 25-6	6.00	21.00	25.0	25.0	22.80	4.40	51.0	8.0	150.00	SR M5X20DIN912	HW 4.0
FSHDR 25-8	8.00	25.50	25.0	25.0	22.30	5.40	51.5	8.0	170.00	SR M6X25 DIN912	HW 5.0

• Clamping torque for FSHDR..-6: 7.5 Nxm, for FSHDR..-8: 10 Nxm

⁽¹⁾ Cutting depth maximum

For inserts, see pages: FSPA/FSMA (449)

Insert Clamping Instructions



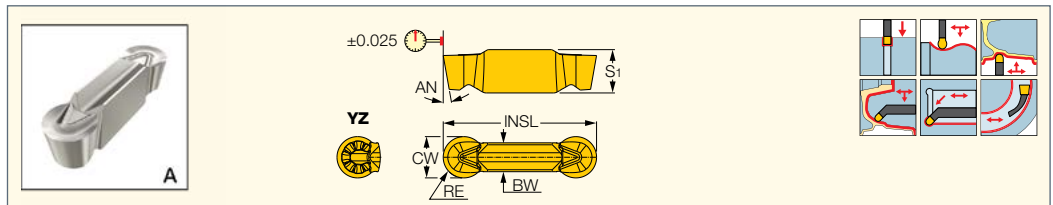
- 1 Position the insert in the pocket so the notch on the insert sits on top of the frontal bulge of the pocket
- 2 Close the clamping screw

Warning

- Do not apply any force and do not hold the insert in place while closing the screw.
- There is no contact between the insert and pocket rear wall

FSPA/FSMA

Full Radius Precision Inserts for Machining Aluminum at Medium to High Feeds



Designation	Dimensions							Tough ↔ Hard			Recommended Machining Data	
	CW	CWTOL ⁽²⁾	RE	S1	BW	INSL	AN	IC20	IC07	ID5	a _p (mm)	f _{turn} (mm/rev)
								•	•	•		
FSPA 6.00-3.00	6.00	0.02	3.00	7.50	4.60	25.00	9.0	•			0.05-3.00	0.30-0.55
FSPA 6.00-3.00YZ	6.00	0.02	3.00	7.50	4.60	25.00	9.0	•			0.05-3.00	0.30-0.55
FSPA 6.00-3.00YZ-D	6.00	0.02	3.00	7.50	4.60	25.00	9.0			•	0.05-3.00	0.30-0.55
FSPA 80-40	8.00	0.02	4.00	8.40	5.60	29.70	10.0	•			0.05-4.00	0.40-0.72
FSPA 80-40-D	8.00	0.02	4.00	8.40	5.60	29.70	10.0			•	0.05-4.00	0.40-0.72
FSPA 80-40YZ	8.00	0.02	4.00	8.40	5.60	29.70	10.0	•			0.05-4.00	0.40-0.72
FSPA 80-40YZ-D	8.00	0.02	4.00	8.40	5.60	29.70	10.0			•	0.05-4.00	0.40-0.72
FSMA 80-40⁽¹⁾	8.00	0.04	4.00	8.40	5.60	29.70	10.0		•		0.05-4.00	0.40-0.72

⁽¹⁾ Utility insert

⁽²⁾ Cutting width tolerance (+/-)

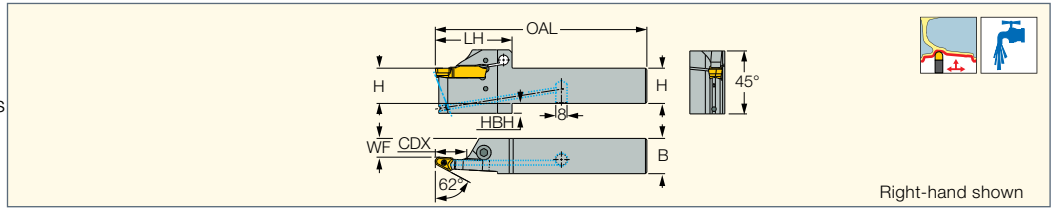
For tools, see pages: DTF50 FSHDR-8 (451) • DTF50 FSHIUR (451) • FSHDR (449) • FSHIUR (448)



FIXGRIP

FGHDUR

Tools for Interrupted Cuts and Back Turning of Aluminum Wheels



Right-hand shown

Designation	CDX ⁽¹⁾	H	B	OAL	WF	LH	HBH		
FGHDUR 25C-3A-10S	22.30	25.0	25.0	150.00	13.30	54.4	7.0	SR M6X25 DIN912	HW 5.0

• Upper jaw with hard coating to sustain chip deflection • For mounting and removing the inserts, see page 419

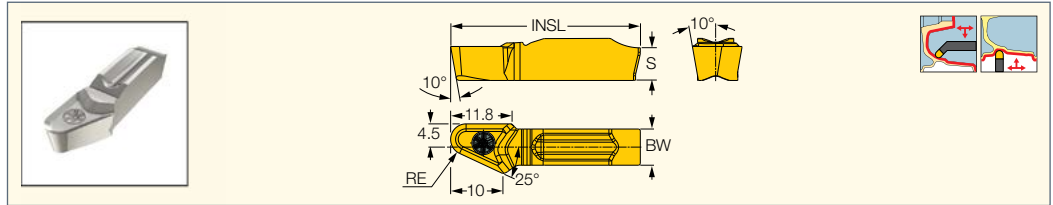
⁽¹⁾ Cutting depth maximum

For inserts, see pages: FGPAM (450)

FIXGRIP

FGPAM

V-Shaped Inserts for Machining Aluminum Wheels

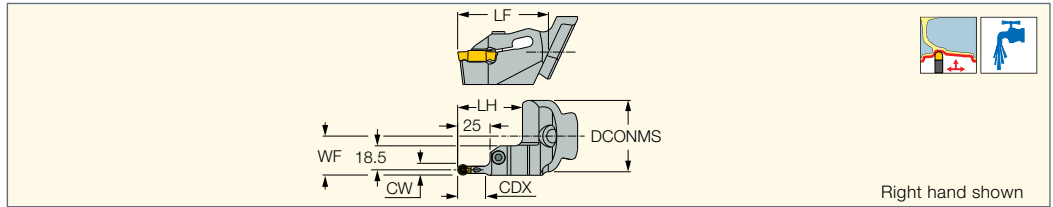


Designation	Dimensions					IC20	Recommended Machining Data	
	RE	BW	S	INSL	a _p (mm)		f turn (mm/rev)	
FGPAM 10S-3R-25A	3.00	7.00	8.20	36.50	•	0.05-12.00	0.40-0.72	

For tools, see pages: FGHDUR (450)



DTF50 FSHDR-8
CUT GRIP Heads with DOVE-TAIL Connection for External Turning of Aluminum Wheels



Designation	CW	CDX	LH	WF	LF	DCONMS	Insert
DTF50 FSHDR-8	8.00	21.50	50.0	30.00	70.00	55.00	FSPA 8...

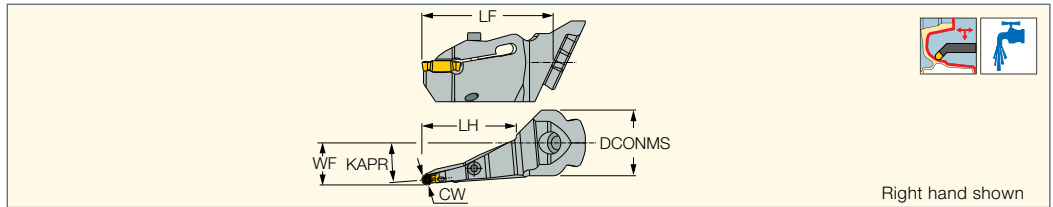
For inserts, see pages: FSPA/FSMA (449)

For holders, see pages: VDI-DTF50E-L60R (453)

Spare Parts

Designation		
DTF50 FSHDR-8	SR M6X25DIN912	HW 5.0X120 MM

DTF50 FSHIUR
CUT GRIP Heads for Internal Profiling, Undercutting and Facing of Aluminum Wheels






Designation	DMIN	CW	KAPR ⁽¹⁾	LH	WF	LF	DCONMS	Insert
DTF50 FSHIUR-5A-8	250.00	8.00	5.0	72.0	32.00	100.00	50.00	FSPA 8...
DTF50 FSHIUR-8A-8	250.00	8.00	8.0	72.0	32.00	100.00	50.00	FSPA 8...
DTF50 FSHIUR-15A-8	250.00	8.00	15.0	80.0	36.00	100.00	50.00	FSPA 8...
DTF50 FSHIUR-22.5A-8	250.00	8.00	22.5	50.0	36.00	70.00	50.00	FSPA 8...
DTF50 FSHIUR-27.5A-8	250.00	8.00	27.5	60.0	40.00	80.00	50.00	FSPA 8...
DTF50 FSHIUR-45A-8	250.00	8.00	45.0	-	55.00	70.00	50.00	FSPA 8...
DTF50 FSHIUR-67.5A-8	250.00	8.00	67.5	-	60.00	70.00	50.00	FSPA 8...
DTF50 FSHIUR-80A-8	250.00	8.00	80.0	-	60.00	70.00	50.00	FSPA 8...

(1) Tool cutting edge angle

For inserts, see pages: FSPA/FSMA (449)

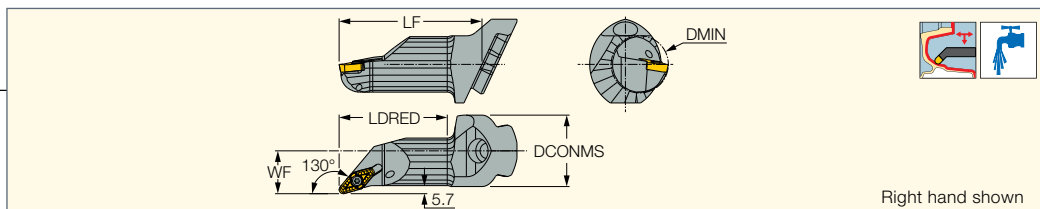
For holders, see pages: VDI-DTF50 (453)

Spare Parts

Designation			
DTF50 FSHIUR-5A-8	SR M6X25DIN912	SR M5X6 DIN913	HW 5.0X120 MM
DTF50 FSHIUR-8A-8	SR M6X25DIN912	SR M6X6 DIN913	HW 5.0X120 MM
DTF50 FSHIUR-15A-8	SR M6X25DIN912	SR M6X6 DIN913	HW 5.0X120 MM
DTF50 FSHIUR-22.5A-8	SR M6X25DIN912		HW 5.0X120 MM
DTF50 FSHIUR-27.5A-8	SR M6X25DIN912		HW 5.0X120 MM
DTF50 FSHIUR-45A-8	SR M6X25DIN912		HW 5.0X120 MM
DTF50 FSHIUR-67.5A-8	SR M6X25DIN912	SR M5X6 DIN913	HW 5.0X120 MM
DTF50 FSHIUR-80A-8	SR M6X25DIN912		HW 5.0X120 MM

ISOTURN



DTF50 SVXCR-22
 ISO Boring Heads with DOVE-TAIL
 Connection for VCGT 22 Inserts
 for Machining Aluminum Wheels



Designation	DMIN	WF	LF	LDRED	DCONMS	Insert
DTF50 SVXCR-22	40.00	30.00	100.00	76.0	50.00	VCGT 22...

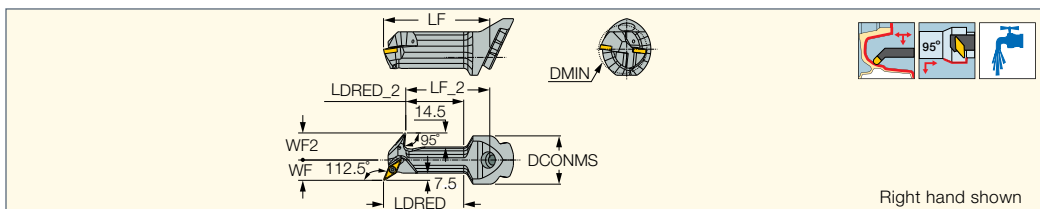
For inserts, see pages: VCGT-AF (212) • VCGT-AS (211) • VCGT-DW (PCD) (223)
 For holders, see pages: VDI-DTF50 (453)

Spare Parts

Designation		
DTF50 SVXCR-22	SR 16-212	T-20/5

ISOTURN



DTF50 SVXCR-16X2
 ISO Double Pocket Boring Heads
 with DOVE-TAIL Connection
 for VCGT 16 Inserts for
 Machining Aluminum Wheels



Designation	DMIN	WF	WF2	LF	LF_2	LDRED	LDRED_2	DCONMS	Insert
DTF50 SVXCR-16X2	50.00	21.00	28.0	110.00	87.00	83.0	60.0	50.00	VCGT 16...

For inserts, see pages: VCGT-AS (211) • VCGT-DW (PCD) (223)
 For holders, see pages: VDI-DTF50 (453)

Spare Parts

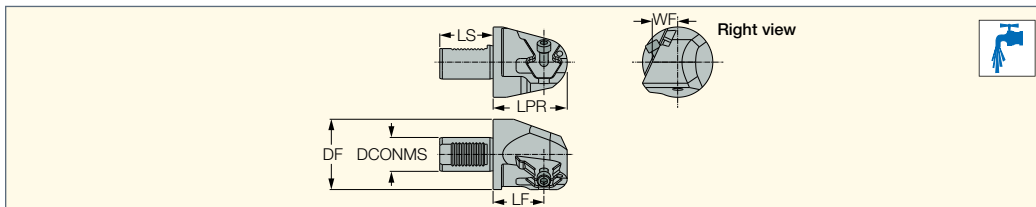
Designation			
DTF50 SVXCR-16X2	SR 16-236	T-15/5	SR M5X8 DIN913



VDI

VDI-DTF50E-L60R

QUICK-CHANGE Holder with a DOVE-TAIL Connection for External Turning of Aluminum Wheels with CUT GRIP Heads



Designation	WF	LF	LPR	LS	DF	DCONMS
VDI40-DTF50E-L60R	30.00	60.00	87.50	63.0	83.00	40.00
VDI50-DTF50E-L60R ⁽¹⁾	37.00	60.00	87.50	78.0	98.00	50.00

⁽¹⁾ on request

For tools, see pages: DTF50 FSHDR-8 (451)

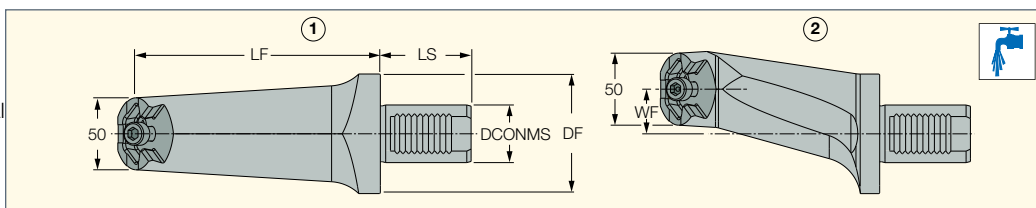
Spare Parts

Designation			
VDI-DTF50E-L60R	SR M10X45 DIN912	HW8 L208	OR 5X1N

VDI

VDI-DTF50

QUICK-CHANGE Holder with DOVE-TAIL Connection for Internal Turning of Aluminum Wheels with CUT-GRIP and ISO-TURN Heads



Designation	WF	LF	LS	DF	DCONMS	Fig.
VDI40-DTF50F31L140R	31.00	140.00	63.0	83.00	40.00	2
VDI40-DTF50L110	0.00	110.00	63.0	83.00	40.00	1
VDI40-DTF50L140	0.00	140.00	63.0	83.00	40.00	1
VDI40-DTF50L170	0.00	170.00	63.0	83.00	40.00	1
VDI50-DTF50F31L140R ⁽¹⁾	31.00	140.00	78.0	98.00	50.00	2
VDI50-DTF50L110 ⁽¹⁾	0.00	110.00	78.0	98.00	50.00	1
VDI50-DTF50L140 ⁽¹⁾	0.00	140.00	78.0	98.00	50.00	1
VDI50-DTF50L170 ⁽¹⁾	0.00	170.00	78.0	98.00	50.00	1

⁽¹⁾ on request

For tools, see pages: DTF50 FSHIUR (451) • DTF50 SVXCR-16X2 (452) • DTF50 SVXCR-22 (452)

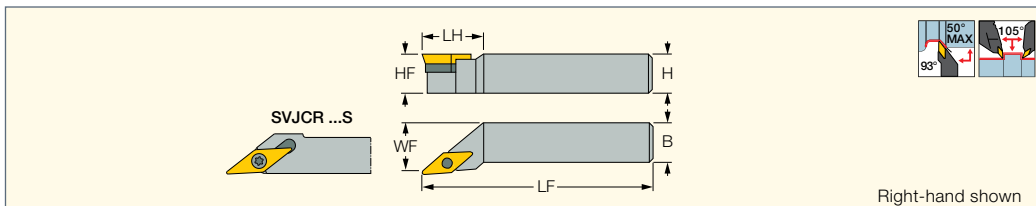
Spare Parts

Designation		
VDI-DTF50	SR M10X45 DIN912	HW8 L208

ISOTURN

SVJCR/L

93° Lead Angle Screw Lock Tools Carrying the 35° Diamond Inserts with 7° Clearance Angle



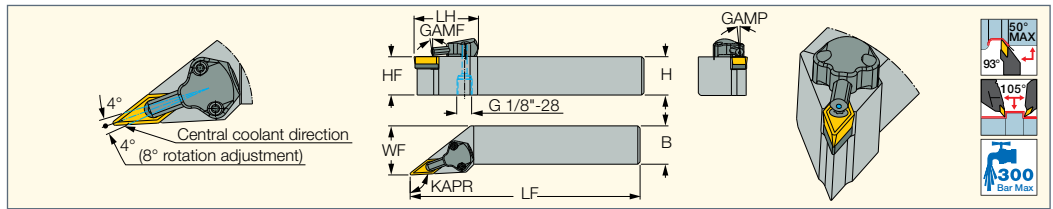
Designation	H	HF	B	LF	LH	WF	GAMP	GAMF	Insert					
SVJCR/L 0808K-11S ⁽¹⁾	8.0	8.0	8.0	125.00	11.5	8.20	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 1010K-11S ⁽¹⁾	10.0	10.0	10.0	125.00	22.0	10.20	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 1212K-11S ⁽¹⁾	12.0	12.0	12.0	125.00	-	12.20	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 1616K-11	16.0	16.0	16.0	125.00	25.0	20.00	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 2020K-11	20.0	20.0	20.0	125.00	30.0	25.00	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 2525M-11	25.0	25.0	25.0	150.00	30.0	32.00	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVJCR/L 2020K-16	20.0	20.0	20.0	125.00	30.0	25.00	0.0	0.0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5
SVJCR/L 2525M-16	25.0	25.0	25.0	150.00	30.0	32.00	0.0	0.0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5

⁽¹⁾ For Swiss-type machines

For inserts, see pages: VCGT-F1M-20P (196) • VCMT-FPC-CERMET (196) • VCMT-F3P (195) • VCGW-2 (CBN) (232) • VCMT-F3M (195) • VCMT-M3M (196) • VCMT-SM (197) • VCET-WF (197) • VCGT-AS (211) • VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223)

ISOTURN JETCUT

SVJCR/L-16-JHP
Screw Lock Tools with Channels
for High Pressure Coolant
Carrying 35° Rhombic Inserts
with 7° Clearance Angle



Designation	H	B	HF	LF	LH	WF	KAPR ⁽¹⁾	GAMP	GAMF	Insert
SVJCR/L 2525M-16-JHP	25.0	25.0	25.0	150.00	42.0	32.00	93.0	0.0	0.0	VCMT 1604

• For user guide, see pages 78-84

⁽¹⁾ Tool cutting edge angle

For inserts, see pages: VCMT-FPC-CERMET (196) • VCMT-F3P (195) • VCGW-2 (CBN) (232) • VCMT-F3M (195) • VCMT-M3M (196) • VCMT-SM (197) • VCGT-AS (211)

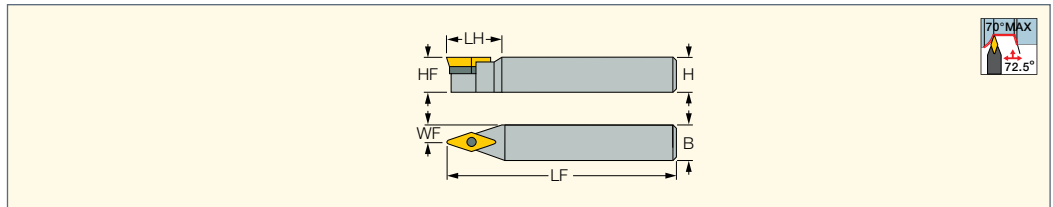
• VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223)

Spare Parts

Designation							
SVJCR/L 2525M-16-JHP	TVC 3-1	SR TC-3	SR 16-236 P	CU-V-JHP	T-15/5	HW 2.5	T-8/5

ISOTURN

SVVCN
72.5° Lead Angle Screw Lock
Tools Carrying the 35° Diamond
Inserts with 7° Clearance Angle



Designation	H	HF	B	LF	LH	WF	GAMP	GAMF	Insert					
SVVCN 0808K-11S ⁽¹⁾	8.0	8.0	8.0	125.00	-	4.30	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVVCN 1010K-11S ⁽¹⁾	10.0	10.0	10.0	125.00	-	5.30	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVVCN 1212K-11S ⁽¹⁾	12.0	12.0	12.0	125.00	-	6.30	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVVCN 1616K-11S ⁽¹⁾	16.0	16.0	16.0	125.00	-	8.30	0.0	0.0	VC..1103	SR 14-560	T-8/5			
SVVCN 2020K-16	20.0	20.0	20.0	125.00	34.0	10.00	0.0	0.0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5
SVVCN 2525M-16	25.0	25.0	25.0	150.00	38.1	12.50	0.0	0.0	VC..1604	SR 16-236 P	T-15/5	TVC 3-1	SR TC-3	HW 2.5

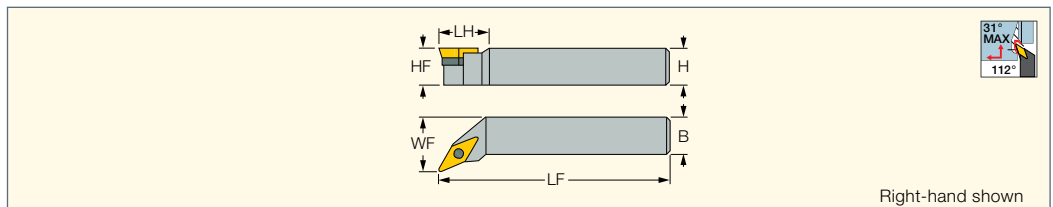
⁽¹⁾ For Swiss-type machines

For inserts, see pages: • VCGT-F1M-20P (196) • VCMT-FPC-CERMET (196) • VCMT-F3P (195) • VCGW-2 (CBN) (232) • VCMT-F3M (195) • VCMT-M3M (196)

• VCMT-SM (197) • VCGT-AS (211) • VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223)

ISOTURN

SVXCR/L
112° Lead Angle Screw Lock
Tools Carrying the 35° Diamond
Inserts with 7° Clearance Angle



Designation	H	HF	B	LF	LH	WF	GAMP	GAMF	Insert					
SVXCR/L 2020K-16	20.0	20.0	20.0	125.00	25.0	25.00	0.0	0.0	VC..1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5
SVXCR/L 2525M-16	25.0	25.0	25.0	150.00	30.0	32.00	0.0	0.0	VC..1604	TVC 3-1	SR TC-3	HW 2.5	SR 16-236 P	T-15/5

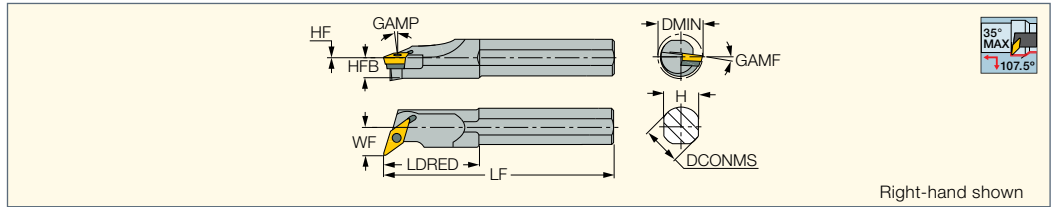
For inserts, see pages: VCMT-FPC-CERMET (196) • VCMT-F3P (195) • VCGW-2 (CBN) (232) • VCMT-F3M (195) • VCMT-M3M (196) • VCMT-SM (197) • VCGT-AS (211)

• VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223)

ISOTURN

A/S-SVQCR/L

Screw Lock Boring Bars
Carrying the 35° Rhombic
Inserts with 7° Clearance



Right-hand shown

Designation	DCONMS	LF	LDRED	H	HFB	WF	HF	DMIN	GAMP	GAMF	CSP ⁽¹⁾	Insert
S25S SVQCR/L-16	25.00	250.00	61.0	23.0	12.0	17.00	0.5	32.00	0.0	-5.0	0	VC.. 1604
S32T SVQCR/L-16	32.00	300.00	70.0	30.0	15.0	22.00	0.0	40.00	0.0	-5.0	0	VC.. 1604
A40U SVQCR/L-22	40.00	350.00	64.0	36.0	18.0	27.00	0.0	47.50	0.0	-8.0	1	VCGT 2205

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

For inserts, see pages: VCMT-FPC-CERMET (196) • VCMT-F3P (195) • VCGW-2 (CBN) (232) • VCMT-F3M (195) • VCMT-M3M (196) • VCMT-SM (197) • VCGT-AS (211) • VCGT-AF (212) • VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223)

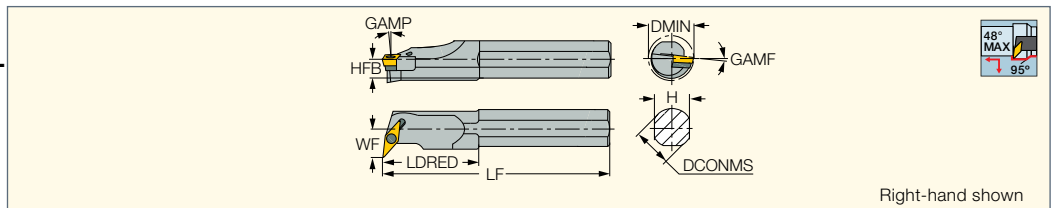
Spare Parts

Designation						
S25S SVQCR/L-16	SR 16-236 P	T-15/5				
S32T SVQCR/L-16	SR 16-236 P	T-15/5	TVC 3-1P	SR TC-3P	HW 4.0	
A40U SVQCR/L-22	SR 14-536	T-20/5	TVC 22T330	SR TC-3	HW 2.5	PL 40

ISOTURN

A/S-SVLFCR/L; A-SVUCR/L

Screw Lock Boring Bars
Carrying the 35° Rhombic
Inserts with 7° Clearance



Right-hand shown

Designation	DCONMS	LF	LDRED	H	HFB	WF	DMIN	GAMP	GAMF	CSP ⁽²⁾	Insert
A32T SVUCR/L-16 ⁽¹⁾	32.00	300.00	50.0	29.0	14.5	22.00	40.00	0.0	-8.0	1	VC.. 1604
S32T SVLFCR/L-16	32.00	300.00	56.0	29.0	14.5	22.00	39.50	0.0	-8.0	0	VC.. 1604
S40U SVLFCR/L-16	40.00	350.00	-	36.0	18.0	27.00	49.00	0.0	-5.0	0	VC.. 1604
A40U SVLFCR/L-22	40.00	350.00	70.0	36.0	18.0	27.00	48.00	0.0	-8.0	1	VC.. 2205

(1) 93° approach angle

(2) 0 - Without coolant supply, 1 - With coolant supply

For inserts, see pages: VCMT-F3P (195) • VCMT-F3M (195) • VCMT-M3M (196) • VCMT-SM (197) • VCGT-AS (211) • VCGT-AF (212) • VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223) • VCMT-FPC-CERMET (196) • VCGW-2 (CBN) (232)

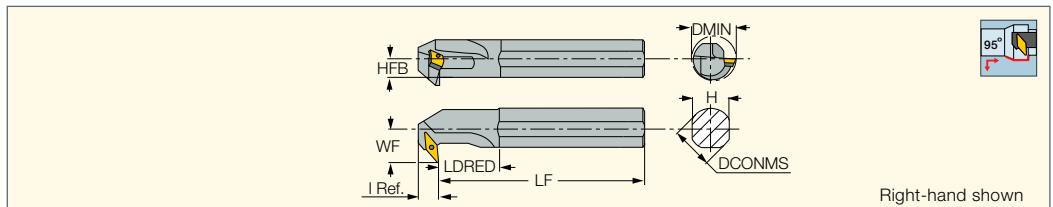
Spare Parts

Designation							
A32T SVUCR/L-16	TVC 3-1P	SR TC-3P	HW 1.5	HW 4.0	SR 16-236 P	PL 32	T-15/5
S32T SVLFCR/L-16	TVC 3-1P	SR TC-3P	HW 4.0		SR 16-236 P		T-15/5
S40U SVLFCR/L-16	TVC 3-1P	SR TC-3P	HW 4.0		SR 16-236 P		T-15/5
A40U SVLFCR/L-22	TVC 22T330	SR TC-3	HW 2.5		SR 14-536	PL 40	T-20/5

ISOTURN

A/S-SVLBCR/L

Screw Lock Back Boring Bars
Carrying the 35° Rhombic
Inserts with 7° Clearance



Right-hand shown

Designation	DCONMS	LF	LDRED	I Ref.	H	HFB	WF	DMIN	GAMP	GAMF	CSP ⁽¹⁾	Insert
A32T SVLBCR/L-16	32.00	300.00	76.5	18.50	29.0	14.5	27.50	40.00	0.0	-8.0	1	VC.. 1604
A32T SVLBCR-16	32.00	300.00	76.5	18.50	29.0	14.5	27.50	40.00	0.0	-8.0	0	VC.. 1604
S32T SVLBCR/L-16	32.00	300.00	63.2	18.50	29.0	14.5	22.00	40.00	0.0	-8.0	0	VC.. 1604
S40U SVLBCR/L-16	40.00	350.00	60.0	20.00	36.0	18.0	27.00	49.50	0.0	-5.0	0	VC.. 1604

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

For inserts, see pages: VCMT-FPC-CERMET (196) • VCMT-F3P (195) • VCGW-2 (CBN) (232) • VCMT-F3M (195) • VCMT-M3M (196) • VCMT-SM (197) • VCGT-AS (211) • VCMT-14 (198) • VCMW (198) • VCMT (CBN) (222) • VCGT (PCD) (223) • VCGT-DW (PCD) (223)

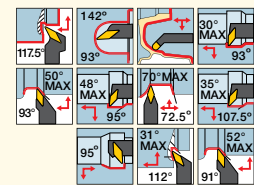
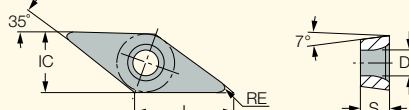
Spare Parts

Designation					
A/S-SVLBCR/L	TVC 3-1P	SR TC-3P	HW 4.0	SR 16-236 P	T-15/5

ISOTURN

VCGT-AS

35° Rhombic Inserts with a 7° Positive Flank, Very Positive Rake Angle and Sharp Cutting Edge for Machining Aluminum



Designation	Dimensions					Tough ↔ Hard		Recommended Machining Data	
	L	IC	S	RE	D1	IC920	IC20	ap (mm)	f (mm/rev)
VCGT 110302-AS	11.10	6.35	3.18	0.20	2.90	●	●	0.20-2.50	0.05-0.20
VCGT 110304-AS	11.10	6.35	3.18	0.40	2.90	●	●	0.50-3.00	0.05-0.25
VCGT 160401-AS	16.60	9.52	4.76	0.10	4.40	●	●	0.20-2.50	0.05-0.20
VCGT 160402-AS	16.60	9.52	4.76	0.20	4.40	●	●	0.50-2.50	0.05-0.25
VCGT 160404-AS	16.60	9.52	4.76	0.40	4.40	●	●	0.50-3.00	0.05-0.25
VCGT 160408-AS	16.60	9.52	4.76	0.80	4.40	●	●	0.50-3.00	0.10-0.25
VCGT 160412-AS	16.60	9.52	4.76	1.20	4.40	●	●	0.50-3.00	0.10-0.25
VCGT 220530-AS	22.10	12.70	5.56	3.00	5.50	●	●	1.50-4.50	0.15-0.30

• For user guide and cutting speed recommendations, see pages 122-134, 236-254

For tools, see pages: A/S-SVLBCR/L (114) • A/S-SVLCR/L; A-SVUCR/L (113) • A/S-SVQCR/L (113) • AVC-SVLCR/L-VH (98) • AVC-SVUCR/L (95) • C#-SVJCR/L (66)

• C#-SVJCR/L-JHP (66) • C#-SVCN (69) • DTF50 SVXCR-16X2 (452) • DTF50 SVXCR-22 (452) • HSK A63WH-SVJCR/L (67) • NQCH-SVACR/L-S-JHP (67)

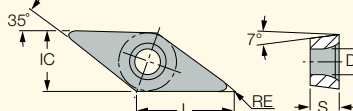
• NQCH-Y-SVJCR-S-JHP (65) • PVACR/L-JHP (68) • PVACR/L-S (64) • S/A-SVJCR/L (114) • SVACR/L (67) • SVJCR-PAD (67) • SVJCR/L (453) • SVJCR/L-16-JHP (454)

• SVPCR/L (69) • SVCN (454) • SVXCR/L (454) • Y-SVJCR (65) • Y-SVJCR-JHP (65) • AVC-SVLCR/L (96) • PVACR/L-JHP-MC (68)

ISOTURN

VCGT-AF

Inserts with a Very Positive Rake Angle and Sharp Cutting Edge for Semi-Finishing and Finishing on Aluminum



Designation	Dimensions					IC20	Recommended Machining Data	
	L	IC	S	RE	D1		ap (mm)	f (mm/rev)
VCGT 220508-AF	22.10	12.70	5.56	0.80	5.50	●	1.00-4.50	0.10-0.25
VCGT 220512-AF	22.10	12.70	5.56	1.20	5.50	●	1.00-4.50	0.10-0.30
VCGT 220516-AF	22.10	12.70	5.56	1.60	5.50	●	1.50-4.50	0.10-0.35

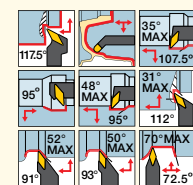
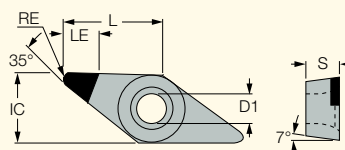
• For user guide and cutting speed recommendations, see pages 122-134, 236-254

For tools, see pages: A/S-SVLCR/L; A-SVUCR/L (113) • A/S-SVQCR/L (113) • DTF50 SVXCR-22 (452)

ISOTURN

VCGT-DW (PCD)

Inserts with 7° Clearance and a Single PCD Top Corner Tip Chipformer for Machining Aluminum



Designation	Dimensions					ID5	Recommended Machining Data	
	L	IC	S	RE	D1		ap (mm)	f (mm/rev)
VCGT 160404-DW	16.60	9.52	4.76	0.40	4.40	●	0.10-3.00	0.05-0.30
VCGT 160408-DW	16.60	9.52	4.76	0.80	4.40	●	0.10-3.00	0.05-0.30
VCGT 160412-DW	16.60	9.52	4.76	1.20	4.40	●	0.10-3.00	0.05-0.30
VCGT 220516-DW	22.10	12.70	5.56	1.60	5.50	●	0.10-3.00	0.05-0.30
VCGT 220520-DW	22.10	12.70	5.56	2.00	5.50	●	0.10-3.00	0.05-0.30
VCGT 220530-DW	22.10	12.70	5.56	3.00	5.50	●	0.10-3.00	0.05-0.30

• For user guide and cutting speed recommendations, see pages 122-134, 236-254

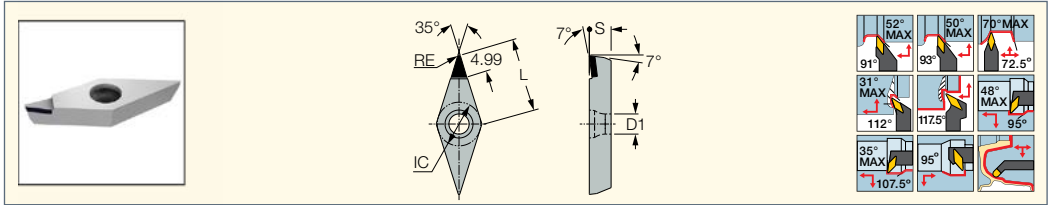
For tools, see pages: A/S-SVLBCR/L (114) • A/S-SVLCR/L; A-SVUCR/L (113) • A/S-SVQCR/L (113) • AVC-SVLCR/L-VH (98) • C#-SVJCR/L (66) • C#-SVJCR/L-JHP (66)

• C#-SVCN (69) • DTF50 SVXCR-16X2 (452) • DTF50 SVXCR-22 (452) • HSK A63WH-SVJCR/L (67) • SVJCR/L (453) • SVJCR/L-16-JHP (454) • SVCN (454)

• SVXCR/L (454) • AVC-SVLCR/L (96)

ISOTURN

VCGT (PCD)
35° Rhombic Single Brazed
Tip Corner Inserts for
Finishing Aluminum (PCD)

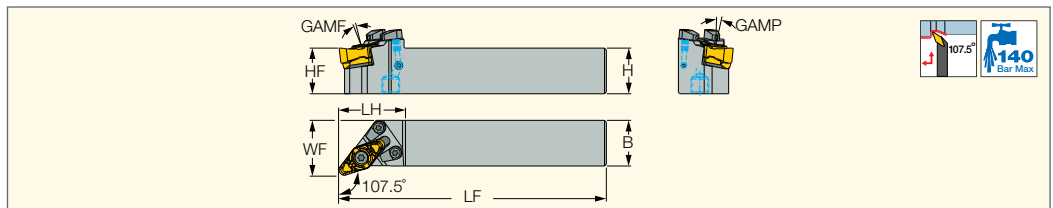


Designation	Dimensions						ID5	Recommended Machining Data	
	IC	S	RE	L	D1	a_p (mm)		f (mm/rev)	
VCGT 160404D	9.52	4.76	0.40	16.60	4.40	●	0.10-3.00	0.05-0.30	
VCGT 160408D	9.52	4.76	0.80	16.60	4.40	●	0.10-3.00	0.05-0.30	

- For user guide and cutting speed recommendations, see pages 122-134, 236-254
- For tools, see pages:** A/S-SVLBCR/L (114) • A/S-SVLFCR/L; A-SVUCR/L (113) • A/S-SVQCR/L (113) • AVC-SVLCR/L-VH (98) • C#-SVJCR/L (66) • C#-SVJCR/L-JHP (66) • C#-SVWCN (69) • HSK A63WH-SVJCR/L (67) • SVJCR/L (453) • SVJCR/L-16-JHP (454) • SVWCN (454) • SVXCR/L (454) • AVC-SVLCR/L (96)

ISOTURN JETCUT

SVHNR/L-AL-JHP
Screw Lock Tools with Channels
for High Pressure Coolant
Carrying 35° Rhombic Inserts



Designation	H	B	HF	LF	LH	WF	GAMP	GAMF	MIID ⁽¹⁾
SVHNR/L 2525M-22-AL-JHP	25.0	25.0	25.0	146.34	36.3	30.03	7.0	6.0	VNGU 220630-R3N

- For user guide, see pages 78-84
- ⁽¹⁾ Master insert identification
- For inserts, see pages:** VNGU-R3N (210)

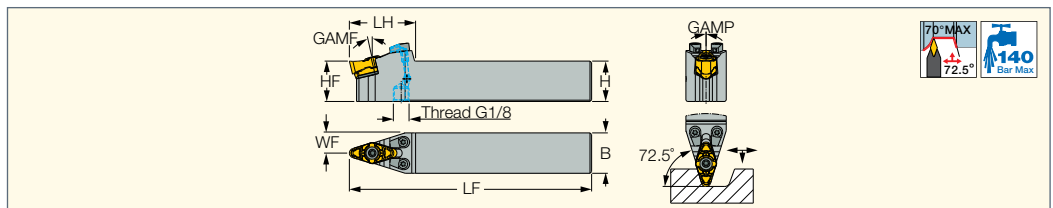
Spare Parts

Designation									
SVHNR/L 2525M-22-AL-JHP	TXV 2230 ^(a)	SR 14-591/L-SN	SW6-T-SH	BLD T20/S7	HW 3.0	SR TC-4	CH-1.9D-JHP-A SET	TXV 2212 ^{(b)*}	TXV 2216 ^{(c)*}

- * Optional, should be ordered separately
- ^(a) For VNGU 220630-R3N insert
- ^(b) For VNGU 220612-R3N insert
- ^(c) For VNGU 220616-R3N insert

ISOTURN JETCUT

SVVNN-AL-JHP
Screw Lock Tools with Channels
for High Pressure Coolant
Carrying 35° Rhombic Inserts



Designation	H	HF	B	LF	LH	WF	GAMP	GAMF	MIID ⁽¹⁾
SVVNN 2525M-22-AL-JHP	25.0	25.0	25.0	150.00	41.0	12.50	0.0	-13.5	VNGU 220630-R3N

- ⁽¹⁾ Master insert identification
- For inserts, see pages:** VNGU-R3N (210)

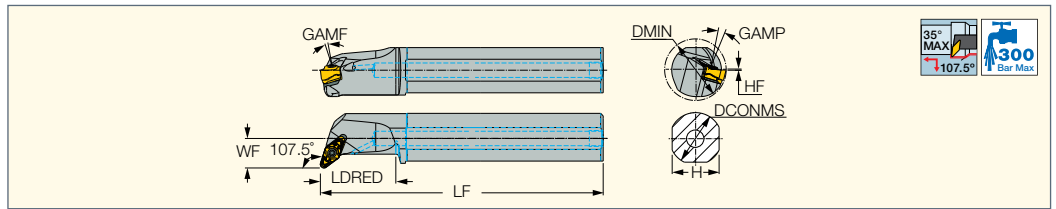
Spare Parts

Designation									
SVVNN 2525M-22-AL-JHP	TXV 2230 ^(a)	HW 3.0	BLD T20/S7	SW6-T-SH	SR TC-4	SR 14-591/L-SN	CH-1.9D-JHP-A SET	TXV 2212 ^{(b)*}	TXV 2216 ^{(c)*}

- * Optional, should be ordered separately
- ^(a) For VNGU 220630-R3N insert
- ^(b) For VNGU 220612-R3N insert
- ^(c) For VNGU 220616-R3N insert

ISOTURN

A-SVQNR/L-AL-JHP
Screw Lock Boring Bars Carrying the 35° Rhombic Inserts



Designation	DCONMS	LF	LDRED	H	HF	WF	DMIN	GAMP	GAMF	MIID ⁽¹⁾
A40U SVQNR/L-22-AL-JHP	40.00	348.10	60.0	36.0	0.1	23.40	49.00	14.5	6.5	VNGU 220630-R3N

⁽¹⁾ Master insert identification

For inserts, see pages: VNGU-R3N (210)

Spare Parts

Designation									
A40U SVQNR/L-22-AL-JHP	TVX 2230 ^(a)	SR 14-591/L-SN	HW 3.0	SW6-T-SH	BLD T20/S7	PL 40	SR TC-4	TVX 2212 ^{(b)*}	TVX 2216 ^{(c)*}

* Optional, should be ordered separately

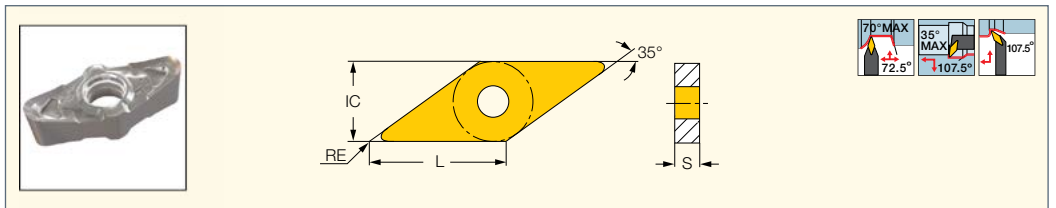
^(a) For VNGU 220630-R3N insert

^(b) For VNGU 220612-R3N insert

^(c) For VNGU 220616-R3N insert

ISOTURN

VNGU-R3N
Double-Sided Sharp-Edged Positive Rake Inserts for Rough Machining on Aluminum and Other Non-Ferrous Materials



Designation	Dimensions					IC20	Recommended Machining Data	
	L	IC	S	RE	a _p (mm)		f (mm/rev)	
VNGU 220612-R3N	22.00	12.70	6.77	1.20	●	1.00-4.50	0.10-0.30	
VNGU 220616-R3N	22.00	12.70	6.51	1.60	●	1.50-4.50	0.10-0.35	
VNGU 220630-R3N	22.00	12.70	6.35	3.00	●	1.50-4.50	0.15-0.40	

• For user guide and cutting speed recommendations, see pages 122-134, 236-254

For tools, see pages: A-SVLFNR-AL-JHP (108) • A-SVQNR/L-AL-JHP (108) • SVHNR/L-AL-JHP (34) • SVVNN-AL-JHP (34)

