GROOVE-TURN

Member IMC Group

CONTENTS

GROOVETURN

Information to Select the Correct Insert

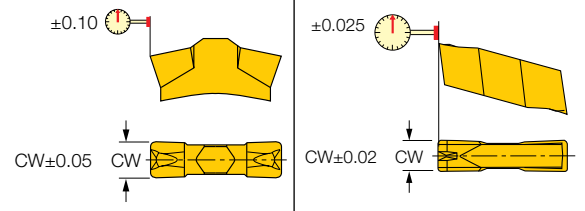
ISCAR has an extensive variety of GROOVE-TURN products. In many cases, you can perform your operation by using several different products. In order to make the optimal selection, these basic parameters need to be defined:

- 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 utillity insert (less expensive).

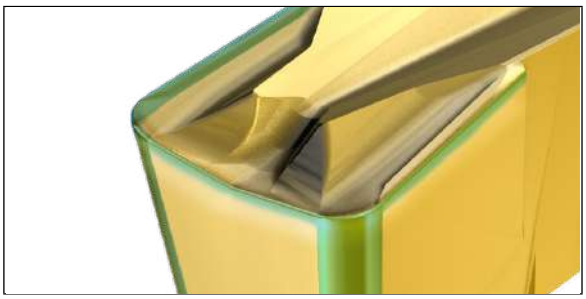
What is an E-type GROOVE-TURN Insert?

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	310-312
PENTACUT		PENTACUT Size 24	✔		5		0.5-4.23	1-6.5	320-324
PENTACUT		PENTACUT Size 34	✔		5		1.5-4.0	5-10	325-326
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	270-272
CUTGRIP		Short Pocket		✔	1	✔	3-12	No depth limit	288-292
CUTGRIP		Short Pocket	✔		2	✔*	0.5-11.0	13**	293-302
CUTGRIP		Long Pocket		✔	2	✔*	8.0	27	289-292
CUTGRIP		Long Pocket	✔		2	✔	8.0-11.0	27	293-299
HEAVY DUTY		SUMO-GRIP		✔	1	✔	6-14	No depth limit	344
HEAVY DUTY		TIGER		✔	1		10-20	No depth limit	330, 335

* Not on all the products

** On most items

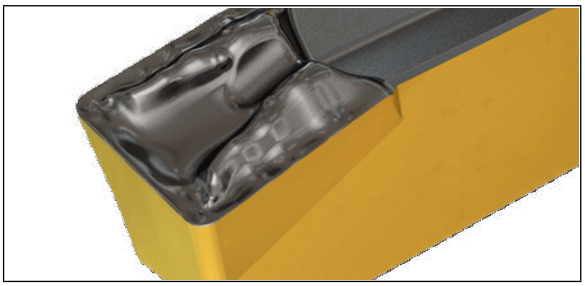
Internal GROOVE-TURN Insert Type

	Insert	Tool	Insert	Utility	Precision	Dmin	CDX	CW	Page
PICCOCUT		PICCO/ MG PCO	PICCO		✔	2.0-7.0	0.4-2.5	0.5-2	390-411
CHAMGROOVE		MG/MGCH	GIQR 8		✔	8.0	0.7-1.5	0.5-4	416
		MG/MGCH	GIQR 11		✔	11.0	1.5-2.3	0.75-5	417
		MGCH	GIQR 11-15		✔	15.0	6.3	1-3	418
CUTGRIP		GEHIR/L	GEPI/ GEMI	✔	✔	12.5-16	2.4-3.0	1-3.18	342-344
		GHIR/L	GIFI/GIPI/ GINI/GIMIY	✔	✔	20-49	2.5-8.0	1.53-6.35	345, 350-353
TOP-GRIP		TGIR/L	TGMF	✔		20.5-57	5.5-17.5	3-6.35	354, 272
HELIGRIP		HELIIR/L	GRIP	✔		26-53	5-12	3-6.35	356, 270
CUTGRIP		GHIR/L 40-8	GDMF/ GDMY/ GDMN...	✔	✔	65	15-20	8-11	356, 289-290
		GHIC/CGHN	GIP/GIF/GIMN/GIMF/ GIA...	✔	✔	70-250	10-26	2.8-6.35	356-359 293-301

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



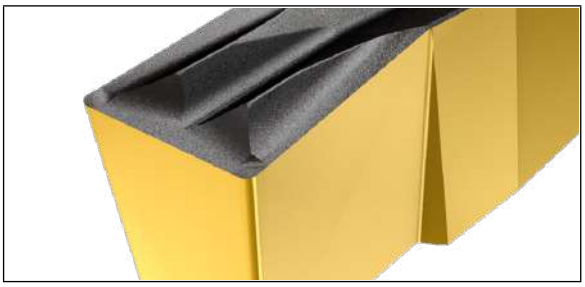
General Use

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

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



G-Type

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

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

HG-Y-Type

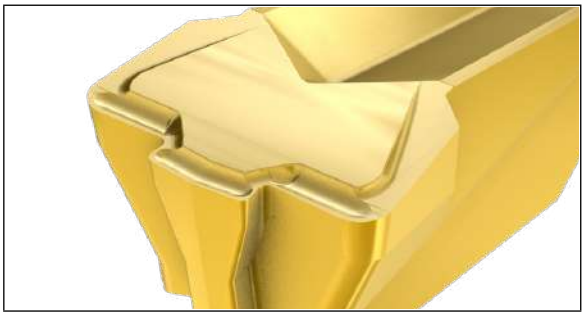
- General use in grooving and turning
- Efficient for a wide range of materials and cutting conditions
- Utility inserts only
- Width range External: 3-6.35 mm Internal: 3-6.35 mm

Chipbreaker Selection

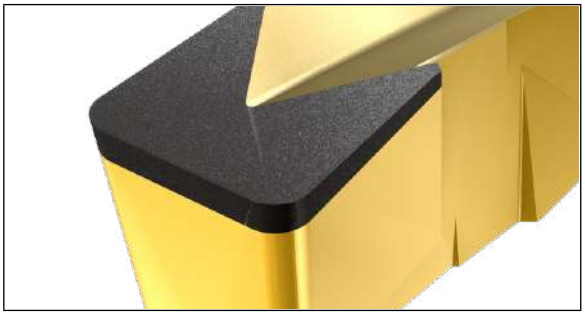
Problematic and Specific Materials

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

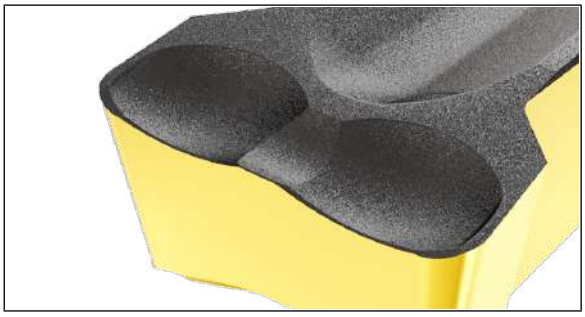


A-Type
- First choice for machining cast Iron
- Peripheral 15° T-land on a flat top
- Exerts high cutting forces, therefore suitable for stable conditions
- Precision ground inserts only
- Width range External: 3-8 mm



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

Internal

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

Suitable Chipbreaker and Required Feed Range for Workpiece Material

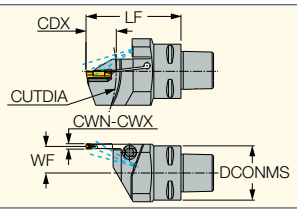
High ↑ Feed ↓ Low	Alloy Steel	Austenitic Stainless	High Temp. Alloys	Nonferrous Materials	Cast Iron
 P	P	P		
 HG-Y	HG-Y	Y	PA*	A*
 Y	Y	F	P	P
 F	F	PA (finish only)		HG
 T*	T*	T	T	
 N				F

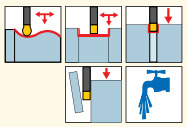
* First Choice

HELI-GRIP Tools and Inserts

HELI-GRIP CAMFIX

C#-HELIR/L
External Tools for Turning, Grooving and Parting with CAMFIX Exchangeable Shanks





Left-hand shown

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)

Inserts: GRIP • GRIP (full radius) • DGN/DGNC/DGNM-C • HGN-C • DGR/L-C DGRC/LC-C • DGN/DGNM-J/JS/JT • HGN-J • HGR/L-C • HGR/L-J/JS • DGR/L-J/JS • DGN-MF • DGN-UT/UA • DGN-W • HGN-UT

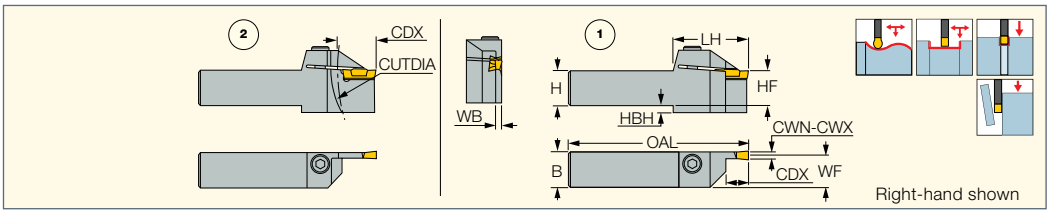
Grooving Depth Capacity

Designation	ØDmax																					
C4 HELIR/L 3T20	∞	∞	∞	∞	1151	384	231	167	131	109	94	83	—	—	—	—	—	—	—	—	—	—
C4 HELIR/L 4T25	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	1127	376	227	163	128	107	—	—	—	—	—
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	118	107	99
CDX	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

HELI-GRIP

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 440-457

[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

Inserts: GRIP • GRIP (full radius) • DGN/DGNC/DGNM-C • HGN-C • DGR/L-C DGRC/LC-C • DGN/DGNM-J/JS/JT • HGN-J • HGR/L-C • HGR/L-J/JS • DGR/L-J/JS • DGN-UT/UA • DGN-W • HGN-UT • DGN-MF

Spare Parts

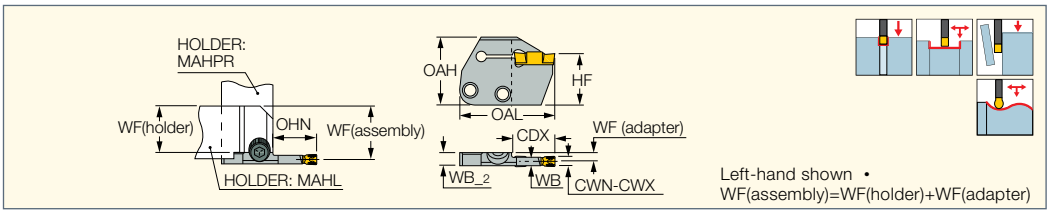
Designation		
HELIR/L 1212-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 1616-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2525-3T12	SR M5X16 DIN912	HW 4.0
HELIR/L 1616-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2020-4T12	SR M5X16 DIN912	HW 4.0
HELIR/L 2525-4T12	SR M5X16 DIN912	HW 4.0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

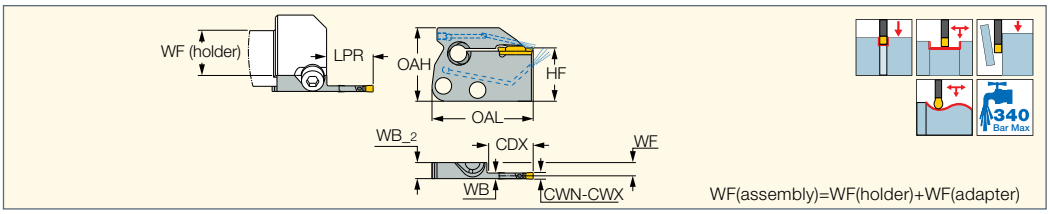


Designation	CWN(1)	CWX(2)	CDX(3)	OHN(4)	WF(5)	WB	WB_2	OAL	OAH	HF	Insert
HGPAD 3R/L-T12	3.00	3.20	12.00	15.2	4.80	2.50	6.0	39.70	32.0	24.0	GRIP 3, HGN 3
HGPAD 3R/L-T20	3.00	3.20	20.00	21.2	4.80	2.50	6.0	45.70	32.0	24.0	GRIP 3, HGN 3
HGPAD 4R/L-T12	4.00	4.76	12.00	18.7	4.40	3.30	6.0	43.20	32.0	24.0	GRIP 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 440-457
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
(4) Minimum overhang
(5) WF(adapter)
Inserts: GRIP • GRIP (full radius) • DGN/DGNC/DGNM-C • HGN-C • DGN/DGNM-J/JS/JT • HGN-J • HGR/L-C • HGR/L-J/JS • DGN-MF • DGN-UT/UA • DGN-W • HGN-UT

HELI-GRIP JET-CUT
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

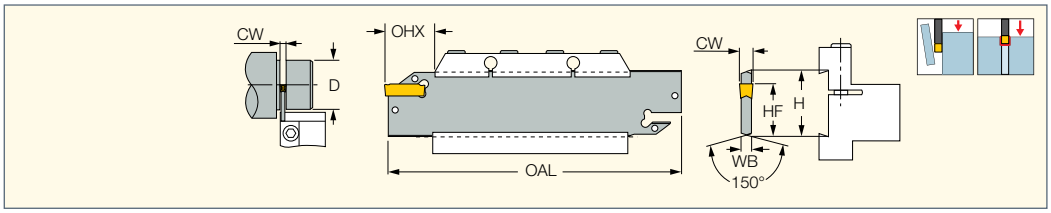
• For user guide and accessories, see pages 440-457
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
Inserts: DGN-MF • GRIP • GRIP (full radius) • DGN/DGNC/DGNM-C • HGN-C • DGN/DGNM-J/JS/JT • HGN-J • HGR/L-C • HGR/L-J/JS • DGN-UT/UA • HGN-UT • DGN-W
Holders: ABC MAHDR-#-XL-JHP • C#-MAHD-JHP • C#-MAHPD-JHP • MAHR/L-JHP-MC • MS##-##-MG-JHP • MS-ES#####-GWS-MG-JHP • TR TNK36 MAHDL-R-XL-JHP • TR45 MAHDR-#-XL-JHP • TR45TNL MAHDN-R-XL-JHP • V## MAHD#-#-XL-##-JHP • V## MAHD-XL-JHP • MAHPR/L-JHP • MAHR/L-JHP

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar 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

DO-GRIP TWISTED 2-SIDED HELI-GRIP

HGFH
Parting and Grooving Blades for 3 mm GRIP Inserts



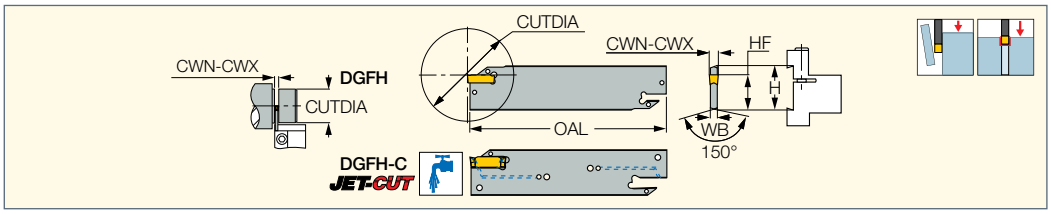
Designation	H	CW	WB	OAL	HF	OHX(1)	CUTDIA(2)	
HGFH 26-3	26.0	3.00	2.40	110.00	21.4	37.5	75.0	EDG 23B*
HGFH 32-3	32.0	3.00	2.40	150.00	24.8	50.0	100.0	EDG 23B*

(1) Maximum overhang
(2) Maximum parting diameter
* Optional, should be ordered separately
Inserts: GRIP • GRIP (full radius) • HGN-C • HGR/L-C • HGN-J • HGN-UT • HGR/L-J/JS
Holders: C#-TBK-R/L • HSK A-WH-TBK-R/L • SGTBF • SGTBR/L • SGTBU/SGTBN • UBHCR/L

DO-GRIP TWISTED 2-SIDED HELI-GRIP

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 [8]	DG. 1.../DG. 2...
DGFH 26-3 [1]	26.0	3.00 [6]	3.18	2.40	110.00	21.4	39.0 [8]	DG. 1.../DG. 3...
DGFH 26C-3 [2]	26.0	3.00	3.18	2.40	110.00	21.4	39.0 [8]	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 [8]	DG. 1.../DG. 2...
DGFH 32-3 [1]	32.0	3.00 [6]	3.18	2.40	150.00	24.8	39.0 [8]	DG. 1.../DG. 3...
DGFH 32C-3 [2]	32.0	3.00	3.18	2.40	150.00	24.8	39.0 [8]	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 440-457

[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) Minimum cutting width Maximum cutting width For DG. 1... insert, modify holder Thickness at the D.O.C. area is 1.0 mm Maximum diameter with double-sided inserts.

Inserts: DGN-LF/LFT • DGN-MF • DGN/DGNC/DGNM-C • DGR/L-C DGRC/LC-C • DGN/DGNM-J/JS/JT • DGR/L-J/JS • DGN-P • DGN-UT/UA • DGN-W • DGN-WP • DGN-Z • DGR-P • DGR-WP • DGR-Z/ZS • GRIP • GRIP (full radius)

Holders: C#-TBK-R/L • HSK A-WH-TBK-R/L • SGTBF • SGTBK • SGTBR/L • SGTBU/SGTBN • UBHCR/L

Spare Parts

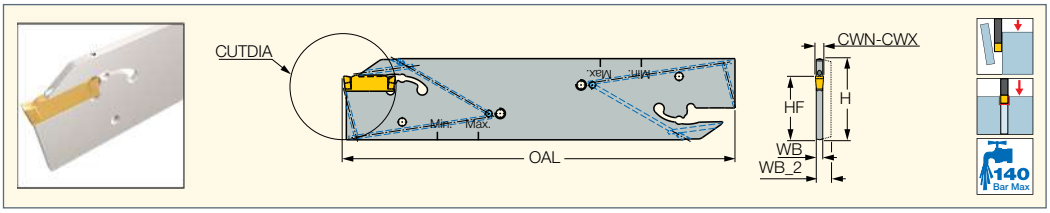
Designation						
DGFH 26-1.4	EDG 23B*					
DGFH 26-2	EDG 23A*					
DGFH 26-3	EDG 23A*					
DGFH 26C-3	EDG 23A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 26-4	EDG 23A*					
DGFH 32-1.4	EDG 23B*					
DGFH 32-2	EDG 33A*					
DGFH 32-3	EDG 33A*					
DGFH 32C-3	EDG 33A*	SGC 340	SGCU 341*	CGF 343*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

* Optional, should be ordered separately

DO-GRIP TWISTED 2-SIDED JET-CUT

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 440-457

[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

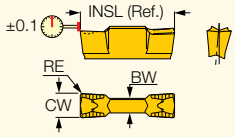
Inserts: DGN-LF/LFT • DGN-MF • DGN-P • DGN-UT/UA • DGN-W • DGN-WP • DGN-Z • DGN/DGNC/DGNM-C • DGN/DGNM-J/JS/JT • DGR-P • DGR-WP • DGR-Z/ZS • DGR/L-C DGRC/LC-C • DGR/L-J/JS • GRIP • GRIP (full radius)

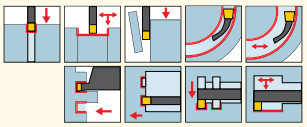
Holders: TGTBU-JHP

HELI-GRIP

GRIP

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





No depth penetration limit

Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	INSL	BW	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC806	IC807	IC804	Recommended Machining Data 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 440-457

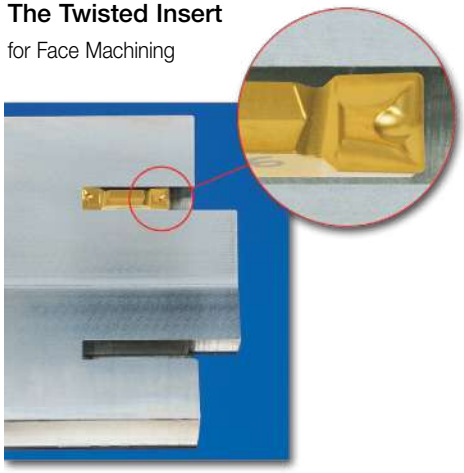
(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

Tools: C#-HELIR/L • C#-HFIR/L-MC • CR HFIR-M • D/HGAD RE/LE-JHP • DGAD/HGAD • DGFH • DGFH-JHP • DGFS • DGTR/L • HELIIR/L • HELIR/L • HFAER/L-4 • HFAER/L-5T, 6T • HFAIR/L-4 • HFAIR/L-DG • HFFR/L-T • HFHR/L-4T • HFHR/L-5T • HFIR/L-MC • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HFPAD-JHP • HGAER/L-3 • HGAIR/L-3 • HGFH • HGHR/L-3 • HGPAD • HGPAD-JHP • IM-HFIR-MC

The Twisted Insert

for Face Machining

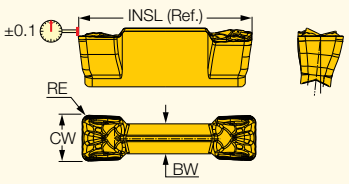


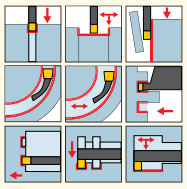
The double-ended, twisted insert body makes it possible to machine deeper than the insert's length.
A unique chipformer for controlled chip flow in axial and radial directions.
The rear angle is slanted in relation to the frontal edge so it does not come into contact with the machined groove surface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

HELI-GRIP

GRIP-T

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





Designation	Dimensions CW	CWTOL(1)	RE	RETOL(2)	INSL	BW	Tough ↔ Hard IC830	IC8250	IC808	IC806	IC807	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GRIP 3002T	3.00	0.050	0.20	0.050	15.80	2.30	●	●	●	●	●	0.25-1.80	0.14-0.18	0.07-0.11
GRIP 3003T	3.00	0.050	0.30	0.050	15.80	2.30	●	●	●	●	●	0.40-1.80	0.14-0.18	0.07-0.11
GRIP 4004T	4.00	0.050	0.40	0.050	19.00	2.80	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15
GRIP 5005T	5.00	0.050	0.50	0.050	19.00	3.40	●	●	●	●	●	0.60-3.00	0.20-0.30	0.11-0.20
GRIP 5008T	5.00	0.050	0.80	0.050	19.00	3.40	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21
GRIP 6008T	6.00	0.050	0.80	0.050	19.00	4.20	●	●		●	●	1.00-3.60	0.24-0.42	0.13-0.25

- For cutting speed recommendations and user guide, see pages 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

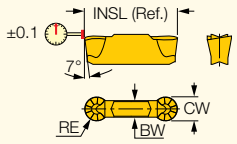
Tools: C#-HELIR/L • D/HGAD RE/LE-JHP • DGAD/HGAD • DGFH • DGFH-JHP • DGFS • DGTR/L • HELIIR/L • HELIR/L • HFAER/L-4 • HFAER/L-5T, 6T • HFAIR/L-4 • HFAIR/L-DG • HFFR/L-T • HFHR/L-4T • HFHR/L-5T • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HFPAD-JHP • HGAIR/L-3 • HGFH • HGPAD • HGPAD-JHP

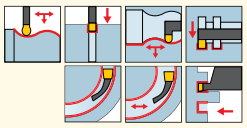
TOP-GRIP Tools and Inserts

HELIGRIP

GRIP (full radius)

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





No depth penetration limit

Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	INSL	BW	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC5010	IC806	IC807	IC804	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

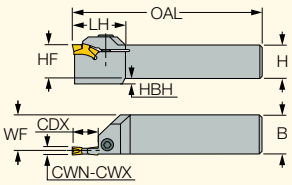
(2) Corner radius tolerance (+/-)

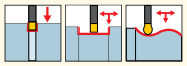
Tools: C#-HELIR/L • C#-HFIR/L-MC • CR HFIR-M • D/HGAD RE/LE-JHP • DGAD/HGAD • DGFH • DGFH-JHP • DGFS • DGTR/L • HELIIR/L • HELIR/L • HFAER/L-4 • HFAER/L-5T, 6T • HFAIR/L-4 • HFAIR/L-DG • HFFR/L-T • HFHR/L-4T • HFHR/L-5T • HFHR/L-6T • HFIR/L-MC • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HFPAD-JHP • HGAER/L-3 • HGAIR/L-3 • HGFH • HGHR/L-3 • HGPAD • HGPAD-JHP • IM-HFIR-MC

TOP-GRIP

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 440-457

(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 pages 448-449

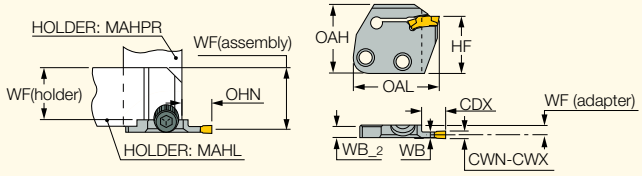
Inserts: TGMA • TGMF (full radius) • TGMF/P

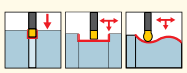
TOP-GRIP

MODULAR-GRIP

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	OHN(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 440-457

(1) Minimum cutting width

(2) Maximum cutting width

(3) Grooving depth is limited by the insert

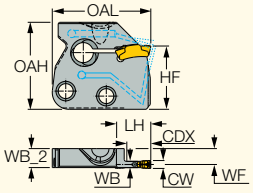
(4) WF(adapter)

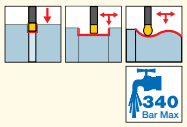
(5) Minimum overhang

Inserts: TGMA • TGMF (full radius) • TGMF/P

TOP-GRIP JETCUT
MODULAR-GRIP

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





Left-hand shown

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 440-457

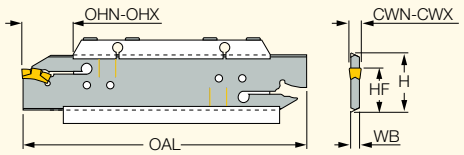
(1) Minimum cutting width
(2) Maximum cutting width
(3) Grooving depth is limited by the insert
Inserts: TGMF (full radius) • TGMF/P

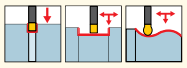
Flow Rate vs. Pressure

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





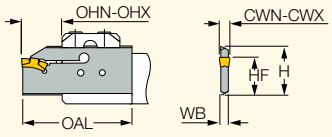
Designation	H	CWN(1)	CWX(2)	OHN(3)	OHX(4)	HF	OAL	WB	Insert
TGHN 26-3D	26.0	3.00	3.00	10.0	15.0	21.4	110.00	2.40	TGMF 3
TGHN 26-4D	26.0	4.00	5.00	10.0	15.0	21.4	110.00	3.20	TGMF 4, TGMF/P 5
TGHN 26-5D	26.0	5.00	5.00	10.0	20.0	21.4	110.00	4.00	TGMF/P 5
TGHN 32-3D	32.0	3.00	3.00	10.0	18.0	24.8	150.00	2.40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

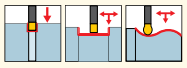
- Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert • For user guide, see pages 440-457

(1) Minimum cutting width
(2) Maximum cutting width
(3) Minimum overhang
(4) Maximum overhang
Inserts: TGMA • TGMF (full radius) • TGMF/P
Holders: SGTBU/SGTBN • UBHCR/L

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

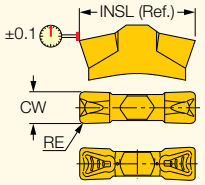
- Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert • For user guide, see pages 440-457

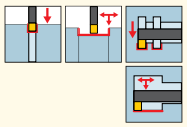
(1) Minimum cutting width
(2) Maximum cutting width
(3) Minimum overhang
(4) Maximum overhang
Inserts: TGMA • TGMF (full radius) • TGMF/P
Holders: C#-TBU • IM-TBU • UBHCR/L

TOP-GRIP

TGMF/P

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	INSL	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC20N	IC428	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

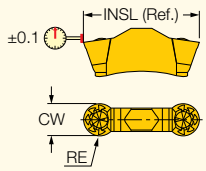
(3) Cutting depth maximum

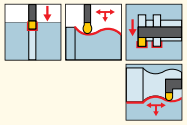
Tools: TGDR/L • TGHN 26-M • TGHN-D • TGHN-S • TGIR/L-C • TGPAD • TGPAD-JHP

TOP-GRIP

TGMF (full radius)

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	INSL	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC5010	IC428	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

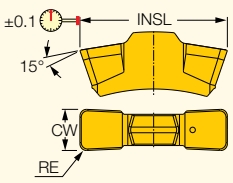
(3) Cutting depth maximum

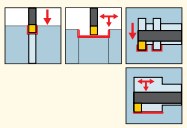
Tools: TGDR/L • TGHN 26-M • TGHN-D • TGHN-S • TGIR/L-C • TGPAD • TGPAD-JHP

TOP-GRIP

TGMA

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	INSL	CDX(3)	IC5010	Recommended Machining Data 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

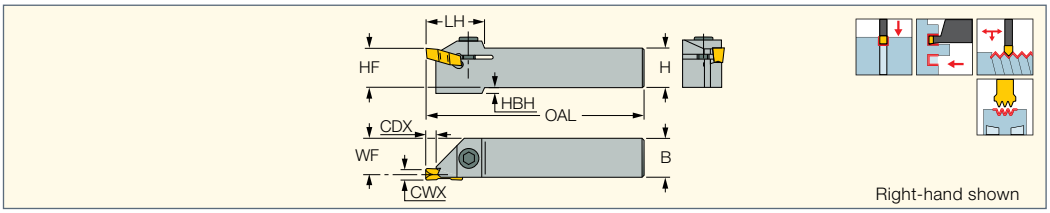
Tools: TGDR/L • TGHN 26-M • TGHN-D • TGHN-S • TGIR/L-C • TGPAD

CUT-GRIP Tools and Inserts

CUT-GRIP

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 440-457

(1) For Star and multi-spindle machines

(2) Maximum cutting width

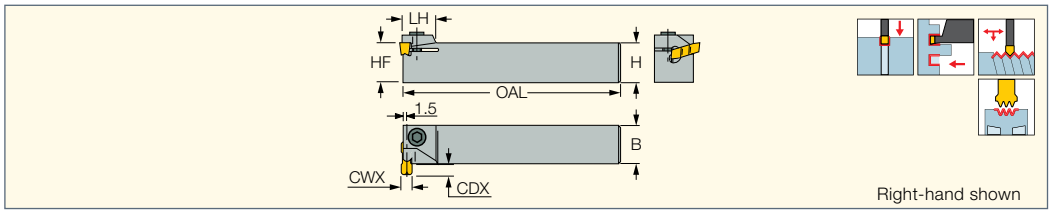
(3) Cutting depth maximum

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIG • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (flat top W<M) • GIP (full radius W<M) • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-RX/LX • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

CUT-GRIP

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 440-457

(1) Maximum cutting width

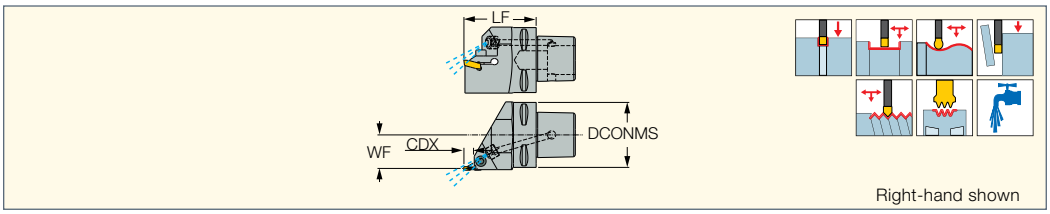
(2) Cutting depth maximum

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIG • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (flat top W<M) • GIP (full radius W<M) • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-RX/LX • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

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)

Inserts: GDMF • GDMM-CC • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GIA-K (long pocket) • GIA-K (W=3-6) • GIF • GIF (full radius) • GIF (long pocket) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPA/GIDA 8 (full radius) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

Spare Parts

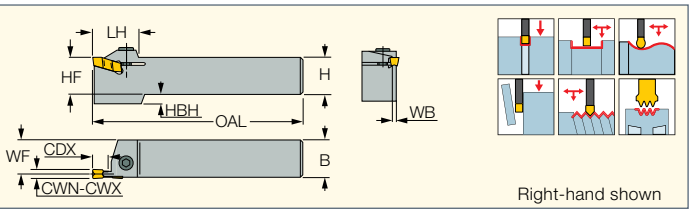
Designation			
C4 GHDR/L-3	SR M5X20DIN912	HW 4.0[a]	EZ 104
C5 GHDR/L-3	SR M5X20DIN912	HW 4.0[a]	EZ 104
C6 GHDR-3	SR M5X16 DIN912	HW 4.0[a]	EZ 125
C4 GHDR/L-4	SR M6X20 DIN912	HW 5.0[a]	EZ 104
C5 GHDR/L-4	SR M6X20 DIN912	HW 5.0[a]	EZ 104
C6 GHDR/L-4	SR M6X16 DIN912	HW 5.0[a]	EZ 125
C5 GHDR/L-5	SR M6X25 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 pages 448-449

Tools, Adapters and Blades (Short Pocket)

CUTGRIP

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 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 440-457

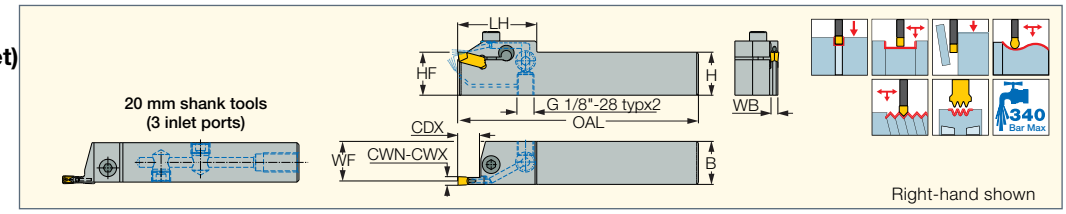
[1] For Star and multi-spindle machines.
[2] Used with GIMF, GIMY, GIPY, GIMM, GITM, GPV inserts.
[3] Used with GIMT, GIMN, GIMF, GIMY, GIPY, GIMM,GITM,GPV Inserts
[4] Minimum cutting width
[5] Maximum cutting width
[6] Cutting depth maximum
[a] For optional key with limited tightening torque see pages 448-449

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIG • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMM 8CC • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (flat top W<M) • GIP (full radius W<M) • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

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 440-457

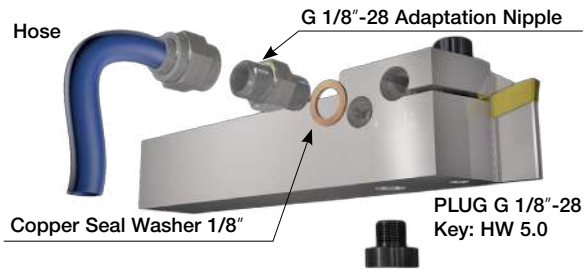
[1] Used with GIMF, GIMY, GIPY, GIMM, GITM, GPV, GIMY-F, GIMM 8CC,GIMT,GIMN,GITM (full radius), GIMY (full radius) inserts.
[2] Minimum cutting width
[3] Maximum cutting width
[4] Cutting depth maximum

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMM 8CC • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

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

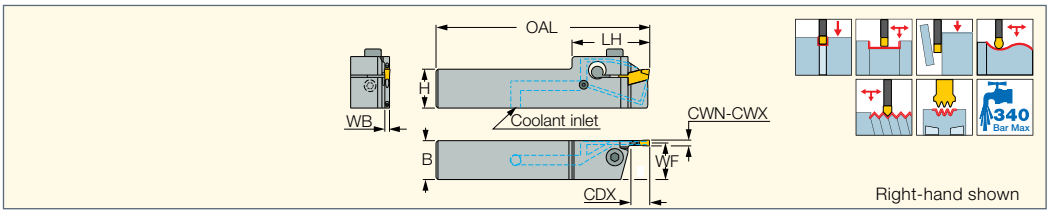
Designation				
GHDR/L 20-3-JHP	SR M5X16 DIN912	HW 4.0[a]	PLG G1/8 TL360	HW 5.0
GHDR/L 25-3-JHP	SR M5X20DIN912	HW 4.0[a]	PLG 1/8ISO1179	HW 5.0
GHDR/L 20-4-JHP	SR M6X16 DIN912		PLG G1/8 TL360	HW 5.0
GHDR/L 25-4-JHP	SR M6X20 DIN912		PLG 1/8ISO1179	HW 5.0
GHDR/L 25-5-JHP	SR M6X20 DIN912		PLG 1/8ISO1179	HW 5.0
GHDR/L 25-P8-JHP	SR M6X20 DIN912		PLG 1/8ISO1179	HW 5.0

[a] For optional key with limited tightening torque see pages 448-449

CUTGRIP JETCUT

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 440-457

(1) Minimum cutting width

(2) Maximum cutting width

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMM 8CC • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

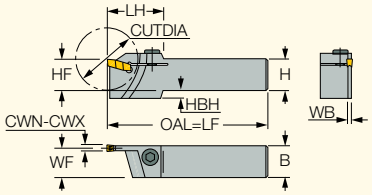
Spare Parts

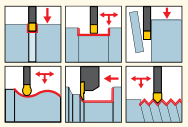
Designation		
GHDR/L 20-3-JHP-MC	SR M5X16 DIN912	HW 4.0
GHDR/L 25-3-JHP-MC	SR M5X20DIN912	HW 4.0
GHDR/L 20-4-JHP-MC	SR M6X20 DIN912	HW 5.0
GHDR/L 25-4-JHP-MC	SR M6X20 DIN912	HW 5.0
GHDR/L 25-5-JHP-MC	SR M6X20 DIN912	HW 5.0

CUTGRIP

GHGR/L

External Holders for Deep Grooving and Parting





Left-hand shown

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 440-457

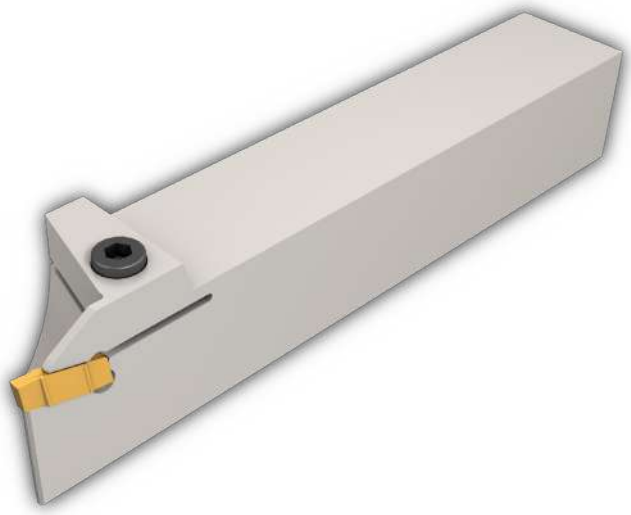
[1] In the case of inserts with CW<2 mm, tool pocket should be ground to 0.3 mm thinner than the insert's grooving width.
[2] For Star and multi-spindle machines.
[3] Minimum cutting width
[4] Maximum cutting width
[5] Maximum parting diameter
[a] For optional key with limited tightening torque see pages 448-449

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIG • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMM 8CC • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (flat top W<M) • GIP (full radius W<M) • GIP (full radius) • GIP-E • GIP-E (full radius) • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

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

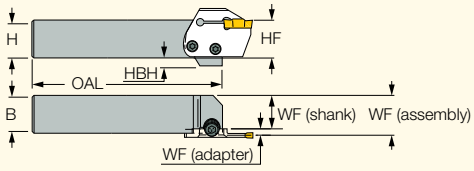
* For over 13 mm depth: GIM, GIMF,GIMT,GIMN and GIMY, GPV (single ended insert) only.



MODULAR-GRIP

MAHR/L

Adapter Holders for all GRIP Systems



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

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)

Tools: CGPAD • DGAD-B-D • DGAD/HGAD • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HGPAD • PCADR/L • SCLCR-PAD • SDJCR-PAD • SVJCR-PAD • SWAPR-PAD • TGAD • TGPAD

Spare Parts

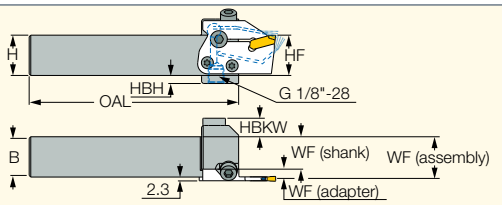
Designation						
MAHR/L	SR M5-04451	T-20/5	SR 14-519	SR M6X20-XT[a]	HW 5.0	SR M6X6DIN551 14H/22H

[a] For CGPAD, HGPAD, TGPAD and HFPAD adapters; supplied with the tools

MODULAR-GRIP
JETCUT

MAHR/L-JHP

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



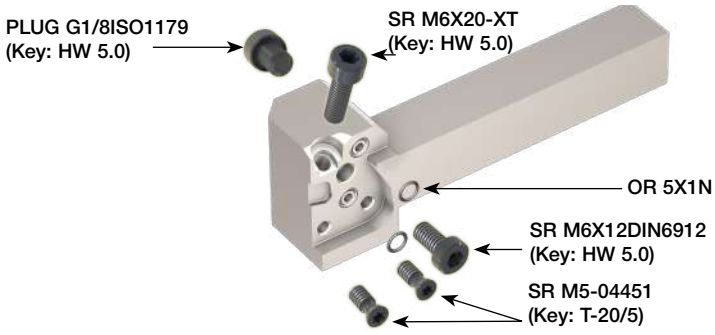
Left-hand shown •
WF(assembly)=WF(shank)+WF(adapter)

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 440-457

[1] WF(shank)

Tools: HFPAD-JHP • PCADRS/LS-JHP • TGPAD-JHP • CGPAD-JHP • DGPAD-JHP • TAGPAD-JHP • HGPAD-JHP • PCADR/L-JHP • CGPAD • DGAD-B-D • DGAD/HGAD • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HGPAD • PCADR/L • SCLCR-PAD • SDJCR-PAD • SVJCR-PAD • SWAPR-PAD • TGAD • TGPAD



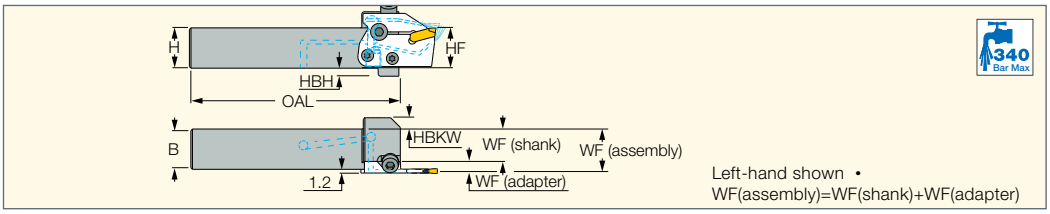
Spare Parts

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



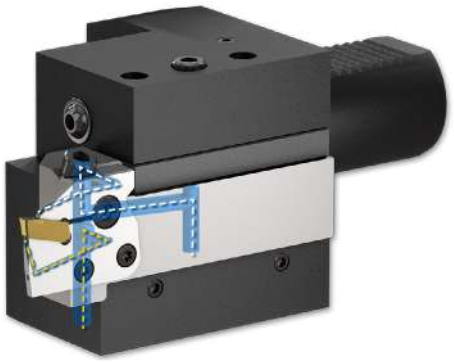
Left-hand shown •
WF(assembly)=WF(shank)+WF(adapter)

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)

Tools: HFPAD-JHP • PCADRS/LS-JHP • TGPAD-JHP • CGPAD-JHP • DGPAD-JHP • HGPAD-JHP • PCADR/L-JHP • TAGPAD-JHP • CGPAD • DGAD-B-D • DGAD/HGAD • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HGPAD • PCADR/L • SCLCR-PAD • SDJCR-PAD • SVJCR-PAD • SWAPR-PAD • TGAD • TGPAD



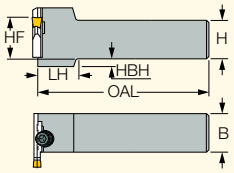
Spare Parts

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



Right-hand shown

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	-

Tools: CGPAD • DGAD-B-D • DGAD/HGAD • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HGPAD • PCADR/L • SCLCR-PAD • SDJCR-PAD • SVJCR-PAD • SWAPR-PAD • TGAD • TGPAD

Spare Parts

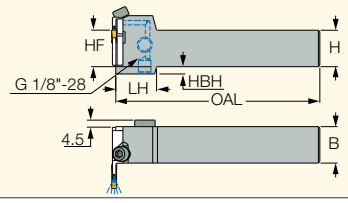
Designation						
MAHPR/L	SR M5-04451	T-20/5	SR 14-519	SR M6X20-XT[a]	HW 5.0	SR M6X6DIN551 14H/22H

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

MODULAR-GRIP
JETCUT

MAHPR/L-JHP

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

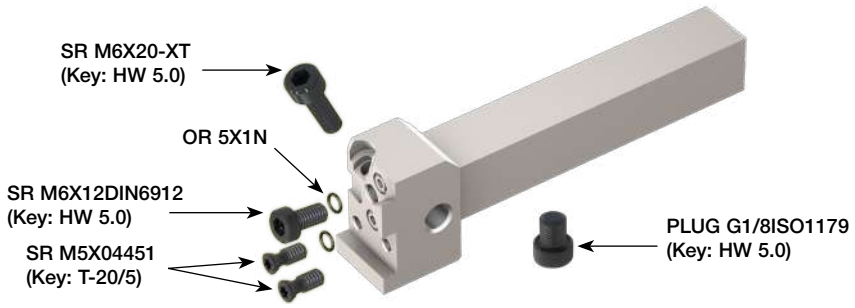


Right-hand shown

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 440-457

Tools: DGPAD-JHP • HFPAD-JHP • PCADRS/LS-JHP • TAGPAD-JHP • TGPAD-JHP • CGPAD-JHP • HGPAD-JHP • PCADR/L-JHP • CGPAD • DGAD-B-D • DGAD/HGAD • HFPAD-3 • HFPAD-4 • HFPAD-5 • HFPAD-6 • HGPAD • PCADR/L • SCLCR-PAD • SDJCR-PAD • SVJCR-PAD • SWAPR-PAD • TGAD • TGPAD



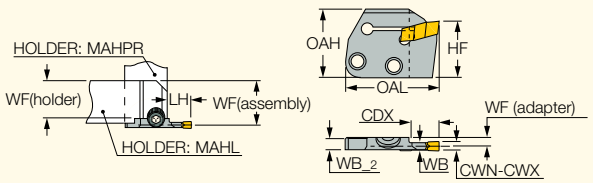
Spare Parts

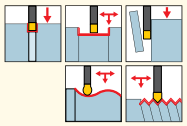
Designation							
MAHPR/L-JHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW 5.0	OR 5X1N	PLG 1/8ISO1179

CUT-GRIP
MODULAR-GRIP

CGPAD

Adapters for CUT-GRIP Inserts





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

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 440-457

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

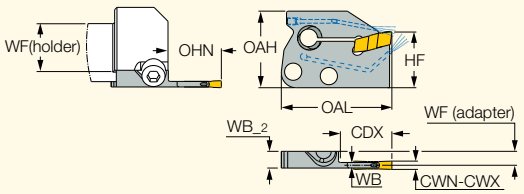
Inserts: GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMM 8CC • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

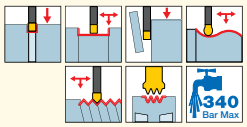
Holders: C#-MAHD-JHP • C#-MAHPD-JHP • MAHR/L-JHP-MC • MAHPR/L-JHP • MAHR/L-JHP • MAHR/L • MAHPR/L • C#-MAHD • C#-MAHPD • C#-MAHDR-45 • HSK A63WH-MAHUR/L • HSK A63WH-MAHDR-45 • HSK A63WH-MAHDOR • IM-MAHD • IM-MAHPD

CUT-GRIP JETCUT
MODULAR-GRIP

CGPAD-JHP

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





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

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 440-457

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

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • GPV • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

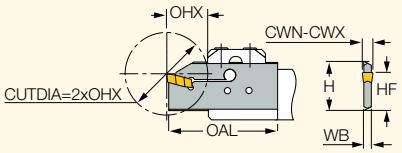
Flow Rate vs. Pressure

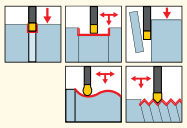
Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
CGPAD 3R/L-T16-JHP	6-8	7-9	8-10
CGPAD 3R-T22-JHP	5-7	6-8	7-9
CGPAD 4R/L-T16-JHP	10-12	11-13	12-14
CGPAD 5R/L-T16-JHP	12-14	16-18	19-21

CUT-GRIP

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 440-457

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

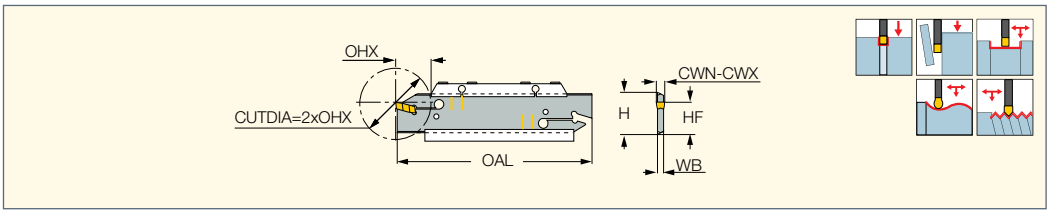
Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

Holders: C#-TBU • IM-TBU • UBHCR/L

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 440-457

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

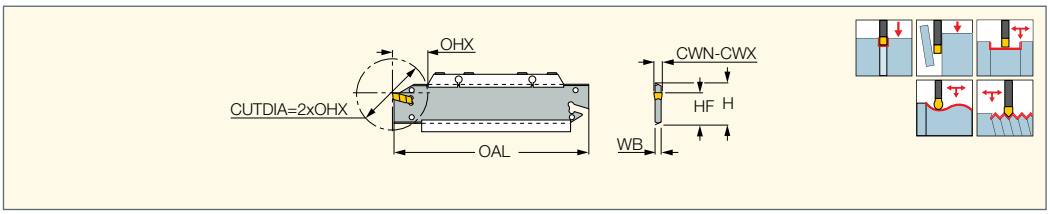
Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

Holders: SGTBU/SGTBN • UBHCR/L

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 440-457

(1) Minimum cutting width
(2) Maximum cutting width
(3) Maximum overhang for grooving
(4) Maximum overhang for turning
* Optional, should be ordered separately

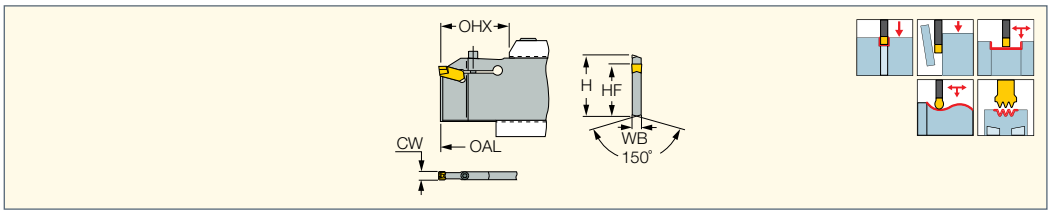
Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIP-UN • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-P-BSPT • TIP-P-BSW • TIP-P-ISO • TIP-P-NPT • TIP-P-UN • TIP-WT

Holders: C#-TBK-R/L • HSK A-WH-TBK-R/L • SGTBU/SGTBN • UBHCR/L

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 440-457

(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

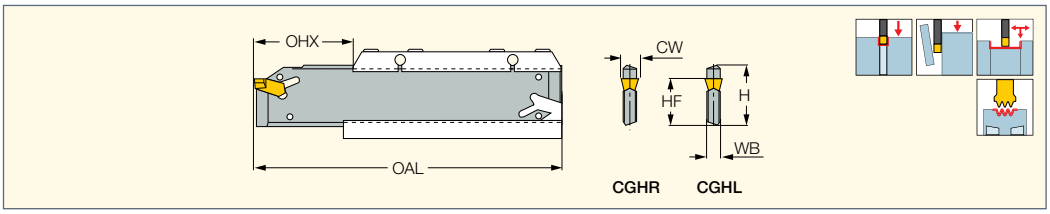
Inserts: GIMF • GIMM 8CC • GIMY • GIMY (full radius) • GIMY-F • GIPY

Holders: SGTBK • SGTBU/SGTBN

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 440-457

(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

Inserts: GIMF • GIMM 8CC • GIMY • GIMY (full radius) • GIMY-F • GIPY

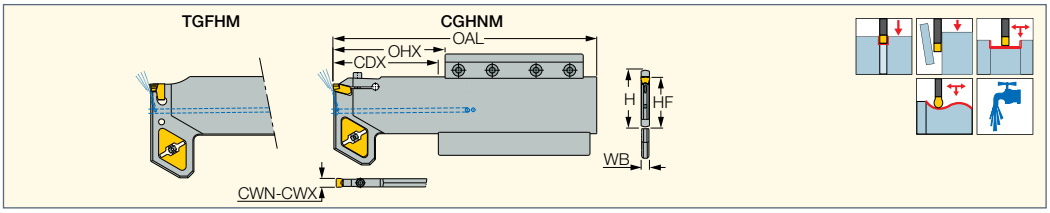
Holders: C#-TBK-R/L • HSK A-WH-TBK-R/L • SGTBK • SGTBU/SGTBN

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 440-457

(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

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIMF • GIMM 8CC • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP-E • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPY • GITM • GITM (full radius) • TAG N-C/W/M • TAGB/TAGBA

Holders: SGTBK • SGTBU/SGTBN

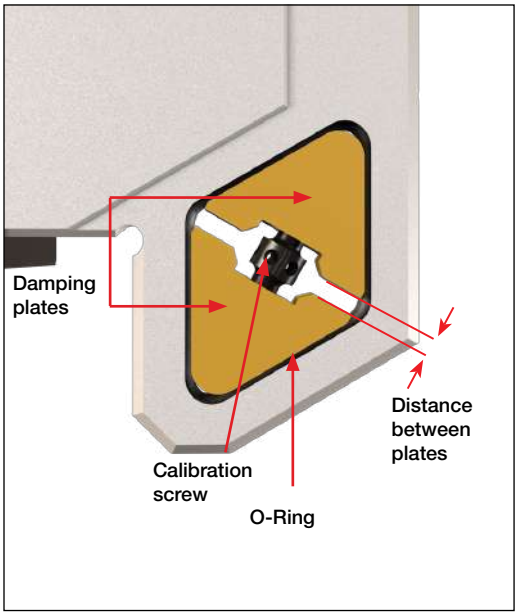
User Guide

- 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.

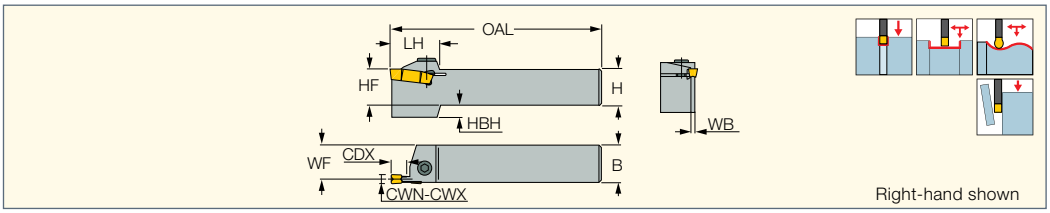


Tools, Adapters and Blades (Long Pocket)

CUT-GRIP

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(a)
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(a)
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(a)
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(a)
GHDL 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(a)
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(a)
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(a)
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(a)
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(a)

- For user guide, see pages 440-457

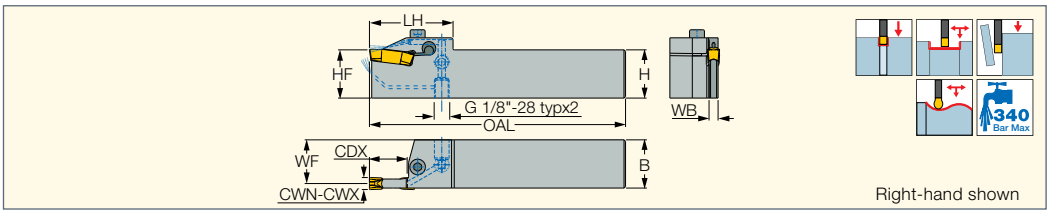
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
(a) For optional key with limited tightening torque see pages 448-449

Inserts: GDMF • GDMM-CC • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GDPY • GIA-K (long pocket) • GIF (long pocket) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIPA/GIDA 8 (full radius)

CUT-GRIP JET CUT

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
GHDL 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 440-457

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

Inserts: GDMF • GDMM-CC • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GIA-K (long pocket) • GIF (long pocket) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIPA/GIDA 8 (full radius)

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 32-8-JHP	13-16	19-21	22-24

Spare Parts

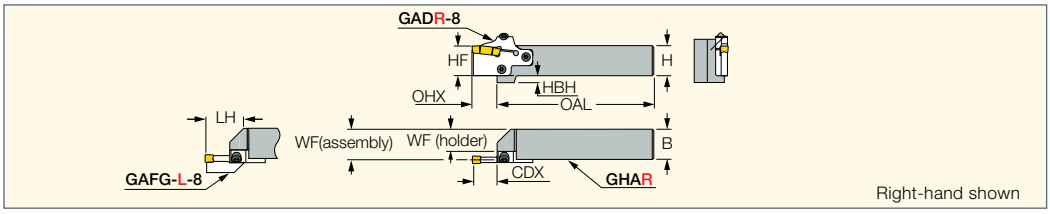
Designation			
GHDR/L 32-8-JHP	SR M6X25 DIN912	HW 5.0(a)	PLG 1/8ISO1179

(a) For optional key with limited tightening torque see pages 448-449

CUT-GRIP

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)

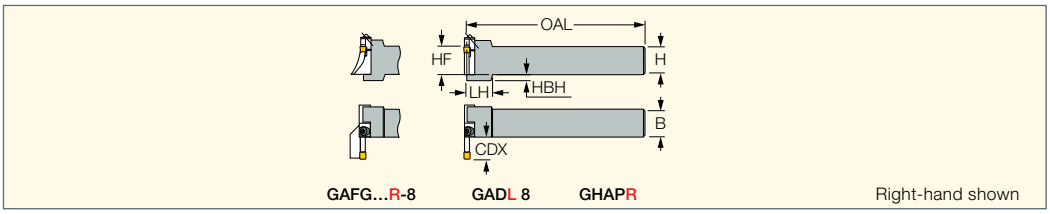
(1) WF(holder)
(2) Maximum overhang
(3) Adapter for Turning & Grooving
(4) See specific adapter dimensions
(5) Adapter for Face Grooving

Tools: GADR/L-8 • GAFG-R/L-8 • PCADR/L 34N-RE

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

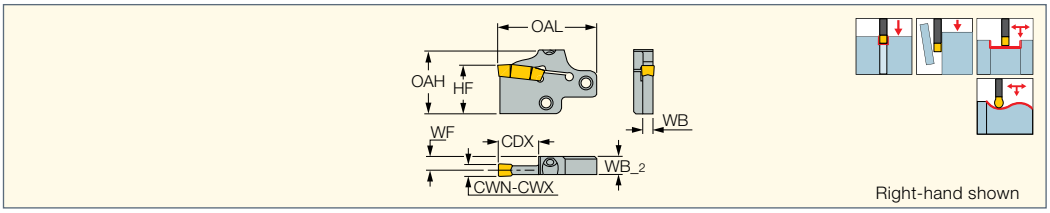
(3) Adapter for Face Grooving

Tools: GADR/L-8 • GAFG-R/L-8 • PCADR/L 34N-RE

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 440-457

(1) Minimum cutting width

(2) Maximum cutting width

(3) Cutting depth maximum

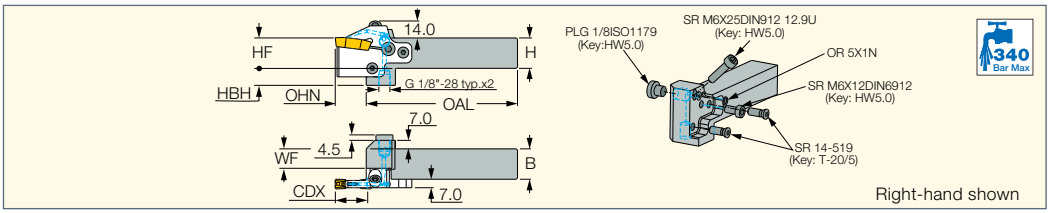
Inserts: GDMA • GDMF • GDMM-CC • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GIA-K (long pocket) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIPA/GIDA 8 (full radius)

Holders: C#-GHAD-8 • C#-GHAPR/L-8 • GHAPR/L-8 • GHAR/L-8 • IM-GHAD-8

CUTGRIP JETCUT

GHAR/L-JHP

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



Designation	H	HF	B	WF	OAL	OHN(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 440-457

(1) Minimum overhang

(2) See specific adapter dimensions

Tools: GADR/L-JHP

Spare Parts

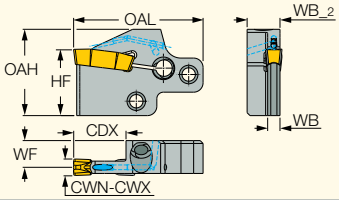
Designation							
GHAR/L-JHP	SR 14-519	T-20/5	OR 5X1N	SR M6X12DIN6912	SR M6X25 DIN912	PLG 1/8ISO1179	HW 5.0X120 MM

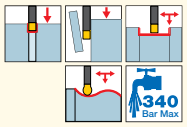
Utility Inserts

CUTGRIP JETCUT

GADR/L-JHP

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





Right-hand shown

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 440-457

(1) Minimum cutting width

(2) Maximum cutting width

(3) Cutting depth maximum

Inserts: GDMA • GDMF • GDMM-CC • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GDPY • GIA-K (long pocket) • GIF (long pocket) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIPA/GIDA 8 (full radius)

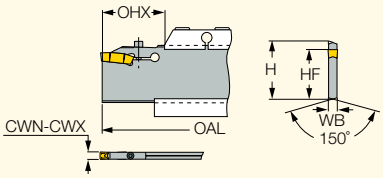
Flow Rate vs. Pressure

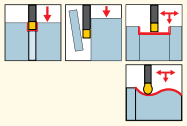
Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GADR/L-JHP	15-17	23-25	27-29

CUTGRIP

CGHN-8-10D

Heavy Duty Deep Grooving and Turning Blades





Designation	CWN(1)	CWX(2)	OHX(3)	WB	HF	H	OAL		
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 440-457

(1) Minimum cutting width

(2) Maximum cutting width

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

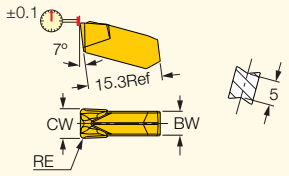
Inserts: GDMF • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GDPY • GIA-K (long pocket) • GIF (long pocket) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIPA/GIDA 8 (full radius)

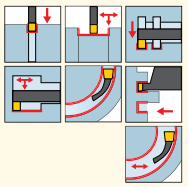
Holders: SGTBK • SGTBU/SGTBN

CUTGRIP

GIMT

Utility Single-Ended Inserts for Grooving and Turning





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	IC808	IC07	IC806	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

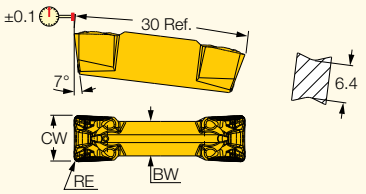
(2) Corner radius tolerance (+/-)

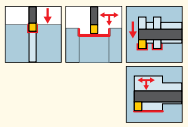
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

CUTGRIP

GDMT

Utility Double-Ended Inserts for Grooving and Turning





Designation	Dimensions CW	CWTOL(1)	RE	RETOL(2)	BW	CDX	Tough ↔ Hard IC830	IC8250	IC808	IC806	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMT 808	8.00	0.050	0.80	0.050	6.00	27.00	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34

• For cutting speed recommendations and user guide, see pages 440-457

(1) Cutting width tolerance (+/-)

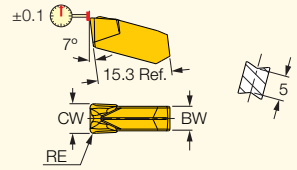
(2) Corner radius tolerance (+/-)

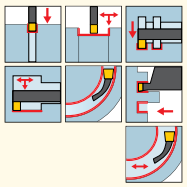
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

GIMF

Utility Single-Ended Inserts
for Grooving and Turning





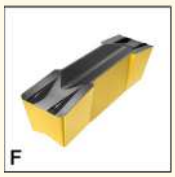
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC1030	IC8250	IC1010	IC808	IC908	IC20	IC5010	IC428	IC806	IC907	IC4	IC804	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMF 406	4.00	0.60	0.05	0.050	3.40	●		●		●	●	●	●	●	●	●	●	●	0.75-2.40	0.19-0.25	0.09-0.16
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

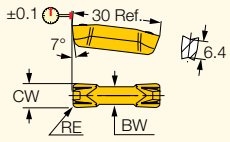
• DMIN for internal applications = 70 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: Anti-Vibration Blades • C#-GHDR/L • CGFG 51-P8 • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-P8 • CGHN-S • CGHR/L-P8DG • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

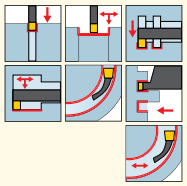
CUTGRIP

GDMF

Utility Double-Ended Inserts
for Grooving and Turning







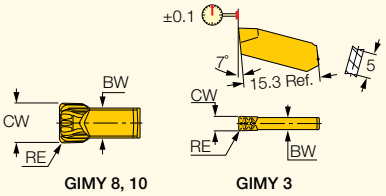
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	Tough ↔ Hard IC830	IC8250	IC808	IC5010	IC428	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMF 808	8.00	0.80	0.05	0.050	27.00	6.00	●	●	●	●	●	1.00-4.80	0.32-0.56	0.18-0.34

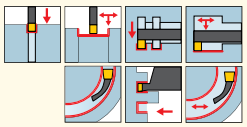
• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

GIMY

Utility Single-Ended Inserts
for Grooving and Turning



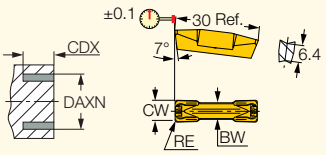


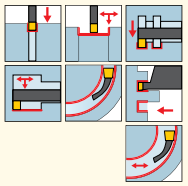
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC806	IC4	IC804	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 304	3.00	0.40	0.05	0.050	2.40	●	●			●	●	●	●	0.50-1.80	0.16-0.20	0.07-0.12
GIMY 808	8.00	0.80	0.05	0.050	6.00	●	●	●	●	●	●			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 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: Anti-Vibration Blades • C#-GHDR/L • CGFG 51-P8 • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-P8 • CGHN-S • CGHR/L-P8DG • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

GDMY
Utility Double-Ended Inserts
for Grooving and Turning



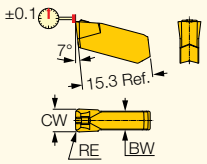


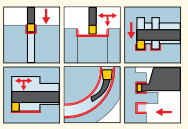
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	DAXN(3)	CDX(4)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMY 808	8.00	0.80	0.05	0.050	6.00	50.0	27.00	•	•	•	•	•	•	•	1.00-4.80	0.32-0.56	0.18-0.34

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Minimum axial grooving diameter
(4) Cutting depth maximum
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket)
• GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

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



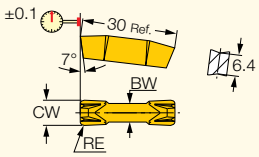


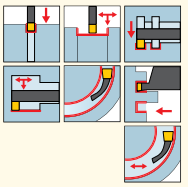
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC908	IC907	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMN 302	3.00	0.20	0.05	0.050	2.40		•	0.30-1.20	0.07-0.11	0.04-0.09
GIMN 406	4.00	0.60	0.05	0.050	3.40		•	0.75-1.60	0.11-0.18	0.05-0.14
GIMN 508	5.00	0.80	0.05	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 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD
• CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

CUTGRIP

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



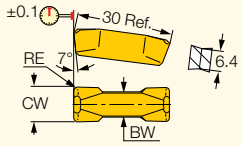


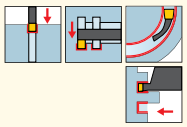
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	Tough ↔ Hard IC830	IC8250	IC808	IC907	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMN 808	8.00	0.80	0.05	0.050	27.00	6.00	•	•	•	•	1.00-3.20	0.20-0.35	0.10-0.30

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket)
• GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

GDMU
Utility Inserts for Heavy Grooving on Ductile Materials



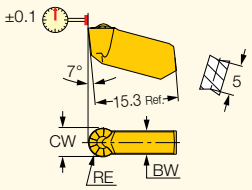


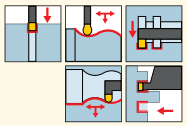
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	Recommended Machining Data f groove (mm/rev)
GDMU 808	8.00	0.80	0.05	0.050	6.00	•	•	0.10-0.24

• For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

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



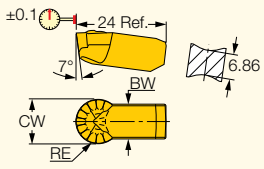


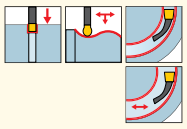
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC20N	IC806	IC804	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 315	3.00	1.50	0.05	0.050	2.40	•	•	•	•	•	•	•	•	0.00-1.50	0.18-0.26	0.07-0.13
GIMY 420	4.00	2.00	0.05	0.050	3.20	•	•	•	•	•	•	•	•	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 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: Anti-Vibration Blades • C#-GHDR/L • CGFG 51-P8 • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-P8 • CGHN-S • CGHR/L-P8DG • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

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





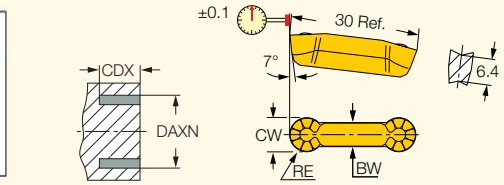
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 1260	12.00	6.00	0.05	0.050	9.50	•	•	•	•	•	0.00-6.00	0.42-0.86	0.26-0.45

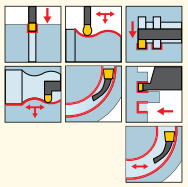
• Toolholder seat needs to be modified according to insert profile to ensure clearance • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: CGHR/L-12-14D • GHDR/L/N 12/14

CUTGRIP

GDMY (full radius)

Utility Double-Ended Full Radius Inserts for Grooving and Profiling





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	DAXN(3)	CDX	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

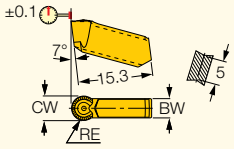
(3) Minimum axial grooving diameter

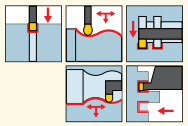
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDKR/L • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

GIMY-F

Utility Single-Ended Inserts for Grooving and Profiling Ductile Materials





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC8250	IC808	IC908	IC806	IC804	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

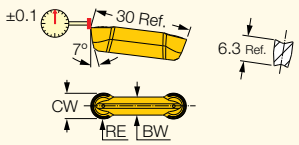
(2) Corner radius tolerance (+/-)

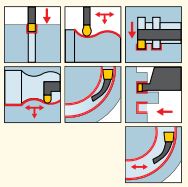
Tools: Anti-Vibration Blades • C#-GHDR/L • CGFG 51-P8 • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-P8 • CGHN-S • CGHR/L-P8DG • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

GDMY-F

Utility Double-Ended Inserts for Grooving and Profiling Ductile Materials





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC808	IC908	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

(3) Cutting depth maximum

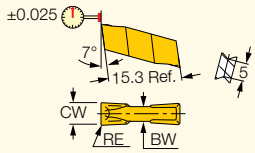
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

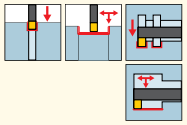
Precision Ground Inserts

CUTGRIP

GIF-E (W=4-6)

Precision Double-Ended Inserts
for Grooving and Turning





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC807	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

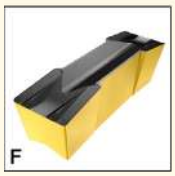
(3) Cutting depth maximum

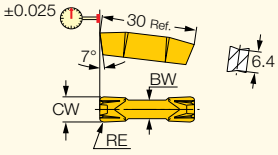
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

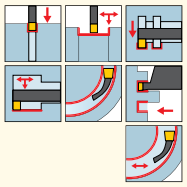
CUTGRIP

GIF-E (W=8,10)

Precision Double-Ended Inserts
for Grooving and Turning







Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC806	IC807	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

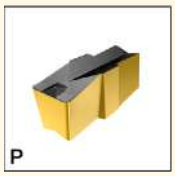
(3) Cutting depth maximum

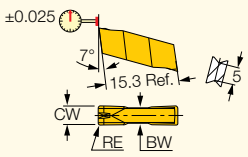
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

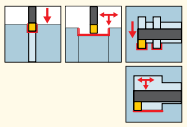
CUTGRIP

GIP-E

Precision Double-Ended Inserts for Grooving and Turning







Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC20N	IC5010	IC428	IC806	IC807	IC804	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

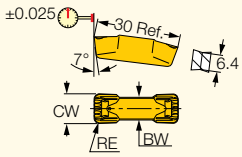
(3) Cutting depth maximum

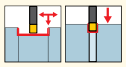
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

GDPY

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	IC20	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

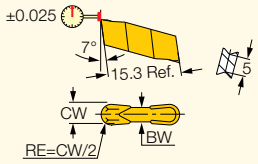
(2) Corner radius tolerance (+/-)

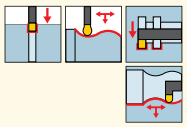
Tools: CGHN-8-10D • GADR/L-JHP • GHDR/L (long pocket)

CUT-GRIP

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

Precision Double-Ended
Full Radius Inserts for
Profiling and Grooving





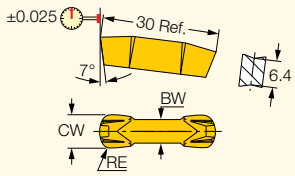
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-2.00	4.00	2.00	0.02	0.050	3.20	11.80	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17
GIF 5.00E-2.50	5.00	2.50	0.02	0.050	4.00	11.30	●	●		●	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

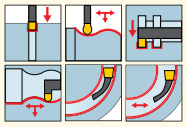
• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

CUT-GRIP

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

Precision Double-Ended
Full Radius Inserts for
Profiling and Grooving





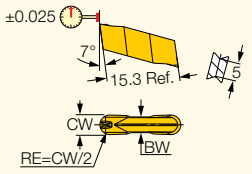
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC830	IC8250	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 8.00E-4.00	8.00	4.00	0.02	0.050	6.00		●	0.00-4.00	0.32-0.67	0.18-0.34
GIF 10.00E-5.00	10.00	5.00	0.02	0.050	8.00	●	●	0.00-5.00	0.35-0.78	0.22-0.40

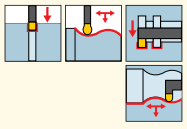
• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUT-GRIP

GIP-E (full radius)

Precision Double-Ended
Full Radius Inserts for
Profiling and Grooving





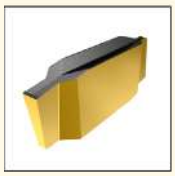
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC5010	IC428	IC807	IC804	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIP 3.00E-1.50	3.00	1.50	0.02	0.050	2.40	12.30	●	●	●	●	●			●	●	0.00-1.50	0.18-0.28	0.08-0.15
GIP 4.00E-2.00	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

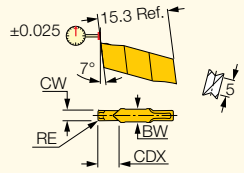
• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

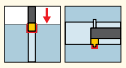
CUTGRIP

GIP (flat top W<M)

Flat Top Precision
Double-Ended Inserts
for Grooving







Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data
	CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	IC830	IC808	IC908	IC20	IC20N	IC807	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

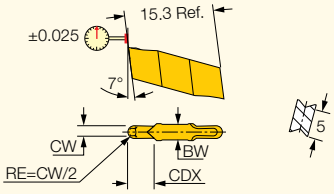
(3) Cutting depth maximum

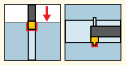
Tools: GHDR/L (short pocket) • GHGR/L • GHMPR/L • GHMR/L

CUTGRIP

GIP (full radius W<M)

Flat Top Precision
Double-Ended Inserts with
Full Radius for Grooving





Designation	Dimensions						Tough ↔ Hard						Recommended Machining Data
	CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	IC830	IC808	IC908	IC20	IC806	IC807	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

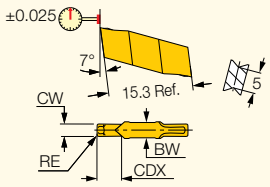
(3) Cutting depth maximum

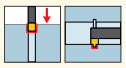
Tools: GHDR/L (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

GIG

Precision Double-Ended Inserts for Grooving





Designation	Dimensions						Tough ↔ Hard			Recommended Machining Data
	CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	IC830	IC808	IC20	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

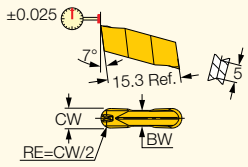
(3) Cutting depth maximum

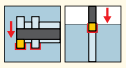
Tools: GHDR/L (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

GIP (full radius)

Precision Double-Ended Full Radius Inserts for Grooving





Designation	Dimensions						Tough ↔ Hard					Recommended Machining Data
	CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	IC830	IC8250	IC808	IC20	IC804	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

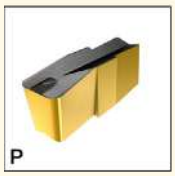
(3) Cutting depth maximum

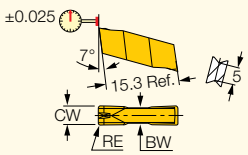
Tools: C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

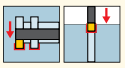
CUTGRIP

GIP

Precision Double-Ended Inserts for Grooving







Designation	Dimensions						Tough ↔ Hard								Recommended Machining Data
	CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	IC830	IC8250	IC808	IC908	IC20	IC20N	IC806	IC807	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

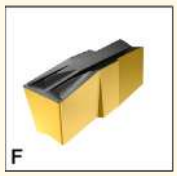
(3) Cutting depth maximum

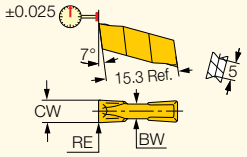
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

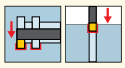
CUTGRIP

GIF

Precision Double-Ended Inserts for Grooving







Designation	Dimensions						Tough ↔ Hard				Recommended Machining Data
	CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	IC830	IC8250	IC808	IC20	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

(3) Cutting depth maximum

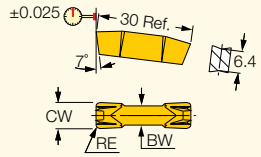
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

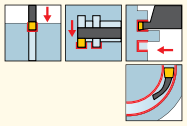
Inserts for Specific Applications and Materials

Cast Iron

CUTGRIP

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



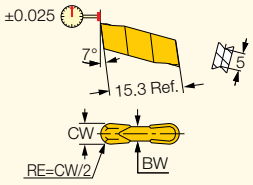


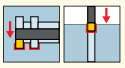
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC20	IC806	Recommended Machining Data f groove (mm/rev)	f face-groove (mm/rev)
GIF 8.00-0.40	8.00	0.40	0.02	0.030	6.00	27.00	●	●	0.18-0.31	0.14-0.23
GIF 8.00-0.80	8.00	0.80	0.02	0.050	6.00	27.00	●	●	0.18-0.34	0.14-0.25

• DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8

CUTGRIP

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



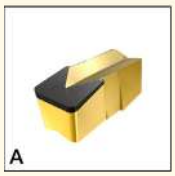


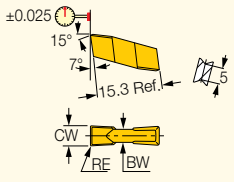
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIF 4.78-2.39	4.78	2.39	0.02	0.050	4.00	11.40	●	●		0.11-0.20
GIF 6.35-3.18	6.35	3.18	0.02	0.050	4.80	10.60			●	0.14-0.27

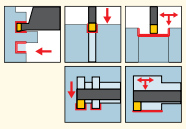
• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

CUTGRIP

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







Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC5010	IC428	Recommended Machining Data 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

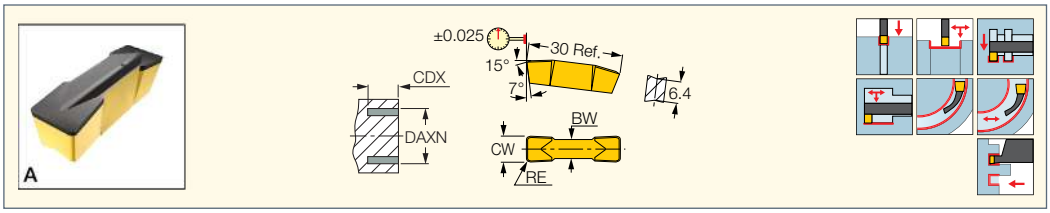
• DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L

Hardened Steel

CUTGRIP

GIA-K (long pocket)

Flat Top Precision Double-Ended Inserts with T-Land for Machining Cast Iron



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	DAXN(4)	Tough ↔ Hard IC5010	IC428	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

(3) Cutting depth maximum

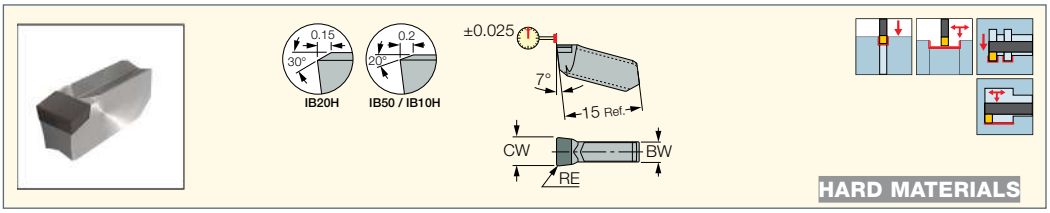
(4) Minimum axial grooving diameter

Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDR/L (long pocket) • GHDR/L-JHP (long pocket) • GHFG-R/L-8 • GHFGR/L-8 • GHIR/L (W=7.0-8.3)

CUTGRIP

GITM

CBN Tipped Inserts for Turning and Grooving on Hard Ferrous Materials



Designation	Dimensions CW	RE	RETOL(1)	CWTOL(2)	BW	Tough ↔ Hard IB20H	IB50	IB10H	Recommended Machining Data 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 440-457

(1) Corner radius tolerance (+/-)

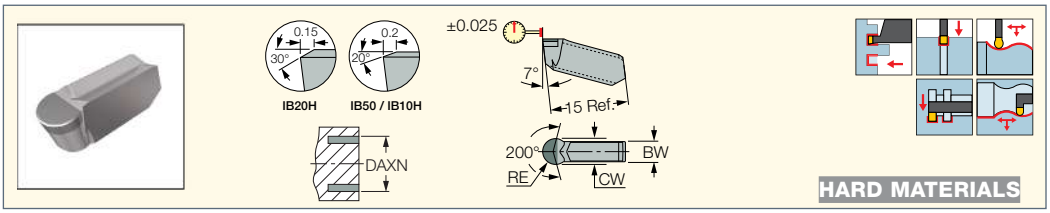
(2) Cutting width tolerance (+/-)

Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL

CUTGRIP

GITM (full radius)

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



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	DAXN(3)	Tough ↔ Hard IB20H	IB50	IB10H	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

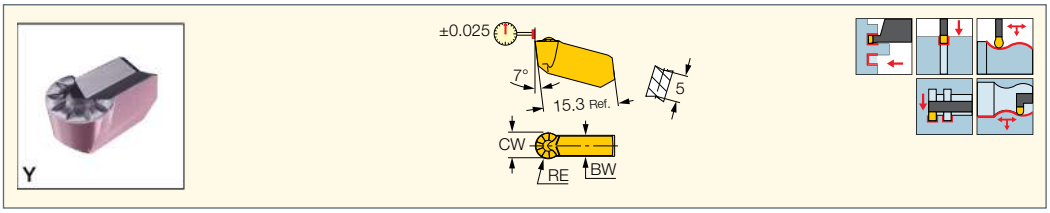
(3) Minimum axial grooving diameter

Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL

High Temperature Alloys

CUTGRIP

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



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC20	IC320	IC07	IC806	IC907	IC4	IC804	Recommended Machining Data 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

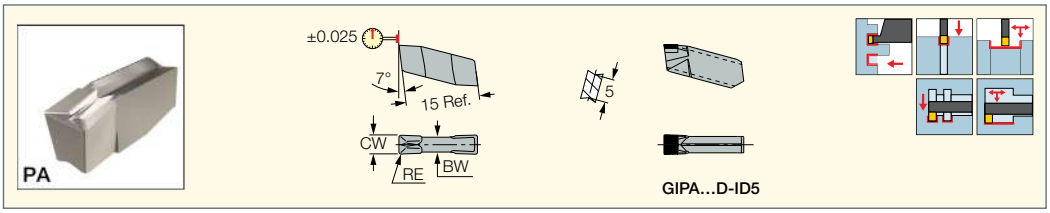
• Can cut arcs to 250° • DMIN for internal machining = 70 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)

Tools: Anti-Vibration Blades • C#-GHDR/L • CGFG 51-P8 • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-P8 • CGHN-S • CGHR/L-P8DG • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

Aluminum

CUTGRIP

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



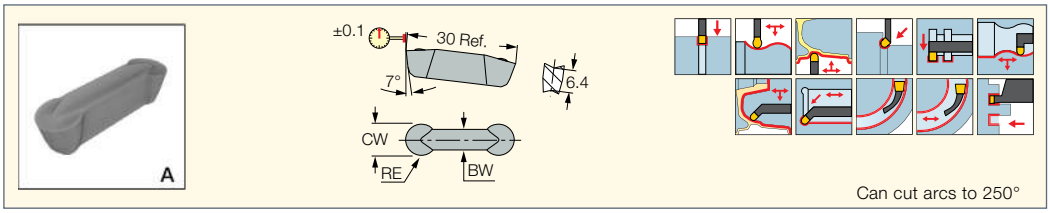
Designation	Dimensions CW	RE	CWTOL(2)	RETOL(3)	BW	Tough ↔ Hard IC20	ID5	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-0.20	3.00	0.20	0.02	0.030	2.40	●		0.25-1.80	0.12-0.20	0.08-0.14
GIPA 3.00-0.20-D (1)	3.00	0.20	0.02	0.030	2.40		●	0.25-1.80	0.12-0.25	0.09-0.16
GIPA 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 440-457
(1) Single-ended PCD tipped insert
(2) Cutting width tolerance (+/-)
(3) Corner radius tolerance (+/-)

Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

CUTGRIP

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



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC07	IC507	Recommended Machining Data 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

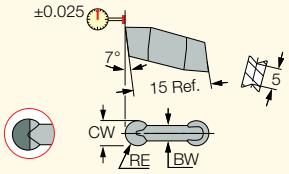
• For heavy-duty machining • DMIN for internal machining = 65 mm • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)

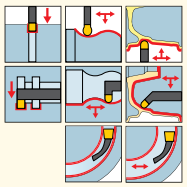
Tools: GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDKR/L • GHIFR/L-A • GHIR/L (W=7.0-8.3) • GHIUR/L-C-A (15° & 27.5°) Bars • GHIUR/L-UC

CUTGRIP

GIPA (full radius W=3-6)

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





Designation	Dimensions CW	RE	CWTOL[4]	RETOL[5]	BW	Tough ↔ Hard IC20	IC806	IC4	ID5	Recommended Machining Data 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 440-457

[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 (+/-)

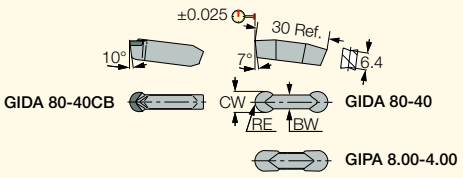
Tools: Anti-Vibration Blades • C#-GHDR/L • CGHN 26-M • CGHN 32-DGM • CGHN 32-M • CGHN-D • CGHN-DG • CGHN-S • CGPAD • CGPAD-JHP • GHDKR/L • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHGR/L • GHIFR/L-A • GHIUR/L-C-A (15° & 27.5°) Bars • GHIUR/L-UC • GHMPR/L • GHMR/L • GHSR/L • GHSR/L-JHP-SL • NQCH-GHSR/L-JHP

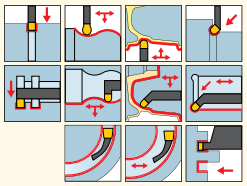
Next to Shoulder

CUTGRIP

GIPA/GIDA 8 (full radius)

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





Designation	Dimensions CW	RE	CWTOL(2)	RETOL(3)	BW	Tough ↔ Hard IC20	IC4	ID5	Recommended Machining Data 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 440-457

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

(2) Cutting width tolerance (+/-)

(3) Corner radius tolerance (+/-)

Tools: C#-GHDR/L • CGHN-8-10D • GADR/L-8 • GADR/L-JHP • GAFG-R/L-8 • GHDKR/L • GHDR/L (long pocket) • GHDR/L-8A • GHDR/L-JHP (long pocket) • GHFGR/L-8 • GHIFR/L-A • GHIR/L (W=7.0-8.3) • GHIUR/L-C-A (15° & 27.5°) Bars • GHIUR/L-UC


GIDA 80-40-D


GIDA 80-40CB-D


GIDA 80-40YZ-D


GIDA 80-40YZ

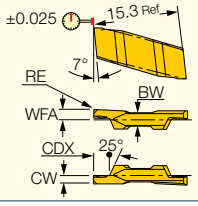

GIPA 8.00-4.00


GIDA 80-40

CUTGRIP

GIP-RX/LX

Precision Double-Ended Inserts for External Grooving Next to a Shoulder



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	WFA	Tough ↔ Hard IC830	IC808	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

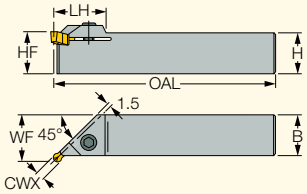
(3) Cutting depth maximum

Tools: GHMPR/L • GHMR/L

Undercutting

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

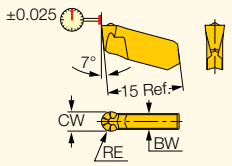
- For D>100 mm, GIP/GIF inserts can be used (clearance types UN, D or G are not required).

[1] Maximum cutting width

Inserts: GIMY-UN • GIP-UN

CUTGRIP

GIMY-UN
Utility Single-Ended Inserts
for External Undercutting



Designation	Dimensions CW	RE	CWTOL[1]	RETOL[2]	BW	CDX[3]	IC8250	Recommended Machining Data f groove (mm/rev)
GIMY 315-UN	3.00	1.50	0.05	0.050	2.40	2.00	●	0.05-0.15
GIMY 420-UN	4.00	2.00	0.05	0.050	3.20	2.50	●	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 440-457

[1] Cutting width tolerance (+/-)

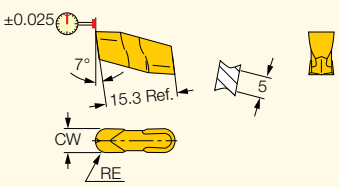
[2] Corner radius tolerance (+/-)

[3] Cutting depth maximum

Tools: GHMUR/L

CUTGRIP

GIP-UN
Precision Double-Ended Inserts
for External Undercutting



Designation	Dimensions CW	RE	CWTOL[1]	RETOL[2]	DMIN	BW	CDX[3]	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIP 3.00-1.50UN	3.00	1.50	0.05	0.050	35.00	2.40	4.00	●	●	●	●	0.05-0.15
GIP 4.00-2.0UN	4.00	2.00	0.05	0.050	35.00	3.20	4.00		●		●	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 440-457

[1] Cutting width tolerance (+/-)

[2] Corner radius tolerance (+/-)

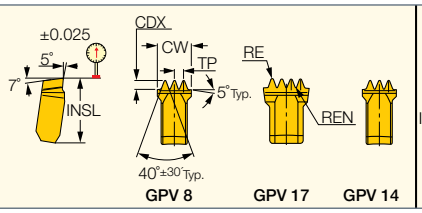
[3] Cutting depth maximum

Tools: C#-GHDR/L • CGHN-DG • CGPAD • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHMPR/L • GHMR/L • GHMUR/L

Pulley V Grooves

CUTGRIP

GPV
Precision Inserts for Grooving
Multi V-Ribbed Pulleys



Designation	Dimensions CW	TP[5]	CDX[6]	RE	REN	NT	INSL	Tough ↔ Hard IC8250	IC5010	IC428	Recommended Machining Data f groove (mm/rev)
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

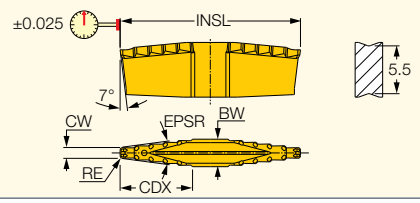
• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For cutting speed recommendations and user guide, see pages 440-457

[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

Tools: C#-GHDR/L • CGPAD-JHP • GHDR/L (short pocket) • GHDR/L-JHP (short pocket) • GHDR/L-JHP-MC (short pocket) • GHDR/L/N 12/14 • GHMPR/L • GHMR/L

CUTGRIP

GDK
Inserts for Rough Grooving
V-Shaped Piston Grooves



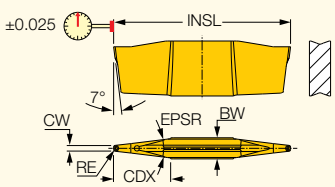
Designation	Dimensions CW	RE	CWTOL[1]	RETOL[2]	CDX[3]	EPSR	INSL	BW	IC808	Recommended Machining Data f groove (mm/rev)
GDK 1.5-MS	1.50	0.50	0.02	0.000	8.40	14.0	21.00	3.50	●	0.15-0.25
GDK 1.81-MS	1.81	0.50	0.02	0.000	8.40	12.0	19.70	3.50	●	0.15-0.25

• 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



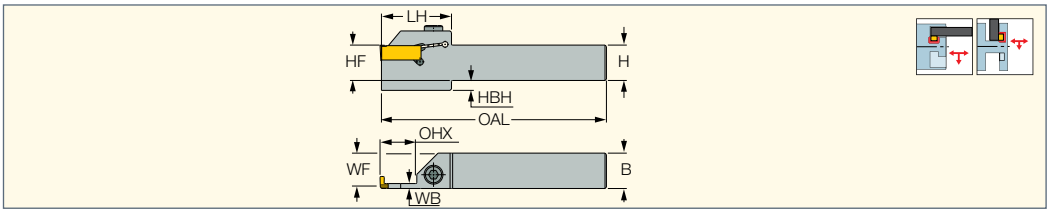
Designation	Dimensions CW	RE	CWTOL[1]	RETOL[2]	CDX[3]	EPSR	INSL	BW	Tough ↔ Hard IC308	IC908	Recommended Machining Data f groove (mm/rev)
GDP 1.20-0.30-4768V2Q	1.20	0.30	0.02	0.000	6.50	11.0	25.00	2.40	●		0.12-0.18
GDP 1.55-0.30-1404Q	1.55	0.30	0.02	0.000	6.50	10.0	20.90	3.50		●	0.12-0.18

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

T/L Grooves

CUTGRIP

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

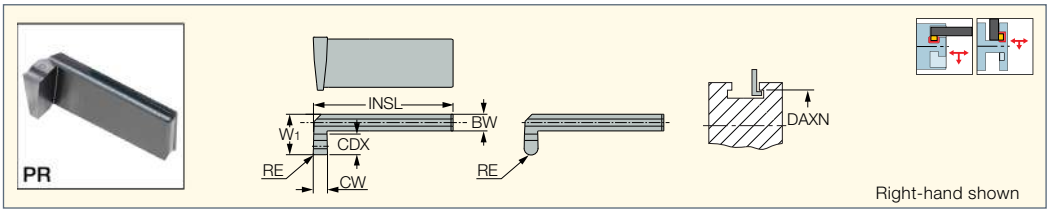
- In case of face penetration prior to radial grooving, please check that the lower insert support is relieved from the groove's outer diameter

(1) Cutting depth maximum

Inserts: LPGIR/L

CUTGRIP

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 440-457

(1) Cutting width tolerance (+/-)

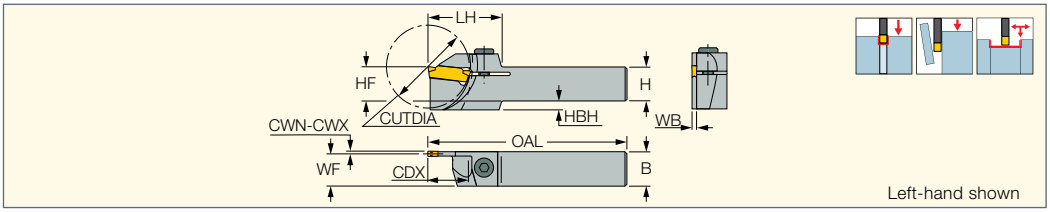
(2) Corner radius tolerance (+/-)

(3) Minimum axial grooving diameter

Tools: HLPGR/L

CUTGRIP

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 440-457

(1) Minimum cutting width

(2) Maximum cutting width

(3) Maximum parting diameter.

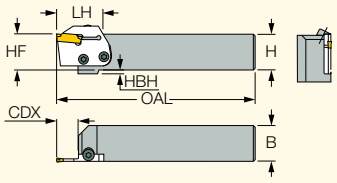
(4) Cutting depth maximum

Inserts: GDMW 2.4

GDMW Tools and Inserts

CUTGRIP

PHAR/L
External Machining Holders
for PADR/L Adapters



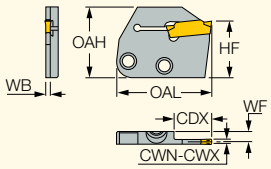
Right-hand shown

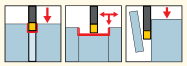
Designation	CDX(1)	H	HF	B	OAL	HBH	Adapter(2)				
PHAR/L 20	16.30	20.0	20.0	20.0	140.00	10.0	PADR/L 2.4	SR 76-1368	HW 4.0	SR M5-04451	T-20/5
PHAR/L 25	16.30	25.0	25.0	25.0	140.00	5.0	PADR/L 2.4	SR 76-1368	HW 4.0	SR M5-04451	T-20/5

(1) Cutting depth maximum
(2) Adapters to be ordered separately.
Tools: PADR/L

CUTGRIP

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





Left-hand shown

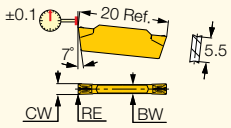
Designation	CWN(1)	CWX(2)	CDX(3)	OAL	WB	HF	OAH	WF	Insert
PADR/L 2.4	2.40	3.18	16.30	41.00	1.90	24.0	30.0	4.20	GDMW 2.4

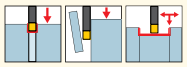
- For user guide, see pages 440-457

(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
Inserts: GDMW 2.4
Holders: PHAR/L

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 440-457

(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum
Tools: PADR/L • PHGR/L • PHSR/L

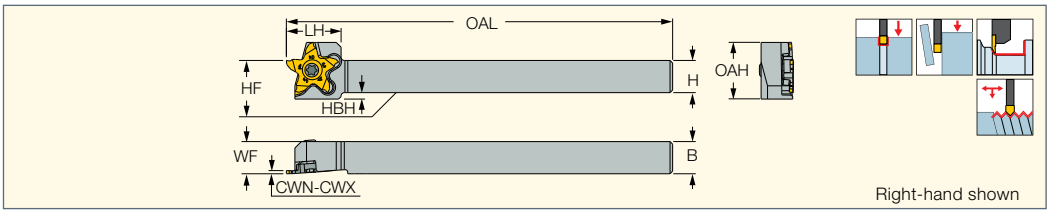
Multi-Corner Grooving Tools and Inserts

PENTACUT (5 Cutting Edges)

PENTACUT PARTING & GROOVING LINE

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

Inserts: PENTA 17-ER/EL • PENTA 17-MT-RS/LS • PENTA 17-NP-RS/LS • PENTA 17-P-RS/LS • PENTA 17-P-RS/LS (full radius) • PENTA 17-WT-RS/LS • PENTA 17R/L-P-RS

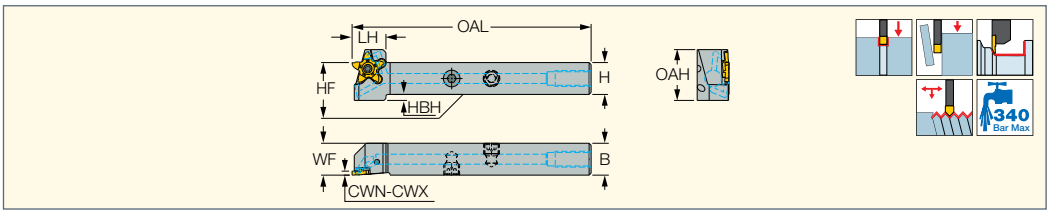
Spare Parts

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

PENTACUT PARTING & GROOVING LINE

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

Inserts: PENTA 17-ER/EL • PENTA 17-MT-RS/LS • PENTA 17-NP-RS/LS • PENTA 17-P-RS/LS • PENTA 17-P-RS/LS (full radius) • PENTA 17-WT-RS/LS • PENTA 17R/L-P-RS • PENTA 17R/L-SP-RS

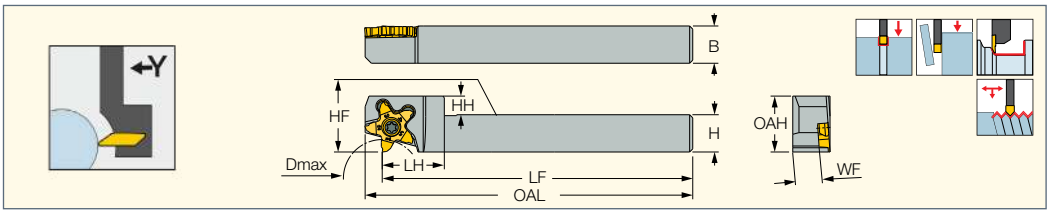
Spare Parts

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		

NEOYSWISS AXIS
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

Inserts: PENTA 17-ER/EL • PENTA 17-MT-RS/LS • PENTA 17-NP-RS/LS • PENTA 17-P-RS/LS • PENTA 17-P-RS/LS (full radius) • PENTA 17-WT-RS/LS • PENTA 17R/L-P-RS

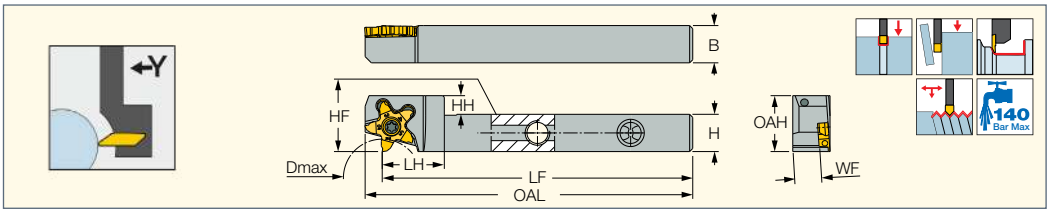
Spare Parts

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

NEOYSWISS AXIS
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

Inserts: PENTA 17-ER/EL • PENTA 17-MT-RS/LS • PENTA 17-NP-RS/LS • PENTA 17-P-RS/LS • PENTA 17-P-RS/LS (full radius) • PENTA 17-WT-RS/LS • PENTA 17R/L-P-RS

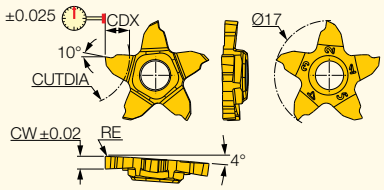
Spare Parts

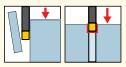
Designation		
Y-PCHRS-17-JHP	HW 5/32"	T-1508/5

PENTACUT PARTING & GROOVING LINE

PENTA 17-P-RS/LS

Pentagonal Inserts for Grooving and Parting Soft Materials, Thin and Miniature Parts





Designation	Dimensions CW	RE	CDX	CUTDIA	IC1008	Recommended Machining Data 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

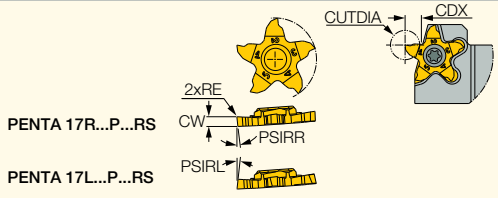
- For cutting speed recommendations and user guide, see pages 440-457

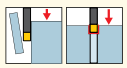
Tools: NQCH-PCHR/L-S-JHP • PCADRS/LS-JHP • PCHRS/LS-17 • PCHRS/LS-17-JHP • Y-PCHRS-17 • Y-PCHRS-17-JHP

PENTACUT PARTING & GROOVING LINE

PENTA 17R/L-P-RS

Lead Angle Edge Pentagonal Inserts (5 edges) for Parting Miniature Parts





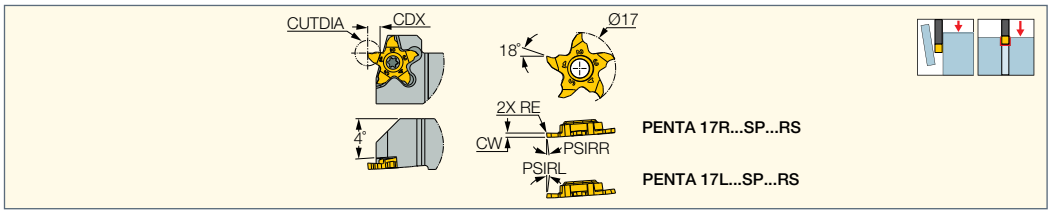
Designation	Dimensions CW	RE	CDX	CUTDIA	PSIRL	PSIRR	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 17L100P-15D-RS	1.00	0.05	3.00	6.0	15.0	-	●	0.02-0.03
PENTA 17L100P-6D-RS	1.00	0.05	3.00	6.0	6.0	-	●	0.02-0.04
PENTA 17R100P-15D-RS	1.00	0.05	3.00	6.0	-	15.0	●	0.02-0.03
PENTA 17R100P-6D-RS	1.00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

Tools: NQCH-PCHR/L-S-JHP • PCADRS/LS-JHP • PCHRS/LS-17 • PCHRS/LS-17-JHP • Y-PCHRS-17 • Y-PCHRS-17-JHP

PENTACUT PARTING & GROOVING LINE

PENTA 17R/L-SP-RS

Pentagonal Inserts (5 edges) with a High Positive Rake for Parting Soft Materials



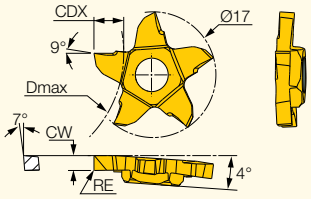
Designation	Dimensions CW	RE	CDX	CUTDIA	PSIRL	PSIRR	IC1007	Recommended Machining Data f groove (mm/rev)
PENTA 17L03SP6D-RS	0.30	0.00	0.60	1.2	6.0	-	●	0.02-0.03
PENTA 17R03SP6D-RS	0.30	0.00	0.60	1.2	-	6.0	●	0.02-0.03
PENTA 17L05SP6D-RS	0.50	0.00	2.00	4.0	6.0	-	●	0.02-0.04
PENTA 17R05SP6D-RS	0.50	0.00	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

Tools: PCADRS/LS-JHP • PCHRS/LS-17-JHP

PENTACUT PARTING & GROOVING LINE

PENTA 17-NP-RS/LS

Pentagonal Inserts for Precision Grooving and Turning Next to High Shoulder Applications



Designation	Dimensions CW	CWTOL(1)	RE	RETOL(2)	CDX	D max	IC1008	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

(3) for grooving

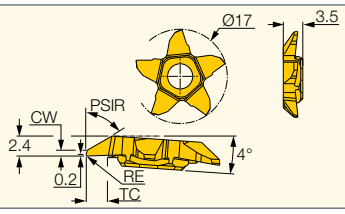
Tools: NQCH-PCHR/L-S-JHP • PCHRS/LS-17 • PCHRS/LS-17-JHP • Y-PCHRS-17 • Y-PCHRS-17-JHP

Designation	Dimensions CW	RE	CDX	Dmax as a function of depth of cut (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

PENTACUT PARTING & GROOVING LINE

PENTA 17-ER/EL

Back Turning Pentagonal Inserts for Short Chipping Materials



Designation	Dimensions CW	RE	PSIR	Tc	IC1008	Recommended Machining Data 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

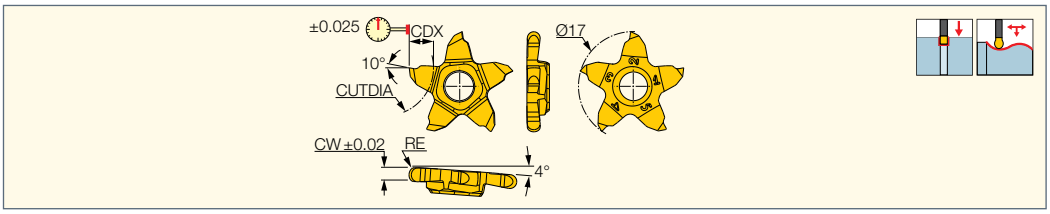
• For cutting speed recommendations and user guide, see pages 440-457

Tools: PCHRS/LS-17 • PCHRS/LS-17-JHP • Y-PCHRS-17 • Y-PCHRS-17-JHP

PENTACUT
PARTING & GROOVING LINE

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

Precision Grooving
Pentagonal Full Radius
Inserts for Soft Materials



Designation	Dimensions CW	RE	CDX	CUTDIA	IC1008	Recommended Machining Data 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

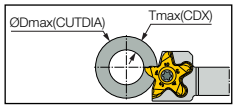
• For cutting speed recommendations and user guide, see pages 440-457

Tools: NQCH-PCHR/L-S-JHP • PCHRS/LS-17 • PCHRS/LS-17-JHP • Y-PCHRS-17 • Y-PCHRS-17-JHP

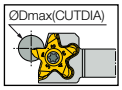
Designation	Dmax as a function of depth of cut (T) W ±0.02	R	Tmax	T<2.3	T<2.5	T<3.0	T<3.5	T<3.8	T<4.0	Parting to center Dmax.
PENTA 17N025P000RS/LS	0.25	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N030P000RS/LS	0.30	0.00	0.6*	---	---	---	---	---	---	1.2
PENTA 17N033P000RS/LS	0.33	0.00	0.6*	---	---	---	---	---	---	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.		---	---	---	---	
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



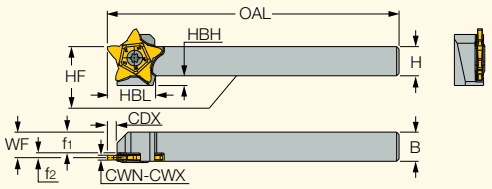
PENTACUT
PARTING & GROOVING LINE

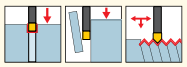
PCHR/L-24

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

CWN-CWX	f_2
0.50-3.20	2.0
3.21-4.23	2.5
4.24-5.20	3.0
5.21-6.20	3.5
6.21-8.20	4.5

$WF=f_1+f_2$





Right-hand shown

Designation	H	HF	B	CWN[2]	CWX[3]	f1	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

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z

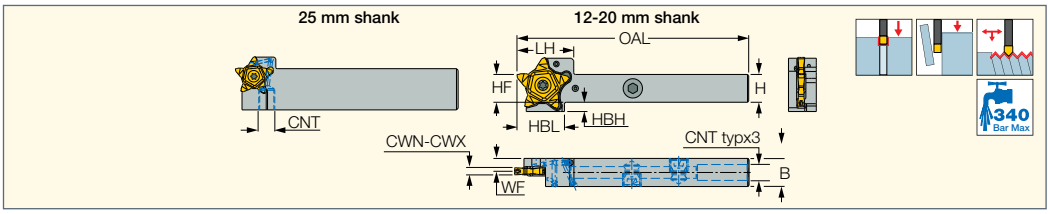
Spare Parts

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

PENTACUT JETCUT PARTING & GROOVING LINE

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 440-457

(1) Minimum cutting width

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

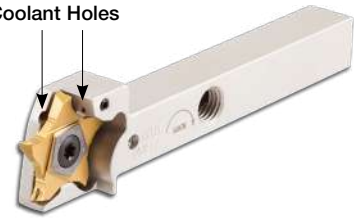
(3) For specific information, refer to insert data.

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z

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

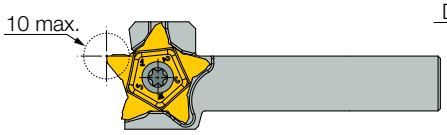
Coolant Holes



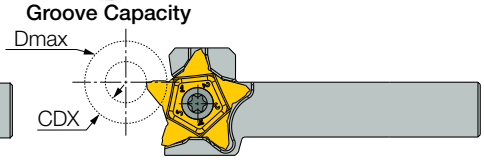
(2) Grooving Depth CDX Relative to Dmax

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

Cut-off to Center



Groove Capacity



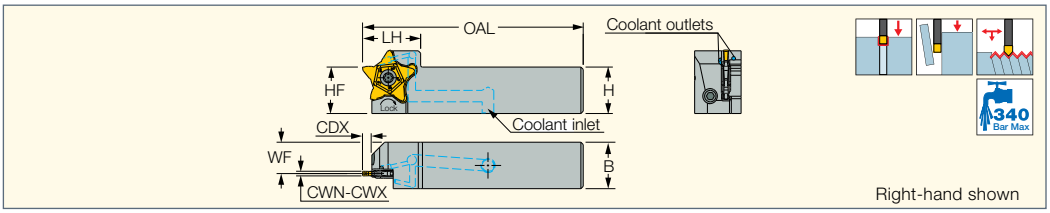
Spare Parts

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			

PENTACUT JETCUT PARTING & GROOVING LINE

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 440-457

(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.

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z

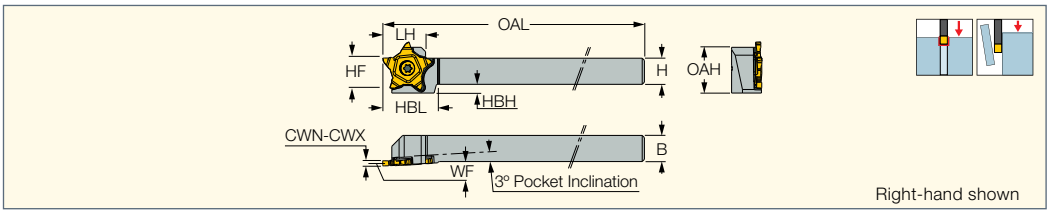
Spare Parts

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

PENTACUT PARTING & GROOVING LINE

PCHRS/LS

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



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

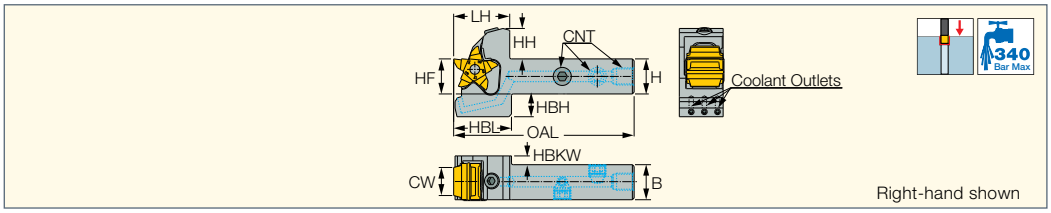
(1) Minimum cutting width
(2) Maximum cutting width

Inserts: PENTA 24N-J-RS • PENTA 24N-RS/LS

PENTACUT PARTING & GROOVING LINE

PCHR/L-27-JHP-MC

Tools Carrying Pentagonal Wide Inserts for Specially Tailored Profiles



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

Inserts: PENTAS 27 blanks

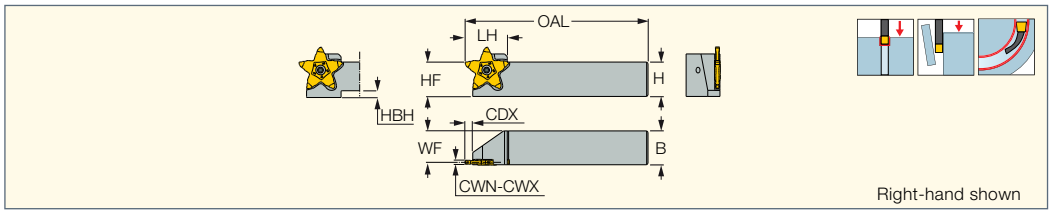
Spare Parts

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		

PENTACUT PARTING & GROOVING LINE

PCHR/L-34

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



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	

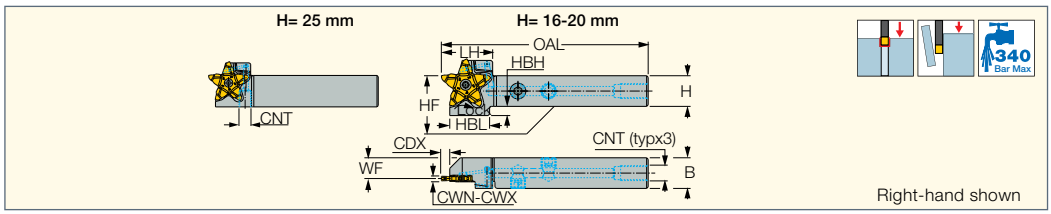
(1) Used with special inserts only
(2) Minimum cutting width
(3) Maximum cutting width
(4) For specific information, refer to insert data

Inserts: PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

PENTACUT PARTING & GROOVING LINE JETCUT

PCHR/L-34-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	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 440-457

(1) Minimum cutting width
(2) Maximum cutting width
(3) For specific information, refer to insert data

Inserts: PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

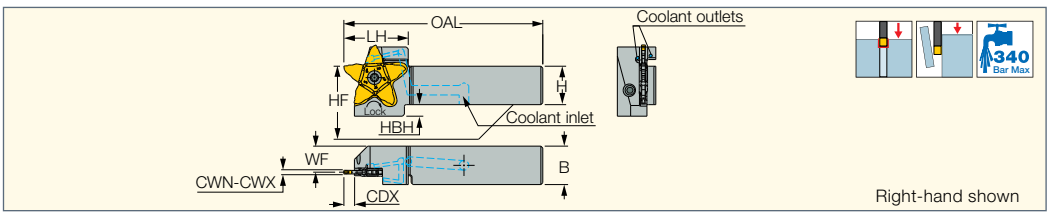
Spare Parts

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		

PENTACUT PARTING & GROOVING LINE JETCUT

PCHR/L-34-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	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 440-457

(1) Minimum cutting width
(2) Maximum cutting width
(3) For specific information, refer to insert data

Inserts: PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

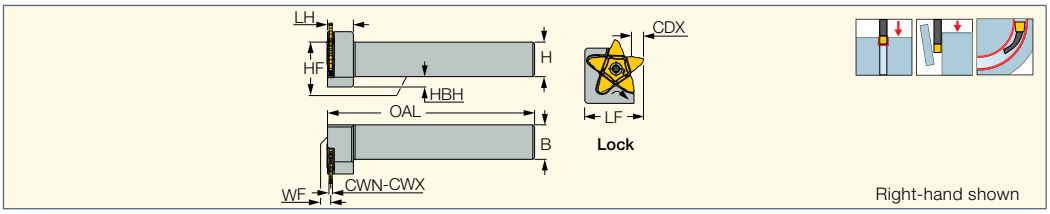
Spare Parts

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

PENTACUT
PARTING & GROOVING LINE

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

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z • PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

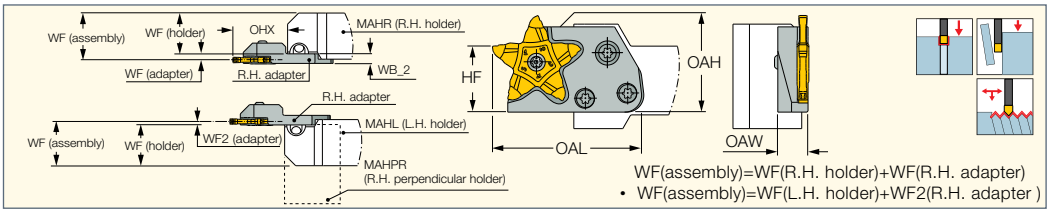
Spare Parts

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

PENTACUT
PARTING & GROOVING LINE
MODULAR-GRIP

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

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z • PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

Holders: MAHPR/L-JHP • MAHR/L-JHP • MAHR/L • MAHPR/L • C#-MAHD • C#-MAHPD • C#-MAHDR-45 • HSK A63WH-MAHUR/L • HSK A63WH-MAHDR-45 • HSK A63WH-MAHDOR • IM-MAHD • IM-MAHPD • C#-MAHD-JHP • C#-MAHPD-JHP • MAHR/L-JHP-MC

Spare Parts

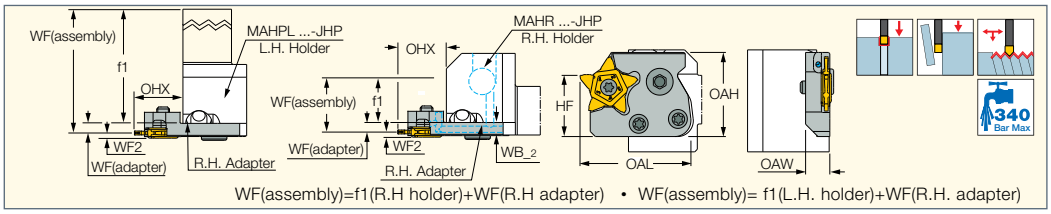
Designation	
PCADL 24N	SR 16-212-01397L(a)
PCADR 24N	SR 16-212-01397
PCADR/L 34N	SR 16-212-01397

(a) For left-hand holders

PENTACUT PARTING & GROOVING LINE JETCUT
MODULARGRIP

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 accessores, see pages 440-457

(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

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z • PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

Holders: ABC MAHDR-#-XL-JHP • C#-MAHD-JHP • C#-MAHPD-JHP • MAHPR/L-JHP • MAHR/L-JHP • MAHR/L-JHP-MC • MS##-##-MG-JHP • MS-ES#####-GWS-MG-JHP • TR TNK36 MAHDL-R-XL-JHP • TR45 MAHDR-#-XL-JHP • TR45TNL MAHDN-R-XL-JHP • V## MAHD#-#-XL-##-JHP • V## MAHD-XL-JHP

Flow Rate vs. Pressure

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

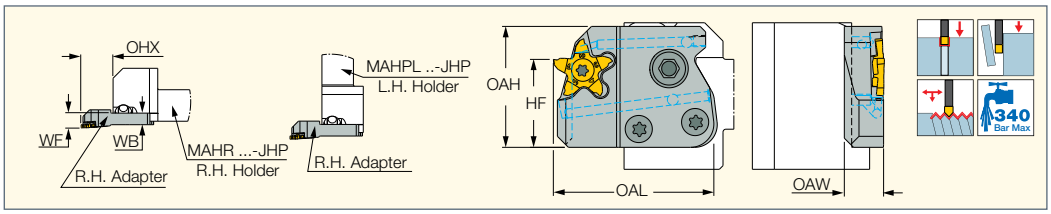
Spare Parts

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

PENTACUT PARTING & GROOVING LINE JETCUT

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 accessores, see pages 440-457

(1) Minimum cutting width

(2) Maximum cutting width

(3) Maximum overhang

Inserts: PENTA 17-MT-RS/LS • PENTA 17-P-RS/LS • PENTA 17-WT-RS/LS • PENTA 17R/L-P-RS • PENTA 17R/L-SP-RS

Holders: ABC MAHDR-#-XL-JHP • C#-MAHD-JHP • C#-MAHPD-JHP • DT##/2 MAHD#-#-XL-JHP • MAHPR/L-JHP • MAHR/L-JHP • MAHR/L-JHP-MC • MS##-##-MG-JHP • MS-ES#####-GWS-MG-JHP • TR TNK36 MAHDL-R-XL-JHP • TR45 MAHDR-#-XL-JHP • TR45TNL MAHDN-R-XL-JHP • V## MAHD#-#-XL-##-JHP • V## MAHD-XL-JHP

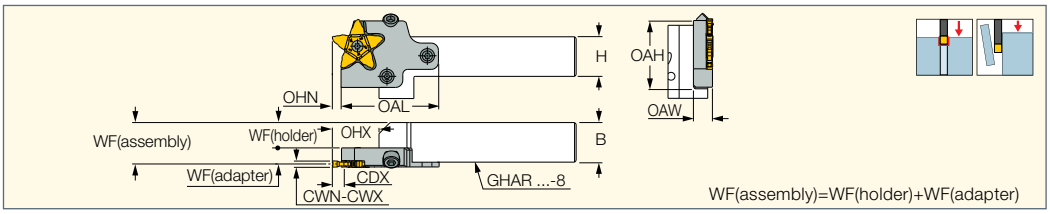
Spare Parts

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

PENTACUT PARTING & GROOVING LINE

PCADR/L 34N-RE

Reinforced Adapters for PENTACUT Grooving Inserts



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

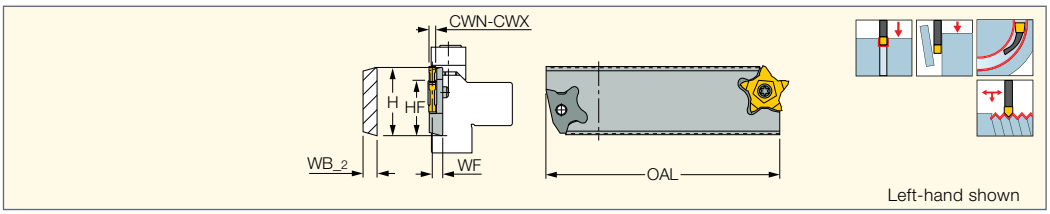
(1) Minimum cutting width
(2) Maximum cutting width
(3) Minimum overhang
(4) Maximum overhang
(5) WF(adapter)

Inserts: PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB
Holders: C#-GHAD-8 • C#-GHAPR/L-8 • GHAPR/L-8 • GHAR/L-8 • IM-GHAD-8

PENTACUT PARTING & GROOVING LINE

PCHBR/L

Double-Ended Parting and Grooving Blades for PENTACUT Inserts



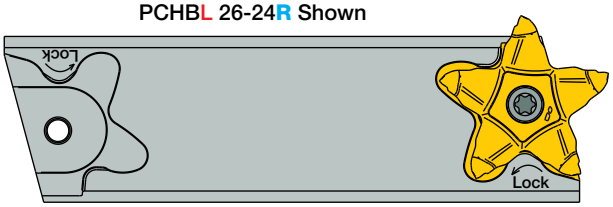
Designation	H	CWN(2)	CWX(3)	HF	WF(4)	OAL	WB_2	Insert	
PCHBL 26-24R	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24	SR 16-212-01397L
PCHBR 26-24L	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24	SR 16-212-01397
PCHBR 26-24R	26.0	0.50	6.20	21.4	1.50	110.00	8.5	PENTA 24	
PCHBL 32-24R	32.0	0.50	6.20	24.8	7.00	110.00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

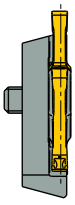
(1) Single pocket blade
(2) Minimum cutting width
(3) Maximum cutting width
(4) To the center of inserts up to 4.15 mm width

Inserts: PENTA 24-BSPT • PENTA 24-ISO • PENTA 24-MT • PENTA 24-NPT • PENTA 24-UN • PENTA 24-W • PENTA 24-WT • PENTA 24N-C • PENTA 24N-C (full radius) • PENTA 24N-J • PENTA 24N-J (full radius) • PENTA 24N-PF (full radius) • PENTA 24N-PF/P • PENTA 24N-Z • PENTA 24R-C • PENTA 24R-P • PENTA 24R/L-J • PENTA 24R/L-Z • PENTA 34F-R/L • PENTA 34N-C • PENTA 34N-J • PENTA 34N-PB • PENTA 34R/L-C • PENTA 34R/L-J • PENTA 34R/L-PB

PCHBL 26-24R Shown

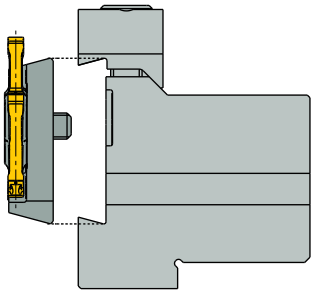


PCHBL 26-24L

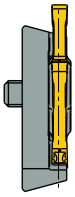


Left-hand blade

PCHBL 26-24R

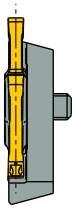


PCHBR 26-24L



Right-hand blade

PCHBR 26-24R



Pocket location on the blade

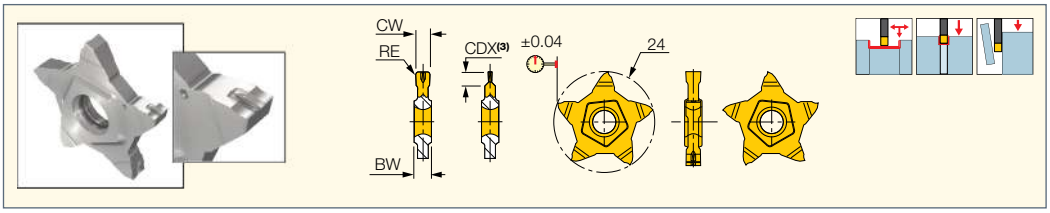
Identification System for Standard Inserts

PENTA	24	N	150	J	010
Family name	Circular circumference of the insert	Insert lead angle (K) N, R, L	Cutting edge width CW(mm) x100	Chipbreaker style J, Z	Corner radius RE (mm)x100 for neutral insert. (k=0) Or lead angle for right- or left-hand inserts.

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	f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

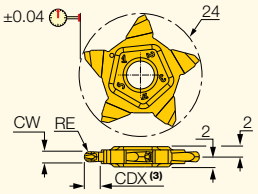
(3) For grooving and parting depth relative to part diameter, see page 323

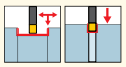
Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

PENTACUT PARTING & GROOVING LINE

PENTA 24N-J (full radius)

Precision Grooving
Pentagonal Full Radius
Inserts for Soft Materials





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	Tough ↔ Hard IC908	IC807G	Recommended Machining Data f groove (mm/rev)
PENTA 24N100J050	1.00	0.50	0.02	0.050	3.50	•		0.03-0.07
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	•		0.05-0.08
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	•	•	0.05-0.12
PENTA 24N239J120	2.39	1.20	0.02	0.050	5.00	•		0.06-0.16
PENTA 24N300J150	3.00	1.50	0.02	0.050	6.50	•	•	0.06-0.20
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

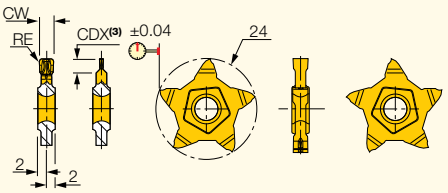
(3) For grooving depth relative to part diameter, see page 323

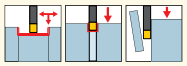
Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

PENTACUT PARTING & GROOVING LINE

PENTA 24N-C

Parting and Grooving Inserts
with 5 Cutting Edges for
Parting Bars, Hard Materials
and Tough Applications





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150C010	1.50	0.10	0.02	0.050	5.00	•	0.05-0.11
PENTA 24N157C015	1.57	0.15	0.02	0.050	3.00	•	0.05-0.12
PENTA 24N170C010	1.70	0.10	0.02	0.050	3.00	•	0.05-0.13
PENTA 24N178C018	1.78	0.18	0.02	0.050	3.00	•	0.05-0.14
PENTA 24N196C015	1.96	0.15	0.02	0.050	3.00	•	0.05-0.15
PENTA 24N200C020	2.00	0.20	0.02	0.050	6.00	•	0.05-0.16
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	•	0.06-0.17
PENTA 24N239C015	2.39	0.15	0.02	0.050	5.00	•	0.07-0.18
PENTA 24N247C020	2.47	0.20	0.02	0.050	5.00	•	0.08-0.18
PENTA 24N270C010	2.70	0.10	0.02	0.050	6.20	•	0.09-0.18
PENTA 24N287C020	2.87	0.20	0.02	0.050	6.20	•	0.10-0.18
PENTA 24N300C020	3.00	0.20	0.02	0.050	6.20	•	0.10-0.20
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

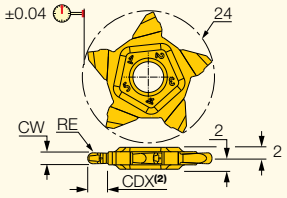
(3) For grooving and parting depths relative to part diameter, see page 323

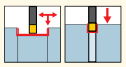
Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

PENTACUT PARTING & GROOVING LINE

PENTA 24N-C (full radius)

Full Radius Grooving Inserts with 5 Cutting Edges for Hard Materials and Tough Applications





Designation	Dimensions CW	RE	CWTOL(1)	CDX(2)	IC908	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

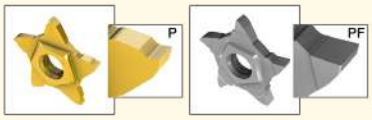
(2) For grooving depth relative to part diameter, see page 323

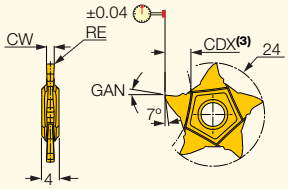
Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

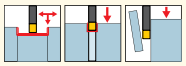
PENTACUT PARTING & GROOVING LINE

PENTA 24N-PF/P

Pentagonal Inserts with a High Positive Flat Rake for Parting and Precision Grooving







Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	GAN	Tough ↔ Hard IC1008	IC908	IC30N	Recommended Machining Data f groove (mm/rev)
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 24N100P005	1.00	0.05	0.02	0.020	3.50	12.0	●			0.02-0.05
PENTA 24N100PF010	1.00	0.10	0.02	0.020	4.00	6.0		●	●	0.03-0.06
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 24N150P005	1.50	0.05	0.02	0.020	5.00	12.0	●			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 24N200P005	2.00	0.05	0.02	0.020	6.00	12.0	●			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 24N300PF020	3.00	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			●	0.04-0.15
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

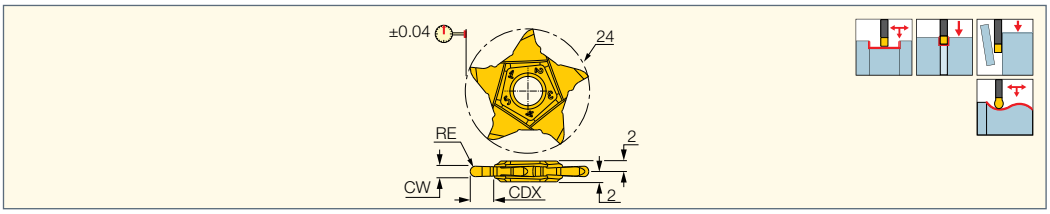
(3) For grooving and parting depths relative to part diameter, see page 323

Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

PENTACUT PARTING & GROOVING LINE

PENTA 24N-PF (full radius)

Full Radius Pentagonal Inserts with a High Positive Flat Rake for Parting and Precision Grooving



Designation	Dimensions CW	RE	CWTOL(1)	CDX(2)	GAN	IC30N	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

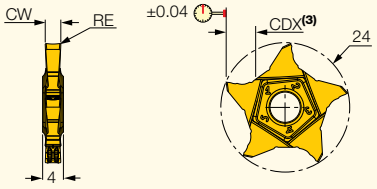
(2) For grooving and parting depths relative to part diameter, see page 323

Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

PENTACUT PARTING & GROOVING LINE

PENTA 24N-Z

Inserts with 5 Cutting Edges for Grooving and Parting Tubes, Small and Thin-Walled Parts



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	IC908	Recommended Machining Data 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 440-457

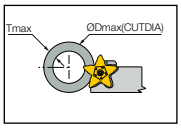
(1) Cutting width tolerance (+/-)

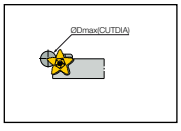
(2) Corner radius tolerance (+/-)

(3) For grooving and parting depths relative to part diameter, see page 323

Tools: PCAD RE/LE-JHP • PCADR/L • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-24 • PCHR/L-24-JHP • PCHR/L-24-JHP-MC

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





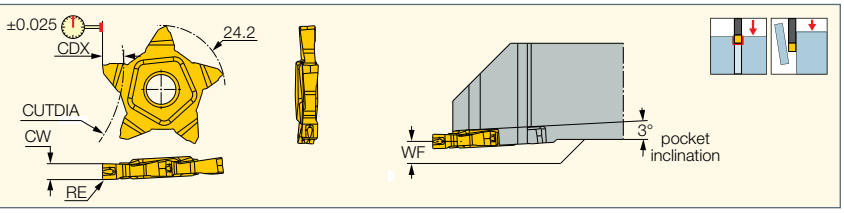
(1) Refers to PENTA 24N050J000 - a precision grooving insert (2) Refers to PENTA 24N050J004 - a parting insert (3) CUTDIA for parting = 2 x CDX

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

PENTACUT PARTING & GROOVING LINE

PENTA 24N-J-RS

Parting and Precision Grooving Pentagonal Inserts for Next to High Shoulder Applications



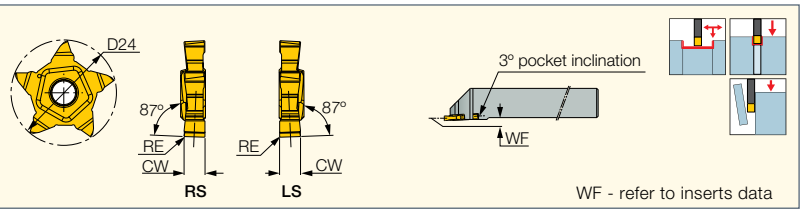
Designation	Dimensions CW	RE	CWTOL(1)	CDX(2)	CUTDIA	WF	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N157J020RS	1.57	0.20	0.20	3.00	-	1.20	●	0.03-0.10
PENTA 24N157J079RS	1.57	0.79	0.20	3.00	-	1.20	●	0.04-0.12
PENTA 24N200J020RS	2.00	0.20	0.20	3.00	-	1.00	●	0.04-0.12
PENTA 24N239J020RS	2.39	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
Tools: PCHRS/LS

PENTACUT PARTING & GROOVING LINE

PENTA 24N-RS/LS

Pentagonal Inserts for Parting and Precision Grooving Next to High Shoulder Applications



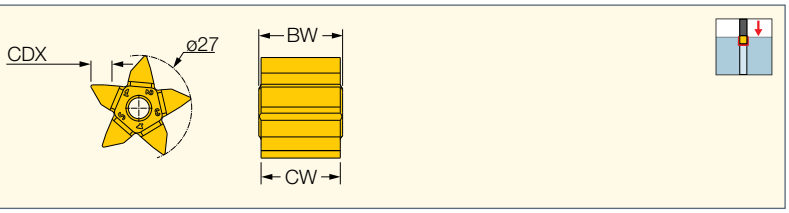
Designation	Dimensions CW	RE	CWTOL(1)	CDX(2)	CUTDIA	WF	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N080NF010R/LS	0.80	0.10	0.02	1.60	- (3)	1.60	●	0.03-0.05
PENTA 24N100NF010R/LS	1.00	0.10	0.02	1.80	- (3)	1.50	●	0.03-0.06
PENTA 24N119NF010R/LS	1.19	0.10	0.02	2.00	- (3)	1.40	●	0.03-0.06
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 440-457
(1) Cutting width tolerance (+/-)
(2) Cutting depth maximum
(3) No limit
Tools: PCHRS/LS

PENTACUT PARTING & GROOVING LINE

PENTAS 27 blanks

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



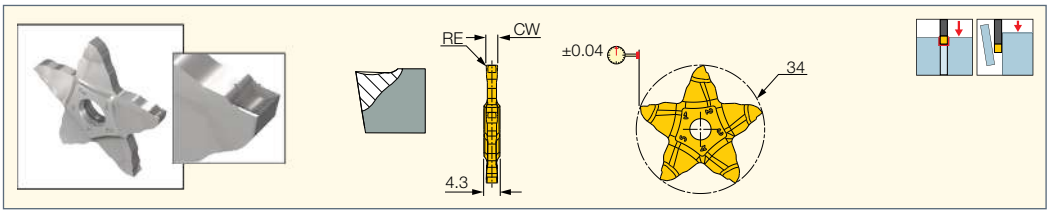
Designation	Dimensions CW	CDX	BW	IC08
PENTAS 27-10FT	10.00	4.00	11.80	●
PENTAS 27-15FT	15.00	4.00	16.80	●
PENTAS 27-20FT	20.00	4.00	21.80	●

Tools: PCHR/L-27-JHP-MC

PENTACUT PARTING & GROOVING LINE

PENTA 34N-PB

Parting and Grooving Pentagonal Inserts for Parting Bearing Steel and Other Ductile Materials



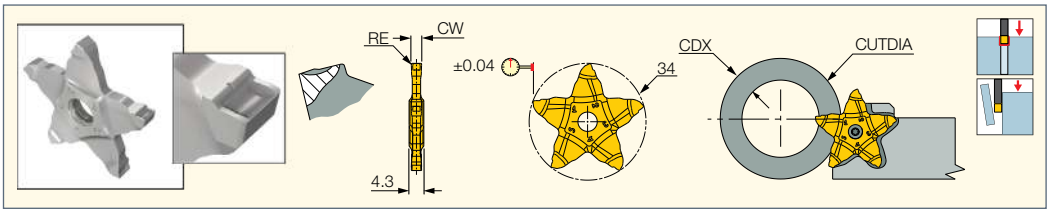
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150PB015	1.50	0.15	0.02	0.030	8.50	●	0.03-0.06
PENTA 34N200PB020	2.00	0.20	0.02	0.030	8.50	●	0.03-0.08
PENTA 34N300PB020	3.00	0.20	0.02	0.030	9.50	●	0.03-0.10

• For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) For grooving and parting depths relative to part diameter, see page 325
Tools: PCADR/L • PCADR/L 34N-RE • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-34 • PCHR/L-34-JHP

PENTACUT PARTING & GROOVING LINE

PENTA 34N-C

Inserts with 5 Cutting Edges for Parting and Grooving Hard Materials, Tough and General Applications

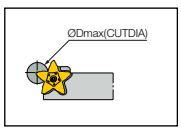


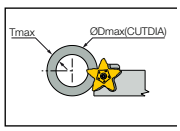
Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 34N150C015	1.50	0.15	0.02	0.030	8.00	●	0.03-0.07
PENTA 34N200C020	2.00	0.20	0.02	0.030	8.00	●	0.04-0.14
PENTA 34N200C100	2.00	1.00	0.02	0.050	8.00	●	0.05-0.16
PENTA 34N222C015	2.22	0.15	0.02	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 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) For grooving and parting depths relative to part diameter, see page 325
Tools: PCADR/L • PCADR/L 34N-RE • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-34 • PCHR/L-34-JHP

	ØDmax as a Function of Parting / Grooving Depth (T) for PENTA 34 Inserts						
CW±0.02	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						55	20

CUTDIA for parting = 2 x CDX
N.L. = No Limit



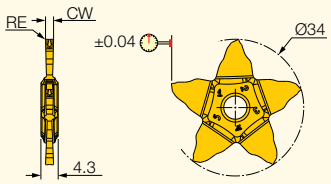


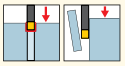
GTGA (3 Cutting Edges)

PENTACUT PARTING & GROOVING LINE

PENTA 34N-J

Inserts with 5 Cutting Edges for Parting and Grooving Soft Materials, Parting Tubes, Small and Thin-Walled Parts





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	IC908	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

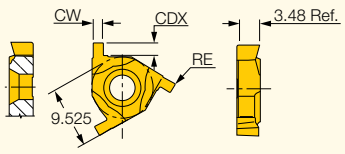
(2) Corner radius tolerance (+/-)

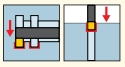
(3) For grooving and parting depths relative to part diameter, see page 325

Tools: PCADR/L • PCADR/L 34N-RE • PCADR/L-JHP • PCHBR/L • PCHPR/L • PCHR/L-34 • PCHR/L-34-JHP

GTGA

Precision Shallow Grooving Inserts with 3 Cutting Edges





GTGA 16 ER/IL shown

Designation	Dimensions CW	CDX(1)	CWTOL(2)	RE	RETOL(3)	Tough ↔ Hard IC528	IC508	Recommended Machining Data 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 440-457

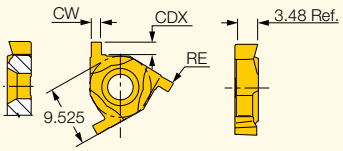
(1) Cutting depth maximum

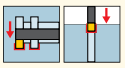
(2) Cutting width tolerance (+/-)

(3) Corner radius tolerance (+/-)

Tools: AVC-D-SIR/L • C#-SER/L • C#-SIR/L • SER-D • SER/L • SER/L-JHP • SER/L-JHP-MC • SIR/L

GTMA
Utility Shallow Grooving
Inserts with 3 Cutting Edges





GTMA 16 ER/IL shown

Designation	Dimensions CW	CDX(1)	CWTOL(2)	RE	RETOL(3)	IC508	Recommended Machining Data 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 440-457

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

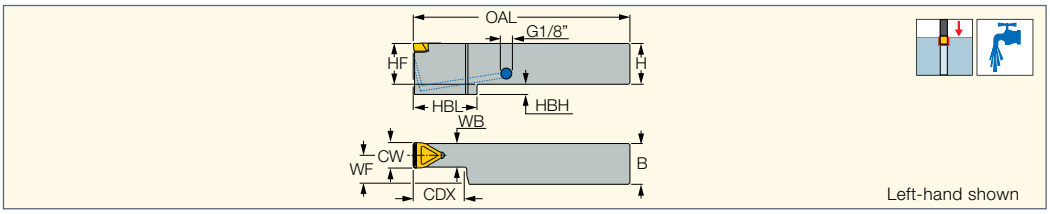
Tools: AVC-D-SIR/L • C#-SER/L • C#-SIR/L • SER-D • SER/L • SER/L-JHP • SER/L-JHP-MC • SIR/L

HEAVY DUTY

DOVE-IQ-GRIP Tools and Inserts

DOVE IQ GRIP TIGER LINE

THDR/L-IQ
External Holders for Wide Grooving Inserts



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

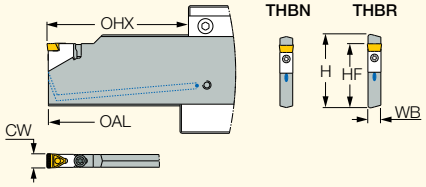
(1) Cutting depth maximum

Inserts: TIGER-IQ

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



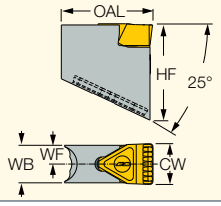
Designation	CW	OHX[3]	CDX[4]	WB	OAL	HF	H						
THBN 53K-10-IQ [1]	10.00	100.0	93.00	9.00	260.00	45.2	52.6	SR M5X3.5PL	SR M5X23-A90	BLD IP20/S7	SW6-T	SGC 340	SGCU 341
THBR/L 53K-12-IQ [2]	12.00	100.0	93.00	10.80	260.00	45.2	52.6	SR M5X3.5PL	SR M5X23-A90	BLD IP20/S7	SW6-T	SGC 340	SGCU 341
THBR/L 53K-14-IQ [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 440-457

[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.

Tools: CR THDN-IQ

CR THDN-IQ
Cartridges for Blades Carrying Wide Grooving Inserts

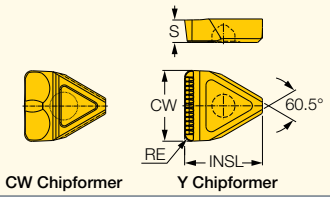


Designation	CW	WF	HF	OAL	WB				
CR THDN-10-IQ	10.00	4.60	24.0	22.60	9.20	SR M6-26392	PIN 5.5 INJ	BLD T15/S7	SW6-T
CR THDN-12-IQ	12.00	5.50	23.7	23.60	11.00	SR M6-26392	PIN 5.5 INJ	BLD T15/S7	SW6-T
CR THDN-14-IQ	14.00	6.50	23.7	24.20	13.00	SR M6-26392	PIN 5.5 INJ	BLD T15/S7	SW6-T

- For user guide, see pages 440-457

Inserts: TIGER-IQ
Holders: THBR/L/N-IQ

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



Designation	Dimensions						Tough ↔ Hard		Recommended Machining Data
	CW	RE	CWTOL[1]	RETOL[2]	S	INSL	IC830	IC808	f groove (mm/rev)
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 440-457

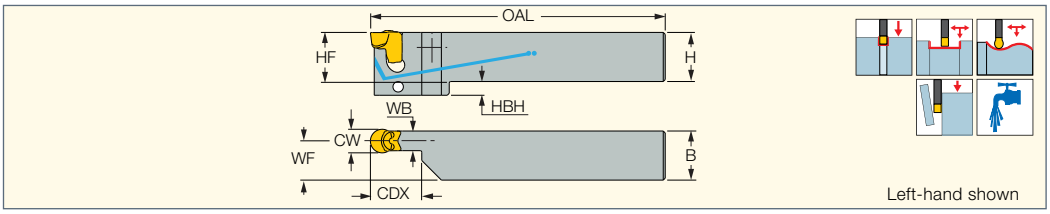
[1] Cutting width tolerance (+/-)
[2] Corner radius tolerance (+/-)

Tools: CR THDN-IQ • THDR/L-IQ

SUMO-GRIP Tools and Inserts

SUMO-GRIP HEAVY DUTY LINE

TGBHR/L
Toolholders for Heavy Duty Groove-Turn and Parting Applications



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 440-457

(1) For detailed depth capacity, see table below

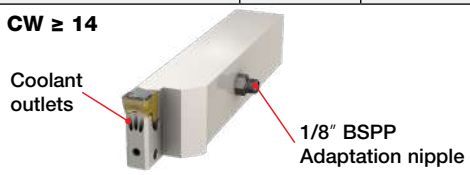
(2) Cutting depth maximum

Inserts: TAG N-C/W/M • TAG N-J/JS/JT • TAG N-UT • TAG R/L-C • TAG R/L-J/JS • TAGB/TAGBA

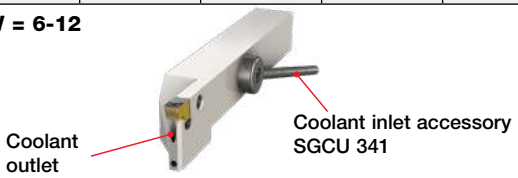
Depth Capacity for TGBHR/L...C-6

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

CW ≥ 14



CW = 6-12



Spare Parts

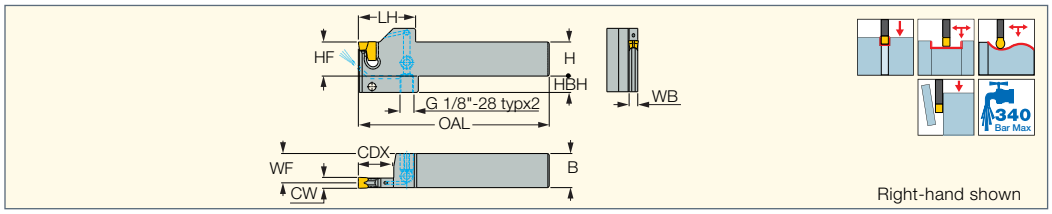
Designation				
TGBHR/L 20C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 25C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 32C-6	ETG 5-7*	SGCU 341*		
TGBHR/L 25C-8	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-8	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-10	ETG 8-12*	SGCU 341*		
TGBHR/L 32C-10	ETG 8-12*	SGCU 341*		
TGBHR/L 25C-12	ETG 8-12*	SGCU 341*		
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

SUMO-GRIP HEAVY DUTY LINE
JETCUT

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 440-457
(1) Cutting depth maximum
Inserts: TAG N-C/W/M • TAGB/TAGBA

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar 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

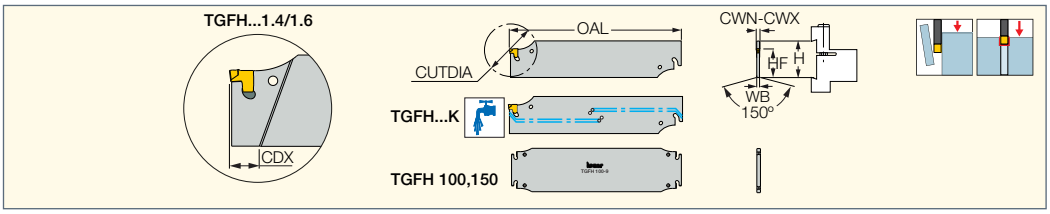
* Optional, should be ordered separately

TANG-GRIP PARTING LINE

SUMO-GRIP HEAVY DUTY LINE

TGFH/R/L

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



Designation	H	CWN[2]	CWX[3]	WB	OAL	CDX	HF	CUTDIA	CSP[4]	Insert		
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 [6]	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 [6]	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 440-457

[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

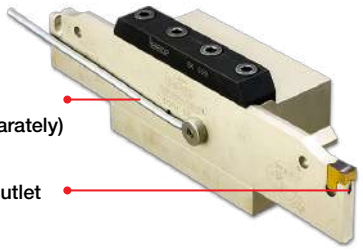
Inserts: TAG N-A • TAG N-C/W/M • TAG N-HF • TAG N-J/JS/JT • TAG N-LF • TAG N-MF • TAG N-UT • TAG R/L-C • TAG R/L-J/JS • TAGB/TAGBA

Holders: C#-TBK-R/L • HSK A-WH-TBK-R/L • SGTBF • SGTBK • SGTBR/L • SGTBU/SGTBN • UBHCR/L

K TYPE COOLANT

Coolant inlet SGCU-341
(should be ordered separately)

Coolant outlet

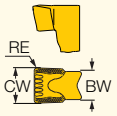


CUT-GRIP Tools and Inserts

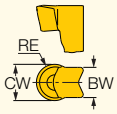
SUMO-GRIP HEAVY DUTY LINE

TAGB/TAGBA

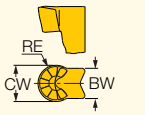
Single-Ended Utility Inserts for Grooving, Turning and Parting



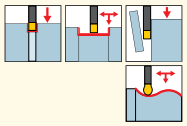
TAGB 608Y
TAGB 808Y
TAGB 1008Y
TAGB 1208Y
TAGB 1415Y



TAGB 1260H



TAGB 630Y
TAGBA 80-40YZ
TAGB 840Y
TAGB 1050Y
TAGB 1260Y



Designation	Dimensions CW	CWTOL(3)	RE	RETOL(4)	BW	Tough ↔ Hard IC8250	IC808	IC07	IC806	IC807	Recommended Machining Data 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 440-457

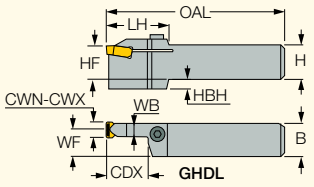
(1) Blade's pocket must be modified
(2) Tool's pocket must be modified
(3) Cutting width tolerance (+/-)
(4) Corner radius tolerance (+/-)

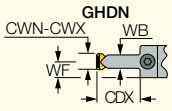
Tools: Anti-Vibration Blades • TGBHR/L • TGBHR/L-JHP • TGFH-JHP • TGFH/R/L • TGSU • TGTR/L-IQ

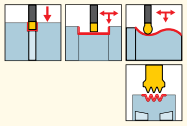
CUT-GRIP

GHDR/L/N 12/14

External Tools for Wide Grooving Inserts







Left-hand shown

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 440-457

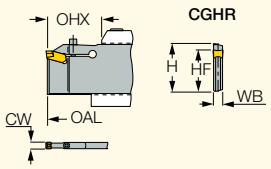
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum

Inserts: GIMY 1260 • GPV • TIGER

CUT-GRIP

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 440-457

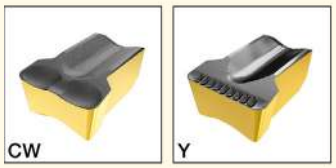
(1) Minimum cutting width
(2) Maximum cutting width
(3) Maximum overhang
(4) If workpiece diameter is smaller than 200 mm, then CDX=98, if workpiece diameter is larger than 200 mm, then CDX=93.

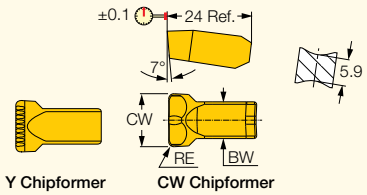
Inserts: GIMY 1260 • TIGER
Holders: SGTBK • SGTBU/SGTBN

CUTGRIP

TIGER

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





Designation	Dimensions CW	CWTOL(1)	RE	RETOL(2)	BW	INSL	Tough ↔ Hard IC830	IC808	IC20	Recommended Machining Data f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

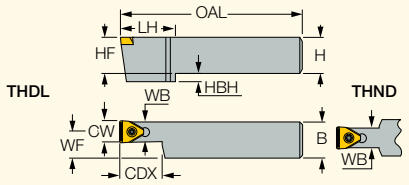
(2) Corner radius tolerance (+/-)

Tools: CGHR/L-12-14D • GHDR/L/N 12/14

CUTGRIP

THDR/L/N

External Holders for Wide (20 mm) Grooving Inserts



Left-hand shown

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

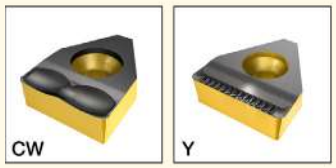
(1) Cutting depth maximum

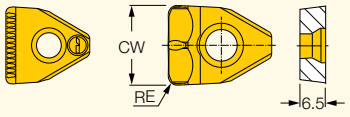
Inserts: TIGERV

CUTGRIP

TIGERV

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	Tough ↔ Hard IC830	IC808	IC20	Recommended Machining Data f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

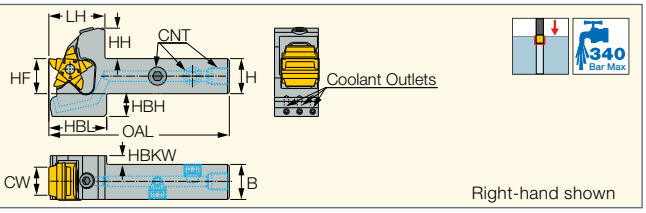
Tools: THDR/L/N

PENTA-CUT Tools and Inserts

PENTACUT PARTING & GROOVING LINE

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

Inserts: PENTAS 27 blanks

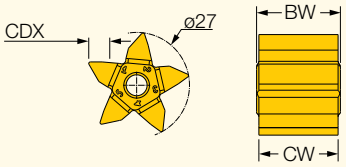
Spare Parts

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		

PENTACUT PARTING & GROOVING LINE

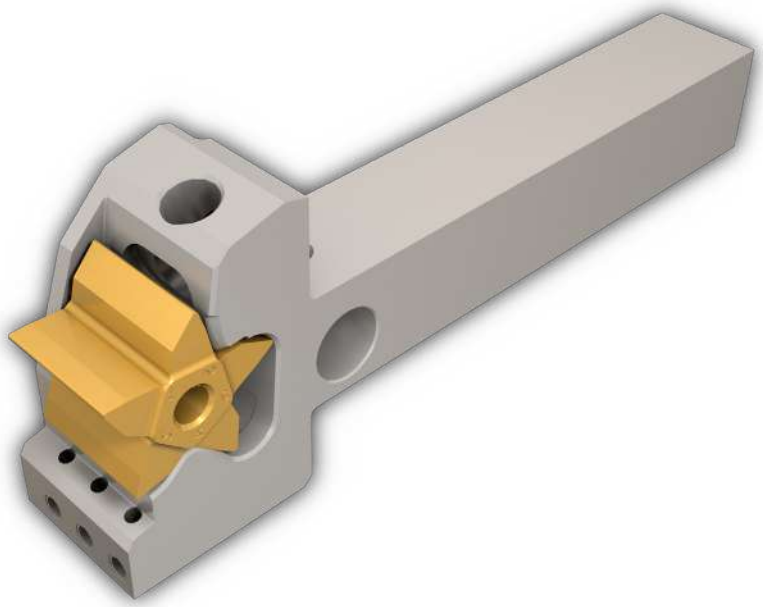
PENTAS 27 blanks

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	●

Tools: PCHR/L-27-JHP-MC



INTERNAL TOOLS AND INSERTS

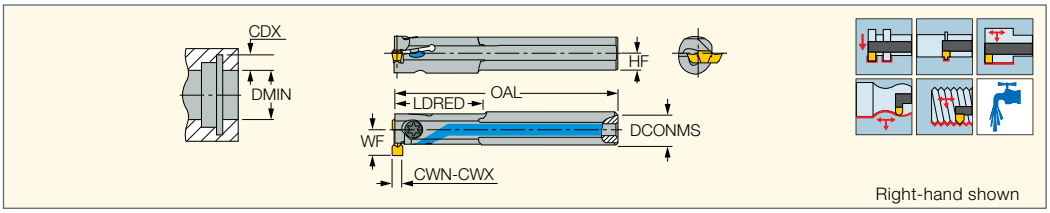
Internal Tools and Inserts

CUT-GRIP Boring Bars Dmin 12.5 mm (GEPI Inserts)

CUT-GRIP

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 440-457

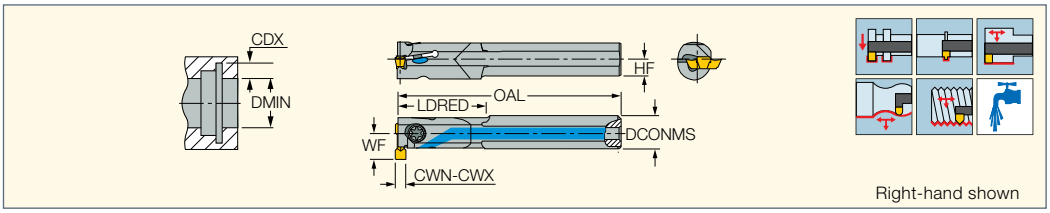
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
(4) Coolant inlet diameter

Inserts: GEPI • GEPI (W<M) • GEPI-MT • GEPI-RX/LX • GEPI-WT

CUT-GRIP

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 440-457

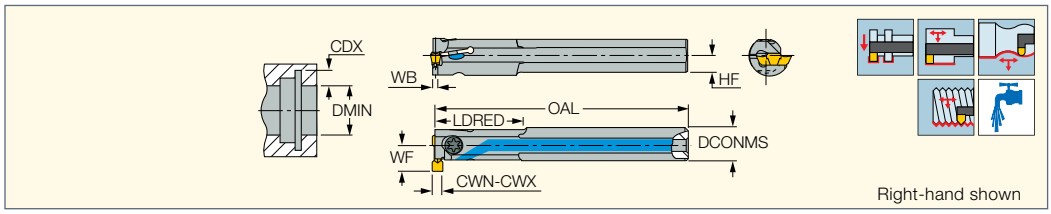
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
(4) Coolant inlet diameter

Inserts: GEPI • GEPI (W<M) • GEPI-MT • GEPI-RX/LX • GEPI-WT

CUTGRIP

GEHIR/L

Internal Machining Bars
with Coolant Holes



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
GEHIL 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
GEHIL 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 440-457

[1] Minimum cutting width
[2] Maximum cutting width
[3] Cutting depth maximum
[4] Coolant inlet diameter

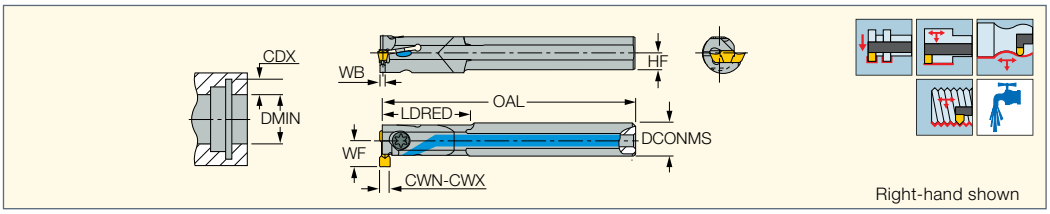
Inserts: GEMI • GEMI (full radius) • GEPI • GEPI (full radius) • GEPI-MT • GEPI-WT

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	
GEHIL 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



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	SR 16-236	T-15/5	
GEHIR 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	SR 16-236	T-15/5	
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	SR M5-04451	T-20/5	PL 16
GEHIR 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	SR 16-236	T-15/5	
GEHIR 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	SR 16-236	T-15/5	PL 16
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	SR 16-236	T-15/5	PL 16
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	SR M5-04451	T-20/5	PL 16

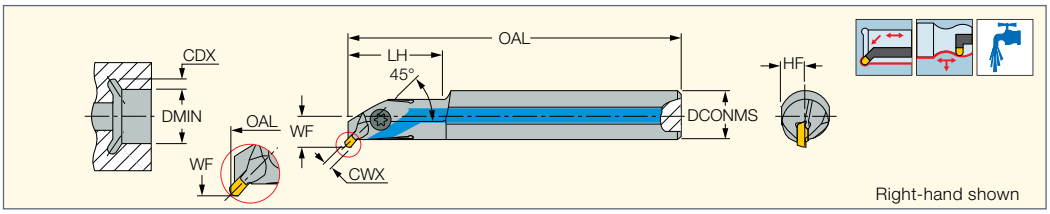
- For user guide, see pages 440-457

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

Inserts: GEMI • GEMI (full radius) • GEPI • GEPI (full radius) • GEPI-MT • GEPI-WT

CUTGRIP

GEHIUR/L
Boring Bars with Coolant Holes for Undercutting and Turning



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	SR 16-236 P	T-15/5	
GEHIUR/L 16U	3.20	16.00	16.00	2.00	125.00	32.0	9.70	7.5	8.00	SR M5-04451	T-20/5	PL 16

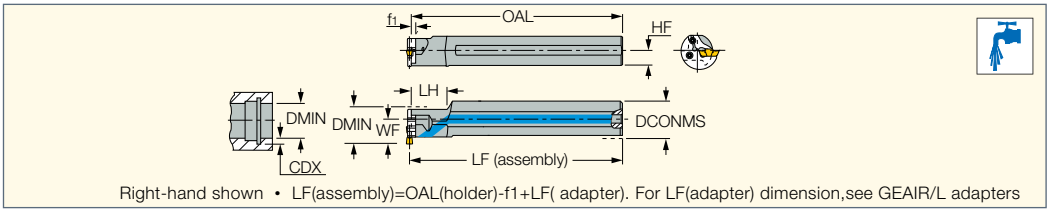
- For profiling use GEPI (full radius) inserts only, for undercutting use GEPI - UN/UR/UL

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

Inserts: GEPI (full radius) • GEPI-UN/UR/UL

CUTGRIP

GHAIR/L-GE
Bars with Coolant Holes for Internal Grooving and Turning 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..	SR 76-2057	T-8/5	PL 16
GHAIR/L 20-20	20.00	20.0	150.00	13.50	9.0	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 20
GHAIR/L 25-20	25.00	25.0	200.00	16.00	11.5	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 25
GHAIR/L 32-20	32.00	32.0	200.00	19.50	14.5	2.4	GEAIR/L 20..	SR 76-2057	T-8/5	PL 32
GHAIR/L 20-25	20.00	-	150.00	14.50	9.0	2.4	GEAIR/L 25..	SR 16-236 P	T-15/5	PL 20
GHAIR/L 25-25	25.00	25.0	200.00	17.00	11.5	2.4	GEAIR/L 25..	SR 16-236 P	T-15/5	PL 25
GHAIR/L 32-25	32.00	32.0	200.00	20.50	14.5	2.4	GEAIR/L 25..	SR 16-236 P	T-15/5	PL 32

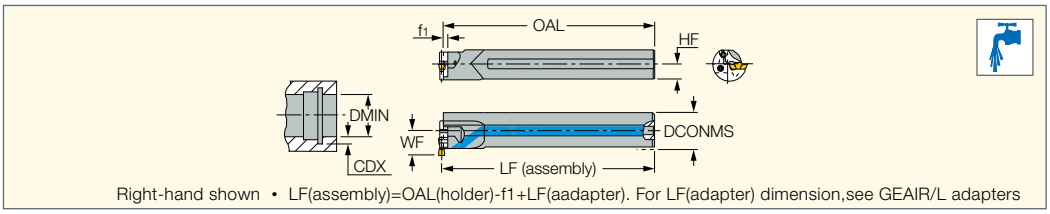
- For DMIN & CDX refer to GEAIR/L adapters

Tools: GEAIR/L

CUTGRIP

GHAIR/L-SC-GE

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



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

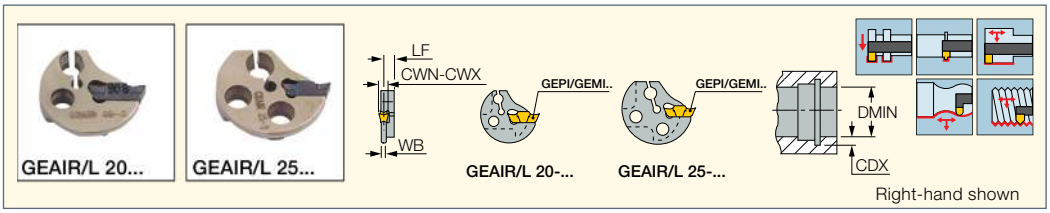
• For DMIN & CDX refer to GEAIR/L adapters.

Tools: GEAIR/L

CUTGRIP

GEAIR/L

Internal Grooving and Turning Adapters



Right-hand shown

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 440-457

[1] Minimum cutting width

[2] Maximum cutting width

[3] Cutting depth maximum

[4] Master insert identification

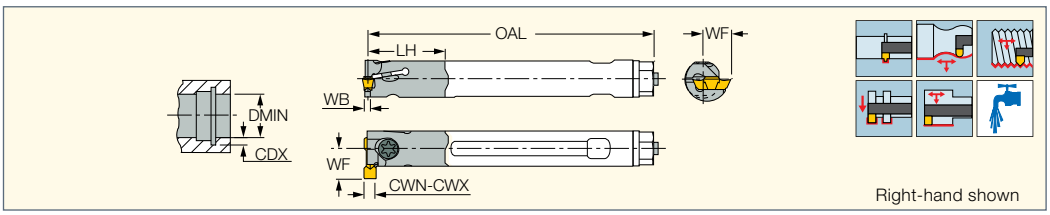
Inserts: GEMI • GEMI (full radius) • GEPI • GEPI (full radius) • GEPI-MT • GEPI-WT

Holders: C#-GHAIR/L • GHAIR/L-GE • GHAIR/L-SC-GE

CUTGRIP

E-GEHIR / E-GHIR

Interchangeable Heads for Internal Grooving and Turning



Right-hand shown

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 GHIR 25-3	2.40	3.00	25.00	4.00	209.00	28.7	12.80	2.00	GIPI,GIMIY,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 440-457

[1] Minimum cutting width

[2] Maximum cutting width

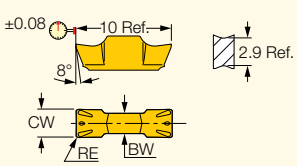
[3] Cutting depth maximum

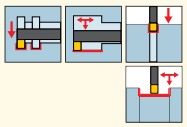
Inserts: GEMI • GEMI (full radius) • GEPI • GEPI (full radius) • GEPI (W<M) • GEPI-MT • GEPI-WT • GIMIY • GINI-E • GIPI • GIPI-E

CUTGRIP

GEMI

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC808	IC908	IC807	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

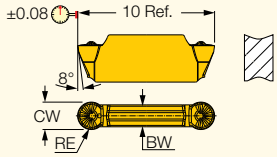
(2) Corner radius tolerance (+/-)

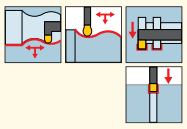
Tools: AVC-GEAIR/L • E-GEHIR / E-GHIR • GEAIR/L • GEHIR/L • GEHIR/L-SC • GEHSR • GEHSR/L-SL

CUTGRIP

GEMI (full radius)

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





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	IC808	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

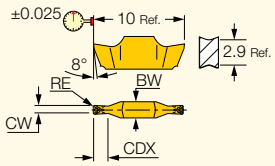
(2) Corner radius tolerance (+/-)

Tools: AVC-GEAIR/L • E-GEHIR / E-GHIR • GEAIR/L • GEHIR/L • GEHIR/L-SC • GEHSR • GEHSR/L-SL

CUTGRIP

GEPI (W<M)

Precision Ground Double-Ended Inserts for Internal Grooving



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	Tough ↔ Hard IC528	IC08	IC908	Recommended Machining Data f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

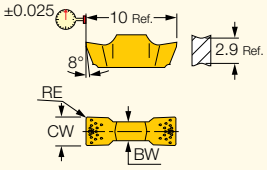
(3) Cutting depth maximum

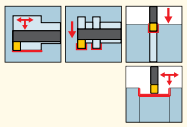
Tools: E-GEHIR / E-GHIR • GEHIMR/L • GEHIMR/L-SC • GEHSR • GEHSR/L-SL

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 440-457

[1] Tool pocket should be modified

[2] Cutting width tolerance (+/-)

[3] Corner radius tolerance (+/-)

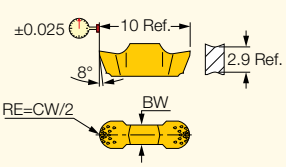
[4] Cutting depth maximum

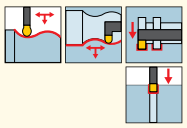
Tools: AVC-GEAIR/L • E-GEHIR / E-GHIR • GEAIR/L • GEHIMR/L • GEHIMR/L-SC • GEHIR/L • GEHIR/L-SC • GEHSR • GEHSR/L-SL

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 440-457

[1] Cutting width tolerance (+/-)

[2] Corner radius tolerance (+/-)

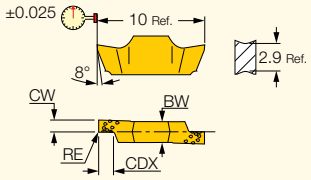
[3] Cutting depth maximum

Tools: AVC-GEAIR/L • E-GEHIR / E-GHIR • GEAIR/L • GEHIR/L • GEHIR/L-SC • GEHIUR/L • GEHSR • GEHSR/L-SL

CUTGRIP

GEPI-RX/LX

Precision Double-Ended Inserts for Internal Grooving Next to Shoulder



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	Tough ↔ Hard IC528	IC908	Recommended Machining Data f groove (mm/rev)
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 440-457

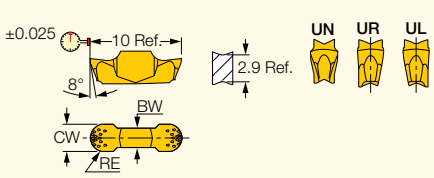
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum

Tools: GEHIMR/L • GEHIMR/L-SC

CUTGRIP

GEPI-UN/UR/UL

Precision Double-Ended Inserts for Internal Undercutting



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	Tough ↔ Hard IC528	IC08	Recommended Machining Data f groove (mm/rev)
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 440-457

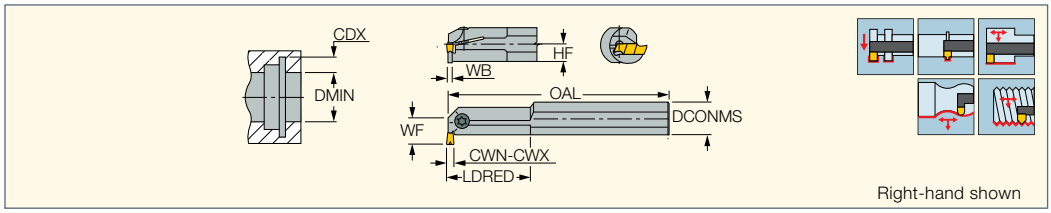
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
(3) Cutting depth maximum

Tools: GEHIUR/L

CUT-GRIP Boring Bars Dmin 20 mm (GIPI/GIFI/GINI Inserts)

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 440-457

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

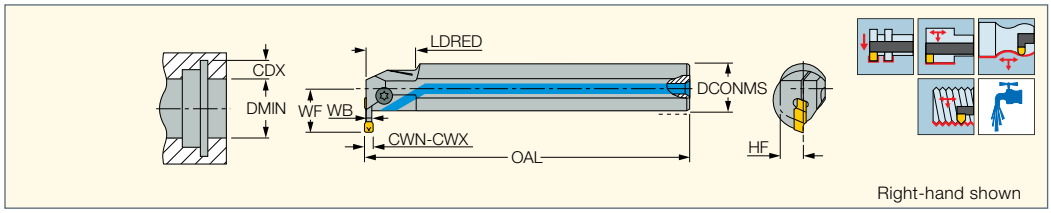
Inserts: GIFI • GIFI-E • GIFI-E (full radius) • GIMIY • GINI-E • GIPI • GIPI (full radius W<M) • GIPI (full radius) • GIPI (W<M) • GIPI-E • GIPI-RX/LX • TIPI-MT • TIPI-WT

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 440-457

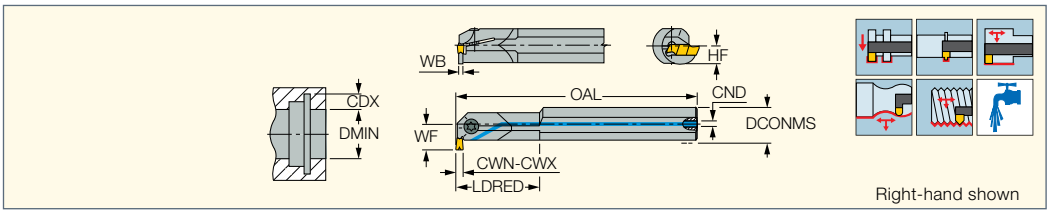
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum

Inserts: GIFI • GIFI-E • GIFI-E (full radius) • GIMIY • GINI-E • GIPI • GIPI (full radius) • GIPI-E • TIPI-MT

CUTGRIP

GHIR/L-SC (W=2-4.8)

Grooving and Turning
Solid Carbide Bars with
Internal Coolant Holes



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 440-457

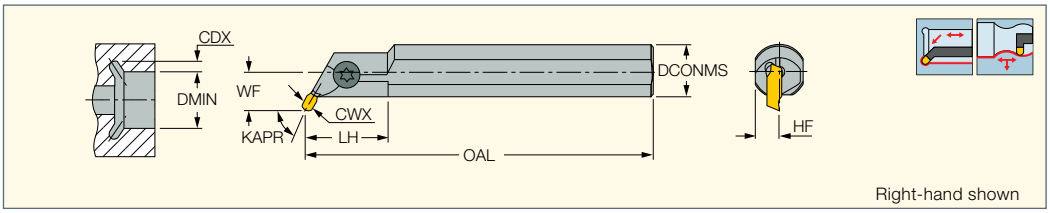
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum

Inserts: GIFI • GIFI-E • GIFI-E (full radius) • GIMIY • GINI-E • GIPI • GIPI (full radius W<M) • GIPI (full radius) • GIPI-E • GIPI-RX/LX • TIPI-MT • TIPI-WT

CUTGRIP

GHIUR/L

Undercutting and
Turning Boring Bars



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

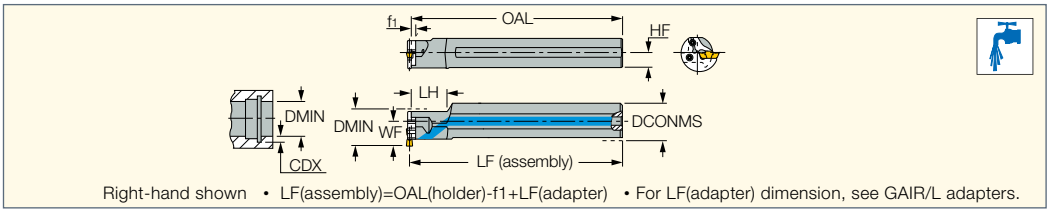
(1) Maximum cutting width
(2) Cutting depth maximum
(3) Tool cutting edge angle

Inserts: GIPI-UR/UL

CUTGRIP

GHAIR/L-GI

Bars with Coolant Holes
for Internal Grooving and
Turning Adapters



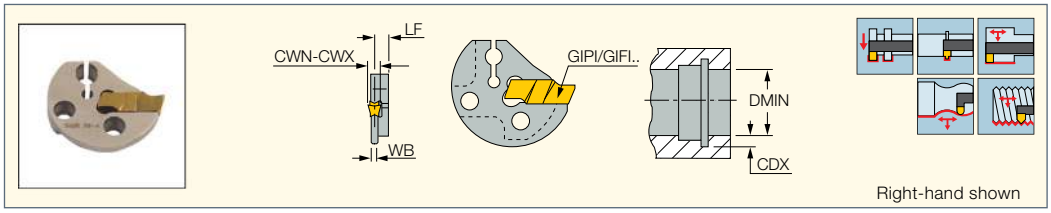
Designation	DCONMS	LH	OAL	WF	HF	f1	Adapter				
GHAIR/L 25-32	25.00	25.0	200.00	19.70	11.5	3.0	GAIR/L 32..	SR 16-236 P	T-15/5	PL 25	
GHAIR/L 32-32	32.00	32.0	200.00	23.20	14.5	3.0	GAIR/L 32..	SR 16-236 P	T-15/5	PL 32	
GHAIR/L 32-40	32.00	40.0	200.00	24.00	14.5	3.0	GAIR/L 40..	SR 16-212	T-20/5	PL 32	SR 14-519

- For DMIN & CDX refer to GAIR/L adapters

Tools: GAIR/L

CUTGRIP

GAIR/L
Internal Grooving and Turning Adapters



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

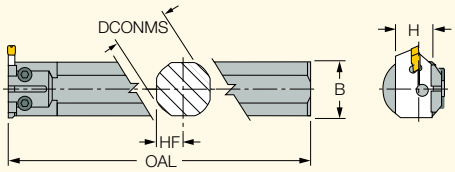
- When using TIPI inserts, toolholder seat needs to be modified according to insert profile to ensure clearance
- For user guide, see pages 440-457

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

Inserts: GIMIY • GIPI-E • GIFI-E • GIFI-E (full radius) • GINI-E • GIPI (W<M) • GIPI • GIPI (full radius W<M) • GIPI (full radius) • GIFI • GIPI-RX/LX • TIPI-MT • TIPI-WT
Holders: C#-GHAIR/L • GHAIR/L-GI

CUTGRIP

GHIC-50
Boring Bars for Internal Grooving and Turning Blades, DMIN=50 mm



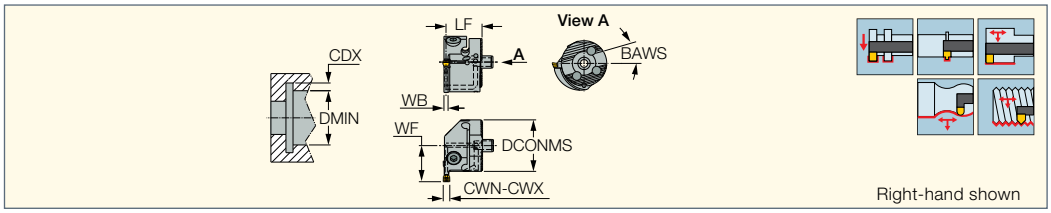
Designation	H	DCONMS	OAL	HF	B		
GHIC 32-50	26.0	32.00	220.00	14.5	29.0	SR M5X16 DIN912	HW 4.0
GHIC 40-50	26.0	40.00	260.00	18.0	36.0	SR M5X16 DIN912	HW 4.0

- For both right and left hand applications

Tools: CGIN 26

CUTGRIP

AVC-GEAIR/L
Internal Grooving, Turning and Threading Adapters



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 440-457

(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
(4) Master insert identification

Inserts: GEMI • GEMI (full radius) • GEPI • GEPI (full radius) • GEPI-MT • GEPI-WT
Holders: AV-D • C#-SH-E-JHP • C#-SH-JHP • SH-D • SH-S#-N-AVC

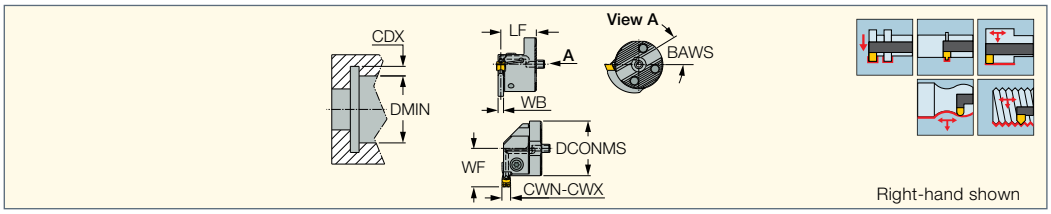
Spare Parts

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			

CUTGRIP

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 440-457

(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

Inserts: GIFI • GIFI-E • GIFI-E (full radius) • GINI-E • GIPI • GIPI (full radius W<M) • GIPI (full radius) • GIPI (W<M) • GIPI-E • GIPI-RX/LX • TIPI-MT • TIPI-WT
Holders: AV-D • C#-SH-E-JHP • C#-SH-JHP • SH-D • SH-S#-N-AVC

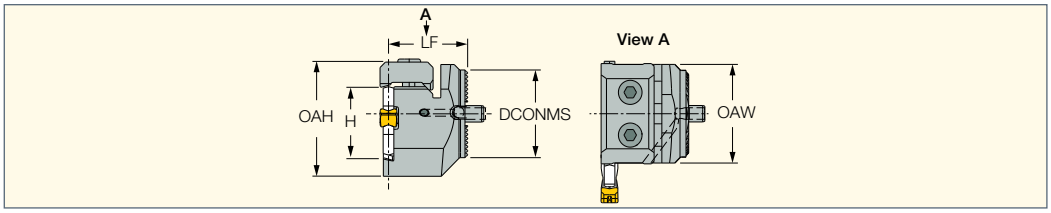
Spare Parts

Designation			
AVC-GAIR/L	SR 76-1021	T-20/5	SR M3X3DIN913

CUTGRIP

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
Tools: CGIN 26

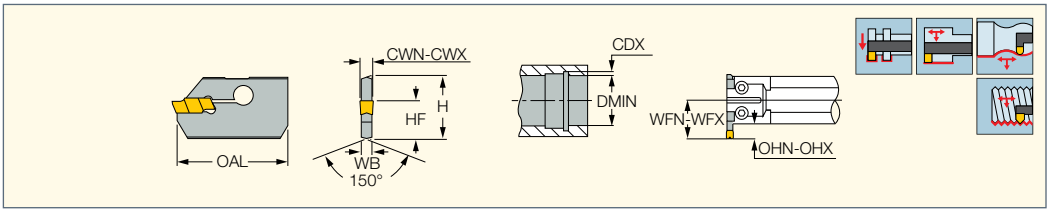
Spare Parts

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

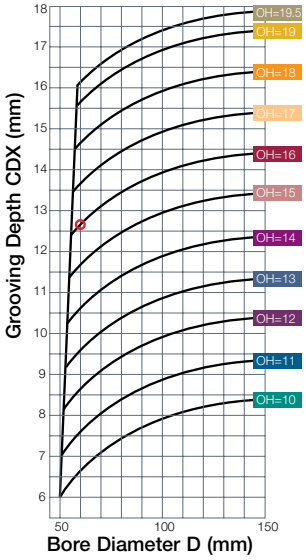
- WFN-WFX and OHN-OHX are the blade's extension range
- Grooving depth (CDX) varies in conformance with blade's overhang (OHN-OHX) and depends on the bore diameter(D).For grooving capacity, see chart below
- When using TIPI inserts toolholder seat needs to be modified according to insert profile to ensure clearance • For user guide, see pages 440-457

(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

Inserts: GIFI • GIFI-E • GIFI-E (full radius) • GIMIY • GINI-E • GIPI • GIPI (full radius) • GIPI-E • TIPI-MT

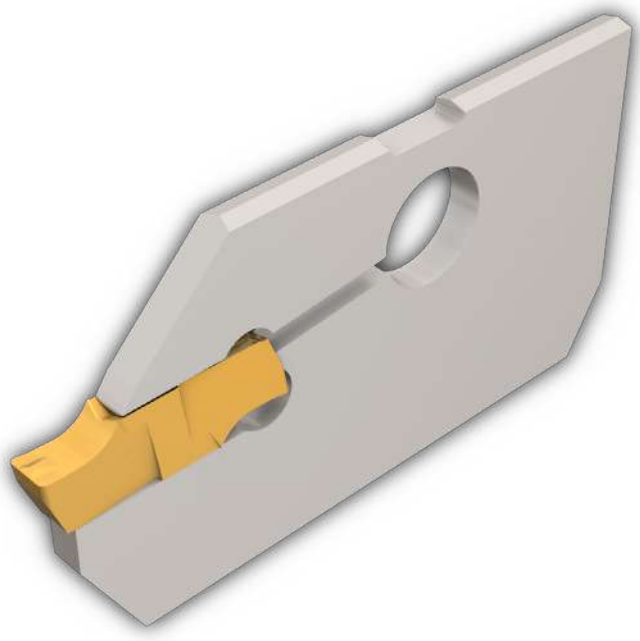
Holders: AVC-GAIC • GHIC-50

Internal Grooving Capacity for CGIN Blades



Example:

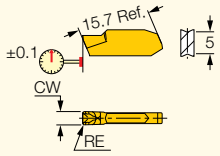
For grooving depth CDX=12.7 mm and grooving width=4 mm in bore øD=60, use blade CGIN 26A-4 and adjust overhang to OH=16 mm.

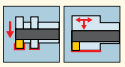


CUTGRIP

GIMIY

Utility Single-Ended Inserts for Internal Grooving and Turning





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	Tough ↔ Hard IC830	IC808	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

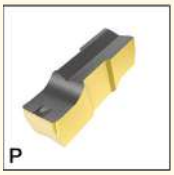
(2) Corner radius tolerance (+/-)

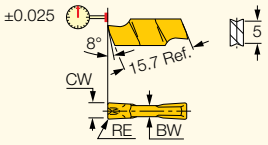
Tools: CGIN 26 • E-GEHIR / E-GHIR • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

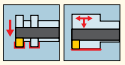
CUTGRIP

GIPI-E

Precision Double-Ended Inserts for Internal Grooving and Turning







Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	IC20N	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

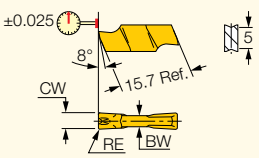
(3) Cutting depth maximum

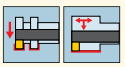
Tools: AVC-GAIR/L • CGIN 26 • E-GEHIR / E-GHIR • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GIFI-E

Precision Double-Ended Inserts for Internal Grooving and Turning





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

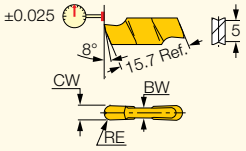
(3) Cutting depth maximum

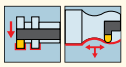
Tools: AVC-GAIR/L • CGIN 26 • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GIFI-E (full radius)

Precision Double-Ended Full Radius Inserts for Internal Profiling and Grooving





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC20	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

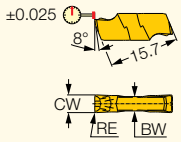
(3) Cutting depth maximum

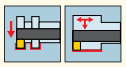
Tools: AVC-GAIR/L • CGIN 26 • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GINI-E

Precision Double-Ended Inserts for Internal Grooving and Turning of Ductile Materials





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	IC808	Recommended Machining Data 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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

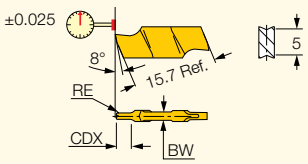
(3) Cutting depth maximum

Tools: AVC-GAIR/L • CGIN 26 • E-GEHIR / E-GHIR • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GIPI (W<M)

Precision Double-Ended Inserts for Internal Grooving and Recessing



Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	CDX(3)	BW	Tough ↔ Hard IC830	IC808	IC908	IC20	IC806	Recommended Machining Data f groove (mm/rev)
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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

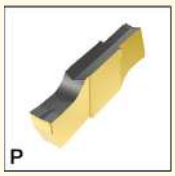
(3) Cutting depth maximum

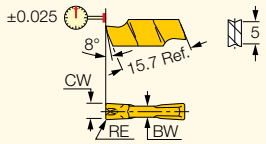
Tools: AVC-GAIR/L • GAIR/L • GHIR/L (W=1.9-6.4)

CUTGRIP

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	IC830	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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

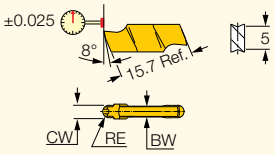
(3) Cutting depth maximum

Tools: AVC-GAIR/L • CGIN 26 • E-GEHIR / E-GHIR • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

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	IC830	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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

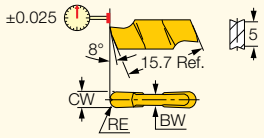
(3) Cutting depth maximum

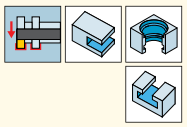
Tools: AVC-GAIR/L • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GIPI (full radius)

Precision Double-Ended Full Radius Inserts for Internal Grooving and Recessing





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC8250	IC20	Recommended Machining Data f groove (mm/rev)
GIPI 3.18-1.59	3.18	1.59	0.02	0.050	2.40	•	•	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 440-457

(1) Cutting width tolerance (+/-)

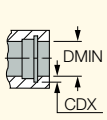
(2) Corner radius tolerance (+/-)

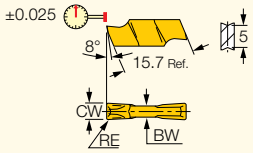
Tools: AVC-GAIR/L • CGIN 26 • E-GEHIR / E-GHIR • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GIFI

Precision Double-Ended Inserts for Internal Grooving and Recessing





Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	CDX(3)	Tough ↔ Hard IC830	IC8250	IC20	Recommended Machining Data f groove (mm/rev)
GIFI 4.78-0.55	4.78	0.55	0.02	0.050	4.00	15.50	•	•	•	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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

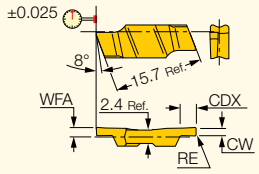
(3) Cutting depth maximum

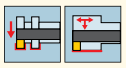
Tools: AVC-GAIR/L • CGIN 26 • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-C (W=4-6.4) • GHIR/L-SC (W=2-4.8)

CUTGRIP

GIPI-RX/LX

Precision Double-Ended Inserts for Internal Grooving Next to a Shoulder





RX shown

Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	WFA	CDX(3)	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
GIPI 0.78-0.1LX	0.78	0.10	0.02	0.030	1.60	1.30		•	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 440-457

(1) Cutting width tolerance (+/-)

(2) Corner radius tolerance (+/-)

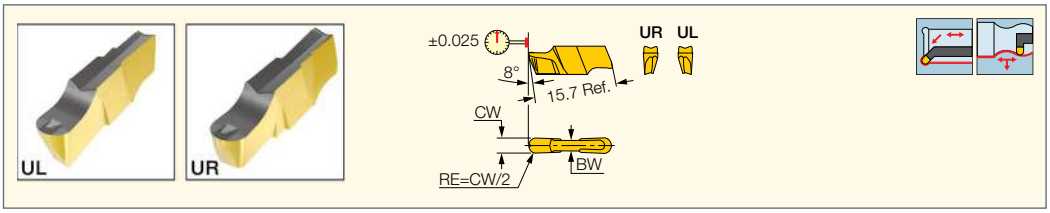
(3) Cutting depth maximum

Tools: AVC-GAIR/L • GAIR/L • GHIR/L (W=1.9-6.4) • GHIR/L-SC (W=2-4.8)

TOP-GRIP Boring Bars Dmin 20.5 mm

CUTGRIP

GIPI-UR/UL
Precision Double-Ended Inserts for Internal Undercutting

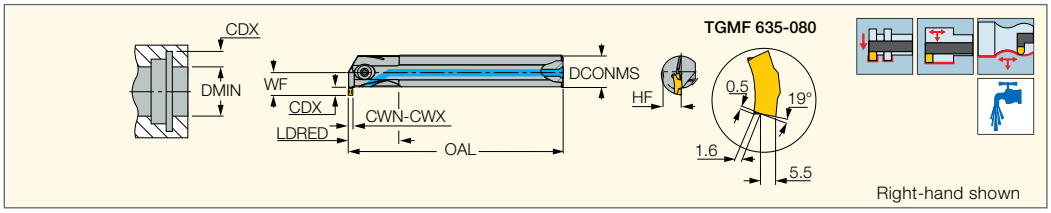


Designation	Dimensions CW	RE	CWTOL(1)	RETOL(2)	BW	Tough ↔ Hard IC8250	IC20	Recommended Machining Data f groove (mm/rev)
GIPI 3.00-1.5UR/L	3.00	1.50	0.02	0.050	2.40	•	•	0.05-0.15
GIPI 4.00-2.0UR/L	4.00	2.00	0.02	0.050	3.20	•	•	0.05-0.15

• Tool's pocket should be modified • For cutting speed recommendations and user guide, see pages 440-457
(1) Cutting width tolerance (+/-)
(2) Corner radius tolerance (+/-)
Tools: GHIUR/L

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 440-457
(1) Minimum cutting width
(2) Maximum cutting width
(3) Cutting depth maximum
(4) For Dmin 47 mm, modify insert according to sketch
Inserts: TGMA • TGMF (full radius) • TGMF/P

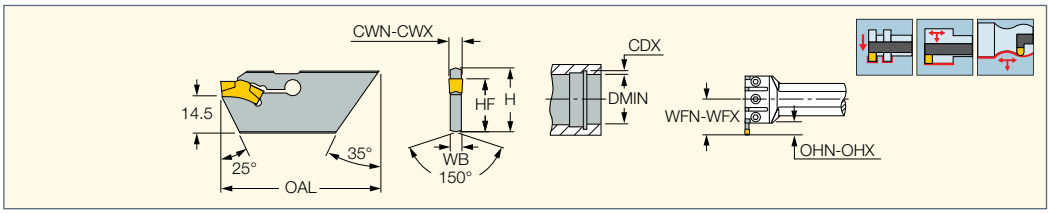
Spare Parts

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

TOP-GRIP

TGHN 26-M

Internal Grooving and Turning Blades for GHIC...-70 Bars



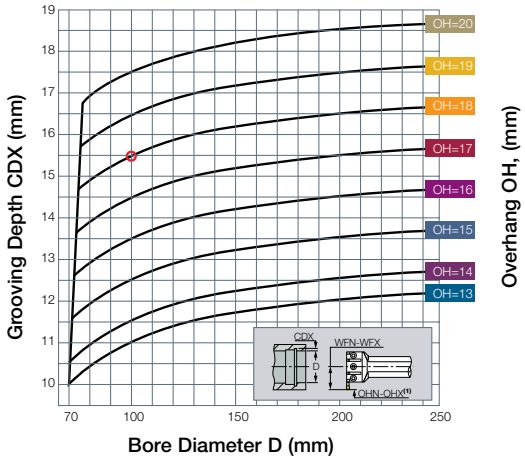
Designation	CWN(1)	CWX(2)	WB	WFN(3)	WFX(4)	OHN(5)	OHX(6)	DMIN	HF	OAL	H
TGHN 26-3M	3.00	3.00	2.40	40.0	41.5	13.5	15.0	70.00	21.4	63.00	26.0
TGHN 26-4M	4.00	5.00	3.20	40.0	41.5	13.5	15.0	70.00	21.4	63.00	26.0
TGHN 26-5M	5.00	5.00	4.00	40.0	46.5	13.5	20.0	70.00	21.4	63.00	26.0

- 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 440-457

(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

Inserts: TGMA • TGMF (full radius) • TGMF/P
Holders: C#-GHIC • GHIC-70

Internal Grooving Capacity for TGHN Blades



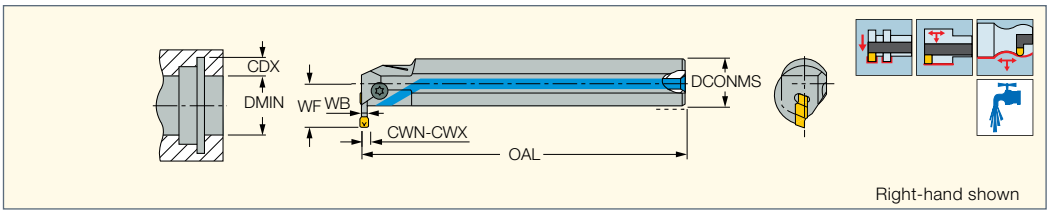
Example:

For grooving depth CDX=15.5 mm
and grooving width=5 mm
in bore øD=100, use blade
TGHN 26-5M and adjust overhang to OH=18 mm.

TGHN 26-...M

HELI-GRIP Boring Bars Dmin 26 mm

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

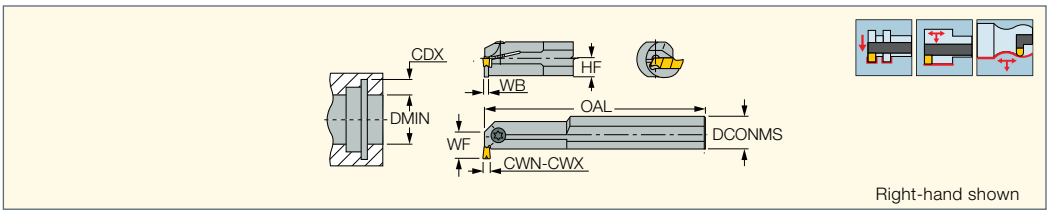
- For user guide, see pages 440-457

(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)

Inserts: GRIP • GRIP (full radius)

CUT-GRIP Boring Bars Dmin 64 mm (GDMY/F/N 8 mm Inserts)

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

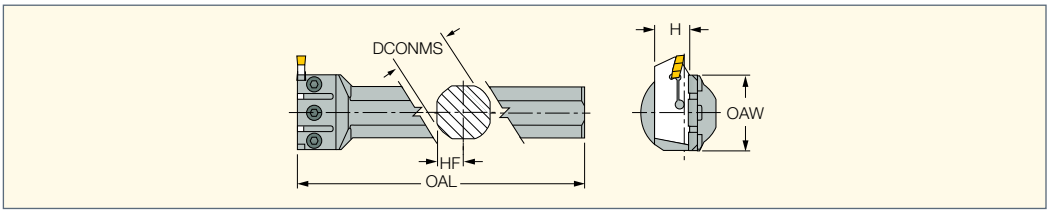
- For user guide, see pages 440-457

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

Inserts: GDMA • GDMF • GDMM-CC • GDMN • GDMU • GDMY • GDMY (full radius) • GDMY-F • GIA-K (long pocket) • GIF-E (W=8,10 full radius) • GIF-E (W=8,10) • GIPA/GIDA 8 (full radius)

CUT-GRIP Blades Dmin 70 mm

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

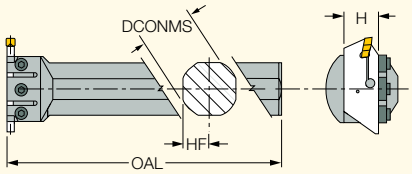
- For both right and left hand applications

Tools: CGHN 26-M • TGHN 26-M

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

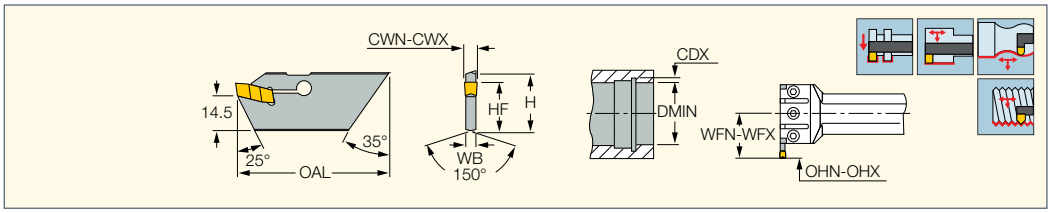
- For both right and left hand applications

Tools: CGHN 32-DGM • CGHN 32-M

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

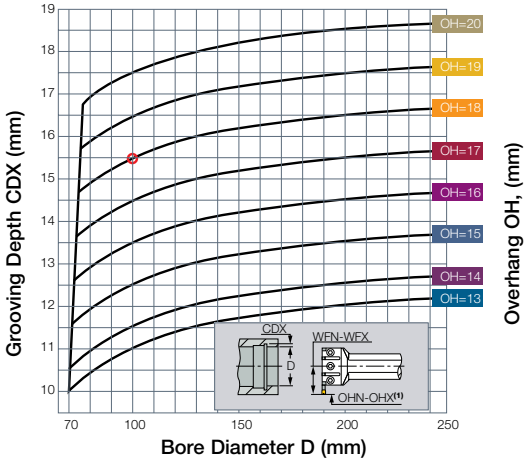
- Grooving depth (CDX) varies in conformance with blade's overhang (WFN-WFX and OHN-OHX) and depends on the bore diameter (D)
- CGHN 26...-M can be modified from external double-sided CGHN blades • When TIP inserts are used the seat needs to be modified to ensure clearance
- For user guide, see pages 440-457

(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

Inserts: GIMF • GIMY • GIMN • GIMY (full radius) • GIMY-F • GIF-E (W=4-6) • GIF-E (W=4-6 full radius) • GIP-E • GIP-E (full radius) • GIP • GIP (full radius) • GIF • GIF (full radius) • GIA-K (W=3-6) • GITM • GITM (full radius) • GIPY • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMT • GIPM-A46 / GIP-1250 • TIP-MT • TIP-WT

Holders: C#-GHIC • GHIC-70

Internal Grooving Capacity for CGHN 26 Blades



Example:

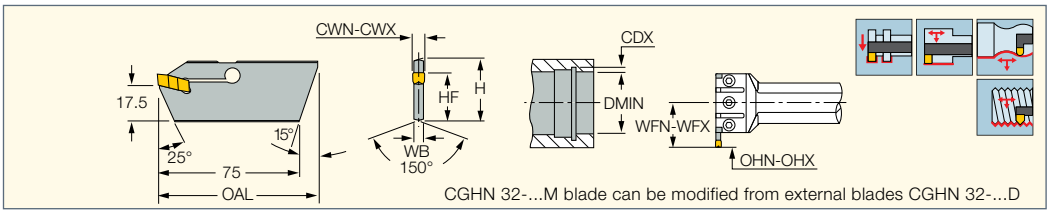
For grooving depth CDX=15.5 mm
and grooving width=5 mm
in bore øD=100, use blade
CGHN 26-5M and adjust overhang to OH=18 mm.

CGHN 26-...M

CUTGRIP

CGHN 32-M

Internal Grooving and Turning Blades



CGHN 32-...M blade can be modified from external blades CGHN 32-...D

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

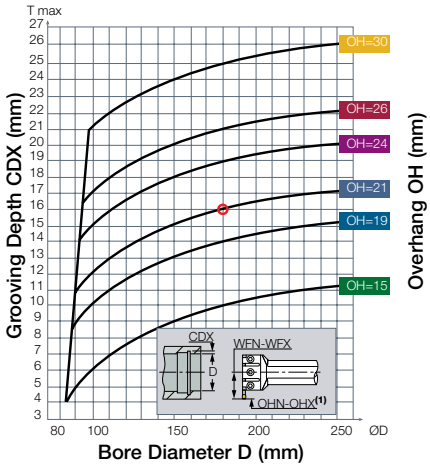
- WFN-WFX and OHN-OHX are the blade's extension range
- Grooving depth (CDX) varies in conformance with blade's overhang (OHN-OHX) and depends on the bore diameter(D). For grooving capacity, see graph
- When using TIP inserts, the toolholder seat needs to be modified • For user guide, see pages 440-457

(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

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-WT

Holders: GHIC-85

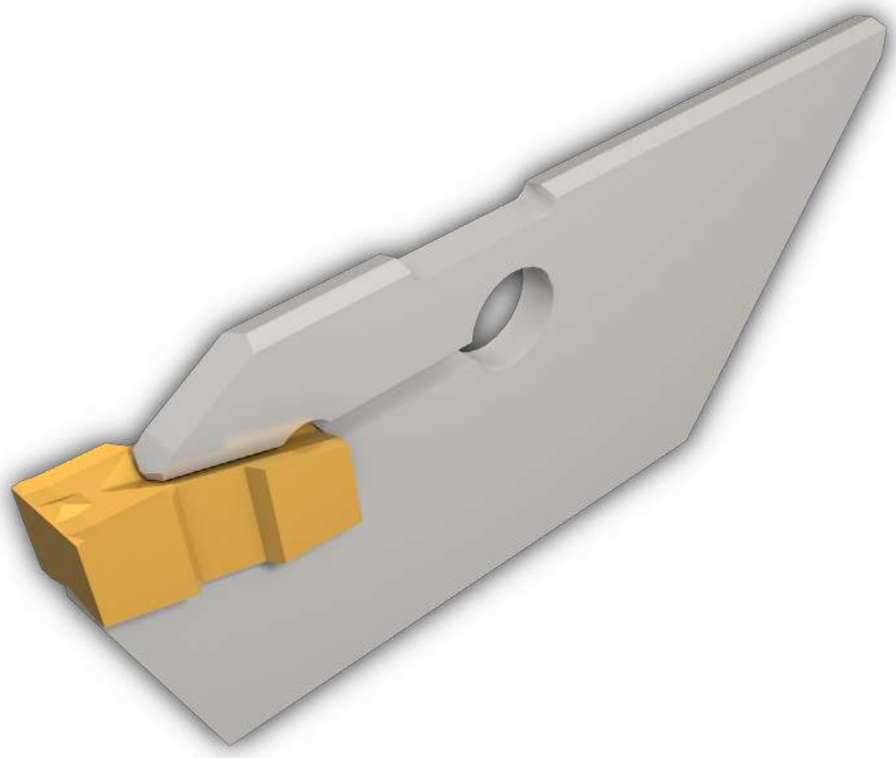
Internal Machining Grooving Capacity for CGHN 32 Blades



Example:

For grooving depth CDX=16 and grooving width= 4 in bore øD=180, use blade CGHN-32-4M and adjust overhang to OH=21 mm.

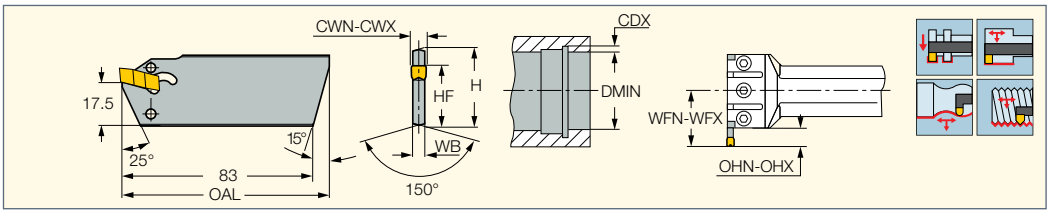
CGHN 32-...M/DGM



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*

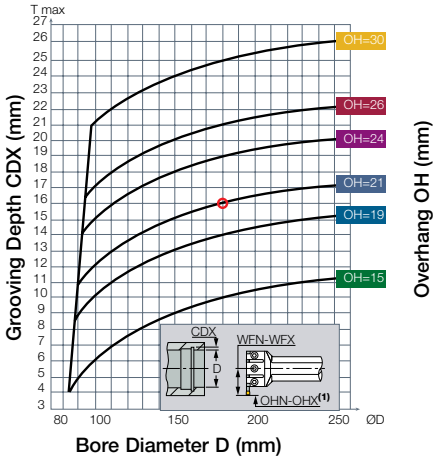
- Grooving depth (CDX) varies in conformance with blade's overhang (WFN-WFX and OHN-OHX) and it depends on the bore diameter (D)
- CGHN 32...DGM can be modified from external double-sided CGHN -DG blades • When TIP inserts are used,the seat needs to be modified to ensure clearance
- For user guide, see pages 440-457

(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

Inserts: GIA-K (W=3-6) • GIF • GIF (full radius) • GIF-E (W=4-6 full radius) • GIF-E (W=4-6) • GIM-C • GIM-J • GIM-J-RA/LA • GIM-UT • GIM-UT-RA/LA • GIM-W • GIM-W-RA/LA • GIMF • GIMN • GIMT • GIMY • GIMY (full radius) • GIMY-F • GIP • GIP (full radius) • GIP-E • GIP-E (full radius) • GIPA (full radius W=3-6) • GIPA (W=3-6) • GIPM-A46 / GIP-1250 • GIPY • GITM • GITM (full radius) • TIP-MT • TIP-WT

Holders: GHIC-85

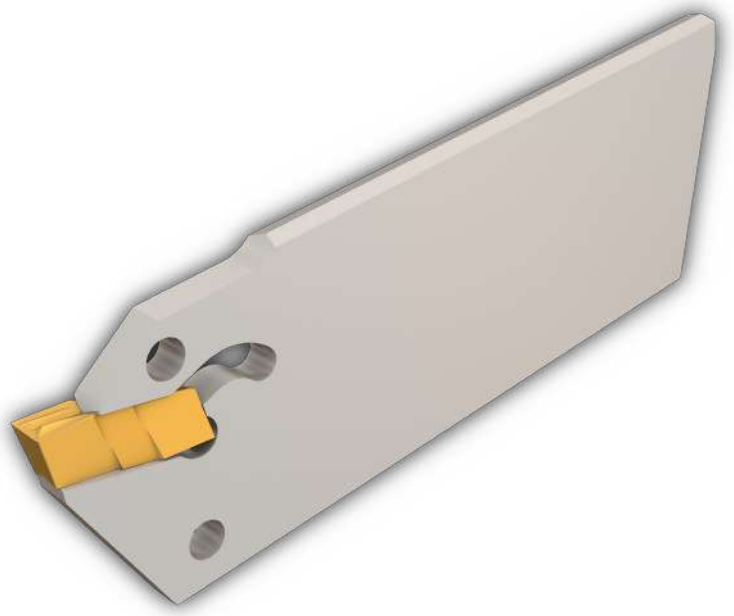
Internal Machining Grooving Capacity for CGHN 32 Blades



Example:

For grooving depth CDX=16 and grooving width= 4 in bore øD=180, use blade CGHN-32-4DGM and adjust overhang to OH=21 mm.

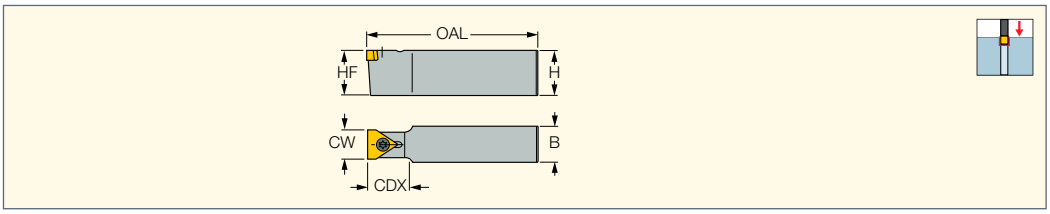
CGHN 32-...M/DGM



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 14-519	T-20/5

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

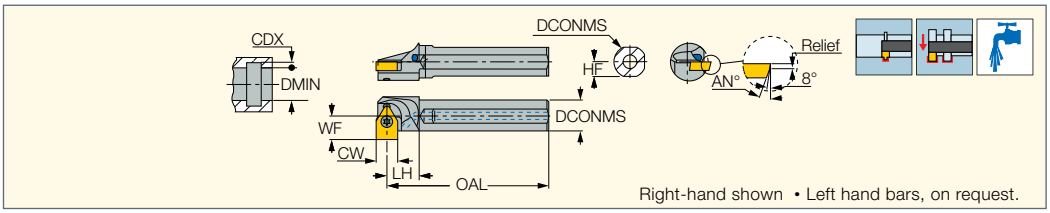
(1) Cutting depth maximum

Inserts: XNUW

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

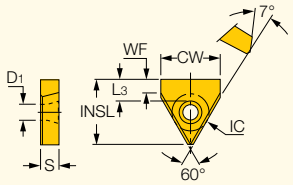
(4) Blank insert reference dimensions

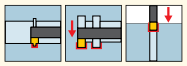
Inserts: XNUW

Form Tools

V-LOCK

XNUW
Blank Inserts for Wide Profile Grooving



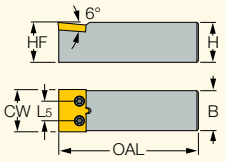


Designation	Dimensions							Tough ↔ Hard			
	CW	WF	L3	IC	S	D1	INSL	IC28	IC08	IC20	IC07
XNUW 1003-06	10.40	6.00	10.50	6.35	3.18	4.53	17.00	●	●		
XNUW 1305-05	13.00	5.00	11.40	12.70	5.35	5.50	20.60	●	●	●	
XNUW 14T3-03	14.50	3.00	3.70	9.52	3.97	4.40	14.00	●	●	●	
XNUW 2006-05	20.50	4.80	5.00	12.70	6.35	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	●	●	●	

Tools: SXCIR • SXCNN

FORMTOOL

FTHN
Square Shank Toolholders for FTB Profile Turning Inserts

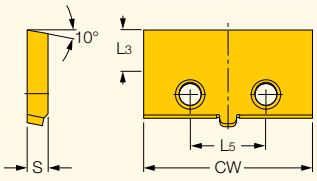


Designation	CW	H	HF	B	OAL	L5		
FTHN 2525M-3010	30.40	25.0	25.0	25.0	150.00	14.00	SR 14-591	T-20/5
FTHN 2525M-3510	35.40	25.0	25.0	25.0	150.00	14.00	SR 14-591	T-20/5
FTHN 3232P-4510	45.40	32.0	32.0	32.0	170.00	18.00	SR 14-591	T-20/5
FTHN 3232P-5107	51.40	32.0	32.0	32.0	170.00	21.90	SR 14-591	T-20/5

Inserts: FTB

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	●

Tools: FTHN