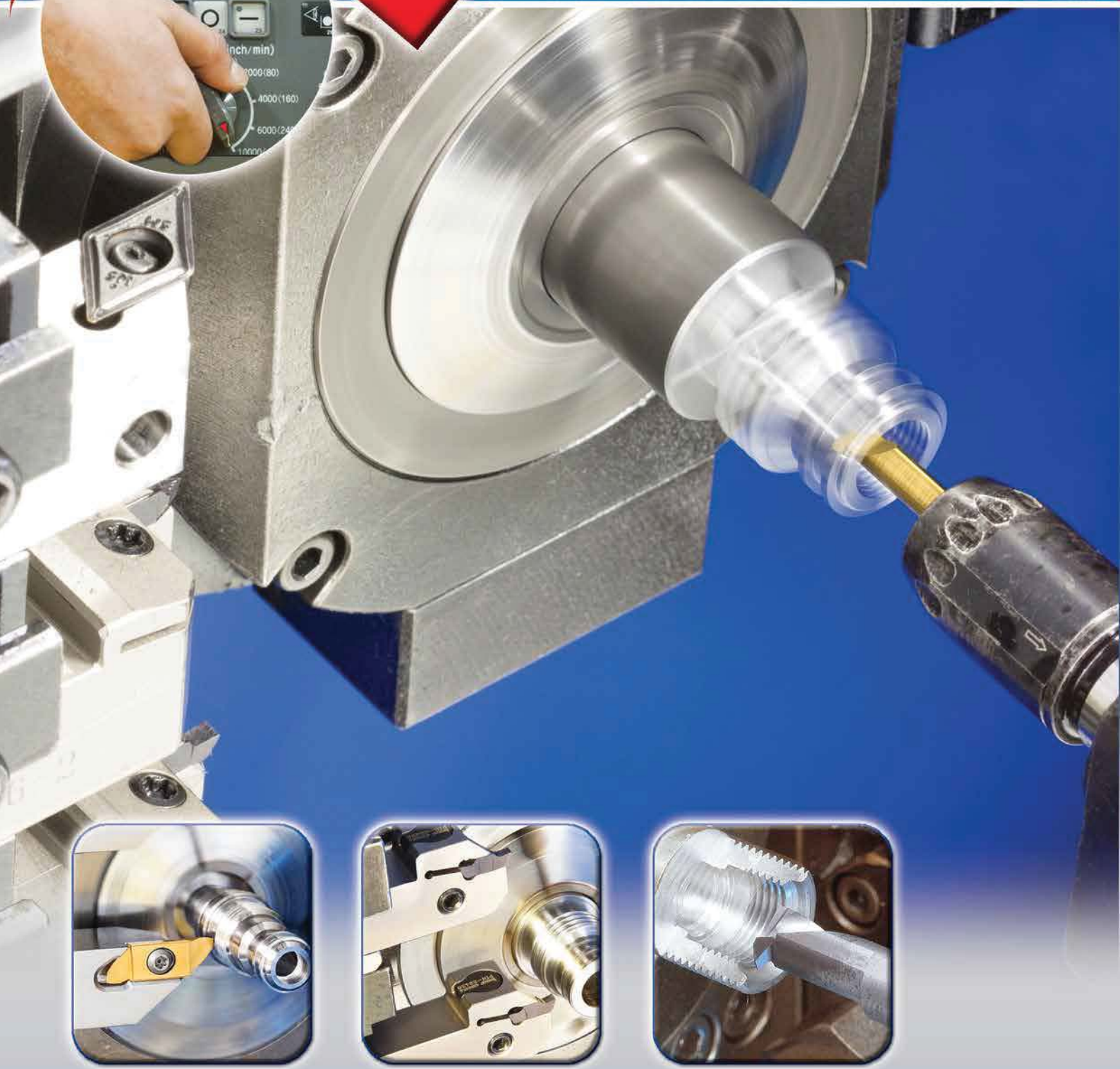
Delivering Profitability

TOOLS FOR MINIATURE PARTS

Metric Version Catalog 2015



Member IMC Group

ISCAR

WWW.ISCAR.COM

Small Part Production

Turnkey Machining Solutions
ISCAR tools provide high performance, optimal machining solutions for your part production.

Time Study

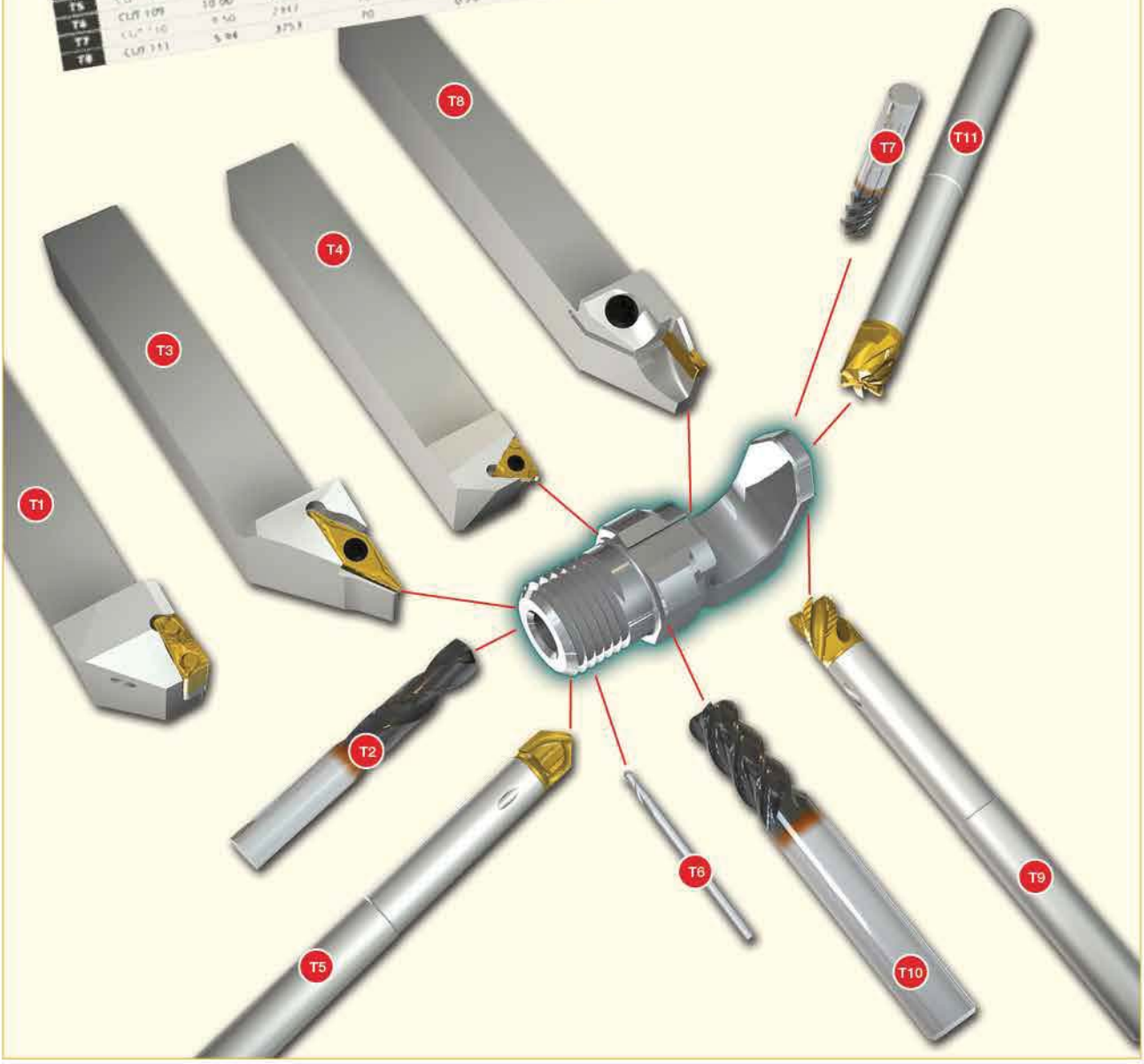
Estimated cutting time:
3 min. 48 sec.

Total cutting time:
4 min. 56 sec.

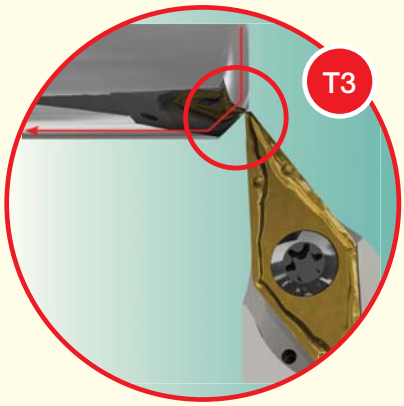
Material:
Stainless steel

Time Study

Tool No.	Operation	Diameter (mm)	RPM	Vc (m/min) (cutting speed)	fz (mm) (feed per insert/ flute)	z (number of inserts/ flutes)	f (mm) (feed)	Vf (mm/min) (table feed)	DOC (mm) (depth of cut)	LOC (mm) (length of cut)	No. of Cuts	Time (sec)
T1	CUT 101	8.00	2787	70	0.05	3	0.15	418	0.5	250.0	1	37.3
T1	CUT 102	8.00	2787	70	0.05	3	0.15	418	0.5	266.0	1	38.8
T2	CUT 103	8.00	2787	70	0.05	4	0.20	557	0.1	260.0	1	29.0
T2	CUT 104	8.00	2787	70	0.05	4	0.20	557	0.1	360.0	1	29.1
T3	CUT 105	12.00	1858	70	0.10	4	0.40	1115	0.5	270.0	1	15.1
T3	CUT 106	12.00	1858	70	0.10	4	0.40	1115	0.5	4.0	1	4.1
T4	CUT 107	2.00	9554	60	0.01	4	0.04	382	0.5	21.0	2	8.2
T4	CUT 108	2.00	9554	60	0.01	4	0.04	382	0.5	150.0	1	47.1
T5	CUT 109	10.00	2548	80	0.05	4	0.20	509	1.0	32.0	1	4.9
T6	CUT 110	5.00	5093	80	0.05	4	0.20	509	1.0	28.0	2	21.2
T7	CUT 111	5.04	3753	70	0.70	3	0.20	751	0.5	4.0	4	3.20

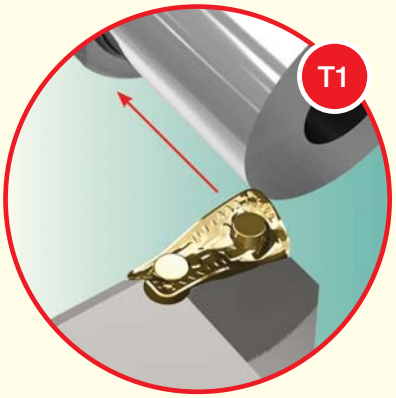


Small Part Production



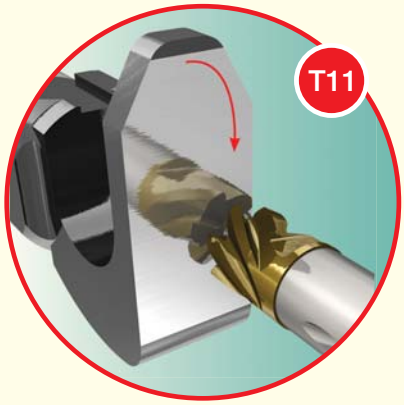
ISOTURN

SVACR 1616M-11
VCET 1103005R-WF



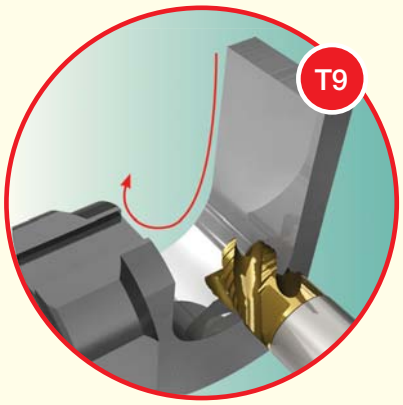
SWISSTURN

SLANR 1616H-11 TANG
LNMX 110408R



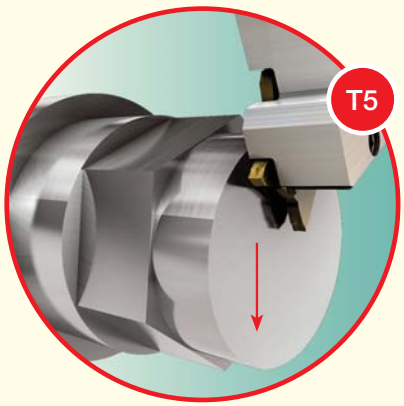
MULTI-MASTER

MM S-A-L075-C10-T06
MM EC100A07R0.5-6T06



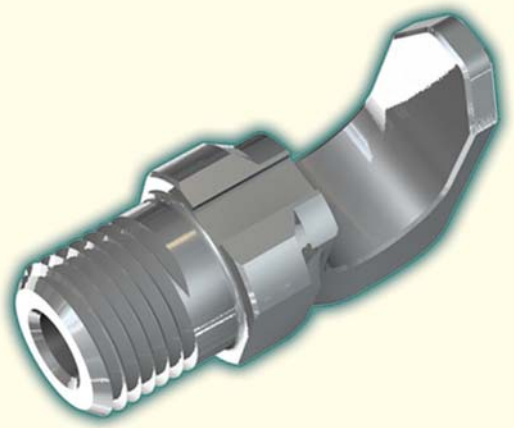
MULTI-MASTER
INDEXABLE SOLID CARBIDE LINE

MM S-A-L075-C10-T06
MM EFS 100B07-4T06



PENTACUT

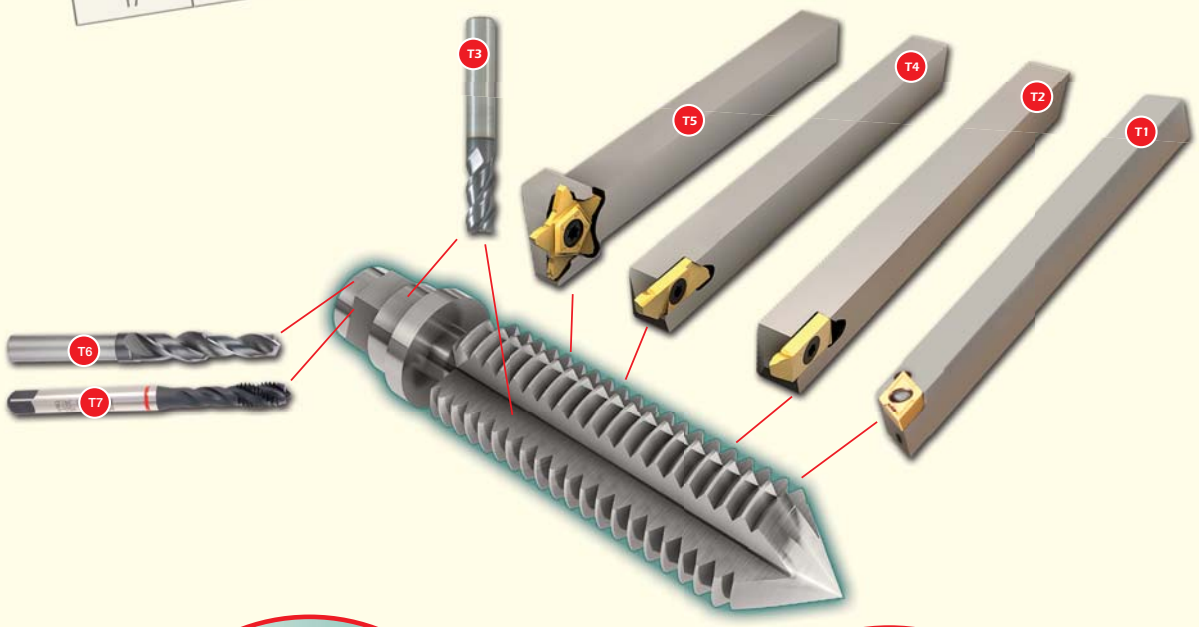
PCHR 16-24
PENTA 24N 15J010

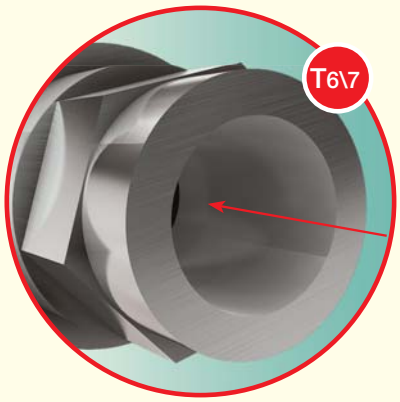


Bone Line Machining Layout

Time Study

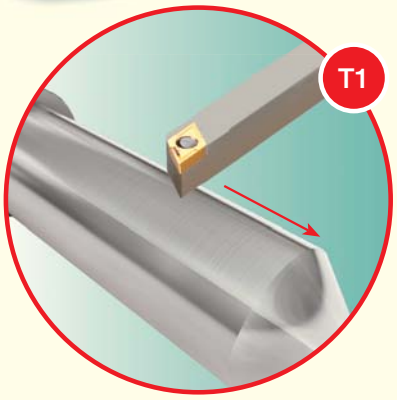
TOOL NO	OPERATION	DIAMETER (mm)	RPM	Vc (m/min) (cutting speed)	fz (mm) (feed per insert/ flute)	z (number of inserts/ flutes)	f (mm) (feed)	Vf (mm/min) (table feed)	DOC (mm) (depth of cut)	LOC (mm) (length of cut)
T1	CUT 101	5	2866	45	0.015	1	0.015	43		
T1	CUT 102	5	2866	45	0.015	1	0.015	43		
T2	CUT 103	3	2866	45	1	1	1	2866		
T3	CUT 104	5	2123	20	0.015	4	0.06	127		
T1	CUT 105	3	2866	45	0.015	1	0.015	43		
T3	CUT 106	3.5	2123	20	0.015	4	0.06	127		
T4	CUT 107	5	3640	40	0.015	1	0.015	55		
T5	CUT 201	1.6	955	15	0.02	1	0.02	19		
T6	CUT 202	1.55	1990	10	0.02	1	0.02	40		
T7	CUT 203		2055	10	0.02	1	0.02	41		





SOLIDDRILL

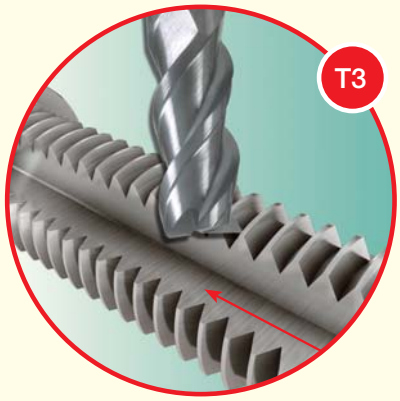
SCDT 025-009-060-M3
TPG M-3X0.5-H



SWISSTURN

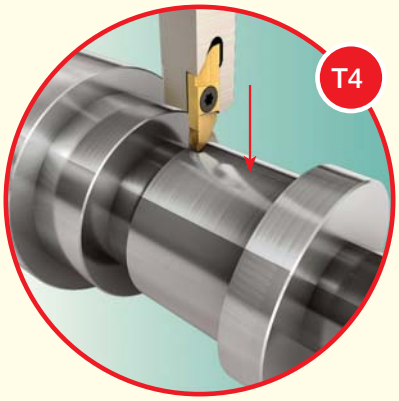
PDACR 1616M-11S
DCET 11T3005R-WF

Bone Line Machining Layout



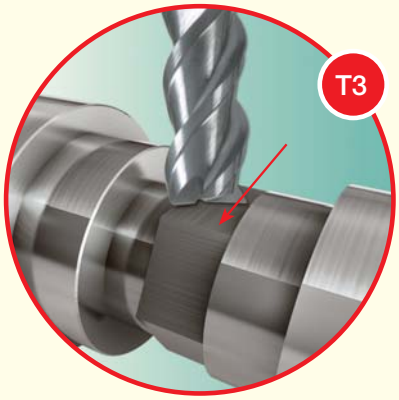
SOLIDMILL
SOLID CARBIDE LINE

ECO30B10-4C03



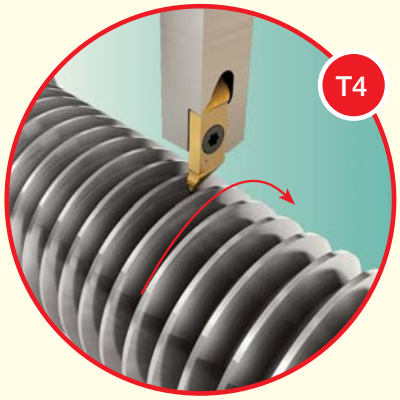
SWISSCUT

SCHR 16-22BF
SCIR 22-150NP...



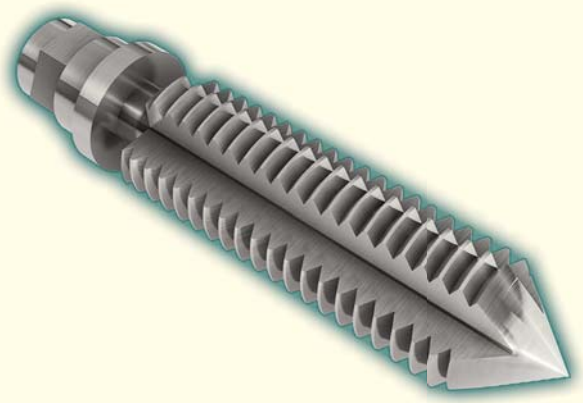
SOLIDMILL
SOLID CARBIDE LINE

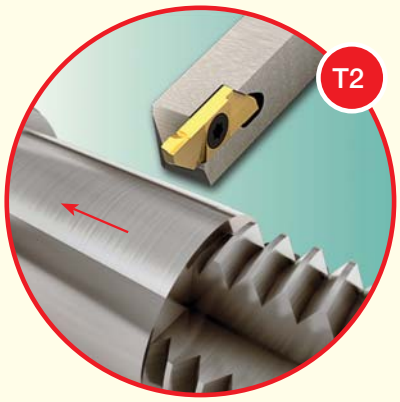
ECO30B10-4C03



SWISSCUT

SCHR 16-22BF
SCIR 22-MTR...





SWISSCUT

SCHR 16-22BF
SCIR 22-AR...

Grooving and turning

CUTGRIP

GEHSR\L-SL Tools with Side Clamping Mechanism

ISCAR is introducing the new **GEHSR/L-SL** tool family for Swiss-type and screw machines. These new tools with a unique clamping mechanism can solve the main problems related to insert clamping and replacement on Swiss-type and screw machines. They are an improved style of the current **GEHSR/L** screw-clamped tools.

MINICUT
MINI FACE LINE

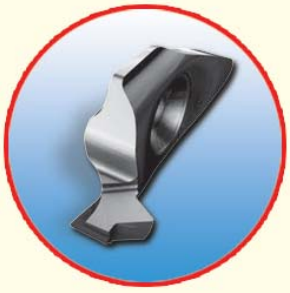
Face Grooving and Turning Family for Dmin 8 mm

ISCAR's family for face grooving and turning in a diameter range of 8 to 17 mm for up to 5.5mm grooving depth, covers the range between ISCAR's **PICCO** and **CHAMGROOVE** tools.

Tool Features

- Can also be used for rotating applications.
- Internal coolant hole, directed to the cutting edge.
- Can be used for grooving in deep holes.
- Uninterrupted chip flow on the insert rake.

MIFR 8-2.20-0.20



MITR 8-MT1-0.05

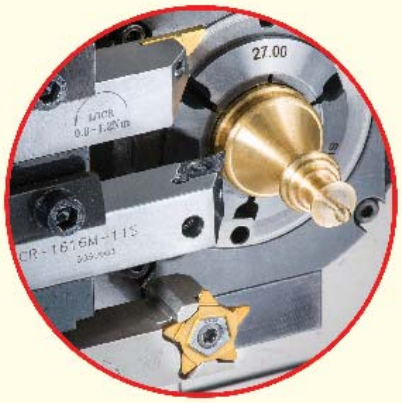
MIGR 8-1.60-0.80

MIFR 8-1.60-0.80

MIUR 8-1.00-0 .50

MIGR 8-2.00-0.10

Grooving and turning



SWISSCUT INNOVAL LINE

Upgraded SWISSCUT Line

A compact tool design for Swiss-type automatics and CNC lathes, providing reduced setup time and easy indexing without having to remove the toolholder from the machine.

- The same tool and insert can be used in both front and back clamping
- Insert indexing without removing the screw ISCAR is upgrading the **SWISSCUT** line. The new inserts feature an innovative oval-shaped hole that enables 2 important improvements.
  The new clamping design uses a special screw that can be accessed and operated from both tool sides.
  In the upgraded line the insert can be indexed without the need to fully remove the screw. Therefore, there is no risk of falling parts and indexing is easier and faster.

Dmin. 4 mm

Front Clamping

Back Clamping

SWISSTURN

ISCAR features a variety of ISO standard inserts, with small shank sizes. Also available are many standard geometry inserts with precision ground cutting edges and small radii for manufacturing small and thin parts. Toolholders with a unique clamping device for solving the main problems related to insert clampingandreplacement on Swiss-type machines.

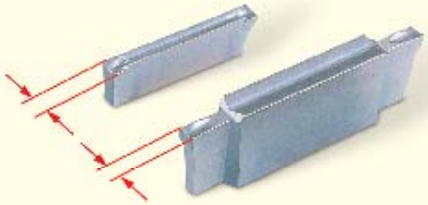
Parting

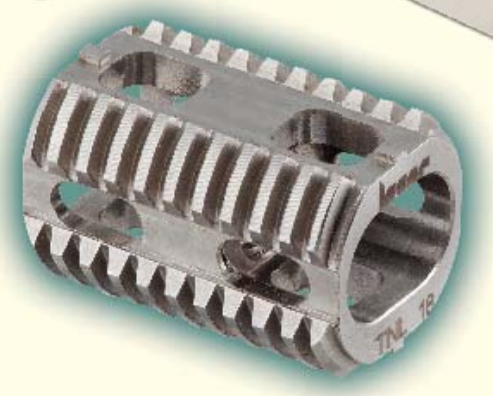
PENTACUT
PARTING GROOVING LINE

The **PENTACUT** insert has 5 cutting edges, useful for multifunction applications including grooving, parting, recessing and chamfering. This cost-effective insert is designed to perform shallow grooving operations and parting of small solid bars up to 12.5 mm in diameter. Each cutting edge on the pentagonal shaped insert is equipped with a unique J-type positive chipformer that provides excellent chip control in grooving, parting and recessing (light side turning) applications.

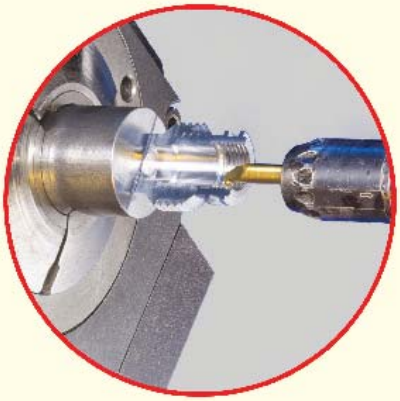
DO-GRIP

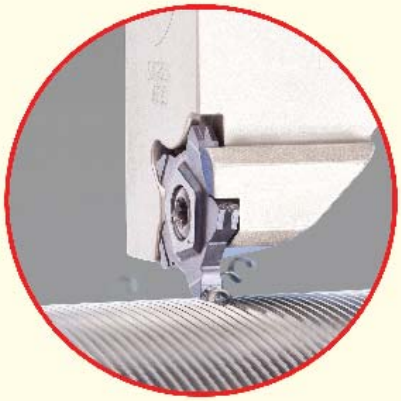
ISCAR's short head, small shank holders (8-12mm)use **DO-GRIP**'s economical, double-ended twistedinserts inwidths of 1-3 mm.
These inserts, featuring advanced PVD coatings, are capable of parting small diameter and thin walled parts while saving workpiece material. The new shank design features a very short clamping head and a slanted screw for convenient indexing - essential features for operating in the very limited space of Swiss-type automatic and small CNC machines.





Threading



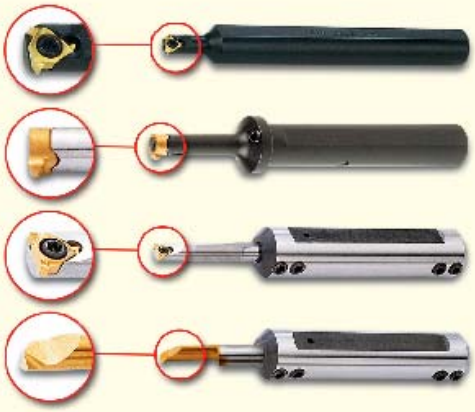


ISCARTHREAD

ISCAR offers a wide range of threading standards for both external and internal operations. The smallest triangular laydown insert is the 06IRM which can be used for internal threading in minimum bore size of 7 mm.Other ISCAR threading systems include:

- PICCOCUT – solid carbide bars for minimum bore diameters of 4 mm.
- MINICHAM – miniature inserts for minimum bore diameters of 6 mm.
- CUT-GRIP and CHAMGROOVE – for a variety of innovative internal andexternal threading applications.

Dmin. 4mm



PENTACUT

THREADING LINE

- Multi-corner, five cutting edges, which provide an advantageous price per cutting edge
- Combination of very rigid clamping system and a strong insert design enables machining at very high machining parameters
- Can be used for threading between walls to enable complete part production on bar feeder machines
- Inserts feature chipformers, providing short and easily exposed chips,excellent accuracy and surface quality

Dmin. 16mm

Whirling Head

Whirling tools are provided on request. Attached is a list of available whirling tools according to the machine model being used.

The customer should specify his specific thread profile and the required number of inserts in the cutter (or leave this decision to ISCAR designers).

The inserts are made from PVD coated grade IC908.

Grooving and Parting

CUTGRIP
PENTACUT
JET LINE

Grooving and Parting Tools for High Pressure Coolant

As in the ISO turning line, **JETCUT** groove-turn and parting tools also feature coolant outlets near the cutting zone and thus the coolant jet increases the amount of coolant that reaches directly to the cutting edge and chips.
In grooving and parting operations, applying high pressure coolant provides excellent chip breaking results on all materials.

JETCUT
SWISSCUT
INNOVAL LINE

Grooving and Parting Tools for High Pressure Coolant

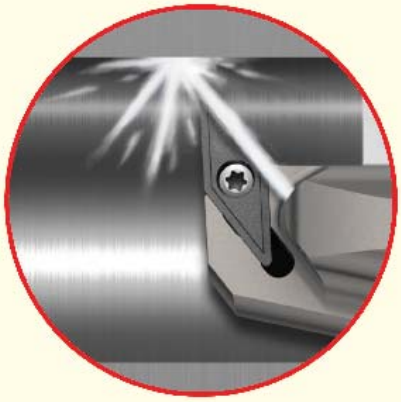
Following the very successful launch of the **SWISSCUT INNOVAL** line and the smooth transition from the old line, ISCAR is expanding the product range: Tools with high pressure coolant channels **(JETCUT)** pinpointed directly to the cutting edge.
The tools can handle pressure up to 340 bars. They will be available in 10 to 16mm shank sizes.

Turning and Threading

DECA IQ THREAD
ECO THREAD

New Tangentially Clamped Threading Inserts, Featuring 10 Cutting Edges.

This unique (patented) geometry is a 16 mm round insert with 5 double-sided corners, providing 10 cutting edges. The new geometry provides the most economical price per threading corner (when compared with the popular 3 corner laydown inserts).



ISOTURN

Boring Bars with Coolant Channel and New Small Size Inserts for Miniature

The boring tools for small diameters are available with steel and solid carbide shank options. These new tools carry new positive inserts.

JETCUT

SWISSTURN Toolholders

The new tools were designed for Swiss-type automatics and CNC machines. They include tools for ISO standard screw-clamped and lever-lock rhombic 80° (C-type), 55° (D-type) and 35° (V-type) inserts, all with 7° positive flank relief inclination.

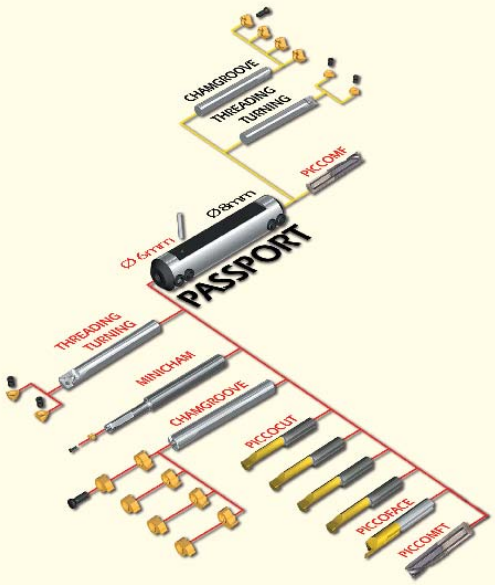
Versatile System

PASSPORT

The PASSPORT is a single holder-bar that is capable of clamping a variety of solid carbide shanks – the VISAS – that carry various inserts.The holder-bar accommodates 2 different diameters, one on each end, as well as both right- and left-hand shanks. This system allows the user to adjust the shank's extension for maximum rigidity. The PASSPORT system is designed for boring, grooving, profiling, back turning, threading and undercutting.
This system provides endless economical tooling combinations.

One Economical Holder for Many Applications

Boring • Grooving
Profiling • Back-Turning
Threading • Undercutting

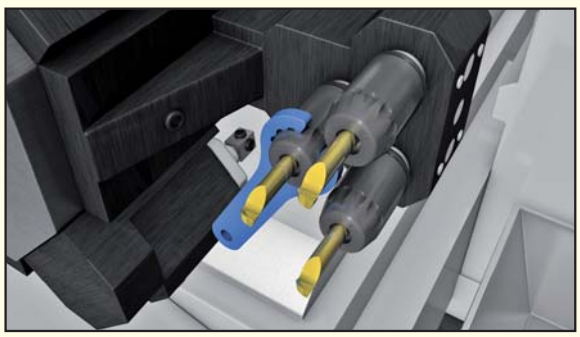


PICCOACE

High Precision Holders for PICCO Inserts

The growing demands for high accuracy and flexibility in clamping orientation have led **ISCAR** to develop a new advanced line of **PICCO** holders.The **PICCOACE** features a unique patented clamping system which sets new standards for three highly important properties: accuracy, rigidity and flexibility of clamping orientation.

No Setup Time



Versatile System

The new **PICCO MF/MFT** was designed in particular for use on Swiss-type and all other machines that produce miniature parts. This family of tools provides a unique cutting geometry and machining abilities that combine the work of a few tools into one.

PICCO MF/MFT is a part of the versatile **PASSPORT** system.

PICCOMFT

The Drilling, Turning, Boring and Threading Combination Tool

Dmin. 4 mm

PICCOMF

The Drilling, Turning and Boring Combination Tool

Dmin. 3 mm

CHAMGROOVE

The same shank can carry either right- or left-hand inserts for turning, threading and grooving in bores as small as 8 mm. This system features easy mounting and indexing. **CHAMGROOVE** is a part of the versatile **PASSPORT** system.

Dmin. 4 mm

MINICHAM

Applications inside bores as small as 4 mm can now be performed by using **ISCAR**'s **MINICHAM**.
This system features secure, self-clamping
inserts with no spare parts.
The unique cartridge is used for mounting and indexing the inserts.
ISCAR's **MINICHAM**, a part of the versatile **PASSPORT** system, has eliminated many of the problems associated with very small inserts.

Dmin. 4 mm

DR-MF

ISCAR introduces the **DR-MF**, a multifunction tool. The new tool can be used for manufacturing small sized components.
It reduces production time and the number of tools needed.

Milling Innovations

SOLIDMILL
PREMIUM LINE

Micrograin solid carbide endmills with extended tool life are a part of the **ISCARMILL** family. These endmills have an improved design and are available with the most advanced TiCN or TiAlN PVD coatings, in a range of 2-20 mm. Ball nose endmills are available in a of diameter range 3-20 mm.

Dmin. 4 mm

MULTI-MASTER
INDEXABLE SOLID CARBIDE LINE

MULTI-MASTER is a family of tools with shanks and interchangeable heads for a variety of milling applications including ball nose, straight shoulder and slitting and slotting applications. This system features **ISCAR'**s unique threaded carbide heads for superior performance, short indexing time and improved economy.

As there is no setup time for head replacement.

Dmin. 6-8 mm

Hole Making

SUMOCHAM
FLAT HEAD

Flat SUMOCHAM Drilling Heads

ISCAR is extending the application range of thesuccessful SUMOCHAM drilling line by addingflat face drilling heads.

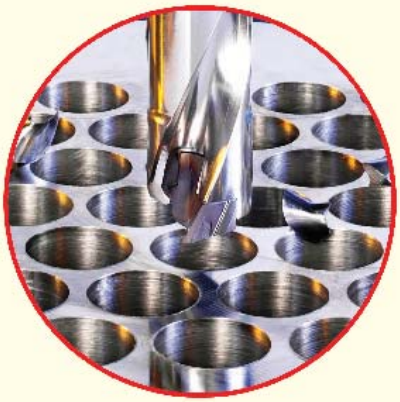
The new flat face drilling heads are designated FCP, designed for drilling steel components (ISO P/K material group).

SOLIDDRILL

The unique requirements of the mass production industries make specially tailored drills essential for optimal performance. ISCAR's trained design engineers ensure that customers have the finest multifunction drilling tools for their required profiles.

Dmin. 0.8 mm

Hole Making

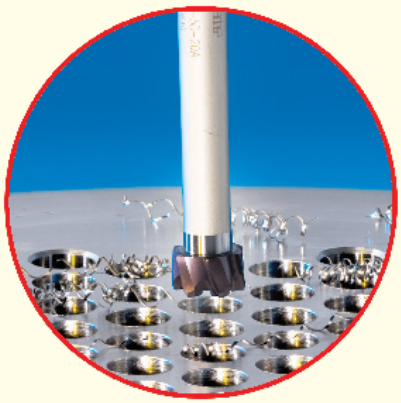


SUMOCHAMIQ
CHAMDRILL LINE

HCP-IQ SUMOCHAM Drilling Heads

ISCAR is expanding the **SUMOCHAM** drilling head options, by introducing a revolutionary drilling head geometry that features concave cutting edges which substantially enhance the self-centering capability of the drill.

By eliminating the need for a pilot hole, the new drilling heads shorten machining cycle time and the number of tools required for the drilling operation.This can provide a substantial cost reduction.

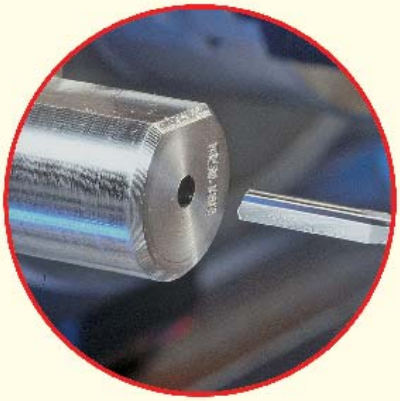


SOLIDH-REAM
INDEXH-REAM
BAYOT-REAM

Solid carbide reamers for standard H7 reaming in the range of 3 to 40 mm are available in cylindrical or Morse cone shanks, with straight or helical flutes. Also available is an interchangeable, shell reaming head system with a unique quick-change mechanism, in IC08 submicron grade or IC908 PVD coating for high speed machining.

Dmin. 3 mm

Deep Drilling



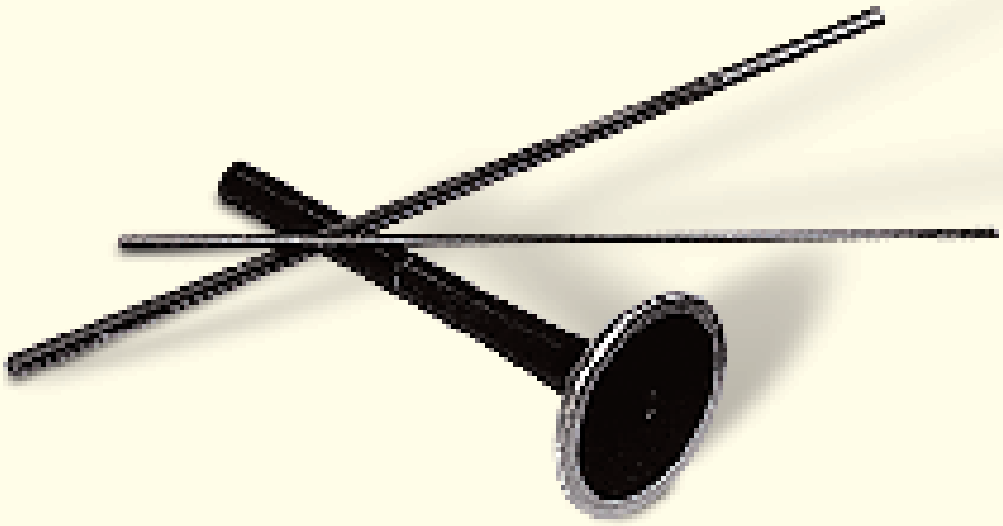
GUNDRILLS

ISCAR's gundrill consists of a single piece carbide head, a streamlined shank and a driver through which coolant flows to the working end where

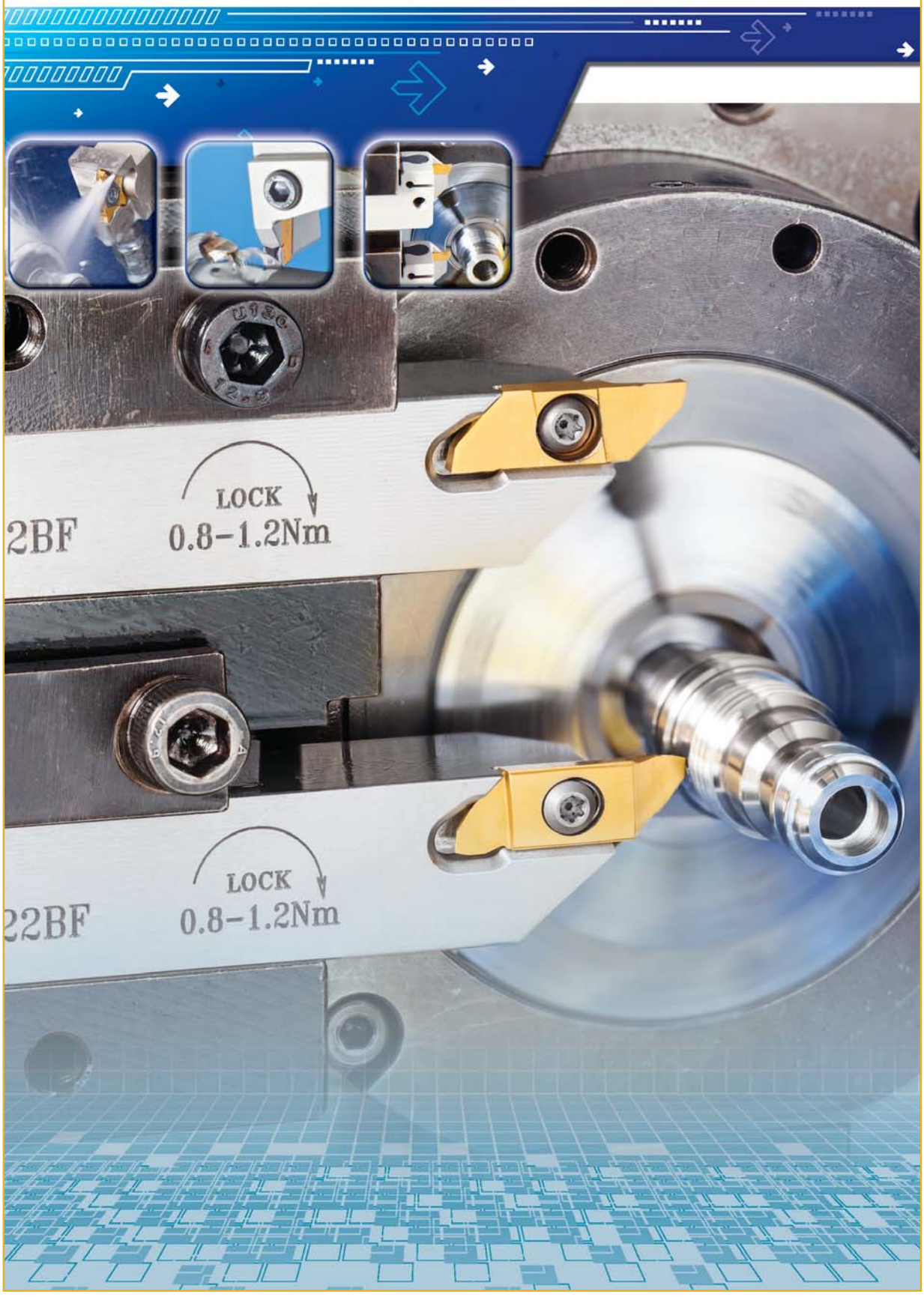
it is most needed Chips are evacuated along the V-shaped external flute. Features:

- Drilling precision of IT7 to IT9 tolerances can be reached
- High precision hole center alignment
- Surface roughness of 0.4 to 1.6 µm is easily obtained
- Reboring operations are often unnecessary

Dmin. 1 mm



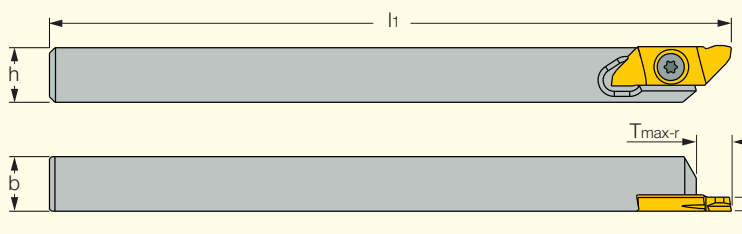
External Turning

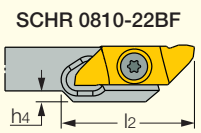


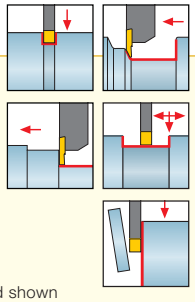
SWISSCUT
INNOVAL LINE

SCHR/L-BF

Grooving and Turning Holders, for Swiss-Type and Automatic Machines - Back and Front Clamping







Left-hand shown

Designation	h	b	l_1	h_4	l_2	T_{max-r} (1)	W min	W max
SCHR/L 0810-22BF	8.0	10.0	125.00	2.0	24.0	8.00	0.50	2.50
SCHR/L 10-22BF	10.0	10.0	125.00	-	-	8.00	0.50	2.50
SCHR/L 12-22BF	12.0	12.0	125.00	-	-	8.00	0.50	2.50
SCHR/L 16-22BF	16.0	16.0	125.00	-	-	8.00	0.50	2.50

(1) See insert dimensions

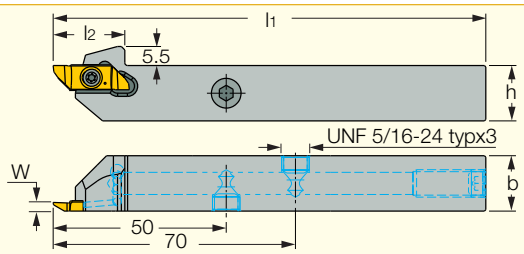
For inserts, see pages: SCIR-22-MTR-ISO (A10) • SCIR/L-22-AR/AL (A8) • SCIR/L-22-BR/BL (A8) • SCIR/L-22-ER/EL (A9) • SCIR/L-22-MTR/MTL (A115) • SCIR/L-22-N/L/R (A10) • SCIR/L-22-NP (A11).

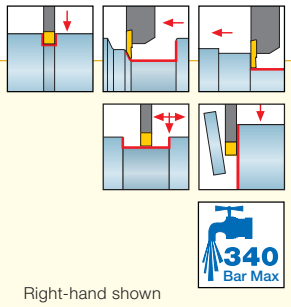
Spare Parts

Designation	Clamp Screw	Key
SCHR/L-BF	SR M4X0.7-19425	T-8/5

SCHR/L-BF-JHP

Grooving and Turning Tools with High Pressure Coolant Channels, for Swiss-Type and Automatic Machines





Right-hand shown

Designation	h	b	l_1	l_2	W min	W max	T_{max-r} (1)
SCHR/L 10-22BF-JHP	10.0	10.0	125.00	20.7	0.50	2.50	8.00
SCHR/L 12-22BF-JHP	12.0	12.0	125.00	20.7	0.50	2.50	8.00
SCHR/L 16-22BF-JHP	16.0	16.0	125.00	20.7	0.50	2.50	8.00

• Note: Coolnat ports of the left-hand tools are in the same position as those of the right-hand tools.

(1) See insert dimensions

For inserts, see pages: SCIR-22-MTR-ISO (A10) • SCIR/L-22-AR/AL (A8) • SCIR/L-22-BR/BL (A8) • SCIR/L-22-ER/EL (A9) • SCIR/L-22-MTR/MTL (A115) • SCIR/L-22-N/L/R (A10) • SCIR/L-22-NP (A11)

Spare Parts

Designation	Clamp Screw	Key	Plug	Key 1
SCHR/L-BF-JHP	SR M4X0.7-19425	HW 5/32"	SR 5/16UNF TL360	T-8/5

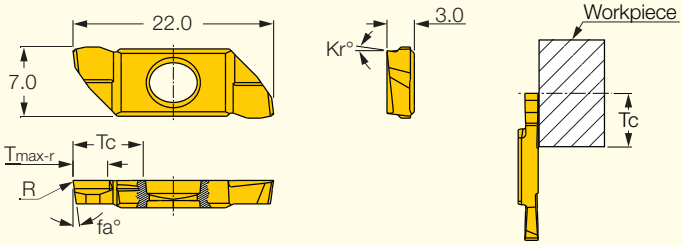
Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
SCHR/L 10-22BF-JHP	1-3	2-4	3-5
SCHR/L 12-22BF-JHP	3-5	4-6	5-7
SCHR/L 16-22BF-JHP	6-8	7-9	8-10

SWISSCUT
INNOVAL LINE

SCIR/L-22-AR/AL

Turning Inserts with a Frontal Relief Angle



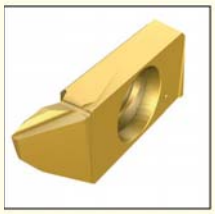
Left-hand shown

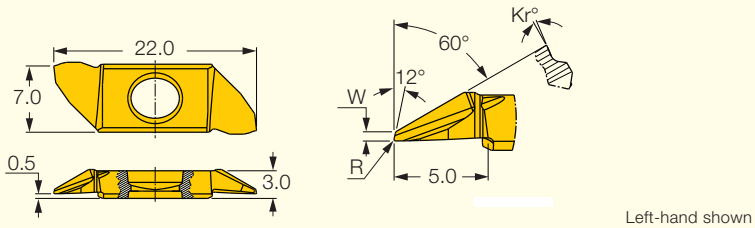
Designation	Dimensions R±0.02	Tc	fa°	Kr°	Tmax-r	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)
SCIL 22-AL00-25K16	0.00	8.0	8.0	16.0	3.80	●	0.05-3.80	0.01-0.15
SCIR 22-AR00-25K16	0.00	8.0	8.0	16.0	3.80	●	0.05-3.80	0.01-0.15
SCIL 22-AL10-25K8	0.10	8.0	12.0	8.0	3.80	●	0.12-3.80	0.01-0.15
SCIR 22-AR10-25K8	0.10	8.0	12.0	8.0	3.80	●	0.12-3.80	0.01-0.15

For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

SCIR/L-22-BR/BL

Back Turning Inserts





Left-hand shown

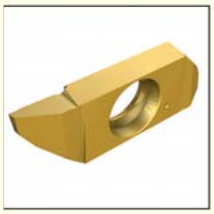
Designation	Dimensions W	Kr°	R±0.02	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)
SCIL 22-BL00-05K7	0.50	7.0	0.00	●	0.05-3.00	0.01-0.15
SCIL 22-BL10-05K7	0.50	7.0	0.10	●	0.12-3.00	0.01-0.15
SCIR 22-BR00-05K7	0.50	7.0	0.00	●	0.05-3.00	0.01-0.15
SCIR 22-BR10-05K7	0.50	7.0	0.10	●	0.12-3.00	0.01-0.15
SCIR 22-BR10-05K15	0.50	15.0	0.10	●	0.12-3.00	0.01-0.15
SCIL 22-BL08-10K7	1.00	7.0	0.08	●	0.10-3.00	0.01-0.15
SCIR 22-BR08-10K7	1.00	7.0	0.08	●	0.10-3.00	0.01-0.15
SCIR 22-BR08-10K15	1.00	15.0	0.08	●	0.10-3.00	0.01-0.15

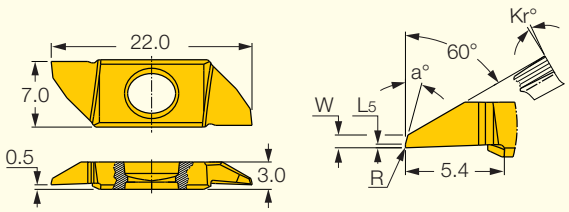
For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

SWISSCUT
INNOVAL LINE

SCIR/L-22-ER/EL

Back Turning Inserts for Short Chipping Materials





Left-hand shown

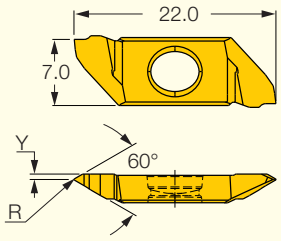
Designation	Dimensions R±0.02	W	a°	IC1008	Recommended Machining Data a_p (mm)	f turn (mm/rev)
SCIL 22-EL00-03K0	0.00	0.30	6.00	●	0.05-2.50	0.01-0.15
SCIR 22-ER00-03K0	0.00	0.30	6.00	●	0.05-2.50	0.01-0.15
SCIR/L 22-EL00-07K0	0.00	0.70	15.00	●	0.05-2.50	0.01-0.15
SCIR 22-ER00-07K0	0.00	0.70	15.00	●	0.05-2.50	0.01-0.15
SCIL 22-EL00-07K10	0.00	0.70	3.00	●	0.05-2.50	0.01-0.15
SCIR 22-ER00-07K10	0.00	0.70	3.00	●	0.05-2.50	0.01-0.15

For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

ISCARTHREAD • SWISSCUT
INNOVAL LINE

SCIR/L-22-MTR/MTL

60° Partial Profile Threading Inserts



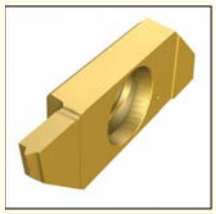
Left-hand shown

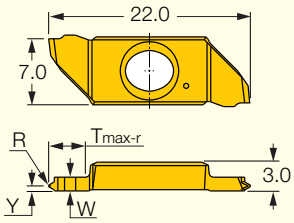
Designation	Dimensions R	Y	P_{min}	P_{max}	TPI max	TPI min	IC1008
SCIL 22-MTL003	0.03	0.4	0.30	0.90	83	28	●
SCIR 22-MTR003	0.03	0.4	0.30	0.90	83	28	●
SCIL 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	●
SCIR 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	●
SCIL 22-MTL010	0.10	0.8	0.90	1.70	28	15	●
SCIR 22-MTR010	0.10	0.8	0.90	1.70	28	15	●

For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

SCIR-22-MTR-ISO

Precision Ground ISO Metric Full Profile Threading Inserts



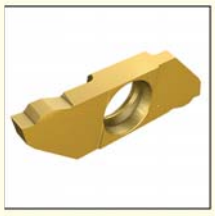


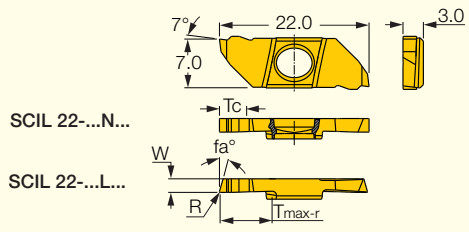
Designation	Dimensions					IC1008
	Pitch	W	Tmax-r	R	Y	
SCIR 22-MTR-0.3ISO	0.30	1.00	3.00	0.03	0.2	●
SCIR 22-MTR-0.4ISO	0.40	1.00	3.00	0.04	0.2	●
SCIR 22-MTR-0.5ISO	0.50	1.00	3.00	0.06	0.3	●
SCIR 22-MTR-0.75ISO	0.75	1.00	3.00	0.10	0.4	●
SCIR 22-MTR-1.0ISO	1.00	1.50	4.00	0.14	0.6	●
SCIR 22-MTR-1.5ISO	1.50	2.00	4.00	0.20	0.8	●

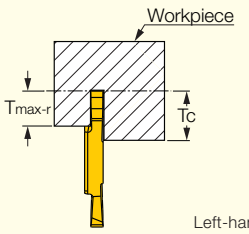
For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

SCIR/L-22-N/L/R

Grooving and Parting Inserts







Left-hand shown

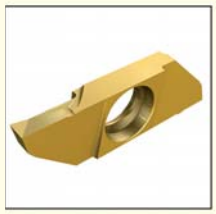
Designation	Dimensions					IC1008	Recommended Machining Data
	W±0.02	fa°	R	Tmax-r	Tc		f groove (mm/rev)
SCIR/L 22-050N-00	0.50	0.0	0.00	1.80	5.5	●	0.02-0.04
SCIR/L 22-100N-00	1.00	0.0	0.00	4.00	5.5	●	0.03-0.05
SCIR/L 22-150N-00	1.50	0.0	0.00	5.50	8.0	●	0.03-0.07
SCIR/L 22-200N-10	2.00	0.0	0.10	7.00	8.0	●	0.03-0.09
SCIL 22-050R/L12-00	0.50	12.0	0.00	2.00	5.5	●	0.01-0.03
SCIR 22-050R/L12-00	0.50	12.0	0.00	2.00	5.5	●	0.01-0.03
SCIL 22-100R/L16-00	1.00	16.0	0.00	4.00	5.5	●	0.02-0.04
SCIR 22-100R/L16-00	1.00	16.0	0.00	4.00	5.5	●	0.02-0.04
SCIL 22-150R/L16-00	1.50	16.0	0.00	5.50	8.0	●	0.03-0.06
SCIR 22-150R/L16-00	1.50	16.0	0.00	5.50	8.0	●	0.03-0.06
SCIL 22-200R/L16-00	2.00	16.0	0.00	7.00	8.0	●	0.03-0.07
SCIR 22-200R/L16-00	2.00	16.0	0.00	7.00	8.0	●	0.03-0.07

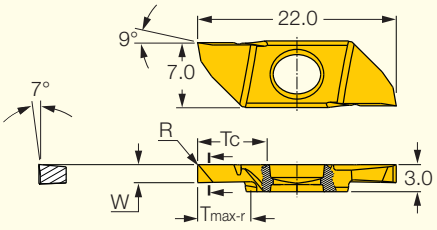
For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

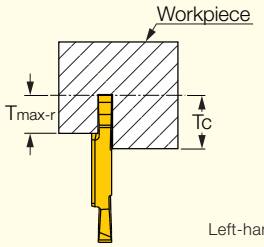
SWISSCUT
INNOVAL LINE

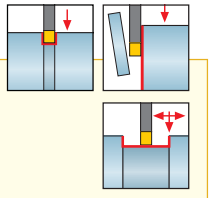
SCIR/L-22-NP

Grooving, Turning and Parting Inserts









Left-hand shown

Designation	Dimensions W±0.02	R±0.02	Tmax-r	Tc	IC1008	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
SCIR/L 22-080NP00	0.80	0.00	2.50	8.0	●	0.05-0.70	0.02-0.06	0.02-0.05
SCIR/L 22-100NP08	1.00	0.08	3.00	8.0	●	0.05-0.80	0.02-0.08	0.02-0.06
SCIR/L 22-150NP05	1.50	0.05	6.00	8.0	●	0.05-1.80	0.02-0.11	0.02-0.07
SCIR/L 22-200NP05	2.00	0.05	6.00	8.0	●	0.05-2.50	0.03-0.15	0.03-0.09
SCIR/L 22-250NP05	2.50	0.05	6.00	8.0	●	0.05-3.10	0.03-0.19	0.03-0.11

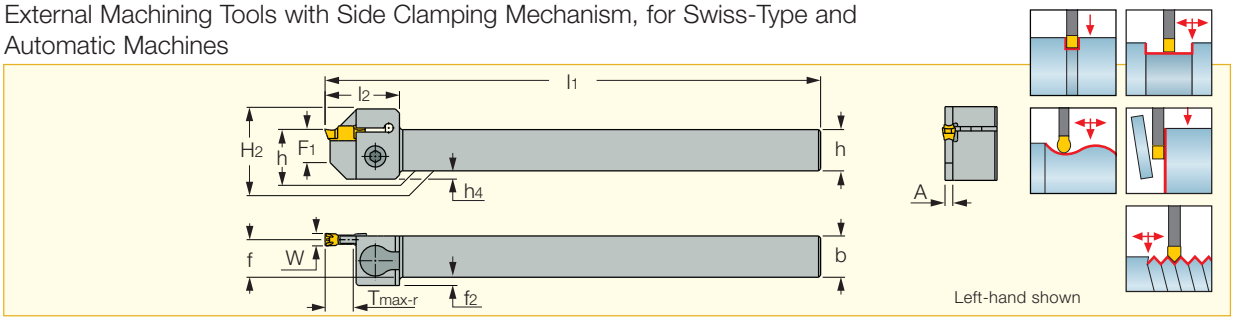
For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

GROOVETURN

CUT-GRIP

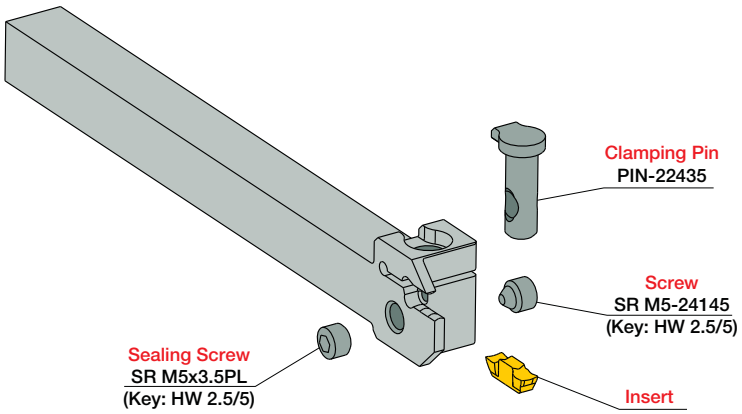
GEHSR/L-SL

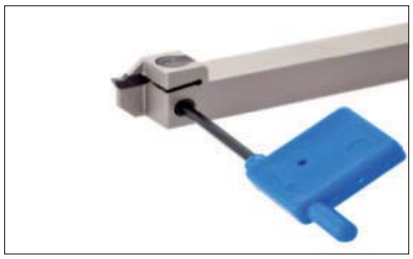
External Machining Tools with Side Clamping Mechanism, for Swiss-Type and Automatic Machines



Designation	h	W min	W max	Tmax-r	b	l1	f	h4	f2	A	l2	F1	H2
GEHSR/L 10-2-SL	10.0	2.20	3.20	6.80	10.0	120.00	9.1	2.0	2.00	1.80	18.0	8.0	15.0
GEHSR/L 12-2-SL	12.0	2.20	3.20	6.80	12.0	120.00	11.1	-	-	1.80	18.0	8.0	17.0
GEHSR/L 16-2-SL	16.0	2.20	3.20	6.80	16.0	120.00	15.1	-	-	1.80	18.0	8.0	21.0

For inserts, see pages: GEMI (B29) • GEPI (B30) • GEPI (full radius) (B30) • GEPI-MT (B102) • GEPI-WT (B99).



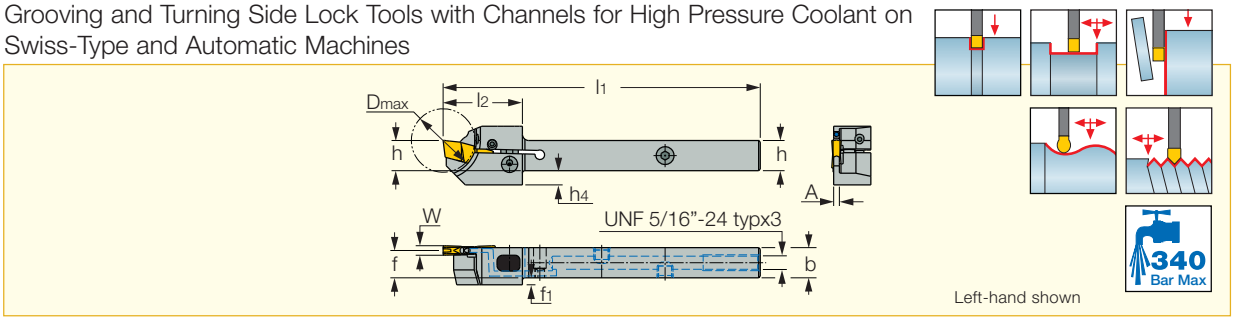


Spare Parts

Designation	Clamping Device	Clamp Screw	Plug	Hex Flag Key
GEHSR/L-SL	PIN-22435	SR M5-24145	SR M5X3.5 ULTEM 2300	HW 2.5/5

GHSR/L-JHP-SL

Grooving and Turning Side Lock Tools with Channels for High Pressure Coolant on Swiss-Type and Automatic Machines

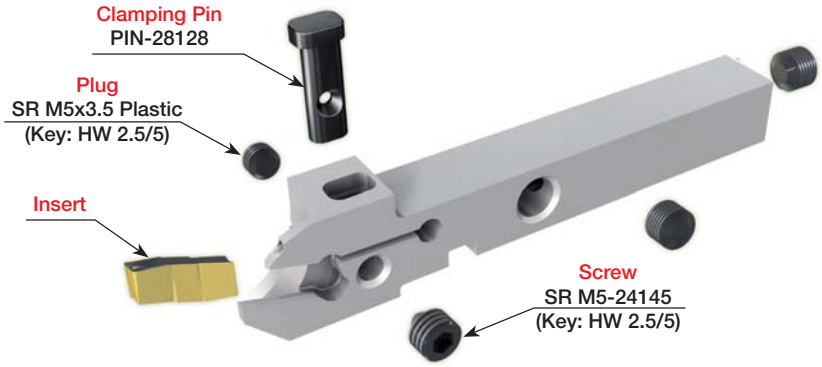


Designation	W min	W max	h	b	D max	l1	l2	f	f1	A
GHSR/L 10-2-JHP-SL	2.20	3.00	10.0	10.0	20.0	100.00	25.0	9.1	2.2	1.80
GHSR/L 12-2-JHP-SL	2.20	3.00	12.0	12.0	25.0	100.00	25.0	11.1	-	1.80
GHSR/L 16-2-JHP-SL	2.20	3.00	16.0	16.0	25.0	120.00	27.0	15.1	-	1.80
GHSR/L 12-3-JHP-SL	2.80	4.00	12.0	12.0	25.0	100.00	25.0	10.8	-	2.40
GHSR/L 16-3-JHP-SL	2.80	4.00	16.0	16.0	25.0	120.00	27.0	14.8	-	2.40

For inserts, see pages: GIG (A32) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (full radius W<M) (A31) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
GHSR/L...-JHP-SL	4-6	7-9	9-11



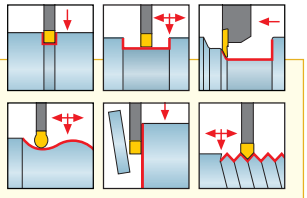
Spare Parts

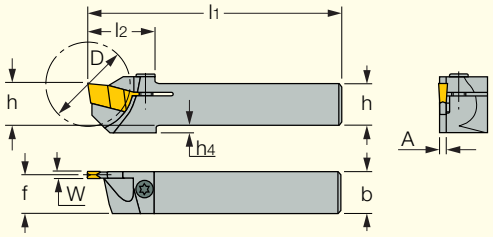
Designation	Clamp Screw	Plug	Hex Flag Key	Plug 1	Key
GHSR/L 10-2-JHP-SL	SR M5-24145	SR M5X3.5 ULTEM 2300	HW 2.5/5	SR 5/16XUNF-TL-S	HW 5/32"
GHSR/L 12-2-JHP-SL	SR M5-24145	SR M5X3.5 ULTEM 2300	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
GHSR/L 16-2-JHP-SL	SR M5-24145	SR M5X3.5 ULTEM 2300	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
GHSR/L 12-3-JHP-SL	SR M5-24145	SR M5X3.5 ULTEM 2300	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
GHSR/L 16-3-JHP-SL	SR M5-24145	SR M5X3.5 ULTEM 2300	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"

CUT-GRIP

GHSR/L

External Machining Holders for Swiss-Type and Automatic Machines





Left-hand shown

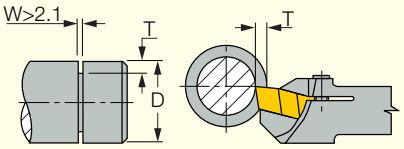
Designation	W min	W max	D max(1)	h	b	l_1	f	l_2	h_4	A
GHSR/L 10-2	2.20	3.15	20.0	10.0	10.0	120.00	9.1	18.0	2.0	1.80
GHSR/L 12-2	2.20	3.15	25.0	12.0	12.0	120.00	11.1	20.0	2.0	1.80
GHSR/L 14-2	2.20	3.15	26.0	14.0	14.0	120.00	13.1	20.0	-	1.80
GHSR/L 16-2	2.20	3.15	32.0	16.0	16.0	120.00	15.1	26.0	-	1.80

(1) For W>2.1 mm: grooving depth depends on part diameter

For inserts, see pages: GIG (A32) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (full radius W<M) (A31) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

Grooving Depth

Grooving Depth Tmax per Diameter for Width > 2.1 mm



Tmax	5.0	4.5	4.0	3.5	3.0	2.5	2.3	2.0	1.7
D	10.5	10.8	11.5	12.6	14.5	17	20	25	34

Tmax is also limited by insert.

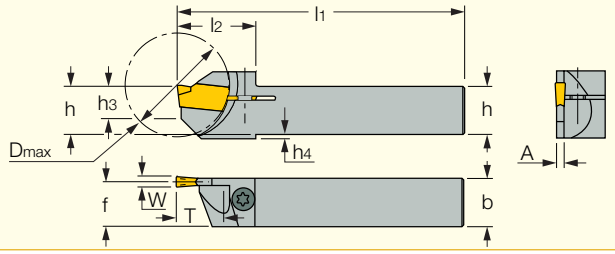
Spare Parts

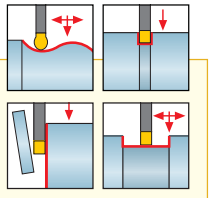
Designation	Screw	Key
GHSR/L 10-2	SR 16-236 P	
GHSR/L 12-2	SR 16-236 P	
GHSR/L 14-2	SR 16-236 P	
GHSR/L 16-2	SR 16-212	T-20/3

CUT-GRIP

PHSR/L

External Machining Holders for Swiss-Type and Automatic Machines





Left-hand shown

Designation	W min	W max	D max(1)	h	b	l1	f	F1	l2	h4	A
PHSR/L 10-2.4	2.40	3.18	20.0	10.0	10.0	150.00	9.0	8.0	18.0	2.0	1.90
PHSR/L 12-2.4	2.40	3.18	25.0	12.0	12.0	150.00	11.1	7.0	20.0	-	1.90
PHSR/L 16-2.4	2.40	3.18	32.0	16.0	16.0	150.00	15.1	8.0	24.1	-	1.90

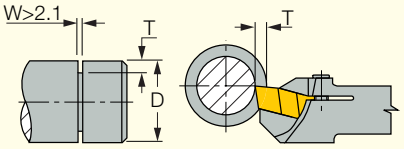
• T=Max depth capacity. see chart below.

(1) Limited by part diameter

For inserts, see pages: GDMW 2.4 (A17).

Grooving Depth

Grooving Depth Tmax per Diameter for Width > 2.1 mm



Tmax	5.0	4.5	4.0	3.5	3.0	2.5	2.3	2.0	1.7
D	10.5	10.8	11.5	12.6	14.5	17	20	25	34

Tmax is also limited by insert.

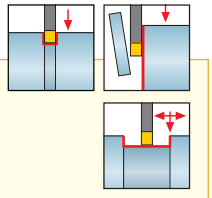
Spare Parts

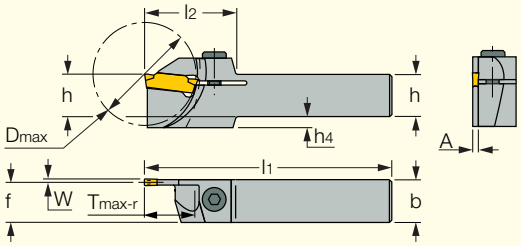
Designation	Screw	Key
PHSR/L	SR 16-236 P	T-15/3

CUT-GRIP

PHGR/L

Holders for External Grooving and Turning





Left-hand shown

Designation	W min	W max	D max(1)	Tmax-r	h	b	l1	l2	f	h4	A	Insert
PHGR/L 16-2.4	2.40	3.18	34.0	17.00	16.0	16.0	110.00	33.0	15.1	5.5	1.90	GDMW 2.4

(1) Maximum parting diameter.

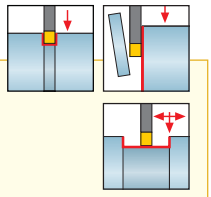
For inserts, see pages: GDMW 2.4 (A17).

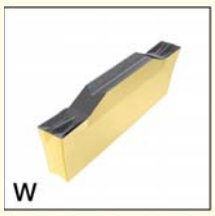
Spare Parts

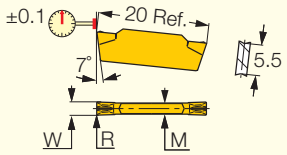
Designation	Screw	Key
PHGR/L	SR M5X16DIN912 12.9	HW 4.0

GDMW 2.4

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







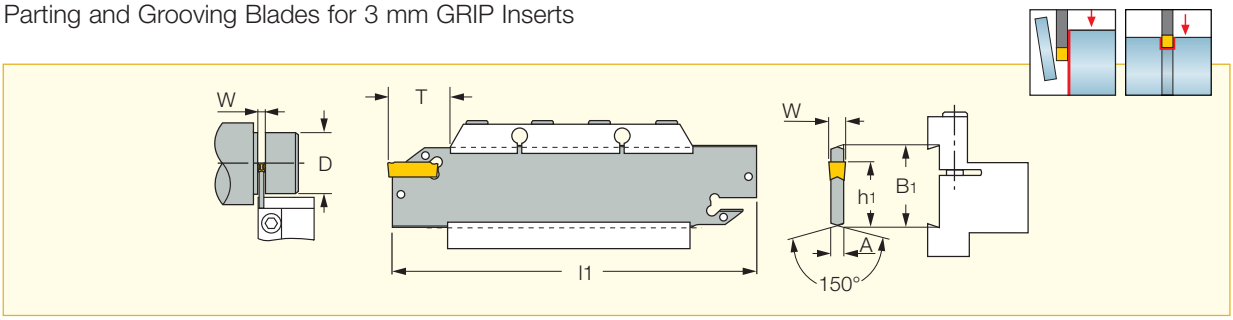
Designation	Dimensions W±0.04	R±0.03	M	Tmax-r	Tough ↔ Hard IC830	IC808	IC20	IC20N	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMW 2.4	2.40	0.18	2.0	18.00	●	●	●	●	0.25-1.50	0.07-0.12	0.05-0.08

For tools, see pages: • PHGR/L (A17) • PHSR/L (A16).

DO-GRIP • HELI-GRIP
TWISTED 2-SIDED

HGFH

Parting and Grooving Blades for 3 mm GRIP Inserts



Designation	B_1	W	A	l_1	h_1	T blade	D max
HGFH 26-3	26.0	3.00	2.40	110.00	21.4	37.5	75.0
HGFH 32-3	32.0	3.00	2.40	150.00	24.8	50.0	100.0

For inserts, see pages: GRIP (A19) • GRIP (full radius) (A20) • HGN-C (A70) • HGR/L-C (A71) • HGN-J (A71) • HGN-UT (A72) • HGR/L-J/JS (A72).

For holders, see pages: • SGTBU/SGTBN (A88) .

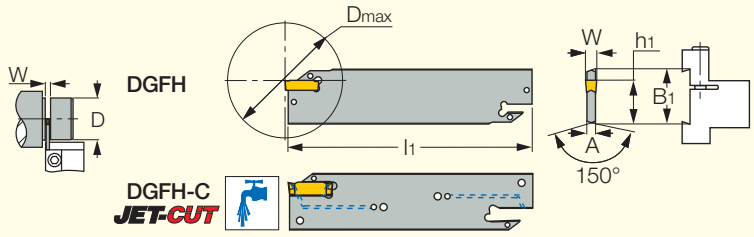
Spare Parts

Designation	Extractor
HGFH	EDG 23B*

* (Optional, should be ordered separately)

DGFH

Parting and Grooving Blades with and without Coolant Holes for DO-GRIP and HELI-GRIP Inserts



Designation	B_1	W min	W max	A	l_1	h_1	D max	Insert
DGFH 26-1.4	26.0	1.40	1.40	2.50 (4)	110.00	21.4	26.0	DG. 14..
DGFH 26-2 (1)	26.0	1.90 (3)	2.50	1.60	110.00	21.4	39.0 (5)	DG. 1.../DG. 2...
DGFH 26-3 (1)	26.0	3.00 (3)	3.18	2.40	110.00	21.4	39.0 (5)	DG. 1.../DG. 3...
DGFH 26C-3 (2)	26.0	3.00	3.18	2.40	110.00	21.4	39.0 (5)	DG. 3..C
DGFH 26-4	26.0	4.00	4.00	3.20	110.00	21.4	80.0	DG. 4.../GRIP 4...

• DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified
(1) For Dmax 50 mm, use single-ended insert (should be modified by the user). (2) Blades with frontal coolant holes (JET-CUT) • For Dmax 50 mm, use single-ended insert (should be modified by the user). (3) For DG. 1... insert, modify holder (4) Thickness at the D.O.C. area is 1.0 mm
(5) Maximum diameter with double-sided inserts.

For inserts, see pages: DGN-MF (A65) • DGN/DGNC/DGNM-C (A64) • DGR/L-C DGRC/LC-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR/L-J/JS (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • GRIP (A19) • GRIP (full radius) (A20).

For holders, see pages: • SGTBU/SGTBN (A88) .

Spare Parts

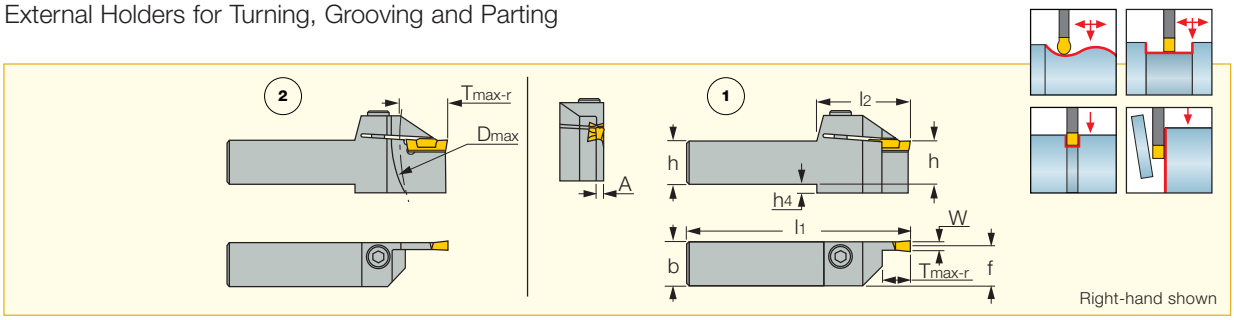
Designation	Extractor	Sealing Screw	Cooling Tube	Pipe Fitting	Pipe Fitting 1	Pipe Fitting 2
DGFH 26-1.4	EDG 23B*					
DGFH 26-2	EDG 23A*					
DGFH 26-3	EDG 23A*					
DGFH 26C-3	EDG 23A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 26-4	EDG 23A*					

* (Optional, should be ordered separately)

HELI-GRIP

HELIR/L

External Holders for Turning, Grooving and Parting



Designation	W min	W max	Tmax-r(2)	Fig.	D max(3)	h	b	f	l1	l2	A	h4	Insert
HELIR/L 1212-3T12	3.00	3.18	12.00	1	-	12.0	12.0	10.8	135.00	30.0	2.40	4.0	GRIP-3..., HG.-3
HELIR/L 1616-3T12	3.00	3.18	12.00	1	-	16.0	16.0	14.8	135.00	30.0	2.40	-	GRIP-3..., HG.-3
HELIR/L 1616-4T12	4.00	4.76	12.00	1	-	16.0	16.0	14.4	135.00	29.0	3.20	3.20	GRIP-4..., DG.-4
HELIR/L 1616-3T20 (1)	3.00	3.18	-	2	40.0	16.0	16.0	14.8	140.00	36.4	2.40	-	GRIP-3..., HG.-3
HELIR/L 1616-4T20	4.00	4.76	-	2	40.0	16.0	16.0	14.4	140.00	38.0	3.20	4.0	GRIP-4..., DG.-4

• For tool type as shown in Fig.2, Tmax for grooving is limited by the part diameter D. For grooving depth capacity, see table below.
(1) DGN inserts are not suitable for this tool. (2) Does not depend on the workpiece diameter (3) Maximum parting diameter

For inserts, see pages: GRIP (A19) • GRIP (full radius) (A20) • DGN/DGNC/DGNM-C (A64) • HGN-C (A70) • DGR/L-C DGRC/LC-C (A64) • DGN/DGNM-J/JS/JT (A65) • HGN-J (A71) • DGR/L-J/JS (A66) • DGN-LF/LFT (A66) • DGN-UT/UA (A68) • DGN-Z (A67) • DGR-Z/ZS (A67) • HGN-UT (A72).

Depth Capacity

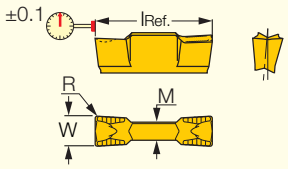
Designation	D											
HELIR/L 1616-3T20	–	–	–	–	–	80	194	∞	∞	∞	∞	∞	∞
HELIR/L 1616-4T20	–	–	–	–	–	78	132	505	∞	∞	∞	∞	∞
Depth T	30.0	28.0	25.0	23.0	21.0	20.0	18.0	16.0	14.0	12.0	10.0	8.0	6.5

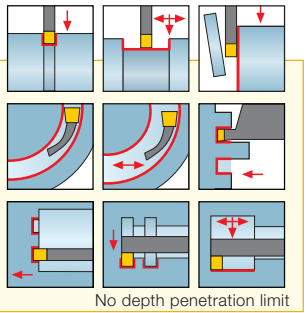
Spare Parts

Designation	Screw	Key
HELIR/L 1212-3T12	SR M5X16DIN912 12.9	HW 4.0
HELIR/L 1616-3T12	SR M5X16DIN912 12.9	HW 4.0
HELIR/L 1616-4T12	SR M5X16DIN912 12.9	HW 4.0
HELIR/L 1616-3T20	SR M6X20DIN912 12.9	HW 5.0
HELIR/L 1616-4T20	SR M6X20DIN912 12.9	HW 5.0

GRIP

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




No depth penetration limit

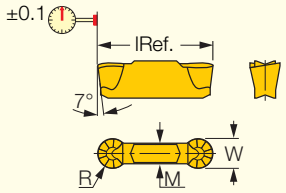
Designation	Dimensions W±0.05	R±0.05	l	M	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC807	IC5010	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3002Y	3.00	0.20	16.00	2.3	●	●	●	●	●		●		0.25-1.80	0.14-0.18	0.07-0.11	0.08-0.20	0.10-0.20
GRIP 3003Y	3.00	0.30	16.00	2.3	●	●	●	●		●		●	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	16.00	2.3	●	●		●	●	●			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	19.00	2.8	●	●	●	●	●		●		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	19.00	2.8	●	●	●	●	●	●	●	●	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	19.00	3.1	●	●		●	●	●			1.00-2.80	0.21-0.33	0.10-0.20	0.10-0.24	0.15-0.30

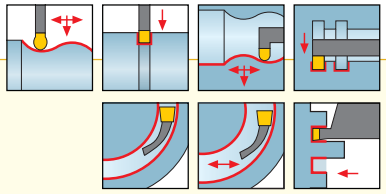
For tools, see pages: DGFH (A17) • DGTR/L (A56) • HELIR/L (A18) • HGFH (A17) • HGHR/L-3 (B127).

HELI-GRIP

GRIP (full radius)

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

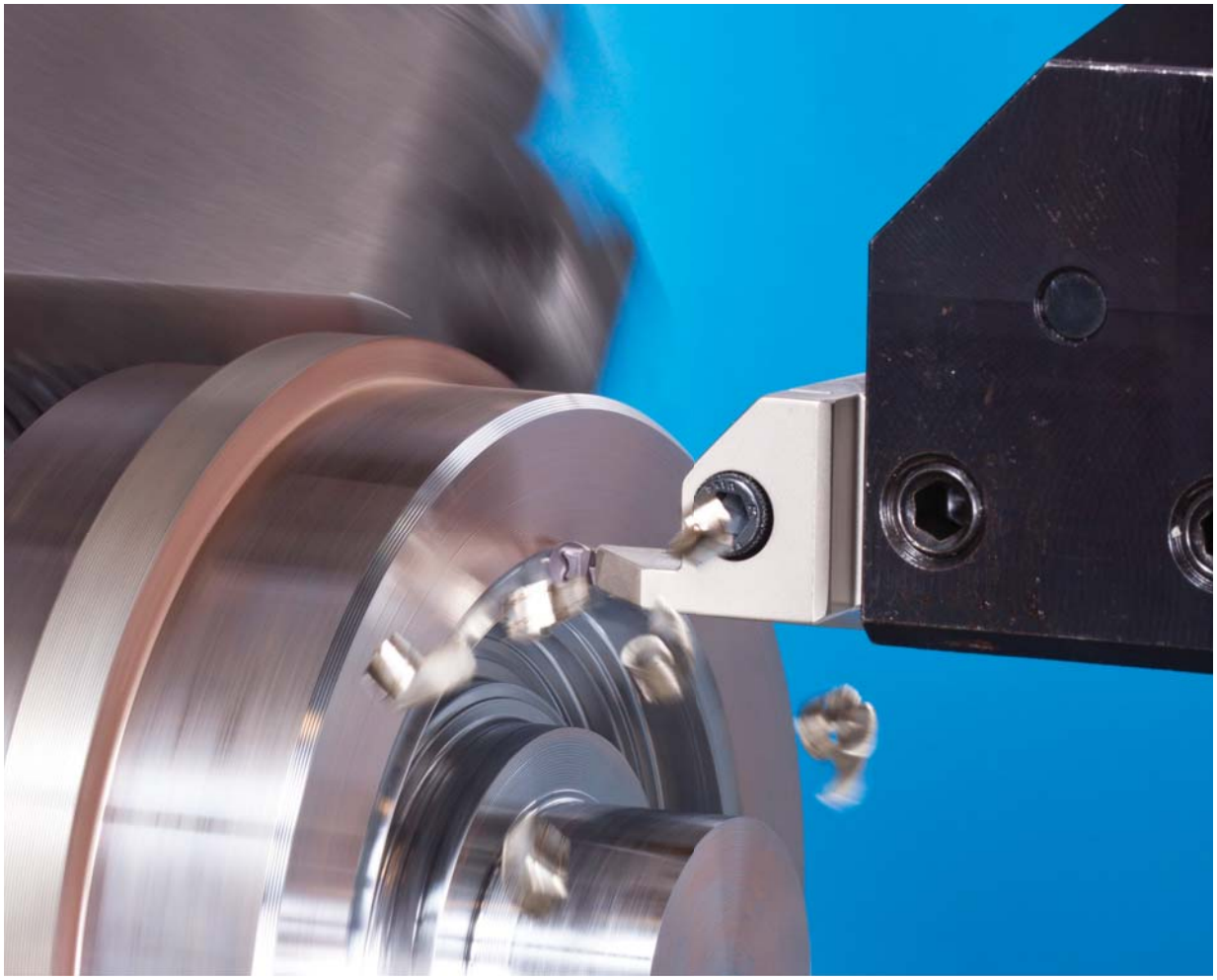




No depth penetration limit

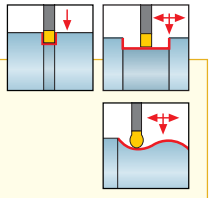
Designation	Dimensions W±0.05	R±0.05	l	M	Tough ↔ Hard IC830	IC8250	IC08	IC808	IC908	IC418	IC807	IC5010	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)	f face-groove (mm/rev)	f face-turn (mm/rev)
GRIP 3015Y	3.00	1.50	15.80	2.1	●	●	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13	0.08-0.20	0.10-0.20
GRIP 318-159Y	3.18	1.59	16.00	2.3				●	●				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	19.00	2.8	●	●	●	●	●	●	●	●	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	19.00	3.2				●	●	●			0.00-2.30	0.21-0.40	0.10-0.20	0.10-0.24	0.15-0.30

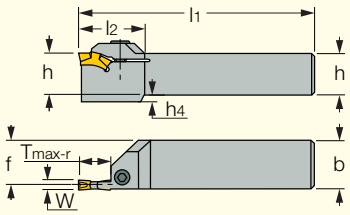
For tools, see pages: • DGFH (A18) • DGTR/L (A56) • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128)



TGDR/L

External Holders for Turning, Grooving and Profiling





Right-hand shown

Designation	W min	W max	Tmax-r(1)	h	b	l1	l2	f	h4	Insert
TGDR/L 1616-3M	3.00	3.00	7.50	16.0	16.0	100.00	30.5	14.7	6.0	TGMF 3
TGDR/L 1616-4M	4.00	5.00	9.00	16.0	16.0	100.00	32.2	14.2	6.0	TGMF 4/TGMF 5

(1) Grooving depth is limited by the insert

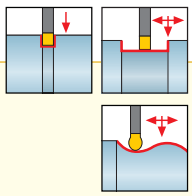
For inserts, see pages: TGMF (full radius) (A22) • TGMF/P (A22).

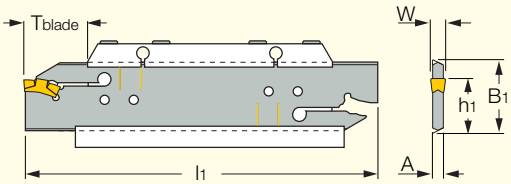
Spare Parts

Designation	Screw	Key
TGDR/L 1616	SR M5X12DIN912 12.9	HW 4.0

TGHN-D

Double-Ended Blades for Utility Grooving and Turning Inserts





Designation	B1	W min	W max	T blmin	T blade	h1	l1	A	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

• Use the drilled holes on blade for min. and max. overhang • Grooving depth is limited by the insert

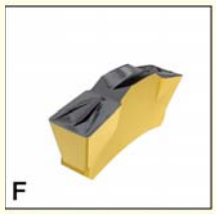
For inserts, see pages: TGMF (full radius) (A22) • TGMF/P (A22).

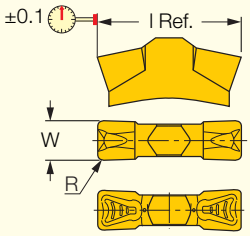
For holders, see pages: SGTBU/SGTBN (A88) .

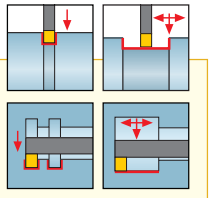
TOP-GRIP

TGMF/P

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







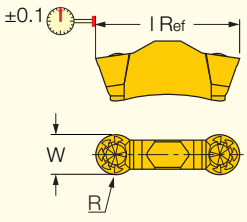
Designation	Dimensions W±0.05	R±0.05	l	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC20N	IC428	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMF 302	3.00	0.20	13.50	10.50	●	●	●	●	●	●	0.25-1.80	0.14-0.18	0.07-0.11
TGMF 304	3.00	0.40	13.55	10.30	●	●	●	●	●	●	0.50-1.80	0.16-0.20	0.07-0.12
TGMF 402	4.00	0.20	17.70	14.70	●	●	●	●	●	●	0.20-2.40	0.16-0.21	0.09-0.14
TGMF 404	4.00	0.40	17.70	14.60	●	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15
TGMP 506	5.00	0.60	17.60	15.00		●			●		0.75-3.00	0.21-0.32	0.11-0.20
TGMF 508	5.00	0.80	17.80	14.20	●	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21

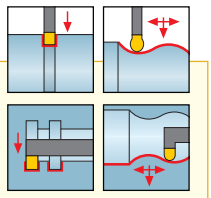
• Dmin for internal application=20.5 mm

For tools, see pages: TGDR/L (A21) • TGHN-D (A21) • TGIR/L-C (B28) .

TGMF (full radius)

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





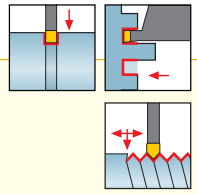
Designation	Dimensions W±0.05	R±0.05	l	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	IC428	IC5010	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
TGMF 315	3.00	1.50	13.50	11.40	●	●	●	●		●	0.00-1.50	0.18-0.26	0.07-0.13
TGMF 420	4.00	2.00	17.80	14.90	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17
TGMF 525	5.00	2.50	17.75	14.30	●	●	●	●	●		0.00-2.50	0.23-0.42	0.11-0.21

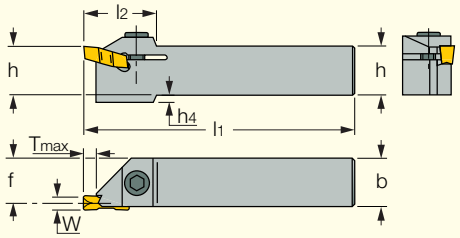
• Can cut arcs to 250° • Dmin for internal application=20.5 mm

For tools, see pages: TGDR/L (A21) • TGHN-D (A21) • TGIR/L-C (B28).

GHMR/L

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





Right-hand shown

Designation	W max	Tmax-r	Tmax-a	h	b	l1	l2	f	h4
GHMR/L 12	4.00	4.80	4.80	12.0	12.0	110.00	25.0	10.8	4.0
GHMR/L 16	4.80	4.80	4.80	16.0	16.0	115.00	25.0	14.5	-
GHMR 16-3 ST (1)	5.00	4.80	4.80	16.0	16.0	78.00	25.0	15.0	-

• Use for recessing: light turning, small depth of cut (ap=0.1-0.5 mm) and small feed (f=0.1 mm/rev).

(1) For Star and multi-spindle machines.

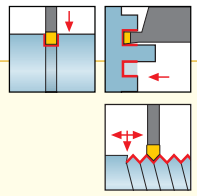
For inserts, see pages: • GIF (A34) • GIF (full radius) (A34) • GIF-E (W=4-6 full radius) (A30) • GIF-E (W=4-6) (A29) • GIG (A32) • GIM-C (A77) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIM-UT (A79) • GIM-UT-RA/LA (A80) • GIM-W (A78) • GIM-W-RA/LA (A79) • GIMF (A27) • GIMN (A28) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (flat top W<M) (A31) • GIP (full radius W<M) (A31) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIP-RX/LX (A38) • GIP-UN (A40) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

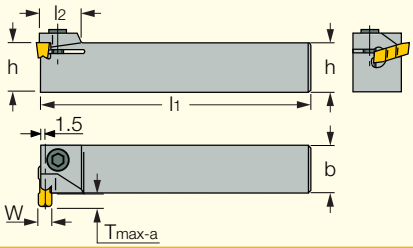
Spare Parts

Designation	Screw	Key	Screw 1	Key 1
GHMR/L 12	SR 76-1021			
GHMR/L 16			SR M6X16DIN912 12.9	
GHMR 16-3 ST			SR M6X16DIN912 12.9	

GHMPR/L

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





Right-hand shown

Designation	W max	Tmax-r	Tmax-a	h	b	l1	l2
GHMPR/L 16	4.80	4.80	4.80	16.0	16.0	110.00	17.0

• Use for recessing: light turning, small depth of cut (ap=0.1-0.5 mm) and small feed (f=0.1 mm/rev).

For inserts, see pages: • GIF (A34) • GIF (full radius) (A34) • GIF-E (W=4-6 full radius) (A30) • GIF-E (W=4-6) (A29) • GIG (A32) • GIM-C (A77) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIM-UT (A79) • GIM-UT-RA/LA (A80) • GIM-W (A78) • GIM-W-RA/LA (A79) • GIMF (A27) • GIMN (A28) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (flat top W<M) (A31) • GIP (full radius W<M) (A31) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIP-RX/LX (A38) • GIP-UN (A40) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

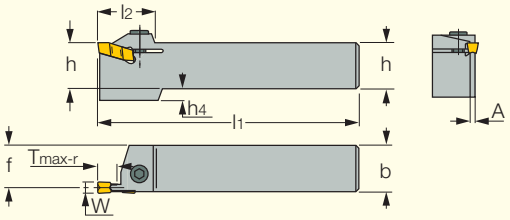
Spare Parts

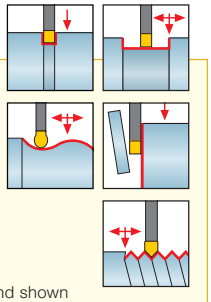
Designation	Screw	Key
GHMPR/L 16	SR M6X16DIN912 12.9	HW 5.0

CUT-GRIP

GHDR/L (short pocket)

External Tools for Turning, Grooving and Parting





Right-hand shown

Designation	W min	W max	Tmax-r	h	b	l1	l2	f	A	h4
GHDR/L 12-3	2.80	4.00	8.00	12.0	12.0	110.00	25.0	10.8	2.40	4.0
GHDR/L 16-3	2.80	4.00	9.00	16.0	16.0	110.00	26.0	14.8	2.40	4.0
GHDR/L 16-3 ST (1)	2.80	4.00	9.00	16.0	16.0	78.00	24.0	15.0	2.20	4.0
GHDR/L 16-4	4.00	5.00	10.00	16.0	16.0	110.00	26.0	14.4	3.20	4.0
GHDR 16-4 ST (1)	4.00	5.40	10.00	16.0	16.0	78.00	24.6	14.0	3.40	4.0

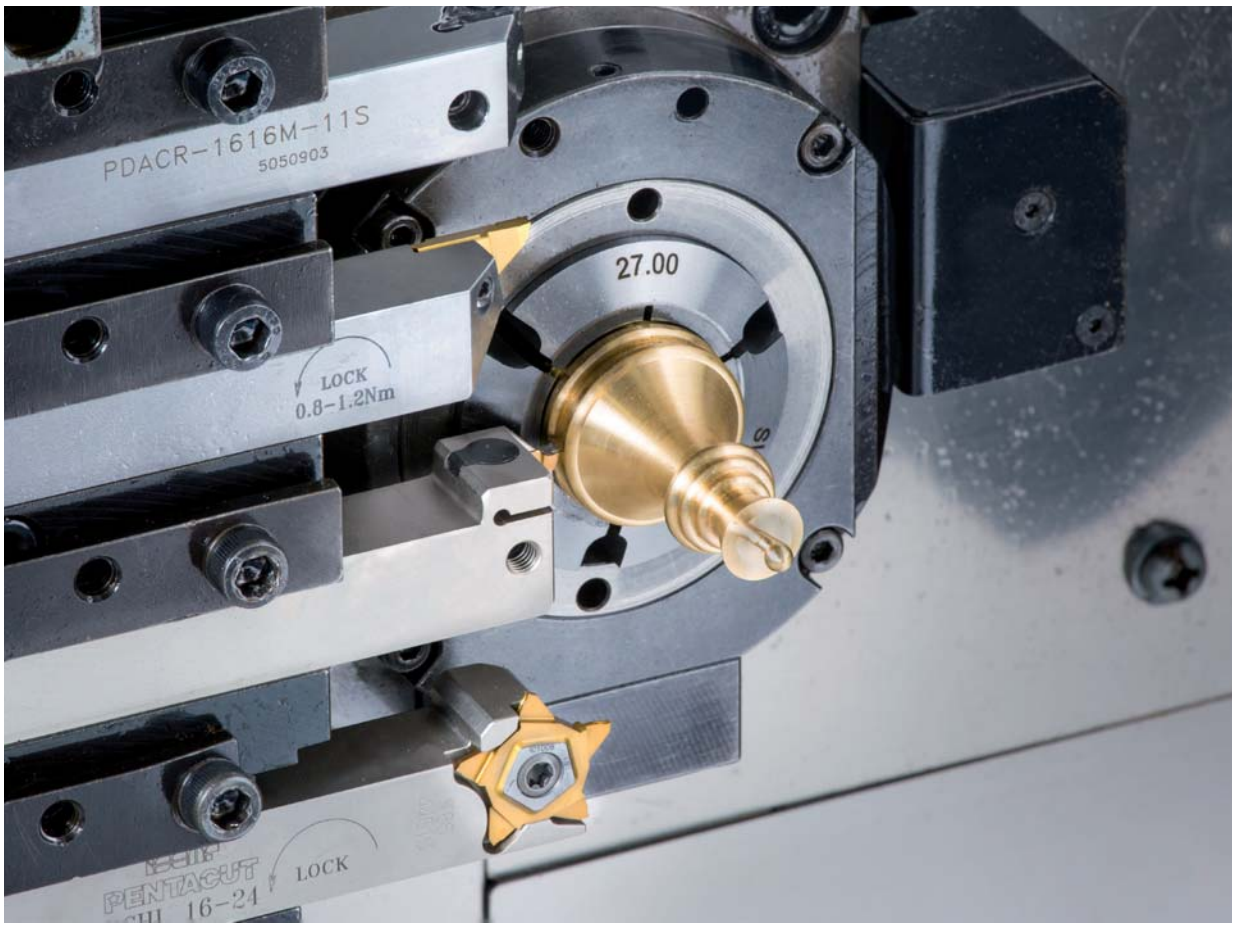
• For using TIP and GPV inserts, toolholder seat needs to be modified according to insert profile to ensure clearance.

(1) For Star and multi-spindle machines.

For inserts, see pages: • GIF (A34) • GIF (full radius) (A34) • GIF-E (W=4-6 full radius) (A30) • GIF-E (W=4-6) (A29) • GIG (A32) • GIM-C (A77) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIM-UT (A79) • GIM-UT-RA/LA (A80) • GIM-W (A78) • GIM-W-RA/LA (A79) • GIMF (A27) • GIMN (A28) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (flat top W<M) (A31) • GIP (full radius W<M) (A31) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIP-UN (A40) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

Spare Parts

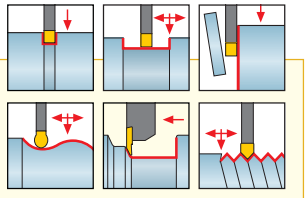
Designation	Key	Screw	Key 1
GHDR/L 12-3		SR 76-1021	
GHDR/L 16-3		SR M5X16DIN912 12.9	
GHDR/L 16-3 ST		SR M5X16DIN912 12.9	
GHDR/L 16-4		SR M6X16DIN912 12.9	
GHDR 16-4 ST		SR M6X16DIN912 12.9	

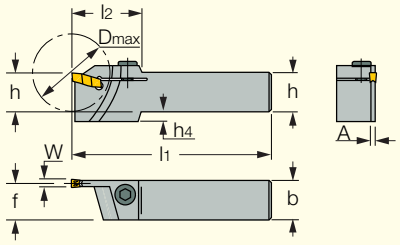


CUT-GRIP

GHGR/L

External Holders for Deep Grooving and Parting





Left-hand shown

Designation	W min	W max	D max(2)	h	b	l1	l2	f	A	h4
GHGR/L 16-3	3.00	4.00	40.0	16.0	16.0	110.00	36.0	14.7	2.50	4.0
GHGR/L 16-3 ST (1)	3.00	4.00	34.0	16.0	16.0	78.00	33.0	15.0	2.40	4.0
GHGR 16-4	4.00	5.00	40.0	16.0	16.0	110.00	36.0	14.4	3.20	4.0

• For machining depth over 13 mm, a single-ended insert is required (GIM, GIMF, GIMY). Tmax for grooving depth depends on part diameter D. For grooving a part with a diameter larger than Dmax, see next table. • For using TIP inserts, toolholder seat needs to be modified according to insert profile to ensure clearance.
(1) For Star and multi-spindle machines. (2) Maximum parting diameter

For inserts, see pages: • GIF (A34) • GIF (full radius) (A34) • GIF-E (W=4-6 full radius) (A30) • GIF-E (W=4-6) (A29) • GIG (A32) • GIM-C (A77) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIM-UT (A79) • GIM-UT-RA/LA (A80) • GIM-W (A78) • GIM-W-RA/LA (A79) • GIMF (A27) • GIMN (A28) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (flat top W<M) (A31) • GIP (full radius W<M) (A31) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

Spare Parts

Designation	Screw	Key
GHGR/L 16-3	SR M6X16DIN912 12.9	HW 5.0
GHGR/L 16-3 ST	SR M6X16DIN912 12.9	HW 5.0
GHGR 16-4	SR M6X16DIN912 12.9	HW 5.0

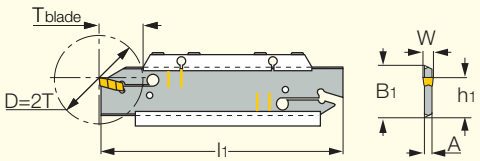
Depth Capacity*

Designation	D								
GHGR/L 16-3/16-4	–	40	50	68	80	120	290	1000	–
Depth T	23	20	19	17	16	14	12	11	9

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

CGHN-D

Double-Ended Blades for External Grooving and Turning



Designation	B1	W min	W max	T blmin	T blade	h1	l1	A
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

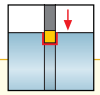
• Use the yellow lines on blade for min. and max. overhang. • For using TIP inserts, toolholder seat needs to be modified according to insert profile to ensure clearance. • When using a double-ended insert, grooving depth is limited by the insert.

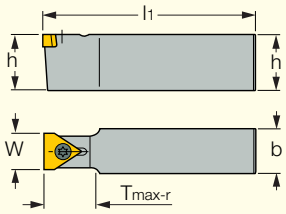
For inserts, see pages: • GIF (A34) • GIF (full radius) (A34) • GIF-E (W=4-6 full radius) (A30) • GIF-E (W=4-6) (A29) • GIM-C (A77) • GIM-J (A77) • GIM-J-RA/LA (A78) • GIM-UT (A79) • GIM-UT-RA/LA (A80) • GIM-W (A78) • GIM-W-RA/LA (A79) • GIMF (A27) • GIMN (A28) • GIMY (A27) • GIMY (full radius) (A28) • GIP (A33) • GIP (full radius) (A33) • GIP-E (A29) • GIP-E (full radius) (A30) • GIPA (full radius W=3-6) (A37) • GIPA (W=3-6) (A36) • GIPM-A46 / GIP-1250 (A38) • GIPY (A36) • GITM (A35) • GITM (full radius) (A35) • TIP-MT (A114) • TIP-P-BSPT (A122) • TIP-P-BSW (A121) • TIP-P-ISO (A117) • TIP-P-NPT (A128) • TIP-P-UN (A119) • TIP-WT (A112).

For holders, see pages: SGTBU/SGTBN (A88) .

SXCNN

External Toolholders for Specially Tailored Wide Profile Inserts





Designation	W	T_{max-r}	h	b	l_1	Insert
SXCNN 1212 K10-06	10.40	17.00	12.0	12.0	125.00	XNUW 10
SXCNN 1616 K10-06	10.40	17.00	16.0	16.0	125.00	XNUW 10
SXCNN 1212 K13-05	13.00	20.00	12.0	12.0	125.00	XNUW 13
SXCNN 1414 K13-05	13.00	23.00	14.0	14.0	125.00	XNUW 13
SXCNN 1616 K13-05	13.00	23.00	16.0	16.0	125.00	XNUW 13
SXCNN 1212 K14-03	14.50	-	12.0	12.0	125.00	XNUW 14
SXCNN 1616 K14-03	14.50	17.00	16.0	16.0	125.00	XNUW 14
SXCNN 1616 K20-05	20.50	-	16.0	16.0	125.00	XNUW 20

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

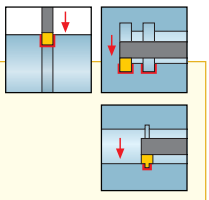
For inserts, see pages: XNUW (A26).

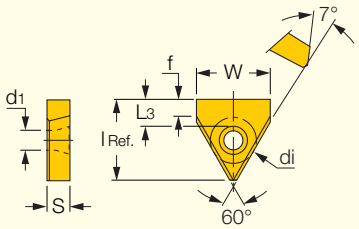
Spare Parts


Designation	Screw	Key
SXCNN 1212 K10-06	SR 76-2067	
SXCNN 1616 K10-06	SR 76-2067	
SXCNN 1212 K13-05	SR 76-2068	T-20/5
SXCNN 1414 K13-05	SR 76-2068	T-20/5
SXCNN 1616 K13-05	SR 14-591	T-20/5
SXCNN 1212 K14-03	SR 76-2067	
SXCNN 1616 K14-03	SR 76-2067	
SXCNN 1616 K20-05	SR 14-591	T-20/5

XNUW

Blank Inserts for Wide Profile Grooving



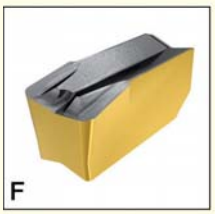


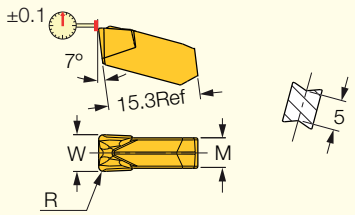
Designation	Dimensions W	f	L_3	di	S	d_1	l	Tough ↔ Hard IC28	IC54	IC08	IC07	IC20
XNUW 1003-06	10.40	6.0	10.50	6.35	3.18	4.53	17.00	●		●		
XNUW 1305-05	13.00	5.0	11.40	12.70	5.35	5.50	20.60	●	●	●		●
XNUW 14T3-03	14.50	3.0	3.70	9.52	3.97	4.40	14.00	●	●	●		●
XNUW 2006-05	20.50	4.8	5.00	12.70	6.35	5.50	20.30	●	●		●	●

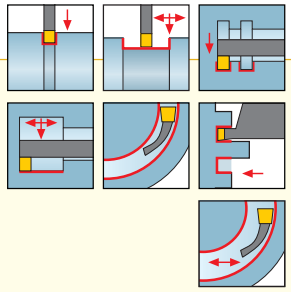
For tools, see pages: • SXCNN (A26).

GIMF

Utility Single-Ended Inserts for Grooving and Turning







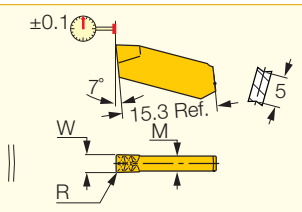
Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC806	IC907	IC20	IC428	IC5010	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMF 406	4.00	0.60	3.2	●	●	●	●	●	●	●	●	●	0.75-2.40	0.19-0.25	0.09-0.16
GIMF 502	5.00	0.20	4.0		●					●			0.25-3.00	0.18-0.26	0.11-0.18
GIMF 508	5.00	0.80	4.0	●	●	●		●		●	●	●	1.00-3.00	0.23-0.35	0.11-0.21

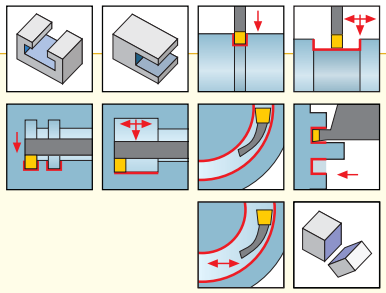
• Dmin for internal applications = 70 mm

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIMY

Utility Single-Ended Inserts, for Grooving and Turning





Designation	Dimensions W±0.05	R±0.05	M	Tough ↔ Hard IC830	IC8250	IC806	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 304	3.00	0.40	2.4	●	●	●	●	0.50-1.80	0.16-0.20	0.07-0.12

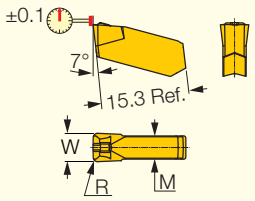
• Dmin for internal applications =70 mm

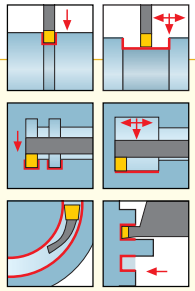
For tools, see pages: • CGHN-D (A25)• GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

CUT-GRIP

GIMN

Utility Single-Ended Inserts for Grooving and Turning Ductile Materials





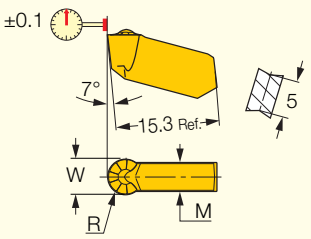
Dimensions	Dimensions W±0.05	Dimensions R±0.05	Dimensions M	Dimensions IC908	Dimensions IC907	Dimensions ap (mm)	Dimensions f turn (mm/rev)	Dimensions f groove (mm/rev)
GIMN 302	3.00	0.20	2.4		●	0.30-1.20	0.07-0.11	0.04-0.09
GIMN 406	4.00	0.60	3.4		●	0.75-1.60	0.11-0.18	0.05-0.14
GIMN 508	5.00	0.80	4.1	●	●	1.00-2.00	0.15-0.25	0.06-0.18

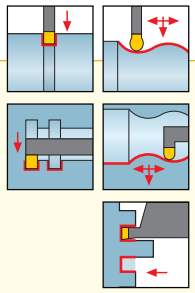
• Dmin for internal applications = 70 mm

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIMY (full radius)

Utility Single-Ended Inserts, for Grooving and Profiling





Designation	Dimensions W±0.05	Dimensions R±0.05	Dimensions M	Tough ↔ Hard IC830	IC8250	IC808	IC806	IC20	IC20N	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIMY 315	3.00	1.50	2.4	●	●	●	●	●	●	0.00-1.50	0.18-0.26	0.07-0.13
GIMY 420	4.00	2.00	3.2	●	●	●	●	●	●	0.00-2.00	0.20-0.28	0.09-0.17
GIMY 525	5.00	2.50	3.9	●	●	●	●	●	●	0.00-2.50	0.23-0.42	0.11-0.21

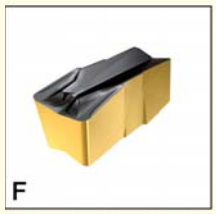
• Dmin for internal application=70 mm • Can cut arcs to 250°

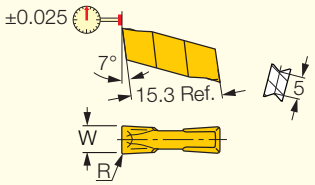
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

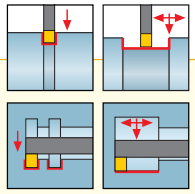
CUT-GRIP

GIF-E (W=4-6)

Precision Double-Ended Inserts for Grooving and Turning







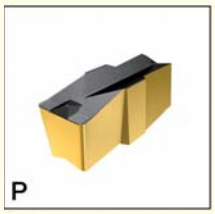
Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC807	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-0.40	4.00	0.40	3.2	13.00	●	●	●	●	●	0.50-2.40	0.18-0.24	0.09-0.15
GIF 4.00E-0.60	4.00	0.60	3.2	13.00	●	●			●	0.75-2.40	0.19-0.25	0.09-0.16
GIF 4.00E-0.80	4.00	0.80	3.2	13.00	●	●	●	●	●	1.00-2.40	0.20-0.28	0.09-0.17
GIF 5.00E-0.40	5.00	0.40	4.0	13.00	●	●	●		●	0.50-3.00	0.20-0.30	0.11-0.19
GIF 5.00E-0.60	5.00	0.60	4.0	13.00	●	●			●	0.75-3.00	0.21-0.32	0.11-0.20
GIF 5.00E-0.80	5.00	0.80	4.0	13.00	●	●	●	●	●	1.00-3.00	0.23-0.35	0.11-0.21

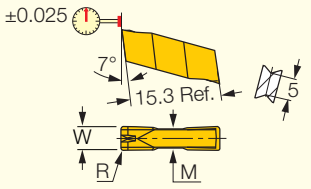
• Dmin for internal machining = 70 mm

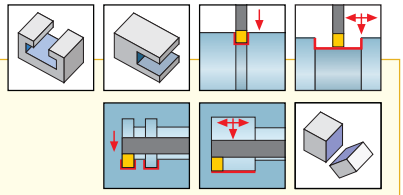
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIP-E

Precision Double-Ended Inserts for Grooving and Turning







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC908	IC806	IC807	IC20	IC20N	IC428	IC5010	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIP 3.00E-0.00	3.00	0.00	2.4	13.00	●										0.00-1.80	0.12-0.16	0.07-0.11
GIP 3.00E-0.20	3.00	0.20	2.4	13.00	●	●	●		●	●		●			0.25-1.80	0.15-0.20	0.08-0.13
GIP 3.00E-0.40	3.00	0.40	2.4	13.00	●	●	●	●	●	●	●	●	●	●	0.50-1.80	0.17-0.22	0.08-0.14
GIP 3.00E-0.80	3.00	0.80	2.4	13.00		●									1.00-1.80	0.19-0.26	0.08-0.15
GIP 4.00E-0.40	4.00	0.40	3.2	13.00	●	●	●		●	●	●	●	●	●	0.50-2.40	0.19-0.26	0.10-0.18
GIP 4.00E-0.60	4.00	0.60	3.2	13.00	●	●	●				●		●	●	0.75-2.40	0.21-0.28	0.10-0.19
GIP 4.00E-0.80	4.00	0.80	3.2	13.00	●	●	●	●	●	●	●		●	●	1.00-2.40	0.22-0.31	0.10-0.20
GIP 4.78E-0.55	4.78	0.55	4.0	13.00	●	●	●				●		●	●	0.70-2.80	0.21-0.31	0.12-0.20
GIP 5.00E-0.40	5.00	0.40	4.0	13.00	●	●	●		●		●				0.50-3.00	0.22-0.33	0.13-0.21
GIP 5.00E-0.60	5.00	0.60	4.0	13.00	●	●	●				●	●			0.75-3.00	0.23-0.35	0.13-0.22
GIP 5.00E-0.80	5.00	0.80	4.0	13.00	●	●	●				●		●	●	1.00-3.00	0.24-0.39	0.13-0.23

• Dmin for internal machining = 70 mm

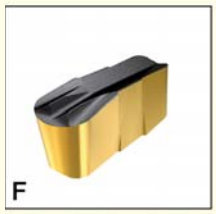
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

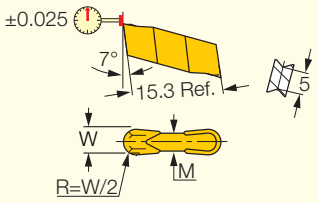
.

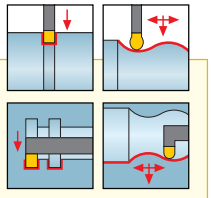
CUT-GRIP

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

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







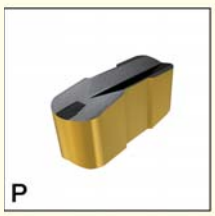
Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIF 4.00E-2.00	4.00	2.00	3.2	11.80	●	●	●	●	0.00-2.00	0.20-0.34	0.09-0.17
GIF 5.00E-2.50	5.00	2.50	4.0	11.30	●	●		●	0.00-2.50	0.23-0.42	0.11-0.21

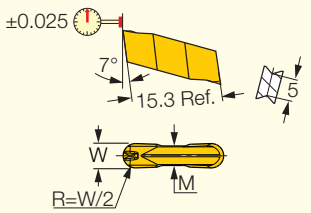
• Dmin for internal machining = 70 mm

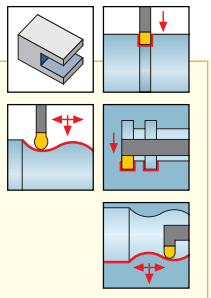
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIP-E (full radius)

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







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC807	IC20	IC428	IC5010	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIP 3.00E-1.50	3.00	1.50	2.4	12.30	●	●	●	●	●			0.00-1.50	0.18-0.28	0.08-0.15
GIP 4.00E-2.00	4.00	2.00	3.2	11.80	●	●	●	●	●	●	●	0.00-2.00	0.20-0.34	0.10-0.20
GIP 5.00E-2.50	5.00	2.50	4.0	11.30		●			●	●	●	0.00-2.50	0.25-0.42	0.13-0.23

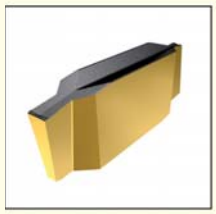
• Dmin for internal machining = 70 mm

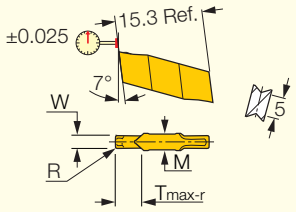
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

CUT-GRIP

GIP (flat top W<M)

Flat Top Precision Double-Ended Inserts for Grooving





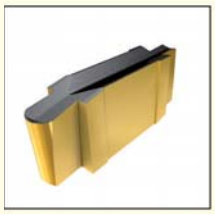
Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC807	IC20	IC20N	Recommended Machining Data f groove (mm/rev)
GIP 0.50-0.00	0.50	0.00	1.00	2.2		●		●		0.02-0.04
GIP 0.80-0.00	0.80	0.00	1.60	2.2		●		●		0.02-0.04
GIP 1.04-0.00	1.04	0.00	2.00	2.2	●	●	●	●	●	0.02-0.05
GIP 1.20-0.00	1.20	0.00	2.00	2.2	●	●	●	●	●	0.03-0.05
GIP 1.40-0.00	1.40	0.00	2.00	2.2	●	●		●		0.03-0.06
GIP 1.47-0.00	1.47	0.00	2.50	2.2	●	●		●		0.03-0.06
GIP 1.57-0.15	1.57	0.15	2.70	2.2	●	●	●	●		0.04-0.06
GIP 1.70-0.10	1.70	0.10	3.00	2.2	●	●		●	●	0.04-0.07
GIP 1.78-0.18	1.78	0.18	3.00	2.2	●	●		●		0.04-0.07
GIP 1.96-0.15	1.96	0.15	3.00	2.2	●	●	●	●	●	0.04-0.08

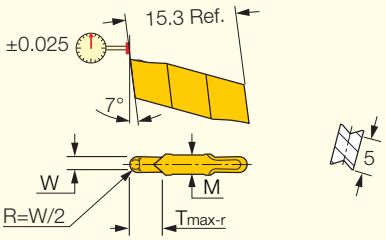
• Dmin for internal machining = 70 mm

For tools, see pages: GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIP (full radius W<M)

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





Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Dimensions IC830	IC808	IC908	IC806	IC807	IC20	Dimensions f groove (mm/rev)
GIP 1.00-0.50	1.00	0.50	2.00	2.2		●			●		0.03-0.06
GIP 1.40-0.70	1.40	0.70	2.00	2.2		●					0.04-0.07
GIP 1.57-0.79	1.57	0.79	2.70	2.2	●	●	●		●	●	0.04-0.08
GIP 2.00-1.00	2.00	1.00	3.00	2.2	●	●		●	●	●	0.05-0.11
GIP 2.39-1.20	2.39	1.20	4.70	2.4		●			●	●	0.06-0.12

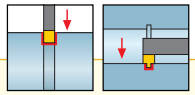
• Dmin for internal machining = 70 mm

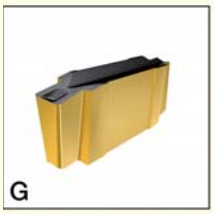
For tools, see pages: GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

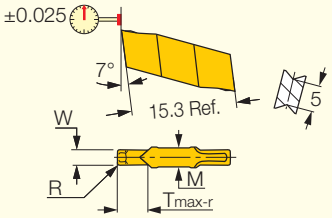
CUT-GRIP

GIG

Precision Double-Ended Inserts for Grooving







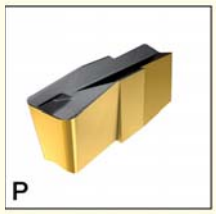
Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC830	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIG 1.04-0.00	1.04	0.00	2.00	2.2		●		0.02-0.03
GIG 1.20-0.00	1.20	0.00	2.00	2.2		●		0.02-0.03
GIG 1.25-0.10	1.25	0.10	2.00	2.2	●	●		0.02-0.04
GIG 1.40-0.00	1.40	0.00	2.00	2.2		●		0.02-0.04
GIG 1.45-0.10	1.45	0.10	2.00	2.2	●	●		0.02-0.04
GIG 1.47-0.00	1.47	0.00	2.50	2.2		●		0.02-0.04
GIG 1.50-0.10	1.50	0.10	2.50	2.2	●	●		0.02-0.04
GIG 1.57-0.15	1.57	0.15	2.70	2.2		●		0.03-0.05
GIG 1.70-0.10	1.70	0.10	3.00	2.2		●		0.03-0.05
GIG 1.78-0.18	1.78	0.18	3.00	2.2		●		0.03-0.05
GIG 1.85-0.15	1.85	0.15	3.00	2.2	●	●		0.03-0.05
GIG 1.86-0.15	1.86	0.15	3.00	2.2		●		0.03-0.05
GIG 1.96-0.15	1.96	0.15	3.00	2.2		●		0.03-0.06
GIG 2.00-0.20	2.00	0.20	3.00	2.2	●	●	●	0.04-0.06
GIG 2.22-0.15	2.22	0.15	3.50	2.2		●		0.04-0.06
GIG 2.30-0.20	2.30	0.20	3.50	2.2	●	●		0.04-0.07

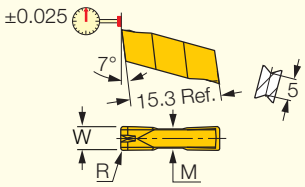
• Dmin for internal machining = 70 mm

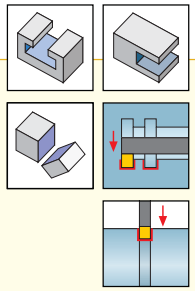
For tools, see pages: GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

GIP

Precision Double-Ended Inserts for Grooving







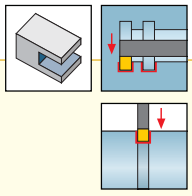
Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC806	IC807	IC20	IC20N	Recommended Machining Data f groove (mm/rev)
GIP 2.22-0.15	2.22	0.15	3.50	2.2	●		●		●	●		0.05-0.09
GIP 2.39-0.15	2.39	0.15	4.70	2.4	●		●		●	●	●	0.05-0.09
GIP 2.47-0.20	2.47	0.20	5.00	2.4	●		●		●	●	●	0.06-0.10
GIP 2.70-0.10	2.70	0.10	13.00	2.4	●		●		●	●		0.06-0.10
GIP 2.70-0.20	2.70	0.20	13.00	2.4			●			●		0.07-0.11
GIP 2.87-0.20	2.87	0.20	13.00	2.4	●		●			●		0.07-0.12
GIP 3.00-0.00	3.00	0.00	13.00	2.4	●		●			●		0.07-0.11
GIP 3.00-0.20	3.00	0.20	13.00	2.4	●		●	●	●	●		0.08-0.13
GIP 3.00-0.40	3.00	0.40	13.00	2.4						●		0.08-0.14
GIP 3.15-0.15	3.15	0.15	13.00	2.4	●	●	●			●	●	0.07-0.12
GIP 3.18-0.20	3.18	0.20	13.00	2.4	●	●	●		●	●		0.08-0.13
GIP 3.30-0.10	3.30	0.10	13.00	2.4	●	●	●			●		0.07-0.12
GIP 3.48-0.20	3.48	0.20	13.00	3.2		●				●		0.09-0.15
GIP 3.56-0.20	3.56	0.20	13.00	3.2		●				●		0.09-0.15
GIP 3.74-0.20	3.74	0.20	13.00	3.2		●	●			●		0.09-0.16
GIP 3.98-0.20	3.98	0.20	13.00	3.2	●	●	●		●	●		0.10-0.17
GIP 4.00-0.80	4.00	0.80	13.00	3.2						●		0.10-0.20
GIP 4.23-0.10	4.23	0.10	13.00	3.2	●	●	●			●		0.10-0.16
GIP 5.00-0.40	5.00	0.40	13.00	4.0						●		0.13-0.21

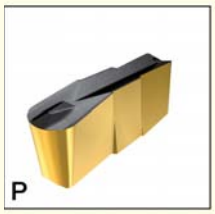
• Dmin for internal machining = 70 mm

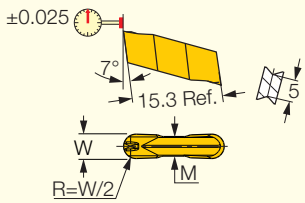
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

GIP (full radius)

Precision Double-Ended, Full Radius Inserts for Grooving







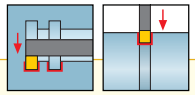
Designation	Dimensions W±0.02	R±0.05	Tmax-r	M	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIP 3.00-1.50	3.00	1.50	12.30	2.4				●	0.08-0.15
GIP 3.18-1.59	3.18	1.59	12.20	2.4	●	●	●	●	0.08-0.16
GIP 3.98-1.99	3.98	1.99	11.80	3.2		●		●	0.10-0.20
GIP 4.78-2.39	4.78	2.39	11.40	4.8		●		●	0.12-0.22
GIP 5.00-2.50	5.00	2.50	11.30	4.0				●	0.13-0.23

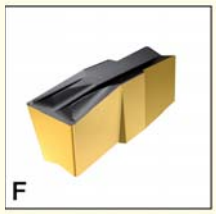
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

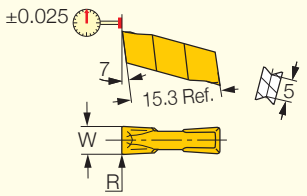
CUT-GRIP

GIF

Precision Double-Ended Inserts for Grooving







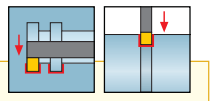
Designation	Dimensions W±0.02	R±0.03	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIF 3.48-0.20	3.48	0.20	3.2	13.00	●	●	●	●	0.08-0.12
GIF 3.56-0.20	3.56	0.20	3.2	13.00		●	●		0.08-0.13
GIF 3.74-0.20	3.74	0.20	3.2	13.00		●	●		0.08-0.13
GIF 3.98-0.20	3.98	0.20	3.2	13.00	●	●	●	●	0.09-0.14
GIF 4.23-0.10	4.23	0.10	3.2	13.00	●	●	●		0.08-0.13
GIF 4.45-0.15	4.45	0.15	4.0	13.00	●	●	●	●	0.09-0.14
GIF 4.78-0.55	4.78	0.55	4.0	13.00	●	●	●	●	0.11-0.18
GIF 4.86-0.30	4.86	0.30	4.0	13.00		●	●	●	0.11-0.18

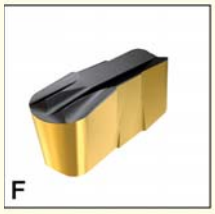
• Dmin for internal machining = 70 mm

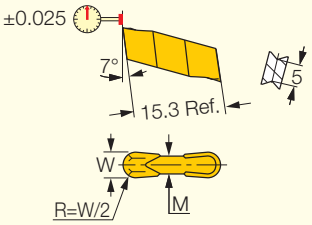
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIF (full radius)

Precision Double-Ended Full Radius Inserts for Grooving







Designation	Dimensions W±0.02	R±0.05	M	Tmax-r	Tough ↔ Hard IC8250	IC808	Recommended Machining Data f groove (mm/rev)
GIF 4.78-2.39	4.78	2.39	4.0	11.40	●	●	0.11-0.20

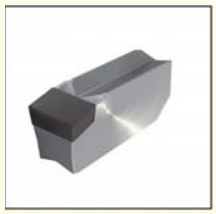
• Dmin for internal machining = 70 mm

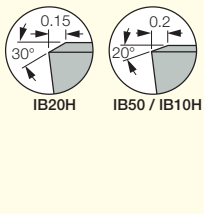
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

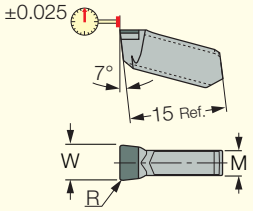
CUT-GRIP

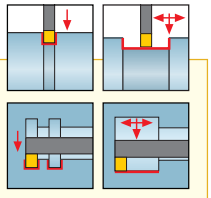
GITM

CBN Tipped Inserts for Turning and Grooving on Hard Ferrous Materials









HARD MATERIALS

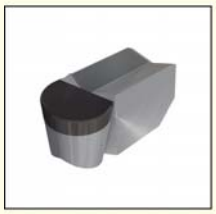
Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IB20H	IB50	IB10H	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GITM 3.00K-0.20	3.00	0.20	2.4	●	●	●	0.00-0.30	0.02-0.07	0.02-0.05
GITM 4.00K-0.20	4.00	0.20	3.2	●	●	●	0.00-0.40	0.03-0.09	0.02-0.07
GITM 5.00K-0.40	5.00	0.40	4.0	●	●	●	0.00-0.50	0.05-0.13	0.03-0.10

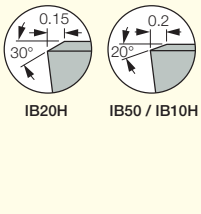
• Dmin for internal machining = 70 mm

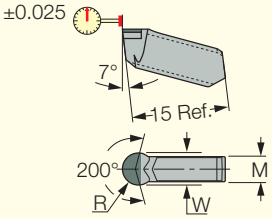
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

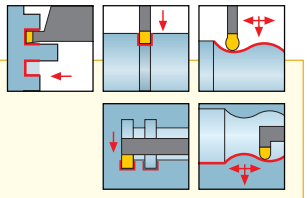
GITM (full radius)

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









HARD MATERIALS

Designation	Dimensions W±0.02	R±0.05	M	$D_{1\ min}$	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	2.4	160.0	●	●	●	0.00-0.30	0.03-0.10	0.02-0.06
GITM 4.00K-2.00	4.00	2.00	3.2	160.0	●	●	●	0.00-0.40	0.04-0.14	0.02-0.09
GITM 5.00K-2.50	5.00	2.50	3.9	160.0	●	●	●	0.00-0.50	0.05-0.18	0.03-0.11

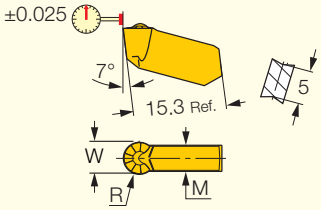
• Dmin for internal machining = 70 mm

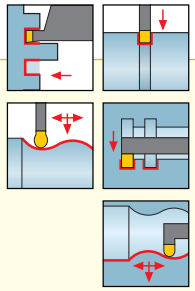
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

CUT-GRIP

GIPY

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





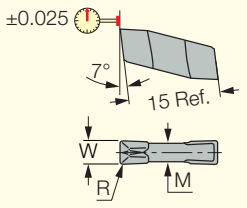
Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC07	IC806	IC907	IC20	IC320	Recommended Machining Data f turn (mm/rev)	f groove (mm/rev)
GIPY 3.00-1.50	3.00	1.50	2.4	●	●	●	●	●	0.19-0.28	0.08-0.15
GIPY 4.00-2.00	4.00	2.00	3.2	●	●	●	●	●	0.22-0.37	0.10-0.20
GIPY 5.00-2.50	5.00	2.50	3.9		●	●	●	●	0.24-0.46	0.13-0.23

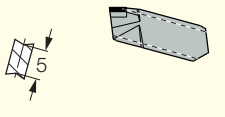
• Can cut arcs to 250° • Dmin for internal machining = 70 mm

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

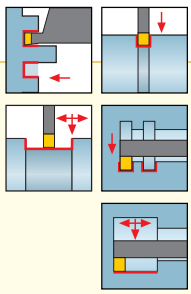
GIPA (W=3-6)

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





GIPA…D-ID5



Designation	Dimensions W±0.02	R±0.03	M	Dimensions IC20	ID5	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-0.20	3.00	0.20	2.4	●		0.25-1.80	0.12-0.20	0.08-0.14
GIPA 3.00-0.20-D (1)	3.00	0.20	2.4		●	0.25-1.80	0.12-0.25	0.09-0.16
GIPA 4.00-0.40	4.00	0.40	3.2	●		0.50-2.40	0.14-0.31	0.10-0.20
GIPA 5.00-0.40	5.00	0.40	4.0	●		0.50-3.00	0.16-0.34	0.11-0.23

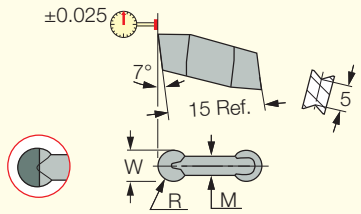
• Dmin for internal machining = 70 mm

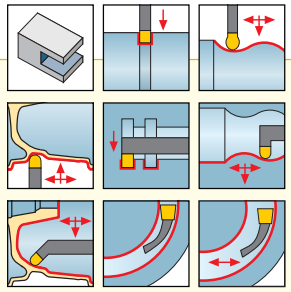
(1) Single-ended PCD tipped insert

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

GIPA (full radius W=3-6)

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





Designation	Dimensions W±0.02	R±0.05	M	Tough ↔ Hard IC806	IC20	ID5	Recommended Machining Data a_p (mm)	f turn (mm/rev)	f groove (mm/rev)
GIPA 3.00-1.50	3.00	1.50	2.4		●		0.00-1.50	0.15-0.30	0.08-0.16
GIPA 3.00-1.50-D (1)	3.00	1.50	2.4			●	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 3.00-1.50YZ-D (2)	3.00	1.50	2.4			●	0.00-1.50	0.19-0.36	0.09-0.19
GIPA 4.00-2.00	4.00	2.00	3.2	●	●		0.00-2.00	0.20-0.43	0.10-0.22
GIPA 4.00-2.00-D (1)	4.00	2.00	3.2			●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 4.00-2.00YZ-D (2)	4.00	2.00	3.2			●	0.00-2.00	0.25-0.53	0.12-0.26
GIPA 5.00-2.50	5.00	2.50	3.9	●	●		0.00-2.50	0.21-0.48	0.09-0.24
GIPA 5.00-2.50-D (1)	5.00	2.50	3.9			●	0.00-2.50	0.22-0.60	0.11-0.30
GIPA 5.00-2.50YZ-D (2)	5.00	2.50	3.9			●	0.00-2.50	0.22-0.60	0.11-0.30

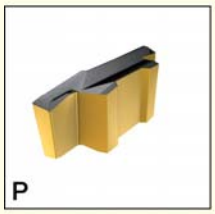
(1) Single-ended PCD tipped insert (2) Single-ended molded PCD chipformer tipped insert

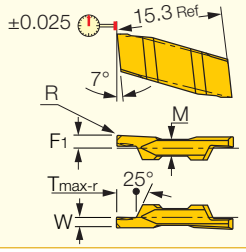
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

CUT-GRIP

GIP-RX/LX

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





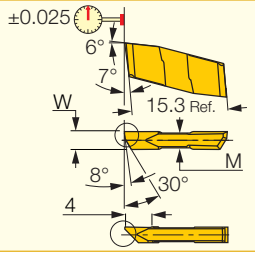
Designation	Dimensions W±0.02	R±0.03	Tmax-r	M	F1	Tough ↔ Hard IC830	IC808	Recommended Machining Data f groove (mm/rev)
GIP 0.80-0.00R/LX	0.80	0.00	1.60	2.4	1.6	●		0.02-0.04
GIP 1.00-0.00R/LX	1.04	0.00	2.00	2.4	1.6	●		0.02-0.05
GIP 1.19-0.1RX	1.19	0.10	2.00	2.4	1.6		●	0.03-0.05
GIP 1.57-0.15 R/LX	1.57	0.15	2.70	2.4	1.7	●		0.04-0.06
GIP 1.57-0.79RX	1.57	0.79	2.80	2.4	1.7		●	0.04-0.08
GIP 2.00-0.15 R/LX	2.00	0.15	3.00	2.4	1.7	●		0.05-0.08
GIP 2.39-0.15 RX	2.39	0.15	3.50	2.4	1.7	●		0.05-0.09
GIP 2.39-1.19RX	2.39	1.19	3.90	2.4	1.7		●	0.06-0.12

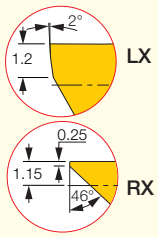
• Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: GHMPR/L (A23) • GHMR/L (A23).

GIPM-A46 / GIP-1250

Precision Back Turning Inserts, for External Machining on Swiss-Type and Automatic Machines





GIP 3.00-1250R

GIPM 2.35-A46R

Designation	Dimensions W±0.05	R±0.03	M	Tough ↔ Hard IC328	IC908	IC20	Recommended Machining Data ap (mm)	f turn (mm/rev)
GIPM 2.35-A46L	2.35	0.05	2.2	●	●		0.10-1.00	0.02-0.15
GIPM 2.35-A46R	2.35	0.05	2.2	●	●		0.10-1.00	0.02-0.15
GIP 3.00-1250L	3.00	0.00	2.4	●		●	0.10-1.00	0.02-0.15
GIP 3.00-1250R	3.00	0.00	2.4	●		●	0.10-1.00	0.02-0.15

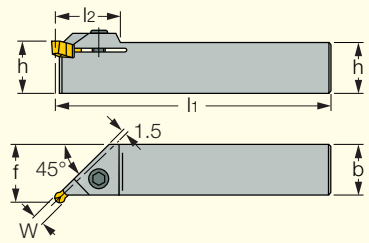
• Toolholder seat needs to be modified according to insert profile to ensure clearance. • For grooving, reduce cutting speed by 30% and feed by 50%.

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

CUT-GRIP

GHMUR/L

External Holders for 45° Undercutting



Right-hand shown

Designation	W max	h	b	l1	l2	f
GHMUR/L 16	4.80	16.0	16.0	112.00	25.0	19.0

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

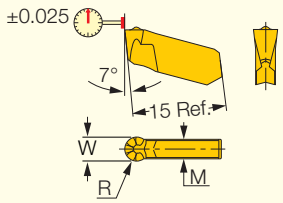
For inserts, see pages: GIMY-UN (A39) • GIP-UN (A40).

Spare Parts

Designation	Screw	Key
GHMUR/L	SR M6X16DIN912 12.9	HW 5.0

GIMY-UN

Utility Single-Ended Inserts for External Undercutting



Designation	Dimensions W±0.05	R±0.05	M	Tmax-r	IC8250	Recommended Machining Data f groove (mm/rev)
GIMY 315-UN	3.00	1.50	2.4	2.00	●	0.05-0.15
GIMY 420-UN	4.00	2.00	3.2	2.50	●	0.05-0.15

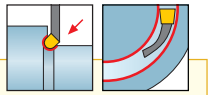
• For 45° undercutting on D 100 mm, regular GIMY inserts may be used.

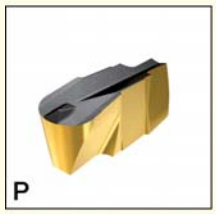
For tools, see pages: GHMUR/L (A39).

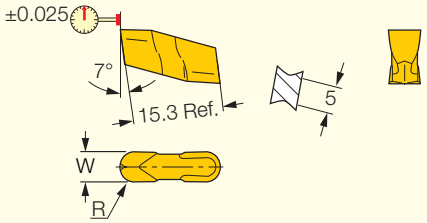
CUT-GRIP

GIP-UN

Precision Double-Ended Inserts for External Undercutting



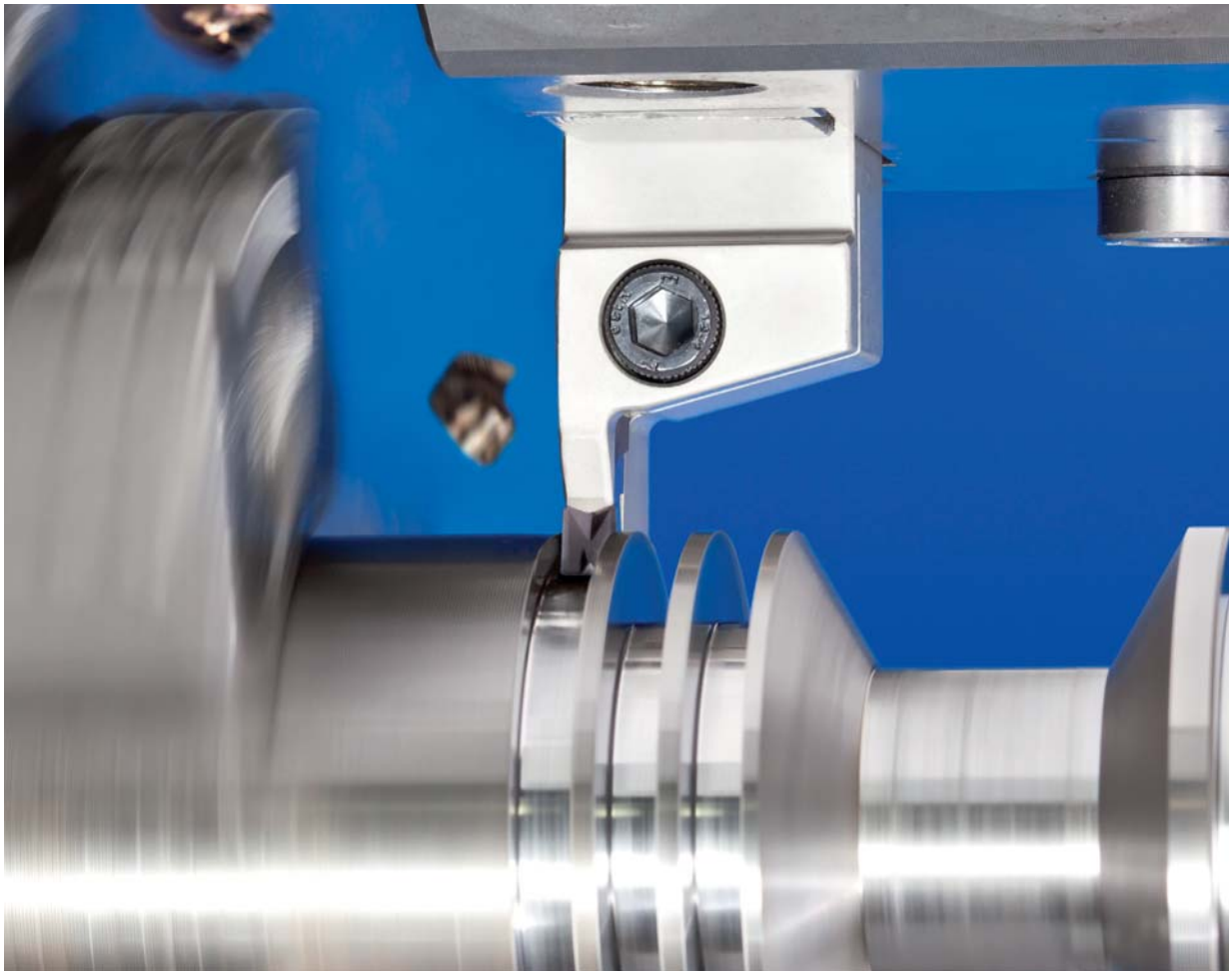




Designation	Dimensions W±0.05	R±0.05	M	Tmax-r	Tough ↔ Hard IC830	IC8250	IC808	IC20	Recommended Machining Data f groove (mm/rev)
GIP 3.00-1.50UN	3.00	1.50	2.4	4.00	●	●	●	●	0.05-0.15
GIP 4.00-2.0UN	4.00	2.00	3.2	4.00		●		●	0.05-0.15

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

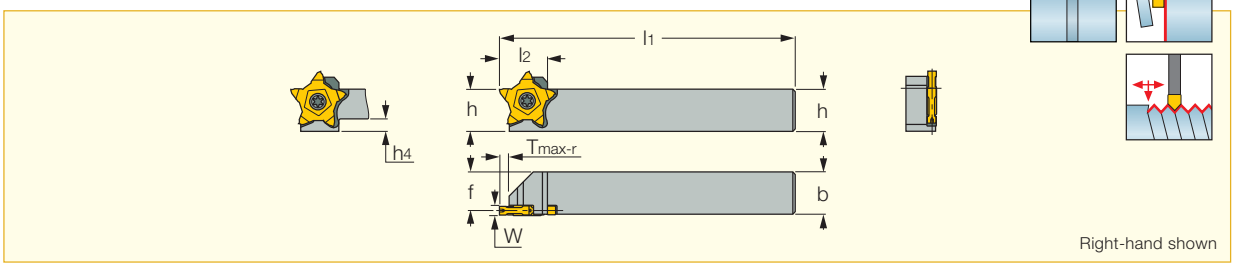
For tools, see pages: • GHDR/L (short pocket) (A24) • GHMPR/L (A23) • GHMR/L (A23) • GHMUR/L (A39).



PENTACUT

PCHR/L-24

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



Right-hand shown

Designation	h	b	W min	W max	f	Tmax-r(2)	l1	l2	h4	Insert
PCHR/L 10-24	10.0	10.0	0.50	3.20 (1)	8.5	6.50	120.00	19.5	6.0	PENTA 24
PCHR/L 12-24	12.0	12.0	0.50	3.20 (1)	10.5	6.50	120.00	19.5	4.0	PENTA 24
PCHR/L 16-24	16.0	16.0	0.50	3.20 (1)	14.5	6.50	120.00	19.5	-	PENTA 24

(1) Up to 6.2 mm width may be ordered on request. (2) For specific information, refer to insert data.

For inserts, see pages: PENTA 24-BSPT (A123) • PENTA 24-ISO (A117) • PENTA 24-MT (A114) • PENTA 24-UN (A119) • PENTA 24-W (A121) • PENTA 24-WT (A113) • PENTA 24N-C (A86) • PENTA 24N-C (full radius) (A87) • PENTA 24N-J (A44) • PENTA 24N-J (full radius) (A45) • PENTA 24N-PF/P (A45) • PENTA 24N-Z (A46) • PENTA 24R-C (A87) • PENTA 24R-P (A84) • PENTA 24R/L-J (A82) • PENTA 24R/L-Z (A85).

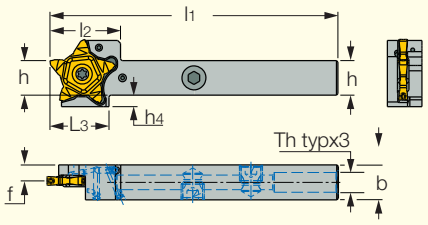
Spare Parts

Designation	Screw	Key
PCHL 10-24	SR 16-212-01397L	T-2010/5
PCHR 10-24	SR 16-212-01397	T-2010/5
PCHL 12-24	SR 16-212-01397L	T-2010/5
PCHR 12-24	SR 16-212-01397	T-2010/5
PCHL 16-24	SR 16-212-01397L	T-2010/5
PCHR 16-24	SR 16-212-01397	T-2010/5

PENTACUT • JETCUT

PCHR/L-24-JHP

Grooving, Parting and Recessing Holders for PENTA Inserts with Channels for High Pressure Coolant



340 Bar Max

Designation	h	b	W min	W max(1)	f	l1	l2	L3	h4	Th	Tmax-r(2)	Insert
PCHR/L 12-24-JHP	12.0	12.0	0.50	3.20	5.5	100.00	24.5	20.50	4.0	UNF 5/16-24	6.50	PENTA 24
PCHR/L 16-24-JHP	16.0	16.0	0.50	3.20	9.5	120.00	24.5	0.00	-	UNF 5/16-24	6.50	PENTA 24

(1) Up to 6.2 mm width may be ordered on request. (2) For specific information, refer to insert data.

For inserts, see pages: PENTA 24-BSPT (A123) • PENTA 24-ISO (A117) • PENTA 24-MT (A114) • PENTA 24-UN (A119) • PENTA 24-W (A121) • PENTA 24-WT (A113) • PENTA 24N-C (A86) • PENTA 24N-C (full radius) (A87) • PENTA 24N-J (A44) • PENTA 24N-J (full radius) (A45) • PENTA 24N-PF/P (A45) • PENTA 24N-Z (A46) • PENTA 24R-C (A87) • PENTA 24R-P (A84) • PENTA 24R/L-J (A82) • PENTA 24R/L-Z (A85).

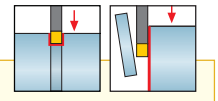
For Accessories, see pages: B134-135.

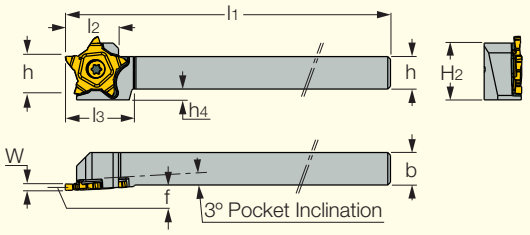
Spare Parts

Designation	Screw	Key	Plug	Plug Key
PCHL 12-24-JHP	SR M2.5X2.5DIN913 45H	HW 5/32"	SR 5/16UNF TL360	HW 5/32"
PCHR 12-24-JHP	SR M2.5X2.5DIN913 45H	HW 5/32"	SR 5/16UNF TL360	HW 5/32"
PCHL 16-24-JHP		HW 5/32"	SR 5/16UNF TL360	HW 5/32"
PCHR 16-24-JHP		HW 5/32"	SR 5/16UNF TL360	HW 5/32"

PCHRS/LS

Holders with 5 Edged Inserts for Grooving, Parting and Recessing Next to High Shoulders





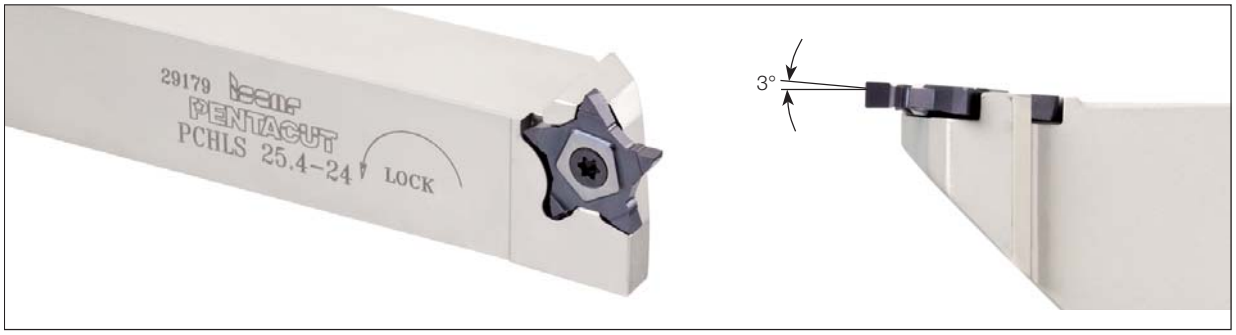
Right-hand shown

Designation	h	b	W min	W max	l1	l2	L3	h4	H2
PCHR/LS 12-24	12.0	12.0	0.80	4.80	120.00	19.5	24.50	4.0	21.0
PCHR/LS 16-24	16.0	16.0	0.80	4.80	120.00	19.5	-	-	21.0

For inserts, see pages: PENTA 24N-RS/LS (A47).

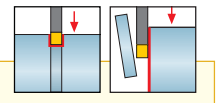
Spare Parts

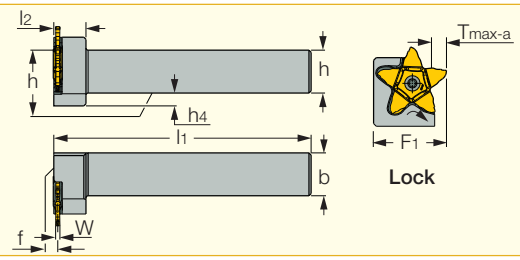
Designation	Screw	Key
PCHLS 12-24	SR 16-212-01397LS	T-2010/5
PCHRS 12-24	SR 16-212-01397RS	T-2010/5
PCHLS 16-24	SR 16-212-01397LS	T-2010/5
PCHRS 16-24	SR 16-212-01397RS	T-2010/5



PCHPR/L

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





Right-hand shown

Designation	h	b	W min	W max	f	F1	l1	l2	h4	Tmax-a(1)
PCHPR/L 16-24	16.0	16.0	0.50	3.20 (2)	1.5 (3)	23.5	120.00	11.5	-	6.50

(1) For specific information, refer to insert data. (2) Up to 6.2 mm width may be ordered on request. (3) Valid for inserts with W<3.2 mm

For inserts, see pages: PENTA 24-BSPT (A123) • PENTA 24-ISO (A117) • PENTA 24-MT (A114) • PENTA 24-UN (A119) • PENTA 24-W (A121) • PENTA 24-WT (A113) • PENTA 24N-C (A86) • PENTA 24N-C (full radius) (A87) • PENTA 24N-J (A44) • PENTA 24N-J (full radius) (A45) • PENTA 24N-PF/P (A45) • PENTA 24N-Z (A46) • PENTA 24R-C (A87) • PENTA 24R-P (A84) • PENTA 24R/L-J (A82) • PENTA 24R/L-Z (A85)

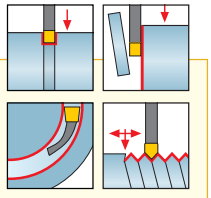
Spare Parts

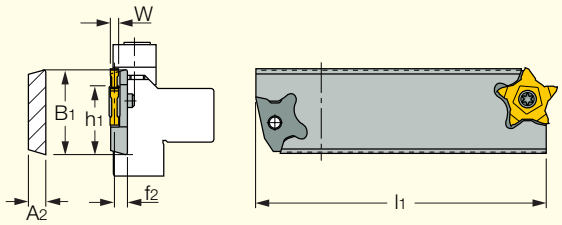
Designation	Screw	Key
PCHPL 16-24	SR 16-212-01397	T-20/5
PCHPR 16-24	SR 16-212-01397L	T-20/5

PENTACUT

PCHBR/L

Double-Ended Parting and Grooving Blades for PENTACUT Inserts





Left-hand shown

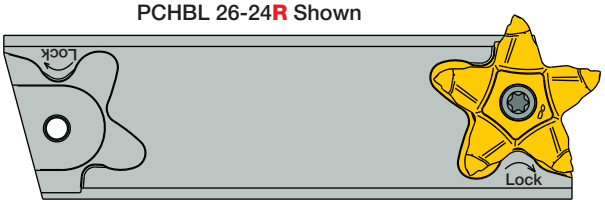
Designation	B_1	W min	W max	h_1	f_2 (2)	l_1	A_2	Insert
PCHBR/L 26-24R	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24
PCHBR 26-24L	26.0	0.50	6.20	21.4	7.00	110.00	8.5	PENTA 24
PCHBR/L 26-34R (1)	26.0	1.50	4.00	21.4	7.15	110.00	8.5	PENTA 34
PCHBR 26-34L (1)	26.0	1.50	4.00	21.4	7.15	110.00	8.5	PENTA 34

• For insert/blade orientation, see the following drawings

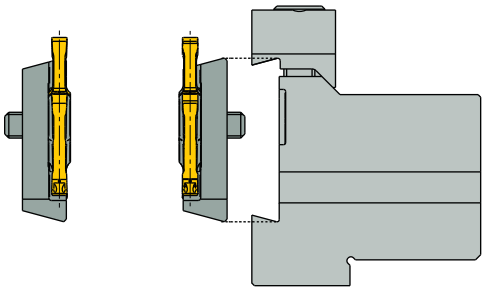
(1) Single pocket blade (2) To the center of inserts up to 4.15 mm width

For inserts, see pages: PENTA 24-BSPT (A123) • PENTA 24-ISO (A117) • PENTA 24-MT (A114) • PENTA 24-UN (A119) • PENTA 24-W (A121) • PENTA 24-WT (A113) • PENTA 24N-C (A86) • PENTA 24N-C (full radius) (A87) • PENTA 24N-J (A44) • PENTA 24N-J (full radius) (A45) • PENTA 24N-PF/P (A45) • PENTA 24N-Z (A46) • PENTA 24R-C (A87) • PENTA 24R-P (A84) • PENTA 24R/L-J (A82) • PENTA 24R/L-Z (A85)

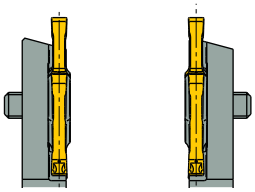
PCHBL 26-24R Shown



PCHBL 26-24L PCHBL 26-24R



PCHBR 26-24L PCHBR 26-24R



Right-hand blade

Right-hand pocket location on the blade

Spare Parts

Designation	Screw	Key
PCHBR/L 26-24R	SR 16-212-01397L	T-2010/5
PCHBR 26-24L	SR 16-212-01397	
PCHBR/L 26-34R	SR 16-212-01397	T-2010/5

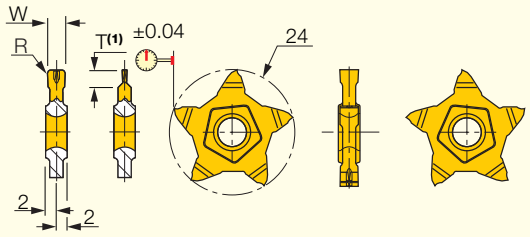
PENTACUT

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 W(mm)x100	Chipbreaker style **J, Z**	Corner radius R (mm)x100 for neutral insert. (k=0) Or lead angle for right- or left-hand inserts. (eg. 15D=15º)

PENTA 24N-J

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



Designation	Dimensions W±0.02	R	T_{max-f}(1)	Tough ↔ Hard IC908	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24N050J000	0.50	0.00	1.00	●		0.02-0.04
PENTA 24N050J004	0.50	0.04	2.50		●	0.02-0.05
PENTA 24N080J000	0.80	0.00	1.60	●		0.02-0.05
PENTA 24N100J004	1.00	0.04	3.50	●		0.03-0.07
PENTA 24N100J006	1.00	0.06	3.50		●	0.03-0.07
PENTA 24N104J000	1.04	0.00	2.00	●		0.02-0.07
PENTA 24N120J000	1.20	0.00	2.00	●		0.03-0.07
PENTA 24N125J010	1.25	0.10	2.00	●		0.03-0.07
PENTA 24N140J000	1.40	0.00	2.00	●		0.03-0.08
PENTA 24N147J000	1.47	0.00	2.50	●		0.03-0.08
PENTA 24N150J010	1.50	0.10	5.00	●	●	0.03-0.10
PENTA 24N157J015	1.57	0.15	3.00	●		0.03-0.12
PENTA 24N170J010	1.70	0.10	3.00	●		0.03-0.12
PENTA 24N178J018	1.78	0.18	3.00	●		0.04-0.12
PENTA 24N185J015	1.85	0.15	3.00	●		0.04-0.12
PENTA 24N196J015	1.96	0.15	3.00	●		0.04-0.12
PENTA 24N200J020	2.00	0.20	6.00	●	●	0.04-0.12
PENTA 24N222J015	2.22	0.15	3.50	●		0.04-0.16
PENTA 24N230J020	2.30	0.20	3.50	●		0.04-0.16
PENTA 24N239J015	2.39	0.15	5.00	●		0.04-0.16
PENTA 24N247J020	2.47	0.20	5.00	●		0.04-0.16
PENTA 24N270J010	2.70	0.10	5.00	●		0.04-0.16
PENTA 24N287J020	2.87	0.20	6.50	●		0.04-0.16
PENTA 24N300J000	3.00	0.00	6.50	●		0.04-0.10
PENTA 24N300J020	3.00	0.20	6.50	●		0.04-0.16
PENTA 24N300J040	3.00	0.40	6.50	●		0.04-0.16
PENTA 24N315J015	3.15	0.15	6.50	●		0.04-0.16
PENTA 24N318J020	3.18	0.20	6.50	●		0.04-0.16
PENTA 24N330J010	3.30	0.10	6.50	●		0.04-0.16
PENTA 24N348J020	3.48	0.20	6.50	●		0.04-0.18
PENTA 24N356J020	3.56	0.20	6.50	●		0.04-0.18
PENTA 24N374J020	3.74	0.20	6.50	●		0.04-0.18
PENTA 24N398J020	3.98	0.20	6.50	●		0.04-0.18
PENTA 24N400J040	4.00	0.40	6.50	●		0.04-0.18
PENTA 24N423J010	4.23	0.10	6.50	●		0.04-0.18

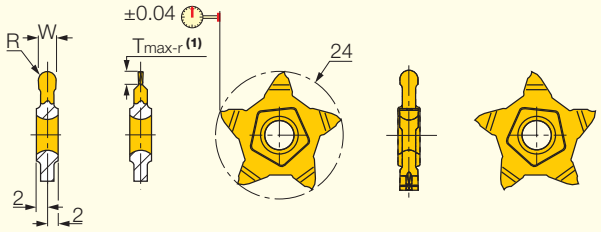
• Recessing is possible only with 2.39 mm and wider inserts.

(1) For grooving and parting depth relative to part diameter, see page (A46)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24N-J (full radius)

Precision Grooving Pentagonal Full Radius Insert for Soft Materials



Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N100J050	1.00	0.50	3.50	●	0.03-0.07
PENTA 24N120J060	1.20	0.60	2.00	●	0.03-0.07
PENTA 24N140J070	1.40	0.70	2.00	●	0.05-0.08
PENTA 24N157J079	1.57	0.79	3.00	●	0.05-0.08
PENTA 24N200J100	2.00	1.00	3.00	●	0.05-0.12
PENTA 24N239J120	2.39	1.20	5.00	●	0.06-0.16
PENTA 24N300J150	3.00	1.50	6.50	●	0.06-0.20
PENTA 24N318J159	3.18	1.59	6.50	●	0.06-0.20
PENTA 24N400J200	4.00	2.00	6.25	●	0.06-0.20
PENTA 24N478J239	4.78	2.39	6.15	●	0.06-0.20

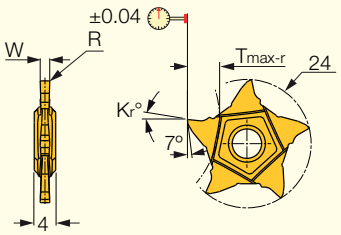
• Recessing is possible only with 2.39 mm and wider inserts.

(1) For grooving depth relative to part diameter, see page A46.

For tools, see pages: PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24N-PF/P

Parting and Precision Grooving Pentagonal Insert with a High Positive Flat Rake



Designation	Dimensions W±0.02	R	R±toler	Tmax-r(1)	Kr°	Tough ↔ Hard IC908	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24N100P005	1.00	0.05	0.020	3.50	12.0		●	0.02-0.05
PENTA 24N100PF010	1.00	0.10	0.020	4.00	6.0	●		0.03-0.06
PENTA 24N150P005	1.50	0.05	0.020	5.00	12.0		●	0.02-0.07
PENTA 24N150PF020	1.50	0.20	0.030	6.00	6.0	●		0.03-0.09
PENTA 24N200P005	2.00	0.05	0.020	6.00	12.0		●	0.02-0.08
PENTA 24N200PF020	2.00	0.20	0.030	6.50	6.0	●		0.04-0.10
PENTA 24N239PF015	2.39	0.15	0.030	6.50	6.0	●		0.04-0.14
PENTA 24N250PF020	2.50	0.20	0.030	6.50	6.0	●		0.04-0.14
PENTA 24N300PF020	3.00	0.20	0.030	6.50	6.0	●		0.04-0.14

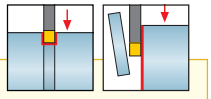
(1) For grooving and parting depth relative to part diameter, see page A46.

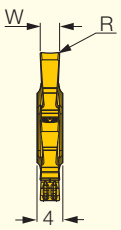
For tools, see pages: PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

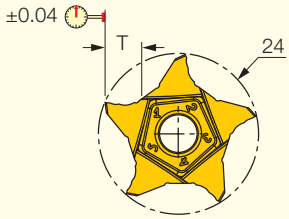
PENTACUT

PENTA 24N-Z

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





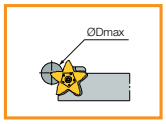


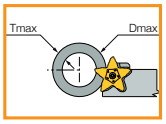
Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150Z010	1.50	0.10	5.00	●	0.05-0.08
PENTA 24N200Z020	2.00	0.20	6.40	●	0.04-0.12
PENTA 24N300Z020	3.00	0.20	6.40	●	0.04-0.16

• Cutting edge with high positive rake, suitable for parting of tubes, thin walled parts and for small diameters • Suitable for machining soft materials and bearing steel at low to medium feeds

(1) For grooving and parting depth relative to part diameter, see below

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).





W±0.02	Tmax(3)	Tmax / Dmax	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.5	T≤6.4
W=0.50 (1)	1.0	1.0 / N.L.	-	-	-	-	-	-	-	-
W=0.50 (2)	2.5			250						
W=0.80	1.6	1.6 / N.L.	-	-	-	-	-	-	-	-
W=1.00	3.5		N.L.	250	-	-	-	-	-	-
1.04≤W≤1.40	2.0	2.0 / N.L.	-	-	-	-	-	-	-	-
W=1.47	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-
W=1.50	5.0		N.L.	470	210	70	30	-	-	-
1.57≤W≤1.96	3.0		N.L.	-	-	-	-	-	-	-
W=2.00	6.0(4)		N.L.	470	210	130	75	45	20	-
2.22≤W≤2.30	3.5		N.L.	250	-	-	-	-	-	-
2.39≤W≤2.50	5.0		N.L.	470	210	70	30	-	-	-
2.70≤W≤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.

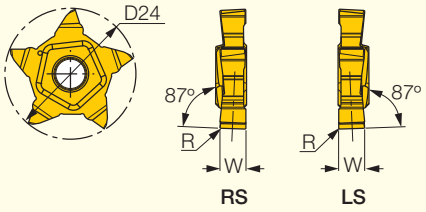
(3) Dmax for parting = 2 x Tmax

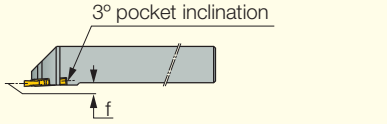
(4) For full radius insert , Tmax = 3.0, Dmax = No limit

PENTACUT

PENTA 24N-RS/LS

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



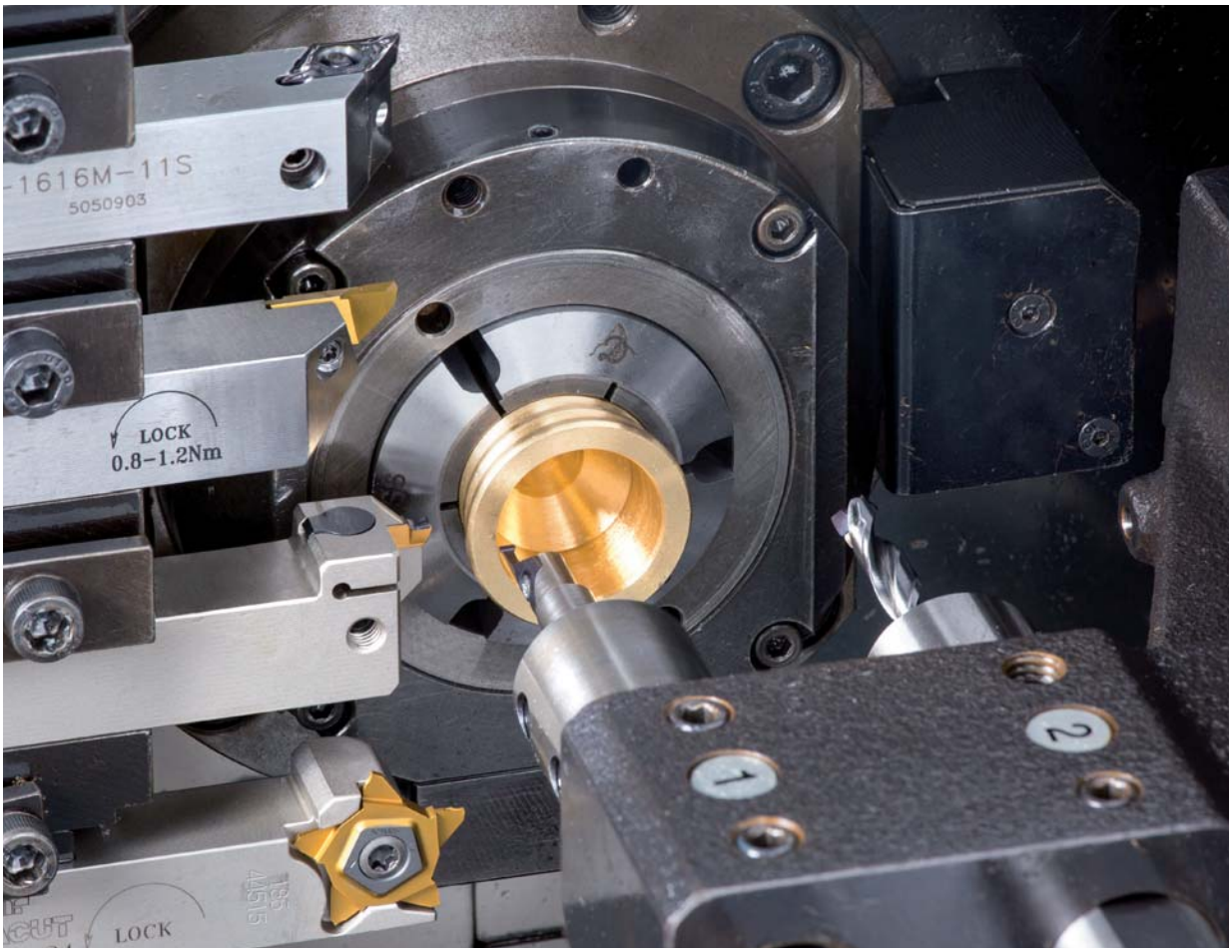


f - refer to inserts data

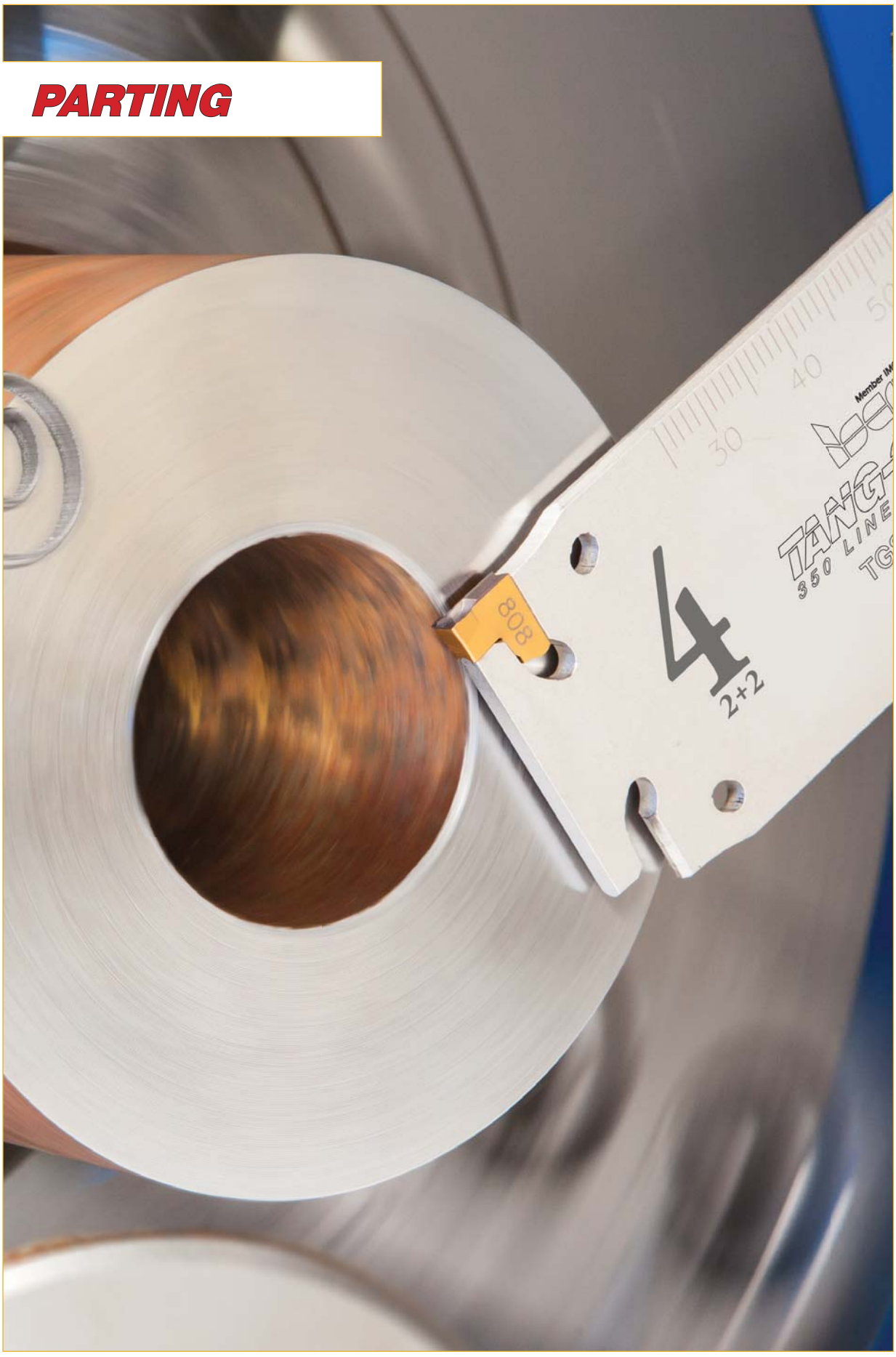
Designation	Dimensions W±0.02	R	Tmax-r	D max	f	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N080NF010R/LS	0.80	0.10	1.60	- (1)	1.6	●	0.03-0.05
PENTA 24N100NF010R/LS	1.00	0.10	1.80	- (1)	1.5	●	0.03-0.06
PENTA 24N119NF010R/LS	1.19	0.10	2.00	- (1)	1.4	●	0.03-0.06
PENTA 24N157NF020R/LS	1.57	0.20	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N157NF079R/LS	1.57	0.79	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N200NF020R/LS	2.00	0.20	3.00	- (1)	1.0	●	0.03-0.10
PENTA 24N239NF020R/LS	2.39	0.20	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N239NF119R/LS	2.39	1.19	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N300NF020R/LS	3.00	0.20	6.20	16.0	0.5	●	0.04-0.14
PENTA 24N318NF020R/LS	3.18	0.20	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N318NF159R/LS	3.18	1.59	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N400NF020R/LS	4.00	0.20	6.50	13.0	1.0	●	0.04-0.16
PENTA 24N480NF020R/LS	4.80	0.20	6.50	13.0	1.6	●	0.04-0.16

(1) No limit

For tools, see page: PCHRS/LS (A42).



PARTING

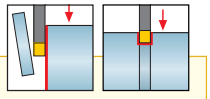


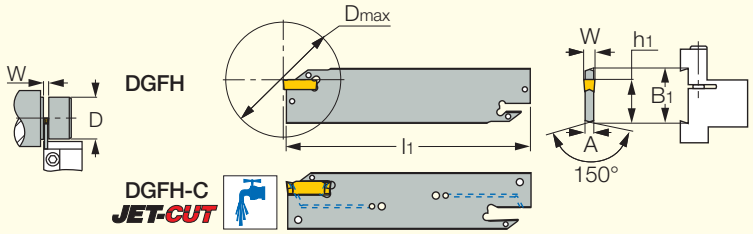
DO-GRIP • HELI-GRIP

TWISTED 2-SIDED

DGFH

Parting and Grooving Blades with and without Coolant Holes for DO-GRIP and HELI-GRIP Inserts





Designation	B_1	W min	W max	A	l_1	h_1	D max	Insert
DGFH 26-1.4	26.0	1.40	1.40	2.50 (4)	110.00	21.4	26.0	DG. 14..
DGFH 26-2 (1)	26.0	1.90 (3)	2.50	1.60	110.00	21.4	39.0 (5)	DG. 1.../DG. 2...
DGFH 26-3 (1)	26.0	3.00 (3)	3.18	2.40	110.00	21.4	39.0 (5)	DG. 1.../DG. 3...
DGFH 26C-3 (2)	26.0	3.00	3.18	2.40	110.00	21.4	39.0 (5)	DG. 3..C
DGFH 26-4	26.0	4.00	4.00	3.20	110.00	21.4	80.0	DG. 4.../GRIP 4...

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

(1) For Dmax 50 mm, use single-ended insert (should be modified by the user). (2) Blades with frontal coolant holes (JET-CUT)

• For Dmax 50 mm, use single-ended insert (should be modified by the user). (3) For DG. 1... insert, modify holder (4) Thickness at the D.O.C. area is 1.0 mm

(5) Maximum diameter with double-sided inserts.

For inserts, see pages: DGN-MF (A65) • DGN/DGNC/DGNM-C (A64) • DGR/L-C DGRC/LC-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR/L-J/JS (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • GRIP (A19) • GRIP (full radius) (A20).

For holders, see pages: SGTBU/SGTBN (A88) .

Spare Parts

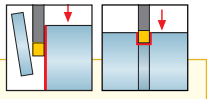
Designation	Extractor	Sealing Screw	Cooling Tube	Pipe Fitting	Pipe Fitting 1	Pipe Fitting 2
DGFH 26-1.4	EDG 23B*					
DGFH 26-2	EDG 23A*					
DGFH 26-3	EDG 23A*					
DGFH 26C-3	EDG 23A*	SGC 340	SGCU 341*	CGF 343*	CF 343*	CGM 343*
DGFH 26-4	EDG 23A*					

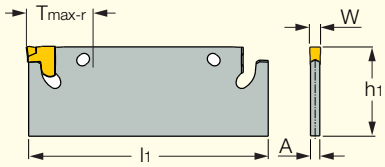
* (Optional, should be ordered separately)

TANG-GRIP
PARTING LINE

TGFH-MB

Parting and Grooving Blades for Other Manufacturer's Blocks





TGFH 12MB-2

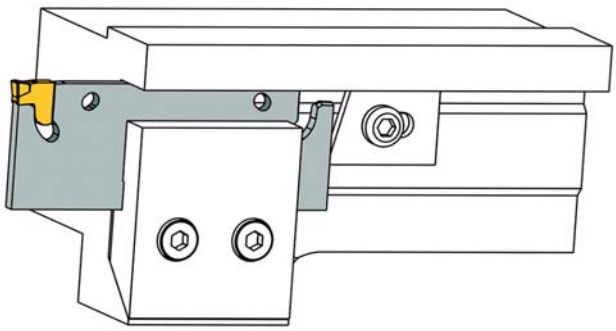
Designation	W min	W max	A	l_1	h_1	h_4	l_2	T_{max-r}	Insert
TGFH 12MB-2 L58	1.80	2.40	1.65	58.00	12.2	2.8	15.5	11.50	TAG 2
TGFH 17MB-2 L58	1.80	2.40	1.65	58.00	17.2	-	-	11.50	TAG 2
TGFH 22MB-2 L58	1.80	2.40	1.65	58.00	22.2	-	-	11.50	TAG 2
TGFH 17MB-3	2.80	3.50	2.50	64.00	17.2	-	-	12.00	TAG 3
TGFH 22MB-3	2.80	3.50	2.50	64.00	22.2	-	-	12.00	TAG 3
TGFH 22MB-3-L84	2.80	3.50	2.50	84.00	22.2	-	-	16.00	TAG 3
TGFH 17MB-4	3.70	4.50	3.40	70.00	17.2	-	-	14.00	TAG 4
TGFH 22MB-4	3.70	4.50	3.40	70.00	22.2	-	-	14.00	TAG 4
TGFH 22MB-4-L90	3.70	4.50	3.40	90.00	22.2	-	-	17.00	TAG 4

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

Spare Parts

Designation	Extractor
TGFH 12MB-2 L58	ETG 2*
TGFH 17MB-2 L58	ETG 2*
TGFH 22MB-2 L58	ETG 2*
TGFH 17MB-3	ETG 3-4-SH*
TGFH 22MB-3	ETG 3-4-SH*
TGFH 22MB-3-L84	ETG 3-4-SH*
TGFH 17MB-4	ETG 3-4-SH*
TGFH 22MB-4	ETG 3-4-SH*
TGFH 22MB-4-L90	ETG 3-4-SH*

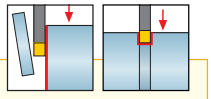
* (Optional, should be ordered separately)

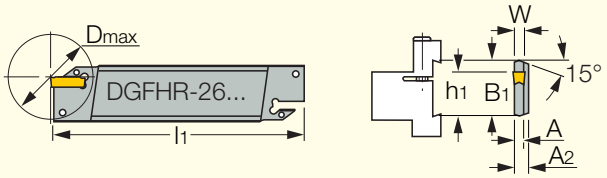


DO-GRIP
TWISTED 2-SIDED

DGFHR/L

Parting and Grooving Reinforced Blades for DO-GRIP Inserts





Designation	B1	W min(1)	W max	A2	A	l1	h1	D max(2)	Machines	Insert
DGFHR 26T16-2	26.0	1.90	2.50	8.0	1.70	110.00	21.4	42.0	TNS-30	DG. 1.../DG. 2..
DGFHR/L 26T23-2	26.0	1.90	2.50	8.0	1.60	110.00	21.4	42.0	TNS-30/112	DG. 1.../DG. 2..
DGFHR/L 26T16-3	26.0	3.00	3.18	8.0	2.40	110.00	21.4	30.0	TNS-30	DG. 1.../DG. 3..
DGFHR/L 26T23-3	26.0	3.00	3.18	8.0	2.40	110.00	21.4	42.0	TNS-30/42	DG. 1.../DG. 3..

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user.
• DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified
(1) For DG: 1.0 insert - modify holder. (2) The specified limit refers to the tool.

For inserts, see pages: DGN-LF/LFT (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGN/DGNC/DGNM-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • DGR/L-C DGRC/LC-C (A64) • DGR/L-J/JS (A66).

For holders, see pages: • SGTBU/SGTBN (A88) .

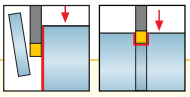
Spare Parts

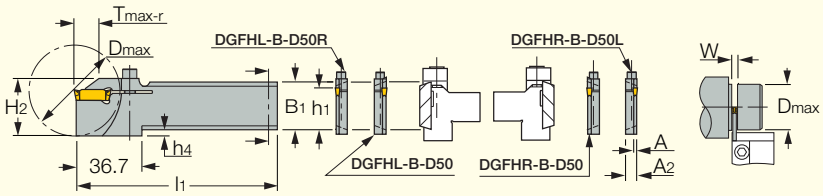
Designation	Extractor
DGFHR/L 26T	EDG 23A*

* (Optional, should be ordered separately)

DGFHR/L-B-D..(R/L)

Reinforced Type Blades with Screw Clamping





Designation	B1(3)	W min(4)	W max	A	A2	l1	H2	h1	h4	Tmax-r	D max(5)	Insert
DGFHR/L 26B-2D50 (1)	26.0	1.90	2.50	1.60	8.0	110.00	33.7	21.4	3.6	18.00	42.0	DG. 1.../DG. 2..
DGFHL 26B-2D50R (2)	26.0	1.90	2.50	1.60	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 2..
DGFHR 26B-2D50L (2)	26.0	1.90	2.50	1.60	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 2..
DGFHR/L 26B-3D50 (1)	26.0	3.00	3.18	2.40	8.0	110.00	31.5	21.4	3.7	18.00	30.0	DG. 1.../DG. 3..
DGFHL 26B-3D50R (2)	26.0	3.00	3.18	2.40	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 3..
DGFHR 26B-3D50L (2)	26.0	3.00	3.18	2.40	8.0	110.00	31.5	21.4	3.7	18.00	50.0	DG. 1.../DG. 3..

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user. • DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified

(1) For Traub machines, model TNC 30, TNM 28, TNS 26/30/42/112, TNA 300, TNK 260. (2) For Tornos Bechler, Emco 2000/20, 2000/26 machines.
(3) Mounted on all ISCAR standard blocks. (4) For DG: 1.0 insert - modify holder. (5) The specified limit refers to the tool.

For inserts, see pages: DGN-LF/LFT (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGN/DGNC/DGNM-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR-Z/ZS (A67) • DGR/L-C DGRC/LC-C (A64).

For holders, see pages: • SGTBU/SGTBN (A88) .

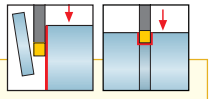
Spare Parts

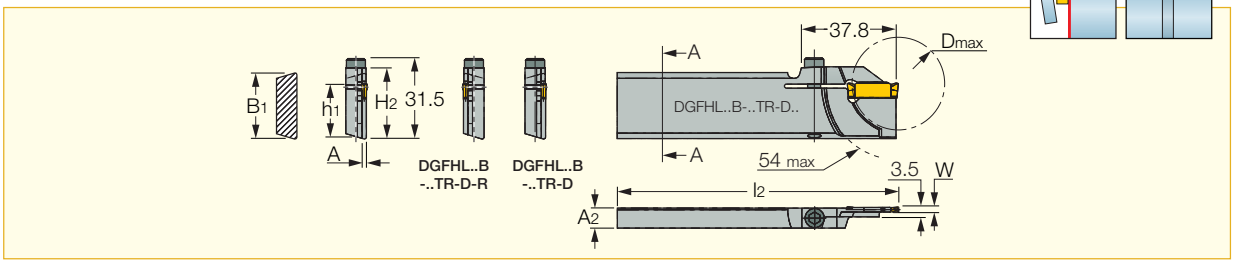
Designation	Screw	Key
DGFHR/L-B-D..(R/L)	SR M4X20DIN912 12.9	HW 3.0

DO-GRIP
TWISTED 2-SIDED

DGFHL-26B-TR-D

Reinforced Type Blades with Screw Clamping for Traub and Index Machines





Designation	B_1 [2]	W min	W max	A	A_2	l_1	H_2	h_1	D max [3]	Insert
DGFHL 26B-1.5TR-D20 [1]	26.0	1.00	1.50	1.20	7.9	110.00	27.9	21.4	20.0	DG. 1.../DG. 15..
DGFHL 26B-2TR-D36	26.0	1.90 [4]	2.50	1.60	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 2..
DGFHL 26B-2TR-D36R	26.0	1.90 [4]	2.50	1.60	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 2..
DGFHL 26B-3TR-D36	26.0	3.00 [4]	3.18	2.40	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 3..
DGFHL 26B-3TR-D36R	26.0	3.00 [4]	3.18	2.40	7.9	110.00	27.9	21.4	36.0	DG. 1.../DG. 3..

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user. • DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified

[1] Do not use DG.. 1.4 on this tool! [2] Mounted on all ISCAR standard blocks. [3] The specified limit refers to the tool. [4] For DG: 1.0 insert - modify holder.

For inserts, see pages: DGN-LF/LFT (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGN/DGNC/DGNM-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR-Z/ZS (A67) • DGR/L-C DGRC/LC-C (A64) • DGR/L-J/JS (A66).

Spare Parts

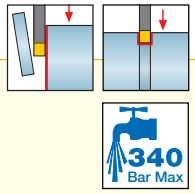
Designation	Screw	Key	Screw 1
DGFHL 26B-1.5TR-D20	SR M5X20-01172	HW 3.0	
DGFHL 26B-2TR-D36	SR M5X20-01172	HW 3.0	SR 76-1637*
DGFHL 26B-2TR-D36R	SR M4X20DIN912 12.9	HW 3.0	
DGFHL 26B-3TR-D36	SR M5X20-01172	HW 3.0	
DGFHL 26B-3TR-D36R	SR M5X20-01172	HW 3.0	SR 76-1637*

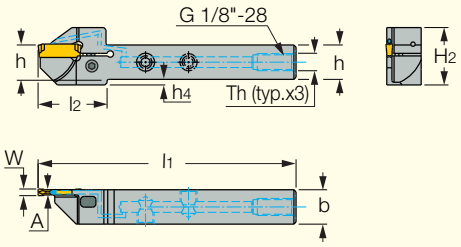
* (Optional, should be ordered separately)

DO-GRIP • JETCUT
TWISTED 2-SIDED

DGTR/L-B-D-JHP-SL

Parting and Grooving, Short Head Tools with Channels for High Pressure Coolant, for CNC and Swiss Automatics





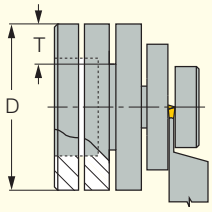
Left-hand shown

Designation	W min	W max	h	b	A	l2	D max	H2	h4	l1
DGTR/L 12B-2D24-JHP-SL	1.90	2.50	12.0	12.0	1.60	29.4	24.0	25.7	6.5	100.00
DGTR/L 16B-2D35-JHP-SL	1.90	2.50	16.0	16.0	1.60	32.0	35.0	26.7	2.6	120.00
DGTR/L 12B-3D24-JHP-SL	3.00	3.18	12.0	12.0	2.40	29.4	24.0	25.7	6.5	100.00
DGTR/L 16B-3D35-JHP-SL	3.00	3.18	16.0	16.0	2.40	32.0	35.0	26.7	2.6	120.00

For inserts, see pages: DGN-LF/LFT (A66) • DGN-MF (A65) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGN/DGNC/DGNM-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • DGR/L-C DGRC/LC-C (A64) • DGR/L-J/JS (A66).

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

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



Designation	øDmax																
DGTR/L 12B-2D24-JHP-SL	–	–	–	–	–	–	–	–	24	26	27	28	30	32	36	42	52
DGTR/L 16B-2D35-JHP-SL	–	–	–	–	–	–	–	–	24	26	27	28	30	32	36	42	52
DGTR/L 20B-2D35-JHP-SL	–	–	–	35	39	42	46	51	59	71	91	130	230	1200	NL	NL	NL
DGTR/L 25B-2D35-JHP-SL	–	–	–	65	70	75	80	90	100	120	140	180	250	410	1200	NL	NL
DGTR/L 12B-3D24-JHP-SL	–	–	–	35	39	42	46	51	59	71	91	130	230	1200	NL	NL	NL
DGTR/L 16B-3D35-JHP-SL	–	–	–	75	90	113	155	250	650	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 20B-3D40-JHP-SL	56	62	71	83	102	134	200	400	NL	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 25B-3D40-JHP-SL	50	55	60	67	75	85	100	115	140	200	350	1500	NL	NL	NL	NL	NL
Depth T →	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4

NL - No Limit

Example:
For 9 mm depth of groove on a 75 mm workpiece diameter, six tools may be used.

Flow Rate vs. Pressure

Designation	70 Bar Flow Rate (liters/min)	100 Bar Flow Rate (liters/min)	140 Bar Flow Rate (liters/min)
DGTR/L ...2-JHP-SL	3-4	4-5	5-6
DGTR/L ...3-JHP-SL	5-6	6-7	7-8

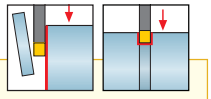
Spare Parts

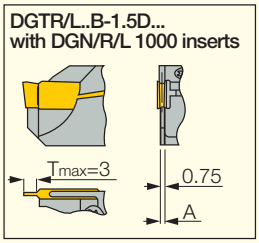
Designation	Clamp Screw	Key	Plug 1	Key
DGTR/L 12B-2D24-JHP-SL	SR M5-24145	HW 5/32"	SR 5/16UNF TL360	HW 5/32"
DGTR/L 16B-2D35-JHP-SL	SR M5-24145	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"
DGTR/L 12B-3D24-JHP-SL	SR M5-24145	HW 5/32"	SR 5/16UNF TL360	HW 5/32"
DGTR/L 16B-3D35-JHP-SL	SR M5-24145	HW 2.5/5	SR 5/16UNF TL360	HW 5/32"

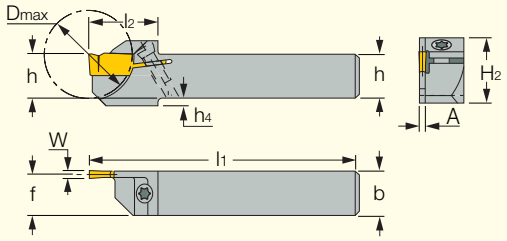
DO-GRIP
TWISTED 2-SIDED

DGTR/L-B-D-SH

Parting and Grooving, Short Head Tools, for CNC and Swiss Automatics







Right-hand shown

Left-hand shown

Designation	W min	W max	h	b	A	f	l2	D max	H2	h4	l1	Insert
DGTR/L 8B-1.4SH	1.40	1.40	8.0	8.0	1.00	7.5	18.0	10.0	15.4	2.0	125.00	DG. 14..
DGTR/L 10B-1.4D20SH	1.40	1.40	10.0	10.0	1.00	9.5	18.0	20.0	13.7	-	120.00	DG. 14..
DGTR/L 10B-1.5D20SH (1)	1.00	1.50	10.0	10.0	1.00	9.5	19.0	20.0	15.7	2.0	120.00	DG. 1.../DG. 15..
DGTR/L 10B-2D20SH	1.90	2.50	10.0	10.0	1.60	9.2	19.0	20.0	15.7	2.0	120.00	DG. 1.../DG. 2..
DGTR/L 12B-1.4D24SH	1.40	1.40	12.0	12.0	1.00	11.5	19.0	24.0	15.7	-	120.00	DG. 14..
DGTR/L 12B-1.5D24SH (1)	1.00	1.50	12.0	12.0	1.00	11.4	19.0	24.0	15.7	-	120.00	DG. 1.../DG. 15..
DGTR/L 12B-2D24SH	1.90	2.50	12.0	12.0	1.60	11.2	19.0	24.0	15.7	-	120.00	DG. 1.../DG. 2..
DGTR/L 12B-2D24SH-L85	1.90	2.50	12.0	12.0	1.60	11.2	19.0	24.0	15.7	-	85.00	DG. 1.../DG. 2..
DGTR/L 12B-3D24SH	3.00	3.18	12.0	12.0	2.40	10.8	19.0	24.0	15.7	-	120.00	DG. 3.../DG. 10..
DGTR/L 16B-1.5D25SH (1)	1.00	1.50	16.0	16.0	1.20	15.4	19.5	25.4	19.7	-	120.00	DG. 1.../DG. 15..
DGTR/L 16B-2D25SH	1.90	2.50	16.0	16.0	1.60	15.2	19.5	25.4	19.7	-	120.00	DG. 1.../DG. 2..
DGTR/L 16B-3D25SH	3.00	3.18	16.0	16.0	2.40	14.8	19.5	25.4	19.7	-	120.00	DG. 1.../DG. 3..

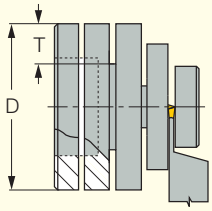
• DGN/R/L 1 mm inserts can also be mounted into pocket sizes 2 and 3.

(1) Do not use DG.. 1.4 on this tool!

For inserts, see pages: DGN-LF/LFT (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGN/DGNC/DGNM-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • DGR/L-C DGRC/LC-C (A64) • DGR/L-J/JS (A66).

Depth Capacity DGTR/L-B-D

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



Designation	øDmax																
DGTR/L 10B-1.4D20	–	–	–	–	–	–	–	–	–	–	20	23	26	32	45	76	NL
DGTR/L 12B-1.4D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 16B-1.4D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 20B-1.4D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 10B-2D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 12B-2D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 16B-2D32	–	–	–	–	32	35	37	41	47	55	69	93	150	400	NL	NL	NL
DGTR/L 20B-2D35	–	–	–	75	90	113	155	250	650	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 25B-2D35	–	–	–	75	90	113	155	250	650	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 12B-3D30	–	–	–	–	–	30	32	35	38	43	50	62	83	125	300	NL	NL
DGTR/L 16B-3D35	–	–	–	35	39	42	46	51	59	71	91	130	230	1200	NL	NL	NL
DGTR/L 20B-3D40	56	62	71	83	102	134	200	400	NL	NL	NL	NL	NL	NL	NL	NL	NL
DGTR/L 25B-3D40	56	62	71	83	102	134	200	400	NL	NL	NL	NL	NL	NL	NL	NL	NL

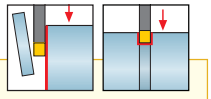
Spare Parts

Designation	Screw	Key
DGTR/L-B-D-SH	SR 16-236 P	T-15/5

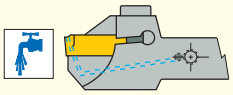
DO-GRIP
TWISTED 2-SIDED

DGTR/L-B/BC-D

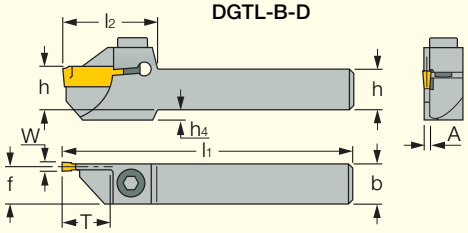
Integral Shank Reinforced Parting and Grooving Tools



DGTL-BC-D



DGTL-B-D



Left-hand shown

Designation	W min	W max	h	b	A	l1	l2	Tmax-f(2)	f	h4	Coolant	Insert
DGTR/L 10B-1.4D20	1.40	1.40	10.0	10.0	1.00	140.00	23.6	10.00	9.5	2.0	N	DG. 14..
DGTR/L 12B-1.4D30	1.40	1.40	12.0	12.0	1.00	140.00	29.6	15.00	11.5	3.5	N	DG. 14..
DGTR/L 16B-1.4D30	1.40	1.40	16.0	16.0	1.00	140.00	29.6	15.00	15.5	-	N	DG. 14..
DGTR/L 10B-2D30	1.90	2.50	10.0	10.0	1.60	140.00	29.6	15.00	9.2	6.6	N	DG. 1.../DG. 2..
DGTR/L 12B-2D30	1.90	2.50	12.0	12.0	1.60	140.00	29.6	15.00	11.2	3.5	N	DG. 1.../DG. 2..
DGTR/L 16B-2D32	1.90	2.50	16.0	16.0	1.60	140.00	30.6	16.00	15.2	-	N	DG. 1.../DG. 2..
DGTR/L 12B-3D30	3.00	3.18	12.0	12.0	2.40	140.00	29.6	15.00	10.8	3.5	N	DG. 1.../DG. 3..
DGTR/L 16B-3D35	3.00	3.18	16.0	16.0	2.40	140.00	32.1	16.00	14.8	2.6	N	DG. 1.../DG. 3..
DGTR/L 16BC-3D35 (1)	3.00	3.18	16.0	16.0	2.40	140.00	31.1	16.00	14.8	2.6	Y	DG.C 3..

• Important: 1.4 mm width inserts should be used only on tools for 1.4 mm specific width tools. • DGN/R/L 1 mm inserts can also be mounted into pocket sizes 2 and 3.

(1) Tools for inserts with coolant holes for high temperature alloys and stainless steel (2) The specified limit refers to the tool.

For inserts, see pages: DGN-LF/LFT (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGN/DGNC/DGNM-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • DGR/L-C DGRC/LC-C (A64) • DGR/L-J/JS (A66).

Spare Parts

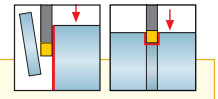
Designation	Screw	Key	Pipe Fitting	Pipe Fitting 1	Cooling Tube	Pipe Fitting 2
DGTR/L 10B-1.4D20	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 12B-1.4D30	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 16B-1.4D30	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 10B-2D30	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 12B-2D30	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 16B-2D32	SR M4X14DIN912 12.9	HW 3.0				
DGTR/L 12B-3D30	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 16B-3D35	SR M5X12DIN912 12.9	HW 4.0				
DGTR/L 16BC-3D35	SR M5X12DIN912 12.9	HW 4.0	CGM 343*	CF 343*	SGCU 341*	CGF 343*

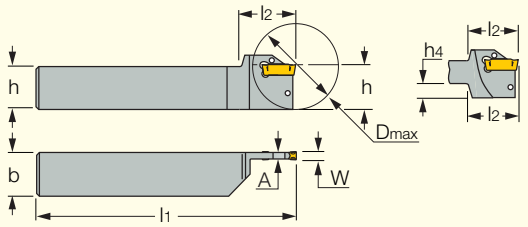
* (Optional, should be ordered separately)

DO-GRIP
TWISTED 2-SIDED

DGTR/L

Integral Shank Parting and Grooving Tools





Right-hand shown

Designation	W min	W max	h	b	A	l1	l2	h4	D max	Insert
DGTR/L 1010-2	1.90	2.50	10.0	10.0	1.80	150.00	29.0	6.6	35.0	DG. 1.../DG. 2..
DGTR/L 1212-2	1.90	2.50	12.0	12.0	1.80	150.00	29.0	6.6	35.0 (1)	DG. 1.../DG. 2..
DGTR/L 1616-2	1.90	2.50	16.0	16.0	1.80	150.00	29.0	2.6	35.0 (1)	DG. 1.../DG. 2..
DGTR/L 1212-3	3.00	3.18	12.0	12.0	2.50	150.00	29.0	6.6	35.0 (1)	DG. 1.../DG. 3..
DGTR/L 1616-3	3.00	3.18	16.0	16.0	2.50	150.00	29.0	6.6	35.0 (1)	DG. 1.../DG. 3..

• Insert limit is Tmax=18 mm. If deeper penetration is required, the insert should be modified into single-ended by the user. • DG..1.0 insert can be mounted into pocket sizes 2 and 3. In that case the pocket width has to be modified

(1) Dmax=43 mm when single-ended insert is used

For inserts, see pages: DGN-LF/LFT (A66) • DGN-MF (A65) • DGN/DGNC/DGNM-C (A64) • DGR/L-C DGRC/LC-C (A64) • DGN/DGNM-J/JS/JT (A65) • DGR/L-J/JS (A66) • DGN-P (A68) • DGN-UT/UA (A68) • DGN-WP (A69) • DGN-Z (A67) • DGR-P (A69) • DGR-WP (A70) • DGR-Z/ZS (A67) • GRIP (A19) • GRIP (full radius) (A20).

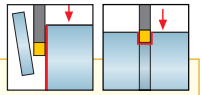
Spare Parts

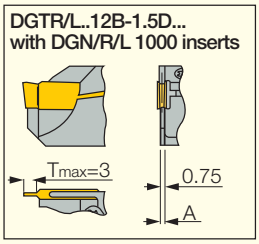
Designation	Extractor
DGTR/L 1010-2	EDG 33B*
DGTR/L 1212-2	EDG 33B*
DGTR/L 1616-2	EDG 33B*
DGTR/L 1212-3	EDG 33B*
DGTR/L 1616-3	EDG 33B*

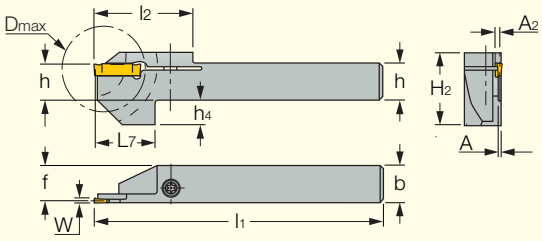
* (Optional, should be ordered separately)

DGTR/L-B-D-TR

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







Right -hand shown

Designation	W min	W max	h	b	A	A2	f	l1	l2	L7	D max	H2	h4	Insert
DGTR/L 12B-1.4D20-TR12	1.40	1.40	12.0	12.0	1.00	2.3	11.5	95.00	32.5	20.00	20.0	23.7	8.0	DG. 14..
DGTL 12B-1.5D20-TR12	1.00	1.50	12.0	12.0	1.20	2.3	11.3	95.00	32.5	20.00	20.0	23.7	8.0	DG. 1.../DG. 15..
DGTR 12B-1.5-D20-TR12	1.00	1.50	12.0	12.0	1.20	2.3	11.3	95.00	32.5	20.00	20.0	23.7	8.0	DG. 1.../DG. 15..

• Important: 1.4 mm width inserts should be used only on tools for 1.4 mm specific width !! • For Traub machines, model TNL 12/7

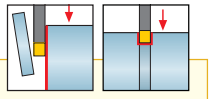
For inserts, see pages: DGN-P (A68) • DGN/DGNM-J/JS/JT (A65) • DGR-P (A69) • DGR/L-J/JS (A66).

Spare Parts

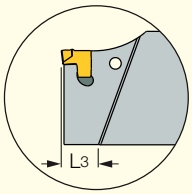
Designation	Screw	Key
DGTR/L-B-D-TR	SR 16-236 P	T-15/5

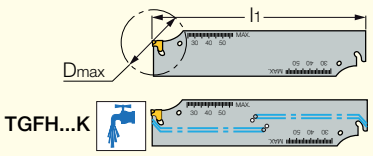
TGFH/R/L

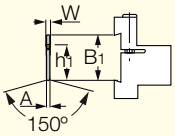
Blades with Tangentially Oriented Pocket for Parting and Grooving, for TANG-GRIP Single-Ended Inserts



TGFH...1.4/1.6







Designation	B_1	W min	W max	A	l_1	L_3	h_1	D max	Coolant	Insert
TGFH 19-1.4	19.0	1.40	1.40	1.05 (2)	86.00	9.60	15.7	30.0	N	TAG 1.4
TGFH 19-1.6	19.0	1.60	1.60	1.30 (3)	86.00	11.00	15.7	32.0	32.0	TAG 1.6
TGFH 19-2	19.0	1.80	2.40	1.65	86.00	-	15.7	38.0	38.0	TAG 2
TGFH 26-1.4	26.0	1.40	1.40	1.05 (2)	110.00	8.30	21.4	29.0	29.0	TAG 1.4
TGFH 26-1.6	26.0	1.60	1.60	1.30 (3)	110.00	10.00	21.4	35.0	35.0	TAG 1.6
TGFH 26-2	26.0	1.80	2.40	1.65	110.00	-	21.4	50.0	50.0	TAG 2
TGFH 26-3	26.0	2.80	3.50	2.50	110.00	-	21.4	75.0	75.0	TAG 3
TGFH 26K-3 (1)	26.0	2.80	3.50	2.50	110.00	-	21.4	75.0	Y	TAG 3
TGFH 26-4	26.0	3.70	4.50	3.40	110.00	-	21.4	80.0	80.0	TAG 4
TGFH 26-5	26.0	4.70	5.50	4.00	150.00	-	21.4	80.0	80.0	TAG 5

(1) With coolant holes, recommended coolant pressure: 10 bar min, cooling tube SGCU 341 should be ordered separately. (2) Thickness beyond the D.O.C. area is 2.50 mm (3) Thickness beyond the D.O.C. area is 1.60 mm

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76) .

For holders, see pages: • SGTBU/SGTBN (A88) .

Spare Parts

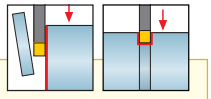
Designation	Extractor	Sealing Screw
TGFH 19-1.4	ETG 1.4/1.6*	
TGFH 19-1.6	ETG 1.4/1.6*	
TGFH 26-1.4	ETG 1.4/1.6*	
TGFH 26-1.6	ETG 1.4/1.6*	
TGFH 26-2	ETG 2*	
TGFH 26-3	ETG 3-4*	
TGFH 26K-3	ETG 3-4-SH*	SGC 340
TGFH 26-4	ETG 3-4*	
TGFH 26-5	ETG 5-7*	

* (Optional, should be ordered separately)

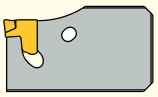
TANG-GRIP
PARTING LINE

TGFH-S

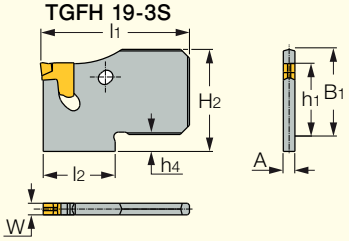
Single-Sided Blades for TANG-GRIP Parting and Grooving Inserts



TGFH 19-2S



TGFH 19-3S



Designation	B_1	W min	W max	A	l_1	h_1	H_2	h_4	l_2	T_{max-r}	D max
TGFH 19-2S	19.0	1.80	2.40	1.65	32.00	15.7	19.0	-	-	12.00	36.0
TGFH 19-3S	19.0	2.80	3.50	2.50	32.00	15.7	22.0	3.0	15.5	16.00	40.0

• For Dmax and Tmax drawing see SGBHR/L holder.

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

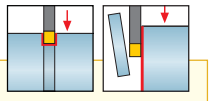
Spare Parts

Designation	Extractor
TGFH 19-2S	ETG 2*
TGFH 19-3S	ETG 3-4-SH*

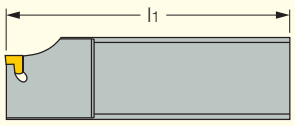
* (Optional, should be ordered separately)

TGFHR/L

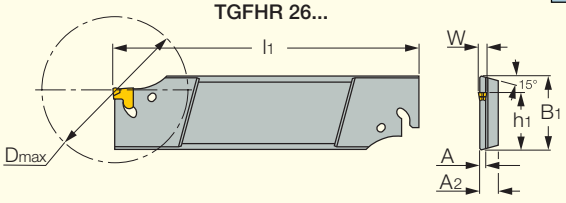
Single- and Double-Ended Parting and Grooving Reinforced Blades for TANG-GRIP Tangentially Clamped Inserts



TGFHR 32...



TGFHR 26...



Right-hand shown

Designation	B_1	W min	W max	A	A_2	l_1	h_1	D max
TGFHL 26T16-2	26.0	1.80	2.40	1.65	7.9	110.50	21.4	43.0
TGFHR 26T16-3	26.0	2.80	3.50	2.50	7.9	110.50	21.4	43.0
TGFHR/L 26T23-2	26.0	1.80	2.40	1.65	7.9	110.50	21.4	46.0
TGFHR/L 26T23-3	26.0	2.80	3.50	2.50	7.9	110.50	21.4	46.0

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

For holders, see pages: • SGTBU/SGTBN (A88) .

Spare Parts

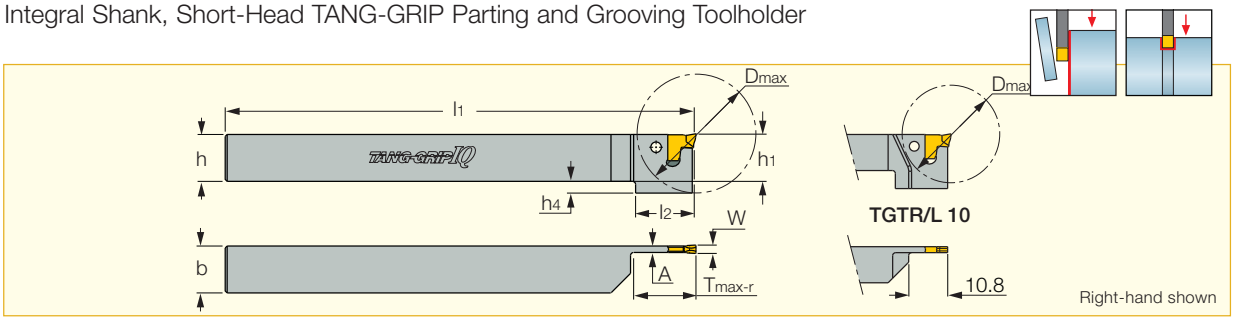
Designation	Extractor
TGFHL 26T16-2	ETG 2*
TGFHR 26T16-3	ETG 3-4-SH*
TGFHR/L 26T23-2	ETG 2*
TGFHR/L 26T23-3	ETG 3-4-SH*

* (Optional, should be ordered separately)

TANG-GRIP IQ 350 LINE

TGTR/L-2T..SH-L120

Integral Shank, Short-Head TANG-GRIP Parting and Grooving Toolholder



Designation	W	W min	W max	h	h1	b	A	l1	l2	h4	Tmax-r	D max(1)
TGTR/L 1010-2T10SH-L120-IQ	2.00	1.80	2.50	10.0	10.1	10.0	1.65	120.00	15.0	5.0	10.00	26.0
TGTR/L 1212-2T15SH-L120-IQ	2.00	1.80	2.50	12.0	12.1	12.0	1.65	120.00	15.0	3.0	15.00	30.0
TGTR/L 1616-2T18SH-L120-IQ	2.00	1.80	2.50	16.0	16.1	16.0	1.65	120.00	-	-	18.00	36.0

(1) For parting

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

Spare Parts

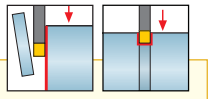
Designation	Extractor
TGTR/L-2T..SH-L120	ETG 2-SH-T*

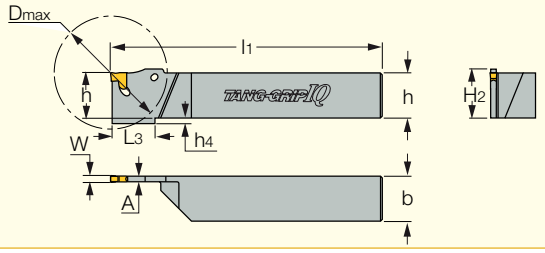
* (Optional, should be ordered separately)

TANG-GRIP IQ 350 LINE

TGTR/L-IQ

Integral Shank, TANG-GRIP Parting and Grooving Toolholder





Left-hand shown

Designation	W min	W max	h	b	A	l1	H2	L3	h4	D max	Insert
TGTR/L 1010-1.4-IQ	1.40	1.45	10.0	10.0	1.05	140.00	15.0	15.50	5.0	20.0	TAG 1.4
TGTR/L 1212-1.4-IQ	1.40	1.45	12.0	12.0	1.05	140.00	12.0	16.00	3.0	30.0	TAG 1.4
TGTR/L 1616-1.4-IQ	1.40	1.45	16.0	16.0	1.05	140.00	16.0	16.00	-	30.0	TAG 1.4
TGTR/L 1010-1.6-IQ	1.60	1.64	10.0	10.0	1.30	120.00	-	16.00	5.0	28.0	TAG 1.6
TGTR/L 1212-1.6-IQ	1.60	1.64	12.0	12.0	1.30	120.00	-	16.00	3.0	32.0	TAG 1.6
TGTR/L 1616-1.6-IQ	1.60	1.64	16.0	16.0	1.30	120.00	-	16.00	-	35.0	TAG 1.6
TGTR/L 1010-2-IQ	1.80	2.40	10.0	10.0	1.65	150.00	15.0	15.50	5.0	28.0	TAG 2
TGTR/L 1212-2-IQ	1.80	2.40	12.0	12.0	1.65	150.00	15.0	17.00	3.0	32.0	TAG 2
TGTR/L 1612-2-L120-IQ	1.80	2.50	16.0	12.0	1.65	120.00	16.0	16.00	-	35.0	TAG 2
TGTR/L 1616-2-IQ	1.80	2.40	16.0	16.0	1.65	150.00	16.0	16.00	-	35.0	TAG 2
TGTR/L 1212-3-IQ	2.80	3.50	12.0	12.0	2.50	150.00	19.0	19.00	7.0	32.0	TAG 3
TGTR/L 1612-3-L120-IQ	2.80	3.50	16.0	12.0	2.50	120.00	19.0	19.00	3.0	35.0	TAG 3
TGTR/L 1616-3-IQ	2.80	3.50	16.0	16.0	2.50	150.00	19.0	19.00	3.0	35.0	TAG 3

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76) .

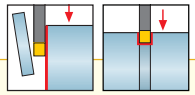
Spare Parts

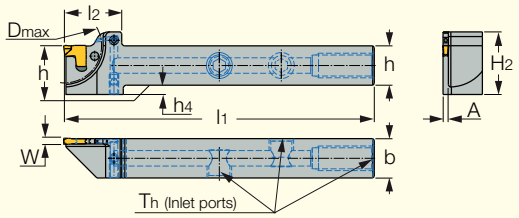
Designation	Extractor
TGTR/L 1010-1.4-IQ	ETG 1.4/1.6*
TGTR/L 1212-1.4-IQ	ETG 1.4/1.6*
TGTR/L 1616-1.4-IQ	ETG 1.4/1.6*
TGTR/L 1010-1.6-IQ	ETG 1.4/1.6*
TGTR/L 1212-1.6-IQ	ETG 1.4/1.6*
TGTR/L 1616-1.6-IQ	ETG 1.4/1.6*
TGTR/L 1010-2-IQ	ETG 2*
TGTR/L 1212-2-IQ	ETG 2*
TGTR/L 1612-2-L120-IQ	ETG 2*
TGTR/L 1616-2-IQ	ETG 2*
TGTR/L 1212-3-IQ	ETG 3-4-SH*
TGTR/L 1612-3-L120-IQ	ETG 3-4-SH*
TGTR/L 1616-3-IQ	ETG 3-4-SH*

* Optional, should be ordered separately

TGTR/L-JHP

Parting and Grooving Toolholders for TANG-GRIP Inserts, with Channels for High Pressure Coolant





Left-hand shown

Designation	W min	W max	h	b	A	l_1	H_2	l_2	h_4	Th	D max	Insert
TGTR/L 1010-2JHP	1.80	2.50	10.0	10.0	1.72	100.00	19.5	18.5	5.0	UNF 5/16-24	24.0	TAG 2
TGTR/L 1212-2JHP	1.80	2.50	12.0	12.0	1.72	100.00	19.5	18.5	3.0	UNF 5/16-24	24.0	TAG 2
TGTR/L 1616-2JHP	1.80	2.50	16.0	16.0	1.72	120.00	21.5	25.5	-	UNF 5/16-24	35.0	TAG 2
TGTR/L 1616-3JHP	2.80	3.50	16.0	16.0	2.50	120.00	24.5	25.5	3.0	UNF 5/16-24	35.0	TAG 3

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

Flow Rate vs. Pressure

Designation	70 bar Flow Rate (liters/min)	100 bar Flow Rate (liters/min)	140 bar Flow Rate (liters/min)
TGTR/L...-2JHP	2-4	4-6	6-8
TGTR/L...-3JHP	7-9	9-11	11-13

Spare Parts

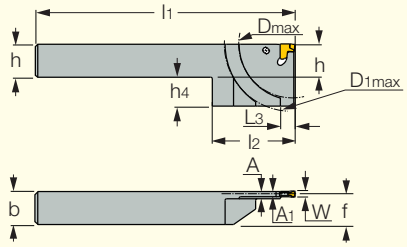
Designation	Extractor	Plug 1	Plug Key
TGTR/L 1010-2JHP	ETG 2-SH-T*	ETG 2-SH-T*	HW 5/32"
TGTR/L 1212-2JHP	ETG 2-SH-T*		HW 5/32"
TGTR/L 1616-2JHP	ETG 2*		HW 5/32"
TGTR/L 1616-3JHP	ETG 3-4-SH*		HW 5/32"

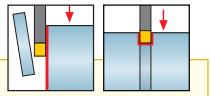
* (Optional, should be ordered separately)

TANG-GRIP IQ 350 LINE

TGTR/L-D

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





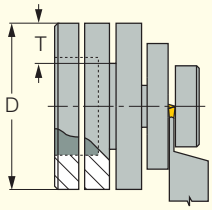
Right-hand shown

Designation	W	W min	W max	h	b	A	A1	l1	l2	f	h4	D max	D1 max	L3
TGTR/L 1616-2-D52-IQ	2.00	1.80	2.40	16.0	16.0	1.65	3.50	125.00	40.0	15.2	14.0	52.0	65.0	6.00
TGTR/L 1616-3-D52-IQ	3.00	2.80	3.50	16.0	16.0	2.50	3.50	125.00	40.0	14.8	14.0	52.0	65.0	6.00

For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

Depth Capacity TGTR/L-D

Table determining depth of cut as function of workpiece diameter



Designation	Tmax									
TGTR/L 1616-2-D52-IQ	20	25	19	16	15	13	11	10	9	8
TGTR/L 1616-3-D52-IQ	20	25	20	17	15	13	11	10	9	8
D →	40	50	60	70	80	100	120	150	200	300

Spare Parts

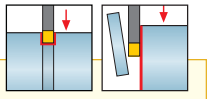
Designation	Extractor
TGTR/L 1616-2-D52-IQ	ETG 2*
TGTR/L 1616-3-D52-IQ	ETG 3-4-SH*

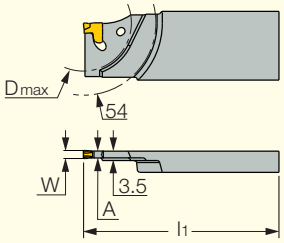
* (Optional, should be ordered separately)

TANG-GRIP
PARTING LINE

TGFHL-TR

TANG-GRIP Reinforced Blades for Traub and Index Machines, for TANG-GRIP Tangentially Clamped Inserts





...TR-D36R

...TR-D36

Designation	B_1	W_{min}	W_{max}	A	l_1	h_1	D_{max}	Insert
TGFHL 26-2TR-D36	26.0	1.80	2.40	1.65	110.00	21.4	36.0	TAG 2
TGFHL 26-2TR-D36R	26.0	1.80	2.40	1.65	110.00	21.4	36.0	TAG 2
TGFHL 26-3TR-D36	26.0	2.80	3.50	2.50	110.00	21.4	36.0	TAG 3
TGFHL 26-3TR-D36R	26.0	2.80	3.50	2.50	110.00	21.4	36.0	TAG 3

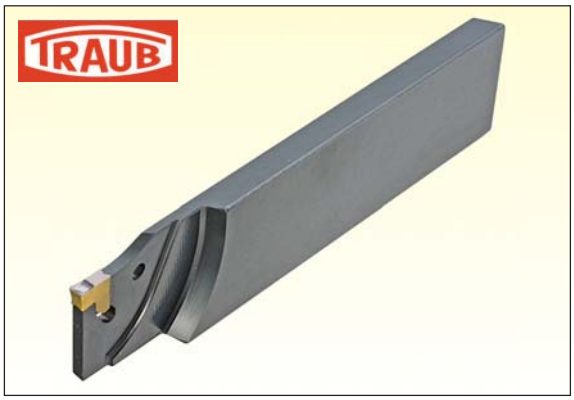
For inserts, see pages: TAG N-A (A74) • TAG N-C/W/M (A73) • TAG N-J/JS/JT (A75) • TAG N-LF (A76) • TAG N-MF (A73) • TAG N-UT (A74) • TAG R/L-C (A75) • TAG R/L-J/JS (A76).

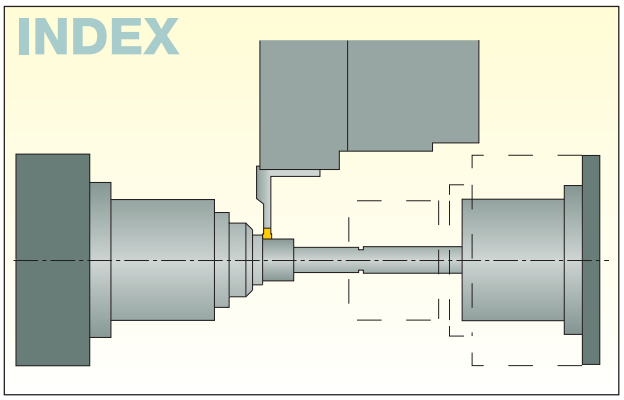
For holders, see pages: • SGTBU/SGTBN (A88) .

Spare Parts

Designation	Extractor
TGFHL 26-2TR-D36	ETG 2*
TGFHL 26-2TR-D36R	ETG 2*
TGFHL 26-3TR-D36	ETG 3-4-SH*
TGFHL 26-3TR-D36R	ETG 3-4-SH*

* (Optional, should be ordered separately)

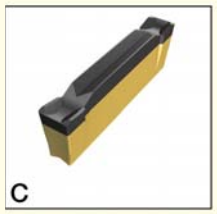


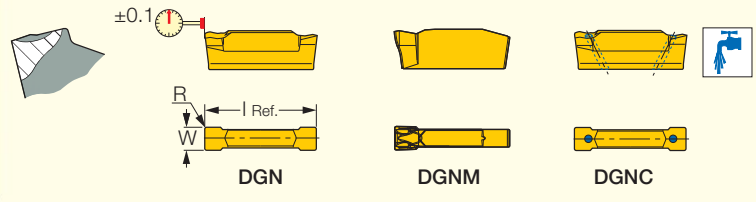


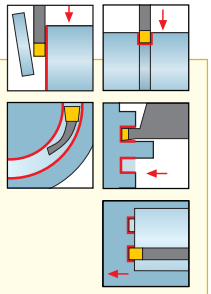
DO-GRIP
TWISTED 2-SIDED

DGN/DGNC/DGNM-C

Double-Sided Parting Insert, for Parting and Grooving of Bars, Hard Materials and Tough Applications







Designation	Dimensions W	W tol(±)	R	T_{max-r}	l Ref.	Tough ↔ Hard IC328	IC830	IC1028	IC354	IC5400	IC308	IC808	IC908	IC30N	IC807	IC907	IC20	Recommended Machining Data f groove (mm/rev)
DGN 2002C	2.00	0.03	0.20	18.00	19.9	●	●	●	●	●		●	●				●	0.05-0.16
DGN 2202C	2.20	0.03	0.20	18.00	19.8		●	●	●	●	●	●	●	●		●		0.05-0.16
DGN 2502C	2.50	0.03	0.20	18.00	20.7								●					0.08-0.20
DGN 3102C	3.10	0.04	0.20	18.00	20.1		●	●	●	●	●	●	●	●		●		0.10-0.25
DGNC 3102C (1)	3.10	0.04	0.20	18.00	21.0							●	●					0.10-0.25
DGNM 3202C (2)	3.18	0.04	0.20	- (3)	20.4	●			●				●					0.10-0.25
DGN 4003C	4.00	0.04	0.30	- (3)	18.8	●	●	●	●		●	●	●	●	●		●	0.10-0.30
DGNC 4003C (1)	4.00	0.04	0.30	- (3)	19.0							●	●					0.10-0.30

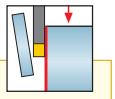
• Feed values for grade IC20 should be decreased by 50%

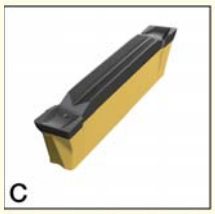
(1) Inserts with coolant holes, recommended coolant pressure 10 bar minimum (2) Single-ended insert. (3) No depth limit

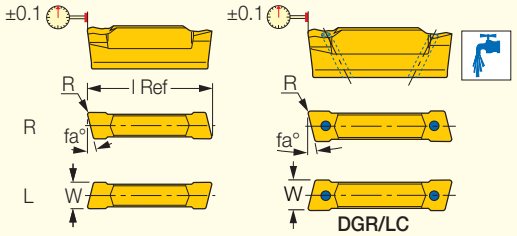
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55) • HELIR/L (A19)

DGR/L-C DGRC/LC-C

Double-Sided Parting Insert, for Parting Bars, Hard Materials and Tough Applications







Designation	Dimensions W	R	T_{max-r}	f_a°	l Ref.	Tough ↔ Hard IC328	IC830	IC1028	IC354	IC808	IC908	IC20	Recommended Machining Data f groove (mm/rev)
DGR/L 2202C-6D	2.20	0.20	18.00	6.0	20.8	●	●	●	●	●	●	●	0.04-0.12
DGR/L 3102C-15D	3.10	0.20	18.00	15.0	21.0	●	●	●					0.08-0.14
DGR/L 3102C-6D	3.10	0.20	18.00	6.0	21.0	●	●	●	●	●	●	●	0.08-0.18
DGR/LC 3102C-6D (1)	3.10	0.20	18.00	6.0	21.0					●	●		0.08-0.18
DGR 3102C-8D	3.10	0.20	18.00	8.0	21.1	●	●	●					0.05-0.15
DGR/L 4003C-4D	4.00	0.30	- (2)	4.0	18.9	●	●	●	●		●	●	0.08-0.20
DGR/LC 4003C-4D (1)	4.00	0.30	- (2)	4.0	19.0					●	●		0.08-0.20

• Feed values for grade IC20 should be decreased by 50%

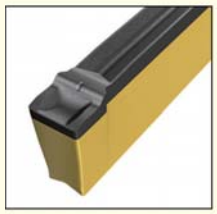
(1) Inserts with coolant holes, recommended coolant pressure 10 bar minimum (2) No depth limit

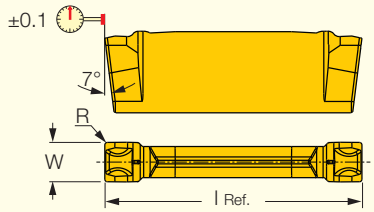
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55) • HELIR/L (A19).

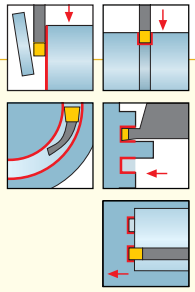
DO-GRIP
TWISTED 2-SIDED

DGN-MF

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





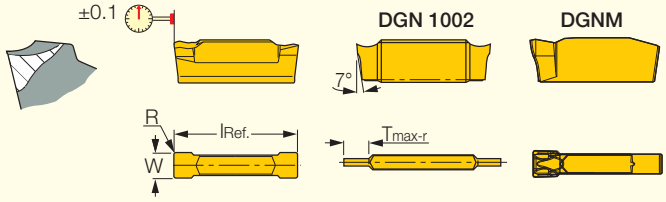


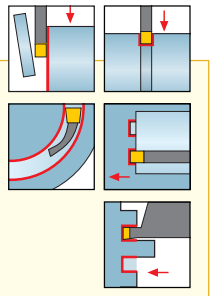
Designation	Dimensions W±0.04	R	Tmax-r	l Ref.	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
DGN 2002MF	2.00	0.20	18.00	19.9	●	●	●	0.04-0.12
DGN 3002MF	3.00	0.20	18.00	20.1		●		0.06-0.18
DGN 3102MF	3.00	0.20	18.00	20.1	●	●	●	0.06-0.18

For tools, see pages: DGFH (A18) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53).

DGN/DGNM-J/JS/JT

Double-Sided Parting and Grooving Insert for Soft Materials, Parting of Tubes, Small Diameters and Thin-Walled Parts





Designation	Dimensions W	W tol(±)	R	Tmax-r	l Ref.	Tough ↔ Hard IC328	IC830	IC1028	IC354	IC5400	IC308	IC808	IC908	IC807	IC907	IC20	Recommended Machining Data f groove (mm/rev)
DGN 1002J	1.00	0.02	0.16	3.00	21.0	●		●					●				0.02-0.07
DGN 1402J	1.40	0.03	0.16	15.00	15.8	●	●	●	●		●	●	●				0.03-0.12
DGN 1502J	1.50	0.03	0.16	18.00	20.9	●		●					●				0.03-0.12
DGN 2002JT	2.00	0.03	0.20	18.00	19.8							●					0.04-0.14
DGN 2200JS (1)	2.20	0.03	0.02	18.00	19.4	●	●										0.03-0.08
DGN 2202J	2.20	0.03	0.20	18.00	19.8		●	●	●	●		●	●	●			0.04-0.12
DGN 2202JT	2.20	0.03	0.20	18.00	19.8		●			●		●					0.04-0.14
DGN 3100JS (1)	3.10	0.04	0.02	18.00	19.7	●					●						0.03-0.10
DGN 3102J	3.10	0.04	0.20	18.00	20.1		●	●	●	●	●	●	●		●		0.04-0.16
DGN 3102JT	3.10	0.04	0.20	18.00	20.1		●			●		●			●		0.05-0.18
DGN 3202J	3.18	0.04	0.20	18.00	21.0								●				0.04-0.16
DGNM 3202J (2)	3.18	0.04	0.20	- (3)	20.3	●			●				●				0.04-0.16
DGN 4003J	4.00	0.04	0.30	- (3)	18.9	●	●	●	●		●	●	●	●		●	0.05-0.18
DGN 4003JT	4.00	0.04	0.30	- (3)	18.9		●										0.05-0.18

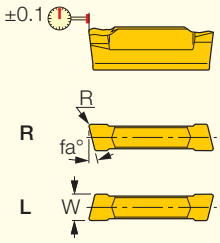
• JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge. Most suitable for soft materials at low to medium feeds. •
(1) Sharp corners (2) Single-ended insert. (3) No depth limit

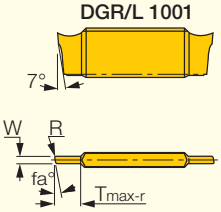
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B-D-TR (A56) • DGTR/L-B/BC-D (A55) • HELIR/L (A19)

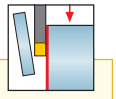
DO-GRIP
TWISTED 2-SIDED

DGR/L-J/JS

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







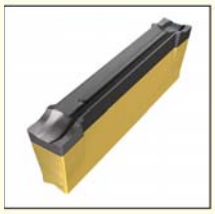
Designation	Dimensions W	R	T_{max-r}	f_a°	l Ref.	Tough ↔ Hard IC328	IC830	IC1028	IC354	IC308	IC808	IC908	IC20	Recommended Machining Data f groove (mm/rev)
DGR/L 1001J-8D	1.00	0.07	3.00	8.0	21.0	●		●		●		●		0.02-0.06
DGR/L 1400JS-15D (1)	1.40	0.02	15.00	15.0	15.4	●	●	●		●		●		0.03-0.07
DGR/L 1402J-8D	1.40	0.16	15.00	8.0	15.8	●	●	●		●		●		0.03-0.08
DGR 1500J-8D	1.50	0.05	18.00	8.0	20.9	●	●	●		●				0.03-0.08
DGR/L 2200JS-15D (1)	2.20	0.02	18.00	15.0	20.4	●		●	●	●		●		0.03-0.07
DGR/L 2200JS-6D (1)	2.20	0.02	18.00	6.0	20.4	●	●	●		●		●		0.03-0.08
DGR/L 2202J-6D	2.20	0.20	18.00	6.0	21.0	●	●	●	●			●	●	0.03-0.10
DGR 2202J-15D	2.20	0.20	18.00	15.0	21.0	●	●	●						0.03-0.08
DGR/L 3100JS-15D (1)	3.10	0.02	18.00	15.0	20.6	●	●	●	●	●		●		0.03-0.07
DGR/L 3100JS-6D (1)	3.10	0.02	18.00	6.0	20.6	●	●	●		●		●		0.03-0.08
DGR/L 3102J-15D	3.10	0.20	18.00	15.0	21.0	●		●	●			●		0.04-0.10
DGR/L 3102J-6D	3.10	0.20	18.00	6.0	21.0	●	●	●	●			●	●	0.04-0.14
DGR 4000JS-15D (1)	4.00	0.00	- (2)	15.0	18.4	●								0.04-0.10
DGR/L 4003J-4D	4.00	0.30	- (2)	4.0	18.9	●	●	●	●		●	●	●	0.04-0.15

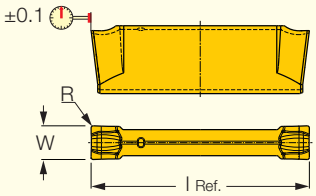
(1) Sharp corners (2) No depth limit.

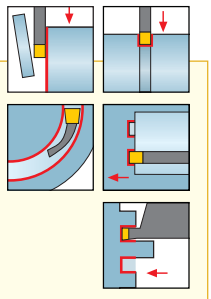
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B-D-TR (A56) • DGTR/L-B/BC-D (A55) • HELIR/L (A19).

DGN-LF/LFT

Double-Sided Parting and Grooving Insert for Stainless Steel







Designation	Dimensions W	W tol(±)	R	T_{max-r}	l Ref.	Tough ↔ Hard IC830	IC928	IC5400	IC808	IC908	Recommended Machining Data f groove (mm/rev)
DGN 2002LF	2.00	0.03	0.20	18.00	19.8	●		●	●		0.03-0.08
DGN 2202LF	2.20	0.03	0.20	18.00	19.8		●	●		●	0.03-0.08
DGN 3102LF	3.10	0.04	0.20	18.00	20.1	●	●	●	●	●	0.04-0.10
DGN 3102LFT	3.10	0.04	0.20	18.00	21.1		●			●	0.04-0.12

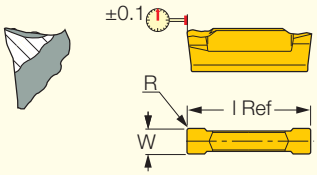
• The LFT chipformer features basically the same design as the LF chipformer, except that it was reinforced by a T-land to improve its durability in interrupted-cut or on hard materials applications. It can be applied at higher feed than the LF chipformer.

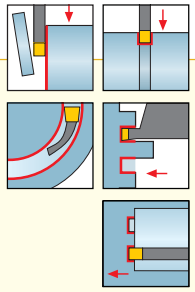
For tools, see pages: • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55).

DO-GRIP
TWISTED 2-SIDED

DGN-Z

Double-Sided Insert for Parting of Tubes, Thin-Walled and Small Parts



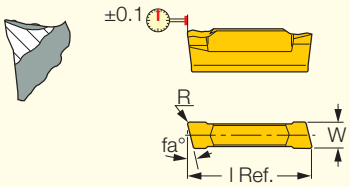


Designation	Dimensions W±0.03	Tmax-r	R	l Ref.	Tough ↔ Hard IC808	IC908	Recommended Machining Data f groove (mm/rev)
DGN 2002Z	2.00	18.00	0.20	20.9	●	●	0.03-0.12
DGN 3002Z	3.00	18.00	0.20	20.9	●	●	0.03-0.16

For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55).

DGR-Z/ZS

Double-Sided Parting Insert, Very Positive Rake for Parting of Tubes, Thin-Walled and Small Parts



Designation	Dimensions W	R	l Ref.	Tmax-r	fa°	IC908	Recommended Machining Data f groove (mm/rev)
DGR 2000ZS-15D (1)	2.00	0.02	20.4	18.00	15.0	●	0.03-0.07
DGR 2000ZS-6D (1)	2.00	0.02	20.4	18.00	6.0	●	0.03-0.08
DGR 2002Z-15D	2.00	0.20	20.4	18.00	15.0	●	0.03-0.10
DGR 2002Z-6D	2.00	0.20	20.9	18.00	6.0	●	0.03-0.10
DGR 3000ZS-15D (1)	3.00	0.02	20.4	18.00	15.0	●	0.03-0.10
DGR 3000ZS-6D (1)	3.00	0.02	20.4	18.00	6.0	●	0.03-0.12
DGR 3002Z-6D	3.00	0.20	20.9	18.00	6.0	●	0.03-0.14

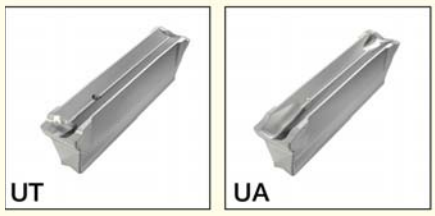
(1) Sharp corners

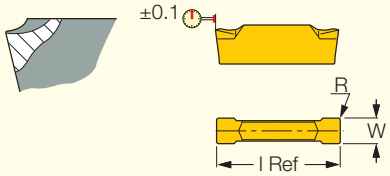
For tools, see pages: DGFH (A17) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55) • HELIR/L (A18).

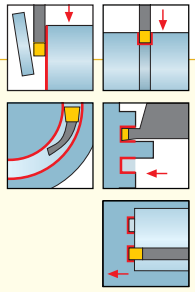
DO-GRIP
TWISTED 2-SIDED

DGN-UT/UA

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







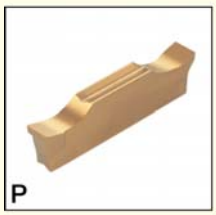
Designation	Dimensions W	W tol(±)	R	T_{max-r}	l Ref.	Tough ↔ Hard IC328	IC1028	IC354	IC350	IC308	IC908	IC20	Recommended Machining Data f groove (mm/rev)
DGN 2202UA	2.20	0.03	0.20	18.00	19.9	●	●	●					0.04-0.13
DGN 2202UT	2.20	0.03	0.20	18.00	19.6				●		●		0.03-0.11
DGN 3003UA	3.00	0.03	0.25	18.00	20.5	●	●	●		●		●	0.04-0.15
DGN 3003UT	3.00	0.03	0.25	18.00	20.5					●	●		0.04-0.13
DGN 4003UA	4.00	0.04	0.30	- (1)	19.4	●		●					0.05-0.16
DGN 4003UT	4.00	0.04	0.30	- (1)	19.3	●		●		●	●		0.04-0.15

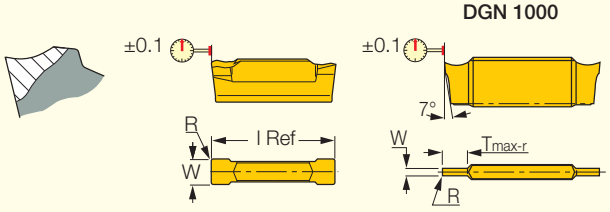
(1) No depth limit

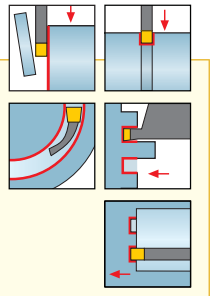
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55) • HELIR/L (A19)

DGN-P

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







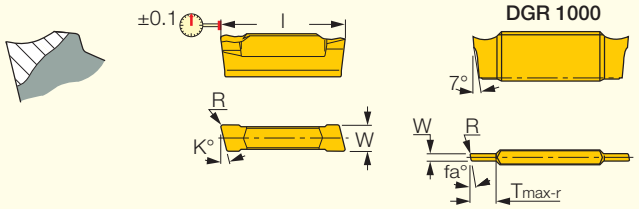
Designation	Dimensions W±0.02	R	l Ref.	T_{max-r}	IC508	Recommended Machining Data f groove (mm/rev)
DGN 1000P	1.00	0.05	20.0	3.00	●	0.02-0.05
DGN 1500P	1.50	0.05	20.0	18.00	●	0.02-0.07
DGN 2000P	2.00	0.05	20.0	18.00	●	0.02-0.08
DGN 3000P	3.00	0.05	20.0	18.00	●	0.02-0.10

For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B-D-TR (A56) • DGTR/L-B/BC-D (A55).

DO-GRIP
TWISTED 2-SIDED

DGR-P

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

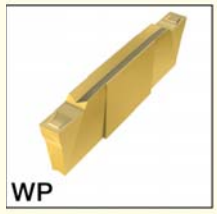


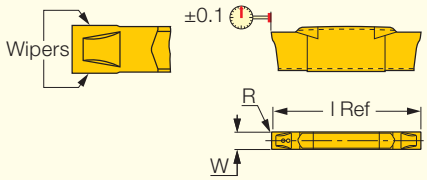
Dimensions	Dimensions W	R	l	T_{max-r}	f_a°	IC508	Recommended Machining Data f groove (mm/rev)
DGR 1000P-15D	1.00	0.05	20.00	3.00	15.0	●	0.02-0.03
DGR 1000P-6D	1.00	0.05	20.00	3.00	6.0	●	0.02-0.04
DGR 1500P-15D	1.50	0.05	20.00	18.00	15.0	●	0.02-0.04
DGR 1500P-6D	1.50	0.05	20.00	18.00	6.0	●	0.02-0.05
DGR 2000P-15D	2.00	0.05	20.00	18.00	15.0	●	0.02-0.05
DGR 2000P-6D	2.00	0.05	20.00	18.00	6.0	●	0.02-0.07

For tools, see pages: • DGFH (A18) • DGFHR/L (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B-D-TR (A56) • DGTR/L-B/BC-D (A55).

DGN-WP

Parting and Grooving, Double-Sided Insert. Wiper Design for High Flatness and Surface Finish





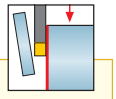
Designation	Dimensions $W^{\pm 0.02}$	R	T_{max-r}	l	IC328	Recommended Machining Data f groove (mm/rev)
DGN 1900WP	1.90	0.05	6.00	19.70	●	0.04-0.12
DGN 2400WP	2.39	0.05	6.00	20.40	●	0.05-0.14

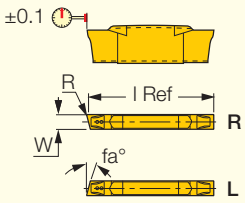
For tools, see pages: • DGFH (A18) • DGFHL-26B-TR-D (A52) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55).

DO-GRIP
TWISTED 2-SIDED

DGR-WP

Double-Sided Parting Insert, Wiper Design for High Flatness and Surface Finish



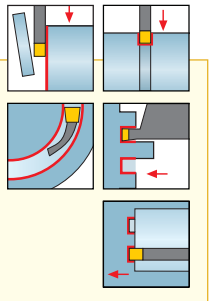


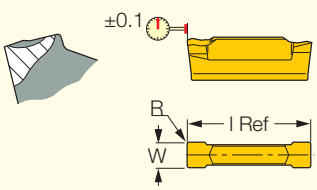
Dimensions	Dimensions W	R	T_{max-r}	l	f_a°	IC328	Recommended Machining Data f groove (mm/rev)
DGR 1900WP-12D	1.90	0.05	6.00	19.70	12.0	●	0.04-0.10
DGR 1900WP-5D	1.90	0.05	6.00	19.70	5.0	●	0.04-0.10
DGR 2400WP-12D	2.39	0.05	6.00	20.40	12.0	●	0.04-0.10
DGR 2400WP-5D	2.39	0.05	6.00	20.40	5.0	●	0.04-0.12

For tools, see pages: • DGFH (A18) • DGFHR/L (A51) • DGTR/L (A56) • DGTR/L-B-D-JHP-SL (A53) • DGTR/L-B-D-SH (A54) • DGTR/L-B/BC-D (A55).

HGN-C

Parting and Grooving Insert, for Parting Bars, Hard Materials and Tough Applications





Designation	Dimensions W±0.05	R	l	Tough ↔ Hard IC328	IC830	IC354	IC308	IC908	Recommended Machining Data f groove (mm/rev)
HGN 3003C	3.00	0.30	15.80	●	●	●	●	●	0.08-0.20

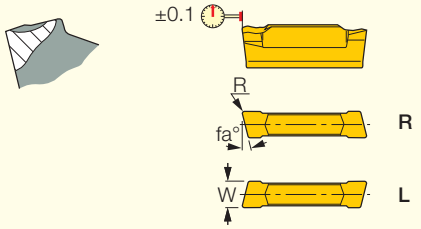
• No depth limit

For tools, see pages: • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128)

DO-GRIP
TWISTED 2-SIDED

HGR/L-C

Parting Inserts for Parting Bars, Hard Materials and Tough Applications



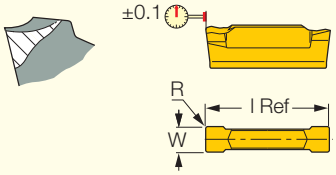
Designation	Dimensions W	R	l	f_a°	Tough ↔ Hard IC328	IC830	Recommended Machining Data f groove (mm/rev)
HGL 3003C -6D	3.00	0.30	15.60	6.0	●		0.06-0.16
HGR 3003C-6D	3.00	0.30	15.60	6.0	●	●	0.06-0.16

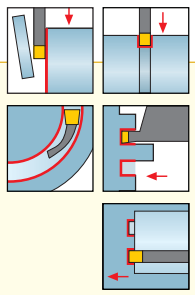
• No depth limit

For tools, see pages: • HGFH (A18).

HGN-J

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





Designation	Dimensions $W^{\pm 0.05}$	R	l	Tough ↔ Hard IC328	IC830	IC354	IC308	Recommended Machining Data f groove (mm/rev)
HGN 3002J	3.00	0.20	16.10	●	●	●	●	0.04-0.15

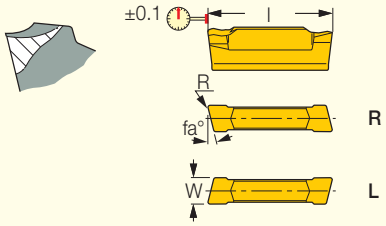
• No depth limit

For tools, see pages: • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128)

DO-GRIP
TWISTED 2-SIDED

HGR/L-J/JS

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



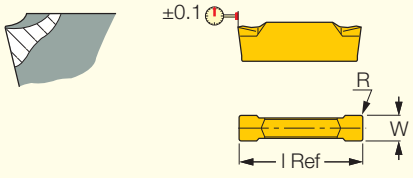
Designation	Dimensions W	R	l	f_a°	Tough ↔ Hard IC328	IC830	IC354	Recommended Machining Data f groove (mm/rev)
HGR/L 3000JS-15D (1)	3.00	0.02	15.20	15.0	●			0.03-0.07
HGL 3002J -6D	3.00	0.20	15.70	6.0	●			0.04-0.12
HGR 3002J-6D	3.00	0.20	15.70	6.0	●	●	●	0.04-0.12

• No depth limit
(1) Sharp corners

For tools, see pages: • HGFH (A18).

HGN-UT

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



Designation	Dimensions W±0.05	R	l	Tough ↔ Hard IC328	IC354	Recommended Machining Data f groove (mm/rev)
HGN 3003UT	3.00	0.30	15.80	●	●	0.04-0.13

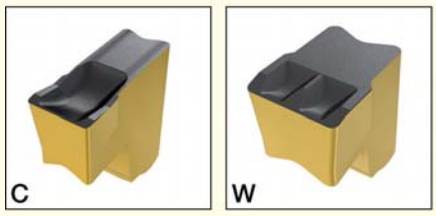
• No depth limit

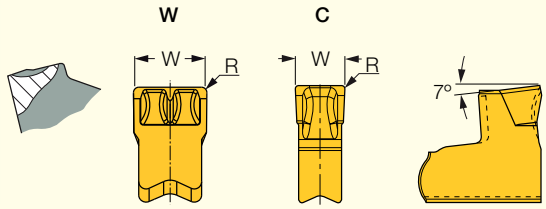
For tools, see pages: • HELIR/L (A19) • HGFH (A18) • HGHR/L-3 (B128)

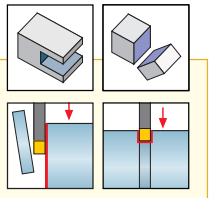
TANG-GRIP
PARTING LINE

TAG N-C/W/M

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







Designation	Dimensions W	W tol(±)	R±0.04	Tough ↔ Hard IC830	IC928	IC5400	IC808	IC908	IC30N	IC807	IC20	Recommended Machining Data f groove (mm/rev)
TAG N1.4C	1.40	0.05	0.16							●		0.04-0.10
TAG N1.6C	1.60	0.05	0.16	●			●					0.04-0.14
TAG N2C	2.00	0.05	0.20	●		●	●		●		●	0.05-0.16
TAG N2.4C	2.40	0.04	0.16	●			●					0.06-0.18
TAG N3CB (1)	3.00	0.05	0.35	●			●					0.12-0.30
TAG N3C	3.05	0.05	0.20	●	●	●	●	●	●	●	●	0.10-0.25
TAG N3M (2)	3.05	0.05	0.20	●				●				0.06-0.18
TAG N3W	3.05	0.05	0.20	●				●				0.10-0.25
TAG N4C	4.00	0.05	0.24	●	●	●	●	●		●	●	0.10-0.30
TAG N4CB (1)	4.00	0.05	0.40	●				●				0.10-0.33
TAG N4M (2)	4.00	0.05	0.24	●				●				0.06-0.20
TAG N4W	4.00	0.05	0.24	●				●				0.10-0.30
TAG N4.8C	4.80	0.05	0.30	●			●					0.10-0.35
TAG N5C	5.05	0.05	0.25	●			●				●	0.10-0.35

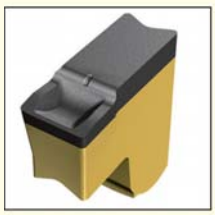
• Feed values for grade IC20 should be decreased by 50%

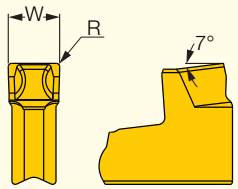
(1) Larger corner radii for interrupted cut and high feed applications. (2) Similar to C-type, but with a modified edge. Improved chip control at medium feeds.

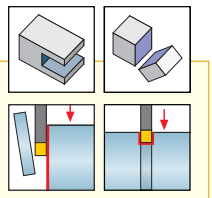
For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

TAG N-MF

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







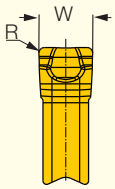
Designation	Dimensions W	W tol(±)	R±0.03	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
TAG N2MF	2.00	0.05	0.20	●	●	●	0.04-0.12
TAG N3MF	3.00	0.05	0.20	●	●	●	0.06-0.18
TAG N4MF	4.00	0.05	0.25	●		●	0.07-0.22

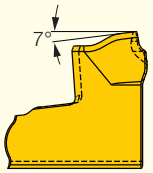
For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

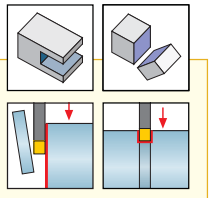
TANG-GRIP
PARTING LINE

TAG N-UT

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





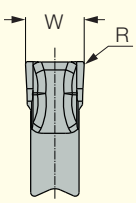


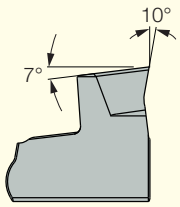
Designation	Dimensions W±0.04	Dimensions R±0.04	Tough ↔ Hard IC830	IC808	IC908	Recommended Machining Data f groove (mm/rev)
TAG N2UT	2.00	0.20	●	●	●	0.03-0.10
TAG N3UT	3.00	0.30	●	●		0.04-0.12
TAG N4UT	4.00	0.30			●	0.05-0.15
TAG N5UT	5.00	0.30			●	0.05-0.18

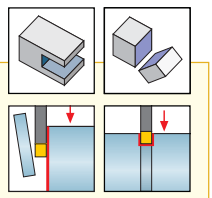
For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

TAG N-A

Parting Grooving and Slitting Single-Ended Inserts for Machining Aluminum







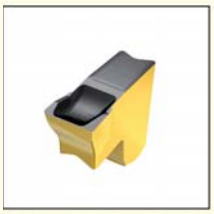
Designation	Dimensions W±0.04	Dimensions R±0.05	IC20	Recommended Machining Data f groove (mm/rev)
TAG N2A	2.10	0.20	●	0.02-0.10
TAG N3A	3.05	0.20	●	0.03-0.14
TAG N4A	4.05	0.24	●	0.03-0.16

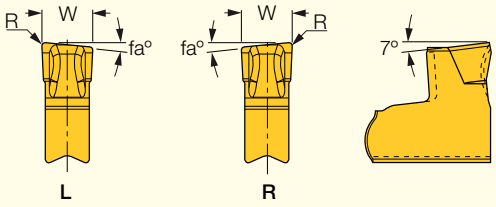
For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

TANG-GRIP
PARTING LINE

TAG R/L-C

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



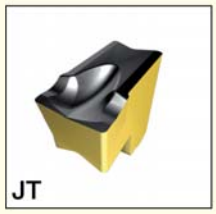


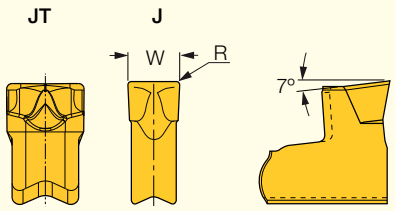
Designation	Dimensions W±0.10	R±0.05	f_a°	Tough ↔ Hard IC830	IC928	IC808	IC908	IC30N	Recommended Machining Data f groove (mm/rev)
TAG R/L2C-6D	2.05	0.20	6.0	●		●			0.04-0.12
TAG R2.4C-8D	2.40	0.16	8.0			●			0.05-0.13
TAG R/L3C-6D	3.00	0.20	6.0	●	●	●	●		0.08-0.18
TAG R3C-8D	3.00	0.20	8.0					●	0.06-0.16
TAG R/L3C-15D	3.00	0.20	15.0	●	●	●	●		0.08-0.16
TAG R/L4C-4D	4.05	0.24	4.0	●	●	●	●		0.08-0.20
TAG R/L5C-4D	5.05	0.25	4.0	●		●			0.10-0.25
TAG R/L6.3C-4D	6.35	0.35	4.0	●		●			0.12-0.30

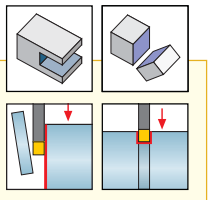
For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

TAG N-J/JS/JT

Parting Grooving and Slitting Single-Ended Inserts, for Soft Materials







Designation	Dimensions W±0.04	R±0.05	Tough ↔ Hard IC830	IC928	IC5400	IC808	IC908	IC807	IC20	Recommended Machining Data f groove (mm/rev)
TAG N1.4J	1.40	0.16	●			●		●		0.03-0.10
TAG N1.6J	1.60	0.16	●			●				0.03-0.12
TAG N2JS (1)	2.00	0.02	●			●				0.03-0.08
TAG N2J	2.00	0.20	●		●	●			●	0.04-0.12
TAG N2JT	2.00	0.20	●	●	●	●	●			0.04-0.10
TAG N3JS (1)	3.05	0.02	●			●				0.04-0.10
TAG N3J	3.05	0.20	●	●	●	●	●	●	●	0.04-0.16
TAG N3JT	3.05	0.20	●		●	●	●			0.05-0.18
TAG N3.2JT	3.25	0.20				●				0.05-0.18
TAG N4J	4.00	0.24	●	●	●	●	●	●		0.04-0.18
TAG N4JT	4.05	0.24	●		●	●	●			0.06-0.20
TAG N5J	5.05	0.25	●			●				0.05-0.20
TAG N5JT	5.05	0.25	●			●	●			0.06-0.22

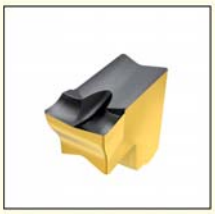
• JT chipformer has the basic positive configuration of the J-type and a reinforced negative frontal edge. Most suitable for soft materials at low to medium feeds. • (1) Sharp corners

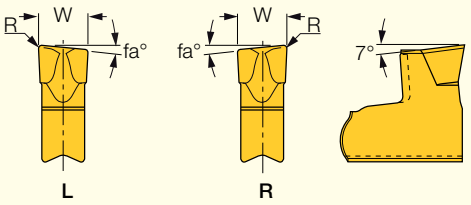
For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

TANG-GRIP
PARTING LINE

TAG R/L-J/JS

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





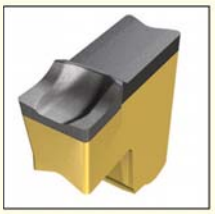
Designation	Dimensions W	R	f_a°	Tough ↔ Hard IC830	IC928	IC808	IC908	IC807	Recommended Machining Data f groove (mm/rev)
TAG R/L1.4J-8D	1.40	0.16	8.0	●		●		●	0.03-0.08
TAG R/L1.4JS-10D (1)	1.40	0.02	10.0	●		●		●	0.02-0.06
TAG R/L2J-6D	2.00	0.20	6.0	●		●			0.03-0.10
TAG R/L2JS-6D (1)	2.00	0.02	6.0	●		●			0.02-0.08
TAG R/L2J-15D	2.00	0.20	15.0	●		●			0.03-0.08
TAG R/L2JS-15D (1)	2.00	0.02	15.0	●		●			0.02-0.06
TAG R/L3J-6D	3.00	0.20	6.0	●	●	●	●		0.04-0.14
TAG R/L3JS-6D (1)	3.00	0.02	6.0	●		●			0.03-0.10
TAG R/L3J-15D	3.00	0.20	15.0	●	●	●	●		0.04-0.12
TAG R/L3JS-15D (1)	3.00	0.02	15.0	●		●			0.03-0.08
TAG R/L4J-4D	4.00	0.24	4.0	●	●	●	●		0.04-0.15
TAG R/L5J-4D	5.05	0.25	4.0	●		●			0.05-0.18

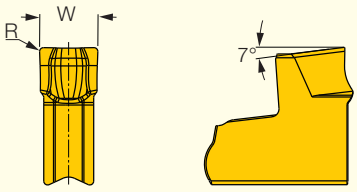
(1) Sharp corners

For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

TAG N-LF

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



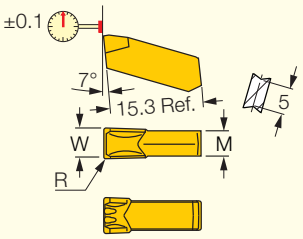


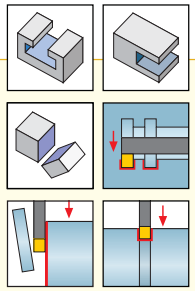
Designation	Dimensions $W^{\pm 0.04}$	$R^{\pm 0.03}$	Tough ↔ Hard IC830	IC5400	IC808	Recommended Machining Data f groove (mm/rev)
TAG N2LF	2.00	0.20	●	●	●	0.03-0.08
TAG N3LF	3.05	0.20	●	●	●	0.04-0.10

For tools, see pages: • TGFH-MB (A50) • TGFH-S (A58) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGTR/L-2T..SH-L120 (A59) • TGTR/L-D (A62) • TGTR/L-IQ (A60) • TGTR/L-JHP (A61).

GIM-C

Parting and Grooving Single-Sided Insert, for Parting Bars,
Hard Materials and Tough Applications



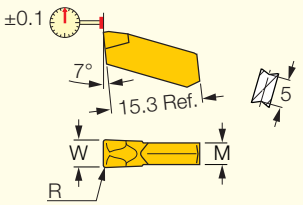


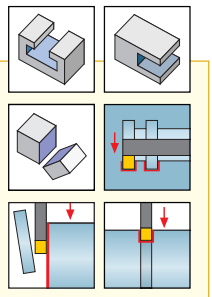
Designation	Dimensions W±0.05	R±0.02	M	Tough ↔ Hard IC328	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 3C	3.00	0.22	2.4	●	●	●	●	0.15-0.25
GIM 4C	4.00	0.25	3.4			●		0.15-0.25
GIM 5C	5.00	0.40	4.0	●	●	●	●	0.15-0.30

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23)

GIM-J

Utility Single-Sided Parting and Grooving Insert, for Soft Materials,
Parting of Tubes and Small Diameters





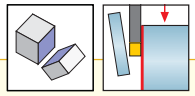
Designation	Dimensions W±0.05	R±0.02	M	Tough ↔ Hard IC328	IC54	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 2.2J	2.20	0.17	1.7	●	●	●	●	●	0.06-0.13
GIM 3J	3.00	0.22	2.4	●	●	●	●	●	0.08-0.15
GIM 4J	4.00	0.25	3.2	●		●	●	●	0.08-0.18

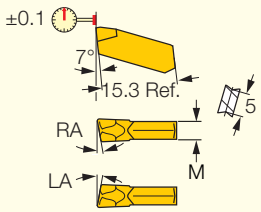
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14)

CUT-GRIP

GIM-J-RA/LA

Utility Single-Sided Parting and Grooving Insert, for Soft Materials, Parting of Tubes and Small Diameters



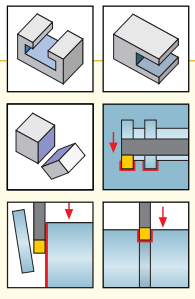


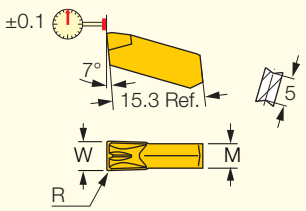
Designation	Dimensions W±0.05	R±0.02	fa°	M	Tough ↔ Hard IC328	IC54	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 2.2J-8R/LA	2.20	0.17	8.0	1.7	●	●	●	●	●	0.05-0.10
GIM 2.2JS-15R/LA	2.20	0.02	15.0	1.7	●	●	●	●	●	0.05-0.10
GIM 3J-4R/LA	3.00	0.22	4.0	2.4	●		●		●	0.05-0.12
GIM 3J-8R/LA	3.00	0.22	8.0	2.4	●		●	●	●	0.05-0.12
GIM 3JS-15R/LA	3.00	0.02	15.0	2.4	●			●	●	0.05-0.12
GIM 4J-6R/LA	4.00	0.25	6.0	3.2			●		●	0.08-0.15

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

GIM-W

Parting and Grooving Single-Sided Inserts with Central Ridged Chipformer and Reinforced Edge for Alloy Steel



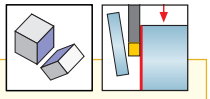


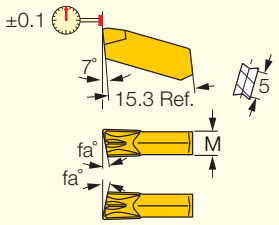
Designation	Dimensions W±0.05	R±0.02	M	Tough ↔ Hard IC328	IC54	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 2.4	2.40	0.17	2.4			●	●	●	0.10-0.18
GIM 3	3.00	0.25	2.4	●	●	●	●	●	0.10-0.18
GIM 3.2	3.20	0.22	2.4	●	●	●	●	●	0.10-0.20
GIM 4	4.00	0.25	3.2	●	●	●	●	●	0.15-0.20

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23)

GIM-W-RA/LA

Parting Single-Sided Screw-Clamped Inserts with Central Ridged Chipformer for Alloy Steel



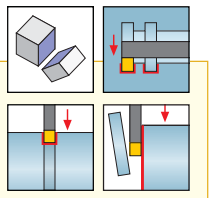


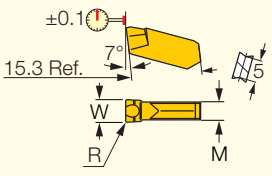
Designation	Dimensions W±0.05	R±0.02	fa°	M	Tough ↔ Hard IC328	IC54	IC354	IC908	IC20	Recommended Machining Data f groove (mm/rev)
GIM 3S-15RA	3.00	0.22	15.0	2.4	●					0.08-0.16
GIM 3-4R/LA	3.00	0.25	4.0	2.4	●	●	●	●	●	0.08-0.16
GIM 3-8R/LA	3.00	0.25	8.0	2.4	●	●	●	●	●	0.08-0.16
GIM 3.2-4R/LA	3.20	0.22	4.0	2.4	●		●		●	0.08-0.16
GIM 3.2-8R/LA	3.20	0.22	8.0	2.4	●		●	●	●	0.08-0.16
GIM 4-4R/LA	4.00	0.25	4.0	3.2			●	●	●	0.10-0.16
GIM 4-8R/LA	4.00	0.25	8.0	3.2	●		●	●	●	0.10-0.16

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIM-UT

Single-Ended Parting and Grooving Screw-Clamped Inserts, for Low Feeds, on CrNi Alloys and Low Carbon Steel



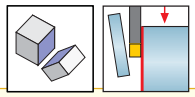


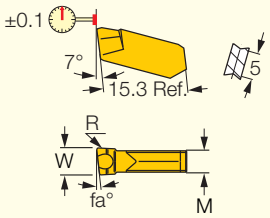
Designation	Dimensions W±0.03	R±0.02	M	IC328	Recommended Machining Data f groove (mm/rev)
GIM 4.6UT	4.60	0.60	3.8	●	0.03-0.10

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GIM-UT-RA/LA

Single-Ended Parting, Screw-Clamped Inserts, for Low Feeds on CrNi Alloys and Low Carbon Steel



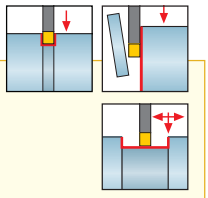


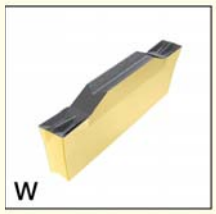
Designation	Dimensions W±0.03	R±0.02	fa°	M	IC328	Recommended Machining Data f groove (mm/rev)
GIM 3UT-1.5RA	3.12	0.25	1.5	2.5	●	0.03-0.10

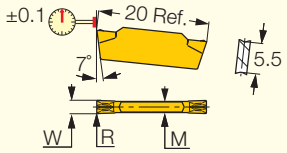
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23).

GDMW 2.4

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







Designation	Dimensions W±0.04	R±0.03	M	Tmax-r	l	Tough ↔ Hard IC830	IC808	IC20	IC20N	Recommended Machining Data ap (mm)	f turn (mm/rev)	f groove (mm/rev)
GDMW 2.4	2.40	0.18	2.0	18.00	20.00	●	●	●	●	0.25-1.50	0.07-0.12	0.05-0.08

For tools, see pages: • PHGR/L (A17) • PHSR/L (A16).

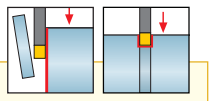
PENTACUT

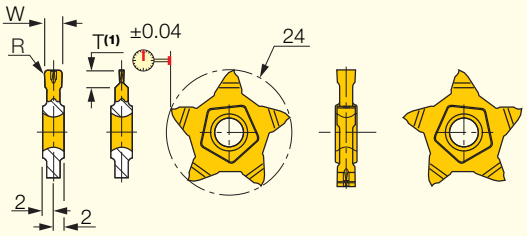
Identification System for Standard Inserts

PENTA	24	N	150	J	010
Family name	Circular circumference of the insert	Insert lead angle (K) **N, R, L**	Cutting edge width W(mm)x100	Chipbreaker style **J, Z**	Corner radius R (mm)x100 for neutral insert. (k=0) Or lead angle for right- or left-hand inserts. (eg. 15D=15°)

PENTA 24N-J

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





Designation	Dimensions W±0.02	R	Tmax-r(1)	Tough ↔ Hard IC908	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24N050J000	0.50	0.00	1.00	●		0.02-0.04
PENTA 24N050J004	0.50	0.04	2.50		●	0.02-0.05
PENTA 24N080J000	0.80	0.00	1.60	●		0.02-0.05
PENTA 24N100J004	1.00	0.04	3.50	●		0.03-0.07
PENTA 24N100J006	1.00	0.06	3.50		●	0.03-0.07
PENTA 24N104J000	1.04	0.00	2.00	●		0.02-0.07
PENTA 24N120J000	1.20	0.00	2.00	●		0.03-0.07
PENTA 24N125J010	1.25	0.10	2.00	●		0.03-0.07
PENTA 24N140J000	1.40	0.00	2.00	●		0.03-0.08
PENTA 24N147J000	1.47	0.00	2.50	●		0.03-0.08
PENTA 24N150J010	1.50	0.10	5.00	●	●	0.03-0.10
PENTA 24N157J015	1.57	0.15	3.00	●		0.03-0.12
PENTA 24N170J010	1.70	0.10	3.00	●		0.03-0.12
PENTA 24N178J018	1.78	0.18	3.00	●		0.04-0.12
PENTA 24N185J015	1.85	0.15	3.00	●		0.04-0.12
PENTA 24N196J015	1.96	0.15	3.00	●		0.04-0.12
PENTA 24N200J020	2.00	0.20	6.00	●	●	0.04-0.12
PENTA 24N222J015	2.22	0.15	3.50	●		0.04-0.16
PENTA 24N230J020	2.30	0.20	3.50	●		0.04-0.16
PENTA 24N239J015	2.39	0.15	5.00	●		0.04-0.16
PENTA 24N247J020	2.47	0.20	5.00	●		0.04-0.16
PENTA 24N270J010	2.70	0.10	5.00	●		0.04-0.16
PENTA 24N287J020	2.87	0.20	6.50	●		0.04-0.16
PENTA 24N300J000	3.00	0.00	6.50	●		0.04-0.10
PENTA 24N300J020	3.00	0.20	6.50	●		0.04-0.16
PENTA 24N300J040	3.00	0.40	6.50	●		0.04-0.16
PENTA 24N315J015	3.15	0.15	6.50	●		0.04-0.16
PENTA 24N318J020	3.18	0.20	6.50	●		0.04-0.16
PENTA 24N330J010	3.30	0.10	0.00	●		0.00-0.00
PENTA 24N348J020	3.48	0.20	0.00	●		0.00-0.00
PENTA 24N356J020	3.56	0.20	0.00	●		0.00-0.00
PENTA 24N374J020	3.74	0.20	0.00	●		0.00-0.00
PENTA 24N398J020	3.98	0.20	0.00	●		0.00-0.00
PENTA 24N400J040	4.00	0.40	0.00	●		0.00-0.00
PENTA 24N423J010	4.23	0.10	0.00	●		0.00-0.00

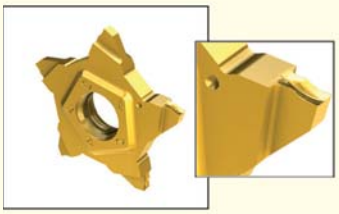
• Recessing is possible only with 2.39 mm and wider inserts.

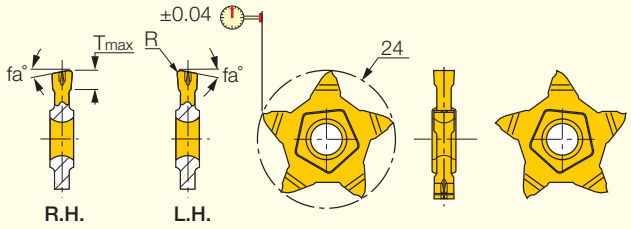
(1) For grooving and parting depth relative to part diameter, see page (A85)

For tools, see pages: PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24R/L-J

Insert with 5 Cutting Edges, for Parting of Tubes, Small and Thin-Walled Parts





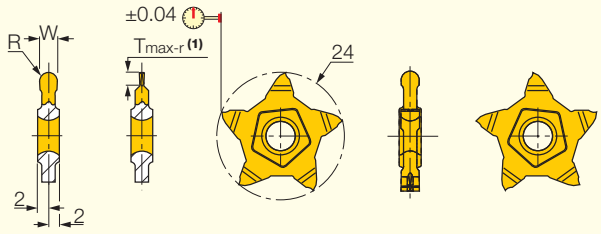
Designation	Dimensions W±0.02	R	fa°	D max(1)	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R/L100J15D	1.00	0.06	15.0	7.0	●	0.02-0.06
PENTA 24R/L150J15D	1.50	0.06	15.0	10.0	●	0.03-0.08
PENTA 24R/L150J06D	1.50	0.10	6.0	10.0	●	0.03-0.09
PENTA 24R/L200J06D	2.00	0.10	6.0	12.0	●	0.04-0.10
PENTA 24R/L200J15D	2.00	0.10	15.0	12.0	●	0.04-0.09

(1) For grooving and parting depth relative to part diameter, see page (A85)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24N-J (full radius)

Precision Grooving Pentagonal Full Radius Insert for Soft Materials



Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N100J050	1.00	0.50	3.50	●	0.03-0.07
PENTA 24N120J060	1.20	0.60	2.00	●	0.03-0.07
PENTA 24N140J070	1.40	0.70	2.00	●	0.05-0.08
PENTA 24N157J079	1.57	0.79	3.00	●	0.05-0.08
PENTA 24N200J100	2.00	1.00	3.00	●	0.05-0.12
PENTA 24N239J120	2.39	1.20	5.00	●	0.06-0.16
PENTA 24N300J150	3.00	1.50	6.50	●	0.06-0.20
PENTA 24N318J159	3.18	1.59	6.50	●	0.06-0.20
PENTA 24N400J200	4.00	2.00	6.25	●	0.06-0.20
PENTA 24N478J239	4.78	2.39	6.15	●	0.06-0.20

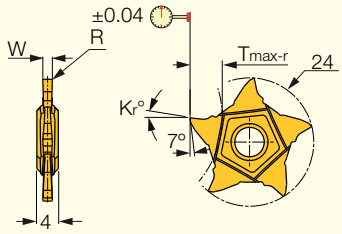
• Recessing is possible only with 2.39 mm and wider inserts.

(1) For grooving depth relative to part diameter, see page: (A85).

For tools, see pages: PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24N-PF/P

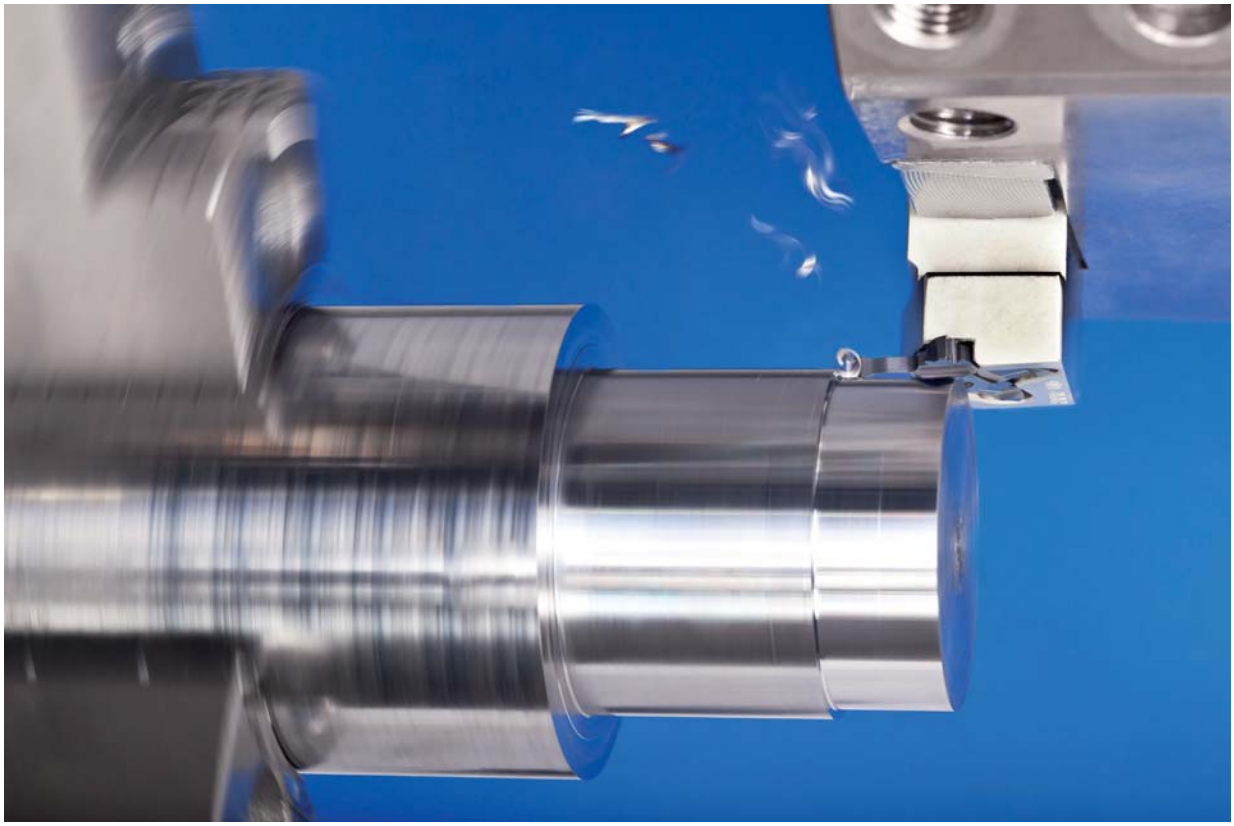
Parting and Precision Grooving Pentagonal Insert with a High Positive Flat Rake



Designation	Dimensions W±0.02	R	R±toler	Tmax-r(1)	Kr°	Tough ↔ Hard IC908	IC1008	IC20N	Recommended Machining Data f groove (mm/rev)
PENTA 24N100P005	1.00	0.05	0.020	3.50	12.0		●		0.02-0.05
PENTA 24N100PF010	1.00	0.10	0.020	4.00	6.0	●		●	0.03-0.06
PENTA 24N150P005	1.50	0.05	0.020	5.00	12.0		●		0.02-0.07
PENTA 24N150PF020	1.50	0.20	0.030	6.00	6.0	●		●	0.03-0.09
PENTA 24N185PF020	1.85	0.20	0.030	6.00	6.0			●	0.03-0.10
PENTA 24N200P005	2.00	0.05	0.020	6.00	12.0		●		0.02-0.08
PENTA 24N200PF020	2.00	0.20	0.030	6.50	6.0	●		●	0.04-0.10
PENTA 24N239PF015	2.39	0.15	0.030	6.50	6.0	●			0.04-0.14
PENTA 24N250PF020	2.50	0.20	0.030	6.50	6.0	●		●	0.04-0.14
PENTA 24N300PF020	3.00	0.20	0.030	6.50	6.0	●		●	0.04-0.14

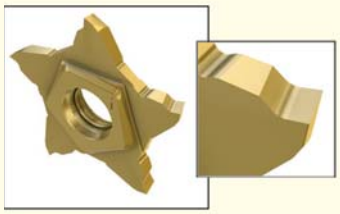
(1) For grooving and parting depth relative to part diameter, see page (A85)

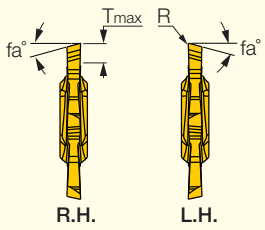
For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

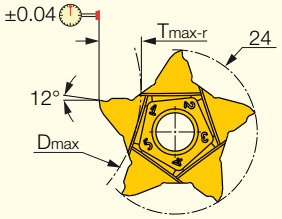


PENTA 24R-P

Parting Inserts with 5 Cutting Edges, for Soft Materials, Thin Walls and Miniature Parts







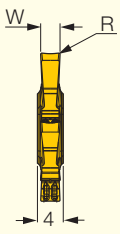
Designation	Dimensions W±0.02	R	fa°	D max(1)	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R100P06D	1.00	0.05	6.0	7.2	●	0.02-0.04
PENTA 24R100P15D	1.00	0.05	15.0	7.2	●	0.02-0.03
PENTA 24R150P06D	1.50	0.05	6.0	11.0	●	0.02-0.05
PENTA 24R150P15D	1.50	0.05	15.0	11.0	●	0.02-0.04
PENTA 24R200P06D	2.00	0.05	6.0	12.6	●	0.02-0.07
PENTA 24R200P15D	2.00	0.05	15.0	12.6	●	0.02-0.05

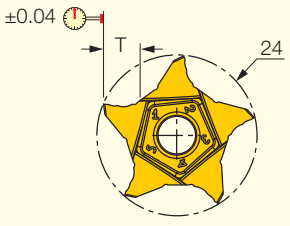
(1) For grooving and parting depth relative to part diameter, see page (A85)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24N-Z

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





Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150Z010	1.50	0.10	5.00	●	0.05-0.08
PENTA 24N200Z020	2.00	0.20	6.40	●	0.04-0.12
PENTA 24N300Z020	3.00	0.20	6.40	●	0.04-0.16

• Cutting edge with high positive rake, suitable for parting of tubes, thin walled parts and for small diameters • Suitable for machining soft materials and bearing steel at low to medium feeds

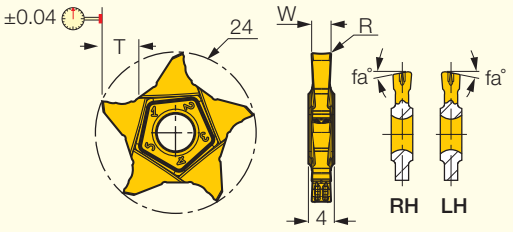
(1) For grooving and parting depth relative to part diameter, see page (A85)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTACUT

PENTA 24R/L-Z

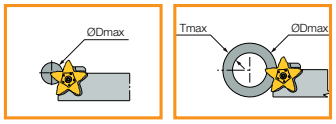
Insert with 5 Cutting Edges, for Parting of Tubes, Small and Thin-Walled Parts



Designation	Dimensions W	fa°	R	D max	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R/L150Z06D	1.50	6.0	0.06	10.0	●	0.03-0.09
PENTA 24R/L150Z15D	1.50	15.0	0.06	10.0	●	0.03-0.08
PENTA 24R/L200Z06D	2.00	6.0	0.10	12.8	●	0.04-0.10
PENTA 24R/L200Z15D	2.00	15.0	0.10	12.8	●	0.04-0.09
PENTA 24R/L300Z06D	3.00	6.0	0.20	12.8	●	0.04-0.13
PENTA 24R/L300Z15D	3.00	15.0	0.20	12.8	●	0.04-0.12

• Cutting edge with high positive rake, suitable for parting of tubes, thin walled parts and for small diameters • Suitable for machining soft materials and bearing steel at low to medium feeds

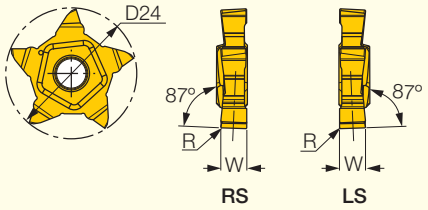
For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

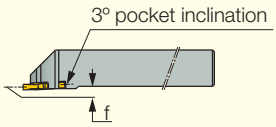


W±0.02	Tmax (1)	Tmax / Dmax	Dmax as a Function of Parting / Grooving Depth (T) for PENTA 24 Inserts T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.0	T≤6.2	T≤6.4
W=0.50	1.0	1.0 / N.L.	-	-	-	-	-	-	-	-	-
W=0.50	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-	-
W=0.80	1.6	1.6 / N.L.	-	-	-	-	-	-	-	-	-
W=1.00	3.5		N.L.	250	-	-	-	-	-	-	-
1.04≤W≤1.40	2.0	2.0 / N.L.	-	-	-	-	-	-	-	-	-
W=1.47	2.5	2.5 / N.L.	-	-	-	-	-	-	-	-	-
W=1.50	5.0		N.L.	470	210	70	30	-	-	-	-
1.57≤W≤1.96	3.0		N.L.	-	-	-	-	-	-	-	-
W=2.00	6.0(2)		N.L.	470	210	130	75	45	20	-	-
2.22≤W≤2.30	3.5		N.L.	250	-	-	-	-	-	-	-
2.39≤W≤2.50	5.0		N.L.	470	210	70	30	-	-	-	-
2.70≤W≤3.18	6.2		N.L.	470	210	135	100	70	40	20	-
3.19≤W≤3.74	6.4		N.L.	350	180	115	80	52	32	26	20
3.75≤W≤4.00	6.2		N.L.	350	180	115	80	62	32	18	-

PENTA 24N-RS/LS

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





f - refer to inserts data

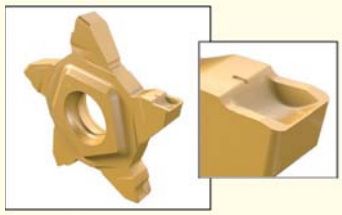
Designation	Dimensions W±0.02	R	Tmax-r	D max	f	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N080NF010R/LS	0.80	0.10	1.60	- (1)	1.6	●	0.03-0.05
PENTA 24N100NF010R/LS	1.00	0.10	1.80	- (1)	1.5	●	0.03-0.06
PENTA 24N119NF010R/LS	1.19	0.10	2.00	- (1)	1.4	●	0.03-0.06
PENTA 24N157NF020R/LS	1.57	0.20	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N157NF079R/LS	1.57	0.79	3.00	- (1)	1.2	●	0.03-0.08
PENTA 24N200NF020R/LS	2.00	0.20	3.00	- (1)	1.0	●	0.03-0.10
PENTA 24N239NF020R/LS	2.39	0.20	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N239NF119R/LS	2.39	1.19	5.00	40.0	0.8	●	0.03-0.12
PENTA 24N300NF020R/LS	3.00	0.20	6.20	16.0	0.5	●	0.04-0.14
PENTA 24N318NF020R/LS	3.18	0.20	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N318NF159R/LS	3.18	1.59	6.50	13.0	0.4	●	0.04-0.14
PENTA 24N400NF020R/LS	4.00	0.20	6.50	13.0	1.0	●	0.04-0.16
PENTA 24N480NF020R/LS	4.80	0.20	6.50	13.0	1.6	●	0.04-0.16

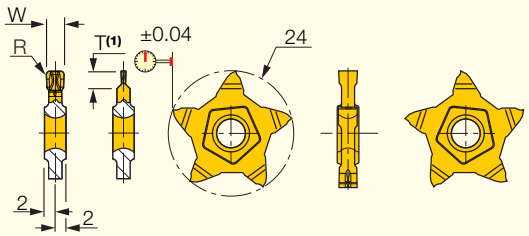
(1) No limit

For tools, see pages: PCHRS/LS (A42).

PENTA 24N-C

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





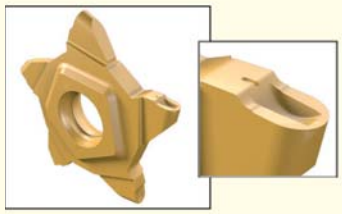
Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N150C010	1.50	0.10	5.00	●	0.05-0.11
PENTA 24N157C015	1.57	0.15	3.00	●	0.05-0.12
PENTA 24N178C018	1.78	0.18	3.00	●	0.05-0.14
PENTA 24N200C020	2.00	0.20	6.00	●	0.05-0.16
PENTA 24N230C020	2.30	0.20	3.50	●	0.06-0.17
PENTA 24N239C015	2.39	0.15	5.00	●	0.07-0.18
PENTA 24N247C020	2.47	0.20	5.00	●	0.08-0.20
PENTA 24N300C020	3.00	0.20	6.20	●	0.10-0.25
PENTA 24N300C040	3.00	0.40	6.20	●	0.10-0.25
PENTA 24N318C020	3.18	0.20	6.20	●	0.10-0.25

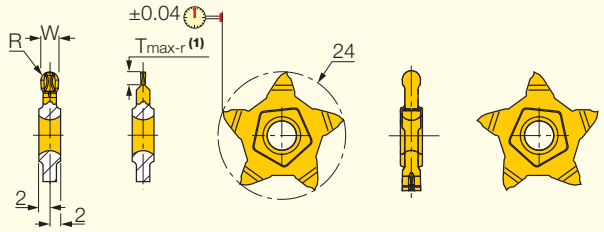
(1) For grooving and parting depth relative to part diameter, see page (A85)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24N-C (full radius)

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





Designation	Dimensions W±0.02	R	Tmax-r(1)	IC908	Recommended Machining Data f groove (mm/rev)
PENTA 24N200C100	2.00	1.00	3.00	●	0.04-0.16

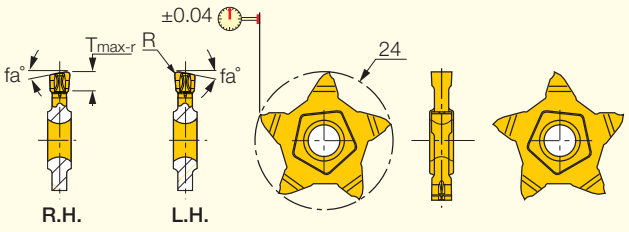
• Recessing is possible only with 2.39 mm and wider inserts.

(1) For grooving and parting depth relative to part diameter, see page (A85)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

PENTA 24R-C

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



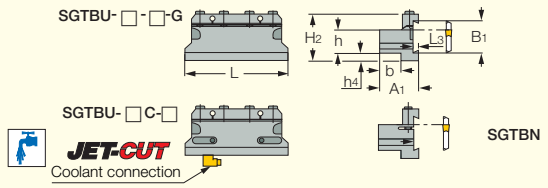
Designation	Dimensions W±0.02	R	fa°	Tmax-r	IC1008	Recommended Machining Data f groove (mm/rev)
PENTA 24R150C06D	1.50	0.06	6.0	5.00	●	0.03-0.10
PENTA 24R200C06D	2.00	0.10	6.0	6.00	●	0.04-0.12

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

TOOL BLOCKS

SGTBU/SGTBN

Blocks for Various Parting and Grooving Blades



Designation	h	b	B_1	A_1	H_2	h_4	L_3	L
SGTBN 16-2	16.0	16.0	19.0	26.00	30.0	4.0	2.00	76.00
SGTBU 16-5G	16.0	17.0	26.0	34.00	43.0	13.0	4.00	86.00

• Choose blade by B1 dimension

For tools, see pages: • CGHN-D (A25) • DGFH (A18) • DGFHR/L (A51) • DGFHR/L-B-D..(R/L) (A51) • HGFH (A18) • PCHBR/L (A43) • TGFH/R/L (A57) • TGFHL-TR (A63) • TGFHR/L (A58) • TGHN-D (A21)

Spare Parts

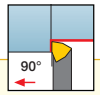
Designation	Top Clamp	Screw	Key
SGTBN 16-2		SR M5X25DIN912 12.9	HW 4.0
SGTBU 16-5G	BKU 86	SR M6X30DIN912 12.9	HW 5.0

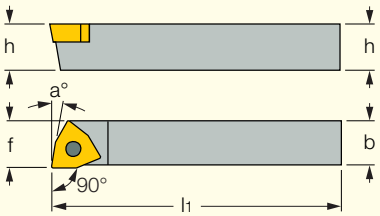
* (Optional, should be ordered separately)

ISOTURN

SWAPR/L

90° Approach Angle Screw Lock Toolholders Carrying Trigon Inserts, for Swiss Automatics





Right-hand shown

Designation	h	b	l_1	f	a°	Insert
SWAPR/L 0808-04	8.0	8.0	140.00	8.1	6	WPEB/X 04..
SWAPR 1010-04	10.0	10.0	150.00	10.1	10	WPEB/X 04..
SWAPR/L 1010-05	10.0	10.0	150.00	10.1	10	WPEB/X 05..
SWAPR/L 1212-05	12.0	12.0	150.00	12.1	10	WPEB/X 05..
SWAPR/L 1212-06	12.0	12.0	150.00	12.1	10	WPEB/X 06..
SWAPR/L 1414-06	14.0	14.0	150.00	14.1	10	WPEB/X 06..
SWAPR/L 1616-06	16.0	16.0	150.00	16.1	10	WPEB/X 06..

• For R.H. tool use -R screw, for L.H. tool use -L screw.

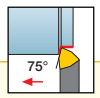
For inserts, see pages: WPEB (B90) • WPEX (B90).

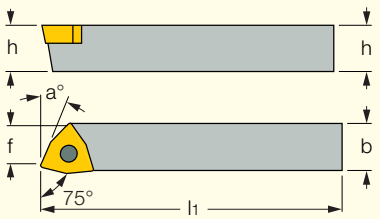
Spare Parts

Designation	Key	Screw
SWAPL 0808-04	T-8/5	SR M3.0L
SWAPR 0808-04	T-8/5	SR M3.0R
SWAPR 1010-04	T-8/5	SR M3.0R
SWAPL 1010-05	T-8/5	SR M3.5L
SWAPR 1010-05	T-8/5	SR M3.5R
SWAPL 1212-05	T-8/5	SR M3.5L
SWAPL 1212-06	T-8/5	SR M3.5L
SWAPR 1212-06	T-8/5	SR M3.5R
SWAPL 1414-06	T-8/5	SR M3.5L
SWAPR 1414-06	T-8/5	SR M3.5R
SWAPL 1616-06	T-8/5	SR M3.5L
SWAPR 1616-06	T-8/5	SR M3.5R

SWBPR/L

75° Approach Angle Screw Lock Toolholders Carrying Trigon Inserts, for Swiss Automatics





Right-hand shown

Designation	h	b	l_1	f	a°	Insert
SWBPL 0810-04	8.0	10.0	150.00	10.1	21	WPEB/X 04..
SWBPR 1212-05	12.0	12.0	150.00	9.8	25	WPEB/X 05..
SWBPR/L 1414-06	14.0	14.0	150.00	14.1	25	WPEB/X 06..
SWBPR 1616-06	16.0	16.0	150.00	16.1	25	WPEB/X 06..

• For R.H. tool use -R screw, for L.H. tool use -L screw.

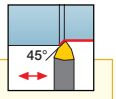
For inserts, see page: WPEB (B89) • WPEX (B89).

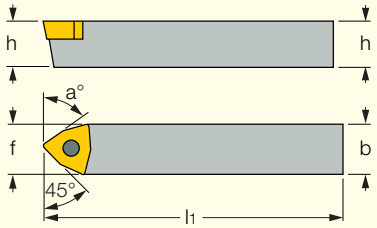
Spare Parts

Designation	Key	Screw
SWBPL 0810-04	T-8/5	SR M3.0L
SWBPR 1212-05	T-8/5	SR M3.5R
SWBPL 1414-06	T-8/5	SR M3.5L
SWBPR 1414-06	T-8/5	SR M3.5R
SWBPR 1616-06	T-8/5	SR M3.5R

SWDPR/L

45° Approach Angle Screw Lock Toolholders Carrying Trigon Inserts, for Swiss Automatics





Right-hand shown

Designation	h	b	l_1	f	a°	Insert
SWDPR/L 1010-04	10.0	10.0	150.00	10.1	51	WPEB/X 04..
SWDPR/L 1212-05	12.0	12.0	150.00	12.1	55	WPEB/X 05..
SWDPR 1616-06	16.0	16.0	150.00	16.1	55	WPEB/X 06..

• For R.H. tool use -R screw, for L.H. tool use -L screw.

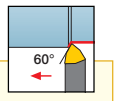
For inserts, see pages: WPEB (B90) • WPEX (B90).

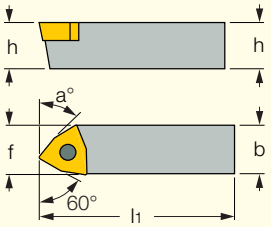
Spare Parts

Designation	Key	Screw
SWDPL 1010-04	T-8/5	SR M3.0L
SWDPR 1010-04	T-8/5	SR M3.0R
SWDPL 1212-05	T-8/5	SR M3.5L
SWDPR 1212-05	T-8/5	SR M3.5R
SWDPR 1616-06	T-8/5	SR M3.5R

SWEPR/L

60° Approach Angle Screw Lock Toolholders Carrying Trigon Inserts, for Swiss Automatics





Right-hand shown

Designation	h	b	l_1	f	a°	Insert
SWEPR/L 0810-04	8.0	10.0	150.00	10.1	36	WPEB/X 04..
SWEPR/L 1010-04	10.0	10.0	150.00	10.1	36	WPEB/X 04..
SWEPR/L 1212-05	12.0	12.0	150.00	12.1	40	WPEB/X 05..
SWEPR 1414-06	14.0	14.0	150.00	14.1	40	WPEB/X 06..
SWEPR 1616-06	16.0	16.0	150.00	16.1	40	WPEB/X 06..

• For R.H. tool use -R screw, for L.H. tool use -L screw.

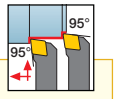
For inserts, see pages: WPEB (B89) • WPEX (B89).

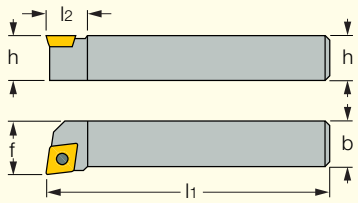
Spare Parts

Designation	Key	Screw
SWEPL 0810-04	T-8/5	SR M3.0L
SWEPR 0810-04	T-8/5	SR M3.0R
SWEPL 1010-04	T-8/5	SR M3.0L
SWEPR 1010-04	T-8/5	SR M3.0R
SWEPL 1212-05	T-8/5	SR M3.5L
SWEPR 1212-05	T-8/5	SR M3.5R
SWEPR 1414-06	T-8/5	SR M3.5R
SWEPR 1616-06	T-8/5	SR M3.5R

SCLCR/L

Screw Lock Toolholders for 80° Diamond Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SCLCR/L 0808F-06	8.0	8.0	80.00	10.0	10.0	0	0	CC.. 0602
SCLCR/L 1010F-06	10.0	10.0	80.00	10.0	12.0	0	0	CC.. 0602
SCLCR/L 1212F-09	12.0	12.0	80.00	14.0	16.0	0	0	CC.. 09T3
SCLCR/L 1616H-09	16.0	16.0	100.00	14.0	20.0	0	0	CC.. 09T3

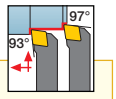
For inserts, see pages: CCMT-F3P (B67) • CCMT-M3M (B68) • CCMT-PF (B69) • CCMT/CCGT-SM (B68) • CCET-WF (B70) • CCMT-WG (B71) • CCGT-AS (B92) • CCGT-AF (B93) • CCMT-14 (B69) • CCMT/CCGT (B70)

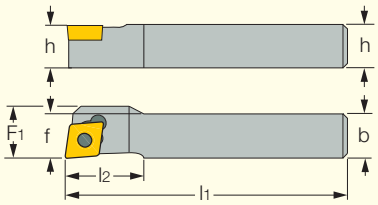
Spare Parts

Designation	Screw	Key
SCLCR/L 0808F-06	SR 14-548	
SCLCR/L 1010F-06	SR 14-548	
SCLCR/L 1212F-09	SR 16-236	
SCLCR/L 1616H-09	SR 16-236	

SCACR/L-S

Screw Lock Holders for 7° Clearance 80° Diamond Inserts for Swiss Type Machines





Right-hand shown

Designation	h	b	l_1	l_2	f	F_1	G_a°	G_r°	Insert
SCACR/L 0808K-06S	8.0	8.0	125.00	8.0	8.2	-	0	0	CC.. 0602
SCACR 1010K-06S	10.0	10.0	150.00	-	10.0	-	0	0	CC.. 0602
SCACR/L 1616K-06S	16.0	16.0	125.00	-	16.2	-	0	0	CC.. 0602
SCACR/L 1010K-09S	10.0	10.0	125.00	15.2	10.2	-	0	0	CC.. 09T3
SCACR 1212K-09S	12.0	12.0	150.00	15.0	12.0	14.0	0	0	CC.. 09T3
SCACR/L 1616K-09S	16.0	16.0	125.00	-	16.2	-	0	0	CC.. 09T3

For inserts, see pages: CCMT-F3P (B67) • CCMT-M3M (B68) • CCMT-PF (B69) • CCMT/CCGT-SM (B68) • CCET-WF (B70) • CCMT-WG (B71) • CCGT-AS (B92) • CCMT-14 (B69) • CCMT/CCGT (B70)

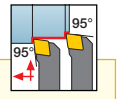
Spare Parts

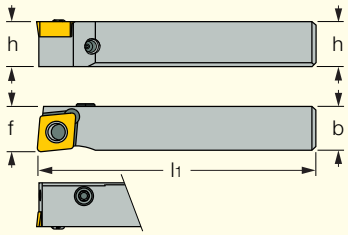
Designation	Screw	Key
SCACR/L 0808K-06S	SR 14-548	T-7/5
SCACR 1010K-06S	SR 14-548	T-7/5
SCACR/L 1616K-06S	SR 14-548	T-7/5
SCACR/L 1010K-09S	SR 16-236	T-15/5
SCACR 1212K-09S	SR 16-236	T-15/5
SCACR/L 1616K-09S	SR 16-236	T-15/5

ISOTURN

PCLCR/L-S

Side Lever Lock Tools for 80° Positive Rhombic Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
PCLCR 0808M-06S	8.0	8.0	150.00	8.0	0	0	CC.. 0602
PCLCR/L 1010M-06S	10.0	10.0	150.00	10.2	0	0	CC.. 0602
PCLCR/L 1212M-06S	12.0	12.0	150.00	12.2	0	0	CC.. 0602
PCLCL 1616M-06S	16.0	16.0	150.00	16.2	0	0	CC.. 0602
PCLCR/L 1012M-09S	10.0	12.0	150.00	12.2	0	0	CC.. 09T3
PCLCR/L 1212M-09S	12.0	12.0	150.00	12.2	0	0	CC.. 09T3
PCLCR/L 1616M-09S	16.0	16.0	150.00	16.2	0	0	CC.. 09T3

• The clamping screw may by transferred to the opposite side if needed

For inserts, see pages: CCMT-F3P (B67) • CCMT-M3M (B68) • CCMT-PF (B69) • CCMT/CCGT-SM (B68) • CCET-WF (B70) • CCMT-WG (B71) • CCGT-AS (B92) • CCGT-AF (B93) • CCMT-14 (B69) • CCMT/CCGT (B70)

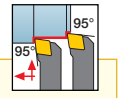
Spare Parts

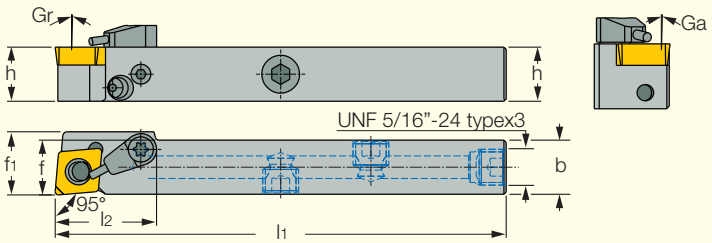
Designation	Lever	Locking Pin	Screw	Hex Flag Key
PCLCR 0808M-06S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCR/L 1010M-06S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCR/L 1212M-06S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCL 1616M-06S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PCLCR/L 1012M-09S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PCLCR/L 1212M-09S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PCLCR/L 1616M-09S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5

ISOTURN • JETCUT

PCLCR/L-S-JHP

Lever Lock Tools with Channels for High Pressure Coolant for 80° Positive Rhombic Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	l_2	f	f_1	G_a°	G_r°	Insert
PCLCR/L 1010H-06S-JHP	10.0	10.0	100.00	22.3	10.2	-	0	0	CC.. 0602
PCLCR/L 1212H-09S-JHP	12.0	12.0	100.00	22.3	12.2	14.0	0	0	CC.. 09T3
PCLCR/L 1616K-09S-JHP	16.0	16.0	125.00	22.3	16.2	-	0	0	CC.. 09T3

For inserts, see pages: CCMT-F3P (B67) • CCMT-M3M (B68) • CCMT-PF (B69) • CCMT/CCGT-SM (B68) • CCET-WF (B70) • CCMT-WG (B71) • CCGT-AS (B92) • CCGT-AF (B93) • CCMT-14 (B69) • CCMT/CCGT (B70)

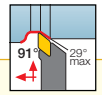
Spare Parts

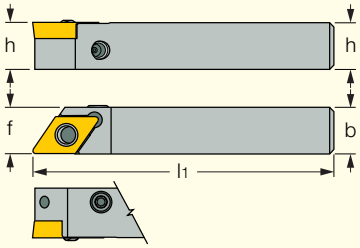
Designation	Lever	Locking Pin	Screw	Hex Flag Key	Plug	Cooling Unit
PCLCR/L-JHP	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN

PDACR/L-S

Side Lever Lock Tools for 55° Positive Rhombic Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
PDACR/L 0808M-07S	8.0	8.0	150.00	8.0	0	0	DC..0702
PDACR/L 1010M-07S	10.0	10.0	150.00	10.0	0	0	DC..0702
PDACR/L 1212M-07S	12.0	12.0	150.00	12.0	0	0	DC..0702
PDACR/L 1616M-07S	16.0	16.0	150.00	16.0	0	0	DC..0702
PDACR/L 1012M-11S	10.0	12.0	150.00	12.0	0	0	DC..11T3
PDACR/L 1212M-11S	12.0	12.0	150.00	12.0	0	0	DC..11T3
PDACR/L 1616M-11S	16.0	16.0	150.00	16.0	0	0	DC..11T3

• The clamping screw may by transferred to the opposite side if needed

For inserts, see pages: DCMT-F3P (B73) • DCMT-M3M (B73) • DCMT-PF (B76) • DCMT/DCGT-SM (B74) • DCET-WF (B75) • DCGT-AS (B93) • DCGT-AF (B94) • DCMT-14 (B75) • DCMT/DCGT (B74)

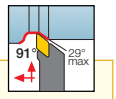
Spare Parts

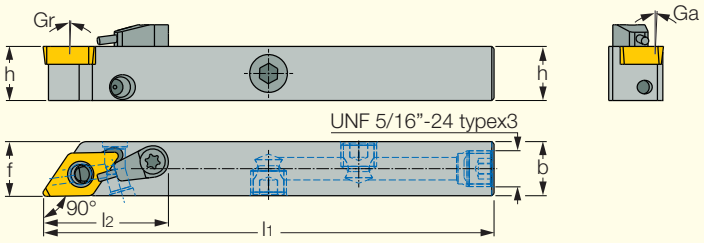
Designation	Lever	Locking Pin	Screw	Hex Flag Key
PDACR/L 0808M-07S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1010M-07S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1212M-07S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1616M-07S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5
PDACR/L 1012M-11S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PDACR/L 1212M-11S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5
PDACR/L 1616M-11S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5

ISOTURN • JETCUT

PDACR/L-JHP

Lever Lock Tools with Channels for High Pressure Coolant for 55° Positive Rhombic Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PDACR/L 1010H-07S-JHP	10.0	10.0	100.00	20.4	10.2	0	0	DC..0702
PDACR/L 1212H-11S-JHP	12.0	12.0	100.00	28.0	12.2	0	0	DC..11T3
PDACR/L 1616K-11S-JHP	16.0	16.0	125.00	28.0	16.2	0	0	DC..11T3

For inserts, see pages: DCMT-F3P (B73) • DCMT-M3M (B73) • DCMT-PF (B76) • DCMT/DCGT-SM (B74) • DCET-WF (B75) • DCGT-AS (B93) • DCGT-AF (B94) • DCMT-14 (B75) • DCMT/DCGT (B74)

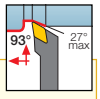
Spare Parts

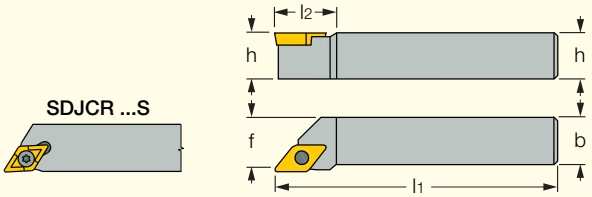
Designation	Lever	Locking Pin	Screw	Hex Flag Key	Plug	Cooling Unit
PDACR/L-JHP	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5	SR 5/16UNF TL360	S-CU-JHP

ISOTURN

SDJCR/L

Screw Lock Toolholders for 55° Diamond Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SDJCR/L 0808F-07	8.0	8.0	80.00	11.5	10.0	0	0	DC..0702
SDJCR/L 1010F-07	10.0	10.0	80.00	11.5	12.0	0	0	DC..0702
SDJCR/L 1212K-07S (1)	12.0	12.0	125.00	-	12.2	0	0	DC..0702
SDJCR/L 1616K-07S (1)	16.0	16.0	125.00	-	16.2	0	0	DC..0702
SDJCR/L 1010K-11S (1)	10.0	10.0	125.00	21.4	10.2	0	0	DC..11T3
SDJCR/L 1212F-11	12.0	12.0	80.00	20.0	16.0	0	0	DC..11T3
SDJCR/L 1616H-11	16.0	16.0	100.00	20.0	20.0	0	0	DC..11T3

(1) For Swiss type machines

For inserts, see pages: DCMT-F3P (B73) • DCMT-M3M (B73) • DCMT-PF (B76) • DCMT/DCGT-SM (B74) • DCET-WF (B75) • DCGT-AS (B93) • DCGT-AF (B94) • DCMT-14 (B75) • DCMT/DCGT (B74)

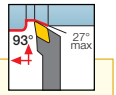
Spare Parts

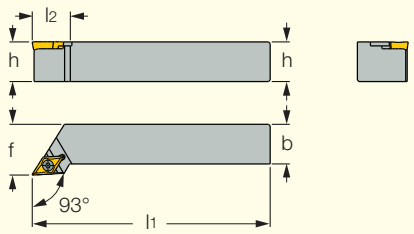
Designation	Screw	Key
SDJCR/L 0808F-07	SR 14-548	
SDJCR/L 1010F-07	SR 14-548	
SDJCR/L 1212K-07S	SR 14-548	
SDJCR/L 1616K-07S	SR 14-548	
SDJCR/L 1010K-11S	SR 16-236	
SDJCR/L 1212F-11	SR 16-236 P	
SDJCR/L 1616H-11	SR 16-236 P	

SAFE-T-LOCK • ISOTURN

SDJCR/L-13-SL

Screw Lock Toolholders for 55° Diamond Inserts with 7° Clearance Angle, High Rigidity in Profiling Applications





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SDJCR/L 1616H-13-SL	16.0	16.0	100.00	24.0	21.0	0	0	DCMT 13T5-SL

• Insert clamping torque 3 Nxm

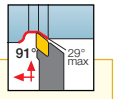
For inserts, see pages: DCMT-F3P-SL (B77) • DCMT-M3M-SL (B78) • DCMT-PF-SL (B78) • DCMT-SM-SL (B78).

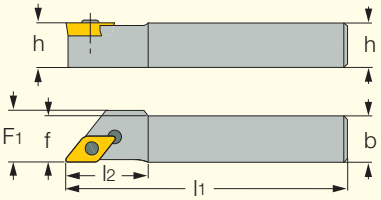
Spare Parts

Designation	Screw	Key
SDJCR/L-13-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45

SDACR/L

Screw Lock Toolholders for 55° Diamond Inserts with 7° Clearance Angle





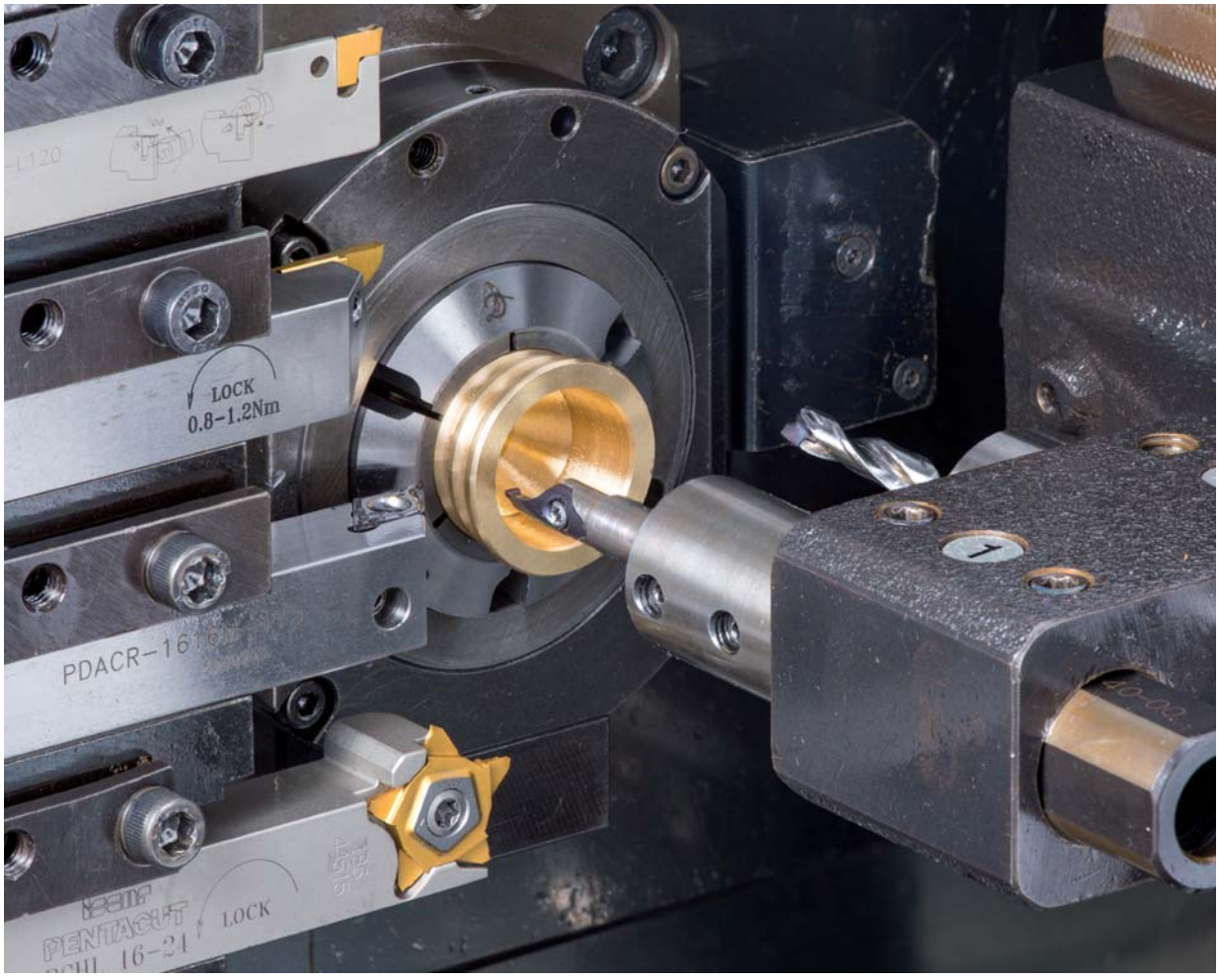
Right-hand shown

Designation	h	b	l_1	l_2	f	F_1	G_a°	G_r°	Insert
SDACR/L 1010K-07S	10.0	10.0	125.00	-	10.0	-	0	0	DC..0702
SDACR/L 1212K-07S	12.0	12.0	125.00	-	12.0	-	0	0	DC..0702
SDACR/L 1212K-11S	12.0	12.0	125.00	20.0	12.0	14.0	0	0	DC..11T3
SDACR/L 1616K-11S	16.0	16.0	150.00	-	16.0	-	0	0	DC..11T3

For inserts, see pages: DCMT-F3P (B73) • DCMT-M3M (B73) • DCMT-PF (B76) • DCMT/DCGT-SM (B74) • DCET-WF (B75) • DCGT-AS (B93) • DCGT-AF (B94) • DCMT-14 (B75) • DCMT/DCGT (B74)

Spare Parts

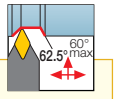
Designation	Screw	Key
SDACR/L 1010K-07S	SR 14-548	T-7/5
SDACR/L 1212K-07S	SR 14-548	T-7/5
SDACR/L 1212K-11S	SR 16-236 P	T-15/5
SDACR/L 1616K-11S	SR 16-236 P	T-15/5

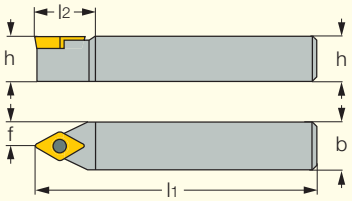


ISOTURN

SDNCN

Screw Lock Toolholders for 55° Diamond Inserts with 7° Clearance Angle





Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SDNCN 0808F-07	8.0	8.0	80.00	14.0	4.0	0	0	DC..0702
SDNCN 1010F-07	10.0	10.0	80.00	14.5	5.0	0	0	DC..0702
SDNCN 1010K-11S (1)	10.0	10.0	120.00	20.0	5.0	0	0	DC..11T3
SDNCN 1212F-11	12.0	12.0	80.00	21.3	6.0	0	0	DC..11T3
SDNCN 1616H-11	16.0	16.0	100.00	21.0	8.0	0	0	DC..11T3

(1) For Swiss type machines

For inserts, see pages: DCMT-F3P (B73) • DCMT-M3M (B73) • DCMT-PF (B76) • DCMT/DCGT-SM (B74) • DCGT-AS (B93) • DCGT-AF (B94) • DCMT-14 (B75) • DCMT/DCGT (B74)

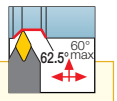
Spare Parts

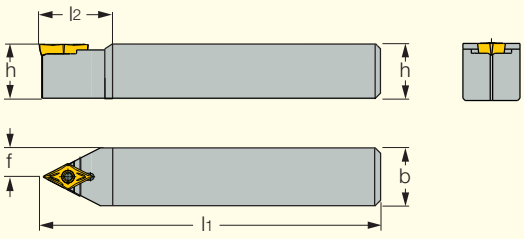
Designation	Key 1	Screw
SDNCN 0808F-07	T-7/5	SR 14-548
SDNCN 1010F-07	T-7/5	SR 14-548
SDNCN 1010K-11S	T-15/5	SR 16-236
SDNCN 1212F-11	T-15/5	SR 16-236 P
SDNCN 1616H-11	T-15/5	SR 16-236 P

SAFE-T-LOCK • ISOTURN

SDNCN-13-SL

Screw Lock Toolholders for 55° Diamond Inserts with 7° Clearance Angle, High Rigidity in Profiling Applications





Designation	h	b	l_1	l_2	f	G_a°	G_r°
SDNCN 1616H-13-SL	16.0	16.0	100.00	25.0	8.0	0	0

• Insert clamping torque 3 Nxm

For inserts, see pages: DCMT-F3P-SL (B77) • DCMT-M3M-SL (B78) • DCMT-PF-SL (B78) • DCMT-SM-SL (B78).

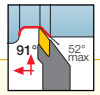
Spare Parts

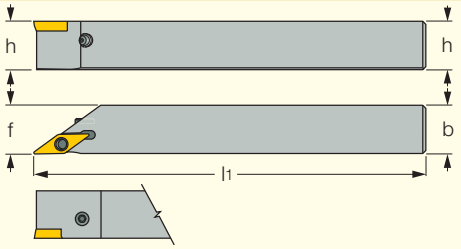
Designation	Screw	Key
SDNCN-13-SL	SR M4X0.7-L9.6 IP15	TORX PLUS IP15X45

ISOTURN

PVACR/L-S

Side Lever Lock Tools for 35° Positive Rhombic Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
PVACR/L 0808M-11S	8.0	8.0	150.00	8.0	0	0	VC..1103
PVACR/L 1010M-11S	10.0	10.0	150.00	10.2	0	0	VC..1103
PVACR/L 1212M-11S	12.0	12.0	150.00	12.2	0	0	VC..1103
PVACR/L 1616M-11S	16.0	16.0	150.00	16.2	0	0	VC..1103

• The clamping screw may be transferred to the opposite side if needed

For inserts, see pages: VCMT-F3P (B80) • VCMT-SM (B70) • VCET-WF (B80) • VCGT-AS (B92).

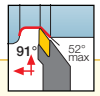
Spare Parts

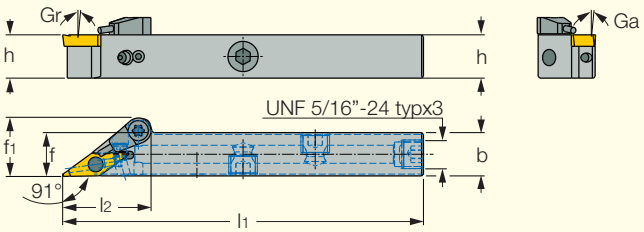
Designation	Lever	Locking Pin	Screw	Hex Flag Key
PVACR/L-S	SL LV-2	SL PI-2 PIN	SR 10400611	HW 2.0/5

ISOTURN • JETCUT

PVACR/L-JHP

Lever Lock Tools with Channels for High Pressure Coolant for 35° Positive Rhombic Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	l_2	f	f_1	G_a°	G_r°	Insert
PVACR/L 1010H-11S-JHP	10.0	10.0	100.00	20.0	10.2	-	0	0	VC..1103
PVACR/L 1212H-11S-JHP	12.0	12.0	100.00	20.0	12.2	16.0	0	0	VC..1103
PVACR/L 1616K-11S-JHP	16.0	16.0	125.00	20.0	16.2	-	0	0	VC..1103

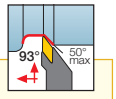
For inserts, see pages: VCMT-F3P (B80) • VCMT-SM (B70) • VCET-WF (B80) • VCGT-AS (B92).

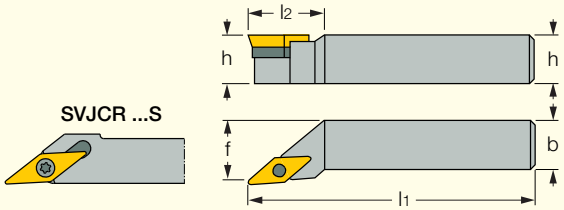
Spare Parts

Designation	Lever	Locking Pin	Screw	Hex Flag Key	Plug	Cooling Unit
PVACR/L-JHP	SL LV-2	SL PI-2 PIN	SR 10400611		SR 5/16UNF TL360	S-CU-JHP

SVJCR/L

93° Lead Angle Screw Lock Toolholders for 35° Diamond Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SVJCR/L 0808K-11S (1)	8.0	8.0	125.00	11.5	8.2	0	0	VC..1103
SVJCR/L 1010K-11S (1)	10.0	10.0	125.00	22.0	10.2	0	0	VC..1103
SVJCR/L 1212K-11S (1)	12.0	12.0	125.00	-	12.2	0	0	VC..1103
SVJCR/L 1616K-11	16.0	16.0	125.00	25.0	20.0	0	0	VC..1103

(1) For Swiss type machines

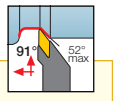
For inserts, see pages: VCMT-F3P (B80) • VCMT-SM (B70) • VCET-WF (B80) • VCGT-AS (B92)

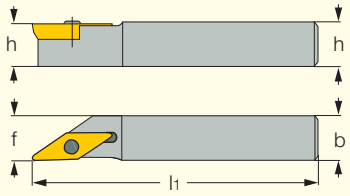
Spare Parts

Designation	Screw	Key
SVJCR/L 0808K-11S	SR 14-560	
SVJCR/L 1010K-11S	SR 14-560	
SVJCR/L 1212K-11S	SR 14-560	
SVJCR/L 1616K-11	SR 14-560	

SVACR/L

91° Lead Angle Screw Lock Toolholders for 35° Diamond Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	f	G_a°	G_r°	Insert
SVACR 1212K-11S	12.0	12.0	125.00	12.0	0	0	VC..11..
SVACR 1616K-11S	16.0	16.0	125.00	16.0	0	0	VC..11..
SVACR/L 1212K-13S	12.0	12.0	125.00	12.0	0	0	VC..13..
SVACR/L 1616K-13S	16.0	16.0	125.00	16.0	0	0	VC..13..

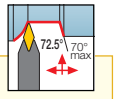
For inserts, see pages: VCMT-F3P (B80) • VCGT 1303..-PF (B79) • VCMT-SM (B70) • VCET-WF (B80) • VCGT-AS (B92).

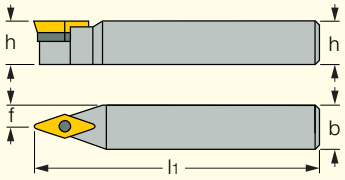
Spare Parts

Designation	Screw	Key
SVACR 1212K-11S	SR 14-560	T-8/5
SVACR 1616K-11S	SR 14-560	T-8/5
SVACR/L 1212K-13S	SR 14-513	T-8/5
SVACR/L 1616K-13S	SR 14-513	T-8/5

SVVCN

72.5° Lead Angle Screw Lock Toolholders for 35° Diamond Inserts with 7° Clearance Angle





Designation	h	b	l_1	f	G_a°	G_r°	Insert
SVVCN 0808K-11S (1)	8.0	8.0	125.00	4.3	0	0	VC..1103
SVVCN 1010K-11S (1)	10.0	10.0	125.00	5.3	0	0	VC..1103
SVVCN 1212K-11S (1)	12.0	12.0	125.00	6.3	0	0	VC..1103
SVVCN 1616K-11S (1)	16.0	16.0	125.00	8.3	0	0	VC..1103

(1) For Swiss type machines

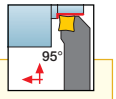
For inserts, see pages: VCMT-F3P (B80) • VCMT-SM (B70) • VCGT-AS (B92)

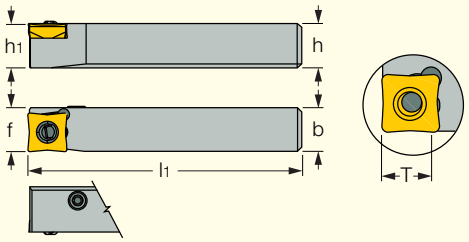
Spare Parts

Designation	Screw	Key
SVVCN 0808K-11S	SR 14-560	
SVVCN 1010K-11S	SR 14-560	
SVVCN 1212K-11S	SR 14-560	
SVVCN 1616K-11S	SR 14-560	

PQLCR/L-S

Side Lever Lock Toolholders for 80° Positive 4-Cornered Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	h_1	l_1	f	T	G_a°	G_r°	Insert
PQLCR/L 1212M-09S	12.0	12.0	12.0	150.00	12.0	8.5	0	0	QCMT 09T3

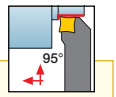
For inserts, see pages: QCMT-PF (B79) • QCMT-SM (B79).

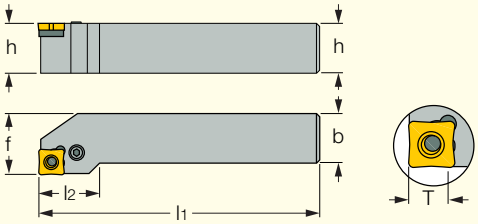
Spare Parts

Designation	Lever	Locking Pin	Screw	Hex Flag Key
PQLCR/L-S	SL LV-3	SL PI-3	SR 10400150	HW 2.5/5

PQLCR/L

Lever Lock Toolholders for 80° Positive 4-Cornered Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	T	G_a°	G_r°	Insert
PQLCR/L 1616H-09	16.0	16.0	100.00	22.0	20.0	8.5	0	0	QCMT 09T3

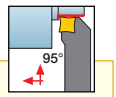
For inserts, see page: QCMT-PF (B78) • QCMT-SM (B78).

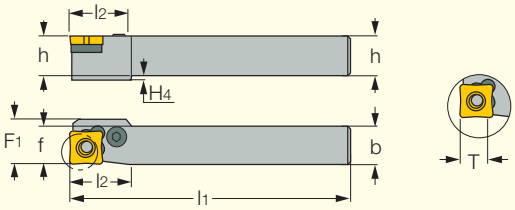
Spare Parts

Designation	Seat	Spring Pin	Punch	Lever	Screw	Hex Flag Key
PQLCR/L	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5/5

PQLCR-A

Lever Lock Toolholders for 80° Positive 4-Cornered Inserts for Swiss Automatic Machines





Right-hand shown

Designation	h	b	l_1	l_2	f	F_1	h_4	T	G_a°	G_r°
PQLCR 1212M-09-A	12.0	12.0	150.00	19.5	12.0	14.0	2.0	8.5	0	0

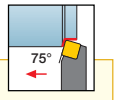
For inserts, see pages: QCMT-PF (B79) • QCMT-SM (B79).

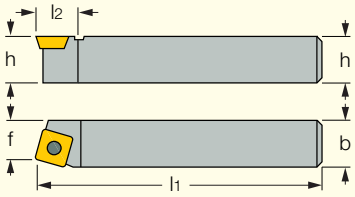
Spare Parts

Designation	Seat	Spring Pin	Punch	Lever	Screw	Hex Flag Key
PQLCR-A	TXC 322	SP 3	PN 3-4	LR 3	SR 117-2014	HW 2.5/5

SSBCR/L

75° Lead Angle Screw Lock Toolholders for Square Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SSBCR/L 1616H-09	16.0	16.0	100.00	15.0	13.0	0	0	SC.. 09T3

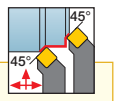
For inserts, see pages: SCMT-F3P (B81) • SCMT-M3M (B81) • SCMT-SM (B82) • SCGT-AS (B91) • SCMT-14 (B82) • SCMT-19 (B83) .

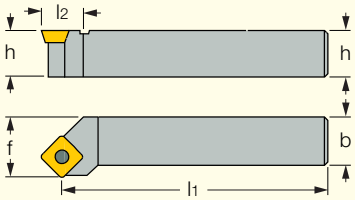
Spare Parts

Designation	Insert Screw	Key 1
SSBCR/L 1616H-09	SR 16-236	T-15/5

SSSCR/L

45° Lead Angle Screw Lock Toolholders for Square Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SSSCR/L 1212F-09	12.0	12.0	80.00	18.0	16.0	0	0	SC.. 09T3
SSSCR/L 1616H-09	16.0	16.0	100.00	18.0	20.0	0	0	SC.. 09T3

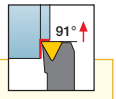
For inserts, see pages: SCMT-F3P (B81) • SCMT-M3M (B81) • SCMT-SM (B82) • SCGT-AS (B91) • SCMT-14 (B82) • SCMT-19 (B83) .

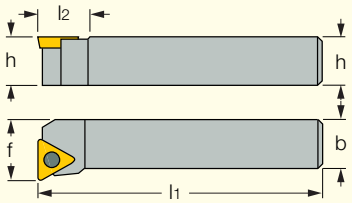
Spare Parts

Designation	Insert Screw	Key 1
SSSCR/L 1212F-09	SR 16-236	T-15/5
SSSCR/L 1616H-09	SR 16-236	T-15/5

STFCR/L

Screw Lock Toolholders for Triangular Inserts with 7° Clearance Angle for Face Turning





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
STFCR/L 1212F-11	12.0	12.0	80.00	13.0	16.0	0	0	TC.. 1102

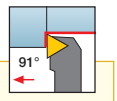
For inserts, see pages: TCMT-F3P (B83) • TCMT-M3M (B84) • TCMT-PF (B84) • TCMT-SM (B85) • TCGT-AS (B91)

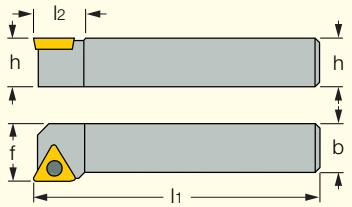
Spare Parts

Designation	Screw	Key
STFCR/L 1212F-11	SR 14-548	

STGCR/L

91° Lead Angle Screw Lock Toolholders for Triangular Inserts with 7° Clearance Angle





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
STGCR/L 1212F-11	12.0	12.0	80.00	13.0	16.0	0	0	TC.. 1102
STGCR/L 1616H-11	16.0	16.0	100.00	13.0	20.0	0	0	TC.. 1102

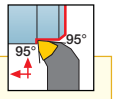
For inserts, see pages: TCMT-F3P (B83) • TCMT-M3M (B84) • TCMT-PF (B84) • TCMT-SM (B85) • TCGT-AS (B91)

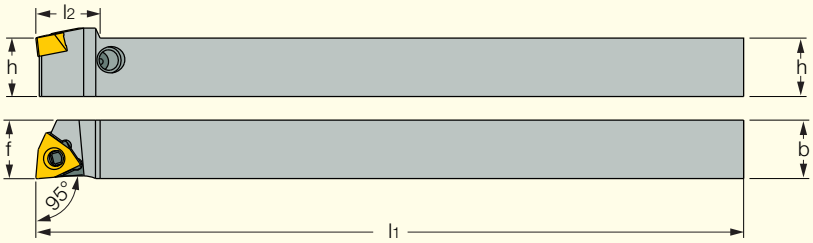
Spare Parts

Designation	Insert Screw	Key
STGCR/L 1212F-11	SR 14-548	
STGCR/L 1616H-11	SR 14-548	

PWLNR/L-04S

Lever Lock External Turning Toolholders for WNGP 0403.. Double-Sided Trigon Inserts





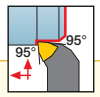
Right-hand shown

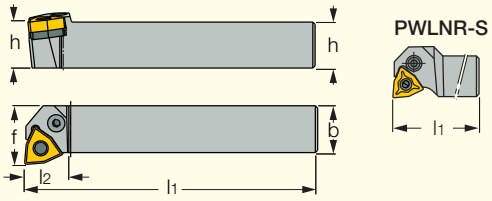
Designation	h	b	l_1	l_2	f	Insert
PWLNR/L 1010X-04S	10.0	10.0	120.00	11.0	10.0	WNGP 04
PWLNR/L 1212F-04S	12.0	12.0	80.00	11.0	12.0	WNGP 04
PWLNR/L 1212X-04S	12.0	12.0	120.00	11.0	12.0	WNGP 04
PWLNR/L 1616X-04S	16.0	16.0	120.00	13.0	16.0	WNGP 04

For inserts, see pages: WNGP-F2M (B45) • WNGP-F2P (B46).

PWLNR/L

Lever Lock External Turning Toolholders for 80° Negative Trigon Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PWLNR/L 1616H-06	16.0	16.0	100.00	16.0	20.0	-6	-6	WN..06T3
PWLNR/L 1616H-06S (1)	16.0	16.0	100.00	20.3	20.0	-6	-6	WN..06T3

(1) Can be used on automatics

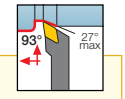
For inserts, see pages: WNMG-F3P (B47) • WNMG-M3P (B48) • WNMG-F3M (B48) • WNMG-M3M (B49) • WNMG-TF (B53) • WNMG-GN (B49) • WNMG-PP (B52) • WNMG-VL (B51) • WNMG-SF (B50) • WNMG-NF (B51) • WNMG-WF (B52) • WNMG-WG (B50)

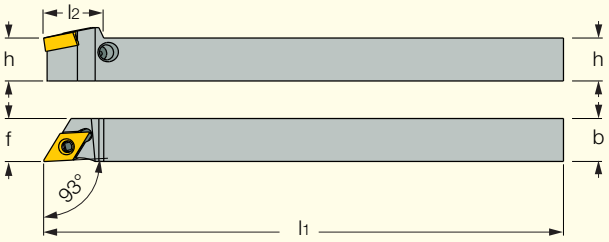
Spare Parts

Designation	Seat	Spring Pin	Punch	Hex Flag Key	Screw	Lever
PWLNR/L 1616H-06	TWN 322	SP 3	PN 3-4	HW 2.5/5	SR 117-2014	LR 3
PWLNR/L 1616H-06S	TWN 322	SP 3	PN 3-4	HW 2.5/5	SR 117-2014	LR 3

PDJNR/L-07S

Lever Lock Toolholders for DNGP 0703.. Double-Sided 55° Rhombic Inserts





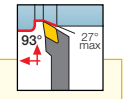
Right-hand shown

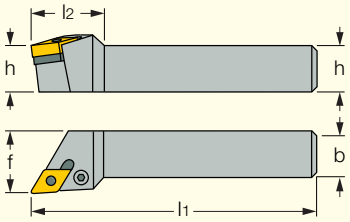
Designation	h	b	l_1	l_2	f	Insert
PDJNR/L 1010X-07S	10.0	10.0	120.00	14.0	10.0	DNGP 07
PDJNR/L 1212F-07S	12.0	12.0	80.00	14.0	12.0	DNGP 07
PDJNR/L 1212X-07S	12.0	12.0	120.00	14.0	12.0	DNGP 07
PDJNR/L 1616X-07S	16.0	16.0	120.00	18.0	16.0	DNGP 07

For inserts, see pages: DNGP-F2M (B53) • DNGP-F2P (B54).

PDJNR/L

Lever Lock Toolholders for 55° Negative Rhombic Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
PDJNR/L 1616H-11	16.0	16.0	100.00	30.0	20.0	-6	-7	DNMG 1104

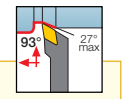
For inserts, see pages: DNMG-F3P (B54) • DNMG-M3P (B55) • DNMG-F3M (B55) • DNMG-M3M (B56) • DNMG-GN (B56) • DNMG-VL (B59) • DNMG-PF (B58) • DNMG-NF (B57)

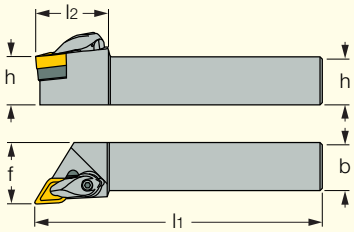
Spare Parts

Designation	Seat	Spring Pin	Punch	Lever	Screw	Hex Flag Key
PDJNR/L 1616H-11	TDN 322	SP 3	PN 3-4	LR 3D	SR 117-2014	HW 2.5/5

DDJNR/L

R-Clamp Toolholders with 93° Lead Angle for 55° Negative Rhombic Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
DDJNR/L 1616H-11	16.0	16.0	100.00	30.0	20.0	-7	-6	DNMG 1104

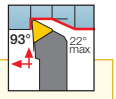
For inserts, see pages: DNMG-F3P (B54) • DNMG-M3P (B55) • DNMG-F3M (B55) • DNMG-M3M (B56) • DNMG-GN (B56) • DNMG-VL (B59) • DNMG-PF (B58) DNMG-NF (B57).

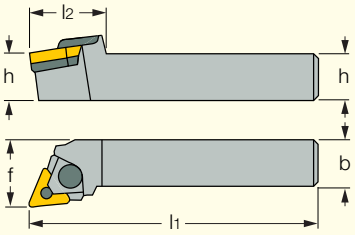
Spare Parts

Designation	Seat	Seat Screw	Clamp	Right-Left Screw	Key	Clamp Spring
DDJNR/L 1616H-11	RDT 3-2	SR 40085I	LCGR-3	SR RC3		KSP 3

MTJNR/L-W

93° Lead Angle Wedge Lock Turning Tools for Negative Triangular Inserts





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
MTJNR/L 1616H-16W-M	16.0	16.0	100.00	32.0	20.0	-6	-6	TNMG 1604

For inserts, see pages: TNMG-F3P (B61) • TNMG-M3P (B62) • TNMG-F3M (B62) • TNMG-M3M (B63) • TNMG-TF (B65) • TNMG-GN (B63) • TNMG/TNGG-PP (B65) • TNMG-VL (B64) • TNMG-PF (B64) • TNMG-SF (B64) • TNMG-NF (B66)

Spare Parts

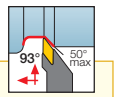
Designation	Seat	Seat 1	Locking Pin	Wedge Clamp	Ring	Wedge Screw	Key 1
MTJNR/L 1616H-16W-M	TTT 322N	TTT 332N(1)*	ZNW 3WNS	LC 291N CLAMP	E RING N	SR 17-317NS	HW 3.0

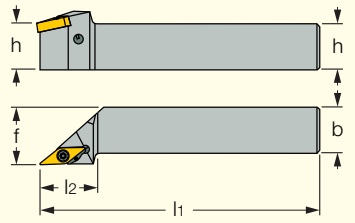
* (Optional, should be ordered separately)

(1) Use for inserts TNMG 1603.. 3.18 mm thick

SVJNR/L-F

Screw Lock Toolholders for 35° Negative Inserts with a Wedge for High Rigidity in Profiling Applications





Right-hand shown

Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SVJNR/L 1616H-12F	16.0	16.0	100.00	25.0	20.0	-6	-12	VNMG 12T3

• Repeatability: for VNMG is ±0.06 mm, for VNGG is ±0.02 mm

For inserts, see pages: VNMG-SF (B60) • VNMG/VNGG-NF (B60) • VNMM-PP (B61).

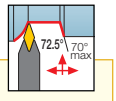
Spare Parts

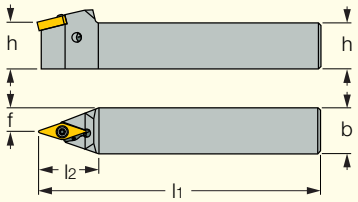
Designation	Screw	Key	Wedge	Wedge Pin
SVJNR/L-F	SR 14-551	T-9/5	AV 12	PA 12

ISOTURN

SVVNN-F

Screw Lock Toolholders for 35° Negative Inserts with a Wedge for High Rigidity in Profiling Applications





Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SVVNN 1616H-12F	16.0	16.0	100.00	26.0	8.0	0	-14	VNMG 12T3

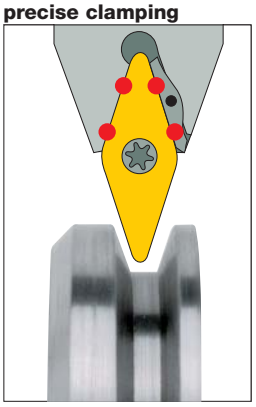
• Repeatability: for VNMG is ±0.06 mm, for VNGG is ± 0.02 mm

For inserts, see pages: VNMG-SF (B60) • VNMG/VNGG-NF (B60) • VNMM-PP (B61).

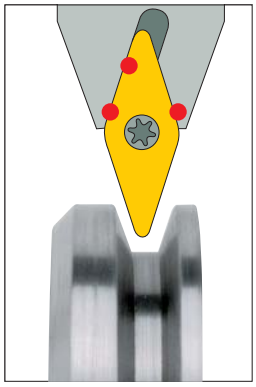
Spare Parts

Designation	Screw	Key	Wedge Pin	Wedge
SVVNN-F	SR 14-551	T-9/5	PA 12	AV 12

4 contact points ensure secure and precise clamping



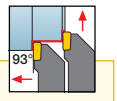
Conventional clamping

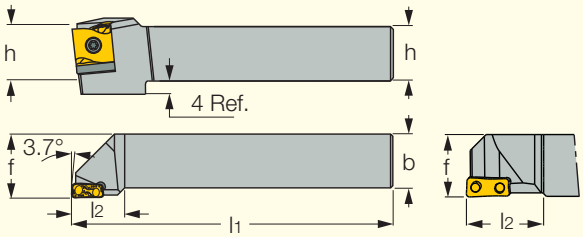


HELITURN TANGENTIAL LINE

SLANR/L-TANG

Toolholders for LNMX Tangentially Clamped Inserts





SLANR/L 1616M-11S

Right-hand shown

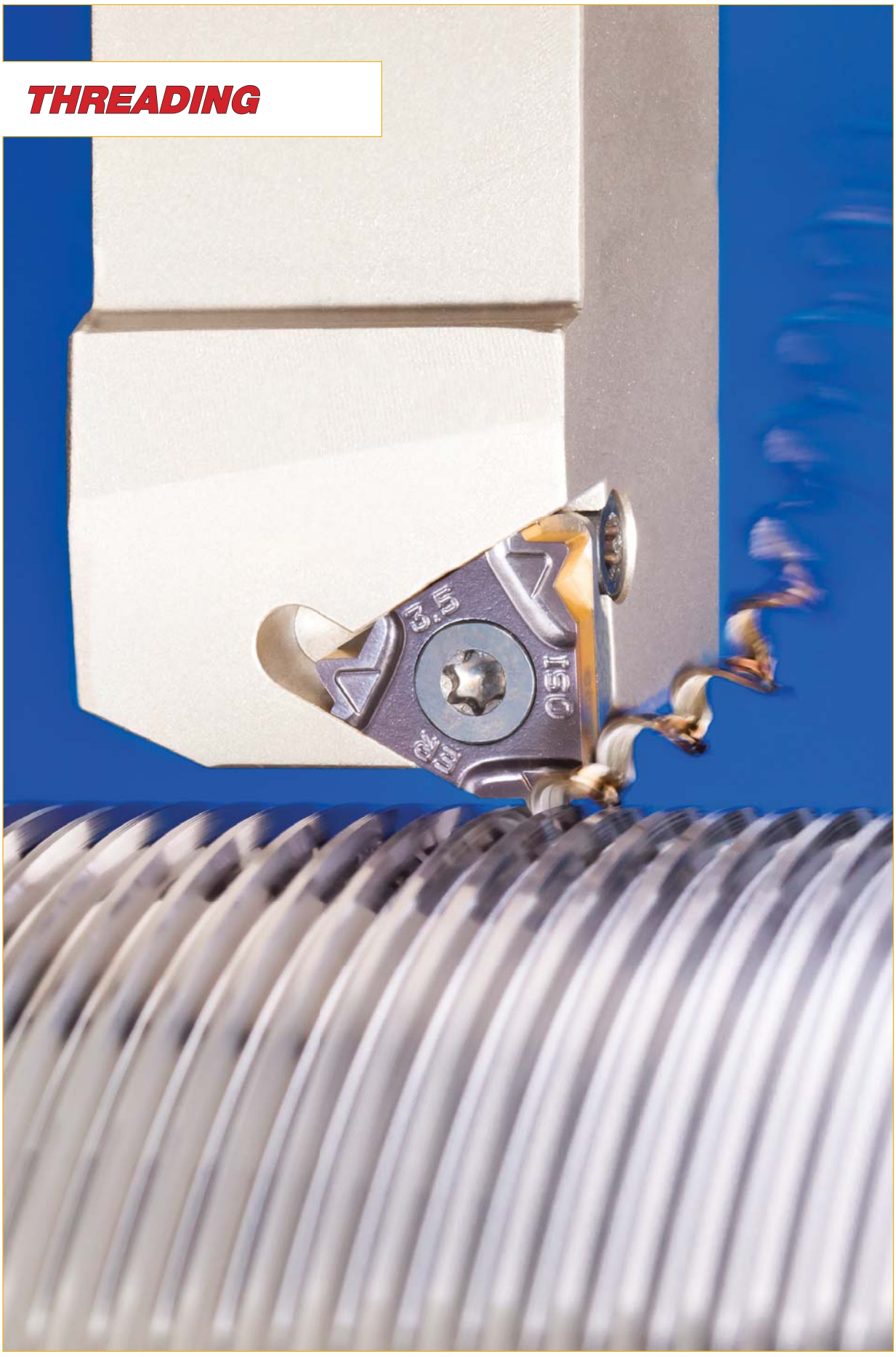
Designation	h	b	l_1	l_2	f	G_a°	G_r°	Insert
SLANR/L 1616H-11 TANG	16.0	16.0	100.00	20.0	20.0	-6	-6	LNMX 1104..
SLANR/L 1616M-11S TANG	16.0	16.0	150.00	20.0	16.2	-6	-6	LNMX 1104..

• ap max for facing: LNMX 11-2.8 mm, LNMX 15-3.8 mm, LNMX 22-5.8 mm

Spare Parts

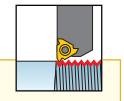
Designation	Seat	Seat Screw	Key	Insert Screw	Torx Blade	T-Handle
SLANL 1616H-11 TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7	SW6-SD
SLANL 1616M-11S TANG	TLN 11L-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7	SW6-SD
SLANR 1616H-11 TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7	SW6-SD
SLANR 1616M-11S TANG	TLN 11R-HT	SR RS4	T-6/5	SR 34-550-C	BLD T10/S7	SW6-SD

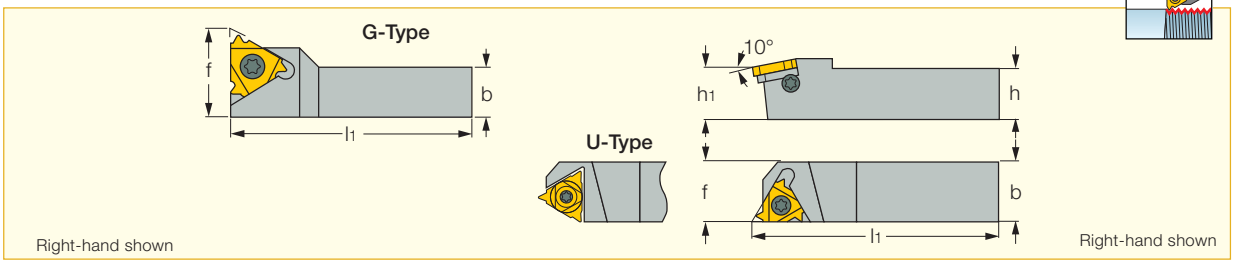
THREADING



SER/L

External Threading Toolholders





Designation	h	b	l_1	f	Insert[2]
SER 0808 H11 [1]	8.0	8.0	100.00	11.0	11 ER..
SER/L 1010 H11 [1]	10.0	10.0	100.00	11.0	11 ER/L..
SER/L 1212 F16	12.0	12.0	80.00	16.0	16 ER/L..
SER/L 1616 H16	16.0	16.0	100.00	16.0	16 ER/L..
SER 1616 K16G	16.0	16.0	125.00	21.7	16 ER..

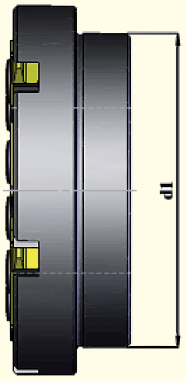
• All tools are made for 1.5 helix angle • For multi-tooth inserts use anvils AE16M / AI16M; AE22M / AI22M; AE27M / AI27M • For GTGA inserts, use anvil AE 16-0

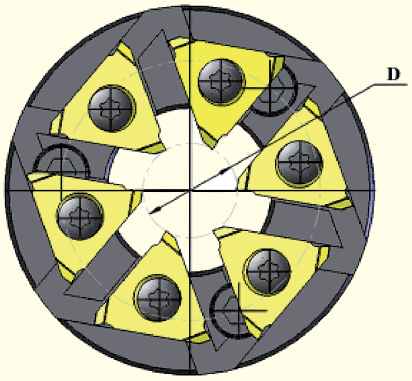
[1] Toolholder without anvil [2] Right-hand inserts (ER) for right-hand tools (SER)

Spare Parts

Designation	Insert Screw	Anvil Screw	Anvil Ext./Int. Right	Anvil Ext./Int. Left	Key
SER 0808 H11	S11				T-8/5
SER/L 1010 H11	S11				T-8/5
SEL 1212 F16	S16	A16		AI16	T-10/5
SER 1212 F16	S16	A16	AE16		T-10/5
SEL 1616 H16	S16	A16		AI16	T-10/5
SER 1616 H16	S16	A16	AE16		T-10/5
SER 1616 K16G	S16	A16	AE16		T-10/5

Whirling Head





Machine		Whirling Head	Z	D	d1	Insert Size	Insert Screw	Torx Key
Type	Model							
STAR	SV12 / SV20	SRW4012 418 - 6	6	12.0	40.0	16	SW16	KW16
		SRW4012 424 - 8	8			11	SW11	KW11
	SR20 / ECAS20	SRW4012 419 - 6	6	12.0	40.0	16	SW16	KW16
		SRW4012 425 - 8	8			11	SW11	KW11
Citizen	M12 / M16	SRW4512 422 - 6	6	12.0	45.0	16	SW16	KW16
		SRW4512 426 - 8	8			11	SW11	KW11
	M20 / M32	SRW4512 423 - 6	6	12.0	45.0	16	SW16	KW16
		SRW4512 427 - 8	8			11	SW11	KW11
Tornos	Deco 13 / 20	SRW4012 420 - 6	6	12.0	40.0	16	SW16	KW16
Traub	TNL26 / TNK36	SRW5425 421 - 6	6	25.0	54.0	16	SW16	KW16
Hanwha	SL26HPD	SRW4012 416 - 3	3	12.0	40.0	16	SW16	KW16
Maier	ML20D	SRW4012 417 - 5	5	12.0	40.0	16	SW16	KW16

Whirling tools are provided on request. Attached is a list of available whirling tools according to the machine model being used.

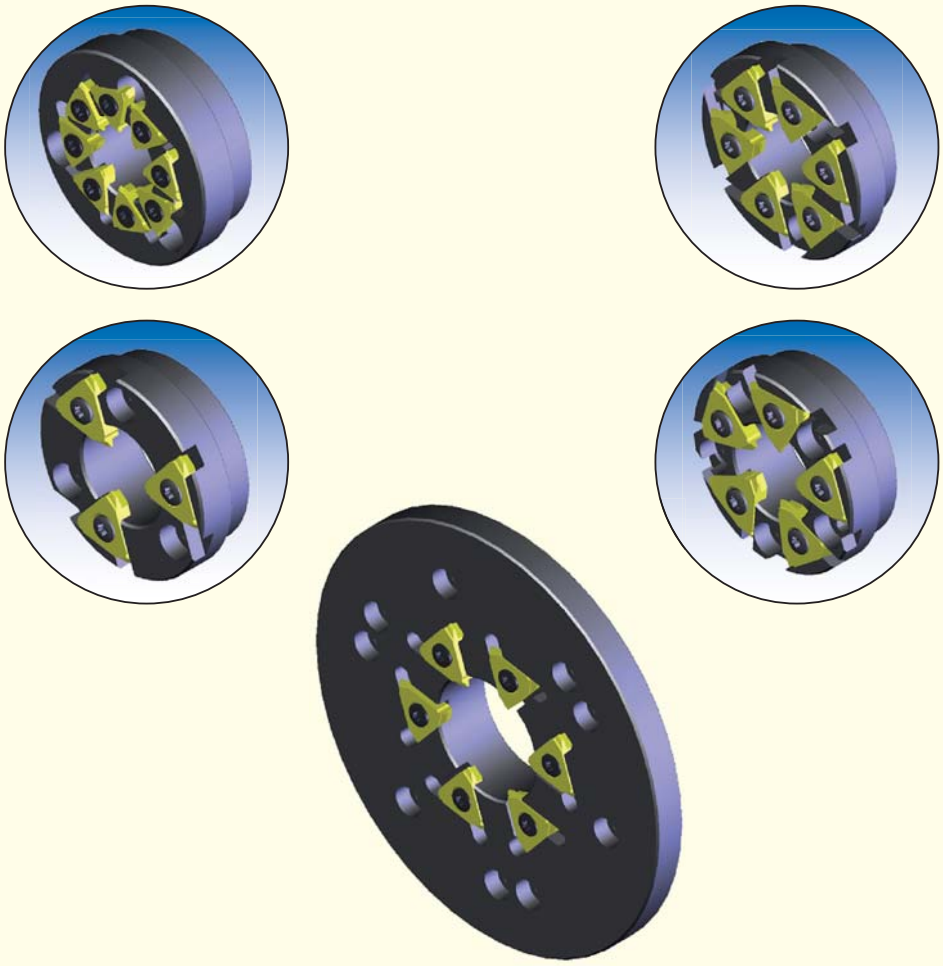
The customer should specify his specific thread profile and the required number of inserts in the cutter (or leave this decision to ISCAR designers).

The inserts are made from PVD coated grade IC908.

Advantages

- Increased productivity
- Increased tool life
- Quick setup
- Enables producing long threads
- Enables high helix angle threads
- Short machining time
- High quality surface finish

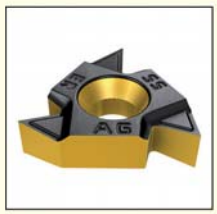
Lead time for whirling tools and inserts is 6-7 weeks.

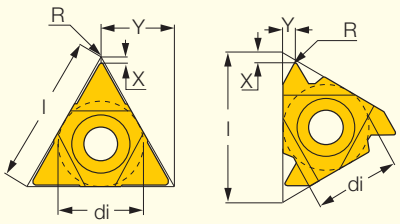


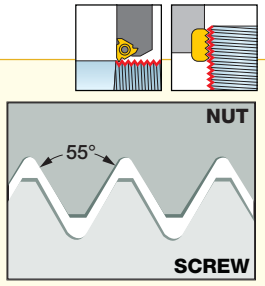
ISCARTHREAD

ER/L-55°

External 55° Partial Profile Laydown Threading Inserts, for General Industry







External right-hand shown

Designation	Dimensions									Tough ↔ Hard						
	di	Pmin	Pmax	TPI max	TPI min	l	R	X	Y	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
11ER/L A 55	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9		●	●			●	
16ER/L A 55	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9		●	●			●	
16ER/L AG 55	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7	●	●	●	●		●	
16ERB AG 55 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7						●	
16ERM AG 55 (1)	9.52	0.50	3.00	48	8	16.00	0.07	1.2	1.7		●	●		●	●	●
16ER/L G 55	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7		●	●			●	
16ERB G 55 (1)	9.52	1.75	3.00	14	8	16.00	0.20	1.2	1.7						●	
16ERM G 55 (1)	9.52	1.75	3.00	14	8	16.00	0.23	1.2	1.7			●		●	●	

• For threading between walls use GRIP-type inserts TIP-WT, GEPI-WT, TIPI-WT.

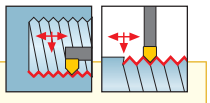
(1) With pressed chipformer

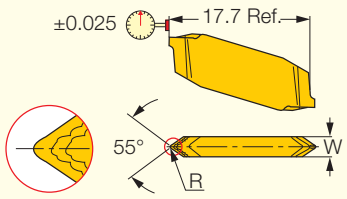
For tools, see pages: • SER/L (A109).

ISCARTHREAD • CUT-GRIP

TIP-WT

Precision Ground 55° Partial Profile, Double-Ended Threading Inserts with a Chipformer





TIP inserts are 1.6 mm longer than GIP in the same pocket

Designation	Dimensions				Tough ↔ Hard	
	W	R±0.03	TPI max	TPI min(1)	IC08	IC908
TIP 2WT-0.05	2.40	0.05	54	D/6.4	●	●
TIP 4WT-0.15	4.00	0.15	19	D/6.4	●	●
TIP 5WT-0.25	5.50	0.25	12	D/6.4		

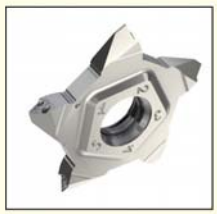
• Toolholder seat needs to be modified according to insert profile to ensure clearance. • Pitch max 0.187xD

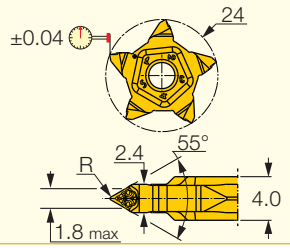
(1) D-Diameter of thread (inch)

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

PENTA 24-WT

Whitworth 55° Partial Profile, Pentagonal External Threading Precision Ground Inserts with a Chipformer





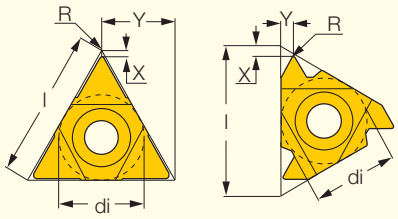
Designation	Dimensions			IC908
	TPI max	TPI min	R	
PENTA 24WT-0.05	48	14	0.05	●

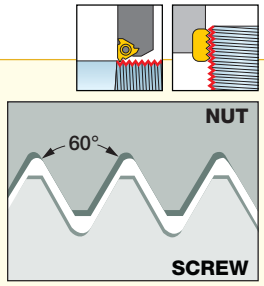
• TPImin=6.4/D(inch) D-nominal thread diameter (inch)

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

ER/L-60°

External 60° Partial Profile, Laydown Threading Inserts, for General Industry





External right-hand shown

Designation	Dimensions									Tough ↔ Hard							
	di	Pmin	Pmax	TPI max	TPI min	l	R	X	Y	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
11ER/L A 60	6.35	0.50	1.50	48	16	11.00	0.05	0.8	0.9		●	●				●	
16ER/L A 60	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9	●	●	●	●	●		●	
16ERB A 60 (1)	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9				●			●	
16ERM A 60 (1)	9.52	0.50	1.50	48	16	16.00	0.05	0.8	0.9		●	●			●	●	●
16ER/L AG 60	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7	●	●	●	●	●		●	●
16ERB AG 60 (1)	9.52	0.50	3.00	48	8	16.00	0.05	1.2	1.7							●	
16ERM AG 60 (1)	9.52	0.50	3.00	48	8	16.00	0.06	1.2	1.7		●	●		●	●	●	●
16ER/L G 60	9.52	1.75	3.00	14	8	16.00	0.17	1.2	1.7	●	●	●		●		●	
16ERB G 60 (1)	9.52	1.75	3.00	14	8	16.00	0.17	1.2	1.7							●	
16ERM G 60 (1)	9.52	1.75	3.00	14	8	16.00	0.17	1.2	1.7		●	●			●	●	●

• For threading between walls use GRIP-type inserts SCIR/L B/F -MTR/L, TIP-MT, GEPI-MT, TIPI-MT.

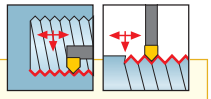
(1) With pressed chipformer.

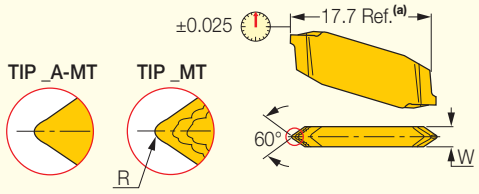
For tools, see pages: • SER/L (A109).

ISCAR THREAD • CUT-GRIP

TIP-MT

Precision Ground 60° Partial Profile, Double-Ended Threading Inserts with Chipformers





Designation	Dimensions W	R±0.03	Pmin	TPI max	Tough ↔ Hard IC08	IC908
TIP 2A-MT-0.05 (1)	2.40	0.05	0.45	56		
TIP 2MT-0.05	2.40	0.05	0.45	56	●	●
TIP 2MT-0.14	2.40	0.14	1.11	23	●	●
TIP 4A-MT-0.15 (1)	4.00	0.15	1.25	20		
TIP 4MT-0.15	4.00	0.15	1.25	20		
TIP 4MT-0.20	4.00	0.20	1.63	16	●	●
TIP 5MT-0.25	5.50	0.25	1.94	13	●	●

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

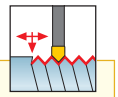
(1) Without chipformer (flat rake)

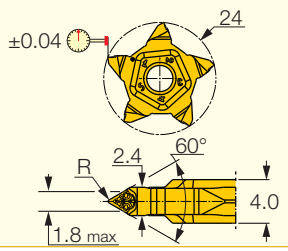
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

ISCAR THREAD • PENTACUT

PENTA 24-MT

60° Partial Profile, Pentagonal External Threading Precision Ground Inserts with a Chipformer





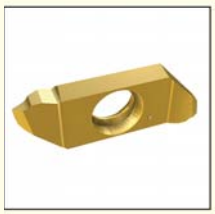
Designation	Dimensions Pmin	Pmax	R	IC908
PENTA 24MT-0.05	0.50	1.75	0.05	●

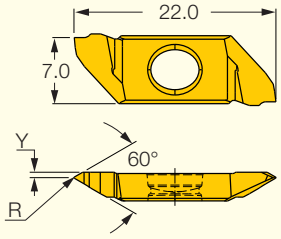
For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

ISCARTHREAD • SWISSCUT INNOVAL LINE

SCIR/L-22-MTR/MTL

60° Partial Profile Threading Inserts





Left-hand shown

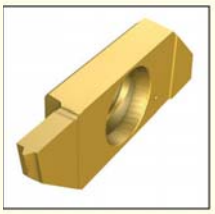
Designation	Dimensions R	Y	Pmin	Pmax	TPI max	TPI min	IC1008
SCIL 22-MTL003	0.03	0.4	0.30	0.90	83	28	●
SCIR 22-MTR003	0.03	0.4	0.30	0.90	83	28	●
SCIL 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	●
SCIR 22-MTR/L007	0.07	0.5	0.70	1.10	36	23	●
SCIL 22-MTL010	0.10	0.8	0.90	1.70	28	15	●
SCIR 22-MTR010	0.10	0.8	0.90	1.70	28	15	●

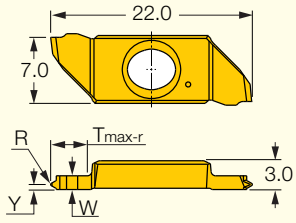
For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

ISCARTHREAD • SWISSCUT INNOVAL LINE

SCIR-22-MTR-ISO

Precision Ground ISO Metric Full Profile Threading Inserts



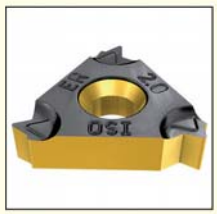


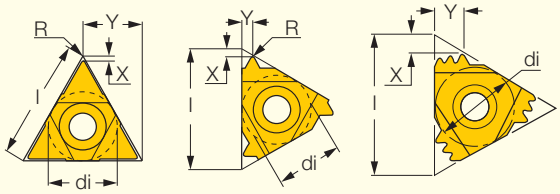
Designation	Dimensions Pitch	W	Tmax-r	R	Y	IC1008
SCIR 22-MTR-0.3ISO	0.30	1.00	3.00	0.03	0.2	●
SCIR 22-MTR-0.4ISO	0.40	1.00	3.00	0.04	0.2	●
SCIR 22-MTR-0.5ISO	0.50	1.00	3.00	0.06	0.3	●
SCIR 22-MTR-0.75ISO	0.75	1.00	3.00	0.10	0.4	●
SCIR 22-MTR-1.0ISO	1.00	1.50	4.00	0.14	0.6	●
SCIR 22-MTR-1.5ISO	1.50	2.00	4.00	0.20	0.8	●

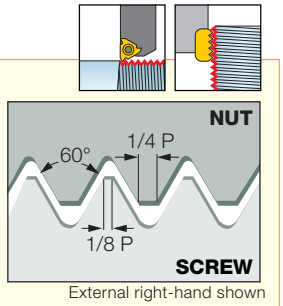
For tools, see pages: SCHR/L-BF (A7) • SCHR/L-BF-JHP (A7).

ER/L-ISO

External ISO Metric (DIN13 12-1986 class: 6G), Laydown Threading Inserts, for General Industry







External right-hand shown

Designation	Dimensions							Tough ↔ Hard								
	di	Pitch	l	R	X	Y	Z(3)	IC228	IC50M	IC250	IC950	IC08	IC508	IC808	IC908	IC1007
11ER/L 0.35 ISO	6.35	0.35	11.00	0.04	0.8	0.4	1		●						●	
11ER 0.40 ISO	6.35	0.40	11.00	0.04	0.7	0.4	1								●	
11ER 0.45 ISO	6.35	0.45	11.00	0.05	0.7	0.4	1	●								
11ER/L 0.50 ISO	6.35	0.50	11.00	0.05	0.6	0.6	1	●	●	●					●	
11ER 0.60 ISO	6.35	0.60	11.00	0.07	0.6	0.6	1		●						●	
11ER 0.70 ISO	6.35	0.70	11.00	0.07	0.6	0.6	1		●	●					●	
11ER/L 0.75 ISO	6.35	0.75	11.00	0.08	0.6	0.6	1		●						●	
11ER 0.80 ISO	6.35	0.80	11.00	0.09	0.6	0.6	1		●	●					●	
11ER/L 1.00 ISO	6.35	1.00	11.00	0.12	0.7	0.7	1		●	●			●		●	
11ER 1.25 ISO	6.35	1.25	11.00	0.15	0.8	0.9	1		●	●					●	
11ER/L 1.50 ISO	6.35	1.50	11.00	0.18	0.8	1.0	1		●	●		●			●	
11ER 1.75 ISO	6.35	1.75	11.00	0.21	0.8	1.1	1			●						
16ER/L 0.35 ISO	9.52	0.35	16.00	0.04	0.8	0.4	1			●					●	
16ER/L 0.40 ISO	9.52	0.40	16.00	0.04	0.7	0.4	1		●						●	
16ER 0.45 ISO	9.52	0.45	16.00	0.05	0.7	0.4	1			●					●	
16ER/L 0.50 ISO	9.52	0.50	16.00	0.04	0.6	0.6	1		●	●		●			●	
16ER 0.60 ISO	9.52	0.60	16.00	0.07	0.6	0.6	1		●	●					●	
16ER/L 0.70 ISO	9.52	0.70	16.00	0.07	0.6	0.6	1		●	●					●	
16ER/L 0.75 ISO	9.52	0.75	16.00	0.08	0.6	0.6	1		●	●		●			●	
16ER 0.75 ISO 3M (1)	9.52	0.75	16.00	0.08	1.3	1.9	3								●	
16ERM 0.75 ISO (2)	9.52	0.75	16.00	0.08	0.6	0.6	1							●	●	
16ER/L 0.80 ISO	9.52	0.80	16.00	0.09	0.6	0.6	1		●	●					●	
16ERB 0.80 ISO (2)	9.52	0.80	16.00	0.09	0.6	0.6	1								●	
16ER/L 1.00 ISO	9.52	1.00	16.00	0.12	0.7	0.7	1	●	●	●		●	●		●	●
16ER 1.00 ISO 3M (1)	9.52	1.00	16.00	0.12	1.7	2.5	3								●	
16ERB 1.00 ISO (2)	9.52	1.00	16.00	0.12	0.7	0.7	1								●	
16ERM 1.00 ISO (2)	9.52	1.00	16.00	0.11	0.7	0.7	1		●	●			●	●	●	●
16ER/L 1.25 ISO	9.52	1.25	16.00	0.15	0.8	0.9	1		●	●		●	●		●	
16ERB 1.25 ISO (2)	9.52	1.25	16.00	0.15	0.8	0.9	1								●	
16ERM 1.25 ISO (2)	9.52	1.25	16.00	0.14	0.8	0.9	1			●				●	●	●
16ER/L 1.50 ISO	9.52	1.50	16.00	0.18	0.8	1.0	1	●	●	●		●	●		●	●
16ER 1.50 ISO 2M (1)	9.52	1.50	16.00	0.18	1.5	2.3	2								●	
16ERB 1.50 ISO (2)	9.52	1.50	16.00	0.19	0.8	1.0	1								●	
16ERM 1.50 ISO (2)	9.52	1.50	16.00	0.19	0.8	1.0	1		●	●			●	●	●	●
16ER/L 1.75 ISO	9.52	1.75	16.00	0.21	0.9	1.2	1	●	●	●		●			●	
16ERB 1.75 ISO (2)	9.52	1.75	16.00	0.21	0.9	1.2	1								●	
16ERM 1.75 ISO (2)	9.52	1.75	16.00	0.20	0.9	1.2	1			●				●	●	●
16ER/L 2.00 ISO	9.52	2.00	16.00	0.25	1.0	1.3	1	●	●	●					●	●
16ER 2.00 ISO 2M (1)	9.52	2.00	16.00	0.25	2.0	3.0	2				●				●	
16ER 2.00 ISO 2M (1)	9.52	2.00	16.00	0.25	2.0	3.0	2	●								
16ERM 2.00 ISO (2)	9.52	2.00	16.00	0.24	1.0	1.3	1			●			●	●	●	●
16ER/L 2.50 ISO	9.52	2.50	16.00	0.31	1.1	1.5	1		●	●			●		●	
16ERM 2.50 ISO (2)	9.52	2.50	16.00	0.30	1.1	1.5	1		●	●				●	●	●
16ER/L 3.00 ISO	9.52	3.00	16.00	0.38	1.2	1.6	1	●	●	●			●		●	
16ERB 3.00 ISO (2)	9.52	3.00	16.00	0.38	1.2	1.6	1								●	
16ERM 3.00 ISO (2)	9.52	3.00	16.00	0.38	1.2	1.6	1		●	●			●	●	●	●

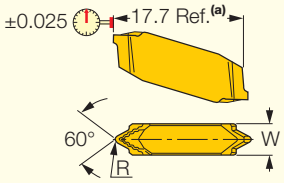
(1) Multi-tooth (2) With pressed chipformer (3) Number of teeth per corner.

For tools, see pages: • SER/L (A109).

ISCARTHREAD • CUT-GRIP

TIP-P-ISO

Precision Ground ISO Metric Full Profile, Double-Ended, External Threading Inserts with a Chipformer



Designation	Dimensions				Tough ↔ Hard	
	Pitch	W	R	R±toler	IC08	IC908
TIP 2P0.5-ISO	0.50	2.40	0.08	0.030	●	●
TIP 2P0.75-ISO	0.75	2.40	0.11	0.030	●	●
TIP 2P0.8-ISO	0.80	2.40	0.12	0.030	●	●
TIP 2P1.0-ISO	1.00	2.40	0.14	0.030	●	●
TIP 2P1.25-ISO	1.25	2.40	0.18	0.030	●	●
TIP 2P1.5-ISO	1.50	2.40	0.22	0.030	●	●
TIP 2P1.75-ISO	1.75	2.40	0.25	0.030	●	●
TIP 4P2.0-ISO	2.00	4.00	0.28	0.030	●	●
TIP 4P2.5-ISO	2.50	4.00	0.35	0.050	●	●
TIP 4P3.0-ISO	3.00	4.00	0.42	0.050		●
TIP 4P3.5-ISO	3.50	4.00	0.48	0.050		●
TIP 5P4.0-ISO	4.00	5.50	0.55	0.050		●
TIP 5P5.0-ISO	5.00	5.50	0.68	0.050		●

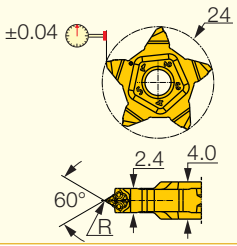
• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

ISCARTHREAD • PENTACUT

PENTA 24-ISO

ISO Metric Full Profile, Pentagonal, External Threading Precision Ground Inserts with a Chipformer

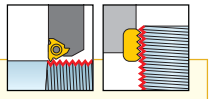


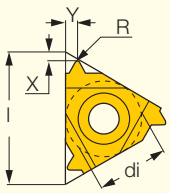
Designation	Dimensions		IC908
	Pitch	R	
PENTA 24-0.5-ISO	0.50	0.08	●
PENTA 24-0.75-ISO	0.75	0.11	●
PENTA 24-0.8-ISO	0.80	0.12	●
PENTA 24-1.0-ISO	1.00	0.14	●
PENTA 24-1.25-ISO	1.25	0.18	●
PENTA 24-1.5-ISO	1.50	0.22	●
PENTA 24-1.75-ISO	1.75	0.25	●
PENTA 24-2.0-ISO	2.00	0.28	●

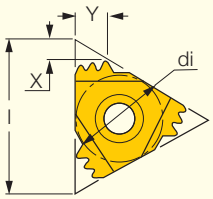
For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

ER/L-UN

External American UN Full Profile (UN, UNC, UNF, UNEF) Laydown Threading Inserts, for General Industry







External right-hand shown

Designation	Dimensions							Tough ↔ Hard							
	di	TPI	l	R	X	Y	Z(3)	IC228	IC50M	IC250	IC08	IC508	IC808	IC908	IC1007
11ER 44 UN	6.35	44.0	11.00	0.05	0.6	0.6	1							●	
11ER 36 UN	6.35	36.0	11.00	0.07	0.6	0.6	1							●	
11ER 32 UN	6.35	32.0	11.00	0.09	0.6	0.6	1							●	
11ER/L 28 UN	6.35	28.0	11.00	0.10	0.6	0.7	1		●					●	
11ER/L 24 UN	6.35	24.0	11.00	0.12	0.7	0.8	1							●	
11ER/L 20 UN	6.35	20.0	11.00	0.15	0.8	0.9	1			●				●	
11ER 18 UN	6.35	18.0	11.00	0.17	0.8	1.0	1							●	
11ER 16 UN	6.35	16.0	11.00	0.18	0.9	1.1	1		●	●				●	
16ERB 16 UN (1)	9.52	16.0	16.00	0.18	0.9	1.1	1							●	
16ER 72 UN	9.52	72.0	16.00	0.04	0.8	0.4	1							●	
16ER 56 UN	9.52	56.0	16.00	0.04	0.7	0.4	1					●		●	
16ER 48 UN	9.52	48.0	16.00	0.05	0.6	0.6	1		●					●	
16ER 40 UN	9.52	40.0	16.00	0.06	0.6	0.6	1	●				●		●	
16ER/L 36 UN	9.52	36.0	16.00	0.07	0.6	0.6	1		●			●		●	
16ER/L 32 UN	9.52	32.0	16.00	0.09	0.6	0.6	1		●	●	●	●		●	
16ER/L 28 UN	9.52	28.0	16.00	0.10	0.6	0.7	1		●	●	●			●	
16ER 27 UN	9.52	27.0	16.00	0.10	0.7	0.8	1		●						
16ER/L 24 UN	9.52	24.0	16.00	0.12	0.7	0.8	1		●	●	●			●	
16ERB 24 UN (1)	9.52	24.0	16.00	0.12	0.7	0.8	1							●	
16ERM 24 UN (1)	9.52	24.0	16.00	0.11	0.7	0.8	1		●	●				●	
16ER/L 20 UN	9.52	20.0	16.00	0.15	0.8	0.9	1		●	●	●			●	
16ERB 20 UN (1)	9.52	20.0	16.00	0.15	0.8	0.9	1							●	
16ERM 20 UN (1)	9.52	20.0	16.00	0.14	0.8	0.9	1		●	●			●	●	●
16ER/L 18 UN	9.52	18.0	16.00	0.17	0.8	1.0	1		●	●				●	
16ERB 18 UN (1)	9.52	18.0	16.00	0.17	0.8	1.0	1							●	
16ERM 18 UN (1)	9.52	18.0	16.00	0.15	0.8	1.0	1			●			●	●	●
16ER/L 16 UN	9.52	16.0	16.00	0.18	0.9	1.1	1	●	●	●				●	
16ER 16 UN 2M (2)	9.52	16.0	16.00	0.18	1.5	2.3	2							●	
16ERM 16 UN (1)	9.52	16.0	16.00	0.19	0.9	1.1	1			●			●	●	●
16ER/L 14 UN	9.52	14.0	16.00	0.22	1.0	1.2	1		●	●		●		●	
16ER 14 UN 2M (2)	9.52	14.0	16.00	0.22	1.5	2.3	2							●	
16ERB 14 UN (1)	9.52	14.0	16.00	0.22	1.0	1.2	1							●	
16ERM 14 UN (1)	9.52	14.0	16.00	0.22	1.0	1.2	1			●			●	●	●
16ER/L 13 UN	9.52	13.0	16.00	0.24	1.0	1.3	1		●	●				●	
16ERB 13 UN (1)	9.52	13.0	16.00	0.24	1.0	1.3	1							●	
16ERM 13 UN (1)	9.52	13.0	16.00	0.24	1.0	1.3	1							●	
16ER/L 12 UN	9.52	12.0	16.00	0.26	1.1	1.4	1		●	●	●			●	
16ER 12 UN 2M (2)	9.52	12.0	16.00	0.26	2.2	3.4	2							●	
16ERB 12 UN (1)	9.52	12.0	16.00	0.26	1.1	1.4	1							●	
16ERM 12 UN (1)	9.52	12.0	16.00	0.25	1.1	1.4	1		●	●			●	●	●
16ER 11.5 UN	9.52	11.5	16.00	0.27	1.1	1.5	1			●				●	
16ER/L 11 UN	9.52	11.0	16.00	0.28	1.1	1.5	1		●	●				●	
16ERB 11 UN (1)	9.52	11.0	16.00	0.28	1.1	1.5	1							●	
16ER/L 10 UN	9.52	10.0	16.00	0.32	1.1	1.5	1		●	●		●		●	
16ERB 10 UN (1)	9.52	10.0	16.00	0.32	1.1	1.5	1							●	
16ER/L 9 UN	9.52	9.0	16.00	0.36	1.2	1.7	1		●					●	
16ERB 9 UN (1)	9.52	9.0	16.00	0.36	1.2	1.7	1							●	
16ER/L 8 UN	9.52	8.0	16.00	0.41	1.2	1.6	1		●	●				●	
16ERB 8 UN (1)	9.52	8.0	16.00	0.41	1.2	1.6	1							●	
16ERM 8 UN (1)	9.52	8.0	16.00	0.41	1.2	1.6	1			●				●	

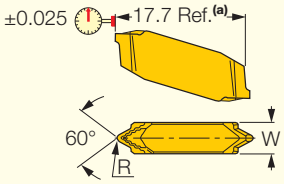
(1) With pressed chipformer. (2) Multi-tooth (3) Number of teeth per corner.

For tools, see pages: • SER/L (A109).

ISCARTHREAD • CUT-GRIP

TIP-P-UN

Precision Ground American UN (UNC,UNF,UNEF) Full Profile, Double-Ended, External Threading Inserts with a Chipformer



Designation	Dimensions W	R	R±toler	TPI	Tough ↔ Hard IC08	IC808	IC908
TIP 2P32-UN	2.40	0.10	0.030	32.0	●		●
TIP 2P28-UN	2.40	0.11	0.030	28.0	●		●
TIP 2P24-UN	2.40	0.13	0.030	24.0	●		●
TIP 2P20-UN	2.40	0.16	0.030	20.0	●		●
TIP 2P18-UN	2.40	0.18	0.030	18.0	●		●
TIP 2P16-UN	2.40	0.20	0.030	16.0	●		●
TIP 2P14-UN	2.40	0.23	0.030	14.0	●		●
TIP 2P13-UN	2.40	0.25	0.030	13.0	●		●
TIP 2P12-UN	2.40	0.27	0.030	12.0	●		●
TIP 4P11-UN	4.00	0.30	0.030	11.0			●
TIP 4P10-UN	4.00	0.33	0.050	10.0		●	●
TIP 4P08-UN	4.00	0.41	0.050	8.0			●

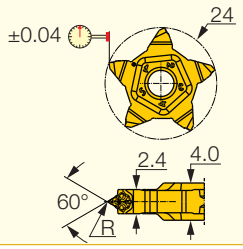
• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

ISCARTHREAD • PENTACUT

PENTA 24-UN

American UN (UNC, UNF, UNEF) Full Profile, Pentagonal External Threading Precision Ground Inserts with a Chipformer

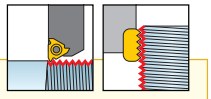


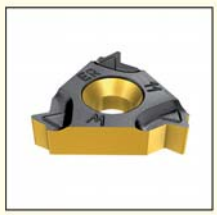
Designation	Dimensions TPI	R	IC908
PENTA 24-24-UN	24.0	0.13	●
PENTA 24-20-UN	20.0	0.16	●
PENTA 24-18-UN	18.0	0.18	●
PENTA 24-16-UN	16.0	0.21	●
PENTA 24-14-UN	14.0	0.23	●

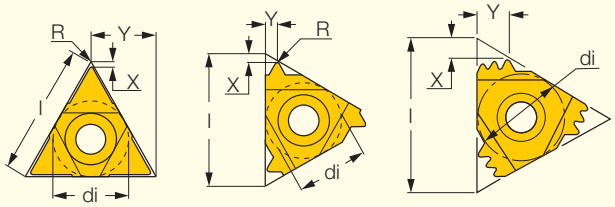
For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

ER/L-W

External Whitworth (BSW, BSF, BSP), B.S.84-1956 DIN 259 Medium Class, Full Profile Laydown Threading Inserts







External right-hand shown

Designation	Dimensions							Tough ↔ Hard						
	di	TPI	l	R	X	Y	Z(3)	IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
11ER 36 W	6.35	36.0	11.00	0.07	0.6	0.6	1						●	
11ER 20 W	6.35	20.0	11.00	0.14	8.0	0.9	1		●					
11ER/L 19 W	6.35	19.0	11.00	0.15	0.8	1.0	1						●	
11ER 18 W	6.35	18.0	11.00	0.16	0.8	1.0	1			●				
11ER 16 W	6.35	16.0	11.00	0.18	0.9	1.1	1		●					
11ER 14 W	6.35	14.0	11.00	0.21	0.9	1.1	1		●	●			●	
16ER 40 W	9.52	40.0	16.00	0.06	0.6	0.6	1				●			
16ER 32 W	9.52	32.0	16.00	0.09	0.6	0.6	1		●					
16ER/L 28 W	9.52	28.0	16.00	0.09	0.6	0.7	1		●	●			●	
16ER 26 W	9.52	26.0	16.00	0.10	0.7	0.7	1		●	●			●	
16ER/L 24 W	9.52	24.0	16.00	0.11	0.7	0.8	1		●	●			●	
16ER/L 22 W	9.52	22.0	16.00	0.13	0.8	0.9	1		●	●			●	
16ER 20 W	9.52	20.0	16.00	0.14	0.8	0.9	1		●	●	●		●	
16ER/L 19 W	9.52	19.0	16.00	0.15	0.8	1.0	1	●	●	●			●	
16ERB 19 W (1)	9.52	19.0	16.00	0.15	0.8	1.0	1						●	
16ERM 19 W (1)	9.52	19.0	16.00	0.16	0.8	1.0	1		●	●		●	●	●
16ER/L 18 W	9.52	18.0	16.00	0.16	0.8	1.0	1		●	●			●	
16ER 16 W	9.52	16.0	16.00	0.18	0.9	1.1	1		●	●			●	
16ERB 16 W (1)	9.52	16.0	16.00	0.18	0.9	1.1	1						●	
16ERM 16 W (1)	9.52	16.0	16.00	0.20	0.9	1.1	1			●		●	●	
16ER/L 14 W	9.52	14.0	16.00	0.21	1.0	1.2	1	●	●	●	●		●	
16ER 14 W 2M (2)	9.52	14.0	16.00	0.21	1.7	2.7	2						●	
16ERB 14 W (1)	9.52	14.0	16.00	0.21	1.0	1.2	1						●	
16ERM 14 W (1)	9.52	14.0	16.00	0.24	1.0	1.2	1		●	●		●	●	●
16ER/L 12 W	9.52	12.0	16.00	0.25	1.1	1.4	1		●	●	●		●	
16ER/L 11 W	9.52	11.0	16.00	0.27	1.1	1.5	1	●	●	●	●		●	
16ERB 11 W (1)	9.52	11.0	16.00	0.27	1.1	1.5	1						●	
16ERM 11 W (1)	9.52	11.0	16.00	0.27	1.1	1.5	1			●	●	●	●	●
16ER/L 10 W	9.52	10.0	16.00	0.31	1.1	1.5	1		●	●			●	
16ERB 10 W (1)	9.52	10.0	16.00	0.31	1.1	1.5	1						●	
16ER 9 W	9.52	9.0	16.00	0.34	1.2	1.7	1		●	●				
16ER/L 8 W	9.52	8.0	16.00	0.39	1.2	1.5	1		●	●			●	

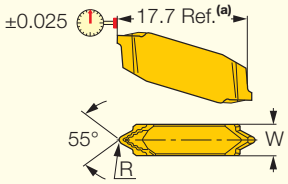
(1) With pressed chipformer. (2) Multi-tooth (3) Number of teeth per corner.

For tools, see pages: • SER/L (A109).

ISCARTHREAD • CUT-GRIP

TIP-P-BSW

Precision Ground American BSW, BSF, BSP, Full Profile, Double-Ended External Threading Inserts with a Chipformer



Designation	Dimensions W	R	TPI	Tough ↔ Hard IC08	IC908
TIP 2P28-BSW	2.40	0.11	28.0	●	●
TIP 2P26-BSW	2.40	0.12	26.0	●	●
TIP 2P-24BSW	2.40	0.12	24.0		●
TIP 2P24-BSW	2.40	0.12	24.0	●	
TIP 2P-20BSW	2.40	0.16	20.0		●
TIP 2P20-BSW	2.40	0.16	20.0	●	
TIP 2P19-BSW	2.40	0.16	19.0	●	●
TIP 2P-18BSW	2.40	0.17	18.0		●
TIP 2P18-BSW	2.40	0.17	18.0	●	
TIP 2P-16BSW	2.40	0.19	16.0		●
TIP 2P16-BSW	2.40	0.19	16.0	●	
TIP 2P14-BSW	2.40	0.22	14.0	●	●
TIP 4P12-BSW	4.00	0.25	12.0		●
TIP 4P11-BSW	4.00	0.28	11.0	●	●
TIP 4P10-BSW	4.00	0.31	10.0		●

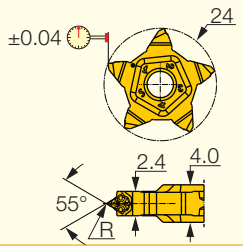
• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

ISCARTHREAD • PENTACUT

PENTA 24-W

Whitworth (BSW, BSF, BSP), B.S.84-1956 DIN 259 Pentagonal Full Profile, External Threading Inserts with a Chipformer



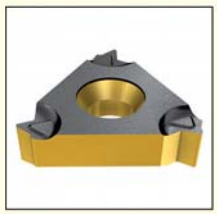
Designation	Dimensions TPI	R	IC908
PENTA 24-28-W	28.0	0.09	●
PENTA 24-19-W	19.0	0.15	●
PENTA 24-14-W	14.0	0.21	●

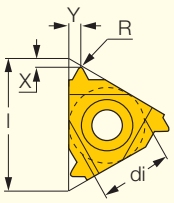
For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

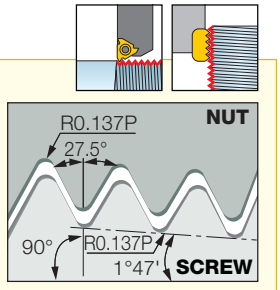
ISCARTHREAD

ER/L-BSPT

External BSPT (British Standard Pipe) B.S.21-1957, Full Profile, Laydown Threading Inserts







External right-hand shown

Designation	Dimensions						Tough ↔ Hard					
	di	TPI	l	R	X	Y	IC50M	IC250	IC508	IC808	IC908	IC1007
16ER 28 BSPT	9.52	28.0	16.00	0.11	0.6	0.6		●			●	
16ER/L 19 BSPT	9.52	19.0	16.00	0.16	0.8	0.9	●	●			●	
16ER/L 14 BSPT	9.52	14.0	16.00	0.21	1.0	1.2	●	●	●		●	
16ERB 14 BSPT (1)	9.52	14.0	16.00	0.21	1.0	1.2					●	
16ERM 14 BSPT (1)	9.52	14.0	16.00	0.21	1.0	1.2				●	●	●
16ER/L 11 BSPT	9.52	11.0	16.00	0.28	1.1	1.5	●	●			●	
16ERB 11 BSPT (1)	9.52	11.0	16.00	0.28	1.1	1.5					●	
16ERM 11 BSPT (1)	9.52	11.0	16.00	0.28	1.1	1.5					●	●

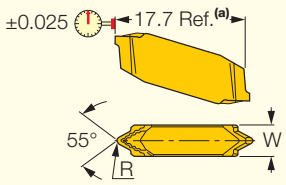
• For threading between walls use insert TIP-BSPT.
(1) With pressed chipformer.

For tools, see pages: • SER/L (A109).

ISCARTHREAD • CUT-GRIP

TIP-P-BSPT

Precision Ground BSPT (British Standard Pipe) Full Profile, Double-Ended External Threading Inserts with a Chipformer



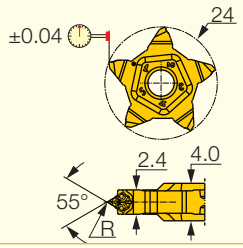
Designation	Dimensions			Tough ↔ Hard	
	W	R±0.03	TPI	IC08	IC908
TIP 2P28-BSPT	2.40	0.11	28.0	●	●
TIP 2P19-BSPT	2.40	0.16	19.0	●	●
TIP 2P14-BSPT	2.40	0.22	14.0	●	●
TIP 4P11-BSPT	4.00	0.28	11.0	●	●

• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

PENTA 24-BSPT

BSPT (British Standard Pipe) Full Profile, Pentagonal External Threading Precision Ground Inserts with a Chipformer

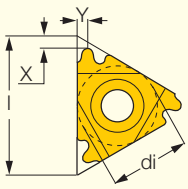


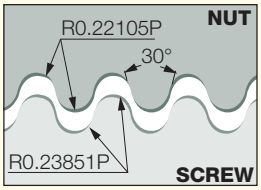
Designation	Dimensions TPI	R	IC908
PENTA 24-19-BSPT	19.0	0.16	●
PENTA 24-14-BSPT	14.0	0.22	●

For tools, see pages: • PCHBR/L (A43) • PCHPR/L (A42) • PCHR/L-24 (A41) • PCHR/L-24-JHP (A41).

ER/L-RND

External DIN 405, Round Laydown Threading Inserts, for Fire Fighting and Food Industry Pipe Couplings





External right-hand shown

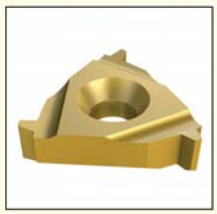
Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC908
16ER/L 10 RND	9.52	10.0	16.00	1.1	1.2		●	●		●
16ER/L 8 RND	9.52	8.0	16.00	1.4	1.3		●	●		●
16ERM 8 RND (1)	9.52	8.0	16.00	1.4	1.3					●
16ER/L 6 RND	9.52	6.0	16.00	1.5	1.7		●	●		●
16ERM 6 RND (1)	9.52	6.0	16.00	1.5	1.7				●	●

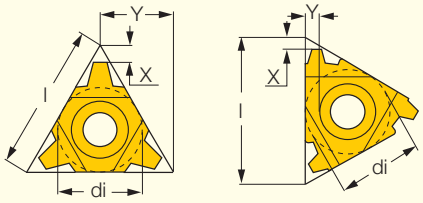
• Tolerance: Class 7H.
(1) With pressed chipformer

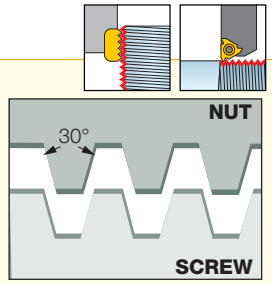
For tools, see pages: • SER/L (A109).

ER/L-TR

External Trapeze Shaped DIN 103 Laydown Threading Inserts, for Feed Screws







External right-hand shown

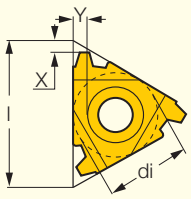
Designation	Dimensions					Tough ↔ Hard				
	di	Pitch	l	X	Y	IC228	IC50M	IC250	IC508	IC908
16ER/L 1.5 TR	9.52	1.50	16.00	1.0	1.1		●	●		●
16ER/L 2 TR	9.52	2.00	16.00	1.0	1.3		●	●		●
16ER/L 3 TR	9.52	3.00	16.00	1.3	1.5	●	●	●	●	●

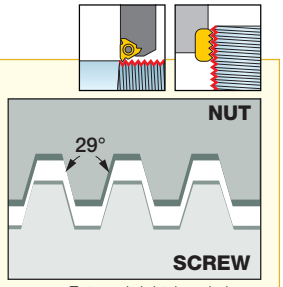
• DIN 103 04/1977,1502901/1977 Class 7H.

For tools, see pages: SER/L (A109).

ER/L-STACME

External STUB ACME Laydown Threading Inserts, for Control Valves and Shallow ACME Profile





External right-hand shown

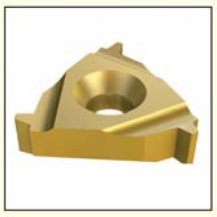
Designation	Dimensions di	TPI	l	X	Y	Dimensions IC50M	IC250	IC908
16ER/L 16 STACME	9.52	16.0	16.00	1.0	1.0	●	●	●
16ER/L 14 STACME	9.52	14.0	16.00	1.1	1.1	●		
16ER/L 12 STACME	9.52	12.0	16.00	1.2	1.2	●	●	●
16ER/L 10 STACME	9.52	10.0	16.00	1.3	1.3	●		
16ER/L 8 STACME	9.52	8.0	16.00	1.5	1.5	●	●	●
16ER/L 6 STACME	9.52	6.0	16.00	1.8	1.8		●	●

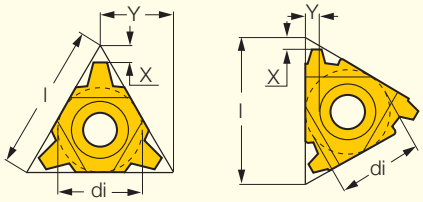
• STUB ACME ASME/ANSI B1.8-1988 Class 2G

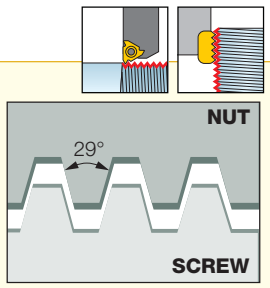
For tools, see pages: SER/L (A109).

ER/L-ACME

External ACME Profile Laydown Threading Inserts, for Feed Screws







External right-hand shown

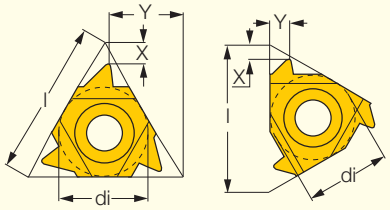
Designation	Dimensions di	TPI	l	X	Y	Dimensions IC50M	IC250	IC908
11ER 16 ACME	6.35	16.0	11.00	0.9	1.0			●
16ER/L 16 ACME	9.52	16.0	16.00	0.9	1.0	●		●
16ER/L 14 ACME	9.52	14.0	16.00	1.0	1.2	●		
16ER/L 12 ACME	9.52	12.0	16.00	1.1	1.2	●	●	●
16ER/L 10 ACME	9.52	10.0	16.00	1.3	1.3	●	●	
16ER/L 8 ACME	9.52	8.0	16.00	1.5	1.5	●	●	●

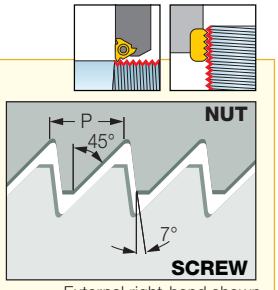
• ACME ASME/ANSI B1.5-1988 Class 3G

For tools, see pages: • SER/L (A109).

ER/L-ABUT

External American Buttress Laydown Threading Inserts, for High Force Transmission in One Direction





External right-hand shown

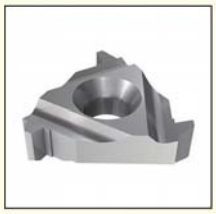
Designation	Dimensions di	TPI	l	X	Y	Tough ↔ Hard IC50M	IC250	IC08	IC908
11ER 20 ABUT	6.35	20.0	11.00	1.0	1.3		●	●	●
11ER 16 ABUT	6.35	16.0	11.00	1.0	1.5			●	
16ER 20 ABUT	9.52	20.0	16.00	1.0	1.3				●
16ER/L 16 ABUT	9.52	16.0	16.00	1.1	1.5		●		●
16ER/L 12 ABUT	9.52	12.0	16.00	1.4	2.0	●	●		●
16ER/L 10 ABUT	9.52	10.0	16.00	1.5	2.3				●

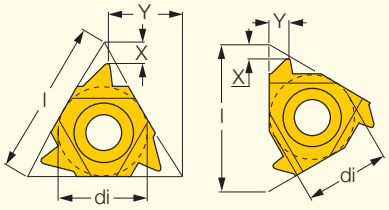
• ANSI B1.9-1973 Class 2

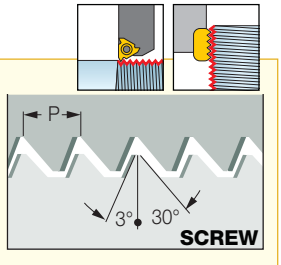
For tools, see pages: • SER/L (A109).

ER/L-SAGE

External Sagengenwinde Thread, Application for High Force in One Direction







External right-hand shown

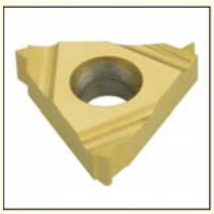
Designation	Dimensions di	Pitch	l	X	Y	IC908
16ER/L 2 SAGE	9.52	2.00	16.00	1.1	1.6	●

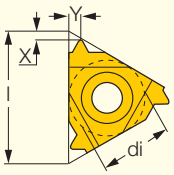
• Sagengenwinde (DIN 513)

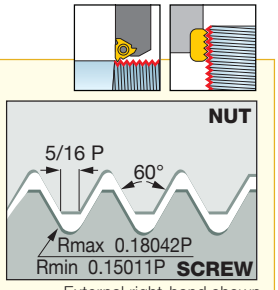
For tools, see pages: • SER/L (A109).

ER/L-UNJ

External UNJ Profile Laydown Threading Inserts, for Aviation and Aerospace Industry







External right-hand shown

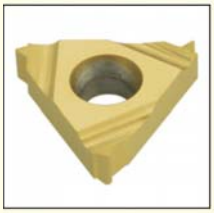
Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC50M	IC250	IC08	IC508	IC908
11ER 28 UNJ	6.35	28.0	11.00	0.14	0.6	0.6					●
11ER 24 UNJ	6.35	24.0	11.00	0.16	0.7	0.8					●
11ER/L 20 UNJ	6.35	20.0	11.00	0.19	0.8	0.9					●
11EL 18 UNJ	6.35	18.0	11.00	0.21	0.8	1.0					●
16ER 48 UNJ	9.52	48.0	16.00	0.08	0.6	0.6					●
16ER 44 UNJ	9.52	44.0	16.00	0.09	0.6	0.6					●
16ER 40 UNJ	9.52	40.0	16.00	0.10	0.6	0.6					●
16ER 36 UNJ	9.52	36.0	16.00	0.11	0.6	0.6					●
16ER/L 32 UNJ	9.52	32.0	16.00	0.12	0.6	0.6	●				●
16ER 28 UNJ	9.52	28.0	16.00	0.14	0.6	0.6	●	●			●
16ER/L 24 UNJ	9.52	24.0	16.00	0.16	0.7	0.8	●	●			●
16ER/L 20 UNJ	9.52	20.0	16.00	0.19	0.8	0.9	●	●		●	●
16ER/L 18 UNJ	9.52	18.0	16.00	0.21	0.8	1.0	●	●	●		●
16ER/L 16 UNJ	9.52	16.0	16.00	0.24	0.8	1.0	●				●
16ER/L 14 UNJ	9.52	14.0	16.00	0.27	1.0	1.2	●	●			●
16ER 13 UNJ	9.52	13.0	16.00	0.29	1.1	1.3					●
16ER/L 12 UNJ	9.52	12.0	16.00	0.32	1.1	1.4	●	●			●
16ER 10 UNJ	9.52	10.0	16.00	0.38	1.1	1.5	●				●
16ER/L 8 UNJ	9.52	8.0	16.00	0.48	1.2	1.6	●	●			

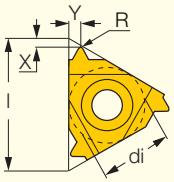
• UNJ MIL-S-8879C 9-1992 Class 3A

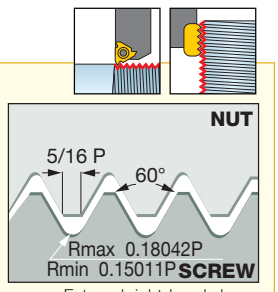
For tools, see pages: SER/L (A109).

ER-MJ

External MJ ISO 5855 Metric Full Profile Laydown Threading Inserts, for the Aviation and Aerospace Industry







External right-hand shown

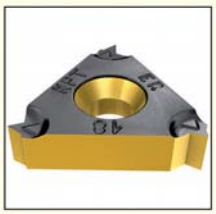
Designation	Dimensions di	Pitch	l	R	X	Y	Tough ↔ Hard IC250	IC908
16ER 1.00 MJ	9.52	1.00	16.00	0.16	0.7	0.8		●
16ER 1.25 MJ	9.52	1.25	16.00	0.20	0.8	0.9		●
16ER 1.50 MJ	9.52	1.50	16.00	0.23	0.8	1.0	●	●
16ER 2.00 MJ	9.52	2.00	16.00	0.32	1.0	1.3		●

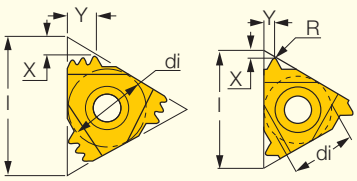
For tools, see pages: • SER/L (A109).

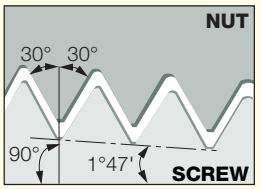
ISCARTHREAD

ER/L-NPT

External NPT (National Pipe Threads) Full Profile Laydown Threading Inserts, for Steam, Gas and Water Pipes







External right-hand shown

Designation	Dimensions di	TPI	l	R	X	Y	Tough ↔ Hard IC228	IC50M	IC250	IC508	IC808	IC908	IC1007
16ER 27 NPT	9.52	27.0	16.00	0.04	0.7	0.8		●	●			●	
16ER 18 NPT	9.52	18.0	16.00	0.06	0.8	1.0		●	●			●	
16ERB 18 NPT (1)	9.52	18.0	16.00	0.06	0.8	1.0						●	
16ERM 18 NPT (1)	9.52	18.0	16.00	0.05	0.8	1.0			●		●	●	
16ER/L 14 NPT	9.52	14.0	16.00	0.07	0.9	1.2	●	●	●	●		●	
16ERB 14 NPT (1)	9.52	14.0	16.00	0.07	0.9	1.2						●	
16ERM 14 NPT (1)	9.52	14.0	16.00	0.05	0.9	1.2		●	●		●	●	●
16ER/L 11.5 NPT	9.52	11.5	16.00	0.09	1.1	1.5		●	●	●		●	
16ERB 11.5 NPT (1)	9.52	11.5	16.00	0.09	1.1	1.5						●	
16ERM 11.5 NPT (1)	9.52	11.5	16.00	0.09	1.1	1.5			●			●	●
16ER 8 NPT	9.52	8.0	16.00	0.12	1.3	1.8		●	●			●	
16ERB 8 NPT (1)	9.52	8.0	16.00	0.12	1.3	1.8						●	
16ERM 8 NPT (1)	9.52	8.0	16.00	0.12	1.3	1.8			●		●	●	

• For threading between walls use GRIP-type insert TIP-NPT. • National Pipe Threads ANSI/ASME B1.20.1-1983

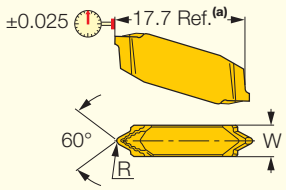
(1) With pressed chipformer.

For tools, see pages: • SER/L (A109).

ISCARTHREAD • CUT-GRIP

TIP-P-NPT

Precision Ground, NPT (National Pipe Threads) Full Profile, Double-Ended External Threading Inserts with a Chipformer



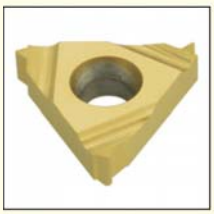
Designation	Dimensions W	R±0.03	TPI	Tough ↔ Hard IC08	IC908
TIP 2P27-NPT	2.40	0.05	27.0	●	●
TIP 2P18-NPT	2.40	0.07	18.0	●	●
TIP 2P14-NPT	2.40	0.09	14.0		●
TIP 4P11.5-NPT	4.00	0.10	11.5	●	●
TIP 4P8-NPT	4.00	0.13	8.0	●	●

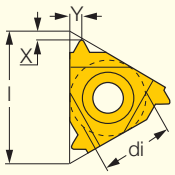
• (a) TIP inserts are 1.6 mm longer than GIP in the same pocket. • Toolholder seat needs to be modified according to insert profile to ensure clearance.

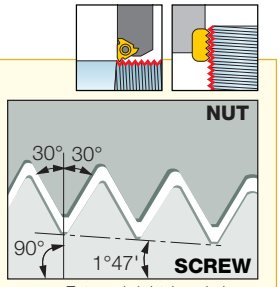
For tools, see pages: • CGHN-D (A25) • GHDR/L (short pocket) (A24) • GHGR/L (A25) • GHMPR/L (A23) • GHMR/L (A23) • GHSR/L (A15) • GHSR/L-JHP-SL (A14).

ER-NPTF

External NPTF (National Pipe Threads) Full Profile Laydown Threading Inserts for Steam, Gas and Water Pipes







External right-hand shown

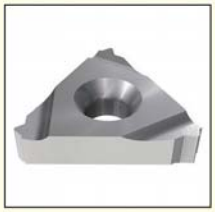
Designation	Dimensions di	TPI	l	X	Y	Z	Tough ↔ Hard IC50M	IC250	IC908
11ER 18 NPTF	6.35	18.0	11.00	0.8	1.0	1		●	
11ER 14 NPTF	6.35	14.0	11.00	0.8	1.0	1			●
16ER 27 NPTF	9.52	27.0	16.00	0.7	0.7	1	●		●
16ER 18 NPTF	9.52	18.0	16.00	0.8	1.0	1			●
16ER 14 NPTF	9.52	14.0	16.00	0.9	1.2	1	●	●	●
16ER 11.5 NPTF	9.52	11.5	16.00	1.1	1.5	1	●		●

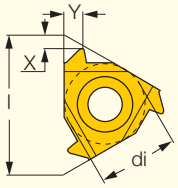
• (National Pipe Threads-Dry Seal) ANSI/ASME B1.20.1-1976 full profile.

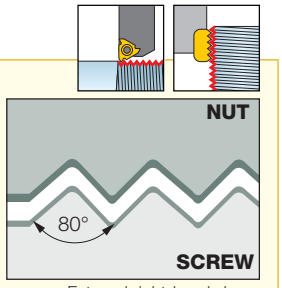
For tools, see pages: • SER/L (A109).

ER-PG

External Threading Inserts for the Electrical Industry







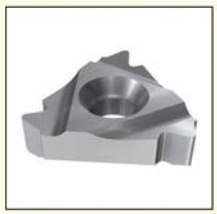
External right-hand shown

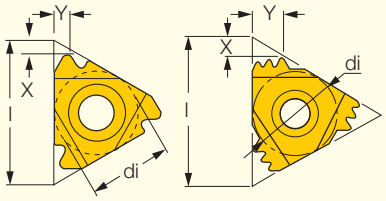
Designation	Dimensions di	Pitch	l	X	Y	Tough ↔ Hard IC08	IC908
16ER 16 PG	9.52	16.00	16.00	0.8	1.0		●
16ER 18 PG	9.52	18.00	16.00	0.8	0.9		●
16ER 20 PG	9.52	20.00	16.00	0.7	0.8	●	●

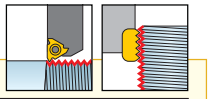
For tools, see pages: • SER/L (A109).

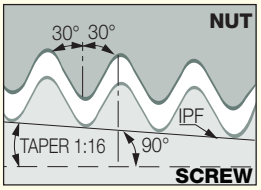
ER/L-API RD

External API - Oil Thread, Round Profile Laydown Threading Inserts









External right-hand shown

Designation	Dimensions						Tough ↔ Hard			
	di	TPI	l	IPF	X	Y	IC50M	IC250	IC508	IC908
16ER 10 API RD	9.52	10.0	16.00	0.75	1.5	1.4	●	●		●
16ER/L 8 API RD	9.52	8.0	16.00	0.75	1.3	1.6	●	●	●	●

• API Spec 5B8-1996

For tools, see pages: SER/L (A109).