Parting, Grooving

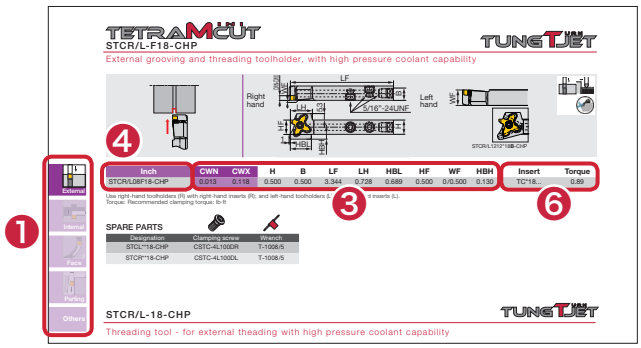
Parting, Grooving - Content structure

- Products are listed by application.
- Each item is listed by product series.
- Internal grooving tools are listed according to the order of the minimum machining diameter (from small to larger).

How to use the page

Method ①

Select the application (❶) at the left end of each page and choose a designation you need (❹) in the dimension table (❸). Applicable inserts are shown in (❻).

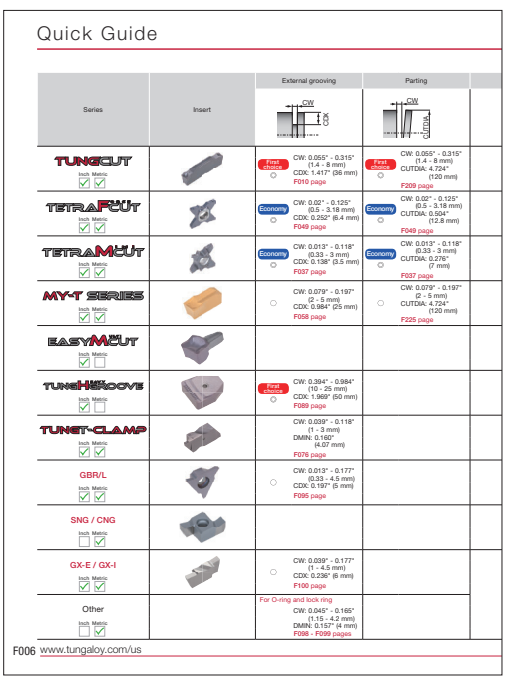


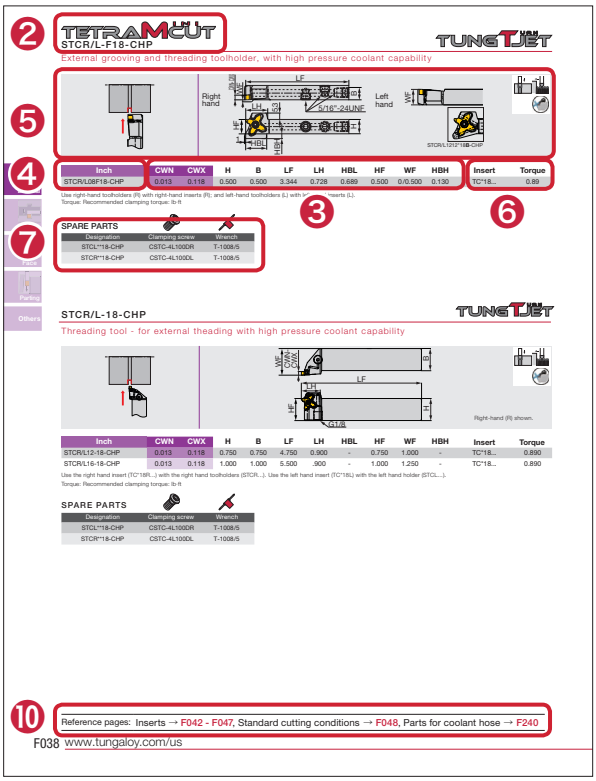
Method ②

Select the tool series name on F004 - F005 and check the details on the product page.

Method ③

Select the tool series or the tool specification from Quick Guide on F006 - F007 and see the details on each page.





TETRAMICUT

STCR/L-F18-CHP

External grooving and threading toolholder, with high pressure coolant capability

TUNGTJET

Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L08F18-CHP	0.013	0.118	0.500	0.500	3.344	0.728	0.689	0.500	0/0.500	0.130	TC*18...	0.89

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

Torque: Recommended clamping torque: lb·ft

SPARE PARTS

Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

STCR/L-18-CHP

Threading tool - for external theading with high pressure coolant capability

TUNGTJET

Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L12-18-CHP	0.013	0.118	0.750	0.750	4.750	0.900	-	0.750	1.000	-	TC*18...	0.890
STCR/L16-18-CHP	0.013	0.118	1.000	1.000	5.500	.900	-	1.000	1.250	-	TC*18...	0.890

Use the right hand insert (TC*18R...) with the right hand toolholders (STCR...). Use the left hand insert (TC*18L) with the left hand holder (STCL...).

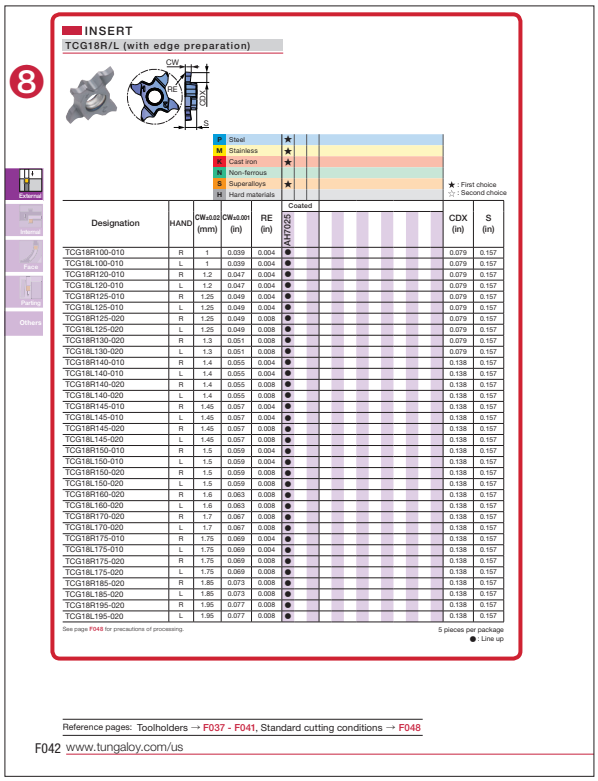
Torque: Recommended clamping torque: lb·ft

SPARE PARTS

Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: Inserts → F042 - F047, Standard cutting conditions → F048, Parts for coolant hose → F240

F038 www.tungaloy.com/us



INSERT

TCG18R/L (with edge preparation)

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	AH7025	CDX (in)	S (in)
TCG18R100-010	R	1	0.039	0.004	●	0.079	0.157
TCG18L100-010	L	1	0.039	0.004	●	0.079	0.157
TCG18R120-010	R	1.2	0.047	0.004	●	0.079	0.157
TCG18L120-010	L	1.2	0.047	0.004	●	0.079	0.157
TCG18R125-010	R	1.25	0.049	0.004	●	0.079	0.157
TCG18L125-010	L	1.25	0.049	0.004	●	0.079	0.157
TCG18R125-020	R	1.25	0.049	0.008	●	0.079	0.157
TCG18L125-020	L	1.25	0.049	0.008	●	0.079	0.157
TCG18R130-020	R	1.3	0.051	0.008	●	0.079	0.157
TCG18L130-020	L	1.3	0.051	0.008	●	0.079	0.157
TCG18R140-010	R	1.4	0.055	0.004	●	0.138	0.157
TCG18L140-010	L	1.4	0.055	0.004	●	0.138	0.157
TCG18R140-020	R	1.4	0.055	0.008	●	0.138	0.157
TCG18L140-020	L	1.4	0.055	0.008	●	0.138	0.157
TCG18R145-010	R	1.45	0.057	0.004	●	0.138	0.157
TCG18L145-010	L	1.45	0.057	0.004	●	0.138	0.157
TCG18R145-020	R	1.45	0.057	0.008	●	0.138	0.157
TCG18L145-020	L	1.45	0.057	0.008	●	0.138	0.157
TCG18R150-010	R	1.5	0.059	0.004	●	0.138	0.157
TCG18L150-010	L	1.5	0.059	0.004	●	0.138	0.157
TCG18R150-020	R	1.5	0.059	0.008	●	0.138	0.157
TCG18L150-020	L	1.5	0.059	0.008	●	0.138	0.157
TCG18R160-020	R	1.6	0.063	0.008	●	0.138	0.157
TCG18L160-020	L	1.6	0.063	0.008	●	0.138	0.157
TCG18R170-020	R	1.7	0.067	0.008	●	0.138	0.157
TCG18L170-020	L	1.7	0.067	0.008	●	0.138	0.157
TCG18R175-010	R	1.75	0.069	0.004	●	0.138	0.157
TCG18L175-010	L	1.75	0.069	0.004	●	0.138	0.157
TCG18R175-020	R	1.75	0.069	0.008	●	0.138	0.157
TCG18L175-020	L	1.75	0.069	0.008	●	0.138	0.157
TCG18R185-020	R	1.85	0.073	0.008	●	0.138	0.157
TCG18L185-020	L	1.85	0.073	0.008	●	0.138	0.157
TCG18R195-020	R	1.95	0.077	0.008	●	0.138	0.157
TCG18L195-020	L	1.95	0.077	0.008	●	0.138	0.157

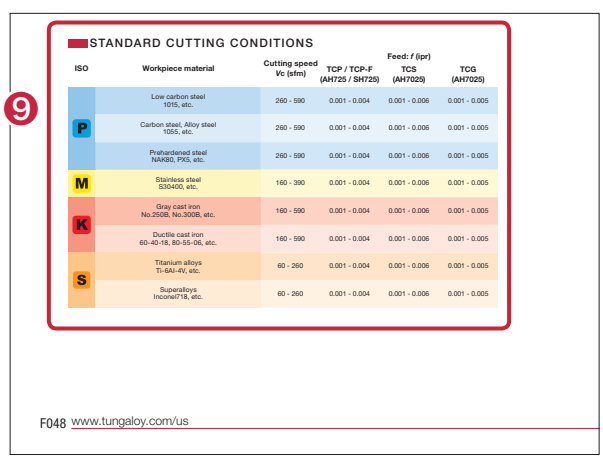
★ : First choice
☆ : Second choice

See page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

F042 www.tungaloy.com/us



STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed Vc (sfm)	Feed: f (ipr) TCP / TCP-F (AH725 / SH725)	TCS (AH7025)	TCG (AH7025)
P	Low carbon steel 1015, etc.	260 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Carbon steel, Alloy steel 1055, etc.	260 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Prehardened steel NAK80, PX5, etc.	260 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
M	Stainless steel S30400, etc.	160 - 390	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
K	Gray cast iron No.25(B), No.30(B), etc.	160 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Ductile cast iron 60-40-18, 80-55-06, etc.	160 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
S	Titanium alloys Ti-6Al-4V, etc.	60 - 260	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Superalloys Inconel718, etc.	60 - 260	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005

F048 www.tungaloy.com/us

❶ : Application
❷ : Tool series name
❸ : Dimension table
❹ : Toolholder designation
e.g. right-hand, 08 square shank

→ **STCR 08 F18-CHP**

R/L in the designation means the stock either right or left hand respectively.

❺ : Dimension (conforming to ISO13399)
❻ : Applicable insert
❼ : Spare parts
❽ : Insert
❾ : Standard cutting conditions
❿ : Reference pages

When ordering

- Please specify the designation and quantity for toolholders.
  e.g. **CTER10-2T08 ...** 1
- Please specify the designation and quantity for shank and blade set when ordering both.
  e.g. **CHSR12-CHP ...** 1, **CAER-2T20-CHP...** 1 (one shank per package, one blade per package)
  * Clamp screw for blade is included.
- Please specify the designation, grade, and quantity for inserts.
  e.g. **DGS3-020 AH7025 ...** 10 (10 inserts per package)
  *You will find a note if the number per package is not 10.

External grooving

F010 page

Max. groove depth: 0.252" (6.4 mm)

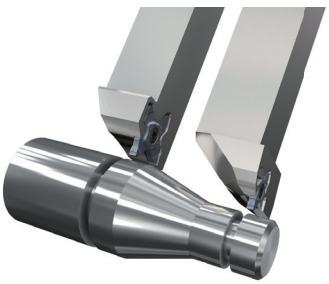
Economy TETRAMINICUT F037 page

Economy TETRAFORCECUT F049 page

GBR/L32 F095 page

GBR/L42 F096 page

GX-E F100 page



Max. groove depth: 1.969" (50 mm)

First choice TUNGCUT F010 page

TUNGHEAVYGROOVE F089 page

MY-T SERIES

Flex, CGD, G series , CDT F058 page

For Swiss lathes

Economy TETRAMINICUT F037 page

Economy TETRAFORCECUT F049 page

TUNGCUT F014 page

J-SERIES (JTGR/L) F103 page

TUNGHEAVYGROOVE F089 page

Internal grooving

F116 page

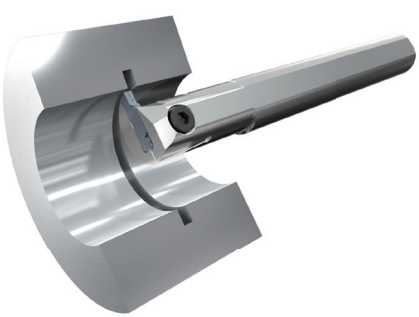
General internal grooving and turning

First choice TUNGCUT F116 page

MY-T SERIES

G series F136 page

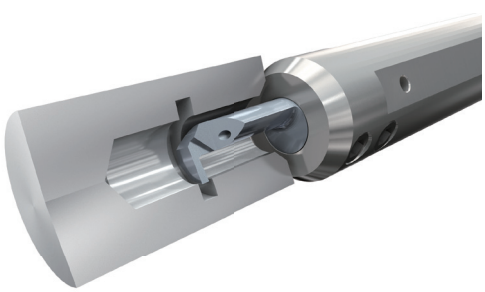
GBR/L32 F155 page



Small-diameter internal grooving

TINYMINITURN G070 page

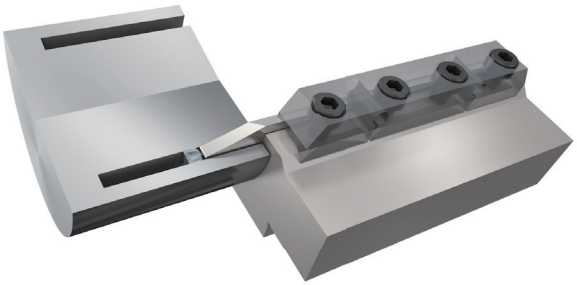
SNG F158 page



Face grooving

F167 page

First choice TUNGCUT	F171 page
EASYMULTICUT	F167 page
Economy TETRAMINICUT	F037 page
MY-T SERIES	F194 page
GX-F	F206 page

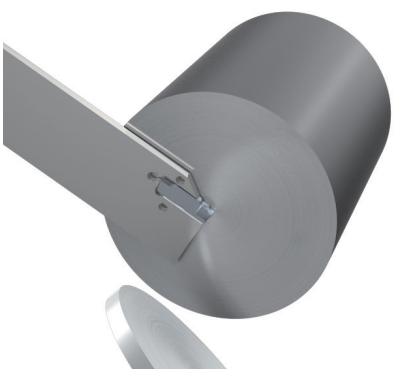


Parting

F209 page

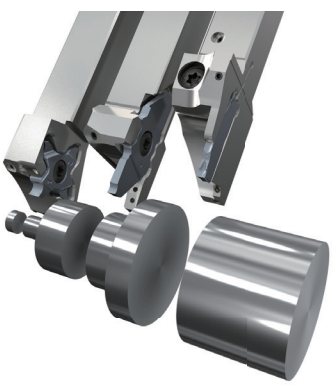
General parting

First choice TUNGCUT	F209 page
Economy TETRAFORCECUT	F049 page
MY-T SERIES	F225 page

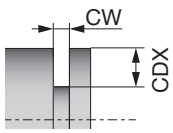
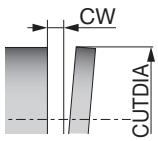
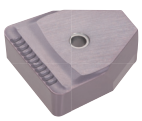
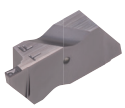
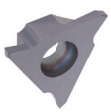
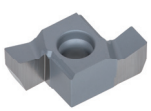
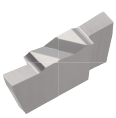


For Swiss lathes

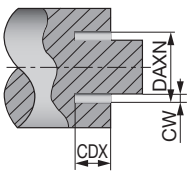
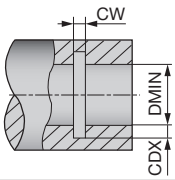
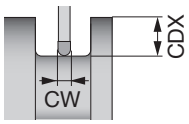
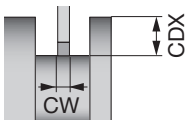
First choice DUOJUSTCUT	G111 page
TUNGCUT	F014 page
Economy TETRAFORCECUT	F049 page
Economy TETRAMINICUT	F037 page
J-SERIES	F103 page



Quick Guide

Series	Insert	External grooving	Parting
			
TUNGCUT Inch ✓ Metric ✓		First choice ◎ CW: 0.055" - 0.315" (1.4 - 8 mm) CDX: 1.417" (36 mm) F010 page	First choice ◎ CW: 0.055" - 0.315" (1.4 - 8 mm) CUTDIA: 4.724" (120 mm) F209 page
TETRAFORCECUT Inch ✓ Metric ✓		Economy ◎ CW: 0.02" - 0.125" (0.5 - 3.18 mm) CDX: 0.252" (6.4 mm) F049 page	Economy ◎ CW: 0.02" - 0.125" (0.5 - 3.18 mm) CUTDIA: 0.504" (12.8 mm) F049 page
TETRAMINICUT Inch ✓ Metric ✓		Economy ◎ CW: 0.013" - 0.118" (0.33 - 3 mm) CDX: 0.138" (3.5 mm) F037 page	Economy ◎ CW: 0.013" - 0.118" (0.33 - 3 mm) CUTDIA: 0.276" (7 mm) F037 page
MY-T SERIES Inch ✓ Metric ✓		○ CW: 0.079" - 0.197" (2 - 5 mm) CDX: 0.984" (25 mm) F058 page	○ CW: 0.079" - 0.197" (2 - 5 mm) CUTDIA: 4.724" (120 mm) F225 page
EASYMULTICUT Inch ✓ Metric ☐			
TUNGHEAVYGROOVE Inch ✓ Metric ☐		First choice ◎ CW: 0.394" - 0.984" (10 - 25 mm) CDX: 1.969" (50 mm) F089 page	
TUNGT-CLAMP Inch ✓ Metric ✓		CW: 0.039" - 0.118" (1 - 3 mm) DMIN: 0.160" (4.07 mm) F076 page	
GBR/L Inch ✓ Metric ✓		○ CW: 0.013" - 0.177" (0.33 - 4.5 mm) CDX: 0.197" (5 mm) F095 page	
SNG / CNG Inch ☐ Metric ✓			
GX-E / GX-I Inch ✓ Metric ✓		○ CW: 0.039" - 0.177" (1 - 4.5 mm) CDX: 0.236" (6 mm) F100 page	
Other Inch ☐ Metric ✓		For O-ring and lock ring CW: 0.045" - 0.165" (1.15 - 4.2 mm) DMIN: 0.157" (4 mm) F098 - F099 pages	

◎ : First choice
○ : Usable

	Face grooving	Internal grooving	Profiling (Full-R)	Turning
				
	First choice ◎ CW: 0.118" - 0.236" (3 - 6 mm) CDX: 0.984" (25 mm) DAXN: 0.984" (25 mm) F171 page	First choice ◎ CW: 0.079" - 0.315" (2 - 8 mm) CDX: 0.394" (10 mm) DMIN: 0.984" (25 mm) F116 page	First choice ◎ CW: 0.118" - 0.315" (3 - 8 mm) CDX: 1.417" (36 mm) F010 page	First choice ◎ CW: 0.118" - 0.315" (3 - 8 mm) CDX: 1.417" (36 mm) F010 page
			Economy ◎ CW: 0.062" - 0.118" (1.57 - 3 mm) CDX: 0.252" (6.4 mm) F049 page	
	○ CW: 0.013" - 0.118" (0.33 - 3 mm) CDX: 0.118" (3 mm) DAXN: 2.559" (65 mm) F037 page			
	○ CW: 0.118" - 0.197" (3 - 5 mm) CDX: 0.866" (22 mm) DAXN: 1.181" (30 mm) F194 page	○ CW: 0.118" - 0.197" (3 - 5 mm) CDX: 0.236" (6 mm) DMIN: 0.984" (25 mm) F136 page	○ CW: 0.118" - 0.197" (3 - 5 mm) CDX: 0.984" (25 mm) F058 page	○ CW: 0.118" - 0.197" (3 - 5 mm) CDX: 0.984" (25 mm) F058 page
	◎ CW: 0.157" - 0.236" (4 - 6 mm) CDX: 2.559" (65 mm) DAXN: 1.181" (30 mm) F167 page			
		CW: 0.039" - 0.118" (1 - 3 mm) CDX: 0.160"(4.07 mm) DMIN: 1.374"(34.9 mm) F143 page		
		◎ CW: 0.013" - 0.177" (0.33 - 4.5 mm) CDX: 0.098" (2.5 mm) DMIN: 1.378" (35 mm) F155 page	◎ CW: 0.039" - 0.157" (1 - 4 mm) CDX: 0.197" (5 mm) F093 page	
		○ CW: 0.039" - 0.197" (1 - 5 mm) CDX: 0.197" (5 mm) DMIN: 0.315" (8 mm) F158 page		
		○ CW: 0.039" - 0.177" (1 - 4.5 mm) CDX: 0.236" (6 mm) DMIN: 2.165" (55 mm) F164 page		
		・CGXR/L CW: 0.039" - 0.197" (1 - 5 mm) DMIN: 0.787" (20 mm) F162 page		

TUNGCUT

Multi-functional grooving tool series with excellent versatility

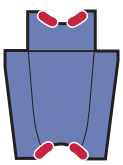
New modular holder system enhances versatility of existing monoblock holder and TungCap (PSC) lines.

High-pressure coolant system improves chip flow and tool life.

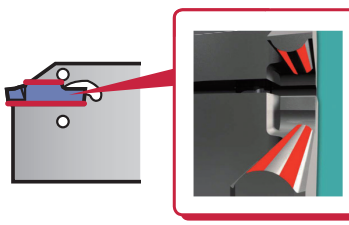
High clamping rigidity

For stable tool life and accuracy

Clamping system

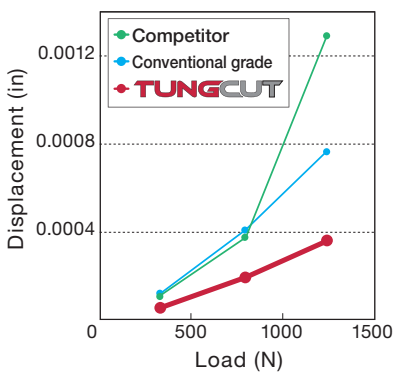


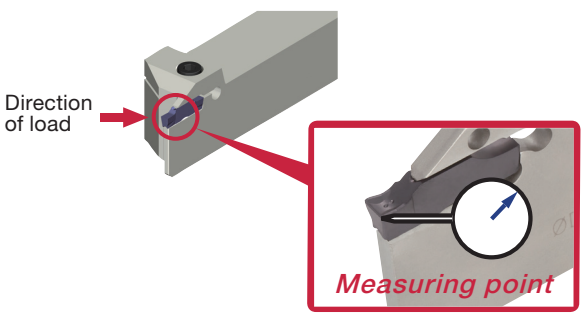
● *Stable and safe contact areas!*



High repeatability and durability due to long pocket!

Minimizes cutting edge displacement



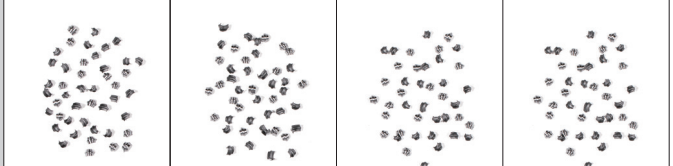
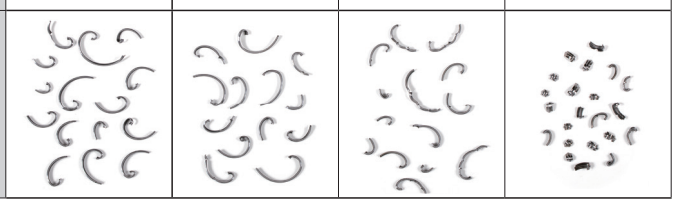


Excellent chip control at low feed rates

P Mild steel (SUJ2)

First choice chipbreaker for low carbon (soft) steel. Excellent chip control at low feed rates.

Workpiece material : SUJ2
Toolholder : CTER16-3T09
Insert : DGL3-025
Groove width : 0.118"

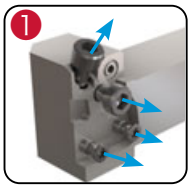
	f = 0.001 ipr	*f* = 0.002 ipr	*f* = 0.003 ipr	*f* = 0.004 ipr
Vc = 164 sfm				
Vc = 328 sfm				

Reference pages: F010, F116, F171, F209

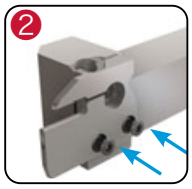
How to install and remove the blade and insert

TUNGMODULAR SYSTEM

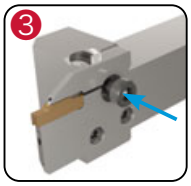
Assembly



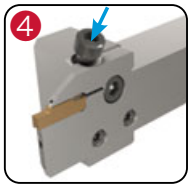
Remove all 4 screws and ensure the O rings are all in place.



Place the blade and tighten 2 bottom clamping screws.



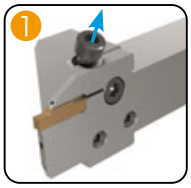
Place the insert in the pocket and tighten the fixing screw in the center.



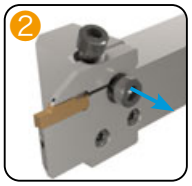
Place the long screw in the angular direction and tighten to clamp the insert.

Please follow the installation order as shown above.
When the screws are tightened in the ❹→❸ order, the insert clamping may be insufficient and unstable.

Disassembly

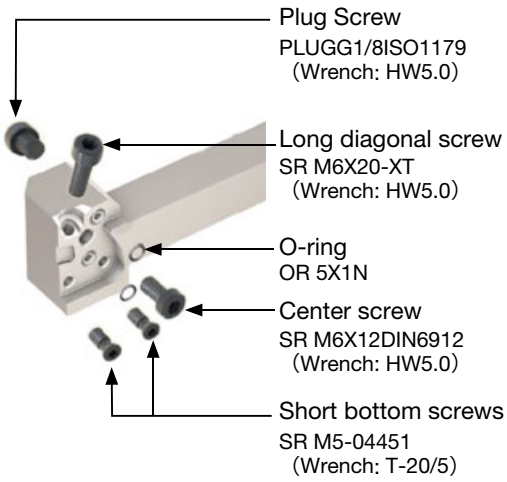


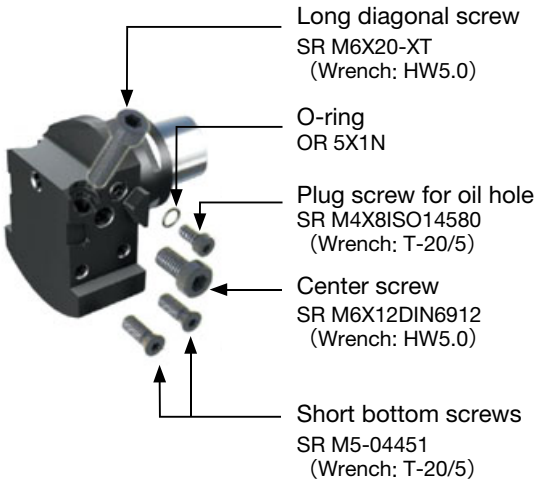
First loosen the long screw in the angular direction.



Loosen the Fixing screw in the center and remove the insert.

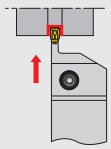
Loosing the long screw alone may not release the insert.

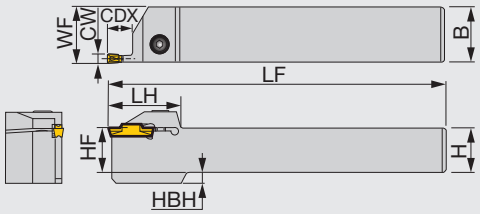


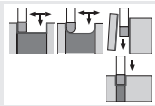


All parts listed here are included in the tool holder.

External grooving, parting and turning toolholder







Right hand (R) shown.

Inch	CW (in)	CW (mm)	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque
CTER/L10-2T08	0.079	2	2	0.315	0.625	0.625	4.500	1.299	0.625	0.629	0.157	3.69
CTER/L12-2T08	0.079	2	2	0.315	0.750	0.750	5.000	1.299	0.750	0.754	-	3.69
CTER/L16-2T08	0.079	2	2	0.315	1.000	1.000	6.000	1.299	1.000	1.004	-	3.69
CTER/L10-2T12	0.079	2	2	0.472	0.625	0.625	4.500	1.260	0.625	0.629	0.157	3.69
CTER/L12-2T12	0.079	2	2	0.472	0.750	0.750	5.000	1.260	0.750	0.754	-	3.69
CTER/L16-2T12	0.079	2	2	0.472	1.000	1.000	6.000	1.260	1.000	1.004	-	3.69
CTER/L10-2T17	0.079	2	2	0.669	0.625	0.625	4.500	1.457	0.625	0.629	0.157	3.69
CTER/L12-2T17	0.079	2	2	0.669	0.750	0.750	5.000	1.457	0.750	0.754	-	3.69
CTER/L16-2T17	0.079	2	2	0.669	1.000	1.000	6.000	1.457	1.000	1.004	-	3.69
CTER/L10-3T09	0.118	3	3	0.354	0.625	0.625	4.500	1.260	0.625	0.637	0.157	3.69
CTER/L12-3T09	0.118	3	3	0.354	0.750	0.750	5.000	1.260	0.750	0.762	-	3.69
CTER/L16-3T09	0.118	3	3	0.354	1.000	1.000	6.000	1.260	1.000	1.012	-	3.69
CTER/L12-3T12	0.118	3	3	0.472	0.750	0.750	5.000	1.260	0.750	0.763	-	3.69
CTER/L16-3T12	0.118	3	3	0.472	1.000	1.000	6.000	1.260	1.000	1.012	-	3.69
CTER/L10-3T20	0.118	3	3	0.787	0.625	0.625	4.500	1.516	0.625	0.637	0.157	3.69
CTER/L12-3T20	0.118	3	3	0.787	0.750	0.750	5.000	1.516	0.750	0.762	-	3.69
CTER/L16-3T20	0.118	3	3	0.787	1.000	1.000	6.000	1.516	1.000	1.012	-	3.69
CTER/L16-3T25	0.118	3	3	0.984	1.000	1.000	6.000	1.752	1.000	1.012	-	3.69
CTER/L10-4T10	0.157	4	4	0.394	0.625	0.625	4.500	1.260	0.625	0.645	0.157	6.27
CTER/L12-4T10	0.157	4	4	0.394	0.750	0.750	5.000	1.260	0.750	0.770	-	6.27
CTER/L16-4T10	0.157	4	4	0.394	1.000	1.000	6.000	1.260	1.000	1.020	-	6.27
CTER/L12-4T15	0.157	4	4	0.590	0.750	0.750	5.000	1.299	0.750	0.770	-	6.27
CTER/L16-4T15	0.157	4	4	0.590	1.000	1.000	6.000	1.299	1.000	1.020	-	6.27
CTER/L10-4T25	0.157	4	4	0.984	0.625	0.625	4.500	1.772	0.625	0.645	0.157	6.27
CTER/L12-4T25	0.157	4	4	0.984	0.750	0.750	5.000	1.772	0.750	0.770	-	6.27
CTER/L16-4T25	0.157	4	4	0.984	1.000	1.000	6.000	1.772	1.000	1.020	-	6.27
CTER/L20-4T25	0.157	4	4	0.984	1.250	1.250	7.000	1.772	1.250	1.270	-	6.27
CTER/L12-5T12	0.197	5	5	0.472	0.750	0.750	5.000	1.457	0.750	0.774	-	6.27
CTER/L16-5T12	0.197	5	5	0.472	1.000	1.000	6.000	1.457	1.000	1.024	-	6.27
CTER/L16-5T20	0.197	5	5	0.787	1.000	1.000	6.000	1.457	1.000	1.024	-	6.27
CTER/L16-5T32	0.197	5	5	1.260	1.000	1.000	6.000	2.205	1.000	1.024	-	6.27
CTER/L20-5T32	0.197	5	5	1.260	1.250	1.250	7.000	2.205	1.250	1.274	-	8.85
CTER/L12-6T12	0.236	6	6	0.472	0.750	0.750	5.000	1.457	0.750	0.770	-	8.85
CTER/L16-6T12	0.236	6	6	0.472	1.000	1.000	6.000	1.457	1.000	1.020	0.276	8.85
CTER/L16-6T20	0.236	6	6	0.787	1.000	1.000	6.000	1.614	1.000	1.023	0.276	8.85
CTER/L16-6T32	0.236	6	6	1.260	1.000	1.000	6.000	2.205	1.000	1.020	0.276	8.85
CTER/L20-6T32	0.236	6	6	1.260	1.250	1.250	7.000	2.205	1.250	1.270	-	8.85
CTER/L16-8T16	0.315	8	8	0.630	1.000	1.000	6.000	1.850	1.000	1.039	0.276	8.85
CTER/L16-8T25	0.315	8	8	0.984	1.000	1.000	6.000	1.850	1.000	1.039	0.276	8.85
CTER/L20-8T25	0.315	8	8	0.984	1.250	1.250	7.000	1.850	1.250	1.289	-	8.85
CTER/L16-8T36	0.315	8	8	1.417	1.000	1.000	6.000	2.362	1.000	1.039	0.276	8.85
CTER/L20-8T36	0.315	8	8	1.417	1.250	1.250	7.000	2.362	1.250	1.289	-	8.85

When groove depth is larger than (insert length - 0.059"), please use 1-cornered insert.
(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: lbs·ft

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

Metric	CW	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque*
CTER/L1616-2T08	2	2	8	16	16	110	33	16	16.1	4	5
CTER/L2020-2T08	2	2	8	20	20	125	33	20	20.1	-	5
CTER/L2525-2T08	2	2	8	25	25	150	33	25	25.1	-	5
CTER/L1616-2T12	2	2	12	16	16	110	32	16	16.1	4	5
CTER/L2020-2T12	2	2	12	20	20	125	32	20	20.1	-	5
CTER/L2525-2T12	2	2	12	25	25	150	32	25	25.1	-	5
CTER/L1616-2T17	2	2	17	16	16	110	37	16	16.1	4	5
CTER/L2020-2T17	2	2	17	20	20	125	37	20	20.1	-	5
CTER/L2525-2T17	2	2	17	25	25	150	37	25	25.1	-	5
CTER/L1616-3T09	3	3	9	16	16	110	32	16	16.3	4	5
CTER/L2020-3T09	3	3	9	20	20	125	32	20	20.3	-	5
CTER/L2525-3T09	3	3	9	25	25	150	32	25	25.3	-	5
CTER/L2020-3T12	3	3	12	20	20	125	32	20	20.3	-	5
CTER/L2525-3T12	3	3	12	25	25	150	32	25	25.3	-	5
CTER/L1616-3T20	3	3	20	16	16	110	38.5	16	16.3	4	5
CTER/L2020-3T20	3	3	20	20	20	125	38.5	20	20.3	-	5
CTER/L2525-3T20	3	3	20	25	25	150	38.5	25	25.3	-	5
CTER/L2525-3T25	3	3	25	25	25	150	44.5	25	25.3	-	5
CTER/L1616-4T10	4	4	10	16	16	110	32	16	16.5	4	8.5
CTER/L2020-4T10	4	4	10	20	20	125	32	20	20.5	-	8.5
CTER/L2525-4T10	4	4	10	25	25	150	32	25	25.5	-	8.5
CTER/L2020-4T15	4	4	15	20	20	125	33	20	20.5	-	8.5
CTER/L2525-4T15	4	4	15	25	25	150	33	25	25.5	-	8.5
CTER/L1616-4T25	4	4	25	16	16	110	45	16	16.5	4	8.5
CTER/L2020-4T25	4	4	25	20	20	125	45	20	20.5	-	8.5
CTER/L2525-4T25	4	4	25	25	25	150	45	25	25.5	-	8.5
CTER/L3232-4T25	4	4	25	32	32	170	45	32	32.5	-	8.5
CTER/L2020-5T12	5	5	12	20	20	125	37	20	20.6	-	8.5
CTER/L2525-5T12	5	5	12	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T20	5	5	20	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T32	5	5	32	25	25	150	56	25	25.6	-	8.5
CTER/L3232-5T32	5	5	32	32	32	170	56	32	32.6	-	8.5
CTER/L2020-6T12	6	6	12	20	20	125	37	20	20.6	-	12
CTER/L2525-6T12	6	6	12	25	25	150	37	25	25.6	7	12
CTER/L2525-6T20	6	6	20	25	25	150	41	25	25.6	-	12
CTER/L2525-6T32	6	6	32	25	25	150	56	25	25.6	7	12
CTER/L3232-6T32	6	6	32	32	32	170	56	32	32.6	-	12
CTER/L2525-8T16	8	8	16	25	25	150	47	25	26.1	7	12
CTER/L2525-8T25	8	8	25	25	25	150	47	25	26.1	7	12
CTER/L3232-8T25	8	8	25	32	32	170	47	32	33.1	-	12
CTER/L2525-8T36	8	8	36	25	25	150	60	25	26.1	7	12
CTER/L3232-8T36	8	8	36	32	32	170	60	32	33.1	-	12

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert. (1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: N·m

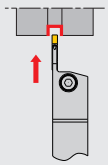
SPARE PARTS

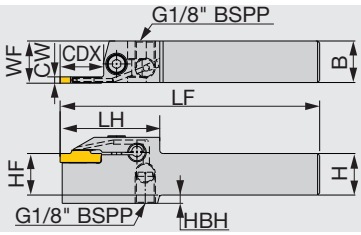
Designation	Clamping screw	Wrench
CTER/L10-2T08, CTER/L1616-2T08	CM5X0.8X16-A	P-4
CTER/L12-2T08, CTER/L2020-2T08	CM5X0.8X20-A	P-4
CTER/L16-2T08, CTELR/L2525-2T08	CM5X0.8X25-A	P-4
CTER/L10-2T12, CTER/L1616-2T12	CM5X0.8X16-A	P-4
CTER/L12-2T12, CTER/L2020-2T12	CM5X0.8X20-A	P-4
CTER/L16-2T12, CTER/L2525-2T12	CM5X0.8X25-A	P-4
CTER/L10-2T17, CTER/L1616-2T17	CM5X0.8X16-A	P-4
CTER/L12-2T17, CTER/L2020-2T17	CM5X0.8X20-A	P-4
CTER/L16-2T17, CTER/L2525-2T17	CM5X0.8X25-A	P-4
CTER/L10-3T09, CTER/L1616-3T09	CM5X0.8X16-A	P-4
CTER/L12-3T09, CTER/L2020-3T09	CM5X0.8X20-A	P-4
CTER/L12-3T12, CTER/L2525-3T09	CM5X0.8X25-A	P-4
CTER/L16-3T12, CTER/L2020-3T12	CM5X0.8X20-A	P-4
CTER/L10-3T20, CTER/L2525-3T12	CM5X0.8X25-A	P-4
CTER/L12-3T20, CTER/L1616-3T20	CM5X0.8X16-A	P-4
CTER/L16-3T20, CTER/L2020-3T20	CM5X0.8X20-A	P-4
CTER/L16-3T25, CTER/L2525-3T20.25	CM5X0.8X25-A	P-4
CTER/L10-4T10, CTER/L1616-4T10	CM6X1X16-A	P-5
CTER/L12-4T10, CTER/L2020-4T10	CM6X1X20-A	P-5
CTER/L16-4T10, CTER/L2525-4T10	CM6X1X25-A	P-5

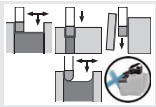
SPARE PARTS

Designation	Clamping screw	Wrench
CTER/L12-4T15, CTER/L2020-4T15	CM6X1X20-A	P-5
CTER/L16-4T15, CTER/L2525-4T15	CM6X1X25-A	P-5
CTER/L10-4T25, CTER/L1616-4T25	CM6X1X16-A	P-5
CTER/L12-4T25, CTER/L2020-4T25	CM6X1X20-A	P-5
CTER/L16-4T25, CTER/L2525-4T25	CM6X1X25-A	P-5
CTER/L20-4T25, CTER/L3232-4T25	CM6X1X25-A	P-5
CTER/L12-5T12, CTER/L2020-5T12	CM6X1X20-A	P-5
CTER/L16-5T12, CTER/L2525-5T12	CM6X1X25-A	P-5
CTER/L16-5T20, CTER/L2525-5T20	CM6X1X25-A	P-5
CTER/L16-5T32, CTER/L2525, 3232-5T32	CM6X1X25-A	P-5
CTER/L20-5T32, CTER/L2020-6T12	CM8X1.25X20-A	P-6
CTER/L12-6T12, CTER/L16-6T12, CTER/L2525-6T12	CM8X1.25X25-A	P-6
CTER/L16-6T20, CTER/L2525-6T20	CM8X1.25X25-A	P-6
CTER/L16-6T32, CTER/L20-6T32, CTER/L2525, 3232-6T32	CM8X1.25X25-A	P-6
CTER/L16-8T16, CTER/L2525-8T16	CM8X1.25X25-A	P-6
CTER/L16-8T25, CTER/L20-8T25, CTER/L2525, 3232-8T25	CM8X1.25X25-A	P-6
CTER/L16-8T36, CTER/L20-8T36, CTER/L2525, 3232-8T36	CM8X1.25X25-A	P-6

Mono-block external grooving and parting toolholder, with high pressure coolant capability







Right hand (R) shown.

Inch	CW (in)	CW (mm)	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque
CTER/L12-2T17-CHP	0.079	2	2	0.669	0.750	0.750	5.000	1.772	0.750	0.791	0.157	4.06
CTER/L16-2T17-CHP	0.079	2	2	0.669	1.000	1.000	6.000	1.772	1.000	0.988	-	4.06
CTER/L12-3T25-CHP	0.118	3	3	0.984	0.750	0.750	5.000	2.008	0.750	0.799	0.157	4.06
CTER/L16-3T25-CHP	0.118	3	3	0.984	1.000	1.000	6.000	2.008	1.000	0.996	-	4.06
CTER/L16-4T25-CHP	0.157	4	4	0.984	1.000	1.000	6.000	2.170	1.000	1.004	-	5.90
CTER/L16-5T32-CHP	0.197	5	5	1.260	1.000	1.000	6.000	2.323	1.000	1.007	-	5.90
CTER/L16-6T32-CHP	0.236	6	6	1.260	1.000	1.000	6.000	2.441	1.000	1.007	0.276	8.85

Metric	CW	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque*
CTER/L2020-2T17-CHP	2	2	17	20	20	125	45	20	20.1	4	5.5
CTER/L2525-2T17-CHP	2	2	17	25	25	150	45	25	25.1	-	5.5
CTER/L2020-3T20-CHP	3	3	20	20	20	125	48	20	20.3	4	5.5
CTER/L2525-3T20-CHP	3	3	20	25	25	150	48	25	25.3	-	5.5
CTER/L2525-3T25-CHP	3	3	25	25	25	150	51	25	25.3	-	5.5
CTER/L2525-4T25-CHP	4	4	25	25	25	150	55	25	25.5	-	8
CTER/L2525-5T20-CHP	5	5	20	25	25	150	49	25	25.58	-	8
CTER/L2525-6T20-CHP	6	6	20	25	25	150	52	25	25.58	7	12

When groove depth is larger than (insert length - 0.059"/1.5 mm), please use 1-cornered insert.
(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: lbs·ft (*N·m)

Inch SPARE PARTS

Designation	Clamping screw	Wrench
CTER/L12-2T17-CHP	CM5x0.8x20-A	P-4
CTER/L16-2T17-CHP	CM5x0.8x20-A	P-4
CTER/L12-3T25-CHP	CM5x0.8x25-A	P-4
CTER/L16-3T25-CHP	CM5x0.8x25-A	P-4
CTER/L16-4T25-CHP	CM6x1x16-A	P-5
CTER/L16-5T32-CHP	CM6x1x16-A	P-5
CTER/L16-6T32-CHP	CM8x1.25x20-A	P-6

Metric SPARE PARTS

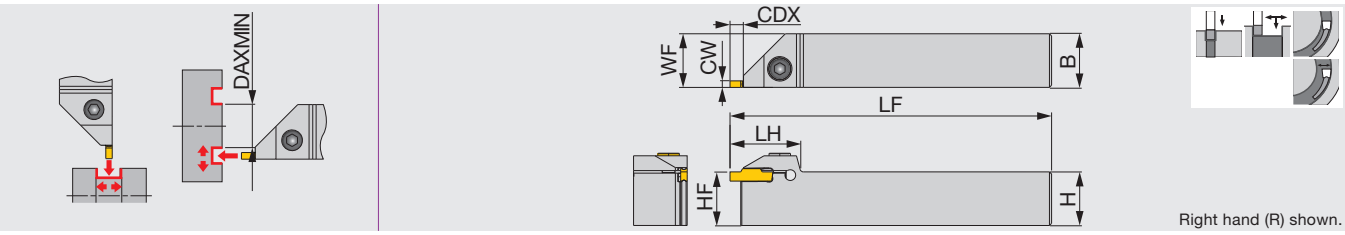
Designation	Clamping screw	Wrench
CTER/L2020-2T17-CHP	CM5x0.8x20-A	P-4
CTER/L2525-2T17-CHP	CM5x0.8x25-A	P-4
CTER/L2020-3T20-CHP	CM5x0.8x20-A	P-4
CTER/L2525-3T20-CHP	CM5x0.8x25-A	P-4
CTER/L2525-3T25-CHP	CM5x0.8x25-A	P-4
CTER/L2525-4T25-CHP	CM6x1x16-A	P-5
CTER/L2525-5T20-CHP	CM6x1x16-A	P-5
CTER/L2525-6T20-CHP	CM8x1.25x20-A	P-6

External
Internal
Face
Parting
Others

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032
Parts for coolant hose → F240, Technical Reference → L043

CTEFR/L

External face grooving and turning toolholder



Inch	CW (in)	CW (mm)	Seat size	CDX	HF	B	H	LF	WF (1)	LH	Torque
CTEFR/L12-4T04	0.157	4	2, 3, 4	0.189	0.750	0.750	0.750	5.000	0.770	1.300	6.27
CTEFR/L16-4T04	0.157	4	2, 3, 4	0.189	1.000	1.000	1.000	6.000	1.020	1.300	6.27
CTEFR/L12-6T04	0.236	6	5, 6	0.189	0.750	0.750	0.750	5.000	0.236	1.460	6.27
CTEFR/L16-6T04	0.236	6	5, 6	0.189	1.000	1.000	1.000	6.000	1.020	1.460	6.27

(1) "WF" value is calculated with groove width "CW" shown in the table.
Use the right-hand insert for the right-hand holder with DTF insert.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

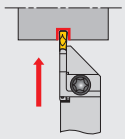
Designation	Clamping screw	Wrench
CTEFR/L12-4T04	CM6X1X20-A	P-5
CTEFR/L16-4T04	CM6X1X25-A	P-5
CTEFR/L12-6T04	CM6X1X20-A	P-5
CTEFR/L16-6T04	CM6X1X25-A	P-5

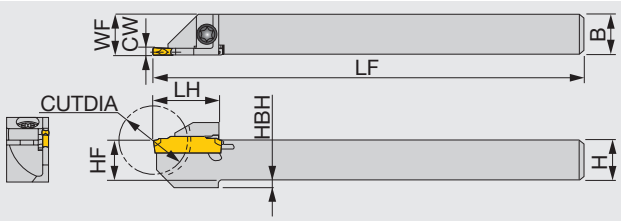
Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DGM / DGS / SGN	0.079	11.614
DGM / DGS / SGN / DGL	0.118	3.622
DGM / DGS / SGN / DGL	0.157	1.457
DGM / DGS / DGL	0.197	2.362
DGM / DGS / DGL	0.236	2.244
DTE / DGG / DTM	0.118	2.441
DTE / DGG / DTM	0.157	1.654
DTE / DGG / DTM	0.197	2.520
DTE / DGG / DTM	0.236	2.402

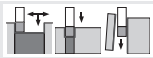
Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DTR	0.118	1.732
DTR	0.157	1.260
DTR	0.197	1.890
DTR	0.236	1.890
DTX	0.118	0.866
DTX	0.157	0.787
DTX	0.197	0.787
DTX	0.236	0.906
DTF	0.118	0.787
DTF	0.157	0.787

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

External grooving and parting toolholder, for Swiss lathes







Right hand (R) shown.

Inch	CW (in)	CW (mm)	Seat size	CUTDIA	H	B	LF	LH	HF	WF (1)	HBH	Torque
JCTER/L08-2T12	0.079	2	2	0.945	0.500	0.500	4.750	0.748	0.500	0.504	0.079	2.21
JCTER/L08-3T12	0.118	3	3	0.945	0.500	0.500	4.750	0.748	0.500	0.512	0.079	2.21
JCTER/L10-2T16	0.079	2	2	1.260	0.625	0.625	4.750	0.945	0.625	0.629	-	2.21
JCTER/L10-3T16	0.118	3	3	1.260	0.625	0.625	4.750	0.945	0.625	0.637	-	2.21

Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF (1)	HBH	Torque*
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	10.2	-	3
JCTER1010-1.4T10	1.4	1	20	10	10	125	18	10	10.2	-	3
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	12.2	-	3
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	12.2	-	3
JCTER1212-1.4T12	1.4	1	24	12	12	125	19.5	12	12.2	-	3
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	14.2	-	3
JCTER/L1616X1.4T16	1.4	1	32	16	16	120	24	16	16.2	-	3
JCTER/L1010X2T10	2	2	20	10	10	120	19	10	10.1	2	3
JCTER/L1212F2T12	2	2	24	12	12	85	19	12	12.1	2	3
JCTER/L1212X2T12	2	2	24	12	12	120	19	12	12.1	2	3
JCTER/L1414-2T12	2	2	24	14	14	125	19	14	14.1	-	3
JCTER/L1616X2T16	2	2	32	16	16	120	24	16	16.1	-	3
JCTER/L1212F3T12	3	3	24	12	12	85	19	12	12.3	2	3
JCTER/L1212X3T12	3	3	24	12	12	120	19	12	12.3	2	3
JCTER/L1616X3T16	3	3	32	16	16	120	24	16	16.3	-	3
JCTER/L2020H3T16	3	3	32	20	20	100	24	20	20.3	-	3

(1) "WF" value is calculated with groove width "CW" shown in the table.
CUTDIA: Max. parting diameter
Torque: Recommended clamping torque: lbs·ft (*N·m)

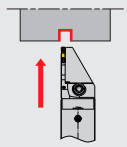
SPARE PARTS

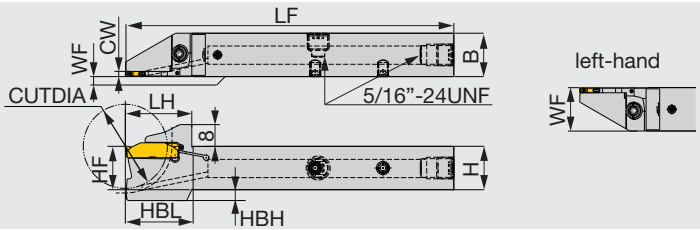
Designation	Clamping screw	Wrench
JCTER/L...	CSHB-4-A	T-15F

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

JCTER/L-CHP

External grooving and parting toolholder with high pressure coolant capability





Right hand (R) shown.

Inch	CW (in)	CW (mm)	Seat size	CUTDIA	H	B	LF	LH	HBL	HF	WF (1)	HBH	Torque
JCTER/L08X2T12-CHP	0.079	2	2	0.984	0.500	0.500	4.750	0.972	0.965	0.500	0.000/0.500	0.169	2.21
JCTER/L10X2T12-CHP	0.079	2	2	0.984	0.625	0.625	4.750	0.972	0.965	0.625	0.000/0.625	0.039	2.21
JCTER/L10X2T16-CHP	0.079	2	2	1.260	0.625	0.625	4.750	0.972	0.965	0.625	0.000/0.625	0.157	2.21
JCTER/L12X2T16-CHP	0.079	2	2	1.260	0.750	0.750	4.750	0.972	0.965	0.750	0.000/0.750	0.037	2.21

Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF (1)	HBH	HBL	Torque*
JCTER/L1212X2T12-CHP	2	2	25	12	12	120	24.7	12	0/12	5	24.7	3
JCTER/L1616X2T12-CHP	2	2	25	16	16	120	24.7	16	0/16	1	24.5	3
JCTER/L1616X2T16-CHP	2	2	32	16	16	120	24.7	16	0/16	4	24.7	3
JCTER/L2020X2T16-CHP	2	2	32	20	20	120	24.7	20	0/20	-	-	3

(1) "WF" value is calculated with groove width "CW" shown in the table. "WF" value depends on the tool hand. With 0.000/0.500 (0/12), WF is 0" (0 mm) for the right hand and 0.5" (12 mm) for the left hand.
CUTDIA: Max. parting diameter
Torque: Recommended clamping torque: lbs·ft (*N·m)

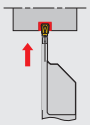
SPARE PARTS

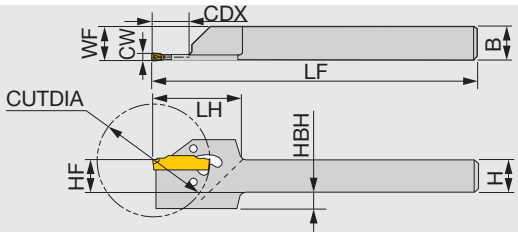
Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JCTER/L...	CSHB-4-A	T-15F	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

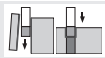
Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

TUNGCUT
CGER/L

External deep grooving and parting toolholder, for Swiss lathes







Right hand (R) shown.

Metric	CW	Seat size	CUTDIA(1)	CDX	H	B	LF	LH	HF	WF(2)	HBH
CGER/L2020-1.4T14	1.4	1	29/29	9.7	20	20	125	31	20	20.2	-
CGER/L1212-2T17	2	2	35/35	11.8	12	12	150	31	12	12.1	6
CGER/L1616-2T17	2	2	35/35	11.8	16	16	150	31	16	16.1	2
CGER/L2020-2T17	2	2	35/35	9.8	20	20	125	31	20	20.1	-
CGER/L1212-3T19	3	3	38/40	12	12	12	150	31	12	12.3	6
CGER/L1616-3T19	3	3	38/45	14.9	16	16	150	31	16	16.3	2
CGER/L2020-3T19	3	3	38/45	13.2	20	20	125	31	20	20.3	-
CGER/L2020-4T19	4	4	38/55	20.3	20	20	125	33	20	20.4	-

Wrench (CRW**) is not included. Please order it separately. Insert is clamped by the elastic deformation of the upper jaw.
(1) DG*/SG* maximum parting diameter will depend on the insert.
(2) "WF" value is calculated with groove width "CW" shown in the table.

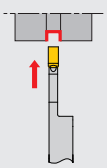
SPARE PARTS

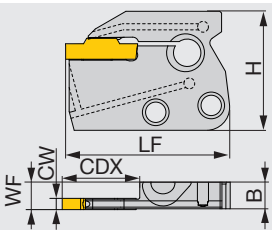
Designation	Wrench (Option)
CGER/L2020-1.4T14	CRW23
CGER/L****-2T17 - 4T19	CRW33

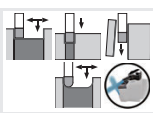
TUNGCUT
CAER/L-CHP

TUNGMODULAR SYSTEM

Modular-type external grooving and parting blade, with high pressure coolant capability







Insert
DGS,SGS,DGM, SGM,DTX,DTE, DGG,DTR,SGN, DTM,DGL

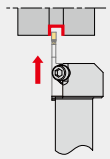
Right hand (R) shown.

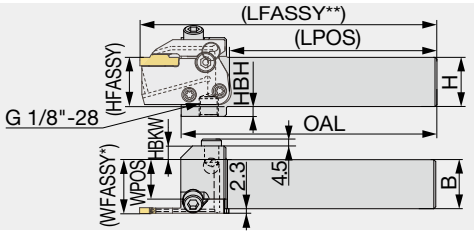
Inch	CW (in)	CW (mm)	Seat size	CDX	H	B	LF	WF(1)
CAER/L-2T16-CHP	0.079	2	2	0.630	1.299	0.283	1.634	0.287
CAER/L-2T20-CHP	0.079	2	2	0.787	1.299	0.283	1.791	0.287
CAER/L-3T16-CHP	0.118	3	3	0.630	1.299	0.283	1.634	0.291
CAER/L-3T20-CHP	0.118	3	3	0.787	1.299	0.283	1.791	0.295
CAER/L-4T16-CHP	0.157	4	4	0.630	1.299	0.283	1.634	0.303
CAER/L-4T20-CHP	0.157	4	4	0.787	1.299	0.283	1.791	0.303
CAER/L-5T20-CHP	0.197	5	5	0.787	1.299	0.283	1.823	0.307
CAER/L-6T20-CHP	0.236	6	6	0.787	1.299	0.283	1.823	0.307

When groove depth is larger than (insert length - 0.059"), please use 1-cornered insert.
(1) "WF" value is calculated with groove width "CW" shown in the table.

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032
Technical Reference → L043

Shank for CAER/L-CHP blades with high pressure coolant capability





Right hand (R)
with right-hand blade shown.

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Blade (Option)	Torque
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190	CAER/L-CHP	4.79
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200	CAER/L-CHP	4.79

Metric	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Blade (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	CAER/L-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	CAER/L-CHP	6.5

*WFASSY :Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)

Please see the page **L043** for the instruction on installing and removing the blade or the insert.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Applicable for 30 MPa coolant

SPARE PARTS

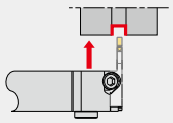
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHSR/L...-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	PLUGG1/8ISO1179

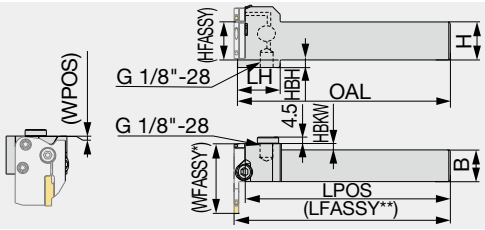
Recommended clamping torque (lbs·ft, N·m)

Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032
Parts for coolant hose → F240, Technical Reference → L043

Shank for CAER/L-CHP blades with high pressure coolant capability





Right hand (R)
with left-hand blade shown.

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Blade (Option)	Torque
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431	CAER/L-CHP	4.79
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200	CAER/L-CHP	4.79

Metric	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Blade (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	CAER/L-CHP	6.5
CHFVR/L2525-CHP	25	25	140	28	135.1	0.5	0	25	5	CAER/L-CHP	6.5

*WFASSY : Shank (WPOS) + blade (LF)
**LFASSY : Shank (LPOS) + blade (WF)
Torque: Recommended clamping torque: lbs·ft (*N·m)
Use right-hand blades (R) with left-hand shanks (L); and left-hand blades (L) with right-hand shanks (R).
Applicable for 30 MPa coolant
Please see the page L043 for the instruction on installing and removing the blade or the insert.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHFVR/L...	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	PLUGG1/8ISO1179

Recommended clamping torque (lbs·ft, N·m)

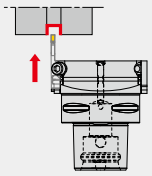
Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

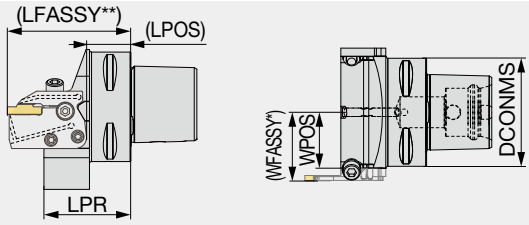
External
Internal
Face
Parting
Others

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032
Parts for coolant hose → F240, Technical Reference → L043

C*CHSN-CHP

TungCap shank for CAER/L-CHP blades with high pressure coolant capability





Right-hand (R) blade shown.

Metric	DCONMS	LPR	LPOS	WPOS	Blade (Option)	Torque
C3CHSN19045-CHP	32	45	17.5	18.5	CAER/L...-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	CAER/L...-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	CAER/L...-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	CAER/L...-CHP	6.5

*WFASSY : Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)

Torque: Recommended clamping torque: N·m, Applicable for 30 MPa coolant
Please see the page L043 for the instruction on installing and removing the blade or the insert.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHSN...-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

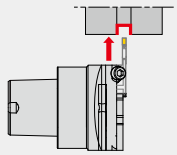
Recommended clamping torque (N·m)

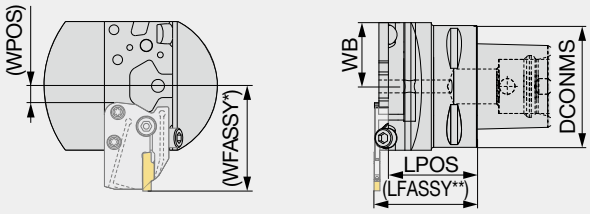
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

TUNGCUT TUNGCAP TUNGMODULAR SYSTEM

C*CHFVN-CHP

TungCap shank for CAER/L-CHP blades with high pressure coolant capability





Left-hand (L) blade shown.

Metric	DCONMS	LPOS	WB	WPOS	Blade (Option)	Torque
C3CHFVN26040-CHP	32	40	26	1.5	CAER/L...-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	CAER/L...-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	CAER/L...-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	CAER/L...-CHP	6.5

*WFASSY : Shank (WPOS) + blade (LF)
**LFASSY : Shank (LPOS) + blade (WF)

Torque: Recommended clamping torque: N·m. Applicable for 30 MPa coolant
Please see the page L043 for the instruction on installing and removing the blade or the insert.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHFVN...-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

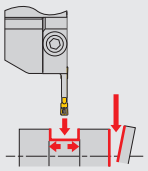
Recommended clamping torque (N·m)

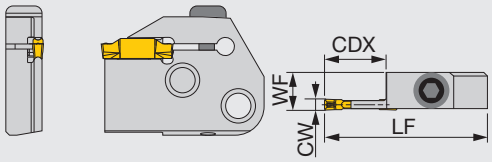
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

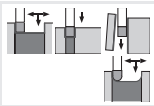
Reference pages: Inserts → F023 - F036, Standard cutting conditions →F032, Technical Reference → L043

TUNGCUT
CAER/L

External grooving, parting, and turning blade







Insert

Right hand (R) shown.

Inch	CW (in)	CW (mm)	Seat size	CDX	LF	WF	Shank	Torque
CAER/L-3T16	0.118	2	2	0.630	1.772	0.409	CHFVL/R...,CHSR/L...	3.69
CAER/L-4T16	0.157	2	2	0.630	1.772	0.413	CHFVL/R...,CHSR/L...	3.69
CAER/L-5T20	0.197	3	3	0.787	1.929	0.413	CHFVL/R...,CHSR/L...	3.69
CAER/L6T20	0.236	3	3	0.787	1.929	0.413	CHFVL/R...,CHSR/L...	3.69

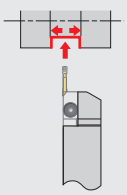
Torque: Recommended clamping torque: lbs·ft
Not compatible with TungModularSystem
When groove depth is larger than insert length - 0.059", please use 1-cornered insert.

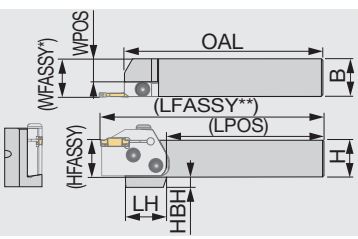
SPARE PARTS

Designation	Clamping screw	Wrench
CAER/L...	BHM6-20-A	P-4

TUNGCUT
CHSR/L

Shank for CAER/L and CAFR/L blades





Right hand (R)
with right-hand blade shown.

Inch	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Blade (Option)
CHSR/L12-U	0.750	0.750	5.330	4.227	1.380	0.356	0.750	0.502	CAER/L...
CHSR/L16-U	1.000	1.000	5.330	4.227	1.100	0.606	1.000	0.280	CAER/L...
CHSR/L20-U	1.250	1.250	6.330	5.227	-	0.856	1.250	-	CAER/L...

Metric	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Blade (Option)
CHSR/L2020	20	20	133	105	35	10	20	12	CAER/L...
CHSR/L2525	25	25	133	105	28	15	25	7	CAER/L...
CHSR/L3232	32	32	153	105	-	22	32	-	CAER/L...

*WFASSY : Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)
Not compatible with TungModularSystem

SPARE PARTS

Designation	Clamping screw	Wrench
CHSR/L...	CSHB-6-A	P-4

Combination of blade and toolholder

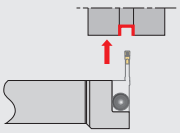
Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	

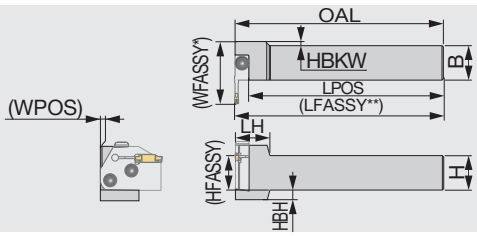
● : Corresponding

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

CHFVR/L

Shank for CAER/L and CAFR/L blades





Right hand (R)
with left-hand blade shown.

Inch	H	B	OAL	LPOS	LH	WPOS	HBKW	HFASSY	HBH	Blade (Option)
CHFVR/L12-U	0.750	0.750	6.000	5.606	0.984	-0.001	0.352	0.750	0.502	CAEL/R...
CHFVR/L16-U	1.000	1.000	6.000	5.606	0.984	-0.001	0.102	1.000	0.276	CAEL/R...
CHFVR/L20-U	1.250	1.250	7.000	6.606	0.984	0.147	-	1.250	-	CAEL/R...

Metric	H	B	OAL	LPOS	LH	WPOS	HBKW	HFASSY	HBH	Blade (Option)
CHFVR/L2020	20	20	150	140	25	0	8	20	12	CAEL/R...
CHFVR/L2525	25	25	150	140	25	0	3	25	7	CAEL/R...
CHFVR/L3232	32	32	170	160	25	4	-	32	-	CAEL/R...

*WFASSY : Shank (WPOS) + blade (LF)
**LFASSY : Shank (LPOS) + blade (WF)

Not compatible with TungModularSystem

SPARE PARTS

Designation	Clamping screw	Wrench
CHFVR/L...	CSHB-6-A	P-4

Combination of blade and toolholder

Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHFVR...		●	●	
CHFVL...	●			●

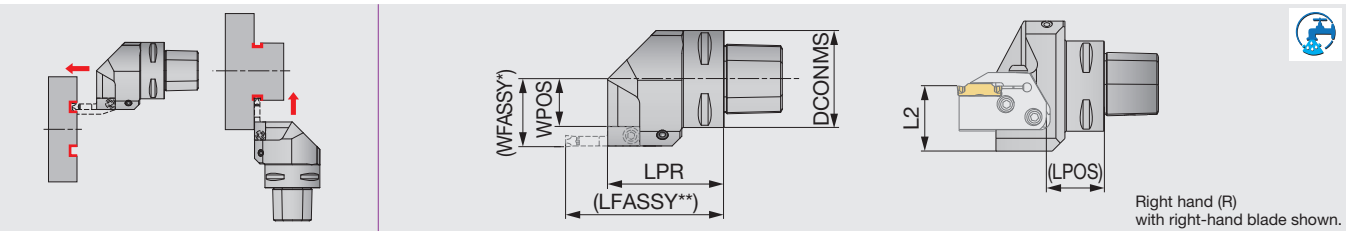
● : Corresponding

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

C-CHSR/L

TUNGCAP

TungCap shank for CAER/L and CAFR/L blades



Metric	DCONMS	LPR	LPOS	L2	WPOS	Blade (Option)
C3CHSR/L22050N	32	50	22.1	35	11.5	CAER/L...
C4CHSR/L27050N	40	50	22.1	36	16.5	CAER/L...
C5CHSR/L35060N	50	60	32.1	36	24.5	CAER/L...
C6CHSR/L45065N	63	65	32.1	41	34.5	CAER/L...

*WFASSY : Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)

Applicable for 7 MPa coolant.
Not compatible with TungModularSystem

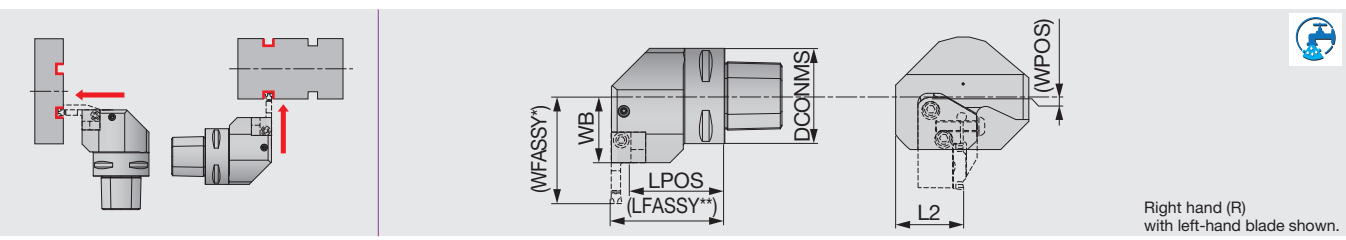
SPARE PARTS

Designation	Coolant parts	Clamping screw	Wrench
C3CHSR/L22050N	SATZ-M8X1-M3	CSHB-6-A	P-4
C4CHSR/L27050N	SATZ-M8X1-M3	CSHB-6-A	P-4
C5CHSR/L35060N	SATZ-M10X1-M5	CSHB-6-A	P-4
C6CHSR/L45065N	SATE-M10X1-M5	CSHB-6-A	P-4

C-CHFVR/L

TUNGCAP

TungCap shank for CAER/L and CAFR/L blades



Metric	DCONMS	LPOS	L2	WB	WPOS	Blade (Option)
C3CHFVR/L22040N	32	32.5	35	22	-5.9	CAEL/R...
C4CHFVR/L27050N	40	42.5	36	27	-0.9	CAEL/R...
C5CHFVR/L35060N	50	49.5	36	35	7.1	CAEL/R...
C6CHFVR/L45065N	63	54.5	41	45	17.1	CAEL/R...

*WFASSY : Shank (WPOS) + blade (LF)
**LFASSY : Shank (LPOS) + blade (WF)

Applicable for 7 MPa coolant.
Not compatible with TungModularSystem

SPARE PARTS

Designation	Coolant parts	Clamping screw	Wrench
C3CHFVR/L22040N	SATZ-M8X1-M3	CSHB-6-A	P-4
C4CHFVR/L27050N	SATZ-M8X1-M3	CSHB-6-A	P-4
C5CHFVR/L35060N	SATZ-M10X1-M5	CSHB-6-A	P-4
C6CHFVR/L45065N	SATZ-M10X1-M5	CSHB-6-A	P-4

Combination of blade and toolholder

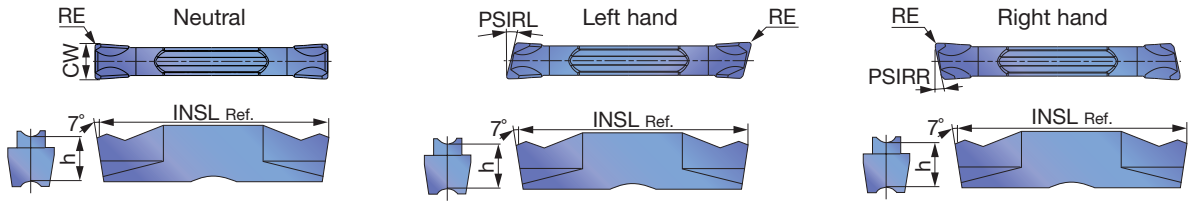
Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

● : Corresponding

Reference pages: Inserts → F023 - F036, Standard cutting conditions → F032

DGM

External grooving and parting, 2 corners



P	Steel	★	★	★	☆		☆			★			
M	Stainless	★		★	☆		★						
K	Cast iron	☆		★		☆	☆			☆			
N	Non-ferrous												
S	Superalloys			★	☆	★							
H	Hard materials												

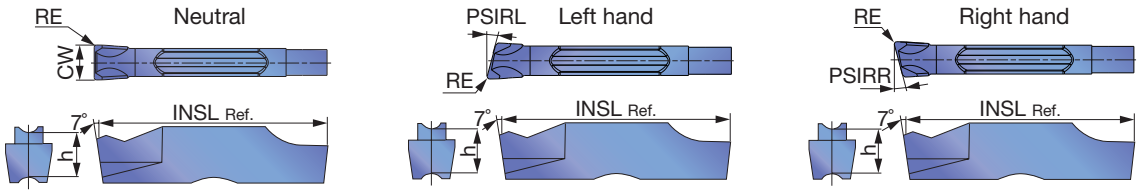
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet				INSL (in)	h (in)	PSIRL	PSIRR
						T9225	T9125	AH7025	AH725	AH905	GH130			NS9530							
DGM2-020	2	N	2	0.079	0.008	●	▲	●	●		●			●				0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008				●		●							0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008				●		●							0.762	0.197	15°	0°
DGM3-020	3	N	3	0.118	0.008	●	▲	●	●	●	●			●				0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008			●	●		●							0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008			●	●		●							0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.0008				●		●							0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.0008				●		●							0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008			●	●		●							0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008			●	●		●							0.787	0.197	15°	0°
DGM4-030	4	N	4	0.157	0.012	●	▲	●	●	●	●			●				0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012			●	●		●							0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012			●	●		●							0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012			●	●		●							0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012			●	●		●							0.787	0.197	15°	0°
DGM5-030	5	N	5	0.197	0.012	●	▲	●	●	●	●			●				0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012			●	●		●							0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	▲	●	●	●	●							0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	▲	●	●		●							1.181	0.264	0°	0°

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

External deep grooving and parting, 1corner



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

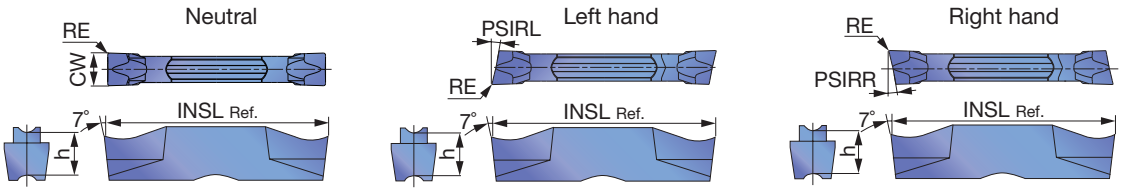
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGM2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●	●	0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●	●	0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

External grooving and parting, 2 corners



		T9225	T9125	AH7025	AH725	GH130	NS9530
P	Steel	★	★	★	☆	☆	★
M	Stainless	★		★	☆	★	
K	Cast iron	☆		★		☆	☆
N	Non-ferrous						
S	Superalloys			★	☆		
H	Hard materials						

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated T9225	Coated T9125	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)	PSIRL	PSIRR
DGS1.4-016	1	N	1.4	0.055	0.006			●	●	●		0.630	0.169	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	▲	●	●	●	●	0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008			●	●	●		0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008			●	●	●		0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008				●	●		0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008				●	●		0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008			●	●	●		0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008			●	●	●		0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008				●	●		0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008				●	●		0.768	0.197	15°	0°
DGS3-020	3	N	3	0.118	0.008	●	▲	●	●	●	●	0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008			●	●	●		0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008			●	●	●		0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008				●	●		0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008				●	●		0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008			●	●	●		0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008			●	●	●		0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008				●	●		0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008				●	●		0.766	0.197	15°	0°
DGS4-030	4	N	4	0.157	0.012	●	▲	●	●	●	●	0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012			●	●	●		0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012			●	●	●		0.787	0.197	4°	0°
DGS5-030	5	N	5	0.197	0.012	●	▲	●	●	●	●	0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	▲	●	●	●		0.984	0.217	0°	0°

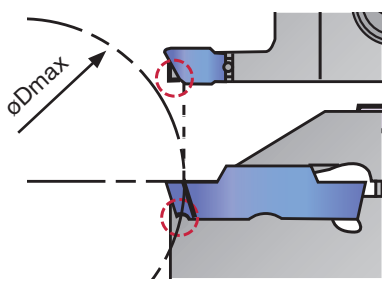
● : Line up
▲ : To be discontinued

Caution

The tool will interfere with the workpiece when grooving larger diameter than øDmax.

Designation	øDmax (in)
DGM2-002-15R/L	1.102
DGM3-002-15R/L	1.141
DGM4-030-15R/L	1.181
SGM3-020-15R/L	4.055

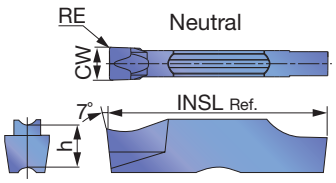
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338

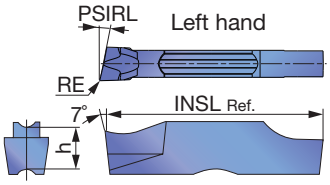


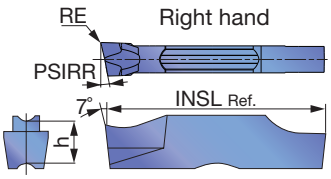
Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

SGS

External deep grooving and parting, 1corner







P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

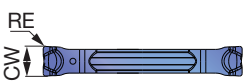
★ : First choice
☆ : Second choice

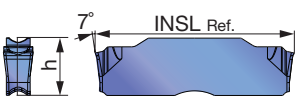
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●	●	0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●	●	0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

● : Line up

DGL

External grooving and parting





P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

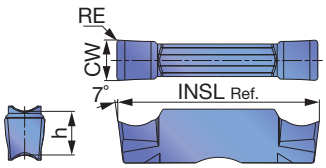
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DGL3-025	3	3	0.118	0.010	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	0.984	0.217

● : Line up

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

DGG

External grooving (for high precision)



		AH7025			NS9530			KS05F					
P	Steel	★			★								
M	Stainless	★											
K	Cast iron	★			☆			☆					
N	Non-ferrous							★					
S	Superalloys	★						☆					
H	Hard materials												

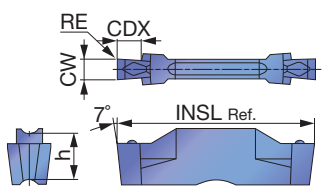
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025			Cermet NS9530			Uncoated KS05F						INSL (in)	h (in)
DGG200-020	2	2	0.079	0.008	●			●			●						0.787	0.197
DGG300-020	3	3	0.118	0.008	●			●			●						0.787	0.197
DGG400-040	4	4	0.157	0.016	●			●			●						0.787	0.197
DGG500-040	5	5	0.197	0.016	●			●			●						0.984	0.217
DGG600-040	6	6	0.236	0.016	●			●			●						0.984	0.217

● : Line up

DGE

External grooving (for high precision)



		AH7025	AH725	GH130			NS9530						
P	Steel	★	☆	☆			★						
M	Stainless	★	☆	★									
K	Cast iron	★		☆			☆						
N	Non-ferrous												
S	Superalloys	★	☆										
H	Hard materials												

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	AH725	GH130			Cermet NS9530							CDX (in)	INSL (in)	h (in)
DGE100-000	2	1	0.039	0		●	●			●							0.098	0.787	0.197
DGE130-000	2	1.3	0.051	0		●	●			●							0.098	0.787	0.197
DGE160-010	2	1.6	0.063	0.004	●	●	●			●							0.098	0.787	0.197
DGE185-010	2	1.85	0.073	0.004	●	●	●			●							0.138	0.787	0.197
DGE215-015	2	2.15	0.085	0.006	●	●	●			●							0.138	0.787	0.197

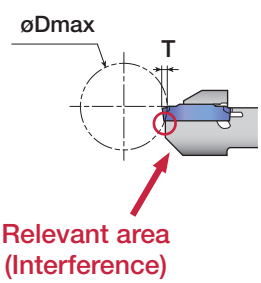
● : Line up

Caution

øDmax is limited as shown in the picture to the right according to the groove depth, T Please refer to the following table.

T = Groove depth

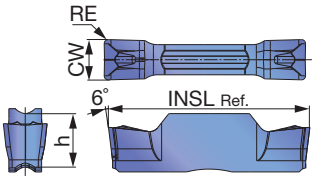
Designation	Max. groove depth (in)	øDmax (in) T = 0.039	T = 0.059	T = 0.079	T = 0.098	T = 0.118
DGE100-000	0.079	∞	0.73	0.45	-	-
DGE130-000						
DGE160-010						
DGE185-010	0.118				0.35	0.28
DGE215-015						



Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

DTM

External face grooving and turning



		AH7025
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

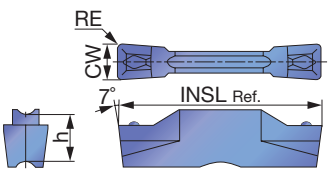
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DTM3-030	3	3	0.118	0.012	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	0.984	0.217
DTM8-080	8	8	0.315	0.031	●	1.181	0.264

● : Line up

DTE

External face grooving and turning (for high precision)



		T9225	T9125	AH7025	AH725	GH130	NS9530
P	Steel	★	★	★	☆	☆	★
M	Stainless	★		★	☆	★	
K	Cast iron	☆		★		☆	
N	Non-ferrous						
S	Superalloys			★	☆		
H	Hard materials						

★ : First choice
☆ : Second choice

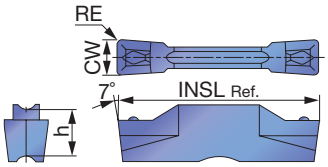
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated T9125	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTE265-015	3	2.65	0.104	0.006	●	▲	●	●	●	●	0.787	0.197
DTE300-020	3	3	0.118	0.008	●	▲	●	●	●	●	0.787	0.197
DTE300-040	3	3	0.118	0.016	●	▲	●	●	●	●	0.787	0.197
DTE315-015	3	3.15	0.124	0.006	●	▲	●	●	●	●	0.787	0.197
DTE400-040	4	4	0.157	0.016	●	▲	●	●	●	●	0.787	0.197
DTE400-080	4	4	0.157	0.031	●	▲	●	●	●	●	0.787	0.197
DTE415-015	4	4.15	0.163	0.006	●	▲	●	●	●	●	0.787	0.197
DTE478-055	5	4.78	0.188	0.022	●	▲	●	●	●	●	0.984	0.217
DTE500-040	5	5	0.197	0.016	●	▲	●	●	●	●	0.984	0.217
DTE500-080	5	5	0.197	0.031	●	▲	●	●	●	●	0.984	0.217
DTE515-015	5	5.15	0.203	0.006	●	▲	●	●	●		0.984	0.217
DTE600-080	6	6	0.236	0.031	●	▲	●	●	●		0.984	0.217
DTE600-120	6	6	0.236	0.047	●	▲	●	●	●		0.984	0.217
DTE800-080	8	8	0.315	0.031	●	▲	●	●	●		1.181	0.264
DTE800-120	8	8	0.315	0.047	●	▲	●	●	●		1.181	0.264

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

DTE

External face grooving and turning



		T9225	T9125	T515	AH7025	AH725	GH130			NS9530			
P	Steel	★	★		★	☆	☆			★			
M	Stainless	★			★	☆	★						
K	Cast iron	☆		★	★		☆						
N	Non-ferrous												
S	Superalloys				★	☆							
H	Hard materials												

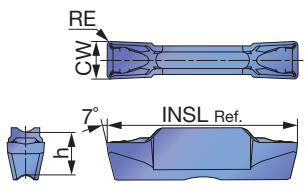
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet				INSL (in)	h (in)
					T9225	T9125	T515	AH7025	AH725	GH130			NS9530					
DTE3-040	3	3	0.118	0.016	●	▲	●	●	●	●			●				0.787	0.197
DTE4-040	4	4	0.157	0.016	●	▲	●	●	●	●			●				0.787	0.197
DTE5-040	5	5	0.197	0.016			●	●									0.984	0.217
DTE6-080	6	6	0.236	0.031			●	●									0.984	0.217

● : Line up
▲ : To be discontinued

DTX

External/Internal face grooving and turning



		T9225	T9125	AH7025	AH725	GH130			NS9530			
P	Steel	★	★	★	☆	☆			★			
M	Stainless	★		★	☆	★						
K	Cast iron	☆		★		☆			☆			
N	Non-ferrous											
S	Superalloys			★	☆							
H	Hard materials											

★ : First choice
☆ : Second choice

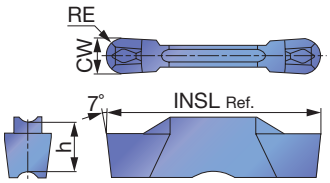
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet				INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130		NS9530					
DTX3-030	3	3	0.118	0.012	●	▲	●	●	●		●				0.787	0.197
DTX4-040	4	4	0.157	0.016	●	▲	●	●	●		●				0.787	0.197
DTX5-040	5	5	0.197	0.016	●	▲	●	●	●		●				0.984	0.217
DTX6-080	6	6	0.236	0.031			●	●	●						0.984	0.197

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

DTR

Profiling and undercutting (for high precision)



		T9225	T9125	AH7025	AH725	GH130			NS9530				
P	Steel	★	★	★	☆	☆			★				
M	Stainless	★		★	☆	★							
K	Cast iron	☆		★		☆			☆				
N	Non-ferrous												
S	Superalloys			★	☆								
H	Hard materials												

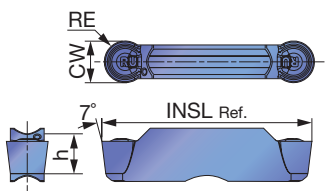
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated							Cermet					INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530						
DTR300-150	3	3	0.118	0.059	●	▲	●	●	●			●					0.787	0.197
DTR400-200	4	4	0.157	0.079	●	▲	●	●	●			●					0.787	0.197
DTR478-239	5	4.78	0.188	0.094	●	▲	●	●	●			●					0.984	0.217
DTR500-250	5	5	0.197	0.098	●	▲	●	●	●			●					0.984	0.217
DTR600-300	6	6	0.236	0.118	●	▲	●	●	●								0.984	0.217

● : Line up
▲ : To be discontinued

DTR

Profiling and undercutting



		T9225	T9125	AH7025	AH725	AH905	GH130			NS9530				
P	Steel	★	★	★	☆		☆			★				
M	Stainless	★		★	☆		★							
K	Cast iron	☆		★		☆	☆			☆				
N	Non-ferrous													
S	Superalloys			★	☆	★								
H	Hard materials													

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet					INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	AH905	GH130		NS9530						
DTR3-150	3	3	0.118	0.059	●	▲	●	●	●	●		●					0.787	0.197
DTR4-200	4	4	0.157	0.079	●	▲	●	●	●	●		●					0.787	0.197
DTR5-250	5	5	0.197	0.098	●	▲	●	●	●	●		●					0.984	0.217
DTR6-300	6	6	0.236	0.118	●	▲	●	●		●							0.984	0.217
DTR8-400	8	8	0.315	0.157	●	▲	●	●		●							1.181	0.264

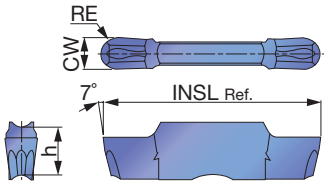
● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

DTIU

Profiling and undercutting (for high precision)



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

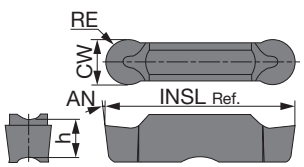
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	AH725	GH130	INSL (in)	h (in)
DTIU300-150	3	3	0.118	0.059	●	●	●	0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●	0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●	0.984	0.217
DTIU600-300	6	6	0.236	0.118	●	●	●	0.984	0.217

● : Line up

DTA

Aluminum wheel machining (for high precision)



P	Steel			
M	Stainless			
K	Cast iron			
N	Non-ferrous	★		
S	Superalloys			
H	Hard materials			

★ : First choice
☆ : Second choice

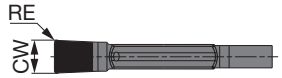
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Uncoated TH10	INSL (in)	h (in)	AN
DTA600-300	6	6	0.236	0.118	●	0.984	0.217	7°
DTA800-400	8	8	0.315	0.157	●	1.181	0.264	10°

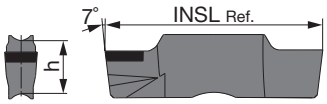
● : Line up

Reference pages: Toolholders → F010 - F022, Standard cutting conditions → F032

SGN

External grooving of hardened steel





		CBN
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	BX360	INSL (in)	h (in)
SGN200-020	2	2	0.079	0.008	●	0.787	0.197
SGN300-020	3	3	0.118	0.008	●	0.787	0.197
SGN400-020	4	4	0.157	0.008	●	0.787	0.197

● : Line up

STANDARD CUTTING CONDITIONS

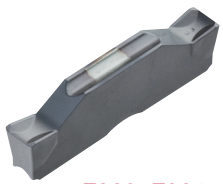
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Priority for wear resistance	T9225	262 - 984
		< 300 HB	Priority for impact resistance	GH130	164 - 394
		< 300 HB	Priority for surface finish	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Priority for impact resistance	GH130	164 - 394
K	Gray cast iron No.250B, No.300B, etc.	-	First choice	T515, AH7025	164 - 591
		-	Priority for impact resistance	GH130	164 - 591
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	First choice	T515, AH7025	164 - 394
		-	Priority for impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel 718, etc.	< HRC 40	First choice	AH7025	66 - 197
		< HRC 40	Priority for wear resistance	AH905	66 - 262
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	66 - 262
		< HRC 40	Priority for impact resistance	AH7025, AH725	66 - 262
		< HRC 40	Priority for surface finish	KS05F	66 - 197
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

*See page F033 - F035 for feed: *f* (ipr).

Reference pages: Toolholders → F010 - F022

External grooving and parting

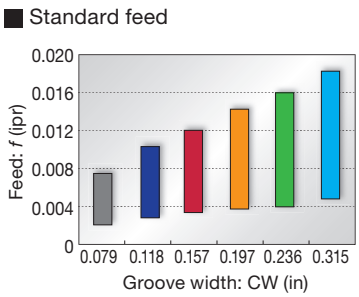
DGM type (2 corners)
SGM type (1 corner)

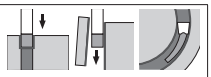


F023, F024 page

1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 0.079" - 0.315"



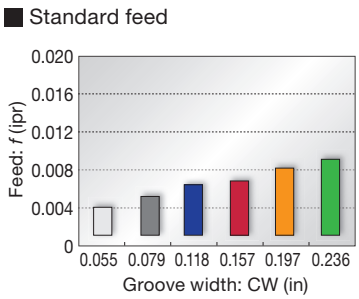


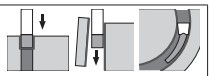
DGS type (2 corners)
SGS type (1 corner)

F025, F026 page

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 0.055" - 0.236"



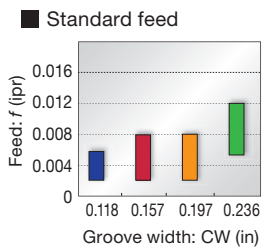


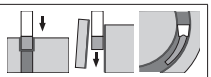
DGL type (2 corners)

F026 page

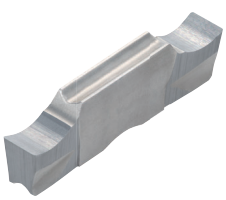
1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often has difficulties with chip control
CW = 0.118" - 0.236"





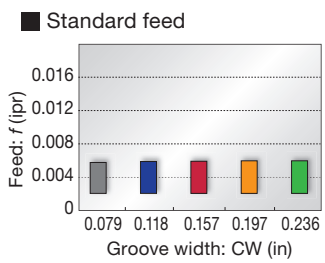
DGG type (2 corners)

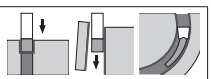


F027 page

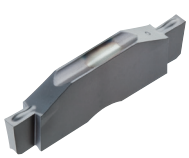
For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 0.079" - 0.236"





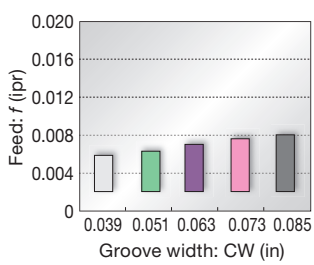
DGE type (2 corners)



F027 page

For high accurate and shallow groove

Excellent chip control
CW = 0.039" - 0.085"



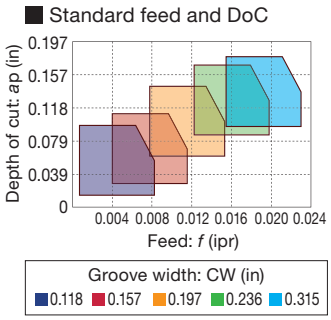
External grooving and turning

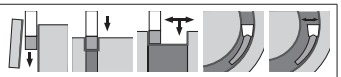
DTM type (2 corners)

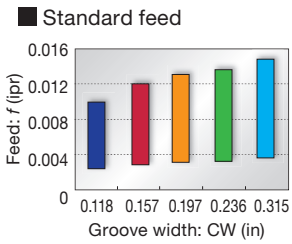
F028 page

General purpose

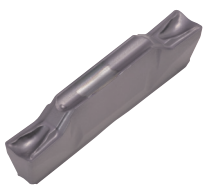
1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.118" - 0.315"







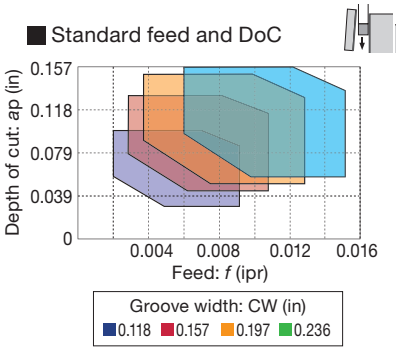
DTX type (2 corners)

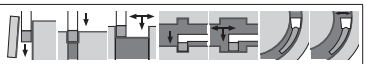


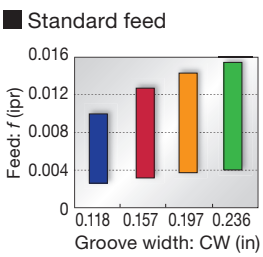
F029 page

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.118" - 0.236"





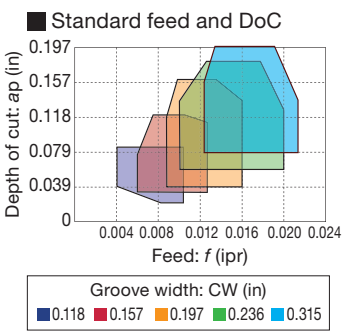


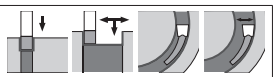
DTE type (2 corners)

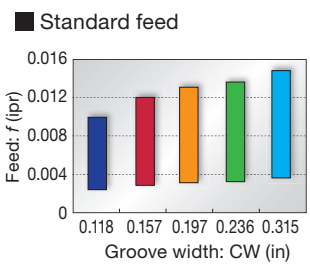
F028, F029 page

General purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 0.118" - 0.315"







Profiling and undercutting

DTR type (2 corners)

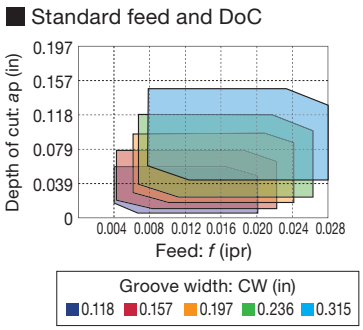
Molded

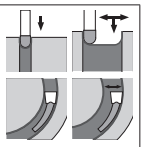
Ground

F030 page

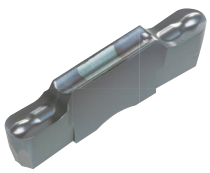
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.118" - 0.315"





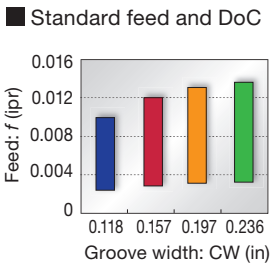
DTIU type (2 corners)

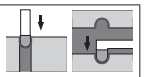


F031 page

Full radius type

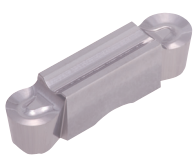
Excellent chip control
For undercutting
CW = 0.118" - 0.236"





Aluminum wheel machining

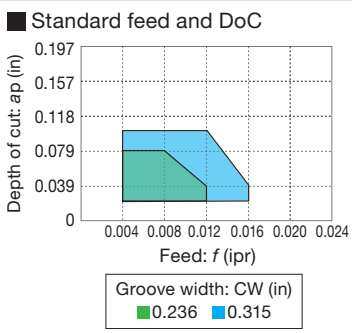
DTA type (2 corners)

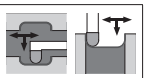


F031 page

Full radius type

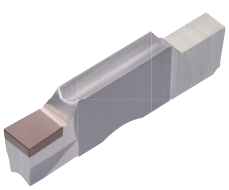
Excellent chip control
For aluminum wheel profiling
Ground insert
CW = 0.236" - 0.315"





External grooving of hardened steel

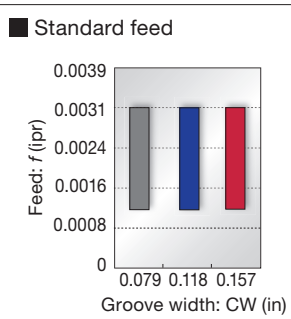
SGN-CBN type (1 corner)

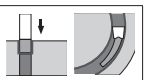


F032 page

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.157"
(CW = ±0.001")



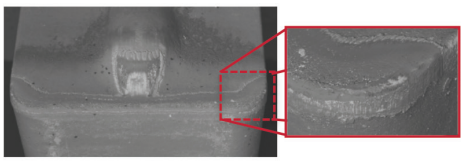


AH7025 Cutting performance

First choice grade for grooving
AH7025 grade: Tungaloy's unique coating technology for drastically improved reliability

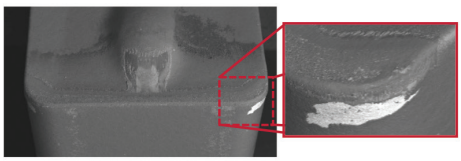
Tool life comparison

AH7025



Tool wear after 60 grooves

Conventional grade



Tool wear after 30 grooves

P Alloy steel (4140)

Insert	: DTE3-040 AH7025
Cutting speed	: *Vc* = 492 sfm
Feed	: *f* = 0.007 ipr
Groove depth	: 0.669"
Machining	: External grooving
Coolant	: Wet

AH7025 provides stability, while preventing coating from peeling off even after machining twice the number of passes compared to the conventional grade.

→ **The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations.**

Grades

AH7025 P M K S

- First choice for various applications
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- Recommended for various applications
- Newly developed coating with well controlled crystal structure and fracture resistance
- Improved adhesion strength

T515 K

- First recommended grade for cast iron
- Excellent wear resistance in high-speed machining

T9225 P

- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K

- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S

- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S

- Recommended for non-ferrous materials and titanium

TH10 N

- Recommended for non-ferrous materials

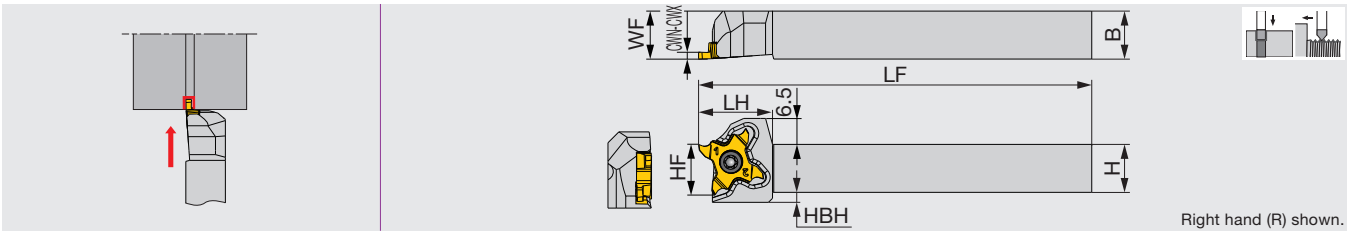
BX360 H

- Suitable for hardened steel machining
- Ideal balance of wear and chipping resistance due to the optimum CBN content and grain size

TETRAMINI CUT

STCR/L-18

External grooving and threading toolholder



Inch	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque
STCR/L06-18	0.013	0.118	0.375	0.375	4.750	0.740	0.375	0.375	0.177	TC*18...	0.89
STCR/L08-18	0.013	0.118	0.500	0.500	4.750	0.740	0.500	0.500	0.098	TC*18...	0.89
STCR/L10-18	0.013	0.118	0.625	0.625	4.750	0.740	0.625	0.625	-	TC*18...	0.89
STCR/L12-18	0.013	0.118	0.750	0.750	4.750	0.900	0.750	1.000	-	TC*18...	0.89
STCR/L16-18	0.013	0.118	1.000	1.000	5.500	0.900	1.000	1.250	-	TC*18...	0.89

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

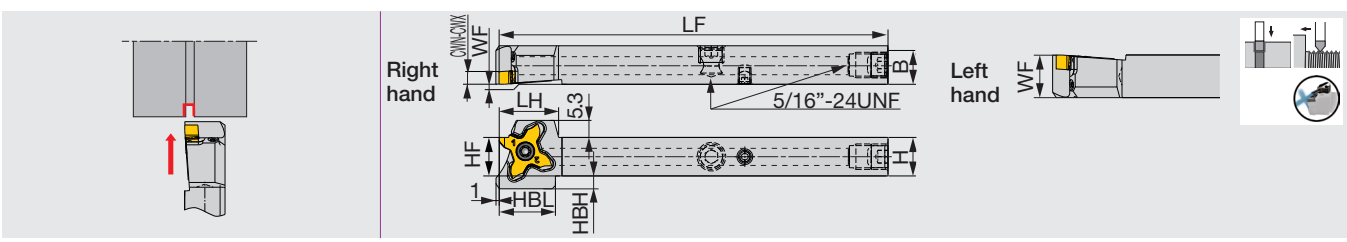
Designation	Clamping screw	Wrench
STCR**-18	CSTC-4L100DL	T-1008/5
STCL**-18	CSTC-4L100DR	T-1008/5

TETRAMINI CUT

TUNGTURN JET

STCR/L-X18-CHP

External grooving and threading toolholder with high pressure coolant capability



Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L08X18-CHP (1)	0.013	0.118	0.500	0.500	4.750	0.728	0.689	0.500	0/0.500	0.130	TC*18...	0.89
STCR/L10X18-CHP (1)	0.013	0.118	0.625	0.625	4.750	0.728	-	0.625	0/0.625	-	TC*18...	0.89

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
(1) Compatible to the direct internal coolant supply system without the use of external coolant hose.
Torque: Recommended clamping torque: lbs·ft

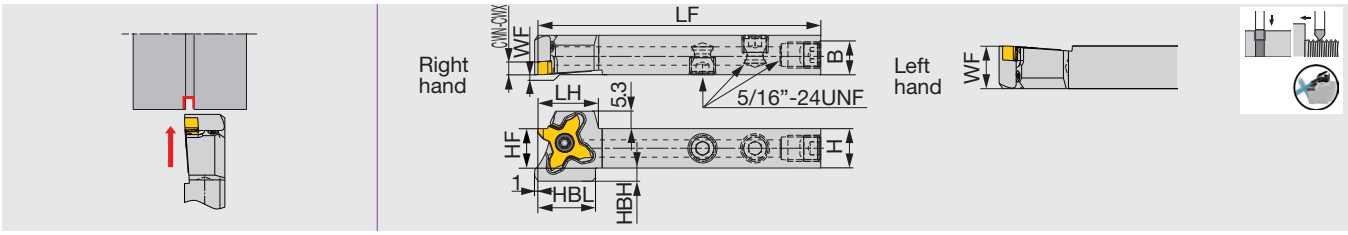
SPARE PARTS

Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: Inserts → F042 - F047, Standard cutting conditions → F048, Parts for coolant hose → F240

STCR/L-F18-CHP

External grooving and threading toolholder, with high pressure coolant capability



Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L08F18-CHP	0.013	0.118	0.500	0.500	3.344	0.728	0.689	0.500	0/0.500	0.130	TC*18...	0.89

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: lb·ft

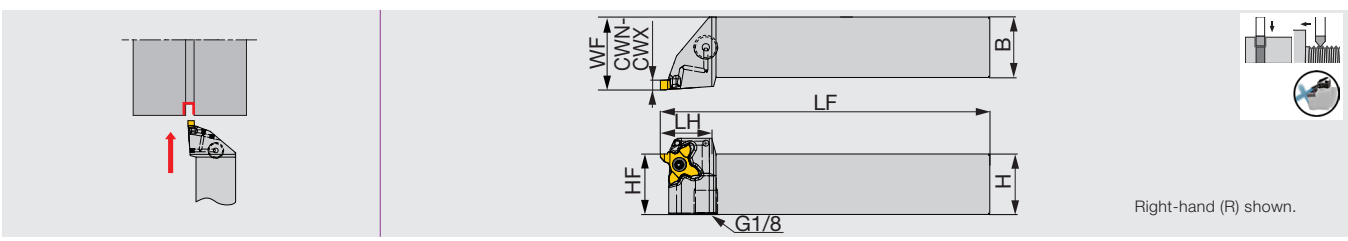
SPARE PARTS

Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

STCR/L-18-CHP

TUNGTURN JET

Threading tool - for external theading with high pressure coolant capability



Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L12-18-CHP	0.013	0.118	0.750	0.750	4.750	0.900	-	0.750	1.000	-	TC*18...	0.890
STCR/L16-18-CHP	0.013	0.118	1.000	1.000	5.500	.900	-	1.000	1.250	-	TC*18...	0.890

Use the right hand insert (TC*18R...) with the right hand toolholders (STCR...). Use the left hand insert (TC*18L) with the left hand holder (STCL...).
Torque: Recommended clamping torque: lb·ft

SPARE PARTS

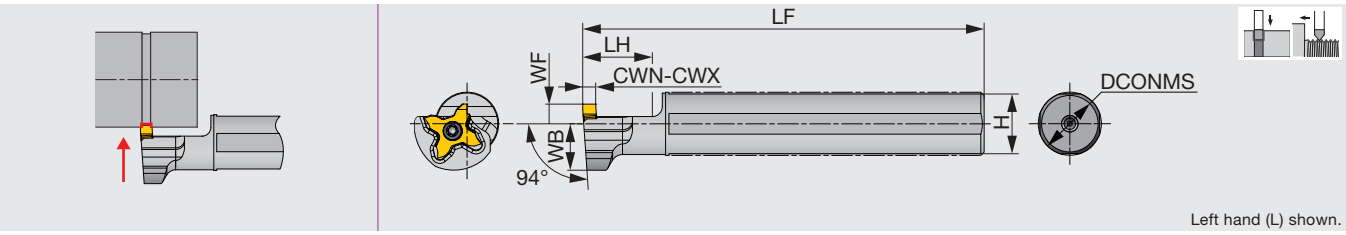
Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: Inserts → F042 - F047, Standard cutting conditions → F048, Parts for coolant hose → F240

TETRAMINI CUT

JS-STCL18

External grooving and threading toolholder with round shank, for Swiss lathes



Metric	CWN	CWX	DCONMS	H	LF	LH	WB	WF	Insert	Torque
JS14H-STCL18	0.33	3	14	13	100	20	14	6	TC*18R...	1.2
JS159F-STCL18	0.33	3	15.875	15	85	20	14	6	TC*18R...	1.2
JS16F-STCL18	0.33	3	16	15	85	20	14	6	TC*18R...	1.2
JS19G-STCL18	0.33	3	19.05	18	90	20	14	6	TC*18R...	1.2
JS19X-STCL18	0.33	3	19.05	18	120	20	14	6	TC*18R...	1.2
JS20G-STCL18	0.33	3	20	19	90	20	14	6	TC*18R...	1.2
JS20X-STCL18	0.33	3	20	19	120	20	14	6	TC*18R...	1.2
JS22X-STCL18	0.33	3	22	21	120	20	12.25	10	TC*18R...	1.2
JS25H-STCL18	0.33	3	25	24	100	20	12.25	10	TC*18R...	1.2
JS254X-STCL18	0.33	3	25.4	24	120	20	12.25	10	TC*18R...	1.2

Please use right-hand inserts.
Torque: Recommended clamping torque: N·m

SPARE PARTS

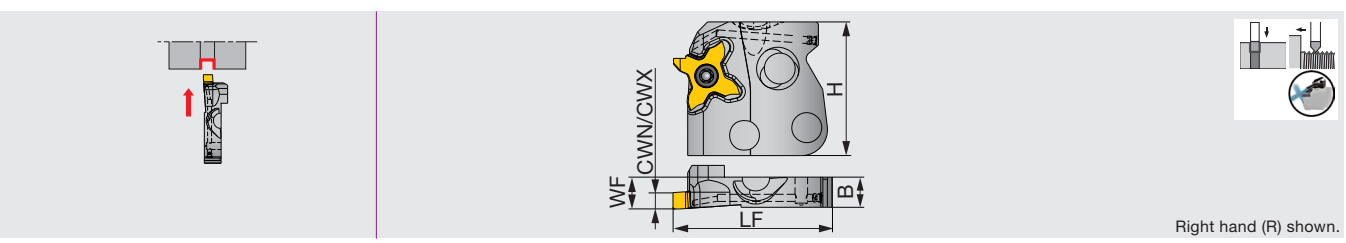
Designation	Clamping screw	Wrench
JS****-STCL18	CSTC-4L100DL	T-1008/5

TETRAMINI CUT

STCAR/L18-CHP

TUNGMODULAR SYSTEM

Modular-type external grooving and parting blade, with high pressure coolant capability



Inch	CWN	CWX	WF	H	LF	B	Insert	Torque
STCAR/L18-CHP	0.013	0.118	0.295	1.299	1.496	0.283	TC*18...	0.89

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: lb·ft

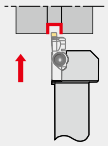
SPARE PARTS

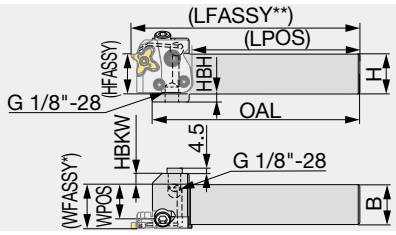
Designation	Clamping screw	Wrench
STCAL18-CHP	CSTC-4L100DR	T-1008/5
STCAR18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: Inserts → F042 - F047, Standard cutting conditions → F048, Parts for coolant hose → F240

CHSR/L-CHP

Shank for blades with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200

*WFASSY : shank (WPOS) + blade (WF)
**LFASSY : shank (LPOS) + blade (LF)

Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Applicable for 30 MPa coolant
Please see the page L043 for the instruction on installing and removing the blade.

SPARE PARTS

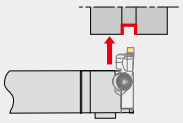
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHSR/L**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	PLUGG1/8ISO1179

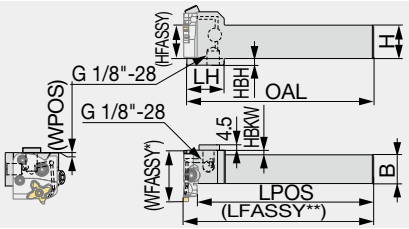
Recommended clamping torque (lbs·ft, N·m)

Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

CHFVR/L-CHP

Shank for blades with high pressure coolant capability





Right hand (R)
with left-hand blade shown.

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200

*WFASSY : shank (WPOS) + blade (LF)
**LFASSY : shank (LPOS) + blade (WF)

Use left-hand blades (L) with right-hand shanks (R); and right-hand blades (R) with left-hand shanks (L).
Applicable for 30 MPa coolant
Please see the page L043 for the instruction on installing and removing the blade.

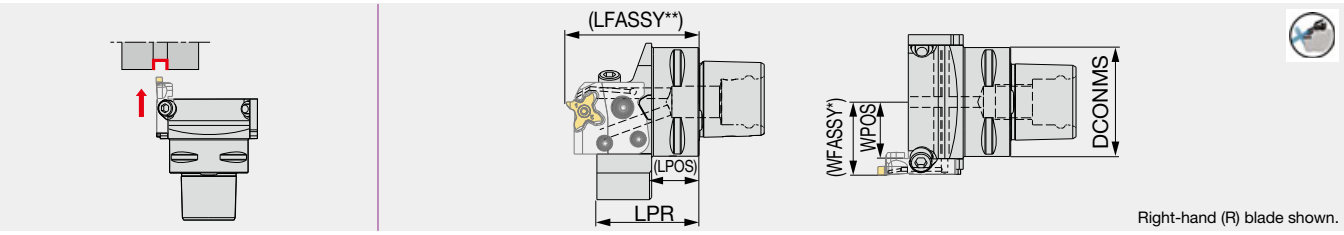
SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHFVR/L**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	PLUGG1/8ISO1179

Reference pages: Inserts → F042 - F047, Standard cutting conditions → F048, Parts for coolant hose → F240

C*CHSN-CHP

TungCap shank for CAER/L-CHP blades with high pressure coolant capability



Right-hand (R) blade shown.

Metric	DCONMS	LPR	LPOS	WPOS
C3CHSN19045-CHP	32	45	17.5	18.5
C4CHSN21047-CHP	40	46.5	21.5	21
C5CHSN26047-CHP	50	47	22.5	26
C6CHSN33050-CHP	63	50	24.5	32.5

*WFASSY : shank (WPOS) + blade (WF)
**LFASSY : shank (LPOS) + blade (LF)

Applicable for 30 MPa coolant
Please see the page **L043** for the instruction on installing and removing the blade.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHSN**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

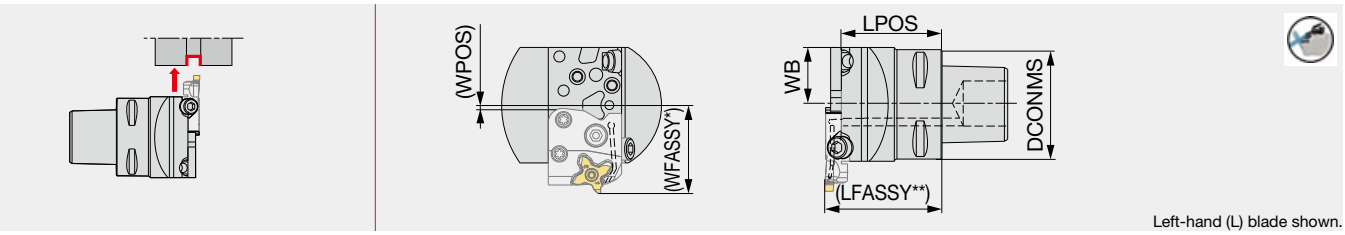
Recommended clamping torque (lbs·ft, N·m)

Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

TUNGCAP TUNGMODULAR SYSTEM

C*CHFVN-CHP

TungCap shank for CAER/L-CHP blades with high pressure coolant capability



Left-hand (L) blade shown.

Inch	DCONMS	LPOS	WB	WPOS
C3CHFVN26040-CHP	1.260	1.575	1.024	0.059
C4CHFVN26046-CHP	1.575	1.811	1.024	0.059
C5CHFVN26046-CHP	1.969	1.811	1.024	0.059
C6CHFVN33046-CHP	2.480	1.811	1.299	0.335

*WFASSY : shank (WPOS) + blade (LF)
**LFASSY : shank (LPOS) + blade (WF)

Applicable for 30 MPa coolant
Please see the page **L043** for the instruction on installing and removing the blade.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHFVN**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

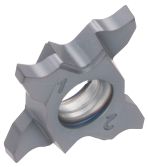
Recommended clamping torque (lbs·ft, N·m)

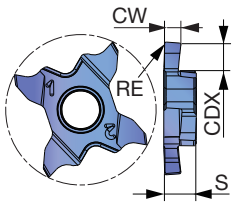
Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

Reference pages: Inserts → **F042 - F047**, Standard cutting conditions →**F048**, Parts for coolant hose → **F240**

INSERT

TCG18R/L (Honed edge)





P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	S (in)
TCG18R100-010	R	1	0.039	0.004	●	0.079	0.157
TCG18L100-010	L	1	0.039	0.004	●	0.079	0.157
TCG18R120-010	R	1.2	0.047	0.004	●	0.079	0.157
TCG18L120-010	L	1.2	0.047	0.004	●	0.079	0.157
TCG18R125-010	R	1.25	0.049	0.004	●	0.079	0.157
TCG18L125-010	L	1.25	0.049	0.004	●	0.079	0.157
TCG18R125-020	R	1.25	0.049	0.008	●	0.079	0.157
TCG18L125-020	L	1.25	0.049	0.008	●	0.079	0.157
TCG18R130-020	R	1.3	0.051	0.008	●	0.079	0.157
TCG18L130-020	L	1.3	0.051	0.008	●	0.079	0.157
TCG18R140-010	R	1.4	0.055	0.004	●	0.138	0.157
TCG18L140-010	L	1.4	0.055	0.004	●	0.138	0.157
TCG18R140-020	R	1.4	0.055	0.008	●	0.138	0.157
TCG18L140-020	L	1.4	0.055	0.008	●	0.138	0.157
TCG18R145-010	R	1.45	0.057	0.004	●	0.138	0.157
TCG18L145-010	L	1.45	0.057	0.004	●	0.138	0.157
TCG18R145-020	R	1.45	0.057	0.008	●	0.138	0.157
TCG18L145-020	L	1.45	0.057	0.008	●	0.138	0.157
TCG18R150-010	R	1.5	0.059	0.004	●	0.138	0.157
TCG18L150-010	L	1.5	0.059	0.004	●	0.138	0.157
TCG18R150-020	R	1.5	0.059	0.008	●	0.138	0.157
TCG18L150-020	L	1.5	0.059	0.008	●	0.138	0.157
TCG18R160-020	R	1.6	0.063	0.008	●	0.138	0.157
TCG18L160-020	L	1.6	0.063	0.008	●	0.138	0.157
TCG18R170-020	R	1.7	0.067	0.008	●	0.138	0.157
TCG18L170-020	L	1.7	0.067	0.008	●	0.138	0.157
TCG18R175-010	R	1.75	0.069	0.004	●	0.138	0.157
TCG18L175-010	L	1.75	0.069	0.004	●	0.138	0.157
TCG18R175-020	R	1.75	0.069	0.008	●	0.138	0.157
TCG18L175-020	L	1.75	0.069	0.008	●	0.138	0.157
TCG18R185-020	R	1.85	0.073	0.008	●	0.138	0.157
TCG18L185-020	L	1.85	0.073	0.008	●	0.138	0.157
TCG18R195-020	R	1.95	0.077	0.008	●	0.138	0.157
TCG18L195-020	L	1.95	0.077	0.008	●	0.138	0.157

See page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	S (in)
TCG18R200-010	R	2	0.079	0.004	●	0.138	0.157
TCG18L200-010	L	2	0.079	0.004	●	0.138	0.157
TCG18R200-020	R	2	0.079	0.008	●	0.138	0.157
TCG18L200-020	L	2	0.079	0.008	●	0.138	0.157
TCG18R225-020	R	2.25	0.089	0.008	●	0.138	0.157
TCG18L225-020	L	2.25	0.089	0.008	●	0.138	0.157
TCG18R230-020	R	2.3	0.091	0.008	●	0.138	0.157
TCG18L230-020	L	2.3	0.091	0.008	●	0.138	0.157
TCG18R250-010	R	2.5	0.098	0.004	●	0.138	0.157
TCG18L250-010	L	2.5	0.098	0.004	●	0.138	0.157
TCG18R250-020	R	2.5	0.098	0.008	●	0.138	0.157
TCG18L250-020	L	2.5	0.098	0.008	●	0.138	0.157
TCG18R250-030	R	2.5	0.098	0.012	●	0.138	0.157
TCG18L250-030	L	2.5	0.098	0.012	●	0.138	0.157
TCG18R265-030	R	2.65	0.104	0.012	●	0.138	0.157
TCG18L265-030	L	2.65	0.104	0.012	●	0.138	0.157
TCG18R280-030	R	2.8	0.110	0.012	●	0.138	0.157
TCG18L280-030	L	2.8	0.110	0.012	●	0.138	0.157
TCG18R300-010	R	3	0.118	0.004	●	0.138	0.157
TCG18L300-010	L	3	0.118	0.004	●	0.138	0.157
TCG18R300-020	R	3	0.118	0.008	●	0.138	0.157
TCG18L300-020	L	3	0.118	0.008	●	0.138	0.157
TCG18R300-030	R	3	0.118	0.012	●	0.138	0.157
TCG18L300-030	L	3	0.118	0.012	●	0.138	0.157

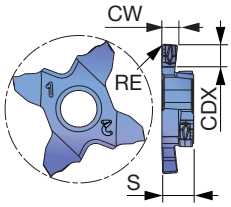
Please see the page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

INSERT

TCS18R (3D chipbreaker, honed edge)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

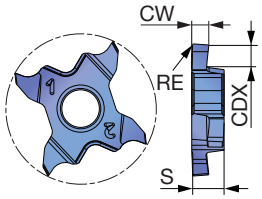
Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	S (in)
TCS18R100-010	R	1	0.039	0.004	●	0.079	0.157
TCS18R120-010	R	1.2	0.047	0.004	●	0.079	0.157
TCS18R125-010	R	1.25	0.049	0.004	●	0.079	0.157
TCS18R125-020	R	1.25	0.049	0.008	●	0.079	0.157
TCS18R130-020	R	1.3	0.051	0.008	●	0.138	0.157
TCS18R140-010	R	1.4	0.055	0.004	●	0.138	0.157
TCS18R140-020	R	1.4	0.055	0.008	●	0.138	0.157
TCS18R145-010	R	1.45	0.057	0.004	●	0.138	0.157
TCS18R150-010	R	1.5	0.059	0.004	●	0.138	0.157
TCS18R150-020	R	1.5	0.059	0.008	●	0.138	0.157
TCS18R160-020	R	1.6	0.063	0.008	●	0.138	0.157
TCS18R170-020	R	1.7	0.067	0.008	●	0.138	0.157
TCS18R175-010	R	1.75	0.069	0.004	●	0.138	0.157
TCS18R175-020	R	1.75	0.069	0.008	●	0.138	0.157
TCS18R185-020	R	1.85	0.073	0.008	●	0.138	0.157
TCS18R195-020	R	1.95	0.077	0.008	●	0.138	0.157
TCS18R200-010	R	2	0.079	0.004	●	0.138	0.157
TCS18R200-020	R	2	0.079	0.008	●	0.138	0.157
TCS18R225-020	R	2.25	0.089	0.008	●	0.138	0.157
TCS18R230-020	R	2.3	0.091	0.008	●	0.138	0.157
TCS18R250-010	R	2.5	0.098	0.008	●	0.138	0.157
TCS18R250-020	R	2.5	0.098	0.008	●	0.138	0.157
TCS18R250-030	R	2.5	0.098	0.012	●	0.138	0.157
TCS18R265-030	R	2.65	0.104	0.012	●	0.138	0.157
TCS18R280-030	R	2.8	0.110	0.012	●	0.138	0.157
TCS18R300-010	R	3	0.118	0.004	●	0.138	0.157
TCS18R300-020	R	3	0.118	0.008	●	0.138	0.157
TCS18R300-030	R	3	0.118	0.012	●	0.138	0.157

Please see the page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

TCP18R/L (lightly honed edge)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

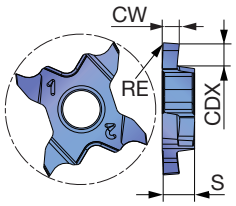
Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	S (in)
TCP18R033-005	R	0.33	0.013	0.002	●	0.031	0.157
TCP18L033-005	L	0.33	0.013	0.002	●	0.031	0.157
TCP18R043-005	R	0.43	0.017	0.002	●	0.047	0.157
TCP18L043-005	L	0.43	0.017	0.002	●	0.047	0.157
TCP18R050-005	R	0.50	0.020	0.002	●	0.047	0.157
TCP18L050-005	L	0.50	0.020	0.002	●	0.047	0.157
TCP18R075-005	R	0.75	0.030	0.002	●	0.079	0.157
TCP18L075-005	L	0.75	0.030	0.002	●	0.079	0.157
TCP18R095-005	R	0.95	0.037	0.002	●	0.079	0.157
TCP18L095-005	L	0.95	0.037	0.002	●	0.079	0.157
TCP18R100-010	R	1	0.039	0.004	●	0.079	0.157
TCP18L100-010	L	1	0.039	0.004	●	0.079	0.157
TCP18R120-010	R	1.2	0.047	0.004	●	0.079	0.157
TCP18L120-010	L	1.2	0.047	0.004	●	0.079	0.157
TCP18R125-010	R	1.25	0.049	0.004	●	0.079	0.157
TCP18L125-010	L	1.25	0.049	0.004	●	0.079	0.157
TCP18R140-010-35	R	1.4	0.055	0.004	●	0.138	0.157
TCP18L140-010-35	L	1.4	0.055	0.004	●	0.138	0.157
TCP18R145-010	R	1.45	0.057	0.004	●	0.079	0.157
TCP18L145-010	L	1.45	0.057	0.004	●	0.079	0.157
TCP18R145-010-35	R	1.45	0.057	0.004	●	0.138	0.157
TCP18L145-010-35	L	1.45	0.057	0.004	●	0.138	0.157
TCP18R150-010	R	1.5	0.059	0.004	●	0.079	0.157
TCP18L150-010	L	1.5	0.059	0.004	●	0.079	0.157
TCP18R150-010-35	R	1.5	0.059	0.004	●	0.138	0.157
TCP18L150-010-35	L	1.5	0.059	0.004	●	0.138	0.157
TCP18R175-010	R	1.75	0.069	0.004	●	0.079	0.157
TCP18L175-010	L	1.75	0.069	0.004	●	0.079	0.157
TCP18R175-010-35	R	1.75	0.069	0.004	●	0.138	0.157
TCP18L175-010-35	L	1.75	0.069	0.004	●	0.138	0.157
TCP18R200-010	R	2	0.079	0.004	●	0.098	0.157
TCP18L200-010	L	2	0.079	0.004	●	0.098	0.157
TCP18R200-010-35	R	2	0.079	0.004	●	0.138	0.157
TCP18L200-010-35	L	2	0.079	0.004	●	0.138	0.157
TCP18R250-010	R	2.5	0.098	0.004	●	0.098	0.157
TCP18L250-010	L	2.5	0.098	0.004	●	0.098	0.157
TCP18R250-010-35	R	2.5	0.098	0.004	●	0.138	0.157
TCP18L250-010-35	L	2.5	0.098	0.004	●	0.138	0.157
TCP18R300-010	R	3	0.118	0.004	●	0.098	0.157
TCP18L300-010	L	3	0.118	0.004	●	0.098	0.157
TCP18R300-010-35	R	3	0.118	0.004	●	0.138	0.157
TCP18L300-010-35	L	3	0.118	0.004	●	0.138	0.157

Please see the page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

TCP18R/L-F (sharp edge)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CDX (in)	S (in)
TCP18R033F-005	R	0.33	0.013	0.002	●	0.031	0.157
TCP18L033F-005	L	0.33	0.013	0.002	●	0.031	0.157
TCP18R043F-005	R	0.43	0.017	0.002	●	0.047	0.157
TCP18L043F-005	L	0.43	0.017	0.002	●	0.047	0.157
TCP18R050F-005	R	0.5	0.020	0.002	●	0.047	0.157
TCP18L050F-005	L	0.5	0.020	0.002	●	0.047	0.157
TCP18R075F-005	R	0.75	0.030	0.002	●	0.079	0.157
TCP18L075F-005	L	0.75	0.030	0.002	●	0.079	0.157
TCP18R095F-005	R	0.95	0.037	0.002	●	0.079	0.157
TCP18L095F-005	L	0.95	0.037	0.002	●	0.079	0.157
TCP18R100F-005	R	1	0.039	0.002	●	0.079	0.157
TCP18R100F-010	R	1	0.039	0.004	●	0.079	0.157
TCP18L100F-010	L	1	0.039	0.004	●	0.079	0.157
TCP18R120F-005	R	1.2	0.047	0.002	●	0.079	0.157
TCP18R120F-010	R	1.2	0.047	0.004	●	0.079	0.157
TCP18L120F-010	L	1.2	0.047	0.004	●	0.079	0.157
TCP18R125F-005	R	1.25	0.049	0.002	●	0.079	0.157
TCP18R125F-010	R	1.25	0.049	0.004	●	0.079	0.157
TCP18L125F-010	L	1.25	0.049	0.004	●	0.079	0.157
TCP18R140F-010-35	R	1.4	0.055	0.004	●	0.138	0.157
TCP18R145F-005-35	R	1.45	0.057	0.002	●	0.138	0.157
TCP18R145F-010	R	1.45	0.057	0.004	●	0.079	0.157
TCP18L145F-010	L	1.45	0.057	0.004	●	0.079	0.157
TCP18R145F-010-35	R	1.45	0.057	0.004	●	0.138	0.157
TCP18L145F-010-35	L	1.45	0.057	0.004	●	0.138	0.157
TCP18R150F-005-35	R	1.5	0.059	0.002	●	0.138	0.157
TCP18R150F-010	R	1.5	0.059	0.004	●	0.079	0.157
TCP18L150F-010	L	1.5	0.059	0.004	●	0.079	0.157
TCP18R150F-010-35	R	1.5	0.059	0.004	●	0.138	0.157
TCP18L150F-010-35	L	1.5	0.059	0.004	●	0.138	0.157
TCP18R175F-005-35	R	1.75	0.069	0.002	●	0.138	0.157
TCP18R175F-010	R	1.75	0.069	0.004	●	0.079	0.157
TCP18L175F-010	L	1.75	0.069	0.004	●	0.079	0.157
TCP18R175F-010-35	R	1.75	0.069	0.004	●	0.138	0.157
TCP18L175F-010-35	L	1.75	0.069	0.004	●	0.138	0.157

Please see the page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice
☆ : Second choice

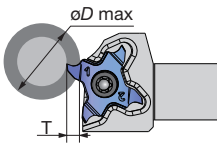
Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated												CDX (in)	S (in)
					SH725													
TCP18R200F-005-35	R	2	0.079	0.002	●												0.138	0.157
TCP18R200F-010	R	2	0.079	0.004	●												0.098	0.157
TCP18L200F-010	L	2	0.079	0.004	●												0.098	0.157
TCP18R200F-010-35	R	2	0.079	0.004	●												0.138	0.157
TCP18L200F-010-35	L	2	0.079	0.004	●												0.138	0.157
TCP18R250F-010	R	2.5	0.098	0.004	●												0.098	0.157
TCP18L250F-010	L	2.5	0.098	0.004	●												0.098	0.157
TCP18R250F-010-35	R	2.5	0.098	0.004	●												0.138	0.157
TCP18L250F-010-35	L	2.5	0.098	0.004	●												0.138	0.157
TCP18R300F-010	R	3	0.118	0.004	●												0.098	0.157
TCP18L300F-010	L	3	0.118	0.004	●												0.098	0.157
TCP18R300F-010-35	R	3	0.118	0.004	●												0.138	0.157
TCP18L300F-010-35	L	3	0.118	0.004	●												0.138	0.157

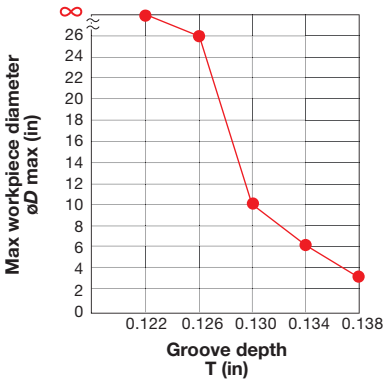
Please see the page F048 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F037 - F041, Standard cutting conditions → F048

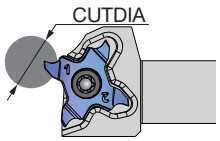
PRECAUTIONS OF PROCESSING





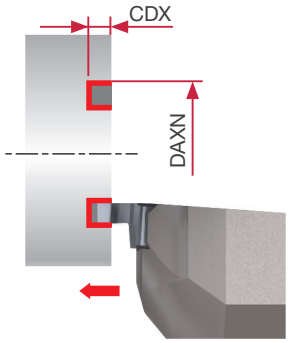
*Groove depth and max workpiece diameter (ø*D* max)

Maximum workpiece diameter is limited relative to depth of cut in order to avoid collision between insert and workpiece.



Max workpiece diameter CUTDIA (in)
0.276

Minimum diameter for face grooving



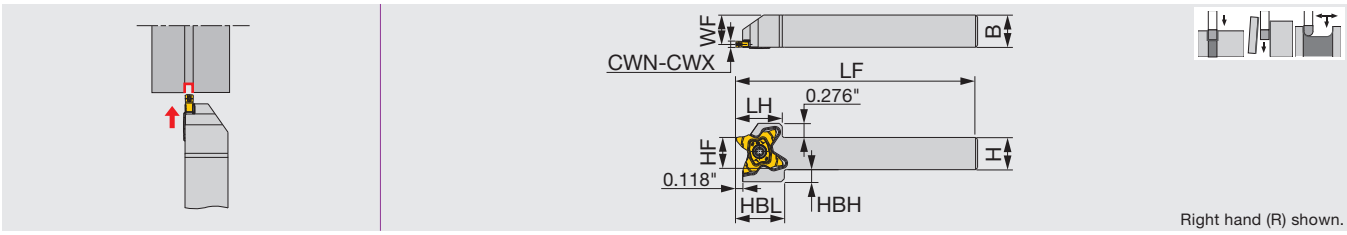
Minimum face diameter DAXN (in)	Maximum groove depth CDX (in)
2.559	0.118

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) TCP / TCP-F (AH725 / SH725)	TCS (AH7025)	TCG (AH7025)
P	Low carbon steel 1015, etc.	260 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Carbon steel, Alloy steel 1055, etc.	260 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Prehardened steel NAK80, PX5, etc.	260 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
M	Stainless steel S30400, etc.	160 - 390	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
K	Gray cast iron No.250B, No.300B, etc.	160 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Ductile cast iron 60-40-18, 80-55-06, etc.	160 - 590	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
S	Titanium alloys Ti-6Al-4V, etc.	60 - 260	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005
	Superalloys Inconel718, etc.	60 - 260	0.001 - 0.004	0.001 - 0.006	0.001 - 0.005

STCR/L-27

External grooving toolholder



Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L06-27	0.02	0.125	0.375	0.375	5.000	0.906	0.945	0.375	0.315	0.374	TC*27...	1.84
STCR/L08-27	0.02	0.125	0.500	0.500	5.000	0.906	0.945	0.500	0.440	0.287	TC*27...	1.84
STCR/L10-27	0.02	0.125	0.625	0.625	5.000	0.906	0.945	0.625	0.570	0.236	TC*27...	1.84
STCR/L12-27	0.02	0.125	0.750	0.750	5.000	0.906	0.945	0.750	0.690	0.118	TC*27...	1.84
STCR/L16-27	0.02	0.125	1.000	1.000	5.000	0.906	-	1.000	0.940	-	TC*27...	1.84

Torque: Recommended clamping torque: lbs·ft

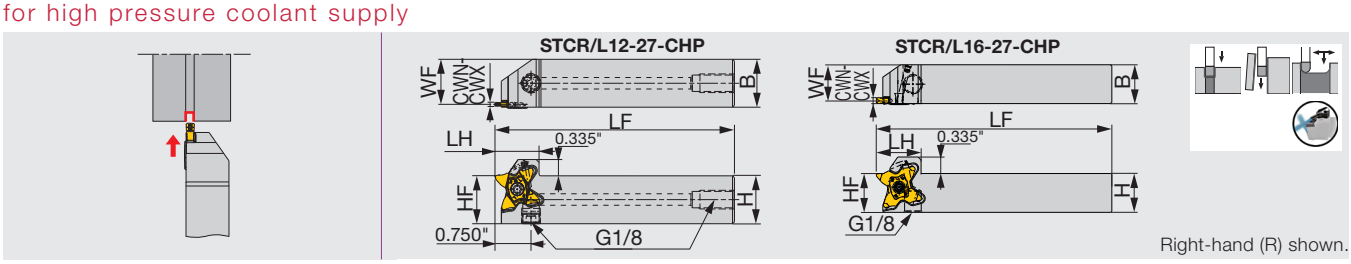
SPARE PARTS

Designation	Screw	Wrench
STCR**-27	SR16-212-01397L	T-2010/5
STCL**-27	SR16-212-01397	T-2010/5

STCR/L-27-CHP

TUNGTURN JET

Precision grooving tools with uniquely shaped insert with 4 cutting edges and channel for high pressure coolant supply



Inch	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque
STCR/L12-27-CHP	0.020	0.125	0.750	0.750	5.000	0.906	0.750	0.690	TC*27...	1.84
STCR/L16-27-CHP	0.020	0.125	1.000	1.000	4.920	0.906	1.000	0.940	TC*27...	1.84

Metric	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque*
STCR/L2020-27-CHP	0.5	3.18	20	20	120	23	20	18.5	TC*27...	2.5
STCR/L2525-27-CHP	0.5	3.18	25	25	125	23	25	23.5	TC*27...	2.5

Torque: Recommended clamping torque: lbs·ft (*N·m)

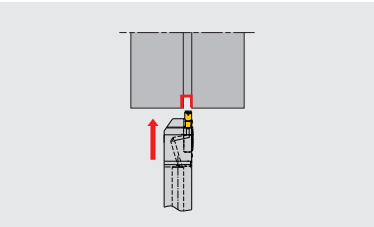
SPARE PARTS

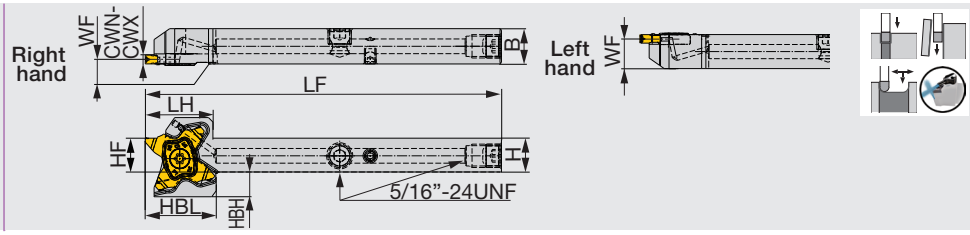
Designation	Screw	Wrench
STCR...-27-CHP	SR16-212-01397L	T-2010/5
STCL...-27-CHP	SR16-212-01397	T-2010/5

Reference pages: Inserts → F053 - F056, Standard cutting conditions → F057
Parts for coolant hose → F240

STCR/L-27-CHP

Grooving and parting-off tool with high pressure coolant capability





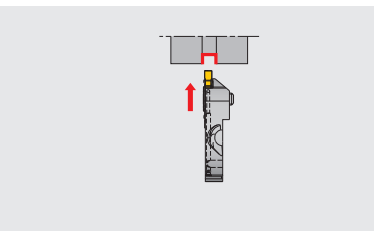
Inch	CWN	CWX	H	B	LF	LH	HF	WF(1)	HBH	HBL	Insert	Torque
STCR/L08-27-CHP	0.200	0.125	0.500	0.500	4.750	0.906	0.500	0.590/0.441	0.287	0.945	TC*27...	1.84

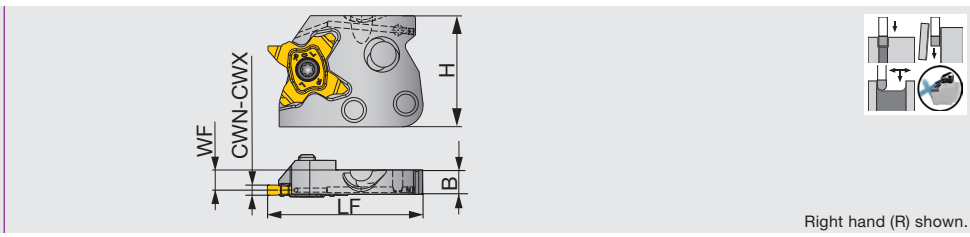
Make sure to avoid tool interferences when used on Swiss machines
Torque: Recommended clamping torque: lb·ft
(1) The above WF value is valid when an insert width of CW=3 is mounted.

TETRA FORCE CUT
TUNG MODULAR SYSTEM

STCAR/L27-CHP

Modular-type external grooving and parting blade, with high pressure coolant capability





Right hand (R) shown.

Inch	CWN	CWX	WF	H	LF	B	Insert	Torque
STCAR/L27-CHP	0.020	0.125	0.236	1.299	1.811	0.283	TC*27...	1.84

Torque: Recommended clamping torque: lb·ft

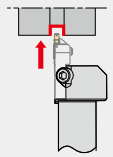
SPARE PARTS

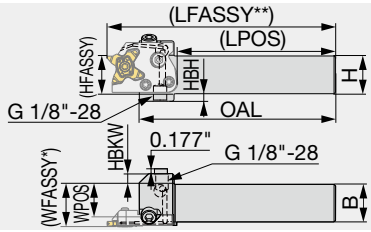
Designation	Screw	Wrench
STCAR27-CHP	SR16-212-01397L	T-2010/5
STCAL27-CHP	SR16-212-01397	T-2010/5

Reference pages: Inserts → F053 - F056, Standard cutting conditions → F057
Parts for coolant hose → F240

CHSR/L-CHP

Shank for blades with high pressure coolant capability





Right hand (R) shown.

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200

*WFASSY : shank (WPOS) + blade (WF)
**LFASSY : shank (LPOS) + blade (LF)

Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Applicable for 30 MPa coolant
Please see the page **L043** for the instruction on installing and removing the blade.

SPARE PARTS

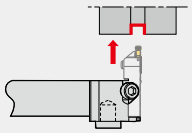
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHSR/L**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	PLUGG1/8ISO1179

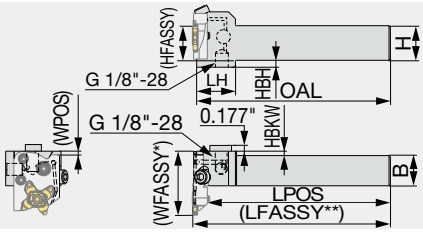
Recommended clamping torque (lbf·ft, N·m)

Clamping screw	Torque (lbf·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

CHFVR/L-CHP

Shank for blades with high pressure coolant capability





Right hand (R)
with left-hand blade shown.

Inch	H	B	OAL	LPOS	WPOS	LH	HBKW	HFASSY	HBH
CHFVR/L12-CHP	0.750	0.750	5.500	5.307	0.020	1.100	0.234	0.750	10
CHFVR/L16-CHP	1.000	1.000	5.500	5.307	0.020	1.100	-	1.000	5

*WFASSY : shank (WPOS) + blade (LF)
**LFASSY : shank (LPOS) + blade (WF)

Use left-hand blades (L) with right-hand shanks (R); and right-hand blades (R) with left-hand shanks (L).
Applicable for 30 MPa coolant
Please see the page **L043** for the instruction on installing and removing the blade.

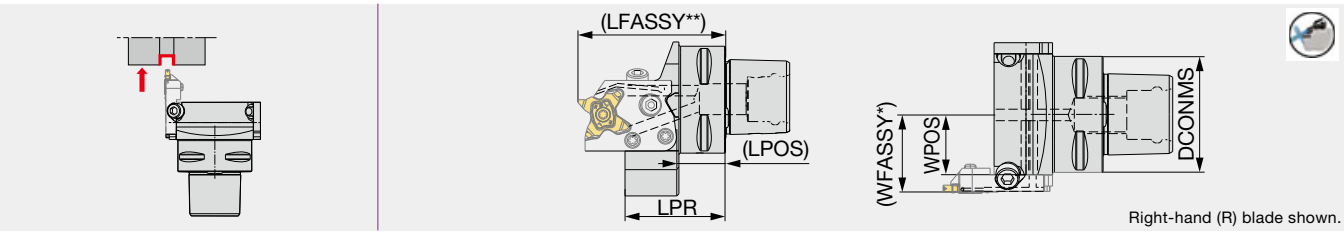
SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHFVR/L**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N	PLUGG1/8ISO1179

Reference pages: Inserts → **F053 - F056**, Standard cutting conditions → **F057**
Parts for coolant hose → **F240**

C*CHSN-CHP

TungCap shank for CAER/L-CHP blades with high pressure coolant capability



Metric	DCONMS	LPR	LPOS	WPOS
C3CHSN19045-CHP	32	45	17.5	18.5
C4CHSN21047-CHP	40	46.5	21.5	21
C5CHSN26047-CHP	50	47	22.5	26
C6CHSN33050-CHP	63	50	24.5	32.5

*WFASSY : shank (WPOS) + blade (WF)
**LFASSY : shank (LPOS) + blade (LF)
Applicable for 30 MPa coolant
Please see the page **L043** for the instruction on installing and removing the blade.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHSN**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

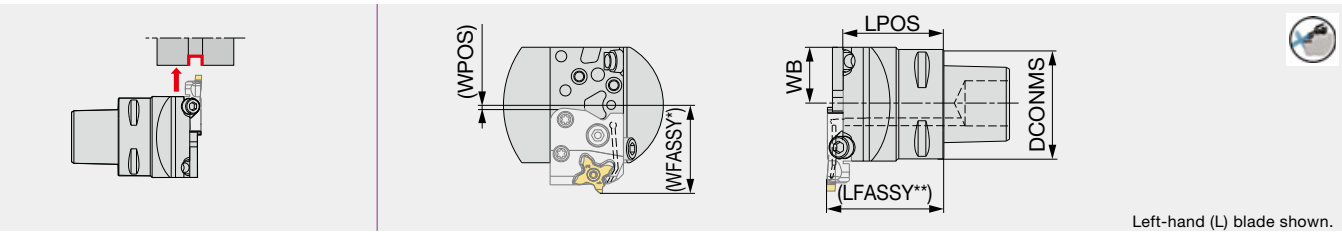
Recommended clamping torque (lbs·ft, N·m)

Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

TUNGCAP TUNGMODULAR SYSTEM

C*CHFVN-CHP

TungCap shank for CAER/L-CHP blades with high pressure coolant capability



Inch	DCONMS	LPOS	WB	WPOS
C3CHFVN26040-CHP	1.260	1.575	1.024	0.059
C4CHFVN26046-CHP	1.575	1.811	1.024	0.059
C5CHFVN26046-CHP	1.969	1.811	1.024	0.059
C6CHFVN33046-CHP	2.480	1.811	1.299	0.335

*WFASSY : shank (WPOS) + blade (LF)
**LFASSY : shank (LPOS) + blade (WF)
Applicable for 30 MPa coolant
Please see the page **L043** for the instruction on installing and removing the blade.

SPARE PARTS

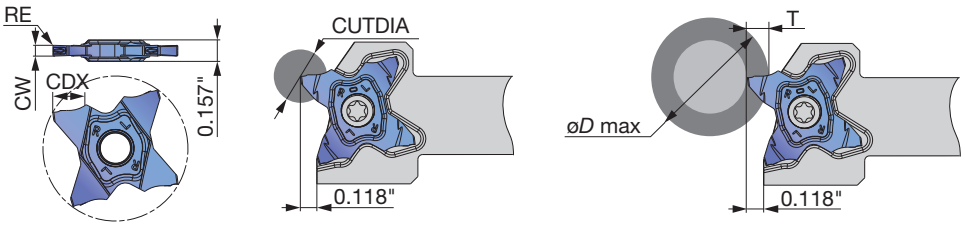
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHFVN**-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

Recommended clamping torque (lbs·ft, N·m)

Clamping screw	Torque (lbs·ft)	Torque (N·m)
SR M5-04451	1.84	2.5
SR M6X12DIN6912	4.79	6.5
SR M6X20-XT	4.79	6.5

Reference pages: Inserts → **F053 - F026**, Standard cutting conditions → **F057**

TCS27



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

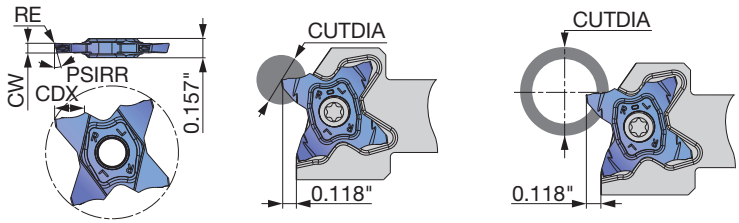
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)											
							T≤0.039	T≤0.079	T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCS27-050-000	0.5	0.020	0	●	0.039	0.079	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.020	0.0016	●	0.098	0.197	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-075-010	0.75	0.030	0.004	●	0.098	0.197	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-080-000	0.8	0.031	0	●	0.063	0.126	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-100-006	1	0.039	0.0024	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-100-010	1	0.039	0.004	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-104-000	1.04	0.041	0	●	0.079	0.157	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-120-000	1.2	0.047	0	●	0.079	0.157	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-125-010	1.25	0.049	0.004	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-125-020	1.25	0.049	0.008	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-140-000	1.4	0.055	0	●	0.079	0.157	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-147-000	1.47	0.058	0	●	0.098	0.197	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-150-010	1.5	0.059	0.004	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-150-020	1.5	0.059	0.008	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-157-015	1.57	0.062	0.006	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-170-010	1.7	0.067	0.004	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-175-010	1.75	0.069	0.004	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-175-020	1.75	0.069	0.008	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-178-018	1.78	0.070	0.007	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-185-020	1.85	0.073	0.008	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-196-015	1.96	0.077	0.006	●	0.118	0.236	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-200-010	2	0.079	0.004	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCS27-200-020	2	0.079	0.008	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCS27-222-015	2.22	0.087	0.006	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-230-020	2.3	0.091	0.008	●	0.138	0.276	∞	∞	∞	23.622	-	-	-	-	-	-	-	-
TCS27-239-015	2.39	0.094	0.006	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-247-020	2.47	0.097	0.008	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-250-010	2.5	0.098	0.004	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-250-030	2.5	0.098	0.012	●	0.224	0.449	∞	∞	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-270-010	2.7	0.106	0.004	●	0.244	0.488	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCS27-287-020	2.87	0.113	0.008	●	0.244	0.488	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCS27-300-000	3	0.118	0	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-020	3	0.118	0.008	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-030	3	0.118	0.012	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-040	3	0.118	0.016	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-315-015	3.15	0.124	0.006	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677
TCS27-318-020	3.18	0.125	0.008	●	0.252	0.504	∞	∞	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677

5 pieces per package
● : Line up

Reference pages: Toolholders → F049 - F052, Standard cutting conditions → F057

INSERT- FOR PARTING OFF

TCS27-R/L



Right hand (R) shown.

P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

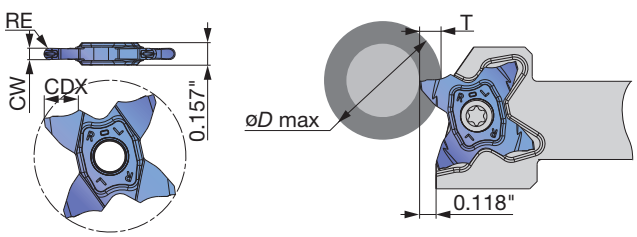
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	PSIRL	PSIRR	Max. parting off dia. CUTDIA (in) Solid bar	Max. parting off dia. CUTDIA (in) Tube
TCS27-100-15R	R	1	0.039	0.0024	●	0.138	0°	15°	0.276	23.622
TCS27-100-15L	L	1	0.039	0.0024	●	0.138	15°	0°	0.276	23.622
TCS27-150-6R	R	1.5	0.059	0.0024	●	0.224	0°	6°	0.449	1.378
TCS27-150-6L	L	1.5	0.059	0.0024	●	0.224	6°	0°	0.449	1.378
TCS27-150-15R	R	1.5	0.059	0.0024	●	0.224	0°	15°	0.449	1.378
TCS27-150-15L	L	1.5	0.059	0.0024	●	0.224	15°	0°	0.449	1.378
TCS27-200-6R	R	2	0.079	0.004	●	0.252	0°	6°	0.504	1.181
TCS27-200-6L	L	2	0.079	0.004	●	0.252	6°	0°	0.504	1.181
TCS27-200-15R	R	2	0.079	0.004	●	0.252	0°	15°	0.504	1.181
TCS27-200-15L	L	2	0.079	0.004	●	0.252	15°	0°	0.504	1.181

5 pieces per package
● : Line up

INSERT- FOR GROOVING AND PROFILING

TCS27 (Full R)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

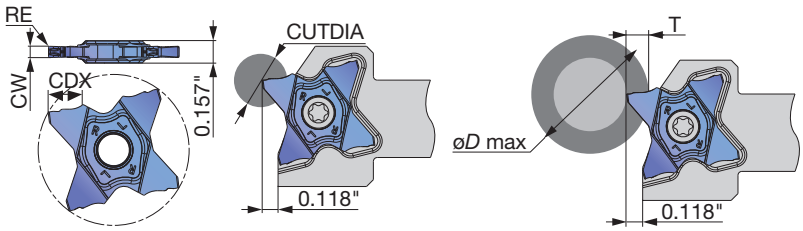
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	Relation of groove depth (T) and Max. diameter (øD max) (in) T≤0.039 T≤0.079 T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCS27-157-079	1.57	0.062	0.031	●	0.118	∞	-	-	-	-	-	-	-	-	-
TCS27-200-100	2	0.079	0.039	●	0.118	∞	-	-	-	-	-	-	-	-	-
TCS27-239-120	2.39	0.094	0.047	●	0.224	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-300-150	3	0.118	0.059	●	0.252	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

5 pieces per package
● : Line up

Reference pages: Toolholders → F049 - F052, Standard cutting conditions → F057

INSERT- FOR GROOVING AND PARTING OFF

TCM27



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

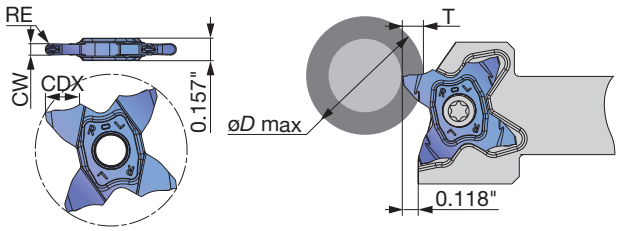
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725			CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
									T≤0.039 T≤0.079 T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCM27-150-010	1.5	0.059	0.004	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-150-020	1.5	0.059	0.008	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-157-015	1.57	0.062	0.006	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-170-010	1.7	0.067	0.004	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-175-010	1.75	0.069	0.004	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-175-020	1.75	0.069	0.008	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-178-018	1.78	0.070	0.007	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-185-020	1.85	0.073	0.008	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-196-015	1.96	0.077	0.006	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-200-010	2	0.079	0.004	●			0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCM27-200-020	2	0.079	0.008	●			0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCM27-222-015	2.22	0.087	0.006	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCM27-230-020	2.3	0.091	0.008	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCM27-239-015	2.39	0.094	0.006	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-247-020	2.47	0.097	0.008	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-250-010	2.5	0.098	0.004	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-250-030	2.5	0.098	0.012	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-270-010	2.7	0.106	0.004	●			0.244	0.488	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCM27-287-020	2.87	0.113	0.008	●			0.244	0.488	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCM27-300-000	3	0.118	0	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-300-020	3	0.118	0.008	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-300-030	3	0.118	0.012	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-300-040	3	0.118	0.016	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCM27-315-015	3.15	0.124	0.006	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677
TCM27-318-020	3.18	0.125	0.008	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677

5 pieces per package
● : Line up

Reference pages: Toolholders → F049 - F052, Standard cutting conditions → F057

INSERT - FOR GROOVING AND PROFILING

TCM27 (Full R)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

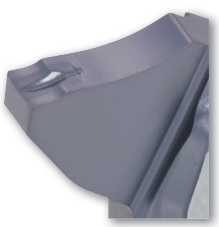
★ : First choice
☆ : Second choice

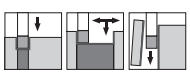
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725			CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
									T≤0.039 T≤0.079 T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCM27-157-079	1.57	0.059	0.031	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-200-100	2	0.059	0.039	●			0.118	0.236	∞	23.622	-	-	-	-	-	-	-	-
TCM27-239-120	2.39	0.062	0.047	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-300-150	3	0.125	0.059	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

5 pieces per package
● : Line up

CHIPBREAKER

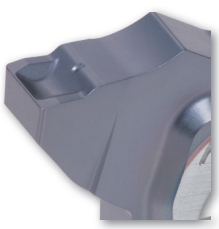
TCS27

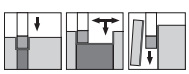




CW = 0.020" - 0.125" (0.5 mm – 3.18 mm)
For general machining, lower cutting force and superior sharpness.

TCM27





CW = 0.059" - 0.125" (1.5 mm – 3.18 mm)
For high feed machining. Well-designed edge with high strength and fracture resistance.

Reference pages: Toolholders → F049 - F052

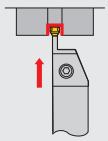
STANDARD CUTTING CONDITIONS

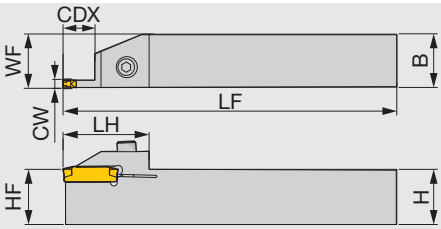
ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving, Parting TCS	Grooving, Parting TCM	Parting (with hand) TCS	Turning (full radius) TCS	Turning (full radius) TCM	Depth of cut for profiling Turning (full radius)
P	Steel 1045, etc.	AH725	330 - 660	0.002 - 0.006	0.002 - 0.010	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
P	Alloy steel 4137, etc.	AH725	165 - 590	0.002 - 0.006	0.002 - 0.010	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
M	Stainless steel 304, etc.	AH725	165 - 490	0.002 - 0.006	0.002 - 0.008	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
K	Gray cast iron No.250, etc.	AH725	165 - 590	0.002 - 0.006	0.002 - 0.010	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
K	Ductile cast iron 60-40-18, etc.	AH725	165 - 390	0.002 - 0.006	0.002 - 0.008	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
S	Titanium alloys Ti-6Al-4V, etc.	AH725	100 - 200	0.002 - 0.006	0.002 - 0.006	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.004	0.020
S	Superalloys Inconel718, etc.	AH725	65 - 165	0.002 - 0.006	0.002 - 0.006	0.0016 - 0.005	0.002 - 0.004	0.002 - 0.004	0.020

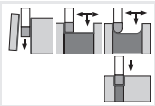
MY-T SERIES

CGWSR/L-W

External grooving, parting and turning toolholder, for 2 corner inserts







Right hand (R) shown.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGWSR/L1616-W30	3	12	16	16	125	34	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30	3	12	20	20	150	34	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30	3	12	25	25	150	34	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40	4	13	20	20	150	39	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40	4	13	25	25	150	39	25	25.4	WG*40, WGE40R/L	5
CGWSR/L2020-W50	5	13	20	20	150	39	20	20.4	WG*50, WGE50R/L	5
CGWSR/L2525-W50	5	13	25	25	150	39	25	25.4	WG*50, WGE50R/L	5

Torque: Recommended clamping torque: N·m

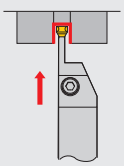
SPARE PARTS

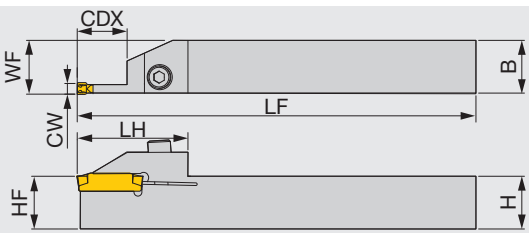
Designation	Clamping screw	Wrench
CGWSR/L****-W...	CHHM5-18	P-4

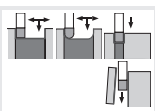
MY-T SERIES

CGWSR/L-W-L

External deep grooving, parting and turning toolholder, for 2 corner inserts







Right hand (R) shown.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGWSR/L1616-W20-L	2	15	16	16	125	37	16	16.2	WGE20, WGE20R/L	5
CGWSR/L2020-W20-L	2	15	20	20	150	37	20	20.2	WGE20, WGE20R/L	5
CGWSR/L2525-W20-L	2	15	25	25	150	37	25	25.2	WGE20, WGE20R/L	5
CGWSR/L1616-W30-L	3	16.5, 17.5	16	16	125	37	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30-L	3	16.5, 17.5	20	20	150	37	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30-L	3	16.5, 17.5	25	25	150	37	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40-L	4	21, 21.5	20	20	150	42	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40-L	4	21, 21.5	25	25	150	42	25	25.4	WG*40, WGE40R/L	5
CGWSR/L2020-W50-L	5	21	20	20	150	42	20	20.4	WG*50, WGE50R/L	5
CGWSR/L2525-W50-L	5	21	25	25	150	42	25	25.4	WG*50, WGE50R/L	5

Torque: Recommended clamping torque: N·m

SPARE PARTS

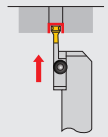
Designation	Clamping screw	Wrench
CGWSR/L****-W**-L	CHHM5-18	P-4

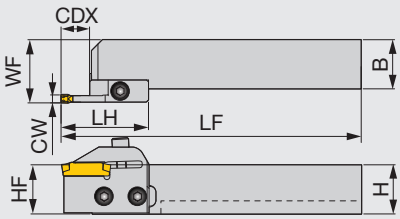
Reference pages: Inserts → F065 - F066, Standard cutting conditions → F067

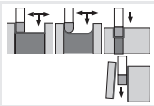
MY-T SERIES

CGWSR/L-WG

External grooving, parting and turning toolholder, for 2 corner inserts







Right hand (R) shown.
Dashed line: 20mm square shank.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Blade	Torque
CGWSR/L2020-W30GR/L	3	12	20	20	150.5	43.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L	5
CGWSR/L2525-W30GR/L	3	12	25	25	150.5	43.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L	5
CGWSR/L2020-W40GR/L	4	13	20	20	151.5	44.5	20	26.9	WG*40, WGE40R/L	CGWSR/L2020	W40GR/L	5
CGWSR/L2525-W40GR/L	4	13	25	25	151.5	44.5	25	31.9	WG*40, WGE40R/L	CGWSR/L2525	W40GR/L	5
CGWSR/L2020-W50GR/L	5	13	20	20	151.5	44.5	20	26.9	WG*50, WGE50R/L	CGWSR/L2020	W50GR/L	5
CGWSR/L2525-W50GR/L	5	13	25	25	151.5	44.5	25	31.9	WG*50, WGE50R/L	CGWSR/L2525	W50GR/L	5

Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Blade sold separately.
Torque: Recommended clamping torque: N·m

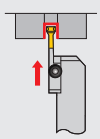
SPARE PARTS

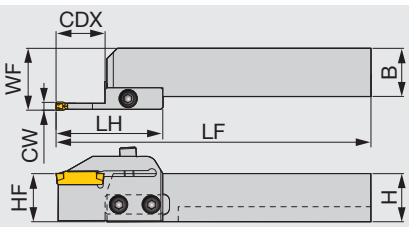
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-W**GR/L	CHHM5-18	CSHB-6	P-4

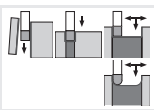
MY-T SERIES

CGWSR/L-WG-L

External deep grooving, parting and turning toolholder, for 2 corner inserts







Right hand (R) shown.
Dashed line: 20mm square shank.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Blade	Torque
CGWSR/L2020-W20GR/L-L	2	15	20	20	153.5	46.5	20	26.7	WGE20, WGE20R/L	CGWSR/L2020	W20GR/L-L	5
CGWSR/L2525-W20R/LR-L	2	15	25	25	153.5	46.5	25	31.7	WGE20, WGE20R/L	CGWSR/L2525	W20GR/L-L	5
CGWSR/L2020-W30GR/L-L	3	16.5 - 17.5	20	20	157.5	50.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L-L	5
CGWSR/L2525-W30GR/L-L	3	16.5 - 17.5	25	25	157.5	50.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L-L	5
CGWSR/L2020-W40GR/L-L	4	21 - 21.5	20	20	162.5	55.5	20	26.9	WG*40, WGE40R/L	CGWSR/L2020	W40GR/L-L	5
CGWSR/L2525-W40GR/L-L	4	21 - 21.5	25	25	162.5	55.5	25	31.9	WG*40, WGE40R/L	CGWSR/L2525	W40GR/L-L	5
CGWSR/L2020-W50GR/L-L	5	21	20	20	162.5	55.5	20	26.9	WG*50, WGE50R/L	CGWSR/L2020	W50GR/L-L	5
CGWSR/L2525-W50GR/L-L	5	21	25	25	162.5	55.5	25	31.9	WG*50, WGE50R/L	CGWSR/L2525	W50GR/L-L	5

Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Blade sold separately.
Torque: Recommended clamping torque: N·m

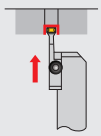
SPARE PARTS

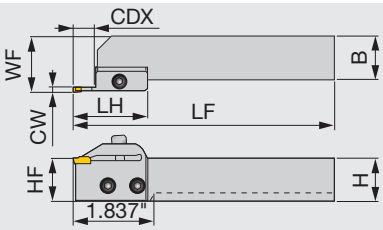
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-W**GR/L-L	CHHM5-18	CSHB-6	P-4

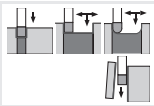
Reference pages: Inserts → F065 - F066, Standard cutting conditions → F067

CGWSR/L-G

External grooving, parting and turning toolholder, for 1 corner inserts







Right hand (R) shown.
The dashed line shows
20 mm-square shank tools.

Inch	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Blade	Torque
CGWSR/L12-20GR/L	0.079	0.472	0.750	0.750	5.913	1.699	0.787	1.055	GE20, GE20-AL	CGWSR/L12	20GR/L	3.69
CGWSR/L16-20GR/L	0.079	0.472	1.000	1.000	5.913	1.699	0.984	1.252	GE20, GE20-AL	CGWSR/L16	20GR/L	3.69
CGWSR/L12-30GR/L	0.118	0.472	0.750	0.750	5.913	1.699	0.787	1.063	G*30,GE30R/L,GE30-AL	CGWSR/L12	30GR/L	3.69
CGWSR/L16-30GR/L	0.118	0.472	1.000	1.000	5.913	1.699	0.984	1.260	G*30,GE30R/L,GE30-AL	CGWSR/L16	30GR/L	3.69
CGWSR/L12-40GR/L	0.157	0.472	0.750	0.750	5.913	1.699	0.787	1.067	G*40,GE40R/L,GE40-AL	CGWSR/L12	40GR/L	3.69
CGWSR/L16-40GR/L	0.157	0.472	1.000	1.000	5.913	1.699	0.984	1.264	G*40,GE40R/L,GE40-AL	CGWSR/L16	40GR/L	3.69
CGWSR/L12-50GR/L	0.197	0.472	0.750	0.750	5.913	1.699	0.787	1.071	G*50,GE50R	CGWSR/L12	50GR	3.69

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Blade	Torque*
CGWSR/L2020-20GR/L	2	12	20	20	150.2	43.15	20	26.8	GE20, GE20-AL	CGWSR/L2020	20GR/L	5
CGWSR/L2525-20GR/L	2	12	25	25	150.2	43.15	25	31.8	GE20, GE20-AL	CGWSR/L2525	20GR/L	5
CGWSR/L2020-30GR/L	3	12	20	20	150.2	43.15	20	27	G*30,GE30R/L,GE30-AL	CGWSR/L2020	30GR/L	5
CGWSR/L2525-30GR/L	3	12	25	25	150.2	43.15	25	32	G*30,GE30R/L,GE30-AL	CGWSR/L2525	30GR/L	5
CGWSR/L2020-40GR/L	4	12	20	20	150.2	43.15	20	27.1	G*40,GE40R/L,GE40-AL	CGWSR/L2020	40GR/L	5
CGWSR/L2525-40GR/L	4	12	25	25	150.2	43.15	25	32.1	G*40,GE40R/L,GE40-AL	CGWSR/L2525	40GR/L	5
CGWSR/L2020-50GR/L	5	12	20	20	150.2	43.15	20	27.2	G*50,GE50R	CGWSR/L2020	50GR	5

For diameter compensation values in traversing, see page F111.
Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Blade sold separately.
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

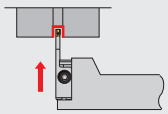
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L**-**GR/L	CHHM5-18	CSHB-6	P-4

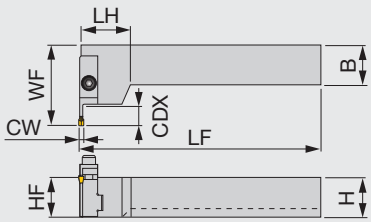
External
Internal
Face
Parting
Others

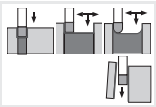
Reference pages: Inserts → F069 - F072, Standard cutting conditions → F075

CGWTR/L-G

External grooving, parting and turning toolholder, for 1 corner inserts







Right hand (R) shown.
The dashed line shows
20 mm-square shank tools.

Inch	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Blade	Torque
CGWTR/L12-30GL/R	0.118	0.472	0.750	0.750	5.911	0.508	0.750	1.960	G*30,GE30R/L,GE30-AL	CGWTR/L12	30GL/R	3.69
CGWTR/L16-30GL/R	0.118	0.472	1.000	1.000	5.911	0.508	1.000	1.960	G*30,GE30R/L,GE30-AL	CGWTR/L16	30GL/R	3.69
CGWTR/L12-40GL/R	0.157	0.472	0.750	0.750	5.911	0.508	0.750	1.960	G*40,GE40R/L,GE40-AL	CGWTR/L12	40GL/R	3.69
CGWTR/L16-40GL/R	0.157	0.472	1.000	1.000	5.911	0.508	1.000	1.960	G*40,GE40R/L,GE40-AL	CGWTR/L16	40GL/R	3.69
CGWTR/L12-50GL/R	0.197	0.472	0.750	0.750	5.911	0.508	0.750	1.960	G*50,GE50R/L,GE50-AL	CGWTR/L12	50GL/R	3.69
CGWTR/L16-50GL/R	0.197	0.472	1.000	1.000	5.911	0.508	1.000	1.960	G*50,GE50R/L,GE50-AL	CGWTR/L16	50GL/R	3.69

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Blade	Torque*
CGWTR/L2020-30GL/R	3	12	20	20	150	12.9	20	49.9	G*30,GE30R/L,GE30-AL	CGWTR/L2020	30GL/R	5
CGWTR/L2525-30GL/R	3	12	25	25	150	12.9	25	49.9	G*30,GE30R/L,GE30-AL	CGWTR/L2525	30GL/R	5
CGWTR/L2020-40GL/R	4	12	20	20	150.1	12.9	20	49.9	G*40,GE40R/L,GE40-AL	CGWTR/L2020	40GL/R	5
CGWTR/L2525-40GL/R	4	12	25	25	150.1	12.9	25	49.9	G*40,GE40R/L,GE40-AL	CGWTR/L2525	40GL/R	5
CGWTR/L2020-50GL/R	5	12	20	20	150.2	12.9	20	49.9	G*50,GE50R/L,GE50-AL	CGWTR/L2020	50GL/R	5
CGWTR/L2525-50GL/R	5	12	25	25	150.2	12.9	25	49.9	G*50,GE50R/L,GE50-AL	CGWTR/L2525	50GL/R	5

For diameter compensation values in traversing, see page F111.
Use left-hand blades (L) with right-hand shanks (R); and right-hand blades (R) with left-hand shanks (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

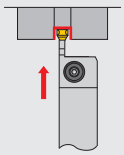
Designation	Clamping screw	Blade screw	Wrench
CGWTR/L**-**GL/R	CHHM5-18	CSHB-6	P-4

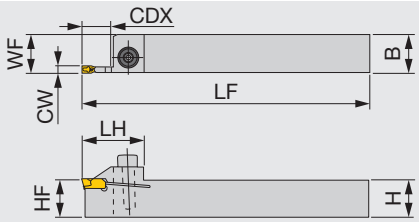
Reference pages: Inserts → F069 - F072, Standard cutting conditions → F075

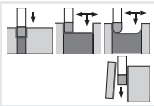
MY-T SERIES

CGSSR/L

External grooving, parting and turning toolholder, for 1 corner inserts







Right hand (R) shown.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGSSR/L1616-20	2	16	16	16	125	27	16	16.2	GE20, GE20-AL	5
CGSSR/L2020-20	2	16	20	20	150	27	20	20.2	GE20, GE20-AL	5
CGSSR/L2525-20	2	16	25	25	150	27	25	25.2	GE20, GE20-AL	5
CGSSR/L1616-30	3	12	16	16	125	27	16	16.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2020-30	3	12	20	20	150	27	20	20.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2525-30	3	12	25	25	150	27	25	25.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2020-40	4	12	20	20	150	27	20	20.6	G*40,GE40R/L,GE40-AL	5
CGSSR/L2525-40	4	12	25	25	150	27	25	25.6	G*40,GE40R/L,GE40-AL	5
CGSSR/L2020-50	5	12	20	20	150	27	20	20.7	G*50,GE50R/L,GE50-AL	5
CGSSR/L2525-50	5	12	25	25	150	27	25	25.7	G*50,GE50R/L,GE50-AL	5

Torque: Recommended clamping torque: N·m

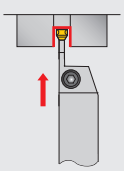
SPARE PARTS

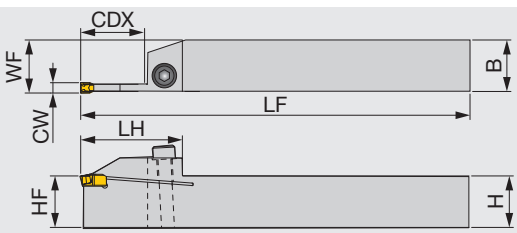
Designation	Clamping screw	Wrench
CGSSR/L...	CHHM5-18	P-4

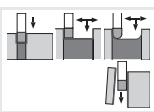
MY-T SERIES

CGSSR/L-D

External grooving, parting and turning toolholder, for 1 corner inserts







Right hand (R) shown.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGSSR/L1616-30D	3	22	16	16	125	36.2	16	16.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2020-30D	3	22	20	20	150	36.2	20	20.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2525-30D	3	22	25	25	150	36.2	25	25.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2020-40D	4	25	20	20	150	39.5	20	20.6	G*40,GE40R/L,GE40-AL	5
CGSSR/L2525-40D	4	25	25	25	150	39.5	25	25.6	G*40,GE40R/L,GE40-AL	5
CGSSR/L2020-50D	5	25	20	20	150	39.5	20	20.7	G*50,GE50R/L	5
CGSSR/L2525-50D	5	25	25	25	150	39.5	25	25.7	G*50,GE50R/L	5

Torque: Recommended clamping torque: N·m

SPARE PARTS

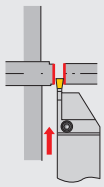
Designation	Clamping screw	Wrench
CGSSR/L****-**D	CHHM5-18	P-4

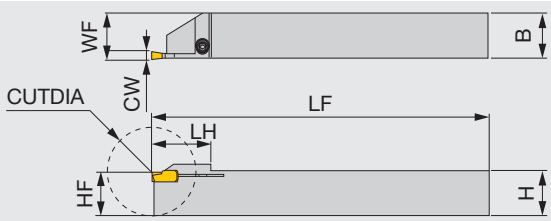
Reference pages: Inserts → F069 - F072, Standard cutting conditions → F075

MY-T SERIES

JCGSSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

Metric	CW	CUTDIA	H	B	LF	LH	HF	WF	Insert	Torque
JCGSSR/L1010-20	2	20	10	10	125	15	10	10.2	GE20, GE20-AL	2.3
JCGSSR/L1212-20	2	25	12	12	125	19	12	12.2	GE20, GE20-AL	2.3
JCGSSR/L1616-20	2	32	16	16	125	22.5	16	16.2	GE20, GE20-AL	2.3

CUTDIA: Max. parting diameter
Torque: Recommended clamping torque: N·m

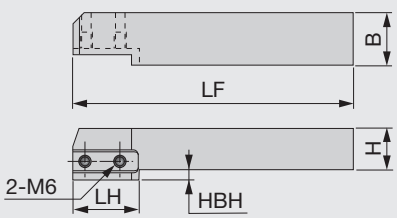
SPARE PARTS

Designation	Clamping screw	Wrench
JCGSSR/L...	CSTB-3	T-9F

MY-T SERIES

CGWSR/L

Shank for CGWSR/L-WG, -WG-L, -G, -CGD, -FL-G/TP, and -#S/D toolholders



Right hand (R) shown.

Inch	H	B	LF	LH	HBH
CGWSR/L12	0.750	0.750	5.400	1.310	0.250
CGWSR/L16	1.000	1.000	5.400	-	-

Metric	H	B	LF	LH	HBH
CGWSR/L2020	20	20	137	32.5	5
CGWSR/L2525	25	25	137	-	-

Right hand tool holders (R) use right hand cartridges (R). Left hand tool holders (L) use left hand cartridges (L).

SPARE PARTS

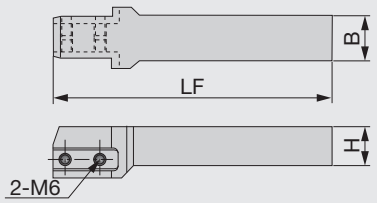
Designation	Blade screw
CGWSR/L...	CSHB-6

Reference pages: Inserts → F069 - F072, Standard cutting conditions → F075

MY-T SERIES

CGWSRL

Shank of toolholders. Vertical type with offset



Inch	H	B	LF
CGWSRL12	0.75	0.75	5.40
CGWSRL16	1.00	1.00	5.40

Right (R) or Left (L) hand cartridges can be used in this toolholder

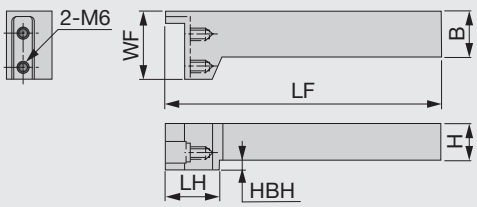
SPARE PARTS

Designation	Blade screw
CGWSRL...	CSHB-6

MY-T SERIES

CGWTR/L

Shank for CGWSR/L-WG, -WG-L, -G, -CGD, -FL-G/TP, and #S/D toolholders



Right hand (R) shown.

Inch	H	B	LF	LH	WF	HBH
CGWTR/L12	0.75	0.75	6.00	1.20	1.50	0.234
CGWTR/L16	1.00	1.00	6.00	-	1.50	-

Metric	H	B	LF	LH	WF	HBH
CGWTR/L2020	20	20	150	30.5	37	5
CGWTR/L2525	25	25	150	-	37	-

Right hand tool holders (R) use left hand cartridges (L). Left hand tool holders (L) use right hand cartridges (R).

SPARE PARTS

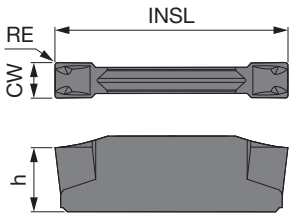
Designation	Blade screw
CGWTR/L...	CSHB-6

Reference pages: Inserts → F069 - F072, Standard cutting conditions → F075

INSERT

WGE

For external grooving and parting



		T9225	T9125	AH120	GH730			NS9530			
P	Steel	★	☆	★	★			★			
M	Stainless	★		★	★						
K	Cast iron	☆		★	☆			☆			
N	Non-ferrous										
S	Superalloys			☆							
H	Hard materials										

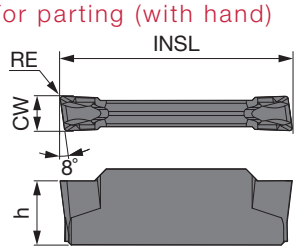
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530							
WGE20	2	0.079	0.008	●	▲	●	●			●						0.787	0.185
WGE30	3	0.118	0.008	●	▲	●	●			●						0.787	0.217
WGE40	4	0.157	0.008	●	▲	●	●			●						0.984	0.224
WGE50	5	0.197	0.008	●	▲	●	●			●						0.984	0.232

● : Line up
▲ : To be discontinued

WGE(R/L)

For parting (with hand)



Right hand (R) shown.

		AH120	GH730												
P	Steel	★	★												
M	Stainless	★	★												
K	Cast iron	★	☆												
N	Non-ferrous														
S	Superalloys	☆													
H	Hard materials														

★ : First choice
☆ : Second choice

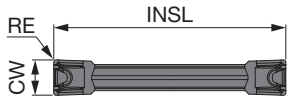
Designation	HAND	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated												INSL (in)	h (in)
					AH120	GH730												
WGE20R	R	2	0.079	0.008		●											0.787	0.185
WGE20L	L	2	0.079	0.008		●											0.787	0.185
WGE30R	R	3	0.118	0.008	●	●											0.787	0.217
WGE30L	L	3	0.118	0.008	●	●											0.787	0.217
WGE40R	R	4	0.157	0.008	●	●											0.984	0.224
WGE40L	L	4	0.157	0.008	●	●											0.984	0.224
WGE50R	R	5	0.197	0.008		●											0.984	0.232
WGE50L	L	5	0.197	0.008		●											0.984	0.232

● : Line up

Reference pages: Toolholders → F058 - F059

WGT

For turning (External grooving and parting)



		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

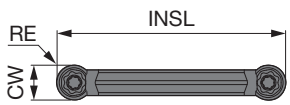
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
WGT30	3	0.118	0.016	●	▲	●	●	●	0.787	0.217
WGT40	4	0.157	0.016	●	▲	●	●	●	0.984	0.224
WGT50	5	0.197	0.016	●	▲	●	●	●	0.984	0.232

● : Line up
▲ : To be discontinued

WGR

For profiling (full radius)



		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
WGR30	3	0.118	0.059	●	▲	●	●	●	0.787	0.217
WGR40	4	0.157	0.079	●	▲	●	●	●	0.984	0.224
WGR50	5	0.197	0.098			●	●	●	0.984	0.232

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F058 - F059

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730	164 - 591
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730	164 - 492
	High carbon steel, Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730	164 - 492
M	Stainless steel	T9225	262 - 591
		GH730	164 - 394
K	Gray iron, Ductile cast iron	T9225	262 - 820
		GH730	164 - 591

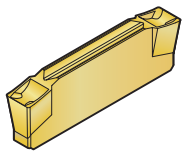
Operation	Feed: *f* (ipr)			
	Groove width: CW (in)			
	2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (WGE**)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting (WGE**R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Turning (WGT**)	-	*ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	*ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	*ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Profiling (WGR**)	-	*ap* = 0.020 - 0.055 *f* = 0.002 - 0.010	*ap* = 0.020 - 0.059 *f* = 0.002 - 0.010	*ap* = 0.020 - 0.063 *f* = 0.002 - 0.012

Note: For diameter compensation values in traversing, see page F111.

2 corner insert

External grooving and parting

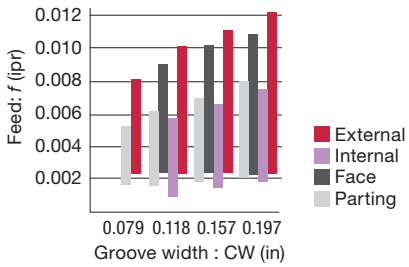
WGE



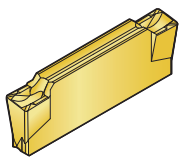
F065 page

1st choice for external grooving and parting
Excellent chip control for grooving

CW = 0.079" - 0.197"



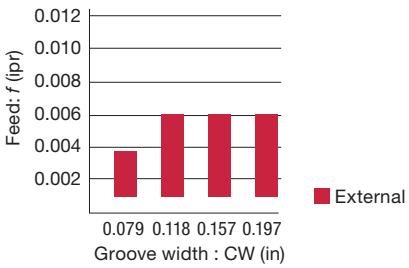
WGE R/L



F065 page

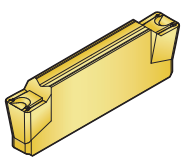
Handed insert
Minimize burr generation when workpiece is cut off

CW = 0.079" - 0.197"



External grooving and turning

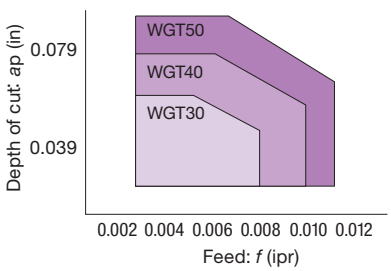
WGT



F066 page

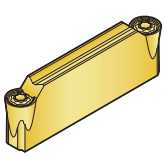
1st choice for turning
Low cutting force and good chip control for traversing

CW = 0.118" - 0.197"



Profiling

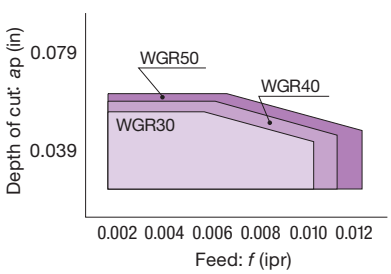
WGR



F066 page

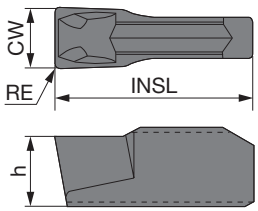
Low cutting force and good chip control for profiling

CW = 0.118" - 0.197"



GE

For general grooving



		T9225	T9125	AH120	GH730			NS9530						
P	Steel	★	☆	★	★			★						
M	Stainless	★		★	★									
K	Cast iron	☆		★	☆			☆						
N	Non-ferrous													
S	Superalloys			☆										
H	Hard materials													

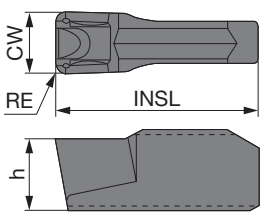
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530							
GE20	2	0.079	0.008			●	●			●						0.394	0.138
GE30	3	0.118	0.008	●	▲	●	●			●						0.394	0.138
GE40	4	0.157	0.008	●	▲	●	●			●						0.394	0.157
GE50	5	0.197	0.008	●	▲	●	●			●						0.472	0.177

● : Line up
▲ : To be discontinued

GT

For turning



		T9225	T9125	AH120	GH730			NS9530						
P	Steel	★	☆	★	★			★						
M	Stainless	★		★	★									
K	Cast iron	☆		★	☆			☆						
N	Non-ferrous													
S	Superalloys			☆										
H	Hard materials													

★ : First choice
☆ : Second choice

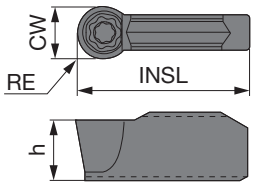
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530							
GT30	3	0.118	0.016			●	●			●						0.394	0.138
GT40	4	0.157	0.016			●	●			●						0.394	0.157
GT50	5	0.197	0.016	●	▲	●	●			●						0.472	0.177

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F060 - F063, Standard cutting conditions → F075

GR

For profiling (full radius)



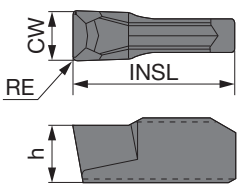
		T9225	T9125	AH120	GH730			NS9530						
P	Steel	★	☆	★	★			★						
M	Stainless	★		★	★									
K	Cast iron	☆		★	☆			☆						
N	Non-ferrous													
S	Superalloys			☆										
H	Hard materials													

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet							INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530								
GR30	3	0.118	0.059			●	●			●							0.394	0.138
GR40	4	0.157	0.079	●	▲	●	●			●							0.394	0.157
GR50	5	0.197	0.098	●	▲	●	●			●							0.472	0.177

● : Line up
▲ : To be discontinued

GF



		GH730			NS9530									
P	Steel	★			★									
M	Stainless	★												
K	Cast iron	☆			☆									
N	Non-ferrous													
S	Superalloys													
H	Hard materials													

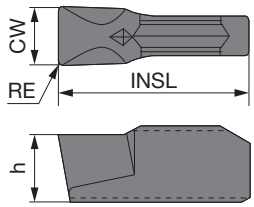
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated			Cermet										INSL (in)	h (in)
				GH730			NS9530											
GF30	3	0.118	0.008	●			●										0.394	0.138
GF40	4	0.157	0.008	●			●										0.394	0.157
GF50	5	0.197	0.008	●			●										0.472	0.177

● : Line up

Reference pages: Toolholders → F060 - F063, Standard cutting conditions → F075

GN



P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

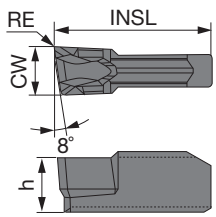
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated GH730	INSL (in)	h (in)
GN30	3	0.118	0.008	●	0.394	0.138
GN40	4	0.157	0.008	●	0.394	0.157
GN50	5	0.197	0.008	●	0.472	0.177

● : Line up

GE-R/L

For parting (with hand)



Right hand (R) shown.

P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	☆
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

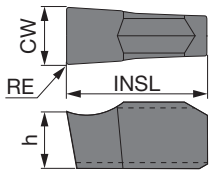
Designation	HAND	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
GE30R	R	3	0.118	0.008	●	●	0.394	0.138
GE30L	L	3	0.118	0.008		●	0.394	0.138
GE40R	R	4	0.157	0.008	●	●	0.394	0.157
GE40L	L	4	0.157	0.008		●	0.394	0.157
GE50R	R	5	0.197	0.008		●	0.472	0.177
GE50L	L	5	0.197	0.008	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F060 - F063, Standard cutting conditions → F075

GE-AL

For aluminum and non-ferrous metal



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Uncoated KS05F	INSL (in)	h (in)
GE20-AL	2	0.079	0.008	●	0.394	0.138
GE30-AL	3	0.118	0.008	●	0.394	0.138
GE40-AL	4	0.157	0.008	●	0.394	0.157

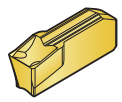
● : Line up

Reference pages: Toolholders → F060 - F063, Standard cutting conditions → F075

1 corner insert

External grooving and parting

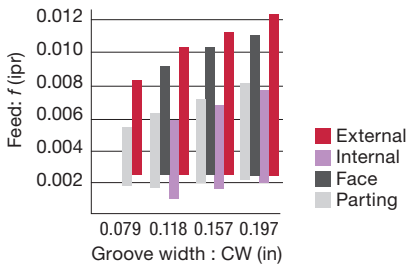
GE

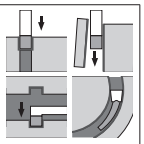


F069 page

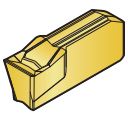
1st choice for external grooving and parting
Excellent chip control

CW = 0.079" - 0.197"





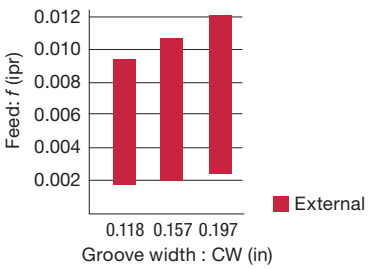
GF

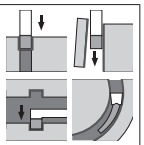


F070 page

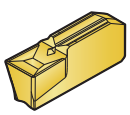
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 0.118" - 0.197"





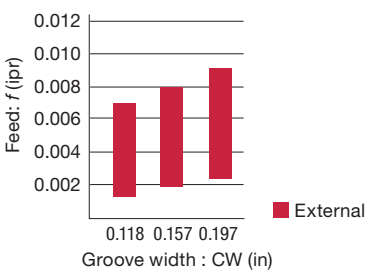
GN

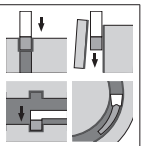


F071 page

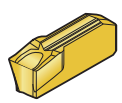
1st choice for internal grooving
Low cutting force and good chip control for internal grooving

CW = 0.118" - 0.197"





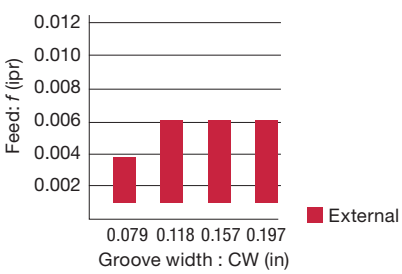
GE R/L



F071 page

Handed insert
Minimize burr generation when workpiece is cut off

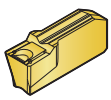
CW = 0.118" - 0.197"



1 corner insert

External grooving and turning

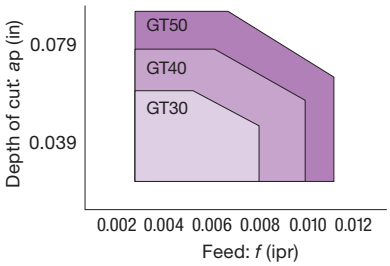
GT

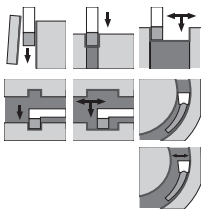


F069 page

1st choice for turning
Low cutting force and good chip control for traversing

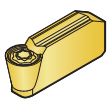
CW = 0.118" - 0.197"





Profiling

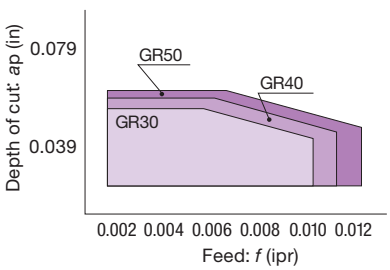
GR

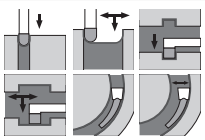


F070 page

Full radius type
Low cutting force and good chip control for profiling

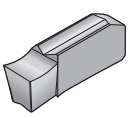
CW = 0.118" - 0.197"





For aluminum and non-ferrous metal

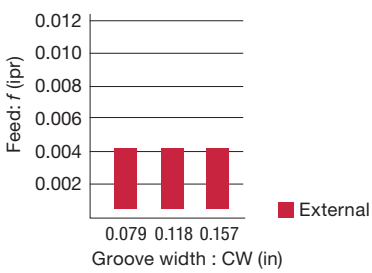
GE-AL

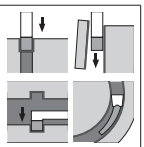


F072 page

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.079" - 0.157"





STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (- HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730	164 - 591
	Medium carbon steel, Alloy steel (HB150 - 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730	164 - 492
	High carbon steel, Alloy steel (HB250 -)	T9225	262 - 722
		NS9530	262 - 492
		GH730	164 - 394
M	Stainless steel	T9225	262 - 591
		GH730	164 - 394
K	Gray iron, Ductile cast iron	T9225	262 - 820
		GH730	164 - 591
N	Aluminum alloys, Non-ferrous metal	KS05F	656 - 984

For External

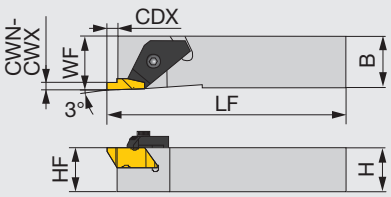
Operation	Feed: *f* (ipr)			
	Groove width: CW (in)			
	2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (GE**)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting off (GE**R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Traversing (GT**)	-	Depth of cut *ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	Depth of cut *ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	Depth of cut *ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Profiling (GR**)	-	Depth of cut *ap* = 0.020 - 0.055 *f* = 0.002 - 0.010	Depth of cut *ap* = 0.020 - 0.059 *f* = 0.002 - 0.010	Depth of cut *ap* = 0.020 - 0.063 *f* = 0.002 - 0.012
Grooving for Aluminum alloys (GE**-AL)	0.0012 - 0.004	0.0012 - 0.004	0.0012 - 0.004	-

For diameter compensation values in traversing, see page F111.

TUNGT-CLAMP

FLASR/L

External grooving and threading toolholder, for Swiss lathes



Right hand (R) shown.

Inch	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque
FLASR/L-082D	0.031	0.128	0.138	0.500	0.500	0.500	6.000	0.500	FL*-2**R/L...	2.21
FLASR-102B	0.031	0.128	0.138	0.625	0.625	0.625	4.500	0.625	FL*-2**R...	2.21
FLASR/L-103B	0.031	0.250	0.210	0.625	0.625	0.625	4.500	0.625	FL*-3**R/L...	2.21

Metric	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque*
FLASR/L-1616M3	1	3	5.31	16	16	16	125	16	FL*-3**R/L...	3

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

Inch SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
FLASR-082D	TF-182	S-310	7/64HEX
FLASL-082D	TF-183	S-310	7/64HEX
FLASR-102B, FLASR-103B	TF-184	S-412	5/32HEX
FLASL-103B	TF-185	S-412	5/32HEX

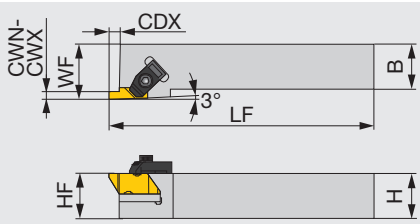
Metric SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
FLASR-1616M3	TF-184	S-412	5/32HEX
FLASL-1616M3	TF-185	S-412	5/32HEX

TUNGT-CLAMP

FLSR/L

External grooving and threading toolholder, for Swiss lathes



Right hand (R) shown.

Inch	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque
FLSR/L-122B	0.031	0.128	0.140	0.750	0.750	0.750	4.500	1.000	FL*-2**R/L...	2.21
FLSR/L-162C	0.031	0.128	0.140	1.000	1.000	1.000	5.000	1.250	FL*-2**R/L...	2.21
FLSR/L-123B	0.031	0.250	0.210	0.750	0.750	0.750	4.500	1.000	FL*-3**R/L...	2.21
FLSR/L-163C	0.031	0.250	0.210	1.000	1.000	1.000	5.000	1.250	FL*-3**R/L...	2.21

Metric	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque*
FLSR/L-2020M3	1	3	4.5	20	20	20	125	32	FL*-3**R/L...	3
FLSR/L-2525M3	1	3	4.5	25	25	25	150	32	FL*-3**R/L...	3

Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

Inch SPARE PARTS

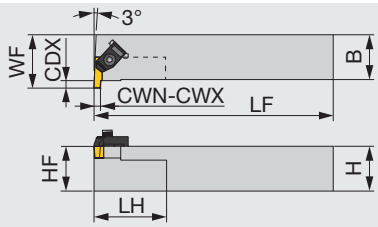
Designation	Clamp	Clamping screw	Wrench
FLSR-122B, FLSR-162C	TF-74	S-310	7/64HEX
FLSL-122B, FLSL-162C	TF-75	S-310	7/64HEX
FLSR-123B, FLSR-163C	TF-72	S-412	5/32HEX
FLSL-123B, FLSL-163C	TF-73	S-412	5/32HEX

Metric SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
FLSR-****M3	TF-72	S-412	5/32HEX
FLSL-****M3	TF-73	S-412	5/32HEX

Reference pages: Inserts → F079 - F086, Standard cutting conditions → F078

TUNGT-CLAMP
FLER/L
External toolholders for grooving & threading



Right hand (R) shown.

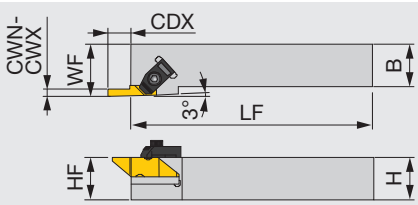
Inch	CWN	CWX	CDX	HF	H	B	LF	LH	WF	Insert	Torque
FLER/L-122B	0.031	0.128	0.140	0.750	0.750	0.750	4.500	1.000	1.000	FL*-2**L/R...	2.21
FLER/L-162C	0.031	0.128	0.140	1.000	1.000	1.000	5.000	1.000	1.250	FL*-2**L/R...	2.21
FLER/L-123B	0.031	0.250	0.210	0.750	0.750	0.750	4.500	2.000	1.125	FL*-3**L/R...	2.21
FLER/L-163D	0.031	0.250	0.210	1.000	1.000	1.000	6.000	2.000	1.250	FL*-3**L/R...	2.21

The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
FLER-122B, FLER-162C	TF-75	S-310	7/64HEX
FLEL-122B, FLEL-162C	TF-74	S-310	7/64HEX
FLER-123B, FLER-163D	TF-73	S-412	5/32HEX
FLEL-123B, FLEL-163D	TF-72	S-412	5/32HEX

TUNGT-CLAMP
FLSR/LT
External toolholders for grooving & threading



Right hand (R) shown.

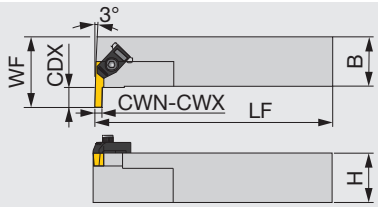
Inch	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque
FLSR/LT-163D	0.094	0.189	0.440	1.000	1.000	1.000	6.000	1.250	FLGT-3R/L...	2.21
FLSR/LT-203D	0.094	0.189	0.440	1.250	1.250	1.250	6.000	1.500	FLGT-3R/L...	2.21

The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
FLSRT-163D, FLSRT-203D	TF-72	S-412	5/32HEX
FLSLT-163D, FLSLT-203D	TF-73	S-412	5/32HEX

Reference pages: Inserts → F079 - F086, Standard cutting conditions → F078



Right hand (R) shown.

Inch	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque
FLER/LT-163D	0.094	0.189	0.440	1.000	1.000	1.000	6.000	1.250	FLGT-3R/L...	2.21
FLER/LT-203D	0.094	0.189	0.440	1.250	1.250	1.250	6.000	1.500	FLGT-3R/L...	2.21

The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

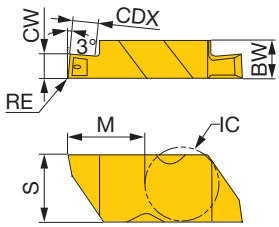
Designation	Clamp	Clamping screw	Wrench
FLERT-163D, FLERT-203D	TF-72	S-412	5/32HEX
FLELT-163D, FLELT-203D	TF-73	S-412	5/32HEX

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Application	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	High carbon steel 1045, etc.	AH110	Grooving	328 - 656	0.005 - 0.014
		AH725	Threading	262 - 591	-
	Alloy steel 4137, etc.	AH110	Grooving	164 - 262	0.005 - 0.012
		AH725	Threading	197 - 525	-
M	Stainless steel S30400, etc.	AH110	Grooving	164 - 492	0.004 - 0.008
		AH725	Threading	164 - 427	-
K	Gray cast iron No.250B, etc.	AH110	Grooving	164 - 591	0.004 - 0.010
	Ductile cast iron 60-40-18, etc.	AH110	Grooving	164 - 394	0.004 - 0.010

Reference pages: Inserts → F079 - F086

FLG-CB (With chipbreaker, metric width)



P	Steel	★			
M	Stainless	★			
K	Cast iron	★			
N	Non-ferrous				
S	Superalloys	★			
H	Hard materials				

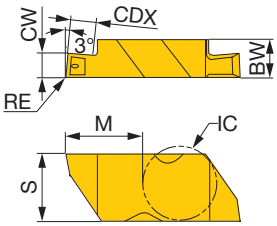
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLG-3M100R-CB	R	1	0.039	0.005 - 0.010	●	0.055	0.3750	0.195	0.344	0.4050
FLG-3M100L-CB	L	1	0.039	0.005 - 0.010	●	0.055	0.3750	0.195	0.344	0.4050
FLG-3M150R-CB	R	1.5	0.059	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M150L-CB	L	1.5	0.059	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M200R-CB	R	2	0.079	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M200L-CB	L	2	0.079	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M250R-CB	R	2.5	0.098	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050
FLG-3M250L-CB	L	2.5	0.098	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050
FLG-3M300R-CB	R	3	0.118	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050
FLG-3M300L-CB	L	3	0.118	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050

● : Line up

Reference pages: Toolholders → F076 - F078

FLG-CB (With chipbreaker)



P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

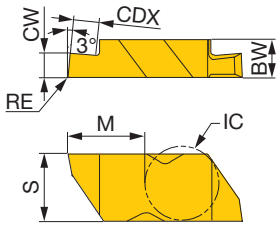
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLG-2047R-CB	R	1.2	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2047L-CB	L	1.2	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2062R-CB	R	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2062L-CB	L	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2078R-CB	R	1.98	0.078	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2078L-CB	L	1.98	0.078	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094R-CB	R	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094L-CB	L	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125R-CB	R	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125L-CB	L	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-3031R-CB	R	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3031L-CB	L	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3047R-CB	R	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3047L-CB	L	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3062R-CB	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3062L-CB	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072R-CB	R	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072L-CB	L	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078R-CB	R	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078L-CB	L	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3088R-CB	R	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3088L-CB	L	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094R-CB	R	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094L-CB	L	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097R-CB	R	2.46	0.097	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097L-CB	L	2.46	0.097	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125R-CB	R	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125L-CB	L	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189R-CB	R	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189L-CB	L	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050

● : Line up

Reference pages: Toolholders → F076 - F078

FLG



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

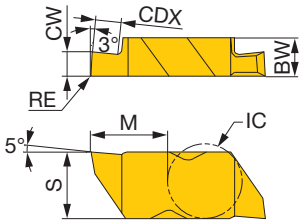
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLG-2031R	R	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2031L	L	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2041R	R	1.04	0.041	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2041L	L	1.04	0.041	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2047R	R	1.19	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2047L	L	1.19	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2058R	R	1.47	0.058	0.005 - 0.010	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2058L	L	1.47	0.058	0.005 - 0.010	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2062R	R	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2062L	L	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094R	R	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094L	L	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125R	R	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125L	L	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-3031R	R	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3031L	L	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3047R	R	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3047L	L	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3062R	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3062L	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072R	R	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072L	L	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078R	R	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078L	L	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3088R	R	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3088L	L	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094R	R	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094L	L	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097R	R	2.46	0.097	0.010 - 0.015	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097L	L	2.46	0.097	0.010 - 0.015	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3105R	R	2.67	0.105	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3105L	L	2.67	0.105	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3110R	R	2.79	0.110	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3110L	L	2.79	0.110	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3122R	R	3.1	0.122	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3122L	L	3.1	0.122	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125R	R	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125L	L	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3142R	R	3.61	0.142	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3142L	L	3.61	0.142	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3156R	R	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3156L	L	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3178R	R	4.52	0.178	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3178L	L	4.52	0.178	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3185R	R	4.7	0.185	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3185L	L	4.7	0.185	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189R	R	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189L	L	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3250R	R	6.35	0.250	0.020 - 0.025	●	0.180	0.3750	0.250	0.344	0.4050
FLG-3250L	L	6.35	0.250	0.020 - 0.025	●	0.180	0.3750	0.250	0.344	0.4050

● : Line up

Reference pages: Toolholders → F076 - F078

FLGP (Positive rake)



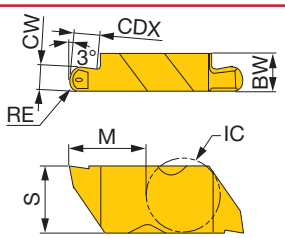
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGP-2031R	R	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLGP-2031L	L	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLGP-2062R	R	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-2062L	L	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-2125R	R	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-2125L	L	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-3047R	R	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLGP-3047L	L	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLGP-3062R	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLGP-3062L	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLGP-3088R	R	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3088L	L	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3094R	R	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3094L	L	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3125R	R	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3125L	L	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3156R	R	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3156L	L	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3189R	R	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3189L	L	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050

● : Line up

FLR-CB (Full nose radius, with chipbreaker)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

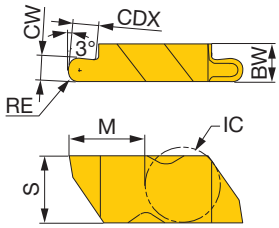
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLR-3031R-CB	R	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3031L-CB	L	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3047R-CB	R	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3047L-CB	L	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3062R-CB	R	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLR-3062L-CB	L	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017

● : Line up

Reference pages: Toolholders → F076 - F078

FLR (Full nose radius)



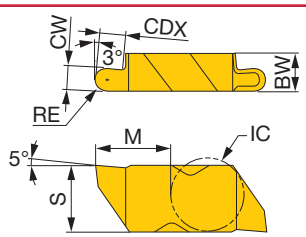
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLR-2031R	R	1.57	0.062	0.031	●	0.110	0.1875	0.150	0.219	0.2683
FLR-2031L	L	1.57	0.062	0.031	●	0.110	0.1875	0.150	0.219	0.2683
FLR-2047R	R	2.39	0.094	0.047	●	0.110	0.1875	0.150	0.219	0.2675
FLR-2047L	L	2.39	0.094	0.047	●	0.110	0.1875	0.150	0.219	0.2675
FLR-2062R	R	3.18	0.125	0.062	●	0.110	0.1875	0.150	0.219	0.2667
FLR-2062L	L	3.18	0.125	0.062	●	0.110	0.1875	0.150	0.219	0.2667
FLR-3031R	R	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3031L	L	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3047R	R	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3047L	L	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3062R	R	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLR-3062L	L	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLR-3078R	R	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLR-3078L	L	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLR-3094R	R	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000
FLR-3094L	L	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000

● : Line up

FLRP (Full nose radius and positive rake)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

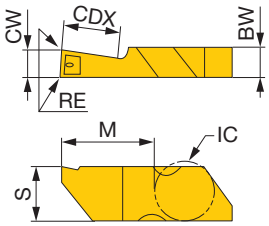
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLRP-3031R	R	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLRP-3031L	L	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLRP-3047R	R	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLRP-3047L	L	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLRP-3062R	R	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLRP-3062L	L	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLRP-3078R	R	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLRP-3078L	L	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLRP-3094R	R	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000
FLRP-3094L	L	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000

● : Line up

Reference pages: Toolholders → F076 - F078

FLGD-CB (Single edge deep, with chipbreaker)



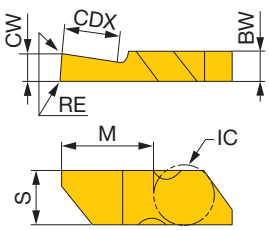
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGD-3094R-CB	R	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3094L-CB	L	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125R-CB	R	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125L-CB	L	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189R-CB	R	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189L-CB	L	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050

● : Line up

FLGD (Single edge deep)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

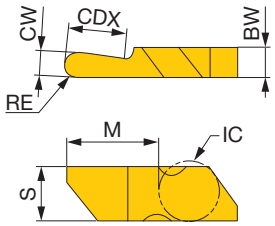
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGD-3062R	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.5050
FLGD-3062L	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.5050
FLGD-3094R	R	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3094L	L	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125R	R	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125L	L	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189R	R	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189L	L	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050

● : Line up

Reference pages: Toolholders → F076 - F078

FLRD (Full nose radius, single edge deep)



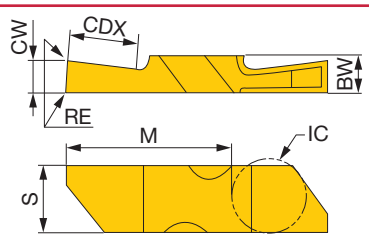
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLRD-3062R	R	3.19	0.125	0.062	●	0.250	0.3750	0.195	0.344	0.5016
FLRD-3062L	L	3.19	0.125	0.062	●	0.250	0.3750	0.195	0.344	0.5016
FLRD-3094R	R	4.8	0.189	0.094	●	0.250	0.3750	0.195	0.344	0.5016
FLRD-3094L	L	4.8	0.189	0.094	●	0.250	0.3750	0.195	0.344	0.5016

● : Line up

FLGT (Double end deep)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

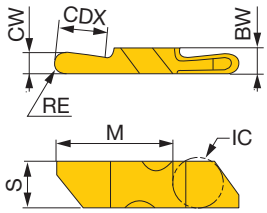
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGT-3094R	R	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3094L	L	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3125R	R	3.18	0.125	0.005 - 0.010	●	0.437	0.3750	0.195	0.344	0.8550
FLGT-3125L	L	3.18	0.125	0.005 - 0.010	●	0.437	0.3750	0.195	0.344	0.8550
FLGT-3189R	R	4.8	0.189	0.020 - 0.025	●	0.437	0.3750	0.195	0.344	0.8550
FLGT-3189L	L	4.8	0.189	0.020 - 0.025	●	0.437	0.3750	0.195	0.344	0.8550

*Fits FLSLT/RT toolholders

● : Line up

Reference pages: Toolholders → F076 - F078

FLRT (Double end deep FNR)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

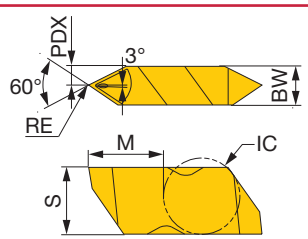
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLRT-3062R	R	3.18	0.125	0.062	●	0.437	0.3750	0.195	0.344	0.8550
FLRT-3062L	L	3.18	0.125	0.062	●	0.437	0.3750	0.195	0.344	0.8550
FLRT-3094R	R	4.8	0.189	0.094	●	0.437	0.3750	0.195	0.344	0.8550
FLRT-3094L	L	4.8	0.189	0.094	●	0.437	0.3750	0.195	0.344	0.8550

*Fits FLSLT/RT toolholders

● : Line up

FLT-CB (For threading)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE (in)	Coated AH110	TPI Internal	TPI External	IC (in)	PDX (in)	BW (in)	S (in)	M (in)
FLT-3R-HCB	R	0.005 - 0.008	●	5-12	6-20	0.3750	0.098	0.195	0.344	0.3999
FLT-3L-HCB	L	0.005 - 0.008	●	5-12	6-20	0.3750	0.098	0.195	0.344	0.3999
FLT-3RC-HCB	R	0.012 - 0.015	●	5-6	6-11	0.3750	0.098	0.195	0.344	0.3999
FLT-3LC-HCB	L	0.012 - 0.015	●	5-6	6-11	0.3750	0.098	0.195	0.344	0.3999
FLT-3R-CB	R	0.005 - 0.008	●	8-12	8-20	0.3750	0.098	0.195	0.344	0.3999
FLT-3L-CB	L	0.005 - 0.008	●	8-12	8-20	0.3750	0.098	0.195	0.344	0.3999

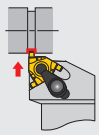
● : Line up

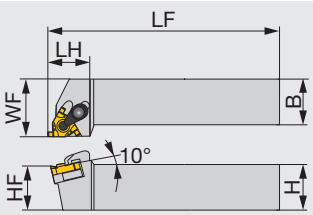
External
Internal
Face
Parting
Others

Reference pages: Toolholders → F076 - F078

CER/L

Clamp-on external grooving and threading toolholder (alternative clamping of screw-on or clamp-on only for DT type)





Right hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque
CER/L123DT	0.039	0.089	0.750	0.750	5.000	0.870	0.750	1.000	GTGN16...	2.58
CER/L163DT	0.039	0.089	1.000	1.000	6.000	1.000	1.000	1.250	GTGN16...	2.58
CER203DT	0.039	0.089	1.250	1.250	6.000	1.250	1.250	1.500	GTGN16...	2.58

Metric	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque*
CER/L1212H16DT	1	2.25	12	12	100	24	12	16	GTGN16...	3.5
CER/L1616H16DT	1	2.25	16	16	100	24	16	20	GTGN16...	3.5
CER/L2020K16DT	1	2.25	20	20	125	24	20	25	GTGN16...	3.5
CER/L2525M16DT	1	2.25	25	25	150	28	25	32	GTGN16...	3.5
CER3232P16T	1	2.25	32	32	170	32	32	40	GTGN16...	3.5

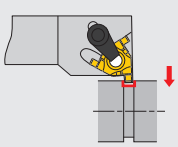
A clamp set consists of a clamp and a clamping screw. A shim set consists of a shim and a shim screw to secure the shim to the shank.
Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand.
When using grooving inserts, please use shims for grooving. Shims for grooving inserts are sold separately.
Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

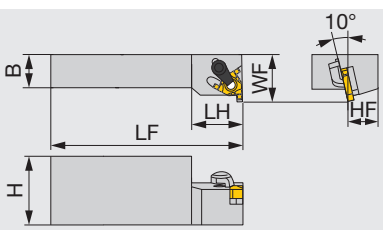
SPARE PARTS

Designation	Clamp set	Clamp screw	Shim screw	*Optional: Shim for grooving	Wrench 1	Wrench 2
CER/L123DT, CER/L163DT, CER203DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16ER/IL-DT	P-3.5	T-15F
CER*****16DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16ER/IL-DT	P-3.5	T-15F
CEL*****16DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16EL/IR-DT	P-3.5	T-15F
CER3232P16T	CSP16	-	-	G16ER/IR-S	-	T-15F

B-CER/L

External threading toolholder, for Swiss lathes





Right hand (R) shown.

Metric	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque
B-CER/L16M16	1	2.25	32	16	150	24	16	22	GTGN16...	3.5

When using grooving inserts, please use shims for grooving. Shims for grooving inserts are sold separately.
Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
Torque: Recommended clamping torque: N·m

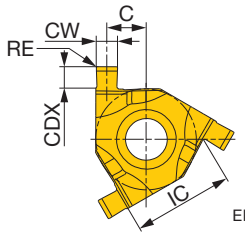
SPARE PARTS

Designation	Clamp set	Clamp screw	Wrench	*Optional: Shim for grooving
B-CER16M16	CSP16	-	T-15F	G16ER/IL-S
B-CEL16M16	CSP16	-	T-15F	G16EL/IR-S

Reference pages: Inserts, Standard cutting conditions → F088

INSERT

GTGN16



ER/IL shown.

P	Steel	★	
M	Stainless	★	
K	Cast iron		
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND (External)	CW±0.03 (mm)	CW±0.001 (in)	RE (in)	Coated SH730	Insert size	CDX (in)	IC (in)	C (in)	Shim: Dual-clamp toolholder: screw-on and clamp-on	Shim: Clamp-on toolholder
GTGN-16ER/IL100	R	1	0.039	0.004	●	16	0.049	0.375	0.166	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	L	1	0.039	0.004	●	16	0.049	0.375	0.166	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL120	R	1.2	0.047	0.004	●	16	0.051	0.375	0.162	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR120	L	1.2	0.047	0.004	●	16	0.051	0.375	0.162	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL140	R	1.4	0.055	0.004	●	16	0.059	0.375	0.158	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR140	L	1.4	0.055	0.004	●	16	0.059	0.375	0.158	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL170	R	1.7	0.067	0.004	●	16	0.067	0.375	0.144	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR170	L	1.7	0.067	0.004	●	16	0.067	0.375	0.144	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL195	R	1.95	0.077	0.004	●	16	0.067	0.375	0.148	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR195	L	1.95	0.077	0.004	●	16	0.067	0.375	0.148	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL225	R	2.25	0.089	0.004	●	16	0.071	0.375	0.142	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR225	L	2.25	0.089	0.004	●	16	0.071	0.375	0.142	G16EL/IR-DT	G16EL/IR-S

GTGN insert can be used for both external and internal machining, but the tool hand is reversed.
Shim for GTGN depends on the toolholder type.

● : Line up

STANDARD CUTTING CONDITIONS

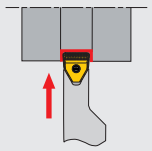
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045, 4140, etc.	SH730	160 - 490	0.002 - 0.004
M	Stainless steel 304, 316, etc.	SH730	100 - 490	0.002 - 0.004
S	Heat-resistant alloys, Titanium alloys, etc. Ti-6Al-4V, etc.	SH730	100 - 330	0.002 - 0.004

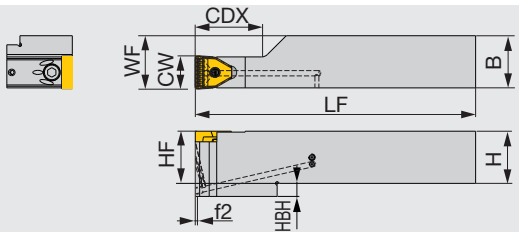
Reference pages: Toolholders → F087

TUNGHEAVY GROOVE

FPGR

Lever-lock external wide grooving toolholder





Inch	CW	CDX	H	B	LF	HF	WF	HBH	f2	Insert (1)	Torque
FPGR16-10T20	0.394	0.787	1.000	1.000	7.000	1.000	1.020	-	0.019	PSG*10...	1.62
FPGR20-10T36	0.394	1.417	1.250	1.250	8.000	1.250	1.270	-	0.019	PSG*10...	1.62
FPGR16-15T20	0.590	0.787	1.000	1.000	7.000	1.000	1.020	-	0.019	PSG*15...	1.62
FPGR20-15T40	0.590	1.574	1.250	1.250	8.000	1.250	1.270	-	0.015	PSG*15...	1.62
FPGR20-20T40	0.787	1.574	1.250	1.250	8.000	1.250	1.270	0.314	0.015	PSG*20...	6.27
FPGR24-20T50	0.787	1.968	1.500	1.500	10.000	1.500	1.520	0.314	0.015	PSG*20...	6.27
FPGR20-25T40	0.984	1.574	1.250	1.250	8.000	1.250	1.270	0.314	0.015	PSG*25...	6.27
FPGR24-25T50	0.984	1.968	1.500	1.500	10.000	1.500	1.520	0.314	0.015	PSG*25...	6.27

(1) Can be used for both wide grooving and wide profile grooving
Torque: Recommended clamping torque: lbs·ft
CDX, LF, f2 are dimensions when PSGM insert is attached. When mounting PSGB insert, the dimensions will be 0.197" (5 mm) longer.

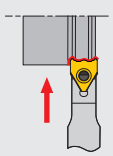
SPARE PARTS

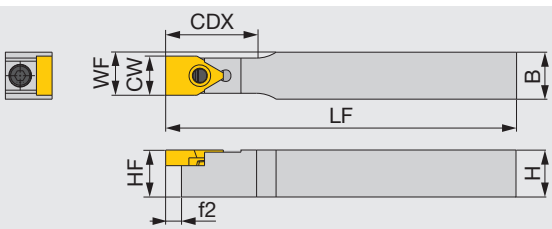
Designation	Lever	Clamping screw	Spring	Wrench
FPGR**-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGR**-20T..., 25T...	FCL8	FCS6	BP-9	P-5

TUNGHEAVY GROOVE

FPGN

Lever-lock external wide profile grooving toolholder





Inch	CW	CDX	H	B	LF	HF	WF	f2	Insert (1)	Torque
FPGN08-10T20	0.394	0.984	0.500	0.500	4.946	0.500	0.450	0.216	PSG*10...	1.62
FPGN10-10T20	0.394	0.984	0.625	0.625	4.946	0.625	0.510	0.216	PSG*10...	1.62
FPGN12-10T20	0.394	0.984	0.750	0.750	5.196	0.750	0.570	0.216	PSG*10...	1.62
FPGN10-15T25	0.590	1.181	0.625	0.625	4.946	0.625	0.610	0.216	PSG*15...	1.62
FPGN12-15T25	0.590	1.181	0.750	0.750	5.196	0.750	0.670	0.216	PSG*15...	1.62
FPGN12-20T32	0.787	1.456	0.750	0.750	5.196	0.750	0.770	0.216	PSG*20...	6.27
FPGN16-20T32	0.787	1.456	1.000	1.000	6.196	1.000	0.890	0.216	PSG*20...	6.27
FPGN16-25T36	0.984	1.614	1.000	1.000	6.196	1.000	0.990	0.216	PSG*25...	6.27

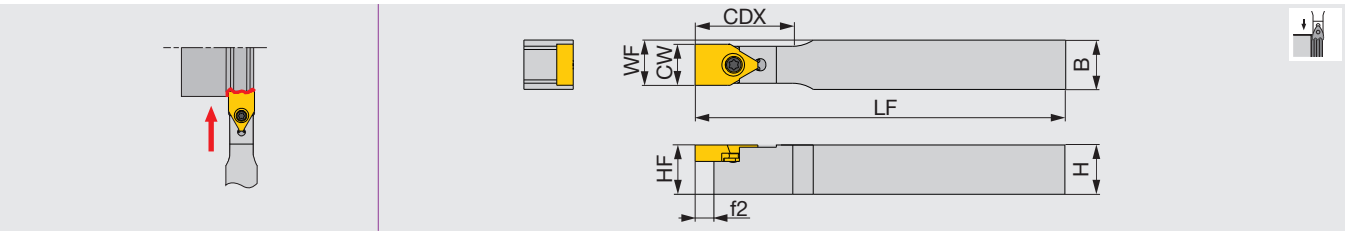
PSGB insert blank is available for tailored inserts.
(1) Can be used for both wide grooving and wide profile grooving
Torque: Recommended clamping torque: lbs·ft
CDX, LF, f2 are dimensions when PSGB insert is attached. When mounting PSGM insert, the dimensions will be 0.197" (5 mm) shorter.

SPARE PARTS

Designation	Lever	Clamping screw	Spring	Wrench
FPGN**-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGN**-20T..., 25T...	FCL8	FCS6	BP-9	P-5

Reference pages: Inserts → F091, Standard cutting conditions → F092

Screw-on external wide profile grooving toolholder



Inch	CW	CDX	H	B	LF	HF	WF	f2	Insert (1)	Torque
SPGN08-10T20	0.394	0.984	0.500	0.500	4.946	0.500	0.450	0.216	PSGB10	0.96
SPGN10-10T20	0.394	0.984	0.625	0.625	4.946	0.625	0.510	0.216	PSGB10	0.96
SPGN12-10T20	0.394	0.984	0.750	0.750	5.196	0.750	0.570	0.216	PSGB10	0.96
SPGN10-15T25	0.590	1.181	0.625	0.625	4.946	0.625	0.610	0.216	PSGB15	2.58
SPGN12-15T25	0.590	1.181	0.750	0.750	5.196	0.750	0.670	0.216	PSGB15	2.58
SPGN12-20T32	0.787	1.456	0.750	0.750	5.196	0.750	0.770	0.216	PSGB20	3.69
SPGN16-20T32	0.787	1.456	1.000	1.000	6.196	1.000	0.890	0.216	PSGB20	3.69
SPGN16-25T36	0.984	1.614	1.000	1.000	6.196	1.000	0.990	0.216	PSGB25	3.69

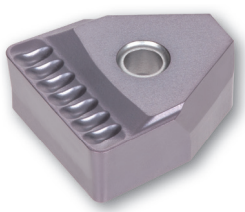
PSGB insert blank is available for tailored inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

Designation	Clamping screw	Wrench
SPGN**-10T20	CSTB-3L081	T-8F
SPGN**-15T25	CSTB-4	T-15F
SPGN**-20T..., 25T...	CSTB-5	T-20F

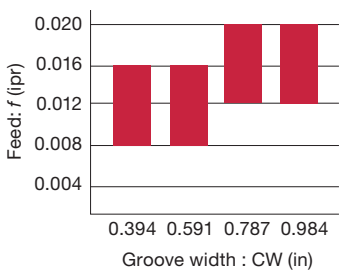
TUNGHEAVY GROOVE - Chipbreaker Guide

PSGM

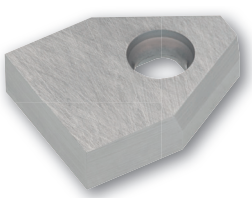


For wide grooving
Improved productivity with excellent chip control and the chipbreaker designed for high feed

CW = 0.394" - 0.984"
(10 mm - 25 mm)



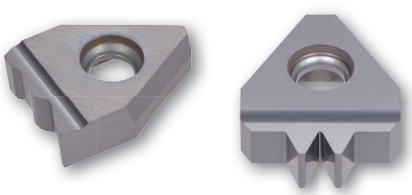
PSGB



Blank for wide profile grooving inserts
Can be prepared for various insert shapes. Shortened cutting time and improved productivity with one-pass operations

CW = 0.394" - 0.984"
(10 mm - 25 mm)

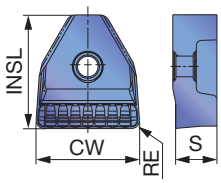
Specially tailored inserts (example)



Reference pages: Inserts → F091, Standard cutting conditions → F092

INSERT

PSGM



		AH725
P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

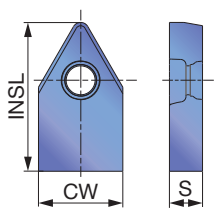
★ : First choice
☆ : Second choice

Designation	CW* (mm)	CW** (in)	RE (in)	Coated AH725	INSL (in)	S (in)
PSGM10-08	10	0.394	0.032	●	0.433	0.157
PSGM15-15	15	0.590	0.059	●	0.591	0.197
PSGM20-20	20	0.787	0.079	●	0.866	0.256
PSGM25-20	25	0.984	0.079	●	0.866	0.256

*Tolerance CW ± 0.08 (CW = 10 mm), ± 0.1 (CW ≥ 15 mm)
**Tolerance CW ± 0.003" (CW = 0.394"), ± 0.004" (CW ≥ 0.591")

● : Line up

PSGB



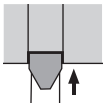
		TH10	UX30
P	Steel	☆	★
M	Stainless		★
K	Cast iron	★	
N	Non-ferrous	★	
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	CW±0.025 (mm)	CW±0.001 (in)	Uncoated TH10	Uncoated UX30	INSL (in)	S (in)
PSGB10	10.2	0.402	●	●	0.709	0.157
PSGB15	15.2	0.598	●	●	0.787	0.197
PSGB20	20.2	0.795	●	●	1.062	0.256
PSGB25	25.2	0.992	●	●	1.062	0.256

● : Line up

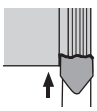
Reference pages: Toolholders → F089 - F090



Wide grooving (PSGM insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed *Vc* (sfm)
P	Alloy steel 4140, 8620, etc.	< 300	AH725	165 - 590
	Alloy steel 4140, 8620, etc.	< 300	UX30	165 - 390

	Groove width: CW (in)			
	0.394	0.590	0.787	0.984
Feed: *f* (ipr)	0.008 - 0.016	0.008 - 0.016	0.012 - 0.020	0.012 - 0.020

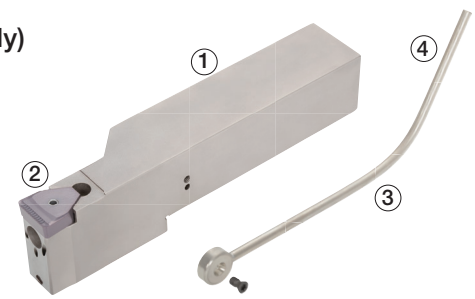


Wide profile grooving (PSGB insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 1055, etc.	< 200	UX30	165 - 490
	Alloy steel 4140, 8620, etc.	< 300	UX30	165 - 390
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200	UX30	165 - 390
K	Gray cast iron Class 25, Class 30, etc.	-	TH10	165 - 490
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	TH10	165 - 390
N	Aluminum alloys Si < 12%, etc.	-	TH10	330 - 1640

Spare parts for internal coolant supply attachment (Order separately)

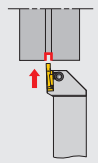
No.	Parts name	Designation	Note
①	Body	FPGR...	-
②	Insert	PSGM...	-
③	Coolant supply attachment	SGCU-341	-
④	Connector	Commercial items can be used	G 1/8 thread
			NPT 1/8 thread

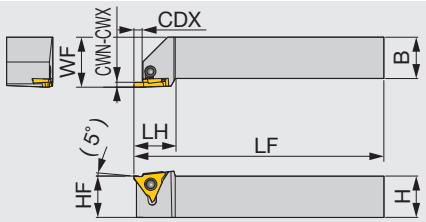


Reference pages: Toolholders → F089 - F090

TGTSR/L

External grooving toolholder, for 3 corner inserts





Right hand (R) shown.

Inch	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Torque
TGTSR16-3	0.013	0.100	0.110	1.00	1.00	6	0.98	1.00	1.00	2.21
TGTSR16-4-1	0.040	0.057	0.100	1.00	1.00	6	1.00	1.00	1.00	2.21
TGTSR16-4-2	0.060	0.090	0.160	1.00	1.00	6	1.00	1.00	1.00	2.21
TGTSR16-4-3	0.100	0.180	0.210	1.00	1.00	6	1.00	1.00	1.00	2.21

Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Torque*
TGTSR/L2020K16	0.33	2.5	2.5	20	20	125	25	20	25	3
TGTSR/L2525M16	0.33	2.5	2.5	25	25	150	25	25	30	3
TGTSR/L2020K22-1	1	1.45	2	20	20	125	25	20	25	3
TGTSR/L2020K22-2	1.5	2.3	3.5	20	20	125	25	20	25	3
TGTSR/L2020K22-3	2.5	4.5	5	20	20	125	25	20	25	3
TGTSR/L2525M22-1	1	1.45	2	25	25	150	25	25	30	3
TGTSR/L2525M22-2	1.5	2.3	3.5	25	25	150	25	25	30	3
TGTSR/L2525M22-3	2.5	4.5	5	25	25	150	25	25	30	3

Use right-hand toolholders (TGTSR) with right-hand inserts (GBR); and left-hand toolholders (TGTSL) with left-hand inserts (GBL).
See below insert table.
Torque: Recommended clamping torque: lbs·ft (*N·m)

Designation	Insert
TGTSR16-3	GBR/L32...
TGTSR16-4-1	GBR43050R ~ 145
TGTSR16-4-2	GBR43150 ~ 230
TGTSR16-4-3	GBR43250 ~ 450
TGTSR/L2020K16	GBR/L32...
TGTSR/L2525M16	GBR/L32...
TGTSR/L2020K22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2020K22-2	GBR/L43150 ~ 230 GBR/L43075R ~ 100R
TGTSR/L2020K22-3	GBR/L43250 ~ 450 GBR/L43125R ~ 200R
TGTSR/L2525M22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2525M22-2	GBR/L43150 ~ 230 GBR/L43075R ~ 100R
TGTSR/L2525M22-3	GBR/L43250 ~ 450 GBR/L43125R ~ 200R

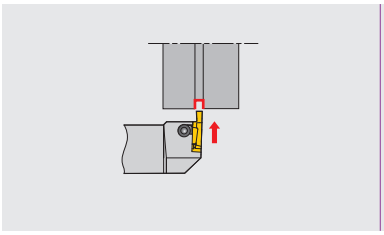
SPARE PARTS

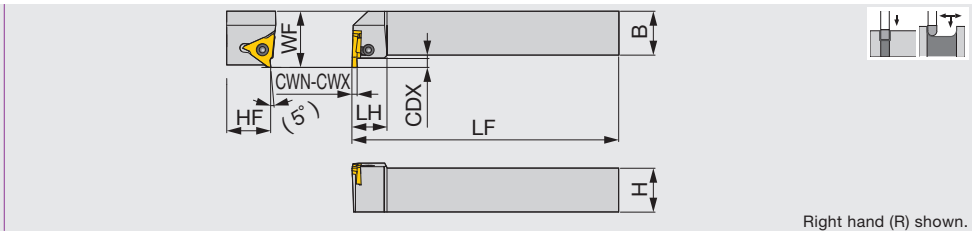
Designation	Clamp	Clamping screw	Wrench
TGTSR16-3	CP900	MCS520-2.5	P-2.5
TGTSR16-4...	CP910	MCS520-2.5	P-2.5
TGTSR/L*****16	CP900	MCS520-2.5	P-2.5
TGTSR/L*****22...	CP910	MCS520-2.5	P-2.5

Reference pages: Inserts → F095 - F097, Standard cutting conditions → F097

TGTTR/L

Perpendicular toolholder for external grooving, for 3 corner inserts





Right hand (R) shown.

Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Torque
TGTTR/L2020K16	0.33	2.5	2.5	20	20	125	20	20	27	3
TGTTR/L2525M16	0.33	2.5	2.5	25	25	150	20	25	32	3
TGTTR/L2020K22-1	1	1.45	2	20	20	125	20	20	27	3
TGTTR/L2020K22-2	1.5	2.3	3.5	20	20	125	20	20	27	3
TGTTR/L2020K22-3	2.5	4.5	5	20	20	125	20	20	27	3
TGTTR/L2525M22-1	1	2.3	2	25	25	150	20	25	32	3
TGTTR/L2525M22-2	1.5	2.3	3.5	25	25	150	20	25	32	3
TGTTR/L2525M22-3	2.5	4.5	5	25	25	150	20	25	32	3

Use right-hand toolholders (TGTTR) with left-hand inserts (GBL); and left-hand toolholders (TGTTL) with right-hand inserts (GBR).
See below insert table.
Torque: Recommended clamping torque: N·m

Designation	Insert
TGTTR/L2020K16	GBL/R32...
TGTTR/L2525M16	GBL/R32...
TGTTR/L2020K22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTTR/L2020K22-2	GBL/R43150 ~ 230 GBL/R43075R ~ 100R
TGTTR/L2020K22-3	GBL/R43250 ~ 450 GBL/R43125R ~ 200R
TGTTR/L2525M22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTTR/L2525M22-2	GBL/R43150 ~ 230 GBL/R43075R ~ 100R
TGTTR/L2525M22-3	GBL/R43250 ~ 450 GBL/R43125R ~ 200R

SPARE PARTS

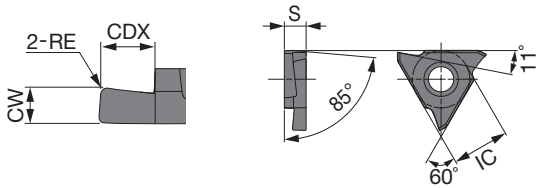
Designation	Clamp	Clamping screw	Wrench
TGTTR/L*****16	CP900	MCS520-2.5	P-2.5
TGTTR/L*****22...	CP910	MCS520-2.5	P-2.5

External
Internal
Face
Parting
Others

Reference pages: Inserts → F095 - F097, Standard cutting conditions → F097

INSERT

GBR/L32



Right hand (R) shown.

		Coated			Cermet			Uncoated		
P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆					
N	Non-ferrous							★		
S	Superalloys	☆						☆		
H	Hard materials									

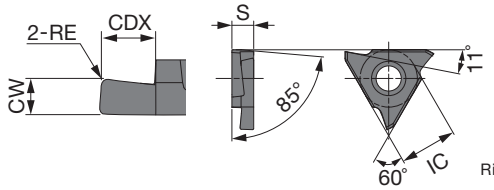
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	AH710	NS9530	KS05F	CDX (in)	IC (mm)	S (mm)
GBR32033	R	0.33	0.013	0.0012	●	●	●	0.031	9.53	3.18
GBL32033	L	0.33	0.013	0.0012	●			0.031	9.53	3.18
GBR32050	R	0.5	0.020	0.002	●	●	●	0.047	9.53	3.18
GBL32050	L	0.5	0.020	0.002	●			0.047	9.53	3.18
GBR32075	R	0.75	0.030	0.002	●	●	●	0.079	9.53	3.18
GBL32075	L	0.75	0.030	0.002	●	●		0.079	9.53	3.18
GBR32095	R	0.95	0.037	0.002	●	●	●	0.079	9.53	3.18
GBL32095	L	0.95	0.037	0.002	●	●		0.079	9.53	3.18
GBR32100	R	1	0.039	0.002	●	●	●	0.079	9.53	3.18
GBL32100	L	1	0.039	0.002	●	●		0.079	9.53	3.18
GBR32125	R	1.25	0.049	0.008	●	●	●	0.079	9.53	3.18
GBL32125	L	1.25	0.049	0.008	●	●		0.079	9.53	3.18
GBR32145	R	1.45	0.057	0.008	●	●	●	0.079	9.53	3.18
GBL32145	L	1.45	0.057	0.008	●			0.079	9.53	3.18
GBR32150	R	1.5	0.059	0.008	●	●	●	0.079	9.53	3.18
GBL32150	L	1.5	0.059	0.008	●			0.079	9.53	3.18
GBR32200	R	2	0.079	0.008	●	●	●	0.098	9.53	3.18
GBL32200	L	2	0.079	0.008	●			0.098	9.53	3.18
GBR32250	R	2.5	0.098	0.008	●	●	●	0.098	9.53	3.18
GBL32250	L	2.5	0.098	0.008	●			0.098	9.53	3.18

● : Line up

Reference pages: Toolholders → F093 - F094

GBR/L43



Right hand (R) shown.

		Coated			Cermet			Uncoated		
P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆					
N	Non-ferrous							★		
S	Superalloys	☆						☆		
H	Hard materials									

★ : First choice
☆ : Second choice

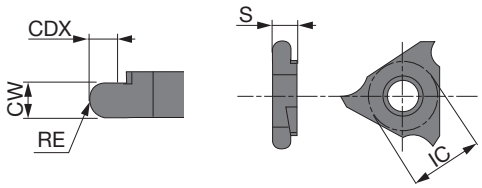
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	AH710	NS9530	KS05F	CDX (in)	IC (mm)	S (mm)
GBR43125	R	1.25	0.049	0.008	●	●	●	0.079	12.7	4.76
GBL43125	L	1.25	0.049	0.008	●			0.079	12.7	4.76
GBR43145	R	1.45	0.057	0.008	●	●	●	0.079	12.7	4.76
GBL43145	L	1.45	0.057	0.008	●			0.079	12.7	4.76
GBR43150	R	1.50	0.059	0.008	●	●	●	0.138	12.7	4.76
GBL43150	L	1.50	0.059	0.008	●	●		0.138	12.7	4.76
GBR43175	R	1.75	0.069	0.008	●	●	●	0.138	12.7	4.76
GBL43175	L	1.75	0.069	0.008	●	●		0.138	12.7	4.76
GBR43185	R	1.85	0.073	0.008	●	●	●	0.138	12.7	4.76
GBL43185	L	1.85	0.073	0.008	●	●		0.138	12.7	4.76
GBR43200	R	2	0.079	0.008	●	●	●	0.138	12.7	4.76
GBL43200	L	2	0.079	0.008	●	●		0.138	12.7	4.76
GBR43230	R	2.3	0.091	0.008	●	●	●	0.138	12.7	4.76
GBL43230	L	2.3	0.091	0.008	●	●		0.138	12.7	4.76
GBR43250	R	2.5	0.098	0.012	●	●	●	0.197	12.7	4.76
GBL43250	L	2.5	0.098	0.012	●			0.197	12.7	4.76
GBR43265	R	2.65	0.104	0.012	●	●	●	0.197	12.7	4.76
GBL43265	L	2.65	0.104	0.012	●			0.197	12.7	4.76
GBR43280	R	2.8	0.110	0.012	●	●	●	0.197	12.7	4.76
GBL43280	L	2.8	0.110	0.012	●			0.197	12.7	4.76
GBR43300	R	3	0.118	0.012	●	●	●	0.197	12.7	4.76
GBL43300	L	3	0.118	0.012	●			0.197	12.7	4.76
GBR43330	R	3.3	0.130	0.012	●	●	●	0.197	12.7	4.76
GBL43330	L	3.3	0.130	0.012	●			0.197	12.7	4.76
GBR43350	R	3.5	0.138	0.012	●	●	●	0.197	12.7	4.76
GBL43350	L	3.5	0.138	0.012	●			0.197	12.7	4.76
GBR43400	R	4	0.157	0.016	●	●	●	0.197	12.7	4.76
GBL43400	L	4	0.157	0.016	●			0.197	12.7	4.76
GBR43430	R	4.3	0.169	0.016	●	●	●	0.197	12.7	4.76
GBL43430	L	4.3	0.169	0.016	●			0.197	12.7	4.76
GBR43450	R	4.5	0.177	0.016	●	●	●	0.197	12.7	4.76
GBL43450	L	4.5	0.177	0.016	●			0.197	12.7	4.76

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F093 - F094

GBR/L43-R(full radius)



Right hand (R) shown.

		Coated			Cermet			Uncoated		
P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆					
N	Non-ferrous							★		
S	Superalloys	☆						☆		
H	Hard materials									

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	AH710			NS9530			KS05F									CDX (in)	IC (mm)	S (mm)
GBR43050R	R	1	0.039	0.020	●			●			●									0.079	12.7	4.76
GBL43050R	L	1	0.039	0.020	●						●									0.079	12.7	4.76
GBR43075R	R	1.5	0.059	0.030	●			●			●									0.138	12.7	4.76
GBL43075R	L	1.5	0.059	0.030	●						●									0.138	12.7	4.76
GBR43100R	R	2	0.079	0.039	●			●			●									0.138	12.7	4.76
GBL43100R	L	2	0.079	0.039	●						●									0.138	12.7	4.76
GBR43125R	R	2.5	0.098	0.049	●			●			●									0.197	12.7	4.76
GBL43125R	L	2.5	0.098	0.049	●						●									0.197	12.7	4.76
GBR43150R	R	3	0.118	0.059	●			●			●									0.197	12.7	4.76
GBL43150R	L	3	0.118	0.059	●						●									0.197	12.7	4.76
GBR43200R	R	4	0.157	0.079	●			●			●									0.197	12.7	4.76
GBL43200R	L	4	0.157	0.079	●						●									0.197	12.7	4.76

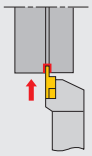
● : Line up

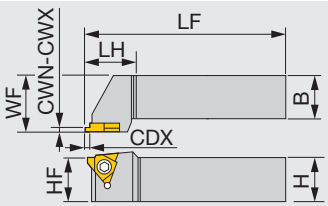
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting Speed *Vc* (sfm)	Feed *f* (ipr)
P	Carbon steel, Alloy steel 1045 SAE, 4140 SAE, etc.	150 - 240HB	NS9530	330 - 650	0.001 - 0.010
		150 - 240HB	AH710	200 - 500	0.002 - 0.010
M	Stainless steel 303, 304, etc.	≤ 240HB	AH710	200 - 500	0.002 - 0.006
K	Cast irons 250, etc.	Tensile strength ≤ 350 N/mm^2	AH710	200 - 500	0.002 - 0.006
N	Non-ferrous metals Aluminum, etc.	-	KS05F	650 - 980	0.002 - 0.006

Reference pages: Toolholders → F093 - F094

External grooving toolholder, for 3 corner inserts





Right hand (R) shown.

Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque
SGTR1616-3	1.15	2.7	1.5 - 3	16	16	100	20	16	20	GLR/L3...	3.5
SGTR/L2020-3	1.15	2.7	1.5 - 3	20	20	125	20	20	25	GLR/L3...	3.5
SGTR/L2525-3	1.15	2.7	1.5 - 3	25	25	150	20	25	32	GLR/L3...	3.5
SGTR/L2020-4	1.15	4.2	1.5 - 4	20	20	125	30	20	25	GLR/L4...,GOR/L4...	5
SGTR/L2525-4	1.15	4.2	1.5 - 4	25	25	150	30	25	32	GLR/L4...,GOR/L4...	5

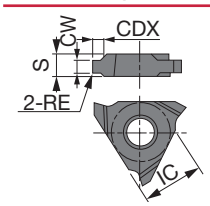
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
SGTR/L****-3	CSTB-4	T-15F
SGTR/L****-4	CSTB-5	T-20F

INSERT

GOR/L (For O-ring)



Right hand (R) shown.

P	Steel	★	★
M	Stainless		★
K	Cast iron	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

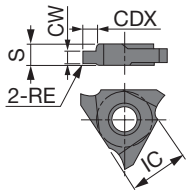
★ : First choice
☆ : Second choice

Designation	HAND	$CW^{+0.004}_{+0.002}$ (in)	$CW^{+0.1}_{+0.05}$ (mm)	RE (mm)	Cermet NS9530	Uncoated UX30	CDX (mm)	IC (mm)	S (mm)
GOR4190	R	0.098	2.5	0.4	●	●	1.5	12.7	4.76
GOR4240	R	0.126	3.2	0.4	●	●	2	12.7	4.76
GOR4310	R	0.161	4.1	0.7	●	●	2.5	12.7	4.76

● : Line up

Reference pages: Inserts → F098 - F099

GLR/L (For lock ring)



Right hand (R) shown.

		Cermet		Uncoated	
P	Steel	★		★	
M	Stainless			★	
K	Cast iron	☆			
N	Non-ferrous				
S	Superalloys				
H	Hard materials				

★ : First choice
☆ : Second choice

Designation	HAND	CW$^{+0.004}_{+0.002}$ (in)	CW$^{+0.1}_{+0.05}$ (mm)	RE (mm)	NS9530	UX30	CDX (mm)	IC (mm)	S (mm)
GLR3115	R	0.045	1.15	0.1	●	●	1.5	9.53	3.18
GLL3115	L	0.045	1.15	0.1	●	●	1.5	9.53	3.18
GLR3135	R	0.053	1.35	0.1	●	●	1.5	9.53	3.18
GLL3135	L	0.053	1.35	0.1	●		1.5	9.53	3.18
GLR3165	R	0.065	1.65	0.1	●	●	2	9.53	3.18
GLR3175	R	0.069	1.75	0.1	●	●	2	9.53	3.18
GLL3175	L	0.069	1.75	0.1	●	●	2	9.53	3.18
GLR3195	R	0.077	1.95	0.1	●	●	2.5	9.53	3.18
GLL3195	L	0.077	1.95	0.1	●	●	2.5	9.53	3.18
GLR3220	R	0.087	2.2	0.1	●	●	3	9.53	3.18
GLL3220	L	0.087	2.2	0.1		●	3	9.53	3.18
GLR3270	R	0.106	2.7	0.1	●	●	3	9.53	3.18
GLL3270	L	0.106	2.7	0.1		●	3	9.53	3.18
GLR4115	R	0.045	1.15	0.1	●	●	1.5	12.7	4.76
GLR4135	R	0.053	1.35	0.1	●	●	1.5	12.7	4.76
GLR4165	R	0.065	1.65	0.1	●	●	2	12.7	4.76
GLR4175	R	0.069	1.75	0.1	●	●	2	12.7	4.76
GLR4190	R	0.075	1.9	0.1	●		2.5	12.7	4.76
GLR4195	R	0.077	1.95	0.1	●	●	2.5	12.7	4.76
GLR4220	R	0.087	2.2	0.1	●	●	3.5	12.7	4.76
GLL4220	L	0.087	2.2	0.1		●	3.5	12.7	4.76
GLR4270	R	0.106	2.7	0.1	●	●	3.5	12.7	4.76
GLR4320	R	0.126	3.2	0.1	●	●	4	12.7	4.76
GLL4320	L	0.126	3.2	0.1		●	4	12.7	4.76
GLR4420	R	0.165	4.2	0.1	●	●	4	12.7	4.76
GLL4420	L	0.165	4.2	0.1		●	4	12.7	4.76

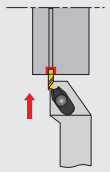
● : Line up

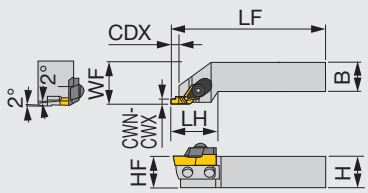
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) CW < 0.079"	CW = 0.079" - 0.157"	CW > 0.157"
P	Carbon steel	NS9530	260 - 650	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
		UX30	200 - 500	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010

Reference pages: Toolholders → F098

External grooving toolholder, for 2 corner inserts





Right hand (R) shown.

Inch	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque
GX-1212REU	0.039	0.177	0.059 - 0.236	0.75	0.75	5.00	1.38	0.75	1.00	XGR63...	3.69
GX-1616REU	0.039	0.177	0.059 - 0.236	1.00	1.00	5.90	1.38	1.00	1.25	XGR63...	3.69

Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque*
GX-2020R/LE	1	4.5	1.5 - 6	20	20	125	40	20	25	XGR/L63...	5
GX-2525R/LE	1	4.5	1.5 - 6	25	25	150	38	25	32	XGR/L63...	5

Use right-hand toolholders (GX-****RE) with right-hand inserts (XGR); and left-hand toolholders (GX-****LE) with left-hand inserts (XGL).
Torque: Recommended clamping torque: lbs·ft (*N·m)

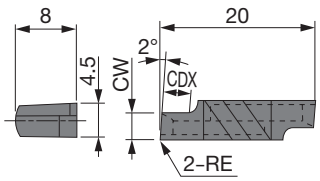
SPARE PARTS

Designation	Clamp set	Clamp screw	Shim	Shim screw	Wrench
GX-1212REU, GX-2020RE	CP81A	RT-1	SL-6R	BHM4-8	P-4
GX-2020LE	CP81A	RT-1	SL-6L	BHM4-8	P-4
GX-1616REU, GX-2525RE	CP81A	RT-1	SL-1R	BHM4-8	P-4
GX-2525LE	CP81A	RT-1	SL-1L	BHM4-8	P-4

Max. groove width and max. groove depth will depend on the insert type.

Reference pages: Inserts → F101 - F102, Standard cutting conditions → F102

XGR/L



Right hand (R) shown.

P	Steel	★			☆	★		
M	Stainless					★		
K	Cast iron	☆			★			
N	Non-ferrous				★			
S	Superalloys				☆			
H	Hard materials							

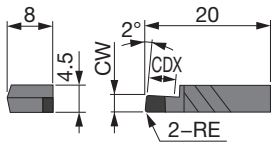
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Cermet NS9530			Uncoated TH10	Uncoated UX30								CDX (in)
XGR6310-02	R	1	0.039	0.008	●			●	●								0.059
XGL6310-02	L	1	0.039	0.008	●			●	●								0.059
XGR6315-02	R	1.5	0.059	0.008	●			●	●								0.091
XGL6315-02	L	1.5	0.059	0.008	●			●	●								0.091
XGR6320-02	R	2	0.079	0.008	●			●	●								0.118
XGL6320-02	L	2	0.079	0.008	●			●	●								0.118
XGR6325-02	R	2.5	0.098	0.008	●			●	●								0.150
XGL6325-02	L	2.5	0.098	0.008	●			●	●								0.150
XGR6330-02	R	3	0.118	0.008	●			●	●								0.177
XGL6330-02	L	3	0.118	0.008	●			●	●								0.177
XGR6335-02	R	3.5	0.138	0.008	●			●	●								0.209
XGL6335-02	L	3.5	0.138	0.008	●			●	●								0.209
XGR6340-02	R	4	0.157	0.008	●			●	●								0.236
XGL6340-02	L	4	0.157	0.008	●			●	●								0.236
XGR6345-02	R	4.5	0.177	0.008	●			●	●								0.236
XGL6345-02	L	4.5	0.177	0.008	●			●	●								0.236

Use right-hand toolholders (GX-****RE) with right-hand inserts (XGR...)
left-hand toolholders (GX-****LE) with left-hand inserts (XGL...).

● : Line up

Reference pages: Toolholders → F100



Right hand (R) shown.

P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	CBN BX360	CDX (in)
XGL6310S-QBN	L	1	0.039	0.008	●	0.059
XGR6315S-QBN	R	1.5	0.059	0.008	●	0.091
XGL6315S-QBN	L	1.5	0.059	0.008	●	0.091
XGR6320S-QBN	R	2	0.079	0.008	●	0.118
XGL6320S-QBN	L	2	0.079	0.008	●	0.118
XGR6325S-QBN	R	2.5	0.098	0.008	●	0.150
XGL6325S-QBN	L	2.5	0.098	0.008	●	0.150
XGR6330S-QBN	R	3	0.118	0.008	●	0.177
XGL6330S-QBN	L	3	0.118	0.008	●	0.177
XGR6335S-QBN	R	3.5	0.138	0.008	●	0.209
XGL6335S-QBN	L	3.5	0.138	0.008	●	0.209
XGR6340S-QBN	R	4	0.157	0.008	●	0.236
XGL6340S-QBN	L	4	0.157	0.008	●	0.236
XGR6345S-QBN	R	4.5	0.177	0.008	●	0.236
XGL6345S-QBN	L	4.5	0.177	0.008	●	0.236

Use right-hand toolholders (GX-****RE) with right-hand inserts (XGR...)
left-hand toolholders (GX-****LE) with left-hand inserts (XGL...).

● : Line up

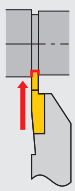
STANDARD CUTTING CONDITIONS

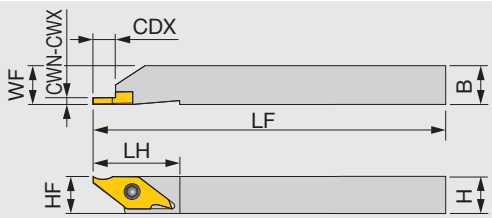
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) CW < 0.079"	CW = 0.079" - 0.157"	CW > 0.157"
P	Carbon steel	NS9530	262 - 656	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
		UX30	197 - 492	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
K	Cast irons , Light alloys	TH10	197 - 492	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
H	Hardened steel	BX360	164 - 591	0.002 - 0.006	0.002 - 0.006	0.002 - 0.006

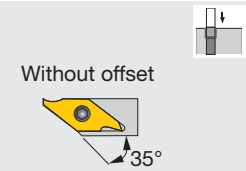
Reference pages: Toolholders → F100

JSVGR/L

External grooving toolholder, for Swiss lathes







Right hand (R) shown.

Inch	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque
JSVGR/L062.5	0.013	0.079	0.028 - 0.217	0.375	0.375	5	0.875	0.375	0.375	JVGR/L...	1.70
JSVGR/L082.5	0.013	0.079	0.028 - 0.217	0.500	0.500	5	0.875	0.500	0.500	JVGR/L...	1.70
JSVGR/L102.5	0.013	0.079	0.028 - 0.217	0.625	0.625	5	0.875	0.625	0.625	JVGR/L...	1.70

Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque*
JSVGR/L1010K-C	0.33	2	0.7 - 5.5	10	10	125	23	10	10	JVGR/L...	2.3
JSVGR/L1212K-C	0.33	2	0.7 - 5.5	12	12	125	23	12	12	JVGR/L...	2.3
JSVGR/L1616K	0.33	2	0.7 - 5.5	16	16	125	23	16	16	JVGR/L...	2.3

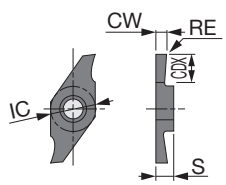
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
JSVGR/L...	CSTB-3S	T-9F (Optional T-9L)

INSERT

JVG (with hand, sharp edge)



Right hand (R) shown.

P	Steel	★	★			★			☆		
M	Stainless	★	★								
K	Cast iron					☆			☆		
N	Non-ferrous								★		
S	Superalloys								★		
H	Hard materials										

★ : First choice
☆ : Second choice

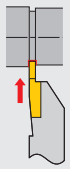
Designation	HAND	CW$^{+0.05}_{0}$ (mm)	CW$^{+0.002}_{0}$ (in)	RE (in)	Coated SH725	Coated J740	Cermet NS9530	Uncoated TH10	CDX (in)	IC (mm)	S (mm)
JVGR033F	R	0.33	0.013	0	●	●		●	0.028	7.94	3.18
JVGL033F	L	0.33	0.013	0	●				0.028	7.94	3.18
JVGR050F	R	0.5	0.020	0	●	●		●	0.043	7.94	3.18
JVGL050F	L	0.5	0.020	0	●				0.043	7.94	3.18
JVGR075F	R	0.75	0.030	0	●	●		●	0.075	7.94	3.18
JVGL075F	L	0.75	0.030	0	●				0.075	7.94	3.18
JVGR095F	R	0.95	0.037	0	●	●		●	0.075	7.94	3.18
JVGL095F	L	0.95	0.037	0	●				0.075	7.94	3.18
JVGR100F	R	1	0.039	0	●	●	●	●	0.217	7.94	3.18
JVGL100F	L	1	0.039	0	●		●	●	0.217	7.94	3.18
JVGR125F	R	1.25	0.049	0	●	●		●	0.197	7.94	3.18
JVGL125F	L	1.25	0.049	0	●				0.197	7.94	3.18
JVGR150F	R	1.5	0.059	0	●	●	●	●	0.217	7.94	3.18
JVGL150F	L	1.5	0.059	0	●		●	●	0.217	7.94	3.18
JVGR200F	R	2	0.079	0	●	●	●	●	0.217	7.94	3.18
JVGL200F	L	2	0.079	0	●				0.217	7.94	3.18

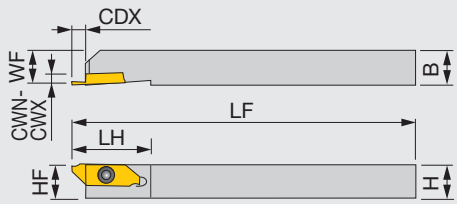
● : Line up

Reference pages: Standard cutting conditions → F110

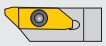
JSXGR/L

Screw-on toolholder for front turning, reverse turning, and external grooving, for Swiss lathes





Without offset



1010, 1212 Shank

Right hand (R) shown.

Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque
JSXGR/L1010K8-C	0.7	2	4.5 - 6	10	10	125	29	10	9.9	JXG...	1.3
JSXGR/L1212K8-C	0.7	2	4.5 - 6	12	12	125	29	12	11.9	JXG...	1.3
JSXGR/L1616K8	0.7	2	4.5 - 6	16	16	125	29	16	15.9	JXG...	1.3
JSXGR/L2020K8	0.7	2	4.5 - 6	20	20	125	29	20	19.9	JXG...	1.3
JSXGR/L2525K8	0.7	2	4.5 - 6	25	25	125	29	25	24.9	JXG...	1.3

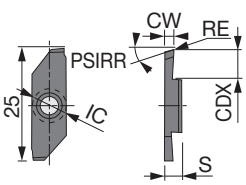
Access to insert clamping screw is available from both sides of the tool for ease of insert indexing/changing.
This toolholder can be used for JXF front-turning insert, JXR reverse-turning insert, and JXG parting and grooving insert.
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
JSXGR/L...	CSTB-4SD	T-8F

INSERT

JXG (with hand, sharp edge)



Right hand (R) shown.

		Coated			Uncoated		
P	Steel	★			☆		
M	Stainless	★					
K	Cast iron				☆		
N	Non-ferrous				★		
S	Superalloys				★		
H	Hard materials						

★ : First choice
☆ : Second choice

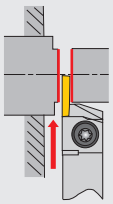
Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated J740	Uncoated TH10	CDX (mm)	IC (mm)	PSIRR	S (mm)
JXGR8070FA	R	0.028	0.7	0	●	●	4.5	8	15°	3.97
JXGL8070FA	L	0.028	0.7	0	●	●	4.5	8	15°	3.97
JXGR8070FA-005	R	0.028	0.7	0.05	●		4.5	8	15°	3.97
JXGR8100FA	R	0.039	1	0	●	●	6	8	15°	3.97
JXGL8100FA	L	0.039	1	0	●	●	6	8	15°	3.97
JXGR8100FA-005	R	0.039	1	0.05	●		6	8	15°	3.97
JXGR8100FA45	R	0.039	1	0	●	●	4.5	8	15°	3.97
JXGR8100FA45-005	R	0.039	1	0.05	●		4.5	8	15°	3.97
JXGR8150FA	R	0.059	1.5	0	●	●	6	8	15°	3.97
JXGL8150FA	L	0.059	1.5	0	●	●	6	8	15°	3.97
JXGR8150FA-005	R	0.059	1.5	0.05	●		6	8	15°	3.97
JXGR8150FA50	R	0.059	1.5	0	●	●	5	8	15°	3.97
JXGR8150FA50-005	R	0.059	1.5	0.05	●		5	8	15°	3.97
JXGR8180FA	R	0.071	1.8	0	●	●	6	8	15°	3.97
JXGR8180FA-005	R	0.071	1.8	0.05	●		6	8	15°	3.97
JXGR8200FA	R	0.079	2	0	●	●	6	8	15°	3.97
JXGL8200FA	L	0.079	2	0	●	●	6	8	15°	3.97
JXGR8200FA-005	R	0.079	2	0.05	●		6	8	15°	3.97
JXGR8200FN	R	0.079	2	0	●	●	6	8	0°	3.97
JXGL8200FN	L	0.079	2	0	●	●	6	8	0°	3.97
JXGR8200FN-005	R	0.079	2	0.05	●		6	8	0°	3.97

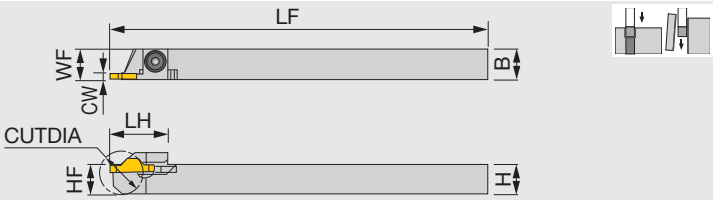
● : Line up

Reference pages: Standard cutting conditions → F110

JCCWSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

Inch	CW	CUTDIA	H	B	LF	LH	HF	WF	Insert	Torque
JCCWSR/L062	0.079	0.787	0.375	0.375	5	0.748	0.375	0.1875	JCC*200...	2.58
JCCWSR/L082	0.079	0.787	0.500	0.500	5	0.748	0.500	0.250	JCC*200...	2.58
JCCWSR/L102	0.079	0.787	0.625	0.625	5	0.748	0.625	0.3125	JCC*200...	2.58

Metric	CW	CUTDIA	H	B	LF	LH	HF	WF	Insert	Torque*
JCCWSR/L1010K2	2	20	10	10	125	19	10	10	JCC*200...	3.5
JCCWSR/L1212K2	2	20	12	12	125	19	12	12	JCC*200...	3.5
JCCWSR/L1616K2	2	20	16	16	125	19	16	16	JCC*200...	3.5
JCCWSR/L2020K2	2	20	20	20	125	19	20	20	JCC*200...	3.5
JCCWSR/L2525K2	2	20	25	25	125	19	25	25	JCC*200...	3.5

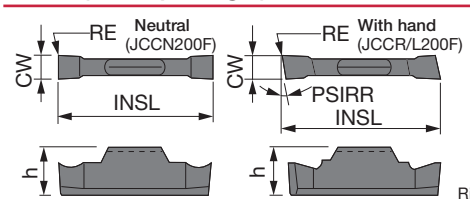
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
JCCWSR/L...	CSTB-4S	T-15F

INSERT

JCC (Sharp edge)



Right hand (R) shown.

		Coated			Uncoated			
P	Steel	★			☆			
M	Stainless	★						
K	Cast iron				☆			
N	Non-ferrous				★			
S	Superalloys				★			
H	Hard materials							

★ : First choice
☆ : Second choice

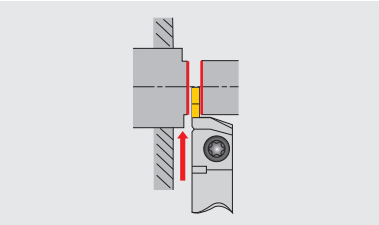
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated J740	Uncoated TH10	PSIRR	INSL (mm)	h (mm)
JCCN200F	N	2	0.079	0	●	●	0°	15	4.8
JCCN200F-005	N	2	0.079	0.002	●		0°	15	4.8
JCCR200F	R	2	0.079	0	●	●	15°	15	4.8
JCCL200F	L	2	0.079	0	●	●	15°	15	4.8
JCCR200F-005	R	2	0.079	0.002	●		15°	15	4.8
JCCL200F-005	L	2	0.079	0.002	●		15°	15	4.8

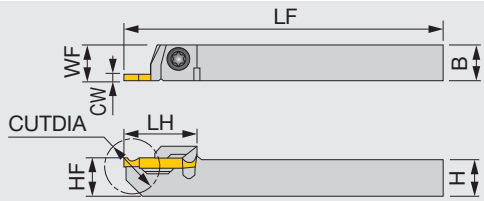
● : Line up

Reference pages: Standard cutting conditions → F110

JCGWSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

Metric	CW	CUTDIA	H	B	LF	LH	HF	WF	Insert	Torque
JCGWSR/L1010K2	2	20	10	10	125	20	10	10	JCGN200F...	3.5
JCGWSR/L1212K2	2	20	12	12	125	20	12	12	JCGN200F...	3.5
JCGWSR/L1616K2	2	20	16	16	125	20	16	16	JCGN200F...	3.5

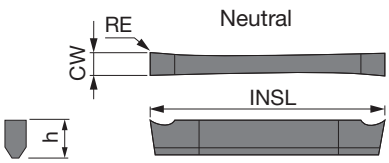
Torque: Recommended clamping torque: N·m

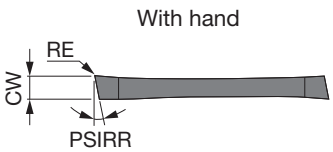
SPARE PARTS

Designation	Clamping screw	Wrench
JCGWSR/L...	CSTB-4S	T-15F

INSERT

JCGN (Sharp edge)





Right hand (R) shown.

		Coated			Uncoated							
P	Steel	★			☆							
M	Stainless	★										
K	Cast iron				☆							
N	Non-ferrous				★							
S	Superalloys				★							
H	Hard materials											

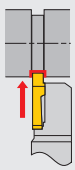
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated J740			Uncoated TH10							PSIRR	INSL (mm)	h (mm)
JCGN200F	N	0.079	2	0.05	●			●							0°	20	3
JCGN200FR	R	0.079	2	0.05	●			●							8°	20	3
JCGN200FL	L	0.079	2	0.05	●			●							8°	20	3

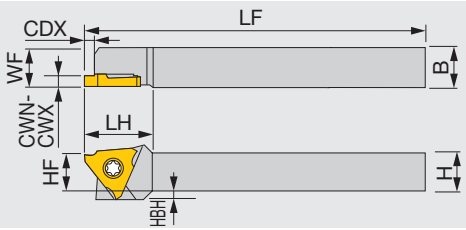
● : Line up

Reference pages: Standard cutting conditions → F110

J-SERIES
JSTGR/L
External grooving toolholder, for Swiss lathes



Access to insert clamping screw is available from both sides of the tool for ease of insert indexing/changing.



Right hand (R) shown.

Inch	CWN	CWX	CDX	H	B	LF	LH	HF	WF	HBH	Insert	Torque
JSTGR/L063	0.013	0.118	0.028 - 0.102	0.375	0.375	5	0.75	0.375	0.375	0.100	JTGR/L3...	0.89
JSTGR/L083	0.013	0.118	0.028 - 0.102	0.500	0.500	5	0.75	0.500	0.500	-	JTGR/L3...	0.89
JSTGR/L103	0.013	0.118	0.028 - 0.102	0.625	0.625	5	0.75	0.625	0.625	-	JTGR/L3...	0.89

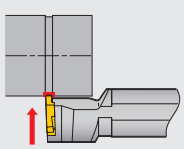
Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*
JSTGR/L1010X3	0.33	3	0.7 - 2.6	10	10	120	18.5	10	10	2	JTGR/L3...	1.2
JSTGR/L1212F3	0.33	3	0.7 - 2.6	12	12	85	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1212X3	0.33	3	0.7 - 2.6	12	12	120	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1616X3	0.33	3	0.7 - 2.6	16	16	120	18.5	16	16	-	JTGR/L3...	1.2
JSTGL1616K3	0.33	3	0.7 - 2.6	16	16	125	18.5	16	16	-	JTGR/L3...	1.2

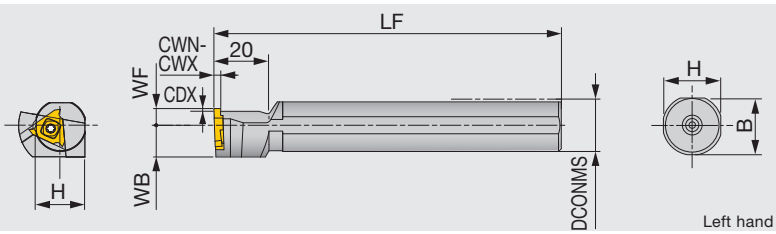
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
JSTGR/L...	CSTB-4SD	T-8F

J-SERIES
JS-TGL3
External grooving toolholder, for Swiss lathes





Left hand (L) shown.

Metric	CWN	CWX	CDX	DCONMS	H	B	LF	WF	WB	Insert	Torque
JS19K-TGL3	0.33	3	0.7 - 2.6	19.05	18	18	125	6	11.5	JTGR3...	3
JS20K-TGL3	0.33	3	0.7 - 2.6	20	19	19	125	6	11.5	JTGR3...	3
JS22K-TGL3	0.33	3	0.7 - 2.6	22	21	21	125	6	11.5	JTGR3...	3
JS25K-TGL3	0.33	3	0.7 - 2.6	25.4	24	24	125	10	12.7	JTGR3...	3

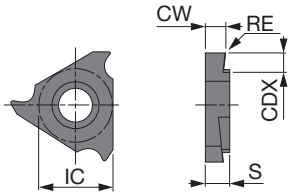
Note: Use left-hand toolholders (L) with right-hand inserts (R).
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
JS***-TGL3	CSTB-4S	T-15F

Reference pages: Inserts → F108 - F109, Standard cutting conditions → F110

JTG (Sharp edge)



Right hand (R) shown.

		Coated				Cermet				Uncoated							
P	Steel	★	★			★				☆							
M	Stainless	★	★														
K	Cast iron					☆				★							
N	Non-ferrous									★							
S	Superalloys									★							
H	Hard materials																

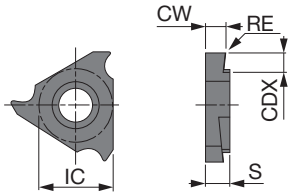
★ : First choice
☆ : Second choice

Designation	HAND	$CW^{+0.05}_{0}$ (mm)	$CW^{+0.002}_{0}$ (in)	RE (in)	SH725	J740			NS9530			TH10							CDX (in)	IC (mm)	S (mm)
JTGR3033F	R	0.33	0.013	0.0012	●	●						●							0.028	9.53	3.18
JTGL3033F	L	0.33	0.013	0.0012		●						●							0.028	9.53	3.18
JTGR3033F-005	R	0.33	0.013	0.002	●														0.028	9.53	3.18
JTGR3043F	R	0.43	0.017	0.0012		●													0.043	9.53	3.18
JTGR3050F	R	0.5	0.020	0.0012	●	●			●			●							0.043	9.53	3.18
JTGL3050F	L	0.5	0.020	0.0012	●	●						●							0.043	9.53	3.18
JTGR3050F-005	R	0.5	0.020	0.002	●														0.043	9.53	3.18
JTGL3050F-005	L	0.5	0.020	0.002	●														0.043	9.53	3.18
JTGR3065F	R	0.65	0.026	0.0012	●	●													0.075	9.53	3.18
JTGR3065F-010	R	0.65	0.026	0.004	●														0.075	9.53	3.18
JTGR3075F	R	0.75	0.030	0.0012	●	●			●			●							0.075	9.53	3.18
JTGL3075F	L	0.75	0.030	0.0012	●	●			●			●							0.075	9.53	3.18
JTGR3075F-010	R	0.75	0.030	0.004	●														0.075	9.53	3.18
JTGL3075F-010	L	0.75	0.030	0.004	●														0.075	9.53	3.18
JTGR3080F	R	0.8	0.031	0.0012	●	●													0.075	9.53	3.18
JTGR3080F-010	R	0.8	0.031	0.004	●														0.075	9.53	3.18
JTGR3085F	R	0.85	0.033	0.0012	●	●													0.075	9.53	3.18
JTGR3095F	R	0.95	0.037	0.0012	●	●			●			●							0.075	9.53	3.18
JTGL3095F	L	0.95	0.037	0.0012	●	●						●							0.075	9.53	3.18
JTGR3095F-010	R	0.95	0.037	0.004	●														0.075	9.53	3.18
JTGL3095F-010	L	0.95	0.037	0.004	●														0.075	9.53	3.18
JTGR3100F	R	1	0.039	0.002	●	●			●			●							0.083	9.53	3.18
JTGL3100F	L	1	0.039	0.002	●	●						●							0.083	9.53	3.18
JTGR3100F-010	R	1	0.039	0.004	●														0.083	9.53	3.18
JTGL3100F-010	L	1	0.039	0.004	●														0.083	9.53	3.18
JTGR3110F	R	1.1	0.043	0.002	●	●													0.083	9.53	3.18
JTGR3120F	R	1.2	0.047	0.002	●	●													0.083	9.53	3.18
JTGR3120F-010	R	1.2	0.047	0.004	●														0.083	9.53	3.18
JTGR3125F	R	1.25	0.049	0.002	●	●			●			●							0.083	9.53	3.18
JTGL3125F	L	1.25	0.049	0.002	●	●						●							0.083	9.53	3.18
JTGR3125F-010	R	1.25	0.049	0.004	●														0.083	9.53	3.18
JTGL3125F-010	L	1.25	0.049	0.004	●														0.083	9.53	3.18
JTGR3130F	R	1.3	0.051	0.002	●	●													0.083	9.53	3.18
JTGR3140F	R	1.4	0.055	0.002	●	●													0.083	9.53	3.18
JTGR3140F-010	R	1.4	0.055	0.004	●														0.083	9.53	3.18
JTGR3145F	R	1.45	0.057	0.002	●	●			●			●							0.083	9.53	3.18
JTGL3145F	L	1.45	0.057	0.002		●						●							0.083	9.53	3.18
JTGR3145F-010	R	1.45	0.057	0.004	●														0.083	9.53	3.18
JTGR3150F	R	1.5	0.059	0.002	●	●			●			●							0.083	9.53	3.18
JTGL3150F	L	1.5	0.059	0.002	●	●						●							0.083	9.53	3.18
JTGR3150F-010	R	1.5	0.059	0.004	●														0.083	9.53	3.18
JTGL3150F-010	L	1.5	0.059	0.004	●														0.083	9.53	3.18

● : Line up

Reference pages: Toolholders →F107, Standard cutting conditions → F110

JTG (Sharp edge)



Right hand (R) shown.

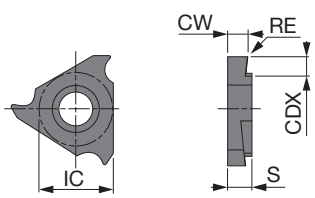
		SH725	J740	NS9530	TH10
P	Steel	★	★	★	☆
M	Stainless	★	★		
K	Cast iron			☆	★
N	Non-ferrous				★
S	Superalloys				★
H	Hard materials				

★ : First choice
☆ : Second choice

Designation	HAND	CW$^{+0.05}_{0}$ (mm)	CW$^{+0.002}_{0}$ (in)	RE (in)	Coated SH725	Coated J740	Cermet NS9530	Uncoated TH10	CDX (in)	IC (mm)	S (mm)
JTGR3175F	R	1.75	0.069	0.002	●	●	●	●	0.083	9.53	3.18
JTGL3175F	L	1.75	0.069	0.002		●	●	●	0.083	9.53	3.18
JTGR3175F-010	R	1.75	0.069	0.004	●				0.083	9.53	3.18
JTGR3180F	R	1.8	0.071	0.002	●	●			0.083	9.53	3.18
JTGR3200F	R	2	0.079	0.002	●	●	●	●	0.102	9.53	3.18
JTGL3200F	L	2	0.079	0.002	●	●		●	0.102	9.53	3.18
JTGR3200F-010	R	2	0.079	0.004	●				0.102	9.53	3.18
JTGL3200F-010	L	2	0.079	0.004	●				0.102	9.53	3.18
JTGR3225F	R	2.25	0.089	0.002	●	●			0.102	9.53	3.18
JTGR3250F	R	2.5	0.098	0.002	●	●	●	●	0.102	9.53	3.18
JTGL3250F	L	2.5	0.098	0.002	●	●		●	0.102	9.53	3.18
JTGR3250F-010	R	2.5	0.098	0.004	●				0.102	9.53	3.18
JTGL3250F-010	L	2.5	0.098	0.004	●				0.102	9.53	3.18
JTGR3275F	R	2.75	0.108	0.002		●			0.102	9.53	3.18
JTGR3300F	R	3	0.118	0.002	●	●			0.102	9.53	3.18
JTGR3300F-010	R	3	0.118	0.004	●				0.102	9.53	3.18

● : Line up

JTG (honed edge)



Right hand (R) shown.

		J9530
P	Steel	★
M	Stainless	
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW$^{+0.05}_{0}$ (mm)	CW$^{+0.002}_{0}$ (in)	RE (in)	Coated cermet J9530	CDX (in)	IC (mm)	S (mm)
JTGR3100	R	1	0.039	0.002	●	0.083	9.53	3.18
JTGR3125	R	1.25	0.049	0.002	●	0.083	9.53	3.18
JTGR3150	R	1.5	0.059	0.002	●	0.083	9.53	3.18
JTGR3200	R	2	0.079	0.002	●	0.102	9.53	3.18

● : Line up

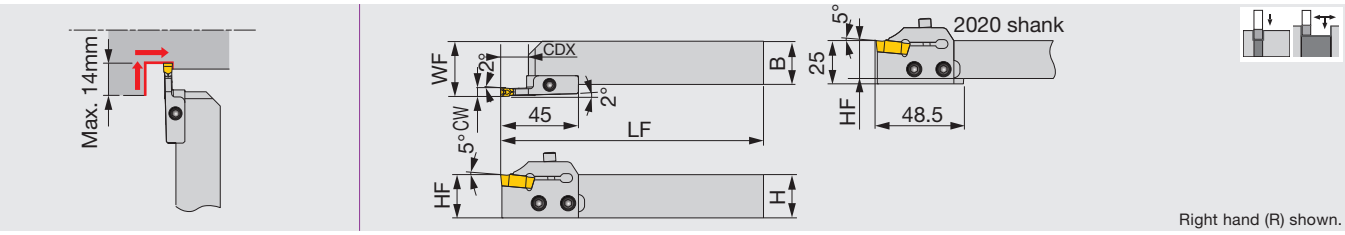
Reference pages: Toolholders →F107, Standard cutting conditions → F110

STANDARD CUTTING CONDITIONS (J-Series grooving tool)

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	General steel, Free-cutting steel, etc.	J740	33 - 328	0.0004 - 0.004
		SH725	164 - 492	0.0004 - 0.004
		NS9530	164 - 492	0.0004 - 0.004
		J9530	164 - 492	0.0004 - 0.004
M	Stainless steel, etc.	J740	33 - 328	0.0004 - 0.004
		SH725	164 - 492	0.0004 - 0.004
N	Aluminum alloys, Brass, etc.	TH10	33 - 656	0.0004 - 0.004
S	Difficult-to-cut materials, Titanium alloys, etc.	TH10	33 - 98	0.0004 - 0.004

CGWSR/L-FLR/L#GP

External grooving and turning toolholder



Metric	CW	CDX	H	B	LF	HF	WF	Insert	Shank	Blade	Torque
CGWSR/L2020-FLR/L3GP	3	10	20	20	152	20	27	FLEX30R/L	CGWSR/L2020	FLR/L3GP	5
CGWSR/L2525-FLR/L3GP	3	10	25	25	152	25	32	FLEX30R/L	CGWSR/L2525	FLR/L3GP	5
CGWSR/L2020-FLR/L4GP	4	12	20	20	152	20	27	FLEX40R/L	CGWSR/L2020	FLR/L4GP	5
CGWSR/L2525-FLR/L4GP	4	12	25	25	152	25	32	FLEX40R/L	CGWSR/L2525	FLR/L4GP	5
CGWSR/L2020-FLR/L5GP	5	14	20	20	152	20	27	FLEX50R/L	CGWSR/L2020	FLR/L5GP	5
CGWSR/L2525-FLR/L5GP	5	14	25	25	152	25	32	FLEX50R/L	CGWSR/L2525	FLR/L5GP	5

Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Use right-hand toolholders (CGWSR...) with right-hand blade (FLR...); and left-hand toolholders (CGWSL...) with left-hand blade (FLL...).
Torque: Recommended clamping torque: N·m

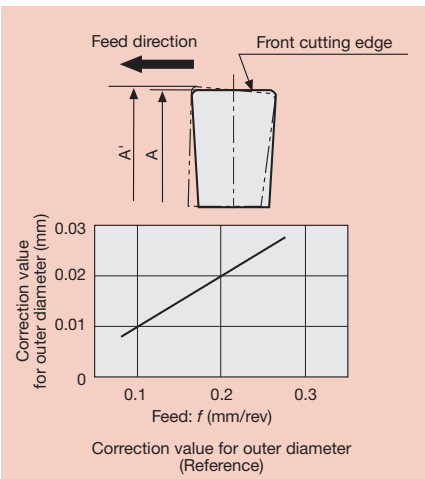
SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-FLR/L*GP	CHHM5-18	CSHB-6	P-4

Caution

- Flex-Tool has a mechanism in which the end cutting edge angle is formed by accepting a cutting force. In external grooving, there is a possibility that if the cutting conditions (feed and depth of cut) are set too high, the programmed diameter will not be achieved. To prevent this problem, it is necessary to perform a compensation in the program by an amount that is equal to the amount A'-A that is shown in the drawing on the right. The values of compensation corresponding to the feeds are also shown in the graph.

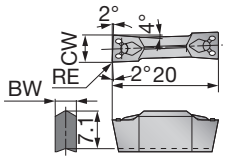
The length of blade for 5 mm width is shortened 2 mm compared from the old type blade. Please notice and read the instruction manual packaged in the box.



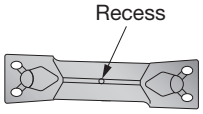
Reference pages: Inserts, Standard cutting conditions → F112

INSERT

FLEX(R/L)



Right hand (R) shown.



To distinguish the insert hands, the V-shape surface (top surface) of a left-hand insert has a recess. (not of a right-hand insert)

P	Steel	★	☆			★			★		
M	Stainless	★							★		
K	Cast iron	☆				☆					
N	Non-ferrous										
S	Superalloys										
H	Hard materials										

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	Coated				Carbide			Uncoated					BW (mm)
					T9225	T9125			NS9530			UX30					
FLEX30R	R	0.118	3	0.4					●								2.2
FLEX30L	L	0.118	3	0.4					●								2.2
FLEX40R	R	0.157	4	0.4					●								3.1
FLEX40L	L	0.157	4	0.4					●								3.1
FLEX50R	R	0.197	5	0.4	●	▲			●			●					4
FLEX50L	L	0.197	5	0.4	●	▲			●			●					4

● : Line up
▲ : To be discontinued

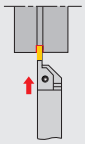
STANDARD CUTTING CONDITIONS

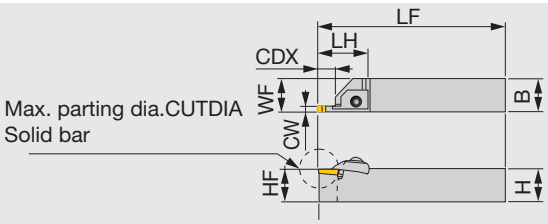
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Turning
P	Carbon steel	T9225	262 - 984	0.002 - 0.010	0.004 - 0.012
		NS9530	262 - 656	0.002 - 0.010	0.004 - 0.012
		UX30	197 - 492	0.002 - 0.010	0.004 - 0.012

Reference pages: Toolholders →F111

CTWR/L

External grooving and parting toolholder, for 2 corner inserts





Right hand (R) shown.

Metric	CW	CUTDIA	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CTWR/L2020-3	3	32	14	20	20	150	41	20	20.25	CTD3	5
CTWR/L2525-3	3	32	14	25	25	150	41	25	25.25	CTD3	5
CTWR/L2020-4	4	32	14	20	20	150	41	20	20.25	CTD4	5
CTWR/L2525-4	4	32	14	25	25	150	41	25	25.25	CTD4	5
CTWR/L2525-5	5	42	20	25	25	150	46	25	25.25	CTD5	5

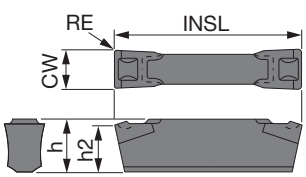
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamp	Pin	Clamping screw	Washer	Wrench
CTWR2020-3	CTC-3R	BP-360	CTS-M6	CDW6	P-4
CTWL2020-3	CTC-3L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-3	CTC-3R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-3	CTC-3L	BP-360	CTS-M6	CDW6	P-4
CTWR2020-4	CTC-4R	BP-360	CTS-M6	CDW6	P-4
CTWL2020-4	CTC-4L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-4	CTC-4R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-4	CTC-4L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-5	CTC-5R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-5	CTC-5L	BP-360	CTS-M6	CDW6	P-4

INSERT

CTD



		Coated
P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

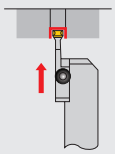
★ : First choice
☆ : Second choice

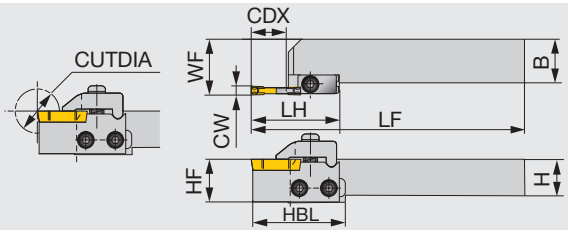
Designation	CW±0.004 (in)	CW±0.1 (mm)	RE (mm)	AH725	INSL (mm)	h (mm)	h2 (mm)
CTD3	0.118	3	0.2	●	20	4.3	4
CTD4	0.157	4	0.2	●	20	5.3	5
CTD5	0.197	5	0.2	●	25	6.3	6

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Parting off
P	Carbon steel	AH725	262 - 591	0.003 - 0.012	0.003 - 0.006
M	Stainless steel	AH725	164 - 394	0.003 - 0.010	0.003 - 0.004





Right hand (R) shown.

Metric	CW	CUTDIA	CDX	H	B	LF	LH	HBL	HF	WF	Insert	Shank	Blade	Torque
CGWSR/L2020-CGDR/L2	2	35	16	20	20	152	45	48.5	20	26.45	CGD200	CGWSR/L2020	CGDR/L2	5
CGWSR/L2525-CGDR/L2	2	35	16	25	25	152	45	-	25	31.45	CGD200	CGWSR/L2525	CGDR/L2	5
CGWSR/L2020-CGDR/L3	3	46	21.6	20	20	157.6	50.6	54.1	20	26.45	CGD300	CGWSR/L2020	CGDR/L3	5
CGWSR/L2525-CGDR/L3	3	46	21.6	25	25	157.6	50.6	-	25	31.45	CGD300	CGWSR/L2525	CGDR/L3	5
CGWSR/L2020-CGDR/L4	4	46	21.6	20	20	157.6	50.6	54.1	20	26.65	CGD400	CGWSR/L2020	CGDR/L4	5
CGWSR/L2525-CGDR/L4	4	46	21.6	25	25	157.6	50.6	-	25	31.65	CGD400	CGWSR/L2525	CGDR/L4	5
CGWSR/L2020-CGDR/L5	5	46	21.6	20	20	157.6	50.6	54.1	20	26.95	CGD500	CGWSR/L2020	CGDR/L5	5
CGWSR/L2525-CGDR/L5	5	46	21.6	25	25	157.6	50.6	-	25	31.95	CGD500	CGWSR/L2525	CGDR/L5	5
CGWSR/L2020-CGDR/L6	6	46	21.6	20	20	157.6	50.6	54.1	20	27.1	CGD600	CGWSR/L2020	CGDR/L6	5
CGWSR/L2525-CGDR/L6	6	46	21.6	25	25	157.6	50.6	-	25	32.1	CGD600	CGWSR/L2525	CGDR/L6	5
CGWSR2525-8	7 / 8	50	21.6	25	25	150	-	-	25	26.35	CGD700, CGD800	-	-	8.5
CGWSR3232-8	7 / 8	50	21.6	32	32	170	-	-	32	33.35	CGD700, CGD800	-	-	8.5

When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.
Torque: Recommended clamping torque: N·m

SPARE PARTS

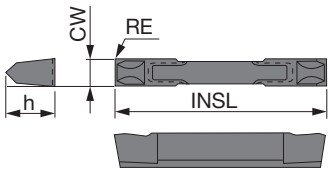
Designation	Blade	Clamp	Clamping screw	Blade screw	Spring pin	Spring	Wrench
CGWSR****-CGDR2	TCR2	CCR2	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL2	TCL2	CCL2	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR3	TCR3	CCR3	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL3	TCL3	CCL3	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR4	TCR4	CCR4	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL4	TCL4	CCL4	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR5	TCR5	CCR5	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL5	TCL5	CCL5	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR6	TCR6	CCR6	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDL6	TCL6	CCL6	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-8	-	CCR/L-8	CHHM6-20	-	5X14AW	BP-9	P-5

External
Internal
Face
Parting
Others

Reference pages: Inserts, Standard cutting conditions → F115

INSERT

CGD



		AH120	GH330		NS9530			UX30					
P	Steel	★	☆		★			★					
M	Stainless	★	★					★					
K	Cast iron	★			☆								
N	Non-ferrous												
S	Superalloys	☆											
H	Hard materials												

★ : First choice
☆ : Second choice

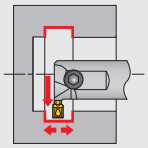
Designation	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated			Cermet			Uncoated						INSL (in)	h (in)
				AH120	GH330		NS9530			UX30							
CGD200	0.079	2	0.2		●		●			●						0.787	0.128
CGD300	0.118	3	0.2	●	●		●			●						1.126	0.248
CGD400	0.157	4	0.2	●	●		●			●						1.126	0.248
CGD500	0.197	5	0.2	●	●		●			●						1.126	0.248
CGD600	0.236	6	0.2		●		●			●						1.126	0.335
CGD700	0.276	7	0.2		●					●						1.126	0.335
CGD800	0.315	8	0.2		●					●						1.126	0.335

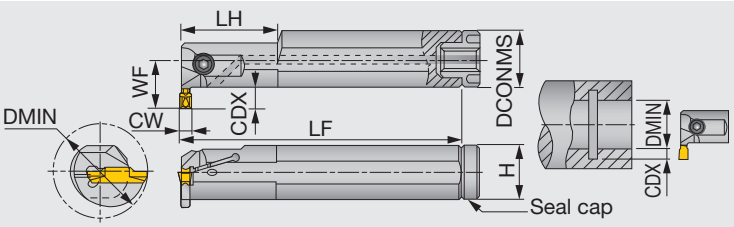
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Parting off
P	Carbon steel	GH330	230 - 591	0.003 - 0.012	0.003 - 0.006
		NS9530	262 - 656	0.003 - 0.012	0.003 - 0.006
		UX30	197 - 492	0.003 - 0.012	0.003 - 0.006

Reference pages: Toolholders → F114





Insert:
Seat size 2: DGIM, DGIS
Seat size 3 - 8: DTI, DTX, DGL

Right hand (R) shown.

Inch	CW (in)	CW (mm)	DMIN	Seat size	CDX	DCONMS	H	LF (1)	LH	WF	Insert	Torque
CTIR/L12-3T06-D16	0.118	3	1.000	3	0.236	0.750	0.551	6.500	1.575	0.609	DTI..., DTX...	3.69
CTIR/L16-3T05-D16	0.118	3	1.000	3	0.201	1.000	0.709	8.000	1.575	0.689	DTI..., DTX...	3.69
CTIR/L16-3T08-D20	0.118	3	1.250	3	0.315	1.000	0.709	8.000	1.575	0.846	DTI..., DTX...	3.69
CTIR/L20-3T10-D25	0.118	3	1.563	3	0.394	1.250	0.906	10.000	2.362	1.063	DTI..., DTX...	3.69
CTIR/L12-4T06-D16	0.157	4	1.000	4	0.236	0.750	0.906	6.500	1.575	0.609	DTI..., DTX...	3.69
CTIR/L16-4T08-D20	0.157	4	1.250	4	0.315	1.000	1.181	8.000	1.575	0.846	DTI..., DTX...	3.69
CTIR/L20-4T04-D20	0.157	4	1.250	4	0.157	1.250	0.709	10.000	2.362	0.819	DTI..., DTX...	3.69
CTIR/L20-4T10-D25	0.157	4	1.563	4	0.394	1.250	0.906	10.000	2.362	1.063	DTI..., DTX...	3.69
CTIR/L16-5T05-D20	0.197	5	1.250	5	0.197	1.000	1.181	8.000	2.362	0.681	DTI..., DTX...	6.27
CTIR/L20-5T10-D25	0.197	5	1.563	5	0.394	1.250	1.181	10.000	2.362	1.063	DTI..., DTX...	6.27
CTIR/L20-6T04-D20	0.236	6	1.250	6	0.157	1.250	0.906	10.000	2.362	0.820	DTI..., DTX...	6.27
CTIR/L20-6T10-D25	0.236	6	1.563	6	0.394	1.250	1.181	10.000	2.362	1.063	DTI..., DTX...	6.27
CTIR/L20-8T05-D23	0.315	8	1.438	8	0.197	1.250	1.181	10.000	2.362	0.839	DTI..., DTX...	6.27
CTIR/L24-8T05-D26	0.315	8	1.625	8	0.228	1.500	1.181	12.000	2.559	0.982	DTI..., DTX...	6.27

(1) LF is calculated with the groove width CW in the above table.
Torque: Recommended clamping torque: lbs·ft

Inch SPARE PARTS

Designation	Clamping screw	Wrench	Seal cap	Thread type for connection
CTIR/L12-3T06-D16	CM5x0.8x12-A	P-4	CA-20	M6
CTIR/L16-3T05-D16	CM5x0.8x16-A	P-4	CA-25	R1/8"
CTIR/L16-3T08-D20	CM5x0.8x16-A	P-4	CA-25	R1/8"
CTIR/L20-3T10-D25	CM5x0.8x16-A	P-4	CA-32	R1/8"
CTIR/L12-4T06-D16	CM5x0.8x12-A	P-4	CA-20	M6
CTIR/L16-4T08-D20	CM5x0.8x16-A	P-4	CA-25	R1/8"
CTIR/L20-4T04-D20	CM5x0.8x16-A	P-4	CA-32	R1/8"
CTIR/L20-4T10-D25	CM5x0.8x16-A	P-4	CA-32	R1/8"
CTIR/L16-5T05-D20	CM6x1x16-A	P-5	CA-25	R1/8"
CTIR/L20-5T10-D25	CM6x1x20-A	P-5	CA-32	R1/8"
CTIR/L20-6T04-D20	CM6x1x20-A	P-5	CA-32	R1/8"
CTIR/L20-6T10-D25	CM6x1x20-A	P-5	CA-32	R1/8"
CTIR/L20-8T05-D23	CM6x1x20-A	P-5	CA-32	R1/8"
CTIR/L24-8T05-D26	CM6x1x25-A	P-5	CA-40	R1/8"

When using the inserts that are not in the above

Insert	Groove width CW (in)	Min. diameter DMIN (in)
DGM / DGS / SGN / DGL / DTM	0.118	1.969
DGM / DGS / SGN / DTM / DGL	0.157	1.969
DGM / DGS / DTM / DGL	0.197	2.362
DGM / DGS / DTM / DGL	0.236	2.362
DGM / DGS / DTM	0.315	2.756
DTE / DGG	0.118	1.575
DTE / DGG	0.157	1.575
DTE / DGG	0.197	1.969
DTE / DGG	0.236	1.969
DTE / DGG	0.315	2.441
DTR	0.118	1.496
DTR	0.157	1.496
DTR	0.197	1.693
DTR	0.236	1.811
DTR	0.315	2.205

External
Internal
Face
Parting
Others

Reference pages: Inserts → F119 - F130, Standard cutting conditions → F130

Metric	CW	DMIN	Seat size	CDX	DCONMS	H	LF	LH	WF	Insert	Torque
CTIR/L16-2T08-D250	2	25	2	8	16	14	125	-	16.5	DGIM..., DGIS...	5
CTIR/L20-2T06-D250	2	25	2	6	20	18	160	40	15.8	DGIM..., DGIS...	5
CTIR/L20-3T06-D250	3	25	3	6	20	18	160	40	15.8	DTI..., DTX...	5
CTIR/L25-3T05-D250	3	25	3	5.1	25	23	200	40	17.5	DTI..., DTX...	5
CTIR/L25-3T08-D320	3	32	3	8	25	23	200	40	21.5	DTI..., DTX...	5
CTIR/L32-3T10-D400	3	40	3	10	32	30	250	60	27	DTI..., DTX...	5
CTIR/L20-4T06-D250	4	25	4	6	20	18	160	40	15.8	DTI..., DTX...	5
CTIR/L25-4T08-D320	4	32	4	8	25	23	200	40	21.5	DTI..., DTX...	5
CTIR/L32-4T04-D310	4	31	4	4	32	30	250	60	20.8	DTI..., DTX...	5
CTIR/L32-4T10-D400	4	40	4	10	32	30	250	60	27	DTI..., DTX...	5
CTIR/L25-5T05-D310	5	31	5	5	25	23	200	60	17.3	DTI..., DTX...	8.5
CTIR/L32-5T10-D400	5	40	5	10	32	30	250	60	27	DTI..., DTX...	8.5
CTIR/L32-6T04-D310	6	31	6	4	32	30	250	60	20.8	DTI..., DTX...	8.5
CTIR/L32-6T10-D400	6	40	6	10	32	30	250	60	27	DTI..., DTX...	8.5
CTIR/L32-8T05-D370	8	37	8	5	32	30	250	60	21.3	DTI..., DTX...	8.5
CTIR/L40-8T05-D420	8	42	8	5.8	40	38	300	65	25.8	DTI..., DTX...	8.5

(1) LF is calculated with the groove width CW in the above table.
Torque: Recommended clamping torque: N·m

Metric SPARE PARTS

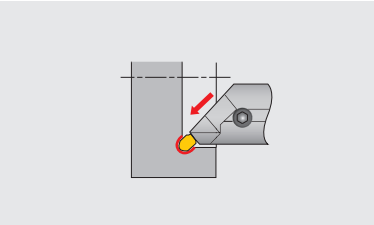
Designation	Clamping screw	Wrench	Seal cap	Thread type for connection
CTIR/L16-2T08-D250	CM5X0.8X10-A	P-4	CA-16	M6
CTIR/L20-2T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L20-3T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L25-3T05-D250	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L25-3T08-D320	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L32-3T10-D400	CM5X0.8X16-A	P-4	CA-32	R1/8"
CTIR/L20-4T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L25-4T08-D320	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L32-4T04-D310	CM5X0.8X16-A	P-4	CA-32	R1/8"
CTIR/L32-4T10-D400	CM5X0.8X16-A	P-4	CA-32	R1/8"
CTIR/L25-5T05-D310	CM6X1X16-A	P-5	CA-25	R1/8"
CTIR/L32-5T10-D400	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L32-6T04-D310	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L32-6T10-D400	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L32-8T05-D370	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L40-8T05-D420	CM6X1X25-A	P-5	CA-40	R1/8"

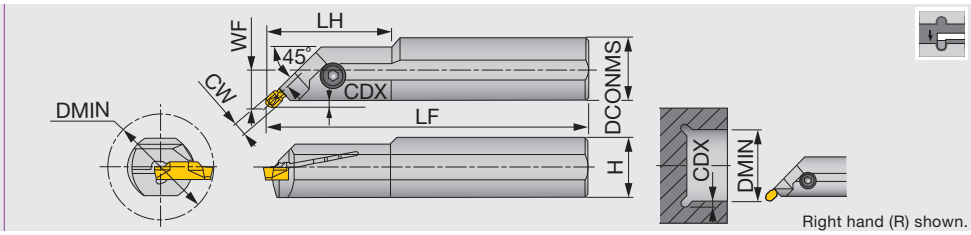
When using the inserts that are not in the above

Insert	Groove width CW (mm)	Min. diameter DMIN (mm)
DGM / DGS / SGN / DGL / DTM	3	50
DGM / DGS / SGN / DTM / DGL	4	50
DGM / DGS / DTM / DGL	5	60
DGM / DGS / DTM / DGL	6	60
DGM / DGS / DTM	8	70
DTE / DGG	3	40
DTE / DGG	4	40
DTE / DGG	5	50
DTE / DGG	6	50
DTE / DGG	8	62
DTR	3	38
DTR	4	38
DTR	5	43
DTR	6	46
DTR	8	56

Reference pages: Inserts → F119 - F130, Standard cutting conditions → F130

TUNGCUT
CGIUR/L
Internal 45° undercutting toolholder





Right hand (R) shown.

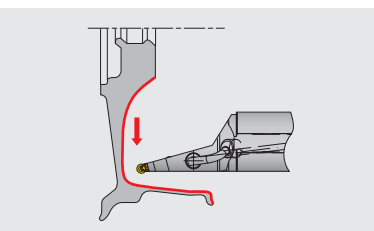
Metric	CW	DMIN	Seat size	CDX	DCONMS	H	LF	LH	WF (1)	Insert	Torque
CGIUR/L20-3T02-D380	3	38	3	2.8	20	19	160	-	12.8	DTIU...	5
CGIUR/L25-3T02-D380	3	38	3	2.8	25	23	200	40	14.8	DTIU...	5
CGIUR/L20-4T02-D380	4	38	4	2.8	20	19	160	-	12.9	DTIU...	5
CGIUR/L25-4T02-D460	4	46	4	2.8	25	23	200	40	14.9	DTIU...	5
CGIUR/L25-6T02-D460	6	46	5, 6	2.8	25	23	200	-	15.2	DTIU...	8.5

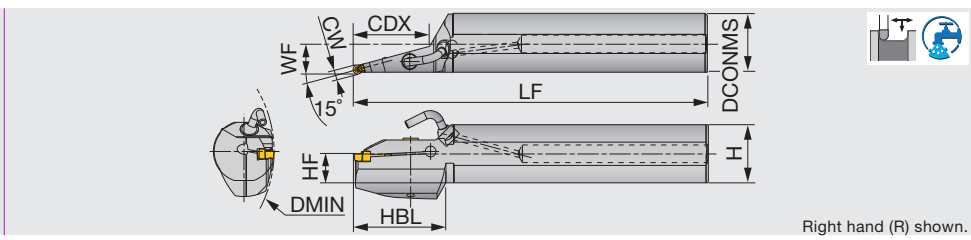
(1) WF is calculated with the groove width CW in the above table.
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
CGIUR/L20-3T02-D380	CM5X0.8X12-A	P-4
CGIUR/L25-3T02-D380	CM5X0.8X16-A	P-4
CGIUR/L**-4T02-D...	CM5X0.8X16-A	P-4
CGIUR/L25-6T02-D460	CM6X1X25-A	P-5

TUNGCUT
CGIUR/L-15A
Round-shank toolholder for profiling aluminum wheel





Right hand (R) shown.

Metric	CW	DMIN	Seat size	CDX	DCONMS	H	WF	LF	HF	HBL	Insert	Seal cap	Torque
CGIUR/L40-6T50-D160-15A	6	160	6	50	40	38.5	19.7	320	19	60	DTA...	CA-40	5
CGIUR/L40-8T83-D160-15A	8	160	8	83	40	38.5	20.5	320	19	85	DTA...	CA-40	5
CGIUR/L50-6T85-D200-15A	6	200	6	85	50	48.5	25.2	350	23.5	85	DTA...	-	5
CGIUR/L50-8T85-D200-15A	8	200	8	85	50	48.5	25.9	350	23.5	85	DTA...	-	5

Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench	Seal cap
CGIUR/L**-15A	CM6X1X25-A	P-5	CA-40

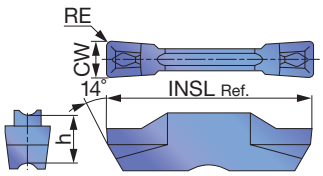
NOZZLE

Coolant pipe	Coolant nozzle
PNZ5	CNZ125

Reference pages: Inserts → F119 - F130, Standard cutting conditions → F130

DTI

Internal grooving and turning (for high precision)



		T9225	T9125	AH7025	AH725	GH130			NS9530				
P	Steel	★	☆	★	☆	☆			★				
M	Stainless	★		★	☆	★							
K	Cast iron	☆		★		☆			☆				
N	Non-ferrous												
S	Superalloys			★	☆								
H	Hard materials												

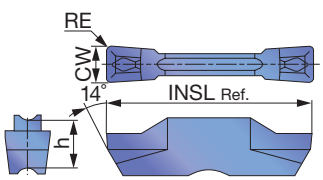
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DTI300-040	3	3	0.118	0.016	●	▲	●	●	●			●						0.787	0.197
DTI400-040	4	4	0.157	0.016	●	▲	●	●	●			●						0.787	0.197
DTI400-080	4	4	0.157	0.031	●	▲	●	●	●			●						0.787	0.197
DTI500-040	5	5	0.197	0.016	●	▲	●	●	●			●						0.984	0.217
DTI500-080	5	5	0.197	0.031	●	▲	●	●	●			●						0.984	0.217
DTI600-080	6	6	0.236	0.031	●	▲	●	●	●									0.984	0.217
DTI600-120	6	6	0.236	0.047	●	▲	●	●	●									0.984	0.217
DTI800-080	8	8	0.315	0.031	●	▲	●	●	●									1.181	0.264
DTI800-120	8	8	0.315	0.047	●	▲	●	●	●									1.181	0.264

● : Line up
▲ : To be discontinued

DTI

Internal grooving and turning



		T9225	T9125	AH7025	AH725	GH130			NS9530				
P	Steel	★	☆	★	☆	☆			★				
M	Stainless	★		★	☆	★							
K	Cast iron	☆		★		☆			☆				
N	Non-ferrous												
S	Superalloys			★	☆								
H	Hard materials												

★ : First choice
☆ : Second choice

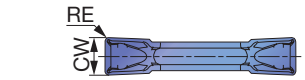
Designation	Seat size	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DTI3-040	3	3	0.118	0.016	●	▲	●	●	●			●						0.787	0.197
DTI4-040	4	4	0.157	0.016	●	▲	●	●	●			●						0.787	0.197

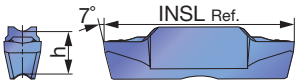
● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

DTX

External/Internal face grooving and turning





		T9225	T9125	AH7025	AH725	GH130	NS9530
P	Steel	★	★	★	☆	☆	★
M	Stainless	★		★	☆	★	
K	Cast iron	☆		★		☆	☆
N	Non-ferrous						
S	Superalloys			★	☆		
H	Hard materials						

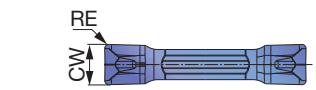
★ : First choice
☆ : Second choice

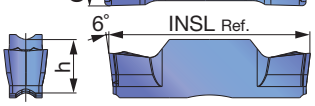
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated					Cermet	INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130	NS9530		
DTX3-030	3	3	0.118	0.012	●	▲	●	●	●	●	0.787	0.197
DTX4-040	4	4	0.157	0.016	●	▲	●	●	●	●	0.787	0.197
DTX5-040	5	5	0.197	0.016	●	▲	●	●	●	●	0.984	0.217
DTX6-080	6	6	0.236	0.031			●	●	●		0.984	0.197

● : Line up
▲ : To be discontinued

DTM

External face grooving and turning





		AH7025
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated	INSL (in)	h (in)
					AH7025		
DTM3-030	3	3	0.118	0.012	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	0.984	0.217
DTM8-080	8	8	0.315	0.031	●	1.181	0.264

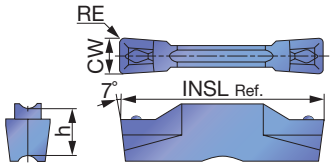
● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

DTE

External face grooving and turning (for high precision)



		T9225	T9125	AH7025	AH725	GH130			NS9530					
P	Steel	★	★	★	☆	☆			★					
M	Stainless	★		★	☆	★								
K	Cast iron	☆		★		☆								
N	Non-ferrous													
S	Superalloys			★	☆									
H	Hard materials													

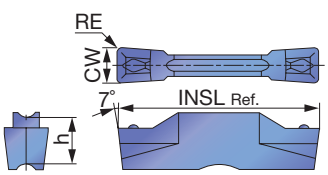
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DTE265-015	3	2.65	0.104	0.006	●	▲	●	●	●			●						0.787	0.197
DTE300-020	3	3	0.118	0.008	●	▲	●	●	●			●						0.787	0.197
DTE300-040	3	3	0.118	0.016	●	▲	●	●	●			●						0.787	0.197
DTE315-015	3	3.15	0.124	0.006	●	▲	●	●	●			●						0.787	0.197
DTE400-040	4	4	0.157	0.016	●	▲	●	●	●			●						0.787	0.197
DTE400-080	4	4	0.157	0.031	●	▲	●	●	●			●						0.787	0.197
DTE415-015	4	4.15	0.163	0.006	●	▲	●	●	●			●						0.787	0.197
DTE478-055	5	4.78	0.188	0.022	●	▲	●	●	●			●						0.984	0.217
DTE500-040	5	5	0.197	0.016	●	▲	●	●	●			●						0.984	0.217
DTE500-080	5	5	0.197	0.031	●	▲	●	●	●			●						0.984	0.217
DTE515-015	5	5.15	0.203	0.006	●	▲	●	●	●									0.984	0.217
DTE600-080	6	6	0.236	0.031	●	▲	●	●	●									0.984	0.217
DTE600-120	6	6	0.236	0.047	●	▲	●	●	●									0.984	0.217
DTE800-080	8	8	0.315	0.031	●	▲	●	●	●									1.181	0.264
DTE800-120	8	8	0.315	0.047	●	▲	●	●	●									1.181	0.264

● : Line up
▲ : To be discontinued

DTE

External face grooving and turning



		T9225	T9125	T515	AH7025	AH725	GH130			NS9530				
P	Steel	★	★		★	☆	☆			★				
M	Stainless	★			★	☆	★							
K	Cast iron	☆		★	★		☆							
N	Non-ferrous													
S	Superalloys				★	☆								
H	Hard materials													

★ : First choice
☆ : Second choice

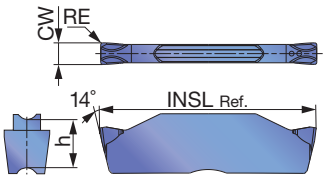
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet					INSL (in)	h (in)
					T9225	T9125	T515	AH7025	AH725	GH130			NS9530						
DTE3-040	3	3	0.118	0.016	●	▲	●	●	●	●			●					0.787	0.197
DTE4-040	4	4	0.157	0.016	●	▲	●	●	●	●			●					0.787	0.197
DTE5-040	5	5	0.197	0.016			●	●										0.984	0.217
DTE6-080	6	6	0.236	0.031			●	●										0.984	0.217

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

DGIM

Small diameter internal grooving



		T9225	T9125	AH7025	AH725	GH130			NS9530					
P	Steel	★	☆	★	☆	☆			★					
M	Stainless	★		★	☆	★								
K	Cast iron	☆		★		☆			☆					
N	Non-ferrous													
S	Superalloys			★	☆									
H	Hard materials													

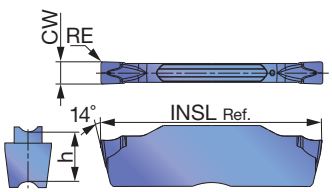
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DGIM2-020	2	2	0.079	0.008	●	▲	●	●	●			●						0.787	0.197

● : Line up
▲ : To be discontinued

DGIS

Small diameter internal grooving



		T9225	T9125	AH7025	AH725	GH130			NS9530					
P	Steel	★	☆	★	☆	☆			★					
M	Stainless	★		★	☆	★								
K	Cast iron	☆		★		☆			☆					
N	Non-ferrous													
S	Superalloys			★	☆									
H	Hard materials													

★ : First choice
☆ : Second choice

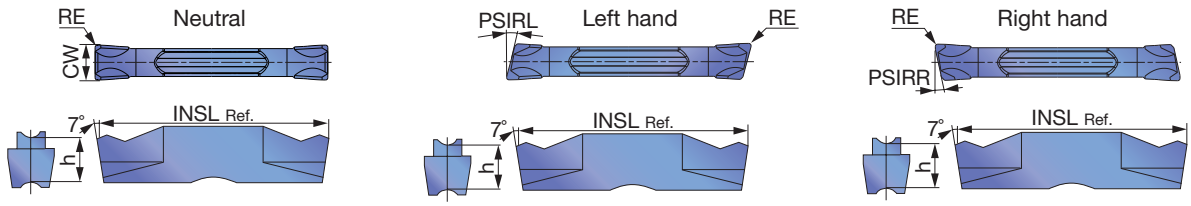
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DGIS2-020	2	2	0.079	0.008	●	▲	●	●	●			●						0.787	0.197

● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

External grooving and parting, 2 corners



		T9225	T9125	AH7025	AH725	AH905	GH130			NS9530				
P	Steel	★	★	★	☆		☆			★				
M	Stainless	★		★	☆		★							
K	Cast iron	☆		★		☆	☆			☆				
N	Non-ferrous													
S	Superalloys			★	☆	★								
H	Hard materials													

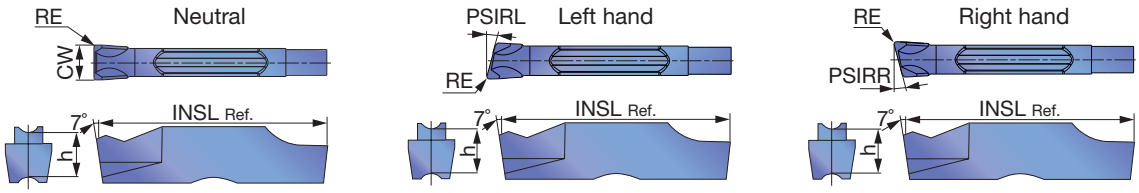
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet					INSL (in)	h (in)	PSIRL	PSIRR
						T9225	T9125	AH7025	AH725	AH905	GH130			NS9530								
DGM2-020	2	N	2	0.079	0.008	●	▲	●	●		●			●					0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008			●	●		●								0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008			●	●		●								0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008			●	●		●								0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008			●	●		●								0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008			●	●		●								0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008			●	●		●								0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008				●		●								0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008				●		●								0.762	0.197	15°	0°
DGM3-020	3	N	3	0.118	0.008	●	▲	●	●	●	●			●					0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008			●	●		●								0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008			●	●		●								0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.0008				●		●								0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.0008				●		●								0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008			●	●		●								0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008			●	●		●								0.787	0.197	15°	0°
DGM4-030	4	N	4	0.157	0.012	●	▲	●	●	●	●			●					0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012			●	●		●								0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012			●	●		●								0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012			●	●		●								0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012			●	●		●								0.787	0.197	15°	0°
DGM5-030	5	N	5	0.197	0.012	●	▲	●	●	●	●			●					0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012			●	●		●								0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	▲	●	●	●	●								0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	▲	●	●		●								1.181	0.264	0°	0°

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

External deep grooving and parting, 1corner



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

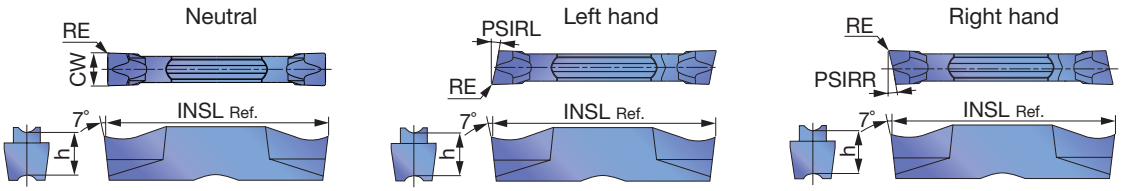
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGM2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●	●	0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●	●	0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

External grooving and parting, 2 corners



		Coated							Cermet						
P	Steel	★	★	★	☆	☆			★						
M	Stainless	★		★	☆	★									
K	Cast iron	☆		★		☆			☆						
N	Non-ferrous														
S	Superalloys			★	☆										
H	Hard materials														

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	T9225	T9125	AH7025	AH725	GH130			NS9530						INSL (in)	h (in)	PSIRL	PSIRR
DGS1.4-016	1	N	1.4	0.055	0.006			●	●	●									0.630	0.169	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008			●	●	●									0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008			●	●	●									0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008				●	●									0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008				●	●									0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008			●	●	●									0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008			●	●	●									0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008				●	●									0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008				●	●									0.768	0.197	15°	0°
DGS3-020	3	N	3	0.118	0.008	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008			●	●	●									0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008			●	●	●									0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008				●	●									0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008				●	●									0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008			●	●	●									0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008			●	●	●									0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008				●	●									0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008				●	●									0.766	0.197	15°	0°
DGS4-030	4	N	4	0.157	0.012	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012			●	●	●									0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012			●	●	●									0.787	0.197	4°	0°
DGS5-030	5	N	5	0.197	0.012	●	▲	●	●	●			●						0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	▲	●	●	●									0.984	0.217	0°	0°

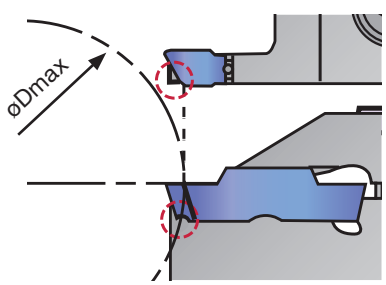
● : Line up
▲ : To be discontinued

Caution

The tool will interfere with the workpiece when grooving larger diameter than øDmax.

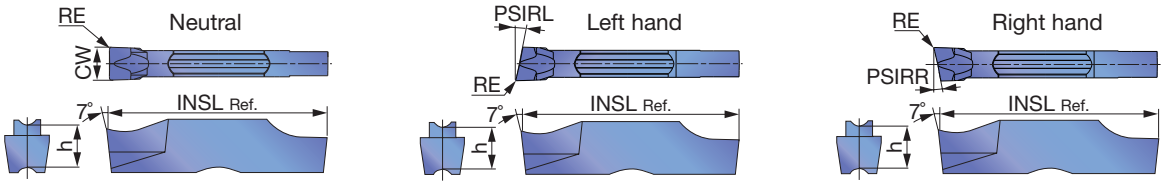
Designation	øDmax (in)
DGM2-002-15R/L	1.102
DGM3-002-15R/L	1.141
DGM4-030-15R/L	1.181
SGM3-020-15R/L	4.055

Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338



Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

External deep grooving and parting, 1corner



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●	●	0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●	●	0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

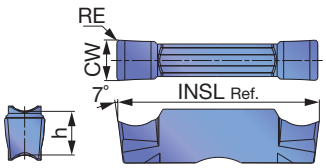
● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

DGG

External grooving (for high precision)



		AH7025			NS9530			KS05F		
P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆			☆		
N	Non-ferrous							★		
S	Superalloys	★						☆		
H	Hard materials									

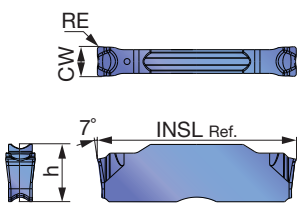
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL (in)	h (in)
DGG200-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGG300-020	3	3	0.118	0.008	●	●	●	0.787	0.197
DGG400-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DGG500-040	5	5	0.197	0.016	●	●	●	0.984	0.217
DGG600-040	6	6	0.236	0.016	●	●	●	0.984	0.217

● : Line up

DGL

External grooving and parting



		AH7025
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

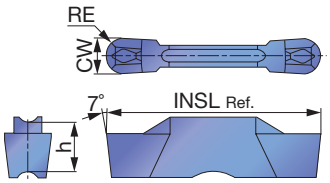
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DGL3-025	3	3	0.118	0.010	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	0.984	0.217

● : Line up

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

DTR

Profiling and undercutting (for high precision)



		T9225	T9125	AH7025	AH725	GH130			NS9530				
P	Steel	★	★	★	☆	☆			★				
M	Stainless	★		★	☆	★							
K	Cast iron	☆		★		☆			☆				
N	Non-ferrous												
S	Superalloys			★	☆								
H	Hard materials												

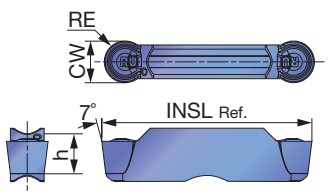
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	T9225	T9125	AH7025	AH725	GH130	NS9530	INSL (in)	h (in)
					Coated					Cermet		
DTR300-150	3	3	0.118	0.059	●	▲	●	●	●	●	0.787	0.197
DTR400-200	4	4	0.157	0.079	●	▲	●	●	●	●	0.787	0.197
DTR478-239	5	4.78	0.188	0.094	●	▲	●	●	●	●	0.984	0.217
DTR500-250	5	5	0.197	0.098	●	▲	●	●	●	●	0.984	0.217
DTR600-300	6	6	0.236	0.118	●	▲	●	●	●		0.984	0.217

● : Line up
▲ : To be discontinued

DTR

Profiling and undercutting



		T9225	T9125	AH7025	AH725	AH905	GH130			NS9530				
P	Steel	★	★	★	☆		☆			★				
M	Stainless	★		★	☆		★							
K	Cast iron	☆		★		☆	☆			☆				
N	Non-ferrous													
S	Superalloys			★	☆	★								
H	Hard materials													

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	T9225	T9125	AH7025	AH725	AH905	GH130	NS9530	INSL (in)	h (in)
					Coated						Cermet		
DTR3-150	3	3	0.118	0.059	●	▲	●	●	●	●	●	0.787	0.197
DTR4-200	4	4	0.157	0.079	●	▲	●	●	●	●	●	0.787	0.197
DTR5-250	5	5	0.197	0.098	●	▲	●	●	●	●	●	0.984	0.217
DTR6-300	6	6	0.236	0.118	●	▲	●	●		●		0.984	0.217
DTR8-400	8	8	0.315	0.157	●	▲	●	●		●		1.181	0.264

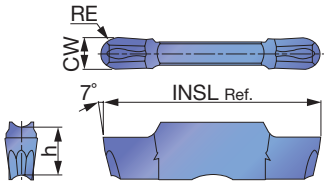
● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

DTIU

Profiling and undercutting (for high precision)



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

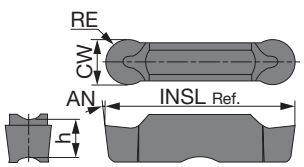
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)
DTIU300-150	3	3	0.118	0.059	●	●	●	0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●	0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●	0.984	0.217
DTIU600-300	6	6	0.236	0.118	●	●	●	0.984	0.217

● : Line up

DTA

Aluminum wheel machining (for high precision)



P	Steel			
M	Stainless			
K	Cast iron			
N	Non-ferrous	★		
S	Superalloys			
H	Hard materials			

★ : First choice
☆ : Second choice

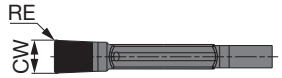
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Uncoated TH10	INSL (in)	h (in)	AN
DTA600-300	6	6	0.236	0.118	●	0.984	0.217	7°
DTA800-400	8	8	0.315	0.157	●	1.181	0.264	10°

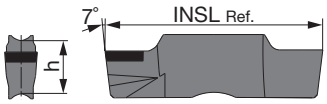
● : Line up

Reference pages: Toolholders → F116 - F118, Standard cutting conditions → F130

SGN

External grooving of hardened steel





		CBN
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	BX360	INSL (in)	h (in)
SGN200-020	2	2	0.079	0.008	●	0.787	0.197
SGN300-020	3	3	0.118	0.008	●	0.787	0.197
SGN400-020	4	4	0.157	0.008	●	0.787	0.197

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Priority for wear resistance	T9225	262 - 984
		< 300 HB	Priority for impact resistance	GH130	164 - 394
		< 300 HB	Priority for surface finish	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Priority for impact resistance	GH130	164 - 394
K	Gray cast iron No.250B, No.300B, etc.	-	First choice	T515, AH7025	164 - 591
		-	Priority for impact resistance	GH130	164 - 591
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	First choice	T515, AH7025	164 - 394
		-	Priority for impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel 718, etc.	< HRC 40	First choice	AH7025	66 - 197
		< HRC 40	Priority for wear resistance	AH905	66 - 262
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	66 - 262
		< HRC 40	Priority for impact resistance	AH7025, AH725	66 - 262
		< HRC 40	Priority for surface finish	KS05F	66 - 197
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

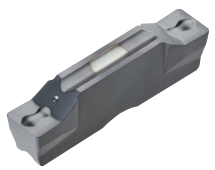
*See page F131 - F134 for feed: *f* (ipr).

Reference pages: Toolholders → F116 - F118

Internal grooving and turning

DTI type (2 corners)

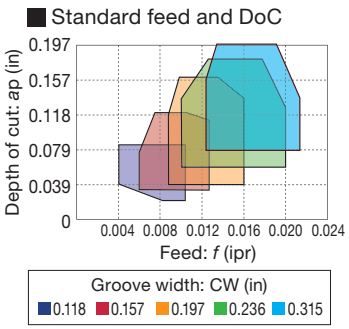
First choice

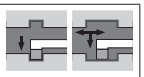


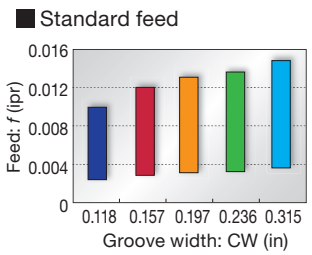
F119 page

Internal

Unique chipbreaker makes chips shorter
Molded and ground inserts available
CW = 0.118" - 0.315"





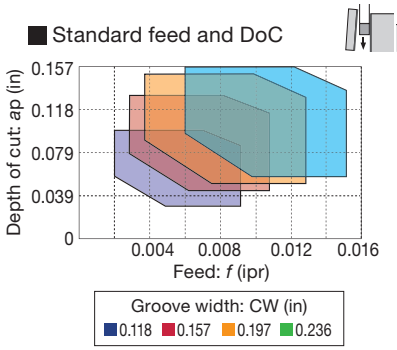


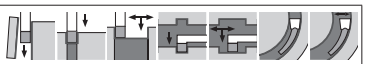
DTX type (2 corners)

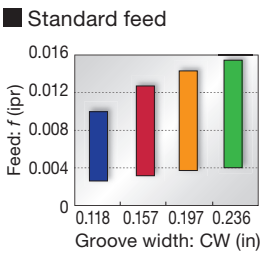
F120 page

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.118" - 0.236"





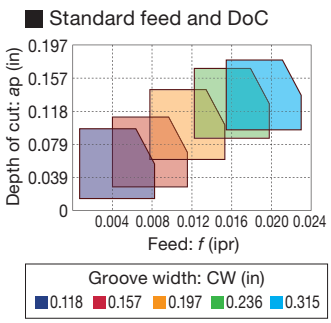


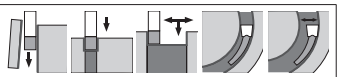
DTM type (2 corners)

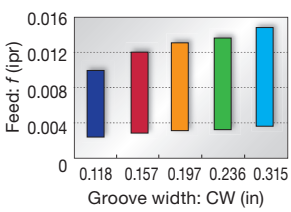
F120 page

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.118" - 0.315"





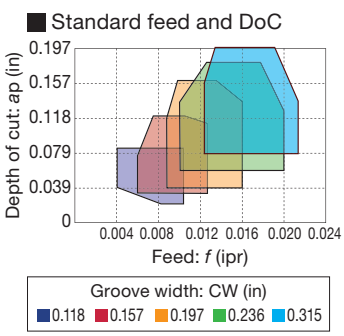


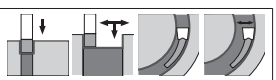
DTE type (2 corners)

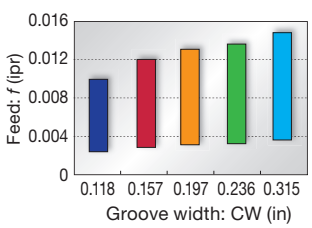
F121 page

General purpose

Unique chipbreaker makes chips shorter
Molded and ground inserts available
CW = 0.118" - 0.315"







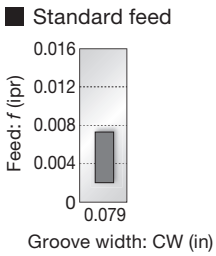
Small diameter internal grooving

DGIM type (2 corners)

F122 page

2 mm insert width only (For general purpose)

Unique chipbreaker for excellent chip control
Excellent fracture resistance due to optimum land on the cutting edge
For general applications on steels & stainless steels
CW = 0.079"

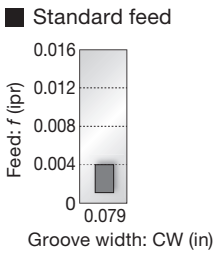


DGIS type (2 corners)

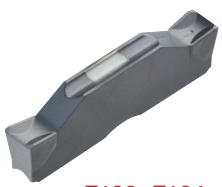
F122 page

2 mm insert width only (Lower cutting force)

Lower cutting force
Excellent fracture resistance due to optimum land on the cutting edge
Applicable for low carbon steels & stainless steels
CW = 0.079"



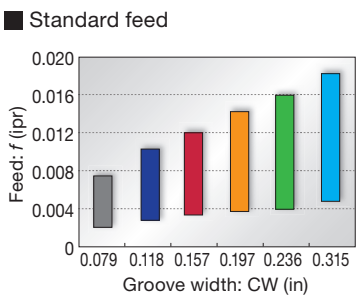
DGM type (2 corners) SGM type (1 corner)

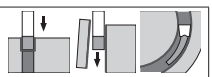


F123, F124 page

1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 0.079" - 0.315"



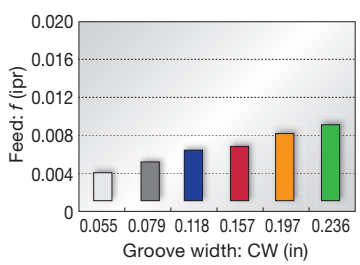


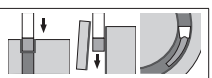
DGS type (2 corners) SGS type (1 corner)

F125, F126 page

Lower cutting force and superior sharpness

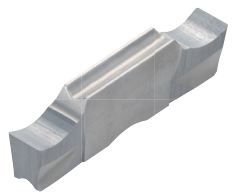
Unique-designed edge and chipbreaker
Handed insert available
CW = 0.055" - 0.236"





Small diameter internal grooving

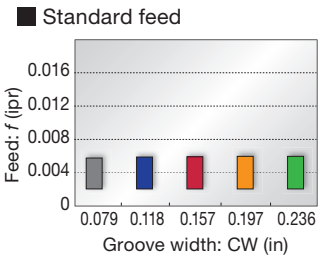
DGG type (2 corners)

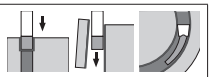


F127 page

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 0.079" - 0.236"



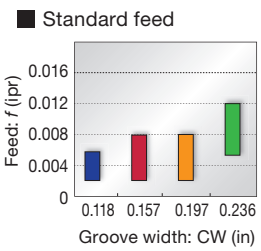


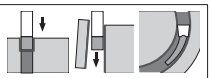
DGL type (2 corners)

F128 page

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often has difficulties with chip control
CW = 0.118" - 0.236"





Profiling and undercutting

DTR type (2 corners)

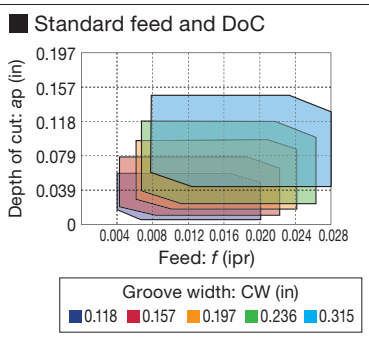
Molded

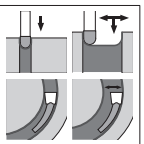
Ground

F128 page

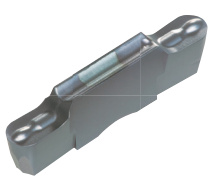
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.118" - 0.315"





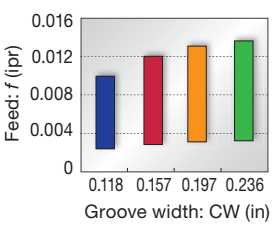
DTIU type (2 corners)

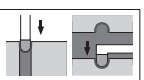


F129 page

Full radius type

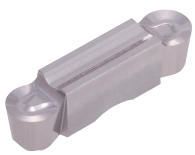
Excellent chip control
For undercutting
CW = 0.118" - 0.236"





Aluminum wheel machining

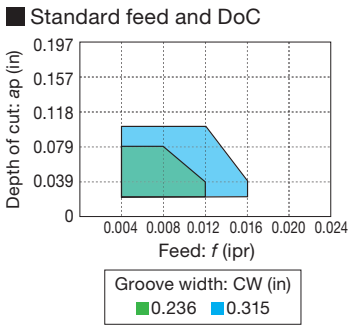
DTA type (2 corners)

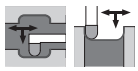


F129 page

Full radius type

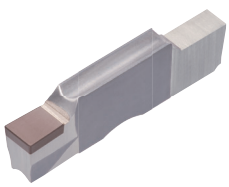
Excellent chip control
For aluminum wheel profiling
Ground insert
CW = 0.236" - 0.315"





External grooving of hardened steel

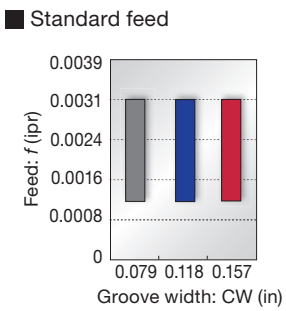
SGN-CBN type (1 corner)

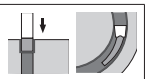


F130 page

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.157"
(CW = ±0.001")



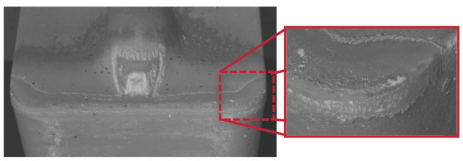


AH7025 Cutting performance

First choice grade for grooving
AH7025 grade: Tungaloy's unique coating technology for drastically improved reliability

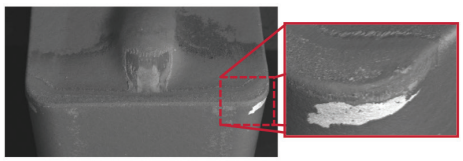
Tool life comparison

AH7025



Tool wear after 60 grooves

Conventional grade



Tool wear after 30 grooves

P Alloy steel (4140)

Insert	: DTE3-040 AH7025
Cutting speed	: *Vc* = 492 sfm
Feed	: *f* = 0.007 ipr
Groove depth	: 0.669"
Machining	: External grooving
Coolant	: Wet

AH7025 provides stability, while preventing coating from peeling off even after machining twice the number of passes compared to the conventional grade.

→ **The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations.**

Grades

AH7025 P M K S

- First choice for various applications
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- Recommended for various applications
- Newly developed coating with well controlled crystal structure and fracture resistance
- Improved adhesion strength

T515 K

- First recommended grade for cast iron
- Excellent wear resistance in high-speed machining

T9225 P

- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K

- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S

- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S

- Recommended for non-ferrous materials and titanium

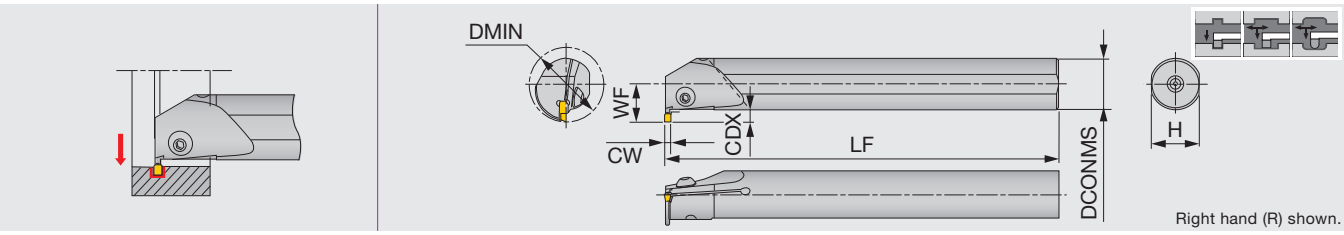
TH10 N

- Recommended for non-ferrous materials

BX360 H

- Suitable for hardened steel machining
- Ideal balance of wear and chipping resistance due to the optimum CBN content and grain size

Internal grooving and turning toolholder



Inch	CW	DMIN	CDX	DCONMS	H	LF	WF	Insert	Torque
A12Q-CGTR30U	0.118	1.0	0.138	0.75	0.709	7.09	0.571	G*30, GE30-AL	2.21
A16R-CGTR/L30U	0.118	1.26	0.197	1.00	0.961	7.87	0.728	G*30, GE30-AL	2.21
A16R-CGTR40U	0.157	1.26	0.197	1.00	0.961	7.87	0.728	G*40, GE40-AL	2.21

Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

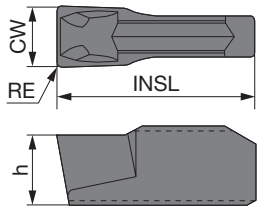
Designation	Clamping screw	Wrench
A***-CGTR/L...	BHM5-14	P-3

External
Internal
Face
Parting
Others

Reference pages: Inserts →F137 - F139, Standard cutting conditions →F142

GE

For general grooving



		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

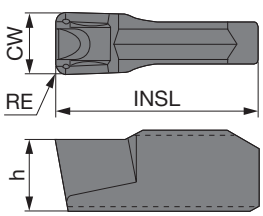
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GE20	2	0.079	0.008			●	●	●	0.394	0.138
GE30	3	0.118	0.008	●	▲	●	●	●	0.394	0.138
GE40	4	0.157	0.008	●	▲	●	●	●	0.394	0.157
GE50	5	0.197	0.008	●	▲	●	●	●	0.472	0.177

● : Line up
▲ : To be discontinued

GT

For turning



		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

★ : First choice
☆ : Second choice

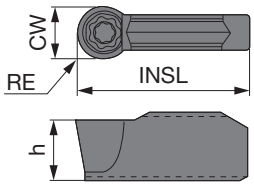
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GT30	3	0.118	0.016			●	●	●	0.394	0.138
GT40	4	0.157	0.016			●	●	●	0.394	0.157
GT50	5	0.197	0.016	●	▲	●	●	●	0.472	0.177

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F136, Standard cutting conditions → F142

GR

For profiling (full radius)



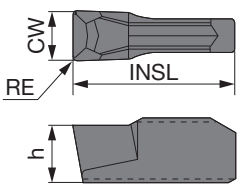
		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GR30	3	0.118	0.059			●	●	●	0.394	0.138
GR40	4	0.157	0.079	●	▲	●	●	●	0.394	0.157
GR50	5	0.197	0.098	●	▲	●	●	●	0.472	0.177

● : Line up
▲ : To be discontinued

GF



		GH730	NS9530
P	Steel	★	★
M	Stainless	★	
K	Cast iron	☆	☆
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

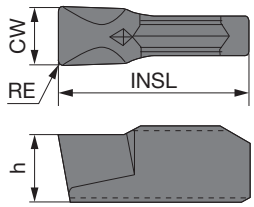
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GF30	3	0.118	0.008	●	●	0.394	0.138
GF40	4	0.157	0.008	●	●	0.394	0.157
GF50	5	0.197	0.008	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F136, Standard cutting conditions → F142

GN



P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

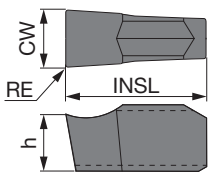
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated GH730	INSL (in)	h (in)
GN30	3	0.118	0.008	●	0.394	0.138
GN40	4	0.157	0.008	●	0.394	0.157
GN50	5	0.197	0.008	●	0.472	0.177

● : Line up

GE-AL

For aluminum and non-ferrous metal



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Uncoated KS05F	INSL (in)	h (in)
GE20-AL	2	0.079	0.008	●	0.394	0.138
GE30-AL	3	0.118	0.008	●	0.394	0.138
GE40-AL	4	0.157	0.008	●	0.394	0.157

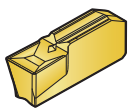
● : Line up

Reference pages: Toolholders → F136, Standard cutting conditions → F142

1 corner insert

Internal grooving

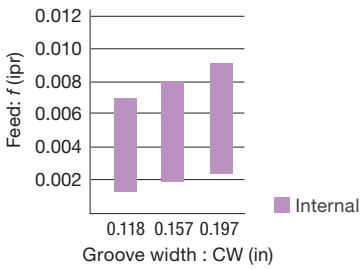
GN

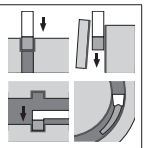


F139 page

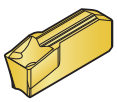
1st choice for internal grooving
Low cutting force and good chip control for internal grooving

CW = 0.118" - 0.197"





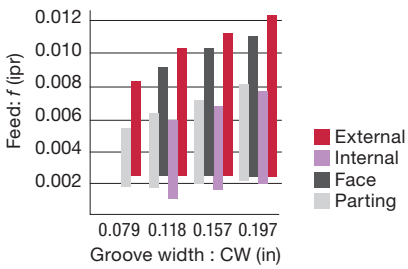
GE

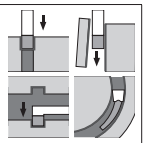


F137 page

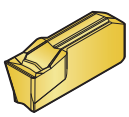
1st choice for external grooving and parting
Excellent chip control

CW = 0.079" - 0.197"





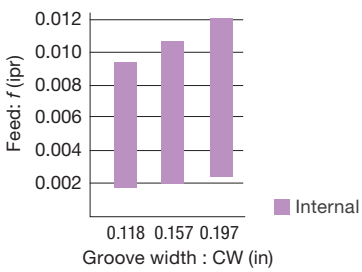
GF

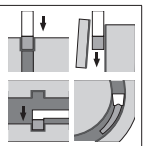


F138 page

1st choice for face grooving
Low cutting force and good chip control for face grooving

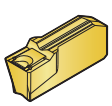
CW = 0.118" - 0.197"





Grooving and turning

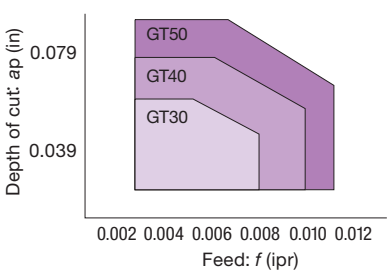
GT

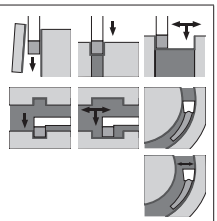


F137 page

1st choice for turning
Low cutting force and good chip control for traversing

CW = 0.118" - 0.197"

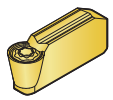




1 corner insert

Profiling

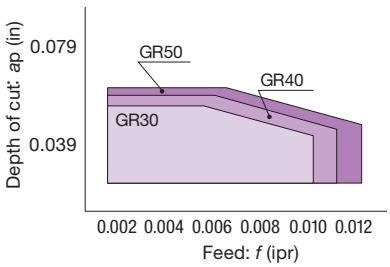
GR

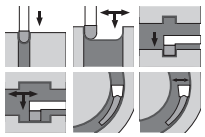


F138 page

Full radius type
Low cutting force and good chip control for profiling

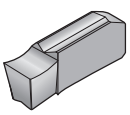
CW = 0.118" - 0.197"





For aluminum and non-ferrous metal

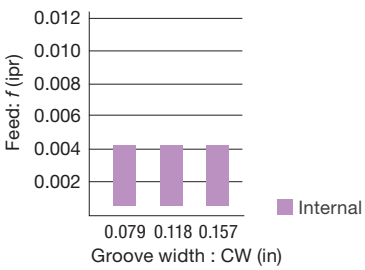
GE-AL

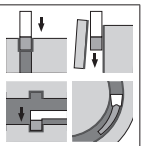


F139 page

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.079" - 0.157"





STANDARD CUTTING CONDITIONS

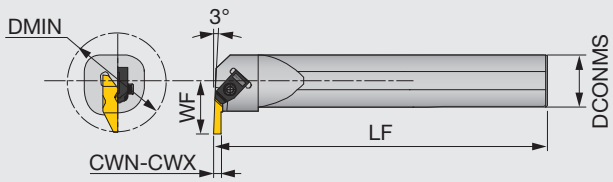
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730	164 - 591
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730	164 - 492
	High carbon steel, Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730	164 - 394
M	Stainless steel	T9225	262 - 591
		GH730	164 - 394
K	Gray iron, Ductile cast iron	T9225	262 - 820
		GH730	164 - 591
N	Aluminum alloy, Non-ferrous metal	KS05F	656 - 984

Internal

Operation	Feed: *f* (ipr)		
	Groove width: CW (in)		
	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Internal grooving (GE**)	0.0016 - 0.006	0.002 - 0.006	0.002 - 0.006
Internal grooving (GN**)	0.0016 - 0.006	0.002 - 0.007	0.002 - 0.008
Internal traversing (GT**)	*ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	*ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	*ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Internal traversing (GR**)	*ap* = 0.020 - 0.055 *f* = 0.002 - 0.010	*ap* = 0.020 - 0.059 *f* = 0.002 - 0.010	*ap* = 0.020 - 0.063 *f* = 0.002 - 0.012
Aluminum alloys (GE**-AL)	0.0012 - 0.004	0.0012 - 0.004	-

For diameter compensation values in traversing, see page F111.
When vibration occurs in turning, please use the lower limit value in the above table.

TUNGT-CLAMP
A-FLER/LT
Internal grooving and threading toolholder



Right hand (R) shown.

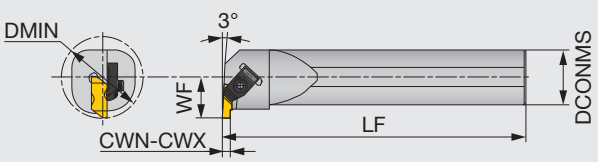
Inch	CWN	CWX	DMIN	DCONMS	LF	WF	Insert	Torque
A20-FLER/LT3	0.094	0.189	1.807	1.250	6.000	1.082	FLGT-3R/L...	2.21
A24-FLER/LT3	0.094	0.189	2.057	1.500	6.000	1.207	FLGT-3R/L...	2.21

Note: The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
A20-FLERT3, A24-FLERT3	TF-72	S-412	5/32HEX
A20-FLELT3, A24-FLELT3	TF-73	S-412	5/32HEX

TUNGT-CLAMP
A_M-FLER/L
Internal grooving and threading toolholder



Right hand (R) shown.

Inch	CWN	CWX	DMIN	DCONMS	LF	WF	Insert	Torque
A08-FLER/L2	0.031	0.125	0.730	0.500	8.000	0.437	FL*-2**L/R...	2.21
A10-FLER2	0.031	0.125	1.000	0.625	10.000	0.500	FL*-2**L...	2.21
A12-FLER/L2	0.031	0.128	1.125	0.750	10.000	0.562	FL*-2**L/R...	2.21
A16-FLER/L2	0.031	0.128	1.375	1.000	12.000	0.688	FL*-2**L/R...	2.21
A16-FLER/L3	0.031	0.250	1.375	1.000	12.000	0.688	FL*-3**L/R...	2.21

Metric	CWN	CWX	DMIN	DCONMS	LF	WF	Insert	Torque*
A25M-FLER/L3	1	3	34.9	25	300	17.7	FL*-3**L/R...	3
A32M-FLER/L3	1	3	44.45	32	350	22.1	FL*-3**L/R...	3
A40M-FLER3	1	3	50.8	40	350	24.5	FL*-3**L...	3

Note: Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).
Torque: Recommended clamping torque: lbs·ft (*N·m)

Inch SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
A08-FLER2	TF-146	S-310	7/64HEX
A08-FLEL2	TF-147	S-310	7/64HEX
A10-FLER2, A12-FLER2, A16-FLER2	TF-75	S-310	7/64HEX
A12-FLEL2, A16-FLEL2	TF-74	S-310	7/64HEX
A16-FLER3	TF-73	S-412	5/32HEX
A16-FLEL3	TF-72	S-412	5/32HEX

Metric SPARE PARTS

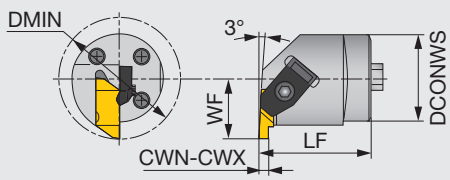
Designation	Clamp	Clamping screw	Wrench
A**M-FLER3	TF-73	S-412	5/32HEX
A**M-FLEL3	TF-72	S-412	5/32HEX

Reference pages: Inserts → F145 - F152, Standard cutting conditions → F144

TUNGT-CLAMP

HS-FLER/L

Internal grooving and threading head, for S-570 shank



Right hand (R) shown.

Metric	CWN	CWX	DMIN	DCONWS	LF	WF	Insert	Torque
HS40-FLER3W	1	3	56.1	40	40.1	28	FL*-3**L...	3
HS50-FLER3W	1	3	70.1	50	41.9	35	FL*-3**L...	3

Note: Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).
Torque: Recommended clamping torque: N·m

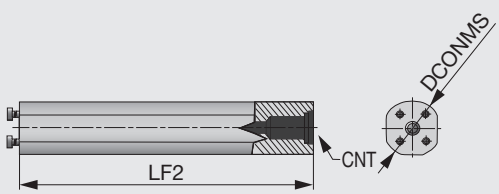
SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
HS40-FLER3W	TF-73	S-412	5/32HEX
HS50-FLER3W	TF-73	S-412	5/32HEX

TUNGT-CLAMP

S-570

Steel shank for head exchangeable tools



Metric	DCONMS	LF2	CNT
S-570-40M-40	40	273	1/2-14NPT
S-570-50M-50	50	366	1/2-14NPT

SPARE PARTS

Designation	Clamping screw	Wrench
S-570-40M-40	SS100	5/32HEX
S-570-50M-50	SS94	1/4HEX

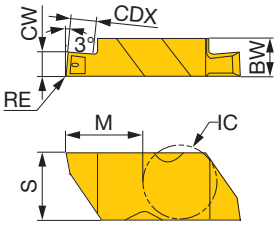
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Application	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	High carbon steel 1045, etc.	AH110	Grooving	328 - 656	0.005 - 0.014
		AH725	Threading	262 - 591	-
	Alloy steel 4137, etc.	AH110	Grooving	164 - 262	0.005 - 0.012
		AH725	Threading	197 - 525	-
M	Stainless steel S30400, etc.	AH110	Grooving	164 - 492	0.004 - 0.008
		AH725	Threading	164 - 427	-
K	Gray cast iron No.250B, etc.	AH110	Grooving	164 - 591	0.004 - 0.010
	Ductile cast iron 60-40-18, etc.	AH110	Grooving	164 - 394	0.004 - 0.010

Reference pages: Inserts → F145 - F152

INSERT

FLG-CB (With chipbreaker, metric width)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

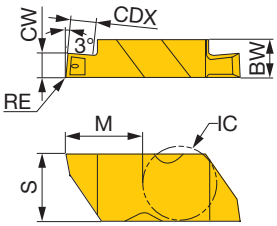
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLG-3M100R-CB	R	1	0.039	0.005 - 0.010	●	0.055	0.3750	0.195	0.344	0.4050
FLG-3M100L-CB	L	1	0.039	0.005 - 0.010	●	0.055	0.3750	0.195	0.344	0.4050
FLG-3M150R-CB	R	1.5	0.059	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M150L-CB	L	1.5	0.059	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M200R-CB	R	2	0.079	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M200L-CB	L	2	0.079	0.005 - 0.010	●	0.100	0.3750	0.195	0.344	0.4050
FLG-3M250R-CB	R	2.5	0.098	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050
FLG-3M250L-CB	L	2.5	0.098	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050
FLG-3M300R-CB	R	3	0.118	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050
FLG-3M300L-CB	L	3	0.118	0.005 - 0.010	●	0.160	0.3750	0.195	0.344	0.4050

● : Line up

Reference pages: Toolholders → F143 - F144

FLG-CB (With chipbreaker)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

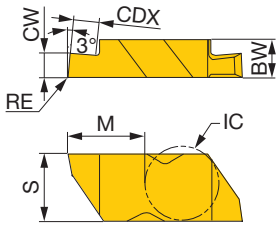
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLG-2047R-CB	R	1.2	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2047L-CB	L	1.2	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2062R-CB	R	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2062L-CB	L	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2078R-CB	R	1.98	0.078	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2078L-CB	L	1.98	0.078	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094R-CB	R	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094L-CB	L	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125R-CB	R	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125L-CB	L	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-3031R-CB	R	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3031L-CB	L	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3047R-CB	R	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3047L-CB	L	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3062R-CB	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3062L-CB	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072R-CB	R	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072L-CB	L	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078R-CB	R	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078L-CB	L	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3088R-CB	R	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3088L-CB	L	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094R-CB	R	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094L-CB	L	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097R-CB	R	2.46	0.097	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097L-CB	L	2.46	0.097	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125R-CB	R	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125L-CB	L	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189R-CB	R	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189L-CB	L	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050

● : Line up

Reference pages: Toolholders → F143 - F144

FLG



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

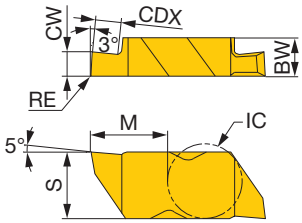
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLG-2031R	R	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2031L	L	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2041R	R	1.04	0.041	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2041L	L	1.04	0.041	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2047R	R	1.19	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2047L	L	1.19	0.047	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2058R	R	1.47	0.058	0.005 - 0.010	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2058L	L	1.47	0.058	0.005 - 0.010	●	0.050	0.1875	0.150	0.219	0.2700
FLG-2062R	R	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2062L	L	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094R	R	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2094L	L	2.39	0.094	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125R	R	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-2125L	L	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLG-3031R	R	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3031L	L	0.79	0.031	0.002 - 0.005	●	0.050	0.3750	0.195	0.344	0.4050
FLG-3047R	R	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3047L	L	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLG-3062R	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3062L	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072R	R	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3072L	L	1.83	0.072	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078R	R	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3078L	L	1.98	0.078	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLG-3088R	R	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3088L	L	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094R	R	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3094L	L	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097R	R	2.46	0.097	0.010 - 0.015	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3097L	L	2.46	0.097	0.010 - 0.015	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3105R	R	2.67	0.105	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3105L	L	2.67	0.105	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3110R	R	2.79	0.110	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3110L	L	2.79	0.110	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3122R	R	3.1	0.122	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3122L	L	3.1	0.122	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125R	R	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3125L	L	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3142R	R	3.61	0.142	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3142L	L	3.61	0.142	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3156R	R	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3156L	L	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3178R	R	4.52	0.178	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3178L	L	4.52	0.178	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3185R	R	4.7	0.185	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3185L	L	4.7	0.185	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189R	R	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3189L	L	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLG-3250R	R	6.35	0.250	0.020 - 0.025	●	0.180	0.3750	0.250	0.344	0.4050
FLG-3250L	L	6.35	0.250	0.020 - 0.025	●	0.180	0.3750	0.250	0.344	0.4050

● : Line up

Reference pages: Toolholders → F143 - F144

FLGP (Positive rake)



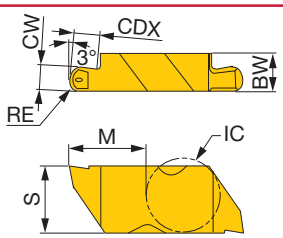
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGP-2031R	R	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLGP-2031L	L	0.79	0.031	0.002 - 0.005	●	0.050	0.1875	0.150	0.219	0.2700
FLGP-2062R	R	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-2062L	L	1.57	0.062	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-2125R	R	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-2125L	L	3.18	0.125	0.005 - 0.010	●	0.110	0.1875	0.150	0.219	0.2700
FLGP-3047R	R	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLGP-3047L	L	1.19	0.047	0.005 - 0.010	●	0.075	0.3750	0.195	0.344	0.4050
FLGP-3062R	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLGP-3062L	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.4050
FLGP-3088R	R	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3088L	L	2.24	0.088	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3094R	R	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3094L	L	2.39	0.094	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3125R	R	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3125L	L	3.18	0.125	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3156R	R	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3156L	L	3.96	0.156	0.005 - 0.010	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3189R	R	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050
FLGP-3189L	L	4.8	0.189	0.020 - 0.025	●	0.180	0.3750	0.195	0.344	0.4050

● : Line up

FLR-CB (Full nose radius, with chipbreaker)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

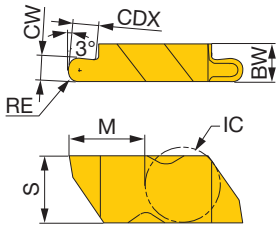
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLR-3031R-CB	R	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3031L-CB	L	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3047R-CB	R	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3047L-CB	L	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3062R-CB	R	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLR-3062L-CB	L	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017

● : Line up

Reference pages: Toolholders → F143 - F144

FLR (Full nose radius)



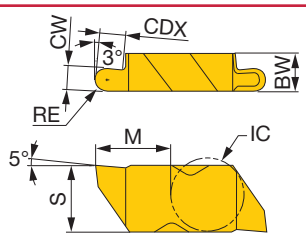
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLR-2031R	R	1.57	0.062	0.031	●	0.110	0.1875	0.150	0.219	0.2683
FLR-2031L	L	1.57	0.062	0.031	●	0.110	0.1875	0.150	0.219	0.2683
FLR-2047R	R	2.39	0.094	0.047	●	0.110	0.1875	0.150	0.219	0.2675
FLR-2047L	L	2.39	0.094	0.047	●	0.110	0.1875	0.150	0.219	0.2675
FLR-2062R	R	3.18	0.125	0.062	●	0.110	0.1875	0.150	0.219	0.2667
FLR-2062L	L	3.18	0.125	0.062	●	0.110	0.1875	0.150	0.219	0.2667
FLR-3031R	R	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3031L	L	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLR-3047R	R	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3047L	L	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLR-3062R	R	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLR-3062L	L	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLR-3078R	R	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLR-3078L	L	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLR-3094R	R	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000
FLR-3094L	L	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000

● : Line up

FLRP (Full nose radius and positive rake)



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

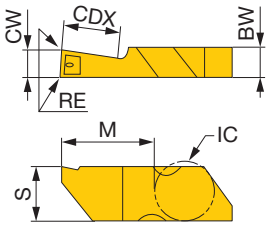
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLRP-3031R	R	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLRP-3031L	L	1.57	0.062	0.031	●	0.125	0.3750	0.195	0.344	0.4033
FLRP-3047R	R	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLRP-3047L	L	2.39	0.094	0.047	●	0.180	0.3750	0.195	0.344	0.4025
FLRP-3062R	R	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLRP-3062L	L	3.18	0.125	0.062	●	0.180	0.3750	0.195	0.344	0.4017
FLRP-3078R	R	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLRP-3078L	L	3.96	0.156	0.078	●	0.180	0.3750	0.195	0.344	0.4008
FLRP-3094R	R	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000
FLRP-3094L	L	4.8	0.189	0.094	●	0.180	0.3750	0.195	0.344	0.4000

● : Line up

Reference pages: Toolholders → F143 - F144

FLGD-CB (Single edge deep, with chipbreaker)



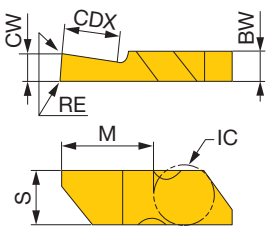
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGD-3094R-CB	R	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3094L-CB	L	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125R-CB	R	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125L-CB	L	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189R-CB	R	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189L-CB	L	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050

● : Line up

FLGD (Single edge deep)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

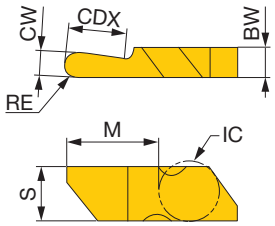
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGD-3062R	R	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.5050
FLGD-3062L	L	1.57	0.062	0.005 - 0.010	●	0.120	0.3750	0.195	0.344	0.5050
FLGD-3094R	R	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3094L	L	2.39	0.094	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125R	R	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3125L	L	3.18	0.125	0.005 - 0.010	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189R	R	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050
FLGD-3189L	L	4.8	0.189	0.020 - 0.025	●	0.250	0.3750	0.195	0.344	0.5050

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F143 - F144

FLRD (Full nose radius, single edge deep)



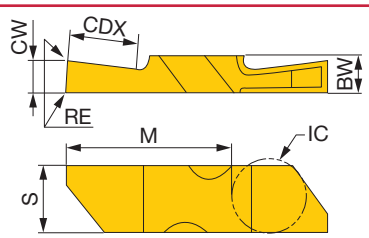
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLRD-3062R	R	3.19	0.125	0.062	●	0.250	0.3750	0.195	0.344	0.5016
FLRD-3062L	L	3.19	0.125	0.062	●	0.250	0.3750	0.195	0.344	0.5016
FLRD-3094R	R	4.8	0.189	0.094	●	0.250	0.3750	0.195	0.344	0.5016
FLRD-3094L	L	4.8	0.189	0.094	●	0.250	0.3750	0.195	0.344	0.5016

● : Line up

FLGT (Double end deep)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

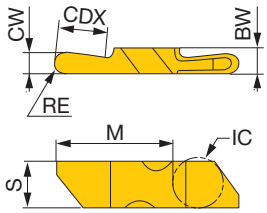
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGT-3094R	R	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3094L	L	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3125R	R	3.18	0.125	0.005 - 0.010	●	0.437	0.3750	0.195	0.344	0.8550
FLGT-3125L	L	3.18	0.125	0.005 - 0.010	●	0.437	0.3750	0.195	0.344	0.8550
FLGT-3189R	R	4.8	0.189	0.020 - 0.025	●	0.437	0.3750	0.195	0.344	0.8550
FLGT-3189L	L	4.8	0.189	0.020 - 0.025	●	0.437	0.3750	0.195	0.344	0.8550

*Fits FLSLT/RT toolholders

● : Line up

Reference pages: Toolholders → F143 - F144

FLRT (Double end deep FNR)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

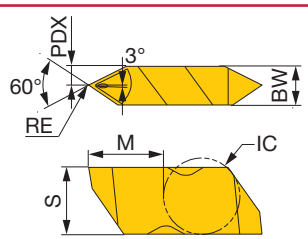
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLRT-3062R	R	3.18	0.125	0.062	●	0.437	0.3750	0.195	0.344	0.8550
FLRT-3062L	L	3.18	0.125	0.062	●	0.437	0.3750	0.195	0.344	0.8550
FLRT-3094R	R	4.8	0.189	0.094	●	0.437	0.3750	0.195	0.344	0.8550
FLRT-3094L	L	4.8	0.189	0.094	●	0.437	0.3750	0.195	0.344	0.8550

*Fits FLSLT/RT toolholders

● : Line up

FLT-CB (For threading)



P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	RE (in)	Coated AH110	TPI Internal	TPI External	IC (in)	PDX (in)	BW (in)	S (in)	M (in)
FLT-3R-HCB	R	0.005 - 0.008	●	5-12	6-20	0.3750	0.098	0.195	0.344	0.3999
FLT-3L-HCB	L	0.005 - 0.008	●	5-12	6-20	0.3750	0.098	0.195	0.344	0.3999
FLT-3RC-HCB	R	0.012 - 0.015	●	5-6	6-11	0.3750	0.098	0.195	0.344	0.3999
FLT-3LC-HCB	L	0.012 - 0.015	●	5-6	6-11	0.3750	0.098	0.195	0.344	0.3999
FLT-3R-CB	R	0.005 - 0.008	●	8-12	8-20	0.3750	0.098	0.195	0.344	0.3999
FLT-3L-CB	L	0.005 - 0.008	●	8-12	8-20	0.3750	0.098	0.195	0.344	0.3999

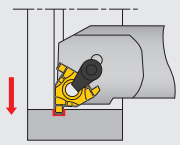
● : Line up

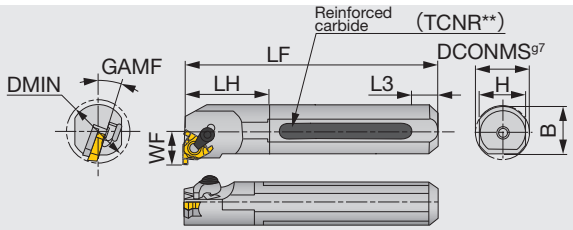
External
Internal
Face
Parting
Others

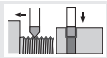
Reference pages: Toolholders → F143 - F144

CNR

Clamp-on internal threading and grooving toolholder (alternative clamping of screw-on or clamp-on only for DT type)







Right hand (R) shown.

Inch	Material	CWN	CWX	DMIN	DCONMS	WF	LF	LH	L3	H	B	GAMF	Insert	Torque
S12-CNR3DT	STEEL	0.039	0.089	0.950	0.750	0.552	7.000	1.200	-	0.725	0.738	15	GTGN-16...	2.58
S16-CNR3DT	STEEL	0.039	0.089	1.150	1.000	0.652	8.000	1.500	-	0.906	0.953	15	GTGN-16...	2.58
S20-CNR3DT	STEEL	0.039	0.089	1.450	1.250	0.788	10.000	1.900	-	1.188	1.219	15	GTGN-16...	2.58

A clamp set consists of a clamp and a clamping screw.
A shim set consists of a shim and a shim screw to secure the shim to the shank.
Use right-hand toolholders (CNR...) with right-hand inserts (**IR...).
Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand.
When using grooving inserts, please use shims for grooving. Shims for grooving inserts are sold separately.
Torque: Recommended clamping torque: lbs·ft

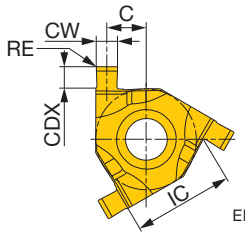
SPARE PARTS

Designation	Clamp set	Clamping screw	Shim screw	Shim (Optional)	Wrench 1	Wrench 2
S**-CNR3DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16EL/IR-DT	P-3.5	T-15F

Reference pages: Inserts, Standard cutting conditions → F154

INSERT

GTGN16



ER/IL shown.

P	Steel	★	
M	Stainless	★	
K	Cast iron		
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND (Internal)	CW±0.03 (mm)	CW±0.001 (in)	RE (in)	Coated SH730			Insert size	CDX (in)	IC (in)	C (in)	Shim: Dual-clamp toolholder: screw-on and clamp-on	Shim: Clamp-on toolholder
GTGN-16ER/IL100	L	1	0.039	0.004	●			16	0.049	0.375	0.166	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	R	1	0.039	0.004	●			16	0.049	0.375	0.166	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL120	L	1.2	0.047	0.004	●			16	0.051	0.375	0.162	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR120	R	1.2	0.047	0.004	●			16	0.051	0.375	0.162	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL140	L	1.4	0.055	0.004	●			16	0.059	0.375	0.158	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR140	R	1.4	0.055	0.004	●			16	0.059	0.375	0.158	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL170	L	1.7	0.067	0.004	●			16	0.067	0.375	0.144	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR170	R	1.7	0.067	0.004	●			16	0.067	0.375	0.144	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL195	L	1.95	0.077	0.004	●			16	0.067	0.375	0.148	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR195	R	1.95	0.077	0.004	●			16	0.067	0.375	0.148	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL225	L	2.25	0.089	0.004	●			16	0.071	0.375	0.142	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR225	R	2.25	0.089	0.004	●			16	0.071	0.375	0.142	G16EL/IR-DT	G16EL/IR-S

Note: GTGN insert can be used for both external and internal machining, but the tool hand is reversed.
Shim for GTGN depends on the toolholder type.

● : Line up

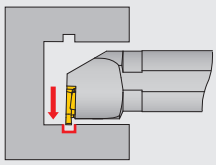
STANDARD CUTTING CONDITIONS

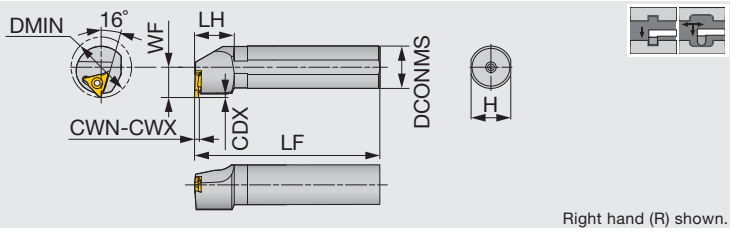
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045, 4140, etc.	SH730	160 - 490	0.002 - 0.004
M	Stainless steel 304, 316, etc.	SH730	100 - 490	0.002 - 0.004
S	Heat-resistant alloys, Titanium alloys, etc. Ti-6Al-4V, etc.	SH730	100 - 330	0.002 - 0.004

Reference pages: Toolholders → F153

S-SGTR/L

Internal grooving





Right hand (R) shown.

Inch	CWN	CWX	DMIN	CDX	DCONMS	H	LF	LH	WF	Insert	Torque
S16R-SGTR/L3	0.013	0.098	1.38	0.100	1.00	0.910	7.78	1.18	0.690	GBL/R32...	2.58

Metric	CWN	CWX	DMIN	CDX	DCONMS	H	LF	LH	WF	Insert	Torque*
S25R-SGTR/L16	0.33	2.5	35	2	25	23	200	30	17.5	GBL/R32...	3.5
S32S-SGTR/L22	1.25	4.5	40	2.5	32	30	250	30	23	GBL/R43...	5

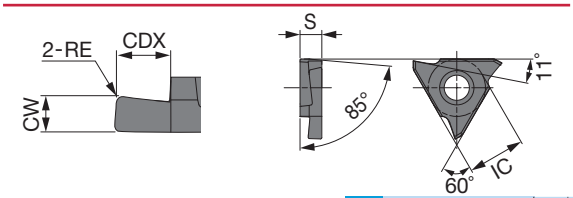
Use right-hand toolholders (SGTR) with left-hand inserts (GBL); and left-hand toolholders (SGTL) with right-hand inserts (GBR).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
S16R-SGTR/L3, S25R-SGTR/L16	CSTB-4S	T-15F
S32S-SGTR/L22	CSTB-5S	T-20F

INSERT

GBR/L32



Right hand (R) shown.

		Coated			Cermet			Uncoated		
P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆					
N	Non-ferrous							★		
S	Superalloys	☆						☆		
H	Hard materials									

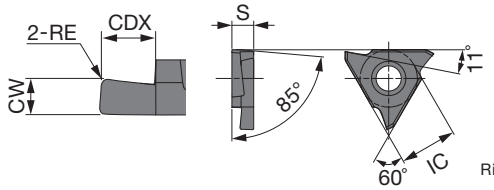
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	AH710	NS9530	KS05F	CDX (in)	IC (mm)	S (mm)
GBR32033	R	0.33	0.013	0.0012	●	●	●	0.031	9.53	3.18
GBL32033	L	0.33	0.013	0.0012	●			0.031	9.53	3.18
GBR32050	R	0.5	0.020	0.002	●	●	●	0.047	9.53	3.18
GBL32050	L	0.5	0.020	0.002	●			0.047	9.53	3.18
GBR32075	R	0.75	0.030	0.002	●	●	●	0.079	9.53	3.18
GBL32075	L	0.75	0.030	0.002	●	●		0.079	9.53	3.18
GBR32095	R	0.95	0.037	0.002	●	●	●	0.079	9.53	3.18
GBL32095	L	0.95	0.037	0.002	●	●		0.079	9.53	3.18
GBR32100	R	1	0.039	0.002	●	●	●	0.079	9.53	3.18
GBL32100	L	1	0.039	0.002	●	●		0.079	9.53	3.18
GBR32125	R	1.25	0.049	0.008	●	●	●	0.079	9.53	3.18
GBL32125	L	1.25	0.049	0.008	●	●		0.079	9.53	3.18
GBR32145	R	1.45	0.057	0.008	●	●	●	0.079	9.53	3.18
GBL32145	L	1.45	0.057	0.008	●			0.079	9.53	3.18
GBR32150	R	1.5	0.059	0.008	●	●	●	0.079	9.53	3.18
GBL32150	L	1.5	0.059	0.008	●			0.079	9.53	3.18
GBR32200	R	2	0.079	0.008	●	●	●	0.098	9.53	3.18
GBL32200	L	2	0.079	0.008	●			0.098	9.53	3.18
GBR32250	R	2.5	0.098	0.008	●	●	●	0.098	9.53	3.18
GBL32250	L	2.5	0.098	0.008	●			0.098	9.53	3.18

● : Line up

Reference pages: Inserts → F156 - F157, Standard cutting conditions → F157

GBR/L43



Right hand (R) shown.

		Coated			Cermet			Uncoated		
P	Steel	★			★					
M	Stainless	★								
K	Cast iron	★			☆					
N	Non-ferrous							★		
S	Superalloys	☆						☆		
H	Hard materials									

★ : First choice
☆ : Second choice

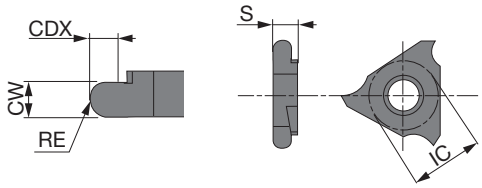
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	AH710	NS9530	KS05F	CDX (in)	IC (mm)	S (mm)
GBR43125	R	1.25	0.049	0.008	●	●	●	0.079	12.7	4.76
GBL43125	L	1.25	0.049	0.008	●			0.079	12.7	4.76
GBR43145	R	1.45	0.057	0.008	●	●	●	0.079	12.7	4.76
GBL43145	L	1.45	0.057	0.008	●			0.079	12.7	4.76
GBR43150	R	1.50	0.059	0.008	●	●	●	0.138	12.7	4.76
GBL43150	L	1.50	0.059	0.008	●	●		0.138	12.7	4.76
GBR43175	R	1.75	0.069	0.008	●	●	●	0.138	12.7	4.76
GBL43175	L	1.75	0.069	0.008	●	●		0.138	12.7	4.76
GBR43185	R	1.85	0.073	0.008	●	●	●	0.138	12.7	4.76
GBL43185	L	1.85	0.073	0.008	●	●		0.138	12.7	4.76
GBR43200	R	2	0.079	0.008	●	●	●	0.138	12.7	4.76
GBL43200	L	2	0.079	0.008	●	●		0.138	12.7	4.76
GBR43230	R	2.3	0.091	0.008	●	●	●	0.138	12.7	4.76
GBL43230	L	2.3	0.091	0.008	●	●		0.138	12.7	4.76
GBR43250	R	2.5	0.098	0.012	●	●	●	0.197	12.7	4.76
GBL43250	L	2.5	0.098	0.012	●			0.197	12.7	4.76
GBR43265	R	2.65	0.104	0.012	●	●	●	0.197	12.7	4.76
GBL43265	L	2.65	0.104	0.012	●			0.197	12.7	4.76
GBR43280	R	2.8	0.110	0.012	●	●	●	0.197	12.7	4.76
GBL43280	L	2.8	0.110	0.012	●			0.197	12.7	4.76
GBR43300	R	3	0.118	0.012	●	●	●	0.197	12.7	4.76
GBL43300	L	3	0.118	0.012	●			0.197	12.7	4.76
GBR43330	R	3.3	0.130	0.012	●	●	●	0.197	12.7	4.76
GBL43330	L	3.3	0.130	0.012	●			0.197	12.7	4.76
GBR43350	R	3.5	0.138	0.012	●	●	●	0.197	12.7	4.76
GBL43350	L	3.5	0.138	0.012	●			0.197	12.7	4.76
GBR43400	R	4	0.157	0.016	●	●	●	0.197	12.7	4.76
GBL43400	L	4	0.157	0.016	●			0.197	12.7	4.76
GBR43430	R	4.3	0.169	0.016	●	●	●	0.197	12.7	4.76
GBL43430	L	4.3	0.169	0.016	●			0.197	12.7	4.76
GBR43450	R	4.5	0.177	0.016	●	●	●	0.197	12.7	4.76
GBL43450	L	4.5	0.177	0.016	●			0.197	12.7	4.76

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F155

GBR/L43-R(full radius)



Right hand (R) shown.

		AH710	NS9530	KS05F
P	Steel	★	★	
M	Stainless	★		
K	Cast iron	★	☆	
N	Non-ferrous			★
S	Superalloys	☆		☆
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH710	Cermet NS9530	Uncoated KS05F	CDX (in)	IC (mm)	S (mm)
GBR43050R	R	1	0.039	0.020	●	●	●	0.079	12.7	4.76
GBL43050R	L	1	0.039	0.020	●		●	0.079	12.7	4.76
GBR43075R	R	1.5	0.059	0.030	●	●	●	0.138	12.7	4.76
GBL43075R	L	1.5	0.059	0.030	●		●	0.138	12.7	4.76
GBR43100R	R	2	0.079	0.039	●	●	●	0.138	12.7	4.76
GBL43100R	L	2	0.079	0.039	●		●	0.138	12.7	4.76
GBR43125R	R	2.5	0.098	0.049	●	●	●	0.197	12.7	4.76
GBL43125R	L	2.5	0.098	0.049	●		●	0.197	12.7	4.76
GBR43150R	R	3	0.118	0.059	●	●	●	0.197	12.7	4.76
GBL43150R	L	3	0.118	0.059	●		●	0.197	12.7	4.76
GBR43200R	R	4	0.157	0.079	●	●	●	0.197	12.7	4.76
GBL43200R	L	4	0.157	0.079	●		●	0.197	12.7	4.76

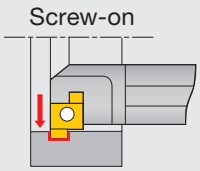
● : Line up

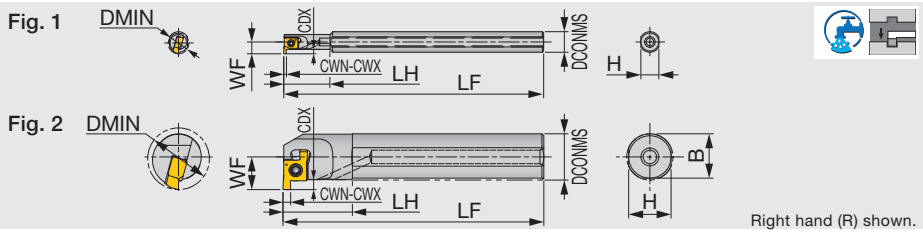
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting Speed *Vc* (sfm)	Feed *f* (ipr)
P	Carbon steel, Alloy steel 1045 SAE, 4140 SAE, etc.	150 - 240HB	NS9530	330 - 650	0.001 - 0.010
		150 - 240HB	AH710	200 - 500	0.002 - 0.010
M	Stainless steel 303, 304, etc.	≤ 240HB	AH710	200 - 500	0.002 - 0.006
K	Cast irons 250, etc.	Tensile strength ≤ 350 N/mm^2	AH710	200 - 500	0.002 - 0.006
N	Non-ferrous metals Aluminum, etc.	-	KS05F	650 - 980	0.002 - 0.006

Reference pages: Toolholders → F155

Toolholders for internal grooving, coolant-through





Right hand (R) shown.

Metric	Material	CWN	CWX	DMIN	CDX	DCONMS	H	B	LF	LH	WF	Insert	Torque	Fig.
A08H-SNGR06-D080	Steel	1	2	8	1.5	8	7	-	100	18	4.73	6GMR..., 6GR...	0.7	1
A08H-SNGR07-D100	Steel	1	2	10	1.5	8	7	-	100	23	5.8	7GMR..., 7GR...	1.0	1
A10K-SNGR07-D120	Steel	1	2	12	1.5	10	9	-	125	29	6.8	7GMR..., 7GR...	1.0	1
A10K-SNGR08-D140	Steel	1.5	3.5	14	2	10	9	-	125	15	7.6	8GMR..., 8GR...	1.0	2
A12M-SNGR08-D160	Steel	1.5	3.5	16	2	12	11	11.5	150	18	8.6	8GMR..., 8GR...	1.0	2
A16Q-SNGR09-D200	Steel	1.5	3.5	20	3	16	15	15.5	180	20	11.6	9GMR..., 9GR...	1.3	2
A20R-SNGR09-D240	Steel	1.5	3.5	24	3	20	18	19	200	25	13.6	9GMR..., 9GR...	1.3	2
E08X-SNGR07-D100	Carbide	1	2	10	1.5	8	7.5	-	120.5	35	5.8	7GMR..., 7GR...	1.0	1
E10X-SNGR07-D120	Carbide	1	2	12	1.5	10	9	-	143.5	45	6.8	7GMR..., 7GR...	1.0	1
E10X-SNGR08-D140	Carbide	1.5	3.5	14	2	10	9	-	146	-	7.6	8GMR..., 8GR...	1.0	2
E12X-SNGR08-D160	Carbide	1.5	3.5	16	2	12	11	-	174.8	-	8.6	8GMR..., 8GR...	1.0	2
E16X-SNGR09-D200	Carbide	1.5	3.5	20	3	16	15	-	194.6	-	11.6	9GMR..., 9GR...	1.5	2

Use the right-hand insert (☐GR) with the right-hand holder (☐NGR).
Torque: Recommended clamping torque: N·m

SPARE PARTS

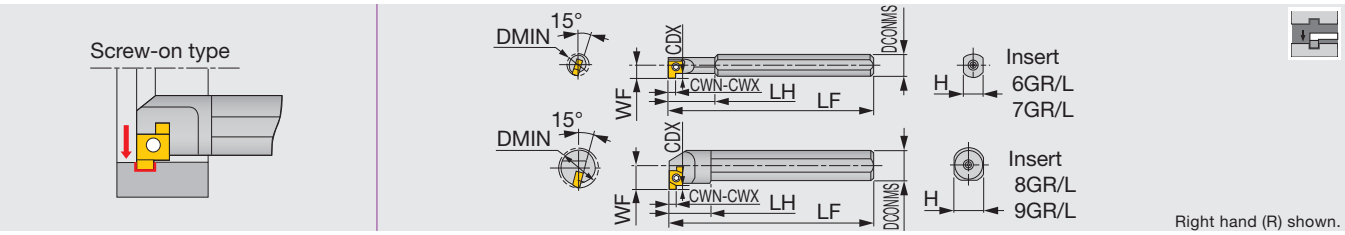
Designation	Clamping screw	Wrench
A**-SNGR06-D...	CSTB-2L040	T-6F
A**-SNGR07-D...	CSTB-2.2S	T-7F
A**-SNGR08-D...	CSTB-2.2	T-7F
A**-SNGR09-D...	CSTB-2.5L080	T-8F
E**-SNGR07-D...	CSTB-2.2S	T-7F
E**-SNGR08-D...	CSTB-2.2	T-7F
E**-SNGR09-D...	CSTB-2.5L080	T-8F

External
Internal
Face
Parting
Others

Reference pages: Inserts → F160 - F161, Standard cutting conditions → F162

SNGR/L

Internal grooving



Metric	Material	CWN	CWX	DMIN	CDX	DCONMS	H	LF	LH	WF	Insert	Torque
SNGR/L08H06	Steel	1	2	8	1.5	8	7	100	18	4.7	6GR/L...	0.7
SNGR/L08H07	Steel	1	2	10	1.5	8	7	100	23	5.8	7GR/L...	1.0
SNGR/L10K07	Steel	1	2	12	1.5	10	9	125	29	6.8	7GR/L...	1.0
SNGR/L10K08	Steel	1.5	3.5	14	2	10	9	125	15	7.6	8GR/L...	1.0
SNGR/L12M08	Steel	1.5	3.5	16	2	12	11	150	18	8.6	8GR/L...	1.0
SNGR/L16Q09	Steel	1.5	3.5	20	3	16	15	180	20	11.6	9GR/L...	1.3
SNGR/L20R09	Steel	1.5	3.5	24	3	20	18	200	25	13.6	9GR/L...	1.3
SNGR/L08K06SC	Carbide	1	2	8	1.5	8	7	125	28	4.7	6GR/L...	0.7
SNGR/L08K07SC	Carbide	1	2	10	1.5	8	7	125	35	5.8	7GR/L...	1.0
SNGR/L10M07SC	Carbide	1	2	12	1.5	10	9	150	45	6.8	7GR/L...	1.0
SNGR/L10M08SC	Carbide	1.5	3.5	14	2	10	9	150	45	7.6	8GR/L...	1.0
SNGR/L12Q08SC	Carbide	1.5	3.5	16	2	12	11	180	-	8.6	8GR/L...	1.0
SNGR/L16R09SC	Carbide	1.5	3.5	20	3	16	15	200	-	11.6	9GR/L...	1.5

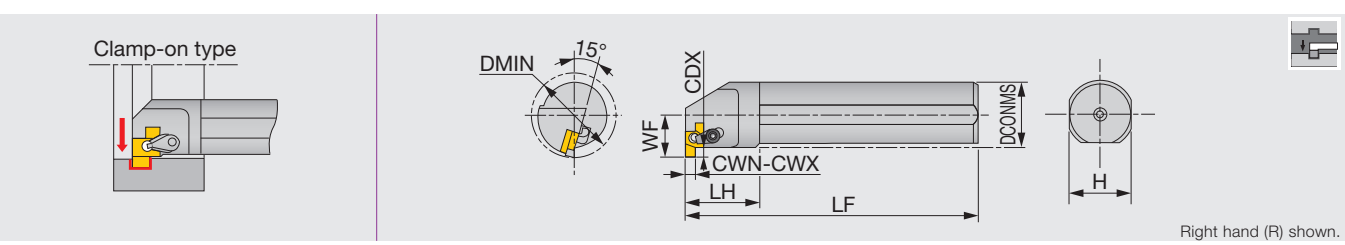
Use right-hand holder (□NGR ~) with right-hand insert (□GR ~); and left-hand holder (□NGL ~) with left-hand insert (□GL ~).
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
SNGR/L***06	CSTB-2L040	T-6F
SNGR/L***07	CSTB-2.2S	T-7F
SNGR/L***08	CSTB-2.2	T-7F
SNGR/L***09	CSTB-2.5L080	T-8F
SNGR/L***06SC	CSTB-2L040	T-6F
SNGR/L***07SC	CSTB-2.2S	T-7F
SNGR/L***08SC	CSTB-2.2	T-7F
SNGR/L***09SC	CSTB-2.5L080	T-8F

CNGR/L

Internal grooving



Metric	CWN	CWX	DMIN	CDX	DCONMS	H	LF	LH	WF	Insert	Torque*
CNGR/L25S15	2	5	32	5	25	23	250	30	18.1	15GR/L...	7
CNGR/L32T15	2	5	40	5	32	30	300	35	22.1	15GR/L...	7
CNGR/L40U15	2	5	48	5	40	38	350	45	26.1	15GR/L...	7

Use right-hand holder (□NGR ~) with right-hand insert (□GR ~); and left-hand holder (□NGL ~) with left-hand insert (□GL ~).
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamp set	Screw	Shim	Wrench
CNGR...	CSP22	DTS5-3.5	SGSR151	T-20F
CNGL...	CSP22	DTS5-3.5	SGSL151	T-20F

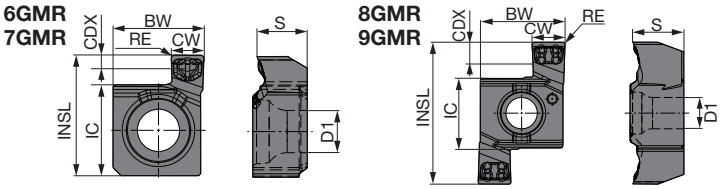
Optional parts for CNG type toolholder

When using as a screw-on type, please use the parts below.

Designation	Clamping screw	Wrench
CNGR/L...	CSTB-3.5L	T-15F

Reference pages: Inserts → F160 - F161, Standard cutting conditions → F162

**GMR/L



Single edge

Double edge

Right hand (R) shown.

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

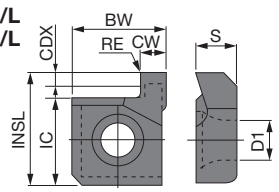
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated AH7025	CDX (mm)	BW (in)	S (in)	IC (in)	INSL (in)	D1 (in)
6GMR100-015	R	0.039	1	0.15	●	1.5	0.219	0.092	0.187	0.254	0.091
7GMR200-020	R	0.079	2	0.20	●	1.5	0.219	0.121	0.219	0.290	0.102
8GMR150-020	R	0.059	1.5	0.20	●	2	0.242	0.152	0.219	0.400	0.102
9GMR200-020	R	0.079	2	0.20	●	3	0.305	0.183	0.250	0.510	0.113
9GMR300-020	R	0.118	3	0.20	●	3	0.305	0.183	0.250	0.510	0.113

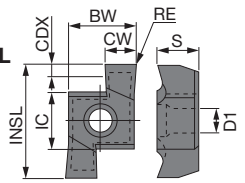
● : Line up

**GR/L

6GR/L
7GR/L



8GR/L
9GR/L
15GR/L



Right hand (R) shown.

		Cermet			Uncoated			
P	Steel	★				★		
M	Stainless					★		
K	Cast iron	☆			★			
N	Non-ferrous				★			
S	Superalloys				☆			
H	Hard materials							

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Cermet NS9530			Uncoated TH10	Uncoated UX30			CDX (mm)	BW (in)	S (in)	IC (in)	INSL (in)	D1 (in)
6GR100	R	0.039	1	0.2	●			●	●			1.5	0.220	0.092	0.187	0.254	0.098
6GL100	L	0.039	1	0.2					●			1.5	0.220	0.092	0.187	0.254	0.098
6GR150	R	0.059	1.5	0.2	●			●	●			1.5	0.220	0.092	0.187	0.254	0.098
6GL150	L	0.059	1.5	0.2				●	●			1.5	0.220	0.092	0.187	0.254	0.098
6GR200	R	0.079	2	0.2	●			●	●			1.5	0.220	0.092	0.187	0.254	0.098
6GL200	L	0.079	2	0.2				●	●			1.5	0.220	0.092	0.187	0.254	0.098
7GR100	R	0.039	1	0.2	●			●	●			1.5	0.220	0.121	0.219	0.290	0.102
7GR150	R	0.059	1.5	0.2	●			●	●			1.5	0.220	0.121	0.219	0.290	0.102
7GR200	R	0.079	2	0.2	●			●	●			1.5	0.220	0.121	0.219	0.290	0.102
7GL200	L	0.079	2	0.2				●	●			1.5	0.220	0.121	0.219	0.290	0.102
8GR150	R	0.059	1.5	0.2	●			●	●			2	0.244	0.152	0.219	0.400	0.102
8GR200	R	0.079	2	0.2	●			●	●			2	0.244	0.152	0.219	0.400	0.102
8GL200	L	0.079	2	0.2				●				2	0.244	0.152	0.219	0.400	0.102
8GR250	R	0.098	2.5	0.2	●			●	●			2	0.244	0.152	0.219	0.400	0.102
8GL250	L	0.098	2.5	0.2				●	●			2	0.244	0.152	0.219	0.400	0.102
8GR300	R	0.118	3	0.2	●			●	●			2	0.244	0.152	0.219	0.400	0.102
8GL300	L	0.118	3	0.2				●	●			2	0.244	0.152	0.219	0.400	0.102
8GR350	R	0.138	3.5	0.2				●	●			2	0.244	0.152	0.219	0.400	0.102
9GR150	R	0.059	1.5	0.2	●			●	●			2	0.303	0.183	0.250	0.510	0.114
9GL150	L	0.059	1.5	0.2	●				●			2	0.303	0.183	0.250	0.510	0.114
9GR200	R	0.079	2	0.2	●			●	●			3	0.303	0.183	0.250	0.510	0.114
9GL200	L	0.079	2	0.2	●			●	●			3	0.303	0.183	0.250	0.510	0.114
9GR250	R	0.098	2.5	0.2	●			●	●			3	0.303	0.183	0.250	0.510	0.114
9GL250	L	0.098	2.5	0.2	●				●			3	0.303	0.183	0.250	0.510	0.114
9GR300	R	0.118	3	0.2	●			●	●			3	0.303	0.183	0.250	0.510	0.114
9GL300	L	0.118	3	0.2	●			●	●			3	0.303	0.183	0.250	0.510	0.114
9GR350	R	0.138	3.5	0.2	●			●	●			3	0.303	0.183	0.250	0.510	0.114
9GL350	L	0.138	3.5	0.2	●				●			3	0.303	0.183	0.250	0.510	0.114
15GR200	R	0.079	2	0.2	●			●	●			3	0.425	0.201	0.362	0.819	0.189
15GR250	R	0.098	2.5	0.2	●			●	●			3	0.425	0.201	0.362	0.819	0.189
15GR300	R	0.118	3	0.2	●			●	●			3	0.425	0.201	0.362	0.819	0.189
15GL300	L	0.118	3	0.2					●			3	0.425	0.201	0.362	0.819	0.189
15GR350	R	0.138	3.5	0.2	●			●	●			3	0.425	0.201	0.362	0.819	0.189
15GR400	R	0.157	4	0.2	●			●	●			4	0.425	0.201	0.362	0.819	0.189
15GR450	R	0.177	4.5	0.2				●	●			4	0.425	0.201	0.362	0.819	0.189
15GL450	L	0.177	4.5	0.2				●				4	0.425	0.201	0.362	0.819	0.189
15GR500	R	0.197	5	0.2				●	●			5	0.425	0.201	0.362	0.819	0.189

Note: Use right-hand holder (□NGR ~) with right-hand insert (□GR ~); and left-hand holder (□NGL ~) with left-hand insert (□GL ~).

● : Line up

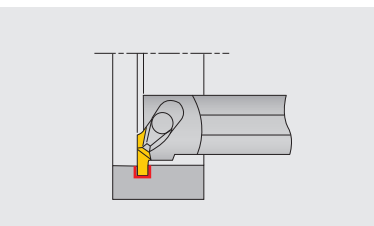
STANDARD CUTTING CONDITIONS

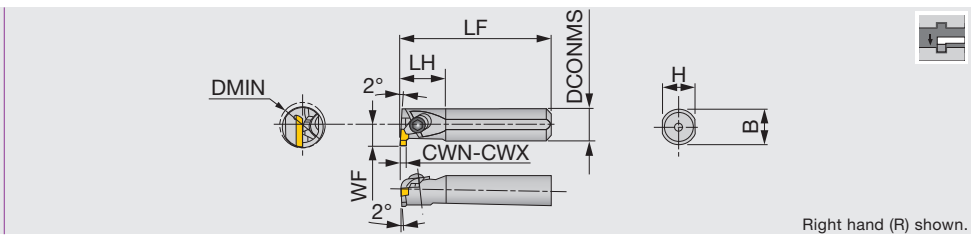
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed rate: *f* (ipr) **GMR...	Feed rate: *f* (ipr) **GR/L...
P	Carbon steel 1045, etc.	AH7025	262 - 591	0.0012 - 0.0047	-
		NS9530	262 - 656	-	0.002 - 0.0059
		UX30	131 - 492	-	0.002 - 0.0059
	Alloy steel 4137, etc.	AH7025	262 - 591	0.0012 - 0.0047	-
		NS9530	262 - 656	-	0.002 - 0.0059
		UX30	131 - 492	-	0.002 - 0.0059
M	Stainless steel 304SS, etc.	AH7025	164 - 394	0.0012 - 0.0047	-
		UX30	131 - 328	-	0.0012 - 0.0039
K	Grey cast irons Class 25, etc.	AH7025	164 - 722	0.0012 - 0.0047	-
		TH10	197 - 656	-	0.002 - 0.0059
	Ductile cast irons 60-40-18, etc.	AH7025	164 - 591	0.0012 - 0.0047	-
		TH10	131 - 525	-	0.002 - 0.0059
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 262	0.0012 - 0.0047	-
		TH10	66 - 164	-	0.002 - 0.0031
	Superalloys Inconel718, etc.	AH7025	66 - 197	0.0012 - 0.0047	-
		TH10	33 - 98	-	0.0012 - 0.0031

Reference pages: Inserts → F160 - F161, Toolholders → F158 - F159

CGXR/L

Internal grooving





Right hand (R) shown.

Metric	Material	CWN	CWX	DMIN	CDX	DCONMS	H	B	LF	LH	WF	Insert	Torque*
CGXR/L0016	Steel	1	3	20	3	16	15	15.5	150	24	11.3	GIR/L52...	2.2
CGXR/L0020	Steel	1	3	24	3	20	18	19	180	30	13.3	GIR/L52...	2.2
CGXR/L0025	Steel	1	5	32	5.3	25	23	24	200	38	18	GIR/L63...	5
CGXR/L0032	Steel	1	5	40	5.3	32	30	31	250	48	23	GIR/L63...	5
CGXR/L0040	Steel	1	5	48	5.3	40	37	38.5	300	60	27	GIR/L63...	5
CGXR/L16SC	Carbide	1	3	20	3	16	15	-	200	24	11.3	GIR/L52...	2.2

Note: Use right-hand holder (CGXR) with right-hand insert (GIR); and left-hand holder (L) with left-hand insert (GIL).
*Torque: Recommended clamping torque (N·m)

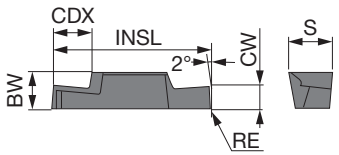
SPARE PARTS

Designation	Clamp set	Wrench1	Wrench2
CGXR/L0016/20	CSW-0	-	P-2.5T
CGXR/L0025/32/40	CSW-2	P-4	-
CGXR/L16SC	CSW-0	-	P-2.5T

Reference pages: Inserts, Standard cutting conditions → F163

INSERT

GIR/L



Right hand (R) shown.

P	Steel	★		
M	Stainless		☆	
K	Cast iron	☆	★	
N	Non-ferrous		★	
S	Superalloys		☆	
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	Coated NS9530	Uncoated TH10	CDX (mm)	INSL (mm)	BW (mm)	S (mm)
GIR5210-02	R	0.039	1	0.2	●	●	1.5	15	3.5	4.4
GIL5210-02	L	0.039	1	0.2	●	●	1.5	15	3.5	4.4
GIR5215-02	R	0.059	1.5	0.2	●	●	2.3	15	3.5	4.4
GIL5215-02	L	0.059	1.5	0.2	●	●	2.3	15	3.5	4.4
GIR5220-02	R	0.079	2	0.2	●	●	3	15	3.5	4.4
GIL5220-02	L	0.079	2	0.2	●	●	3	15	3.5	4.4
GIR5225-02	R	0.098	2.5	0.2	●	●	3	15	3.5	4.4
GIL5225-02	L	0.098	2.5	0.2		●	3	15	3.5	4.4
GIR5230-02	R	0.118	3	0.2	●	●	3	15	3.5	4.4
GIL5230-02	L	0.118	3	0.2		●	3	15	3.5	4.4
GIR6310-02	R	0.039	1	0.2	●	●	1.5	24	5.5	6.4
GIL6310-02	L	0.039	1	0.2		●	1.5	24	5.5	6.4
GIR6315-02	R	0.059	1.5	0.2	●	●	2.3	24	5.5	6.4
GIL6315-02	L	0.059	1.5	0.2	●	●	2.3	24	5.5	6.4
GIR6320-02	R	0.079	2	0.2	●	●	3	24	5.5	6.4
GIL6320-02	L	0.079	2	0.2	●	●	3	24	5.5	6.4
GIR6325-02	R	0.098	2.5	0.2	●	●	3.8	24	5.5	6.4
GIL6325-02	L	0.098	2.5	0.2	●	●	3.8	24	5.5	6.4
GIR6330-02	R	0.118	3	0.2	●	●	4.5	24	5.5	6.4
GIL6330-02	L	0.118	3	0.2	●	●	4.5	24	5.5	6.4
GIR6335-02	R	0.138	3.5	0.2	●	●	5.3	24	5.5	6.4
GIL6335-02	L	0.138	3.5	0.2	●	●	5.3	24	5.5	6.4
GIR6340-02	R	0.157	4	0.2	●	●	5.3	24	5.5	6.4
GIL6340-02	L	0.157	4	0.2	●	●	5.3	24	5.5	6.4
GIR6345-02	R	0.177	4.5	0.2	●	●	5.3	24	5.5	6.4
GIL6345-02	L	0.177	4.5	0.2		●	5.3	24	5.5	6.4
GIR6350-02	R	0.197	5	0.2	●	●	5.3	24	5.5	6.4
GIL6350-02	L	0.197	5	0.2		●	5.3	24	5.5	6.4

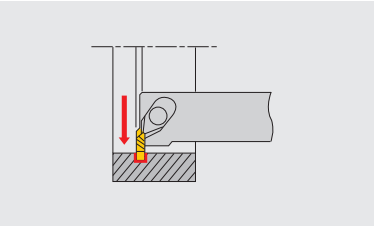
Use right-hand toolholders (CGXR~) with right-hand inserts (GIR); and left-hand toolholders (GX-****LI) with left-hand inserts (XGR).

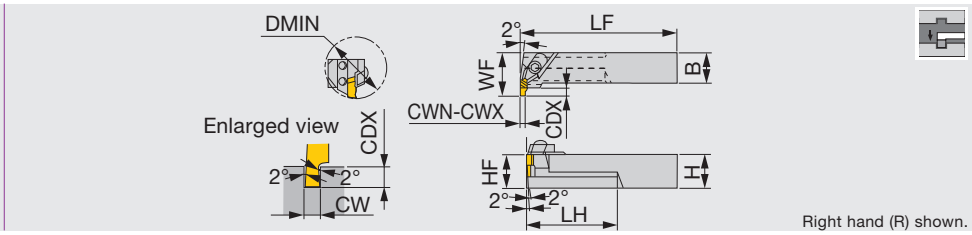
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) CW < 0.079"	CW = 0.079" - 0.157"	CW > 0.157"
P	Carbon steel	NS9530	262 - 492	0.002 - 0.004	0.003 - 0.006	0.003 - 0.008
K	Cast iron, Light alloys	TH10	197 - 492	0.002 - 0.004	0.003 - 0.006	0.003 - 0.008

Reference pages: Toolholders → F162





Right hand (R) shown.

Inch	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque
GX-1212RIU	0.039	0.177	2.165	0.059 - 0.236	0.750	0.75	6.30	2.36	0.75	1.37	XGL63...	3.69
GX-1616RIU	0.039	0.177	2.165	0.059 - 0.236	1.00	1.00	7.87	1.96	1.00	1.37	XGL63...	3.69

Metric	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque*
GX-2525R/LI	1	4.5	55	1.5 - 6	25	25	200	70	25	35	XGL/R63...	5

Use right-hand toolholders (GX-****RI) with left-hand inserts (XGL); and left-hand toolholders (GX-****LI) with right-hand inserts (XGR).
Torque: Recommended clamping torque: lbs·ft (*N·m)

External
Internal
Face
Parting
Others

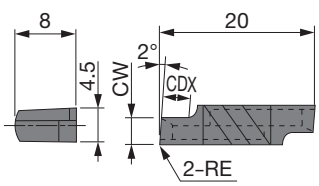
SPARE PARTS

Designation	Clamp set	Clamp screw	Shim	Shim screw	Wrench
GX-1212RIU	CP81B	RT-1	SL-7R	BHM4-8	P-4
GX-2525RI	CP81B	RT-1	SL-2R	BHM3-8	P-4
GX-1616RIU, GX-2525LI	CP81B	RT-1	SL-2L	BHM3-8	P-4

Max. groove width and max. groove depth will depend on the insert type.

INSERT

XGR/L



Right hand (R) shown.

		Cermet			Uncoated			
P	Steel	★			☆	★		
M	Stainless					★		
K	Cast iron	☆			★			
N	Non-ferrous				★			
S	Superalloys				☆			
H	Hard materials							

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	NS9530			TH10	UX30									CDX (in)
XGR6310-02	R	1	0.039	0.008	●			●	●									0.059
XGL6310-02	L	1	0.039	0.008	●			●	●									0.059
XGR6315-02	R	1.5	0.059	0.008	●			●	●									0.091
XGL6315-02	L	1.5	0.059	0.008	●			●	●									0.091
XGR6320-02	R	2	0.079	0.008	●			●	●									0.118
XGL6320-02	L	2	0.079	0.008	●			●	●									0.118
XGR6325-02	R	2.5	0.098	0.008	●			●	●									0.150
XGL6325-02	L	2.5	0.098	0.008	●			●	●									0.150
XGR6330-02	R	3	0.118	0.008	●			●	●									0.177
XGL6330-02	L	3	0.118	0.008	●			●	●									0.177
XGR6335-02	R	3.5	0.138	0.008	●			●	●									0.209
XGL6335-02	L	3.5	0.138	0.008	●			●	●									0.209
XGR6340-02	R	4	0.157	0.008	●			●	●									0.236
XGL6340-02	L	4	0.157	0.008	●			●	●									0.236
XGR6345-02	R	4.5	0.177	0.008	●			●	●									0.236
XGL6345-02	L	4.5	0.177	0.008	●			●	●									0.236

Use right-hand toolholders (GX-****RE) with right-hand inserts (XGR...)
left-hand toolholders (GX-****LE) with left-hand inserts (XGL...).

● : Line up

Reference pages: Standard cutting conditions → F165

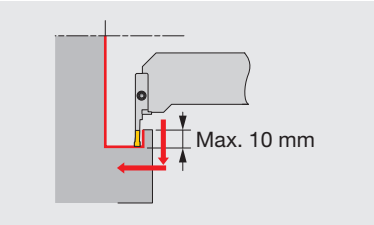
STANDARD CUTTING CONDITIONS

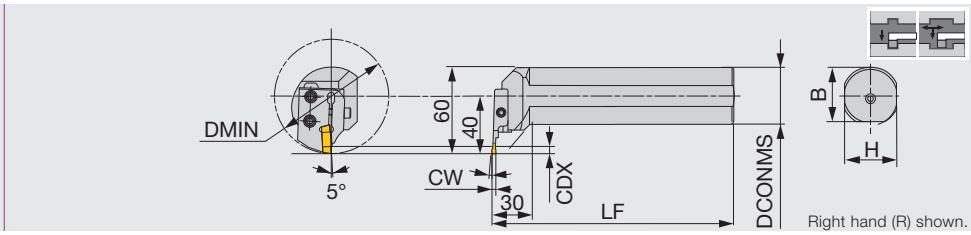
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)		
				CW < 0.079"	CW = 0.079" - 0.157"	CW > 0.157"
P	Carbon steel	NS9530	262 - 656	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
		UX30	197 - 492	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
K	Cast irons , Light alloys	TH10	197 - 492	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
H	Hardened steel	BX360	164 - 591	0.002 - 0.006	0.002 - 0.006	0.002 - 0.006

Reference pages: Toolholders → F164

CGWTR/L0040-FLL/R3NP

Internal grooving and turning toolholder





Metric	CW	DMIN	CDX	DCONMS	LF	H	B	Insert	Shank	Blade	Torque
CGWTR/L0040-FLL/R3NP	3	80	10	40	180	37.5	37	FLEX30L/R	CGWTR/L0040	FLL/R3NP	5

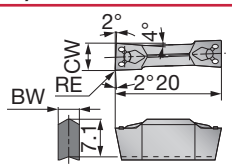
Please place an order with the designation of a set or a shank+a blade
Note: Use right-hand blades (CCWTR) with left-hand shanks (FLL3NP); and left-hand blades (CGWTL) with right-hand shanks (FLR3NP).
Torque: Recommended clamping torque: N·m

SPARE PARTS

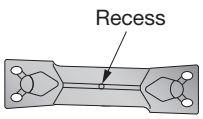
Designation	Clamping screw	Blade screw	Wrench
CGWTR/L0040-FLL/R3NP	CHHM5-18	CSHB-6	P-4

INSERT

FLEX(R/L)



Right hand (R) shown.



To distinguish the insert hands, the V-shape surface (top surface) of a left-hand insert has a recess. (not of a right-hand insert)

P	Steel	★	☆			★			★		
M	Stainless	★							★		
K	Cast iron	☆				☆					
N	Non-ferrous										
S	Superalloys										
H	Hard materials										

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	Coated T9225	Coated T9125	Carbide NS9530	Uncoated UX30	BW (mm)
FLEX30R	R	0.118	3	0.4			●		2.2
FLEX30L	L	0.118	3	0.4			●		2.2
FLEX40R	R	0.157	4	0.4			●		3.1
FLEX40L	L	0.157	4	0.4			●		3.1
FLEX50R	R	0.197	5	0.4	●	▲	●	●	4
FLEX50L	L	0.197	5	0.4	●	▲	●	●	4

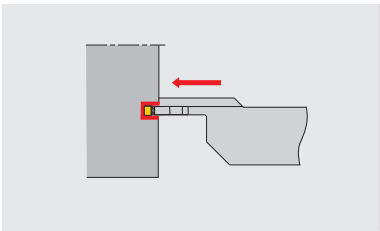
● : Line up
▲ : To be discontinued

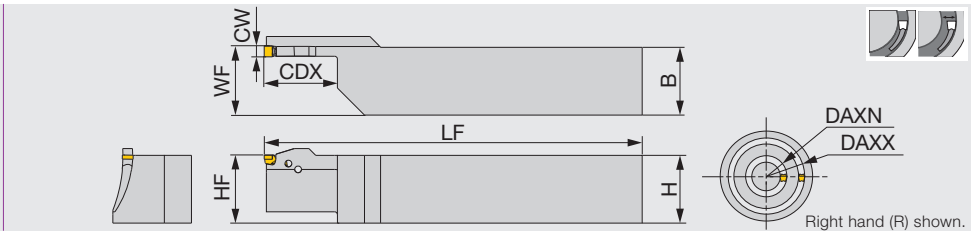
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Turning
P	Carbon steel	T9225	262 - 984	0.002 - 0.010	0.004 - 0.012
		NS9530	262 - 656	0.002 - 0.010	0.004 - 0.012
		UX30	197 - 492	0.002 - 0.010	0.004 - 0.012

ETFR/L

Face grooving and turning toolholder





Inch	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert
ETFR/L12-4T15-030035	0.157	1.181	1.378	0.591	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T15-030035	0.157	1.181	1.378	0.591	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T22-035045	0.157	1.378	1.772	0.866	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T22-035045	0.157	1.378	1.772	0.866	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T25-045055	0.157	1.772	2.165	0.984	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T25-045055	0.157	1.772	2.165	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T25-055075	0.157	2.165	2.953	0.984	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T25-055075	0.157	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T25-075120	0.157	2.953	4.724	0.984	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T25-075120	0.157	2.953	4.724	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L16-4T25-120200	0.157	4.724	7.874	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L16-4T25-200500	0.157	7.874	19.685	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L16-5T25-035045	0.197	1.378	1.772	0.984	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T25-045055	0.197	1.772	2.165	0.984	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T25-055075	0.197	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T32-075120	0.197	2.953	4.724	1.260	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T32-120200	0.197	4.724	7.874	1.260	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T32-200500	0.197	7.874	19.685	1.260	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-6T25-040055	0.236	1.575	2.165	0.984	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T25-055075	0.236	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T32-075120	0.236	2.953	4.724	1.260	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T32-120200	0.236	4.724	7.874	1.260	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T32-200500	0.236	7.874	19.685	1.260	1.000	1.000	6.000	1.000	1.020	ETX6...

SPARE PARTS

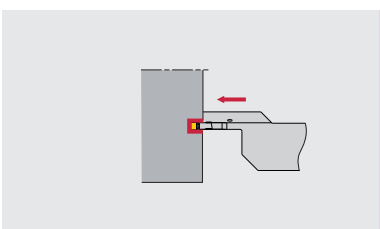
Designation	Wrench (Optional)
ETFR/L...	ECW-456EF

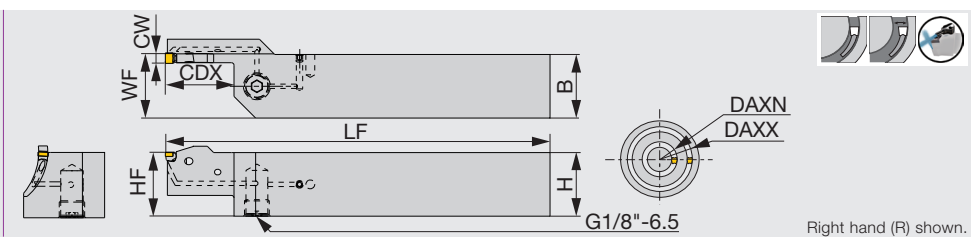
Wrench (ECW...) is not included. Please order it separately.

ETFR-CHP

TUNGTURN JET

Face grooving and turning toolholder, with high pressure coolant capability





Inch	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert
ETFR16-4T15-030035-CHP	0.157	1.181	1.378	0.591	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T22-035045-CHP	0.157	1.378	1.772	0.866	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-045055-CHP	0.157	1.772	2.165	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-055075-CHP	0.157	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-075120-CHP	0.157	2.953	4.724	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-120200-CHP	0.157	4.724	7.874	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-200500-CHP	0.157	7.874	19.685	0.984	1.000	1.000	6.000	1.000	1.020	E**4...

SPARE PARTS

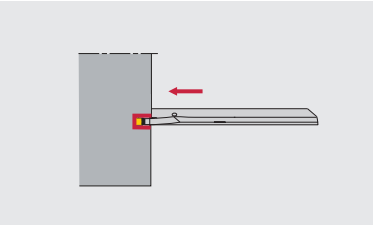
Designation	Wrench (Optional)
ETFR**-CHP	ECW-456EF

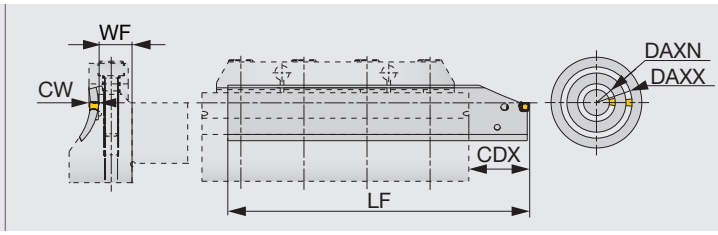
Wrench (ECW...) is not included. Please order it separately.

Reference pages: Inserts, Standard cutting conditions → F170, Parts for coolant hose → F240

EFPR/L

Face grooving blade





Right hand (R) shown.

Inch	CW	DAXN	DAXX	WF	LF	Min. CDX	Max. CDX	Insert
EFPR/L-4-030035	0.157	1.181	1.378	0.535	4.921	0.709	1.968	E**4...
EFPR-4-035045	0.157	1.378	1.772	0.535	4.921	0.709	1.968	E**4...
EFPR-4-045055	0.157	1.772	2.165	0.535	4.921	0.709	1.968	E**4...
EFPR-4-055075	0.157	2.165	2.953	0.535	4.921	0.709	1.968	E**4...
EFPR-4-075120	0.157	2.953	4.724	0.535	5.512	0.709	2.559	E**4...
EFPR-4-120200	0.157	4.724	7.874	0.535	5.512	0.709	2.559	E**4...
EFPR-4-200500	0.157	7.874	19.685	0.535	5.512	0.709	2.559	E**4...
EFPR-5-035045	0.197	1.378	1.772	0.535	4.921	0.748	1.968	ETX5...
EFPR-5-045055	0.197	1.772	2.165	0.535	4.921	0.748	1.968	ETX5...
EFPR-5-055075	0.197	2.165	2.953	0.535	4.921	0.748	1.968	ETX5...
EFPR-5-075120	0.197	2.953	4.724	0.535	5.512	0.748	2.559	ETX5...
EFPR-5-120200	0.197	4.724	7.874	0.535	5.512	0.748	2.559	ETX5...
EFPR-5-200500	0.197	7.874	19.685	0.535	5.512	0.748	2.559	ETX5...
EFPR-6-045055	0.236	1.772	2.165	0.535	4.921	0.787	1.968	ETX6...
EFPR-6-055075	0.236	2.165	2.953	0.535	4.921	0.787	1.968	ETX6...
EFPR-6-075120	0.236	2.953	4.724	0.535	5.512	0.787	2.559	ETX6...
EFPR-6-120200	0.236	4.724	7.874	0.535	5.512	0.787	2.559	ETX6...
EFPR/L-6-200500	0.236	7.874	19.685	0.535	5.512	0.787	2.559	ETX6...

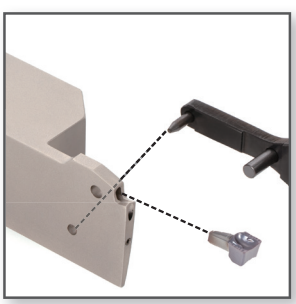
SPARE PARTS

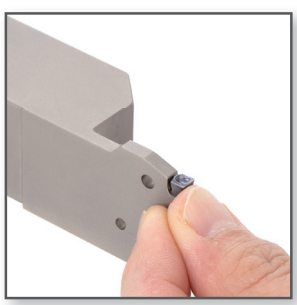
Designation	Wrench (Optional)
EFPR/L...	ECW-456I

Wrench (ECW...) is not included. Please order it separately.

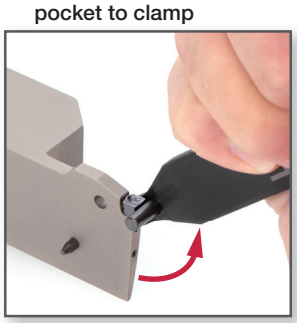
Procedure to clamp and unclamp insert

1 Put the insert in the Unclamp pocket

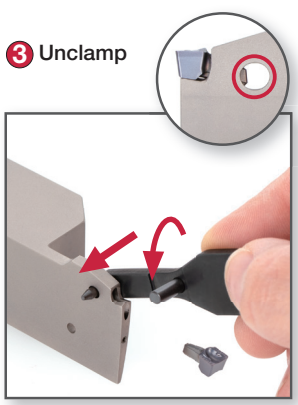




2 Turn the wrench Push the insert into the pocket to clamp



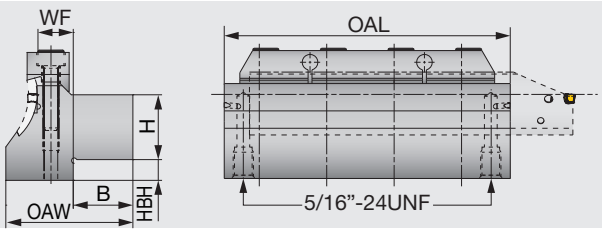
3 Unclamp



Reference pages: Inserts, Standard cutting conditions → F170

CTBU-CHP for EFPR/L

Tool block for EFP blades with high pressure coolant capability



Inch	CW	DAXN	WF	H	B	HBH	OAW	OAL	Blade
CTBU16-030-4U-CHP	0.157	1.181	0.535	1.000	0.905	0.299	1.929	4.331	EFPR/L-4-030035
CTBU16-035-4/5U-CHP	0.157, 0.197	1.378	0.535	1.000	0.905	0.299	1.929	4.331	EFPR/L-4/5-035045
CTBU16-045-4/5U-CHP	0.157, 0.197	1.772	0.535	1.000	0.905	0.299	1.929	4.331	EFPR/L-4/5-045055
CTBU16-055-4/5U-CHP	0.157, 0.197	2.165	0.535	1.000	0.905	0.299	1.850	4.331	EFPR/L-4/5-055075
CTBU16-075-4/5U-CHP	0.157, 0.197	2.953	0.535	1.000	0.905	0.299	1.771	4.331	EFPR/L-4/5-075120
CTBU16-120-4/5U-CHP	0.157, 0.197	4.724	0.535	1.000	0.905	0.299	1.732	4.331	EFPR/L-4/5-120200
CTBU16-200-4/5U-CHP	0.157, 0.197	7.874	0.535	1.000	0.905	0.299	1.633	4.331	EFPR/L-4/5-200500
CTBU16-045-6U-CHP	0.236	1.772	0.535	1.000	0.905	0.299	2.007	4.331	EFPR/L-6-045055
CTBU16-055-6U-CHP	0.236	2.165	0.535	1.000	0.905	0.299	1.929	4.331	EFPR/L-6-055075
CTBU16-075-6U-CHP	0.236	2.953	0.535	1.000	0.905	0.299	1.850	4.331	EFPR/L-6-075120
CTBU16-120-6U-CHP	0.236	4.724	0.535	1.000	0.905	0.299	1.811	4.331	EFPR/L-6-120200
CTBU16-200-6U-CHP	0.236	7.874	0.535	1.000	0.905	0.299	1.712	4.331	EFPR/L-6-200500

SPARE PARTS

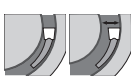
Designation	Clamp	Clamping screw	Wrench
CTBU**-CHP	CT-110	CM6X30-S	P-5

EASYMULTICUT - Chipbreaker Guide

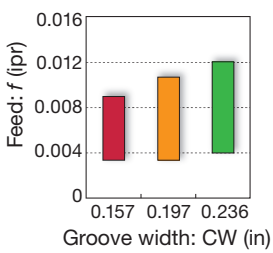
ETX type

Multi-functional insert
Grooving and turning suitable for light to medium cutting
Well-balanced sharpness and strength

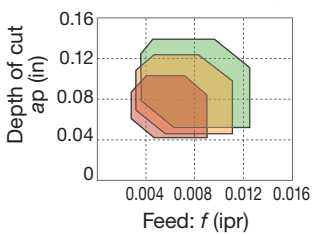
CW = 0.157" - 0.236"



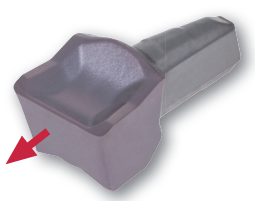
■ Standard feed



■ Standard feed and depth of cut for turning



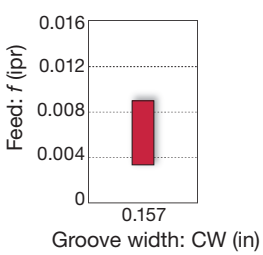
EGM type



1st choice for high feed
Well-designed edge

CW = 0.157"

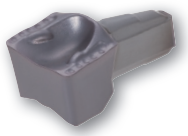
■ Standard feed

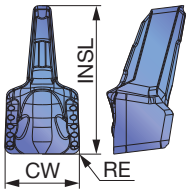


Reference pages: Inserts, Standard cutting conditions → F170
Parts for coolant hose → F240

INSERT

ETX





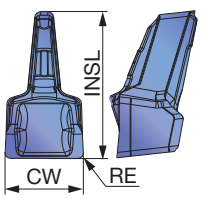
P	Steel	★	
M	Stainless	★	
K	Cast iron	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH725	INSL (in)
ETX4-040	4	0.157	0.016	●	0.315
ETX5-040	5	0.197	0.016	●	0.394
ETX6-040	6	0.236	0.016	●	0.472

● : Line up

EGM



P	Steel	★	
M	Stainless	★	
K	Cast iron	☆	
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH725	INSL (in)
EGM4-030	4	0.157	0.012	●	0.315

● : Line up

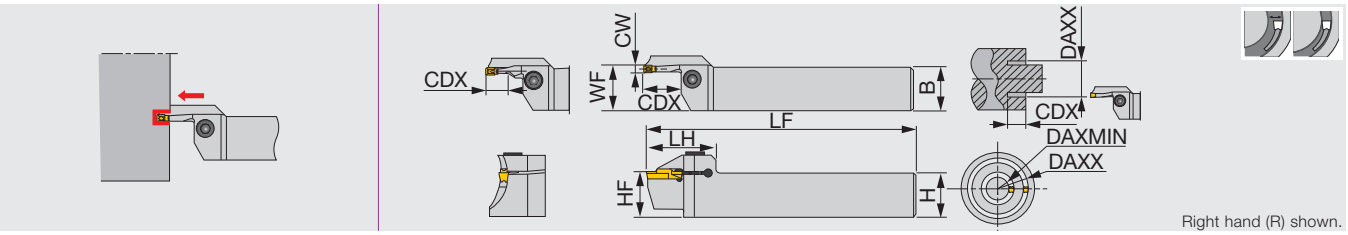
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Chipbreaker	Cutting speed *Vc* (sfm)
P	Low carbon steel 1018, 1020, 1026, etc.	- 300 HB	AH725	ETX	262 - 591
		- 300 HB	AH725	EGM	262 - 591
	Carbon steel, Alloy steel 1045, 1055, etc.	- 300 HB	AH725	ETX	262 - 591
		- 300 HB	AH725	EGM	262 - 591
	Prehardened steel NAK80, PX5, etc.	- 300 HB	AH725	ETX	262 - 591
		- 300 HB	AH725	EGM	262 - 591
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	-	AH725	ETX	164 - 394
		-	AH725	EGM	164 - 394

Reference pages: Toolholders → F167 - F168

CTFR/L

Face grooving and turning toolholder



Metric	CW	DAXMIN	DAXX	Seat size	CDX	H	B	LF	LH	HF	WF (1)	Torque
CTFR/L2525-3T10-024035	3	24	35	3	10	25	25	150	38	25	25.5	5
CTFR/L2525-3T10-029040	3	29	40	3	10	25	25	150	38	25	25.5	5
CTFR/L2525-3T10-034050	3	34	50	3	10	25	25	150	38	25	25.5	5
CTFR/L2525-3T15-044070	3	44	70	3	15	25	25	150	38	25	25.5	5
CTFR/L2525-3T15-064100	3	64	100	3	15	25	25	150	38	25	25.5	5
CTFR/L2525-4T10-022036	4	22	36	4	10	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-028042	4	28	42	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-034050	4	34	50	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-042070	4	42	70	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-062120	4	62	120	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-112200	4	112	200	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-5T25-050080	5	50	80	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-5T25-070110	5	70	110	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-5T25-100150	5	100	150	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-5T25-140200	5	140	200	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-048070	6	48	70	6	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-058100	6	58	100	6	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-088180	6	88	180	6	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-168400	6	168	400	6	25	25	25	150	49	25	25.6	12

When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.
Max. groove depth will be 15 mm with DTF insert.
(1)WF is calculated with the groove width (CW) in the above table.
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
CTFR/L2525-3T - 4T...	CM6X1X25-A	P-5
CTFR/L2525-5T - 6T...	CM8X1.25X25-A	P-6

INSERT

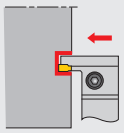
Designation	Seat size	Insert
CTFR/L2525-3T10-024035	3	DTF, DTX
CTFR/L2525-3T10-029040	3	DTF, DTX
CTFR/L2525-3T10-034050	3	DTF, DTX
CTFR/L2525-3T15-044070	3	DTF, DTX, DTR, DTE, DGG, DTM
CTFR/L2525-3T15-064100	3	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DGL, DTM
CTFR/L2525-4T10-022036	4	DTF, DTX
CTFR/L2525-4T20-028042	4	DTF, DTX, DTR
CTFR/L2525-4T20-034050	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFR/L2525-4T20-042070	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFR/L2525-4T20-062120	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFR/L2525-4T20-112200	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFR/L2525-5T25-...	5	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFR/L2525-6T25-...	6	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL

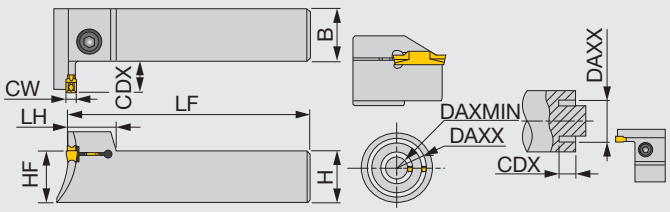
Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

Reference pages: Inserts → F178 - F187, Standard cutting conditions → F192

CTFVR/L

Perpendicular toolholder for face grooving and turning





Right hand (R) shown.

Metric	CW	DAXMIN	DAXX	Seat size	CDX	H	B	LF	LH	HF	Torque
CTFVR/L2525-3T10-024035	3	24	35	3	10	25	25	150	18	25	5
CTFVR/L2525-3T10-029040	3	29	40	3	10	25	25	150	18	25	5
CTFVR/L2525-3T10-034050	3	34	50	3	10	25	25	150	18	25	5
CTFVR/L2525-3T15-044060	3	44	60	3	15	25	25	150	18	25	5
CTFVR/L2525-3T15-054085	3	54	85	3	15	25	25	150	18	25	5
CTFVR/L2525-4T12-022040	4	22	40	4	12	25	25	150	18.5	25	8.5
CTFVR/L2525-4T15-032050	4	32	50	4	15	25	25	150	18.5	25	8.5
CTFVR/L2525-4T15-042060	4	42	60	4	15	25	25	150	18.5	25	8.5
CTFVR/L2525-4T15-052085	4	52	85	4	15	25	25	150	18.5	25	8.5
CTFVR/L2525-5T20-050080	5	50	80	5	20	25	25	150	22	25	12
CTFVR/L2525-5T20-070110	5	70	110	5	20	25	25	150	22	25	12
CTFVR/L2525-5T20-100150	5	100	150	5	20	25	25	150	22	25	12
CTFVR/L2525-5T20-140200	5	140	200	5	20	25	25	150	22	25	12
CTFVR/L2525-6T20-048085	6	48	85	6	20	25	25	150	22	25	12
CTFVR/L2525-6T20-073150	6	73	150	6	20	25	25	150	22	25	12
CTFVR/L2525-6T20-138250	6	138	250	6	20	25	25	150	22	25	12

When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended
Max. groove depth will be 15 mm with DTF insert.
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
CTFVR/L2525-3T...	CM5X0.8X25-A	P-4
CTFVR/L2525-4T...	CM6X1X25-A	P-5
CTFVR/L2525-5T..., 6T...	CM8X1.25X25-A	P-6

INSERT

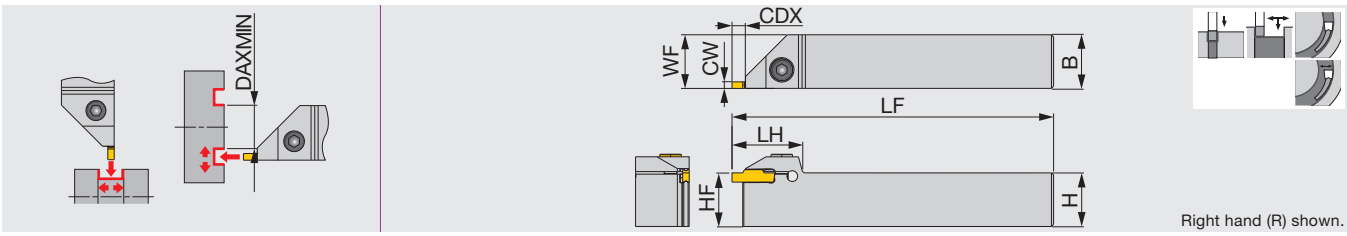
Designation	Seat size	Insert
CTFVR/L2525-3T10-024035	3	DTF, DTX
CTFVR/L2525-3T10-029040	3	DTF, DTX
CTFVR/L2525-3T10-034050	3	DTF, DTX, DTR
CTFVR/L2525-3T15-044060	3	DTF, DTX, DTR
CTFVR/L2525-3T15-054085	3	DTF, DTX, DTE, DGG, DTR, DTM
CTFVR/L2525-4T12-022040	4	DTF, DTX, DTR
CTFVR/L2525-4T15-032050	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFVR/L2525-4T15-042060	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFVR/L2525-4T15-052085	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFVR/L2525-5T20-...	5	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFVR/L2525-6T20-...	6	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL

Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

Reference pages: Inserts → F178 - F187, Standard cutting conditions → F192

CTEFR/L

External face grooving and turning toolholder



Inch	CW (in)	CW (mm)	Seat size	CDX	HF	B	H	LF	WF (1)	LH	Torque
CTEFR/L12-4T04	0.157	4	2, 3, 4	0.189	0.750	0.750	0.750	5.000	0.770	1.300	6.27
CTEFR/L16-4T04	0.157	4	2, 3, 4	0.189	1.000	1.000	1.000	6.000	1.020	1.300	6.27
CTEFR/L12-6T04	0.236	6	5, 6	0.189	0.750	0.750	0.750	5.000	0.236	1.460	6.27
CTEFR/L16-6T04	0.236	6	5, 6	0.189	1.000	1.000	1.000	6.000	1.020	1.460	6.27

(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

Designation	Clamping screw	Wrench
CTEFR/L12-4T04	CM6X1X20-A	P-5
CTEFR/L16-4T04	CM6X1X25-A	P-5
CTEFR/L12-6T04	CM6X1X20-A	P-5
CTEFR/L16-6T04	CM6X1X25-A	P-5

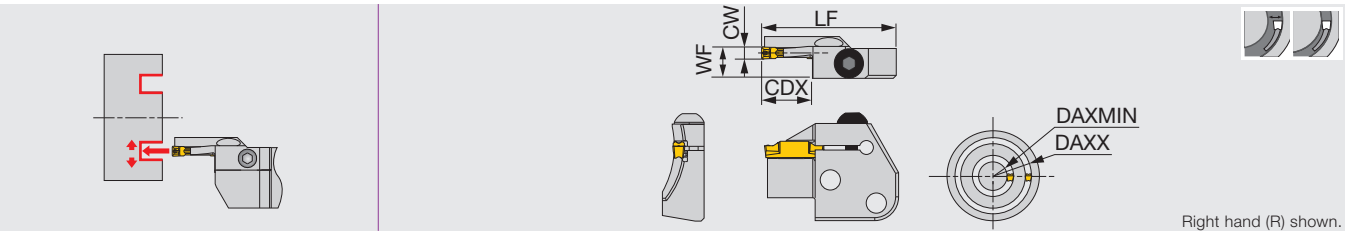
Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DGM / DGS / SGN	0.079	11.614
DGM / DGS / SGN / DGL	0.118	3.622
DGM / DGS / SGN / DGL	0.157	1.457
DGM / DGS / DGL	0.197	2.362
DGM / DGS / DGL	0.236	2.244
DTE / DGG / DTM	0.118	2.441
DTE / DGG / DTM	0.157	1.654
DTE / DGG / DTM	0.197	2.520
DTE / DGG / DTM	0.236	2.402

Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DTR	0.118	1.732
DTR	0.157	1.260
DTR	0.197	1.890
DTR	0.236	1.890
DTX	0.118	0.866
DTX	0.157	0.787
DTX	0.197	0.787
DTX	0.236	0.906
DTF	0.118	0.787
DTF	0.157	0.787

Reference pages: Inserts → F178 - F187, Standard cutting conditions → F192

CAFR/L

Face grooving and turning blade



Right hand (R) shown.

Inch	CW (in)	CW (mm)	DAXMIN	DAXX	Seat size	CDX	LF	WF (1)	Torque
CAFR/L-3T12-040055	0.118	3	1.575	2.17	3	0.472	1.772	0.409	3.69
CAFR/L-3T12-055075	0.118	3	2.165	2.95	3	0.472	1.772	0.409	3.69
CAFR/L-3T12-075100	0.118	3	2.953	3.94	3	0.472	1.772	0.409	3.69
CAFR/L-3T12-100140	0.118	3	3.937	5.51	3	0.472	1.772	0.409	3.69
CAFR/L-3T12-140200	0.118	3	5.512	7.87	3	0.472	1.772	0.409	3.69
CAFR/L-4T16-050070	0.157	4	1.969	2.76	4	0.630	1.772	0.413	3.69
CAFR/L-4T16-070100	0.157	4	2.756	3.94	4	0.630	1.772	0.413	3.69
CAFR/L-4T16-100150	0.157	4	3.937	5.91	4	0.630	1.772	0.413	3.69
CAFR/L-4T16-150250	0.157	4	5.906	9.84	4	0.630	1.772	0.413	3.69
CAFR/L-5T20-055080	0.197	5	2.165	3.15	5	0.787	1.929	0.413	3.69
CAFR/L-5T20-080120	0.197	5	3.15	4.72	5	0.787	1.929	0.413	3.69
CAFR/L-5T20-120180	0.197	5	4.724	7.09	5	0.787	1.929	0.413	3.69
CAFR/L-5T20-180300	0.197	5	7.087	11.81	5	0.787	1.929	0.413	3.69
CAFR/L-5T20-300000	0.197	5	11.811	∞	5	0.787	1.929	0.413	3.69
CAFR/L-6T25-060090	0.236	6	2.362	3.54	6	0.984	2.165	0.413	3.69
CAFR/L-6T25-090150	0.236	6	3.543	5.91	6	0.984	2.165	0.413	3.69
CAFR/L-6T25-150250	0.236	6	5.906	9.84	6	0.984	2.165	0.413	3.69
CAFR/L-6T25-250400	0.236	6	9.843	15.75	6	0.984	2.165	0.413	3.69

When groove depth is larger than (insert length - 0.059"), please use 1-cornered insert.
Max. groove depth will be 0.591" with DTF insert.
Not compatible with TungModularSystem
(1) WF is calculated with the groove width (CW) in the above table.
(2) Not applicable to CAFR/L-3T12-040055
(3) Seat sizes of DTF are only 3 and 4.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

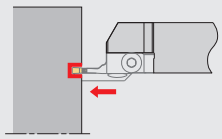
Designation	Clamping screw	Wrench
CAFR/L...	BHM6-20-A	P-4

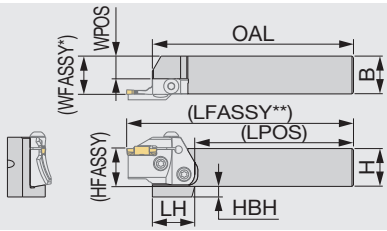
Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DGM / DGS / SGN / DGL	0.118	3.622
DGM / DGS / SGN / DGL	0.157	1.457
DGM / DGS / DGL	0.197	2.362
DGM / DGS / DGL	0.236	2.244
DTE / DGG / DTM	0.118	2.441
DTE / DGG / DTM	0.157	1.654
DTE / DGG / DTM	0.197	2.520
DTE / DGG / DTM	0.236	2.402
DTR	0.118	1.732
DTR	0.157	1.260
DTR	0.197	1.890
DTR	0.236	1.890
DTX	0.118	0.866
DTX	0.157	0.787
DTX	0.197	0.787
DTX	0.236	0.906
DTF	0.118	0.787
DTF	0.157	0.787

Reference pages: Inserts → F178 - F187, Standard cutting conditions → F192

TUNGCUT
CHSR/L

Shank for CAER/L and CAFR/L blades





Right hand (R)
with left-hand blade shown.

Inch	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Blade (Option)
CHSR/L12-U	0.750	0.750	5.330	4.227	1.380	0.356	0.750	0.502	CAFL/R...
CHSR/L16-U	1.000	1.000	5.330	4.227	1.100	0.606	1.000	0.280	CAFL/R...
CHSR/L20-U	1.250	1.250	6.330	5.227	-	0.856	1.250	-	CAFL/R...

Metric	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Blade (Option)
CHSR/L2020	20	20	133	105	35	10	20	12	CAFL/R...
CHSR/L2525	25	25	133	105	28	15	25	7	CAFL/R...
CHSR/L3232	32	32	153	105	-	22	32	-	CAFL/R...

*WFASSY : Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)

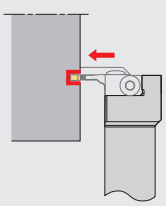
Not compatible with TungModularSystem

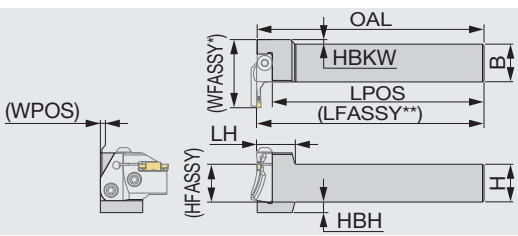
SPARE PARTS

Designation	Clamping screw	Wrench
CHSR/L...	CSHB-6-A	P-4

TUNGCUT
CHFVR/L

Shank for CAER/L and CAFR/L blades





Right hand (R)
with right-hand blade shown.

Inch	H	B	OAL	LPOS	LH	WPOS	HBKW	HFASSY	HBH	Blade (Option)
CHFVR/L12-U	0.750	0.750	6.000	5.606	0.984	-0.001	0.352	0.750	0.502	CAFR/L...
CHFVR/L16-U	1.000	1.000	6.000	5.606	0.984	-0.001	0.102	1.000	0.276	CAFR/L...
CHFVR/L20-U	1.250	1.250	7.000	6.606	0.984	0.147	-	1.250	-	CAFR/L...

Metric	H	B	OAL	LPOS	LH	WPOS	HBKW	HFASSY	HBH	Blade (Option)
CHFVR/L2020	20	20	150	140	25	0	8	20	12	CAFR/L...
CHFVR/L2525	25	25	150	140	25	0	3	25	7	CAFR/L...
CHFVR/L3232	32	32	170	160	25	4	-	32	-	CAFR/L...

*WFASSY : Shank (WPOS) + blade (LF)
**LFASSY : Shank (LPOS) + blade (WF)

Not compatible with TungModularSystem

SPARE PARTS

Designation	Clamping screw	Wrench
CHFVR/L...	CSHB-6-A	P-4

Combination of blade and toolholder

Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

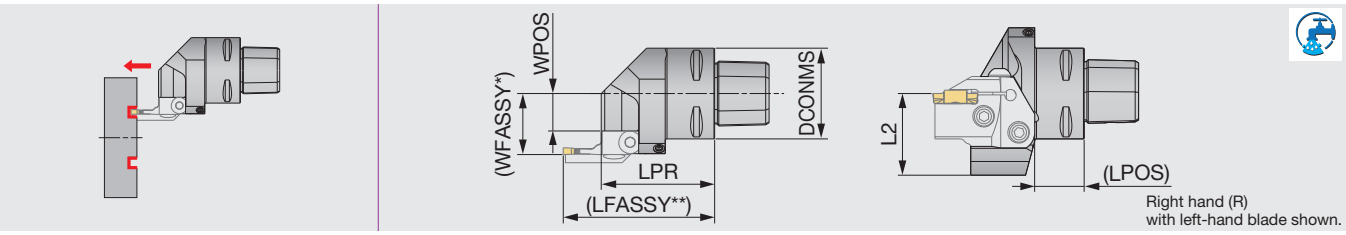
● : Corresponding

Reference pages: Inserts → F178 - F187,
Standard cutting conditions → F192

C-CHSR/L

TUNGCAP

TungCap shank for CAER/L and CAFR/L blades



Metric	DCONMS	LPR	LPOS	L2	WPOS	Blade (Option)
C3CHSR/L22050N	32	50	22.1	35	11.5	CAFL/R...
C4CHSR/L27050N	40	50	22.1	36	16.5	CAFL/R...
C5CHSR/L35060N	50	60	32.1	36	24.5	CAFL/R...
C6CHSR/L45065N	63	65	32.1	41	34.5	CAFL/R...

*WFASSY : Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)

Applicable for 7 MPa coolant.
Not compatible with TungModularSystem

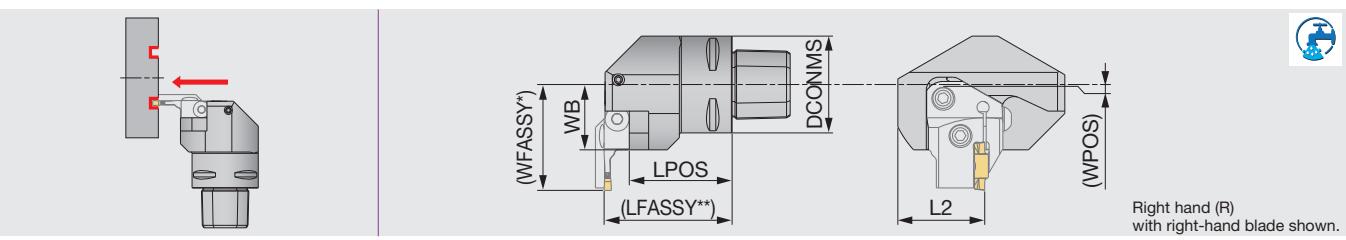
SPARE PARTS

Designation	Coolant parts	Clamping screw	Wrench
C3CHSR/L22050N	SATZ-M8X1-M3	CSHB-6-A	P-4
C4CHSR/L27050N	SATZ-M8X1-M3	CSHB-6-A	P-4
C5CHSR/L35060N	SATZ-M10X1-M5	CSHB-6-A	P-4
C6CHSR/L45065N	SATZ-M10X1-M5	CSHB-6-A	P-4

C-CHFVR/L

TUNGCAP

TungCap shank for CAER/L and CAFR/L blades



Metric	DCONMS	LPOS	L2	WB	WPOS	Blade (Option)
C3CHFVR/L22040N	32	32.5	35	22	-5.9	CAFR/L...
C4CHFVR/L27050N	40	42.5	36	27	-0.9	CAFR/L...
C5CHFVR/L35060N	50	49.5	36	35	7.1	CAFR/L...
C6CHFVR/L45065N	63	54.5	41	45	17.1	CAFR/L...

*WFASSY : Shank (WPOS) + blade (LF)
**LFASSY : Shank (LPOS) + blade (WF)

Applicable for 7 MPa coolant.
Not compatible with TungModularSystem

SPARE PARTS

Designation	Coolant parts	Clamping screw	Wrench
C3CHFVR/L22040N	SATZ-M8X1-M3	CSHB-6-A	P-4
C4CHFVR/L27050N	SATZ-M8X1-M3	CSHB-6-A	P-4
C5CHFVR/L35060N	SATZ-M10X1-M5	CSHB-6-A	P-4
C6CHFVR/L45065N	SATZ-M10X1-M5	CSHB-6-A	P-4

Combination of blade and toolholder

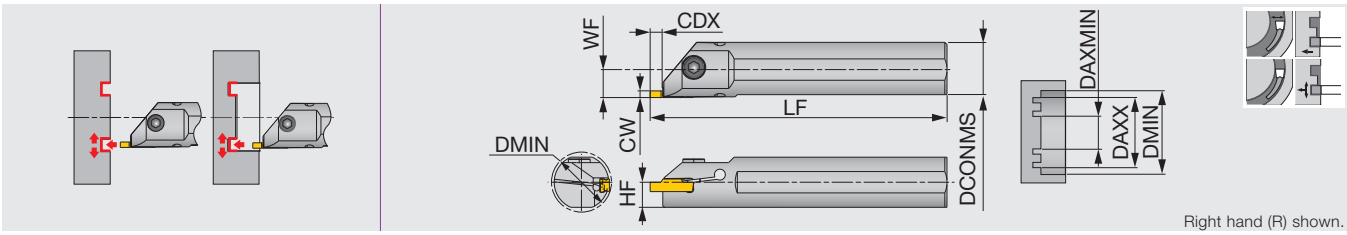
Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

● : Corresponding

Reference pages: Inserts → F178 - F187, Standard cutting conditions → F192

CTIFR/L

External/Internal face grooving and turning toolholder



Inch	CW (in)	CW (mm)	Seat size	CDX	DCONMS	LF	HF	WF (1)	Torque
CTIFR/L16-4T05-D17	0.157	4	3, 4	0.217	1.000	8.000	0.450	0.531	3.69
CTIFR/L20-4T05-D22	0.157	4	3, 4	0.217	1.250	10.000	0.590	0.656	3.69
CTIFR/L16-5T05-D17	0.236	6	5, 6	0.217	1.000	8.000	0.450	0.531	3.69
CTIFR/L20-5T05-D22	0.236	6	5, 6	0.217	1.250	10.000	0.590	0.656	3.69

Metric	CW	Seat size	CDX	DCONMS	LF	HF	WF (1)	Torque*
CTIFR/L25-4T05-D270	4	3, 4	5.5	25	200	11.5	13.3	5
CTIFR/L32-4T05-D340	4	3, 4	5.5	32	250	15	16.8	5
CTIFR/L25-5T05-D270	6	5, 6	5.5	25	200	11.5	13.3	5
CTIFR/L32-5T05-D340	6	5, 6	5.5	32	250	15	16.8	5

(1) WF is calculated with the groove width (CW) in the above table.
Use the right-hand insert for the right-hand holder with DTF insert.
Torque: Recommended clamping torque: lbs·ft (*N·m)

Inch SPARE PARTS

Designation	Clamping screw	Wrench	Seal cap
CTIFR/L16-4T05-D17	CM6X1X16-A	P-5	CA-25
CTIFR/L20-4T05-D22	CM6X1X20-A	P-5	CA-32
CTIFR/L16-5T05-D17	CM6X1X16-A	P-5	CA-25
CTIFR/L20-5T05-D22	CM6X1X20-A	P-5	CA-32

Insert seat size	Minimum diameter	
	DCONMS = 0.984"	DCONMS = 1.259"
3	1.035	1.311
4	1.055	1.331
5	1.035	1.311
6	1.055	1.331

Insert seat size	DAXMIN				DAXX
	DGM, DGS	DTE, DGG	DTF, DTX	DTR	
3	2.126	1.732	0.787	1.614	∞
4	1.339	1.654	0.709	1.417	∞
5	1.929	1.969	0.787	2.126	∞
6	1.811	1.890	0.709	2.126	∞

Metric SPARE PARTS

Designation	Clamping screw	Wrench	Seal cap
CTIFR/L25-4T05-D270	CM6X1X16-A	P-5	CA-25
CTIFR/L32-4T05-D340	CM6X1X20-A	P-5	CA-32
CTIFR/L25-5T05-D270	CM6X1X16-A	P-5	CA-25
CTIFR/L32-5T05-D340	CM6X1X20-A	P-5	CA-32

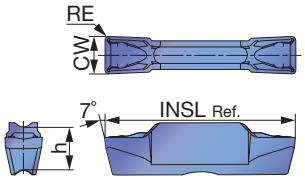
Insert seat size	Minimum diameter	
	DCONMS = 25 mm	DCONMS = 32 mm
3	26.3	33.3
4	26.8	33.8
5	26.3	33.3
6	26.8	33.8

Insert seat size	DAXMIN				DAXX
	DGM, DGS	DTE, DGG	DTF, DTX	DTR	
3	92	62	19	44	∞
4	37	42	20	32	∞
5	60	64	20	48	∞
6	57	61	23	48	∞

Reference pages: Inserts → F178 - F187, Standard cutting conditions → F192

DTX

External/Internal face grooving and turning



		T9225	T9125	AH7025	AH725	GH130			NS9530				
P	Steel	★	★	★	☆	☆			★				
M	Stainless	★		★	☆	★							
K	Cast iron	☆		★		☆			☆				
N	Non-ferrous												
S	Superalloys			★	☆								
H	Hard materials												

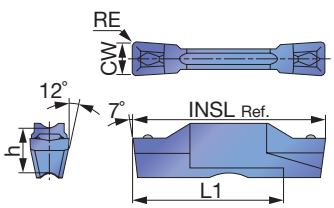
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated T9225	T9125	AH7025	AH725	GH130	Cermet NS9530	INSL (in)	h (in)
DTX3-030	3	3	0.118	0.012	●	▲	●	●	●	●	0.787	0.197
DTX4-040	4	4	0.157	0.016	●	▲	●	●	●	●	0.787	0.197
DTX5-040	5	5	0.197	0.016	●	▲	●	●	●	●	0.984	0.217
DTX6-080	6	6	0.236	0.031			●	●	●		0.984	0.197

● : Line up
▲ : To be discontinued

DTF

Face grooving and turning



Right hand (R) shown.

		T9225	T9125	AH7025	AH725	GH130			NS9530				
P	Steel	★	☆	★	☆	☆			★				
M	Stainless	★		★	☆	★							
K	Cast iron	☆		★		☆			☆				
N	Non-ferrous												
S	Superalloys			★	☆								
H	Hard materials												

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated T9225	T9125	AH7025	AH725	GH130	Cermet NS9530	INSL (in)	h (in)	L1 (in)
DTF3-040-R	3	R	3	0.118	0.016	●	▲	●	●	●	●	0.787	0.197	0.630
DTF3-040-L	3	L	3	0.118	0.016	●	▲	●	●	●	●	0.787	0.197	0.630
DTF4-040-R	4	R	4	0.157	0.016	●	▲	●	●	●	●	0.787	0.197	0.630
DTF4-040-L	4	L	4	0.157	0.016	●	▲	●	●	●	●	0.787	0.197	0.630

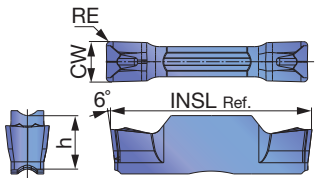
● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

DTM

External face grooving and turning



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

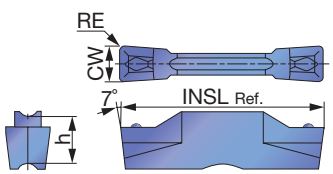
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DTM3-030	3	3	0.118	0.012	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	0.984	0.217
DTM8-080	8	8	0.315	0.031	●	1.181	0.264

● : Line up

DTE

External face grooving and turning (for high precision)



P	Steel	★	★	★	☆	☆			★		
M	Stainless	★		★	☆	★					
K	Cast iron	☆		★		☆					
N	Non-ferrous										
S	Superalloys			★	☆						
H	Hard materials										

★ : First choice
☆ : Second choice

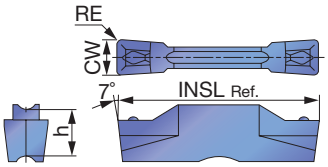
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated T9125	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTE265-015	3	2.65	0.104	0.006	●	▲	●	●	●	●	0.787	0.197
DTE300-020	3	3	0.118	0.008	●	▲	●	●	●	●	0.787	0.197
DTE300-040	3	3	0.118	0.016	●	▲	●	●	●	●	0.787	0.197
DTE315-015	3	3.15	0.124	0.006	●	▲	●	●	●	●	0.787	0.197
DTE400-040	4	4	0.157	0.016	●	▲	●	●	●	●	0.787	0.197
DTE400-080	4	4	0.157	0.031	●	▲	●	●	●	●	0.787	0.197
DTE415-015	4	4.15	0.163	0.006	●	▲	●	●	●	●	0.787	0.197
DTE478-055	5	4.78	0.188	0.022	●	▲	●	●	●	●	0.984	0.217
DTE500-040	5	5	0.197	0.016	●	▲	●	●	●	●	0.984	0.217
DTE500-080	5	5	0.197	0.031	●	▲	●	●	●	●	0.984	0.217
DTE515-015	5	5.15	0.203	0.006	●	▲	●	●	●		0.984	0.217
DTE600-080	6	6	0.236	0.031	●	▲	●	●	●		0.984	0.217
DTE600-120	6	6	0.236	0.047	●	▲	●	●	●		0.984	0.217
DTE800-080	8	8	0.315	0.031	●	▲	●	●	●		1.181	0.264
DTE800-120	8	8	0.315	0.047	●	▲	●	●	●		1.181	0.264

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

DTE

External face grooving and turning



		T9225	T9125	T515	AH7025	AH725	GH130			NS9530				
P	Steel	★	★		★	☆	☆			★				
M	Stainless	★			★	☆	★							
K	Cast iron	☆		★	★		☆							
N	Non-ferrous													
S	Superalloys				★	☆								
H	Hard materials													

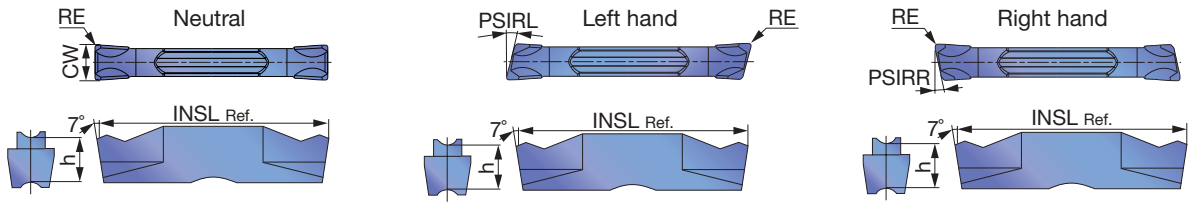
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet					INSL (in)	h (in)
					T9225	T9125	T515	AH7025	AH725	GH130			NS9530						
DTE3-040	3	3	0.118	0.016	●	▲	●	●	●	●			●					0.787	0.197
DTE4-040	4	4	0.157	0.016	●	▲	●	●	●	●			●					0.787	0.197
DTE5-040	5	5	0.197	0.016			●	●										0.984	0.217
DTE6-080	6	6	0.236	0.031			●	●										0.984	0.217

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

External grooving and parting, 2 corners



P	Steel	★	★	★	☆		☆			★		
M	Stainless	★		★	☆		★					
K	Cast iron	☆		★		☆	☆			☆		
N	Non-ferrous											
S	Superalloys			★	☆	★						
H	Hard materials											

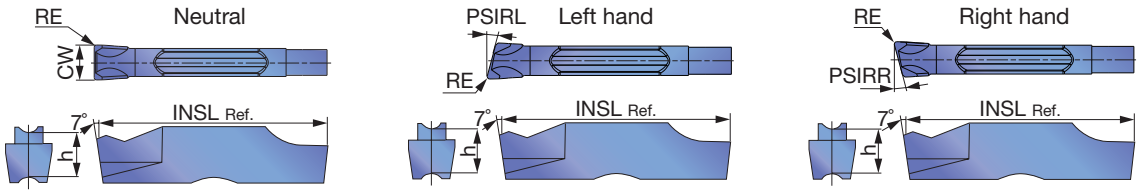
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet				INSL (in)	h (in)	PSIRL	PSIRR
						T9225	T9125	AH7025	AH725	AH905	GH130			NS9530							
DGM2-020	2	N	2	0.079	0.008	●	▲	●	●		●			●				0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008				●		●							0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008				●		●							0.762	0.197	15°	0°
DGM3-020	3	N	3	0.118	0.008	●	▲	●	●	●	●			●				0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008			●	●		●							0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008			●	●		●							0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.0008				●		●							0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.0008				●		●							0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008			●	●		●							0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008			●	●		●							0.787	0.197	15°	0°
DGM4-030	4	N	4	0.157	0.012	●	▲	●	●	●	●			●				0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012			●	●		●							0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012			●	●		●							0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012			●	●		●							0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012			●	●		●							0.787	0.197	15°	0°
DGM5-030	5	N	5	0.197	0.012	●	▲	●	●	●	●			●				0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012			●	●		●							0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	▲	●	●	●	●							0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	▲	●	●		●							1.181	0.264	0°	0°

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

External deep grooving and parting, 1corner



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

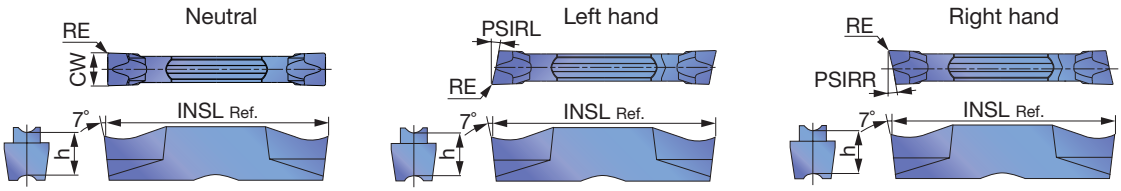
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGM2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●	●	0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●	●	0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

External grooving and parting, 2 corners



		Coated							Cermet						
P	Steel	★	★	★	☆	☆			★						
M	Stainless	★		★	☆	★									
K	Cast iron	☆		★		☆			☆						
N	Non-ferrous														
S	Superalloys			★	☆										
H	Hard materials														

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	T9225	T9125	AH7025	AH725	GH130			NS9530						INSL (in)	h (in)	PSIRL	PSIRR
DGS1.4-016	1	N	1.4	0.055	0.006			●	●	●									0.630	0.169	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008			●	●	●									0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008			●	●	●									0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008				●	●									0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008				●	●									0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008			●	●	●									0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008			●	●	●									0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008				●	●									0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008				●	●									0.768	0.197	15°	0°
DGS3-020	3	N	3	0.118	0.008	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008			●	●	●									0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008			●	●	●									0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008				●	●									0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008				●	●									0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008			●	●	●									0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008			●	●	●									0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008				●	●									0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008				●	●									0.766	0.197	15°	0°
DGS4-030	4	N	4	0.157	0.012	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012			●	●	●									0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012			●	●	●									0.787	0.197	4°	0°
DGS5-030	5	N	5	0.197	0.012	●	▲	●	●	●			●						0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	▲	●	●	●									0.984	0.217	0°	0°

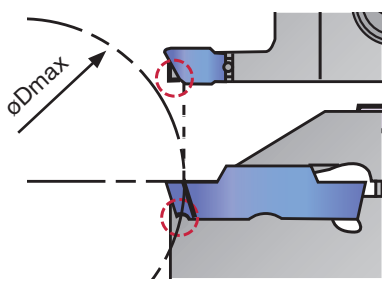
● : Line up
▲ : To be discontinued

Caution

The tool will interfere with the workpiece when grooving larger diameter than øDmax.

Designation	øDmax (in)
DGM2-002-15R/L	1.102
DGM3-002-15R/L	1.141
DGM4-030-15R/L	1.181
SGM3-020-15R/L	4.055

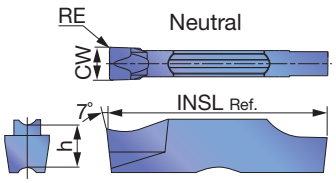
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338

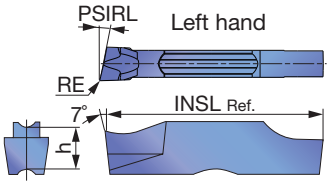


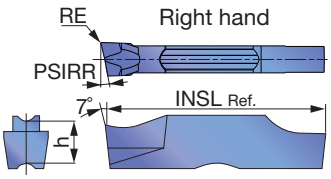
Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

SGS

External deep grooving and parting, 1corner







P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

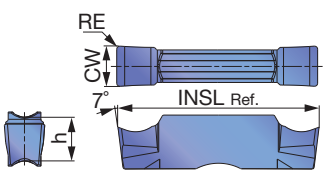
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●	●	0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●	●	0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

● : Line up

DGG

External grooving (for high precision)



P	Steel	★			★	
M	Stainless	★				
K	Cast iron	★			☆	☆
N	Non-ferrous					★
S	Superalloys	★				☆
H	Hard materials					

★ : First choice
☆ : Second choice

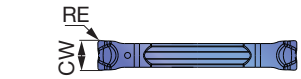
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL (in)	h (in)
DGG200-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGG300-020	3	3	0.118	0.008	●	●	●	0.787	0.197
DGG400-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DGG500-040	5	5	0.197	0.016	●	●	●	0.984	0.217
DGG600-040	6	6	0.236	0.016	●	●	●	0.984	0.217

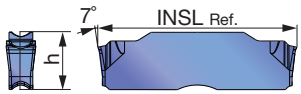
● : Line up

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

DGL

External grooving and parting





P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

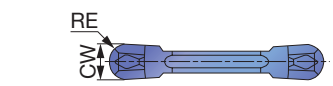
★ : First choice
☆ : Second choice

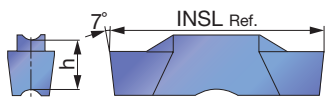
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated	INSL (in)	h (in)
					AH7025		
DGL3-025	3	3	0.118	0.010	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	0.984	0.217

● : Line up

DTR

Profiling and undercutting (for high precision)





P	Steel	★	★	★	☆	☆			★		
M	Stainless	★		★	☆	★					
K	Cast iron	☆		★		☆			☆		
N	Non-ferrous										
S	Superalloys			★	☆						
H	Hard materials										

★ : First choice
☆ : Second choice

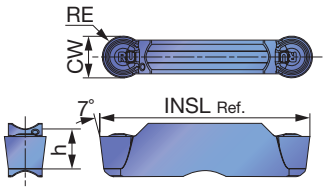
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated					Cermet	INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130	NS9530		
DTR300-150	3	3	0.118	0.059	●	▲	●	●	●	●	0.787	0.197
DTR400-200	4	4	0.157	0.079	●	▲	●	●	●	●	0.787	0.197
DTR478-239	5	4.78	0.188	0.094	●	▲	●	●	●	●	0.984	0.217
DTR500-250	5	5	0.197	0.098	●	▲	●	●	●	●	0.984	0.217
DTR600-300	6	6	0.236	0.118	●	▲	●	●	●		0.984	0.217

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

DTR

Profiling and undercutting



P	Steel	★	★	★	☆		☆			★		
M	Stainless	★		★	☆		★					
K	Cast iron	☆		★		☆	☆			☆		
N	Non-ferrous											
S	Superalloys			★	☆	★						
H	Hard materials											

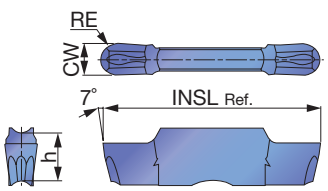
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet				INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	AH905	GH130			NS9530					
DTR3-150	3	3	0.118	0.059	●	▲	●	●	●	●			●				0.787	0.197
DTR4-200	4	4	0.157	0.079	●	▲	●	●	●	●			●				0.787	0.197
DTR5-250	5	5	0.197	0.098	●	▲	●	●	●	●			●				0.984	0.217
DTR6-300	6	6	0.236	0.118	●	▲	●	●		●							0.984	0.217
DTR8-400	8	8	0.315	0.157	●	▲	●	●		●							1.181	0.264

● : Line up
▲ : To be discontinued

DTIU

Profiling and undercutting (for high precision)



P	Steel	★	☆	☆				
M	Stainless	★	☆	★				
K	Cast iron	★		☆				
N	Non-ferrous							
S	Superalloys	★	☆					
H	Hard materials							

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated												INSL (in)	h (in)
					AH7025	AH725	GH130											
DTIU300-150	3	3	0.118	0.059	●	●	●										0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●										0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●										0.984	0.217
DTIU600-300	6	6	0.236	0.118	●	●	●										0.984	0.217

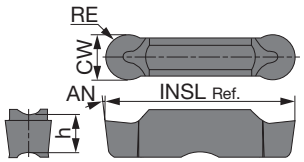
● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

DTA

Aluminum wheel machining (for high precision)



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

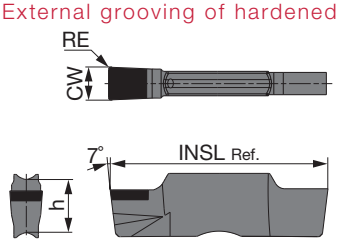
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Uncoated TH10	INSL (in)	h (in)	AN
DTA600-300	6	6	0.236	0.118	●	0.984	0.217	7°
DTA800-400	8	8	0.315	0.157	●	1.181	0.264	10°

● : Line up

SGN

External grooving of hardened steel



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN BX360	INSL (in)	h (in)
SGN200-020	2	2	0.079	0.008	●	0.787	0.197
SGN300-020	3	3	0.118	0.008	●	0.787	0.197
SGN400-020	4	4	0.157	0.008	●	0.787	0.197

● : Line up

Reference pages: Toolholders → F171 - F177, Standard cutting conditions → F192

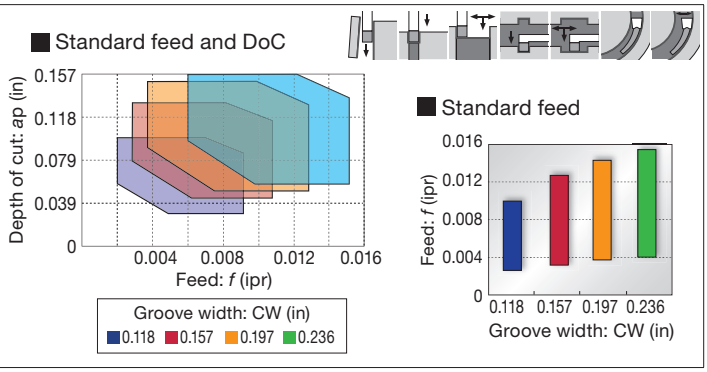
Face grooving and turning

DTX type (2 corners)

F178 page

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.118" - 0.236"



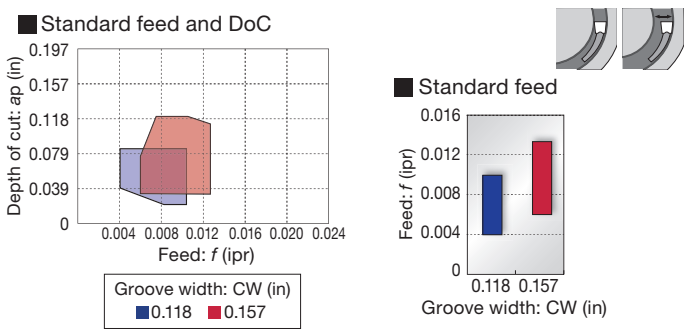
DTF type (2 corners)

First choice

F178 page

1st choice for face grooving

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 0.118" - 0.157"

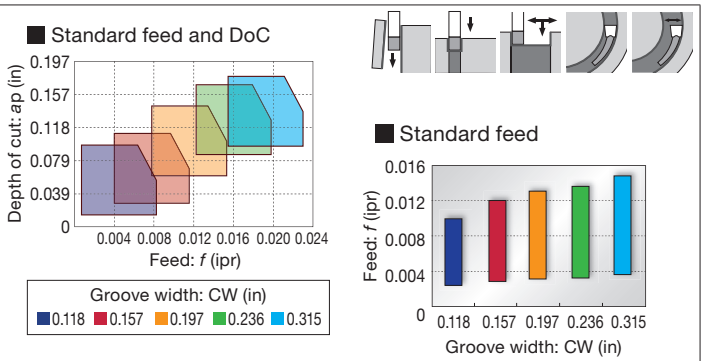


DTM type (2 corners)

F179 page

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.118" - 0.315"

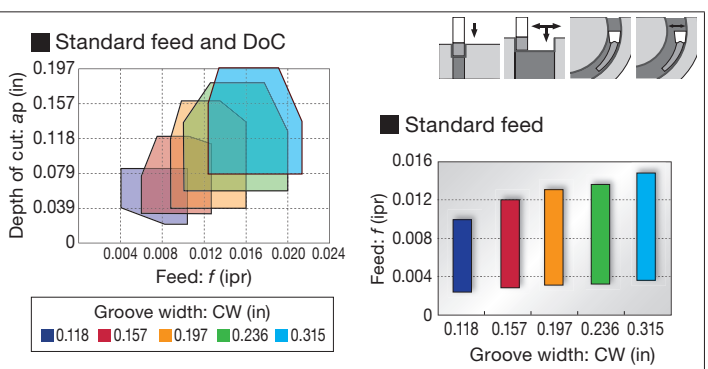


DTE type (2 corners)

F179, F180 page

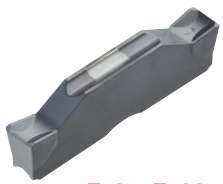
General purpose

Unique chipbreaker makes chips shorter
Molded and ground inserts available
CW = 0.118" - 0.315"



Grooving

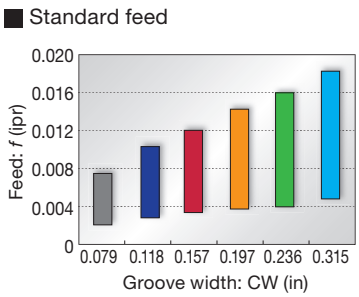
DGM type (2 corners)
SGM type (1 corner)

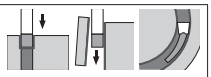


F181, F182 page

1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 0.079" - 0.315"



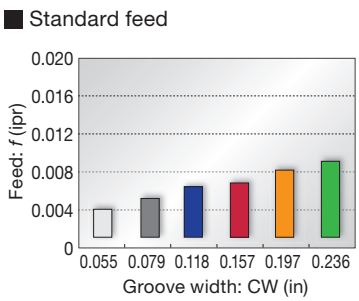


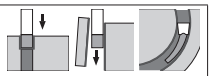
DGS type (2 corners)
SGS type (1 corner)

F183, F184 page

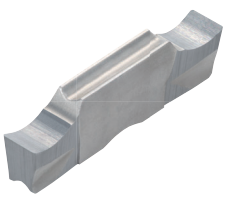
Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 0.055" - 0.236"





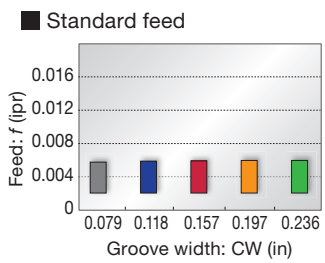
DGG type
(2 corners)

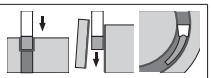


F184 page

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 0.079" - 0.236"



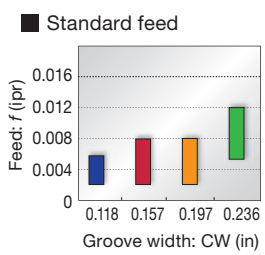


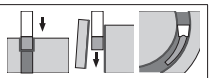
DGL type
(2 corners)

F185 page

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often has difficulties with chip control
CW = 0.118" - 0.236"





Profiling and undercutting

DTR type (2 corners)

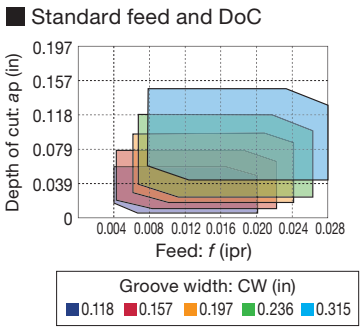
Molded

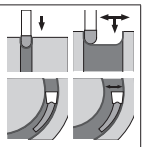
Ground

F185, F186 page

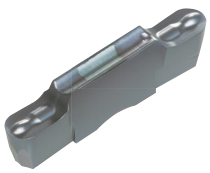
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.118" - 0.315"





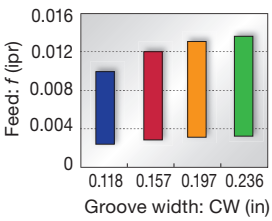
DTIU type (2 corners)

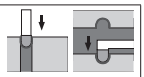


F186 page

Full radius type

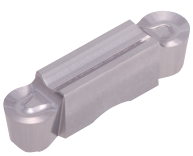
Excellent chip control
For undercutting
CW = 0.118" - 0.236"





Aluminum wheel machining

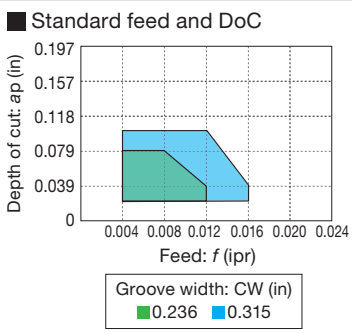
DTA type (2 corners)

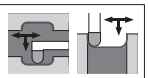


F187 page

Full radius type

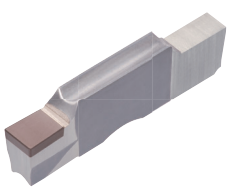
Excellent chip control
For aluminum wheel profiling
Ground insert
CW = 0.236" - 0.315"





External grooving of hardened steel

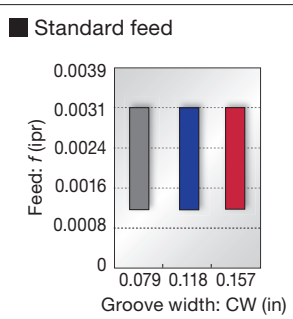
SGN-CBN type (1 corner)

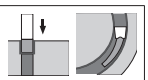


F187 page

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.157"
(CW = ±0.001")



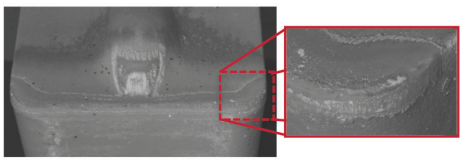


AH7025 Cutting performance

First choice grade for grooving
AH7025 grade: Tungaloy's unique coating technology for drastically improved reliability

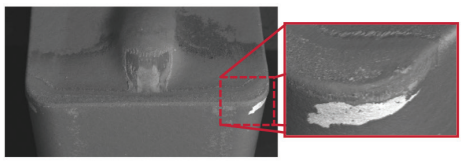
Tool life comparison

AH7025



Tool wear after 60 grooves

Conventional grade



Tool wear after 30 grooves

P Alloy steel (4140)

Insert	: DTE3-040 AH7025
Cutting speed	: *Vc* = 492 sfm
Feed	: *f* = 0.007 ipr
Groove depth	: 0.669"
Machining	: External grooving
Coolant	: Wet

AH7025 provides stability, while preventing coating from peeling off even after machining twice the number of passes compared to the conventional grade.

→ **The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations.**

Grades

AH7025 P M K S

- First choice for various applications
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- Recommended for various applications
- Newly developed coating with well controlled crystal structure and fracture resistance
- Improved adhesion strength

T515 K

- First recommended grade for cast iron
- Excellent wear resistance in high-speed machining

T9225 P

- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K

- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S

- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S

- Recommended for non-ferrous materials and titanium

TH10 N

- Recommended for non-ferrous materials

BX360 H

- Suitable for hardened steel machining
- Ideal balance of wear and chipping resistance due to the optimum CBN content and grain size

STANDARD CUTTING CONDITIONS

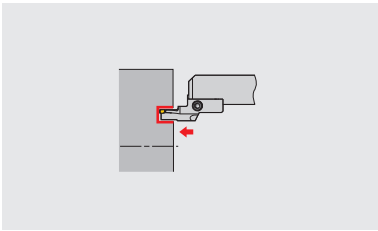
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Priority for wear resistance	T9225	262 - 984
		< 300 HB	Priority for impact resistance	GH130	164 - 394
		< 300 HB	Priority for surface finish	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Priority for impact resistance	GH130	164 - 394
K	Gray cast iron No.250B, No.300B, etc.	-	First choice	T515, AH7025	164 - 591
		-	Priority for impact resistance	GH130	164 - 591
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	First choice	T515, AH7025	164 - 394
		-	Priority for impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel 718, etc.	< HRC 40	First choice	AH7025	66 - 197
		< HRC 40	Priority for wear resistance	AH905	66 - 262
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	66 - 262
		< HRC 40	Priority for impact resistance	AH7025, AH725	66 - 262
		< HRC 40	Priority for surface finish	KS05F	66 - 197
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

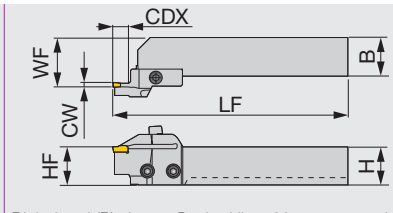
*See page F189 - F190 for feed: *f* (ipr).

MEMO

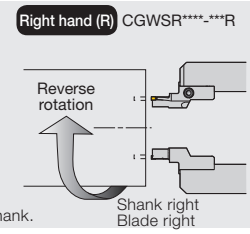
#S/D##R/L+CGWSR/L

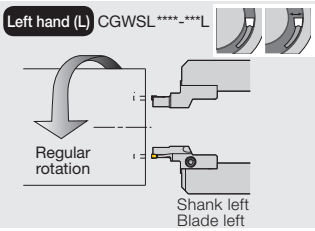
Blade for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)





Right hand (R) shown. Dashed line: 20mm square shank.





Inch	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert	Shank	Torque
30S3040R/L	0.118	1.181	1.575	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWSR/L...	3.69
30S4050R/L	0.118	1.575	1.696	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWSR/L...	3.69
30S5065R/L	0.118	1.696	2.559	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWSR/L...	3.69
30S6590R/L	0.118	2.559	3.543	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWSR/L...	3.69
30S90150R/L	0.118	3.543	5.906	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWSR/L...	3.69
30S150500R/L	0.118	5.906	19.685	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWSR/L...	3.69
40S3545R/L	0.157	1.378	1.772	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWSR/L...	3.69
40S4555R/L	0.157	1.772	2.165	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWSR/L...	3.69
40S5580R/L	0.157	2.165	3.150	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWSR/L...	3.69
40S80140R/L	0.157	3.150	5.512	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWSR/L...	3.69
40S140500R/L	0.157	5.512	19.685	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWSR/L...	3.69
40D3545R/L	0.157	1.378	1.772	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWSR/L...	3.69
40D4555R/L	0.157	1.772	2.165	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWSR/L...	3.69
40D5580R/L	0.157	2.165	3.150	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWSR/L...	3.69
40D80140R/L	0.157	3.150	5.512	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWSR/L...	3.69
40D140500R/L	0.157	5.512	19.685	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWSR/L...	3.69
50S3545R/L	0.197	1.378	1.772	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWSR/L...	3.69
50S4555R/L	0.197	1.772	2.165	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWSR/L...	3.69
50S5575R/L	0.197	2.165	2.953	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWSR/L...	3.69
50S75130R/L	0.197	2.953	5.118	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWSR/L...	3.69
50S130500R/L	0.197	5.118	19.685	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWSR/L...	3.69
50D3545R/L	0.197	1.378	1.772	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWSR/L...	3.69
50D4555R/L	0.197	1.772	2.165	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWSR/L...	3.69
50D5575R/L	0.197	2.165	2.953	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWSR/L...	3.69
50D75130R/L	0.197	2.953	5.118	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWSR/L...	3.69
50D130500R/L	0.197	5.118	19.685	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWSR/L...	3.69

Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Use right-hand blades (CGWSR～) with right-hand shanks ～(R); and left-hand blades (CGWSL～) with left-hand shanks (～L).
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

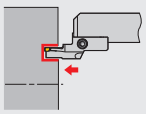
Designation	Clamping screw	Blade screw	Wrench
30S..., 40S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

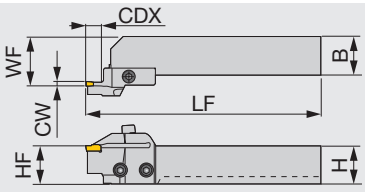
Reference pages: Inserts → F200 - F202, Standard cutting conditions → F205

MY-T SERIES

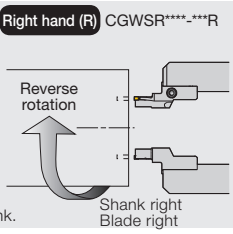
#S/D##R/L+CGWSR/L

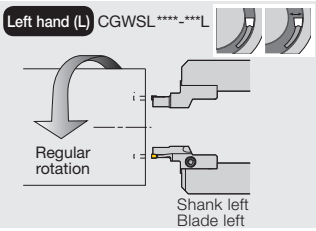
Blade for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)





Right hand (R) shown. Dashed line: 20mm square shank.





Metric	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert	Shank	Torque
30S3040R/L	3	30	40	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S4050R/L	3	40	50	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S5065R/L	3	50	65	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S6590R/L	3	65	90	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S90150R/L	3	90	150	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S150500R/L	3	150	500	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
40S3545R/L	4	35	45	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S4555R/L	4	45	55	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S5580R/L	4	55	80	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S80140R/L	4	80	140	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S140500R/L	4	140	500	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D3545R/L	4	35	45	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D4555R/L	4	45	55	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D5580R/L	4	55	80	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D80140R/L	4	80	140	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D140500R/L	4	140	500	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
50S3545R/L	5	35	45	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S4555R/L	5	45	55	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S5575R/L	5	55	75	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S75130R/L	5	75	130	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S130500R/L	5	130	500	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50D3545R/L	5	35	45	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D4555R/L	5	45	55	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D5575R/L	5	55	75	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D75130R/L	5	75	130	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D130500R/L	5	130	500	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5

Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Use right-hand blades (CGWSR～) with right-hand shanks ～(R); and left-hand blades (CGWSL～) with left-hand shanks (～L).
Torque: Recommended clamping torque: N·m

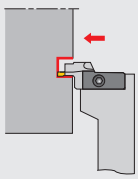
SPARE PARTS

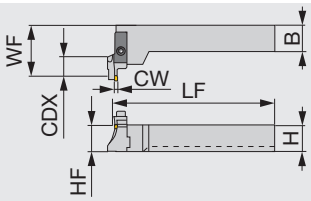
Designation	Clamping screw	Blade screw	Wrench
30S..., 40S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

Reference pages: Inserts → F200 - F202, Standard cutting conditions → F205

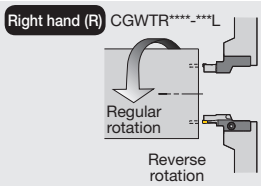
#S/D##R/L+CGWTR/L

Blade for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)

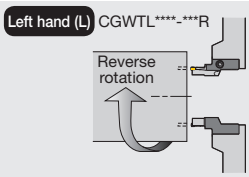




Right hand (R) shown. Dashed line: 20mm square shank.



Shank right
Blade left



Shank left
Blade right

Inch	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert	Shank	Torque
30S3040R/L	0.118	1.181	1.575	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWTL/R...	3.69
30S4050R/L	0.118	1.575	1.696	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWTL/R...	3.69
30S5065R/L	0.118	1.696	2.559	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWTL/R...	3.69
30S6590R/L	0.118	2.559	3.543	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWTL/R...	3.69
30S90150R/L	0.118	3.543	5.906	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWTL/R...	3.69
30S150500R/L	0.118	5.906	19.685	0.393	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*30, GE30-AL	CGWTL/R...	3.69
40S3545R/L	0.157	1.378	1.772	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWTL/R...	3.69
40S4555R/L	0.157	1.772	2.165	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWTL/R...	3.69
40S5580R/L	0.157	2.165	3.150	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWTL/R...	3.69
40S80140R/L	0.157	3.150	5.512	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWTL/R...	3.69
40S140500R/L	0.157	5.512	19.685	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*40, GE40-AL	CGWTL/R...	3.69
40D3545R/L	0.157	1.378	1.772	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWTL/R...	3.69
40D4555R/L	0.157	1.772	2.165	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWTL/R...	3.69
40D5580R/L	0.157	2.165	3.150	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWTL/R...	3.69
40D80140R/L	0.157	3.150	5.512	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWTL/R...	3.69
40D140500R/L	0.157	5.512	19.685	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*40, GE40-AL	CGWTL/R...	3.69
50S3545R/L	0.197	1.378	1.772	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWTL/R...	3.69
50S4555R/L	0.197	1.772	2.165	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWTL/R...	3.69
50S5575R/L	0.197	2.165	2.953	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWTL/R...	3.69
50S75130R/L	0.197	2.953	5.118	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWTL/R...	3.69
50S130500R/L	0.197	5.118	19.685	0.551	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.057	G*50	CGWTL/R...	3.69
50D3545R/L	0.197	1.378	1.772	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWTL/R...	3.69
50D4555R/L	0.197	1.772	2.165	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWTL/R...	3.69
50D5575R/L	0.197	2.165	2.953	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWTL/R...	3.69
50D75130R/L	0.197	2.953	5.118	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWTL/R...	3.69
50D130500R/L	0.197	5.118	19.685	0.866	0.750/1.0	0.750/1.0	5.906	0.750/1.0	2.372	G*50	CGWTL/R...	3.69

Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Use right-hand shanks (CGWTR~) with left-hand blades (~L); and left-hand shanks (CGWTL~) with right-hand blades (~R).
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

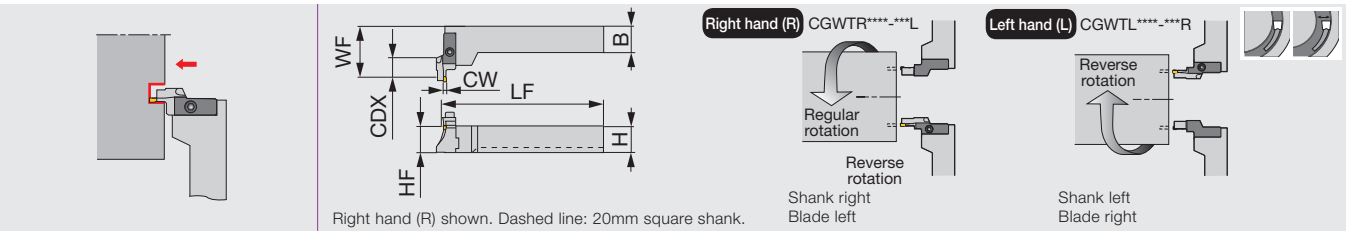
Designation	Clamping screw	Blade screw	Wrench
30S..., 40S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

Reference pages: Inserts → F200 - F202, Standard cutting conditions → F205

MY-T SERIES

#S/D##R/L+CGWTR/L

Blade for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)



Right hand (R) shown. Dashed line: 20mm square shank.

Metric	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert	Shank	Torque
30S3040R/L	3	30	40	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S4050R/L	3	40	50	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S5065R/L	3	50	65	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S6590R/L	3	65	90	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S90150R/L	3	90	150	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S150500R/L	3	150	500	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
40S3545R/L	4	35	45	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S4555R/L	4	45	55	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S5580R/L	4	55	80	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S80140R/L	4	80	140	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S140500R/L	4	140	500	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40D3545R/L	4	35	45	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D4555R/L	4	45	55	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D5580R/L	4	55	80	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D80140R/L	4	80	140	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D140500R/L	4	140	500	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
50S3545R/L	5	35	45	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S4555R/L	5	45	55	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S5575R/L	5	55	75	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S75130R/L	5	75	130	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S130500R/L	5	130	500	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50D3545R/L	5	35	45	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D4555R/L	5	45	55	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D5575R/L	5	55	75	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D75130R/L	5	75	130	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D130500R/L	5	130	500	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5

Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Use right-hand shanks (CGWTR～) with left-hand blades (～L); and left-hand shanks (CGWTL～) with right-hand blades (～R).
Torque: Recommended clamping torque: N·m

SPARE PARTS

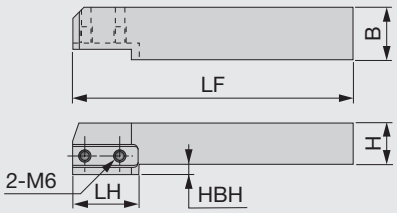
Designation	Clamping screw	Blade screw	Wrench
30S..., 40S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

Reference pages: Inserts → F200 - F202, Standard cutting conditions → F205

MY-T SERIES

CGWSR/L

Shank for CGWSR/L-WG, -WG-L, -G, -CGD, -FL-G/TP, and -#S/D toolholders



Right hand (R) shown.

Inch	H	B	LF	LH	HBH
CGWSR/L12	0.750	0.750	5.400	1.310	0.250
CGWSR/L16	1.000	1.000	5.400	-	-

Metric	H	B	LF	LH	HBH
CGWSR/L2020	20	20	137	32.5	5
CGWSR/L2525	25	25	137	-	-

Note: Right hand tool holders (R) use right hand cartridges (R). Left hand tool holders (L) use left hand cartridges (L).

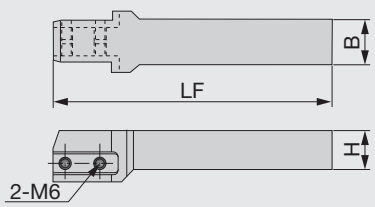
SPARE PARTS

Designation	Blade screw
CGWSR/L...	CSHB-6

MY-T SERIES

CGWSRL

Shank of toolholders. Vertical type with offset



Inch	H	B	LF
CGWSRL12	0.75	0.75	5.40
CGWSRL16	1.00	1.00	5.40

Note: Right (R) or Left (L) hand cartridges can be used in this toolholder

SPARE PARTS

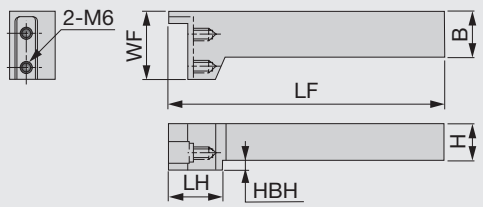
Designation	Blade screw
CGWSRL...	CSHB-6

External
Internal
Face
Parting
Others

Reference pages: Inserts → F200 - F202, Standard cutting conditions → F205

CGWTR/L

Shank for CGWSR/L-WG, -WG-L, -G, -CGD, -FL-G/TP, and #S/D toolholders



Right hand (R) shown.

Inch	H	B	LF	LH	WF	HBH
CGWTR/L12	0.75	0.75	6.00	1.20	1.50	0.234
CGWTR/L16	1.00	1.00	6.00	-	1.50	-

Metric	H	B	LF	LH	WF	HBH
CGWTR/L2020	20	20	150	30.5	37	5
CGWTR/L2525	25	25	150	-	37	-

Note: Right hand tool holders (R) use left hand cartridges (L). Left hand tool holders (L) use right hand cartridges (R).

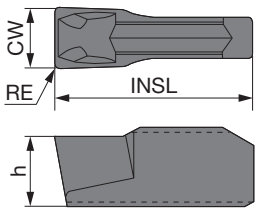
SPARE PARTS

Designation	Blade screw
CGWTR/L...	CSHB-6

Reference pages: Inserts → F200 - F202, Standard cutting conditions → F205

GE

For general grooving



		Coated						Cermet					
P	Steel	★	☆	★	★			★					
M	Stainless	★		★	★								
K	Cast iron	☆		★	☆			☆					
N	Non-ferrous												
S	Superalloys			☆									
H	Hard materials												

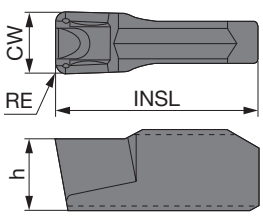
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	T9225	T9125	AH120	GH730			NS9530						INSL (in)	h (in)
GE20	2	0.079	0.008			●	●			●						0.394	0.138
GE30	3	0.118	0.008	●	▲	●	●			●						0.394	0.138
GE40	4	0.157	0.008	●	▲	●	●			●						0.394	0.157
GE50	5	0.197	0.008	●	▲	●	●			●						0.472	0.177

● : Line up
▲ : To be discontinued

GT

For turning



		Coated						Cermet					
P	Steel	★	☆	★	★			★					
M	Stainless	★		★	★								
K	Cast iron	☆		★	☆			☆					
N	Non-ferrous												
S	Superalloys			☆									
H	Hard materials												

★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	T9225	T9125	AH120	GH730			NS9530						INSL (in)	h (in)
GT30	3	0.118	0.016			●	●			●						0.394	0.138
GT40	4	0.157	0.016			●	●			●						0.394	0.157
GT50	5	0.197	0.016	●	▲	●	●			●						0.472	0.177

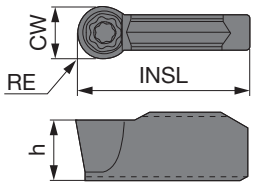
● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F194 - F199, Standard cutting conditions → F205

GR

For profiling (full radius)



		T9225	T9125	AH120	GH730			NS9530						
P	Steel	★	☆	★	★			★						
M	Stainless	★		★	★									
K	Cast iron	☆		★	☆			☆						
N	Non-ferrous													
S	Superalloys			☆										
H	Hard materials													

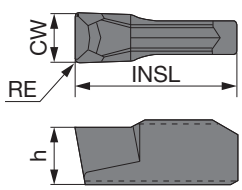
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530							
GR30	3	0.118	0.059			●	●			●						0.394	0.138
GR40	4	0.157	0.079	●	▲	●	●			●						0.394	0.157
GR50	5	0.197	0.098	●	▲	●	●			●						0.472	0.177

● : Line up
▲ : To be discontinued

GF

For face grooving



		GH730			NS9530		
P	Steel	★			★		
M	Stainless	★					
K	Cast iron	☆			☆		
N	Non-ferrous						
S	Superalloys						
H	Hard materials						

★ : First choice
☆ : Second choice

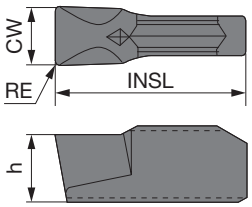
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated			Cermet			INSL (in)	h (in)
				GH730			NS9530				
GF30	3	0.118	0.008	●			●			0.394	0.138
GF40	4	0.157	0.008	●			●			0.394	0.157
GF50	5	0.197	0.008	●			●			0.472	0.177

● : Line up

Reference pages: Toolholders → F194 - F199, Standard cutting conditions → F205

GN

For internal grooving



P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

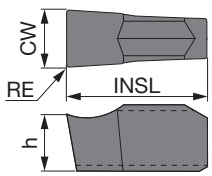
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated GH730	INSL (in)	h (in)
GN30	3	0.118	0.008	●	0.394	0.138
GN40	4	0.157	0.008	●	0.394	0.157
GN50	5	0.197	0.008	●	0.472	0.177

● : Line up

GE-AL

For aluminum and non-ferrous metal



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Uncoated KS05F	INSL (in)	h (in)
GE20-AL	2	0.079	0.008	●	0.394	0.138
GE30-AL	3	0.118	0.008	●	0.394	0.138
GE40-AL	4	0.157	0.008	●	0.394	0.157

● : Line up

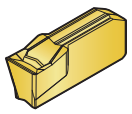
External
Internal
Face
Parting
Others

Reference pages: Toolholders → F194 - F199, Standard cutting conditions → F205

1 corner insert

Face grooving

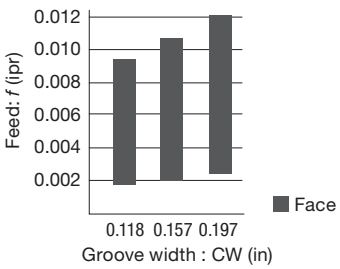
GF

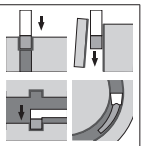


F201 page

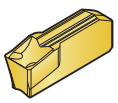
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 0.118" - 0.197"





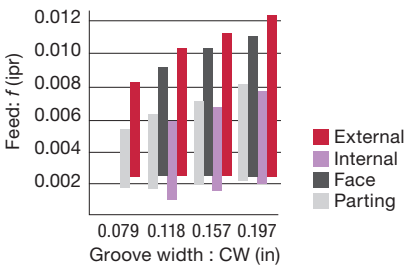
GE

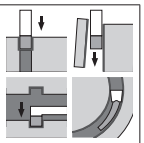


F200 page

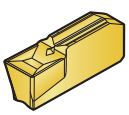
1st choice for external grooving and parting
Excellent chip control

CW = 0.079" - 0.197"





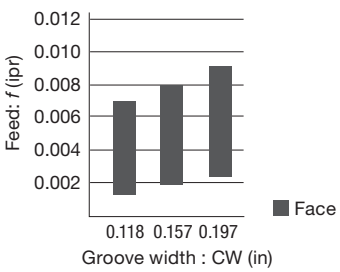
GN

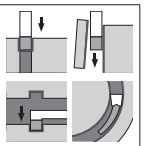


F202 page

1st choice for internal grooving
Low cutting force and good chip control for internal grooving

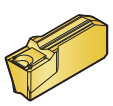
CW = 0.118" - 0.197"





External grooving and turning

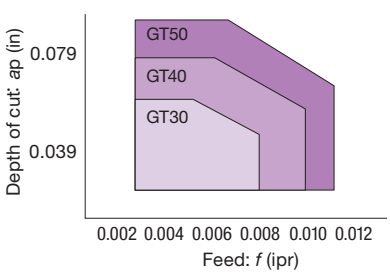
GT

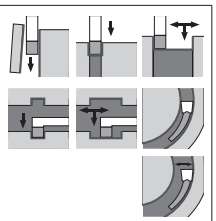


F200 page

1st choice for turning
Low cutting force and good chip control for traversing

CW = 0.118" - 0.197"

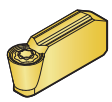




1 corner insert

Profiling

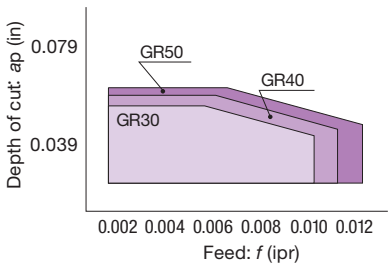
GR

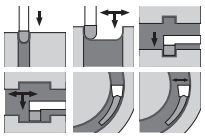


F201 page

Full radius type
Low cutting force and good chip control for profiling

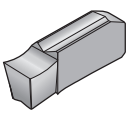
CW = 0.118" - 0.197"





For aluminum and non-ferrous metal

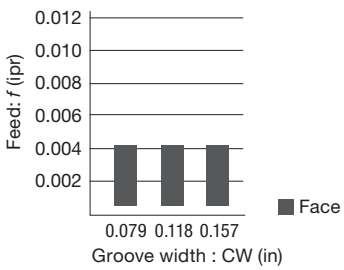
GE-AL

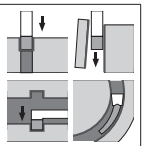


F202 page

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.079" - 0.157"





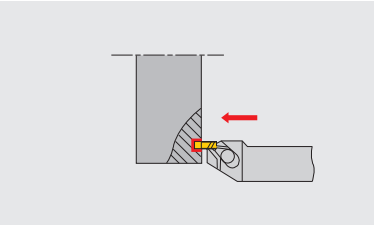
STANDARD CUTTING CONDITIONS

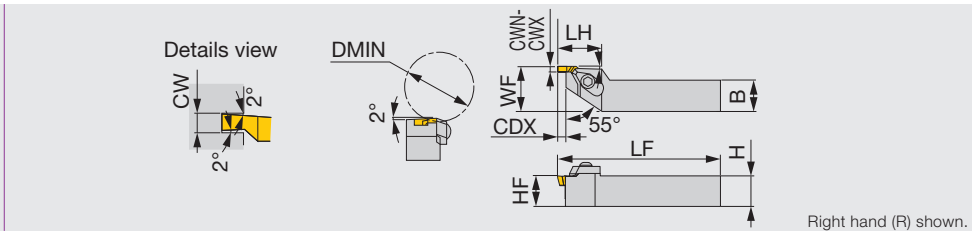
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (- HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730	164 - 591
	Medium carbon steel, Alloy steel (HB150 - 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730	164 - 492
	High carbon steel, Alloy steel (HB250 -)	T9225	262 - 722
		NS9530	262 - 492
		GH730	164 - 394
M	Stainless steel	T9225	262 - 591
		GH730	164 - 394
K	Gray iron, Ductile cast iron	T9225	262 - 820
		GH730	164 - 591
N	Aluminum alloys, Non-ferrous metal	KS05F	656 - 984

1st choice for face grooving

Operation	Feed: *f* (ipr)		
	Groove width: CW (in)		
	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Face grooving (GE**)	0.0024 - 0.009	0.0024 - 0.009	0.0028 - 0.010
Face grooving (GF**)	0.0016 - 0.010	0.0020 - 0.010	0.0020 - 0.012
Traversing (GT**)	Depth of cut *ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	Depth of cut *ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	Depth of cut *ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Traversing (GR**)	Depth of cut *ap* = 0.020 - 0.055 *f* = 0.002 - 0.010	Depth of cut *ap* = 0.020 - 0.059 *f* = 0.002 - 0.010	Depth of cut *ap* = 0.020 - 0.063 *f* = 0.002 - 0.012
Grooving for Aluminum alloys (GE**-AL)	0.0012 - 0.004	0.0012 - 0.004	-

For diameter compensation values in traversing, see page F111.
When vibration occurs in turning, please use the lower limit value in the above table.





Right hand (R) shown.

Metric	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque
GX-2525R/LF	1	4.5	55	1.5 - 6	25	25	150	35	25	32	XNL/R63...	5

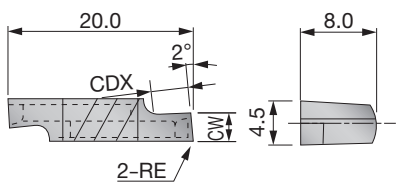
Use right-hand toolholders (GX-...RF) with left-hand inserts (XNL); and left-hand toolholders (GX-...LF)) with right-hand inserts (GBR).
Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamp set	Clamping screw	Shim	Shim screw	Wrench
GX-2525RF	CP81A	RT-1	SL-3R	BHM4-8	P-4
GX-2525LF	CP81A	RT-1	SL-3L	BHM4-8	P-4

INSERT

XNR/L



Left hand (L) shown.

		Cermet			Uncoated		
P	Steel	★			★		
M	Stainless						
K	Cast iron	☆			☆		
N	Non-ferrous						
S	Superalloys						
H	Hard materials						

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	NS9530	TH10	CDX (mm)
XNR6310-02	R	0.039	1	0.2	●	●	1.5
XNL6310-02	L	0.039	1	0.2	●	●	1.5
XNR6315-02	R	0.059	1.5	0.2	●	●	2.3
XNL6315-02	L	0.059	1.5	0.2	●	●	2.3
XNR6320-02	R	0.079	2	0.2	●	●	3
XNL6320-02	L	0.079	2	0.2	●	●	3
XNR6325-02	R	0.098	2.5	0.2	●	●	3.8
XNL6325-02	L	0.098	2.5	0.2	●	●	3.8
XNR6330-02	R	0.118	3	0.2	●	●	4.5
XNL6330-02	L	0.118	3	0.2	●	●	4.5
XNR6335-02	R	0.138	3.5	0.2	●	●	5.3
XNL6335-02	L	0.138	3.5	0.2	●	●	5.3
XNR6340-02	R	0.157	4	0.2	●	●	6
XNL6340-02	L	0.157	4	0.2	●	●	6
XNR6345-02	R	0.177	4.5	0.2	●	●	6
XNL6345-02	L	0.177	4.5	0.2	●	●	6

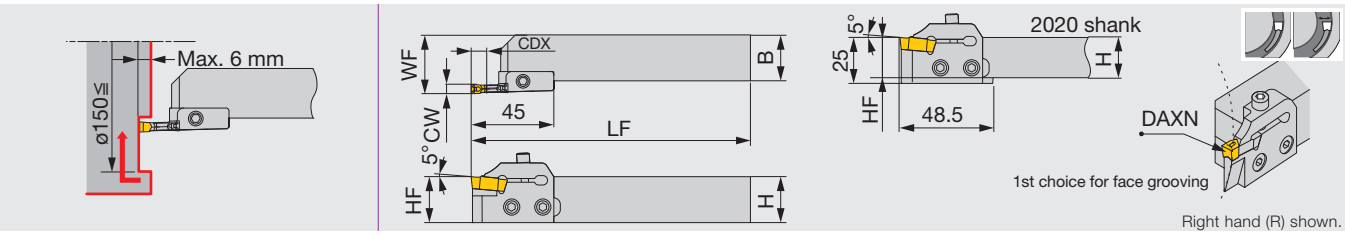
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)		
				CW < 0.079"	CW = 0.079" - 0.157"	CW > 0.157"
P	Carbon steels	NS9530	262 - 656	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
K	Cast irons, Light alloys	TH10	197 - 492	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010

CGWSR/L-FLR/L5TP

Face grooving and turning toolholder



Metric	CW	DAXN	CDX	H	B	LF	HF	WF	Insert	Shank	Blade	Torque
CGWSR/L2020-FLR/L5TP	5	150	6	20	20	152	20	27	FLEX50R/L	CGWSR/L2020	FLR/L5TP	5
CGWSR/L2525-FLR/L5TP	5	150	6	25	25	152	25	32	FLEX50R/L	CGWSR/L2525	FLR/L5TP	5

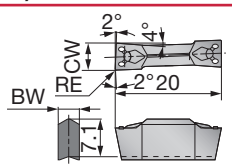
Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Note: Use right-hand blades (CCWSR...) with right-hand shanks (FLR5TP); and left-hand blades (CGWSL...) with left-hand shanks (FLL5TP).
Torque: Recommended clamping torque: N·m

SPARE PARTS

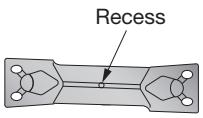
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-FLR/L5TP	CHHM5-18	CSHB-6	P-4

INSERT

FLEX(R/L)



Right hand (R) shown.



To distinguish the insert hands, the V-shape surface (top surface) of a left-hand insert has a recess. (not of a right-hand insert)

		Coated			Carbide		Uncoated	
P	Steel	★	☆		★		★	
M	Stainless	★					★	
K	Cast iron	☆			☆			
N	Non-ferrous							
S	Superalloys							
H	Hard materials							

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	T9225	T9125	NS9530	UX30	BW (mm)
FLEX30R	R	0.118	3	0.4			●		2.2
FLEX30L	L	0.118	3	0.4			●		2.2
FLEX40R	R	0.157	4	0.4			●		3.1
FLEX40L	L	0.157	4	0.4			●		3.1
FLEX50R	R	0.197	5	0.4	●	▲	●	●	4
FLEX50L	L	0.197	5	0.4	●	▲	●	●	4

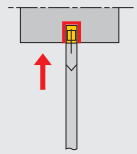
● : Line up
▲ : To be discontinued

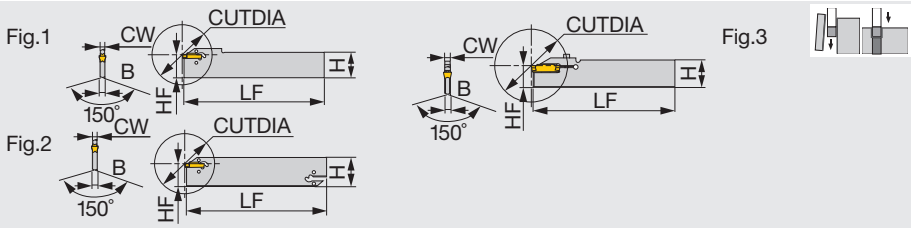
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Turning
P	Carbon steel	T9225	262 - 984	0.002 - 0.010	0.004 - 0.012
		NS9530	262 - 656	0.002 - 0.010	0.004 - 0.012
		UX30	197 - 492	0.002 - 0.010	0.004 - 0.012

CGP

External deep grooving and parting blade





Inch	CW (in)	CW (mm)	Seat size	CUTDIA	H	B	LF	HF	Fig.	Torque
CGP26-1.4S	0.055	1.4	1	1.024	1.024	0.039	5.906	0.843	1	-
CGP32-1.4D	0.055	1.4	1	1.024	1.260	0.039	5.906	0.976	2	-
CGP26-2S	0.079	2	2	1.575	1.024	0.071	5.906	0.843	1	-
CGP32-2D	0.079	2	2	1.969	1.260	0.071	5.906	0.976	2	-
CGP26-3S	0.118	3	3	1.969	1.024	0.094	5.906	0.843	1	-
CGP32-3D	0.118	3	3	3.937	1.260	0.094	5.906	0.976	2	-
CGP26-4S	0.157	4	4	3.150	1.024	0.126	5.906	0.843	1	-
CGP32-4D	0.157	4	4	3.937	1.260	0.126	5.906	0.980	2	-
CGP45-4D	0.157	4	4	4.724	1.772	0.126	5.906	1.500	2	-
CGP32-5D	0.197	5	5	4.724	1.260	0.157	5.906	0.980	2	-
CGP32-6D	0.236	6	6	4.724	1.260	0.205	5.906	0.980	2	-
CGP32-8S-CL	0.315	8	8	3.150	1.260	0.244	5.906	0.980	3	2.21

When depth is deeper than (insert length - 0.059"), 1 corner type is recommended.
• CUTDIA: Max. parting dia.
Torque: Recommended clamping torque: lbs·ft

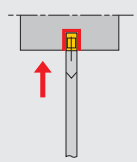
SPARE PARTS

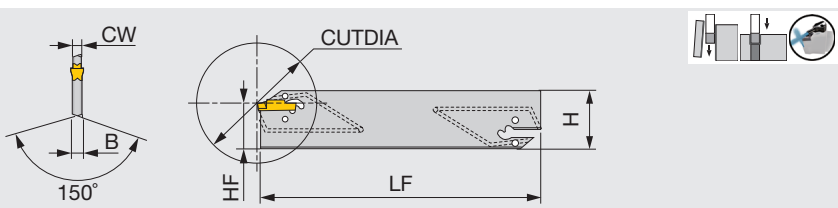
Designation	Clamping screw	Wrench	Wrench (Optional)
CGP**-1.4*	-	-	CRW23
CGP**-2/3/4/5/6	-	-	CRW33
CGP32-8S-CL	CM4X0.7X20-M0-A	P-3	-

Wrench (CRW...) is not included. Please order it separately.

CGP32-CHP

External deep grooving and parting blade, with high pressure coolant capability





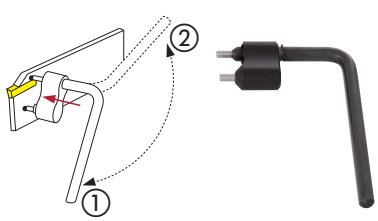
Inch	CW	Seat size	CUTDIA	H	B	LF	HF
CGP32-2D-CHP	0.079	2	1.968	1.260	0.071	5.906	0.976
CGP32-3D-CHP	0.118	3	3.937	1.260	0.094	5.906	0.976
CGP32-4D-CHP	0.157	4	3.937	1.260	0.126	5.906	0.980
CGP32-5D-CHP	0.197	5	4.724	1.260	0.157	5.906	0.980
CGP32-6D-CHP	0.236	6	4.724	1.260	0.205	5.906	0.980

When depth is deeper than (insert length - 0.059"), 1 corner type is recommended.
• CUTDIA Max. parting dia

SPARE PARTS

Designation	Sealing screw	Wrench (Optional)
CGP32-*D-CHP	SGC340	CRW33

Wrench (CRW...) is not included. Please order it separately.



■ Caution

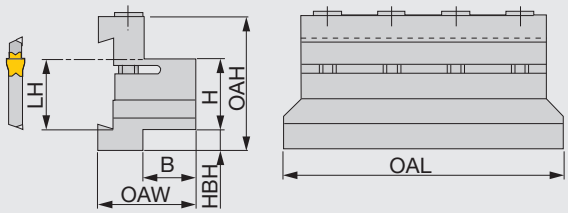
Newly developed clamp

Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.

Reference pages: Inserts → F211 - F219, Standard cutting conditions → F224
Tool block → F210, K032

CTBF

Tool block for CGP blades (fixed clamp)



Right hand (R) shown.

Metric	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)
CTBF25-45	25	22	110	38.1	25	66	40	CGP45...
CTBF32-45	32	28	120	38.1	18	66	45	CGP45...

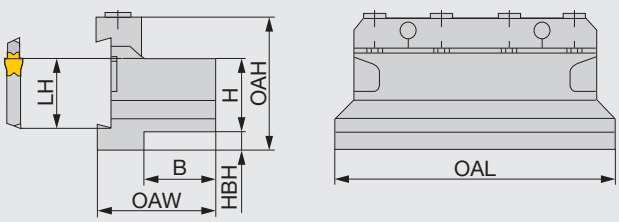
SPARE PARTS

Designation	Clamping screw	Wrench
CTBF...	CM6X1.0X40-A	P-5

TUNGCUT

CTBU

Tool block for CGP blades



Right hand (R) shown.

Inch	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)
CTBU12-26-U	0.750	1.690	3.386	0.843	0.354	1.690	1.496	CGP26...
CTBU16-26-U	1.000	1.770	4.331	0.843	0.197	1.770	1.654	CGP26...
CTBU12-32-U	0.750	1.970	3.937	0.976	0.512	1.970	1.496	CGP32...
CTBU16-32-U	1.000	1.970	4.331	0.976	0.315	1.970	1.654	CGP32...
CTBU20-32-U	1.250	2.130	4.331	0.976	0.197	2.130	1.890	CGP32...

Metric	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)
CTBU20-26	20	21	86	21.4	9	43	38	CGP26...
CTBU25-26	25	23	110	21.4	5	45	43	CGP26...
CTBU20-32	20	19	100	24.8	13	50	38	CGP32...
CTBU25-32	25	23	110	24.8	8	50	42	CGP32...
CTBU32-32	32	29	110	24.8	5	54	48	CGP32...

Inch SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU12-26-U	CT-86	CM6X30-S	P-5
CTBU16-26-U	CT-100	CM6X30-S	P-5
CTBU12-32-U	CT-105	CM6X30-S	P-5
CTBU16-32-U	CT-110	CM6X30-S	P-5
CTBU20-32-U	CT-110	CM6X30-S	P-5

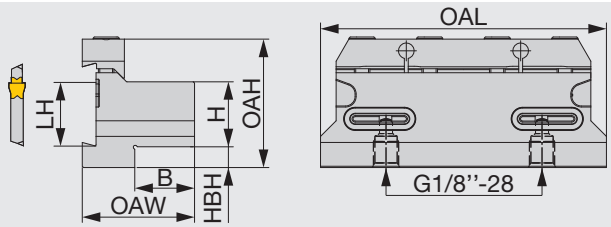
Metric SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU20-26	CT-86	CM6X30-S	P-5
CTBU25-26	CT-105	CM6X30-S	P-5
CTBU20-32	CT-100	CM6X30-S	P-5
CTBU25-32	CT-110	CM6X30-S	P-5
CTBU32-32	CT-110	CM6X30-S	P-5

Reference pages: Blade → F209

CTBU-CHP

Tool blocks for high pressure coolant



Inch	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)
CTBU16-32-U-CHP	1.000	0.906	4.331	0.976	0.315	1.97	1.654	CGP32-*D-CHP

Applicable for 14 MPa coolant

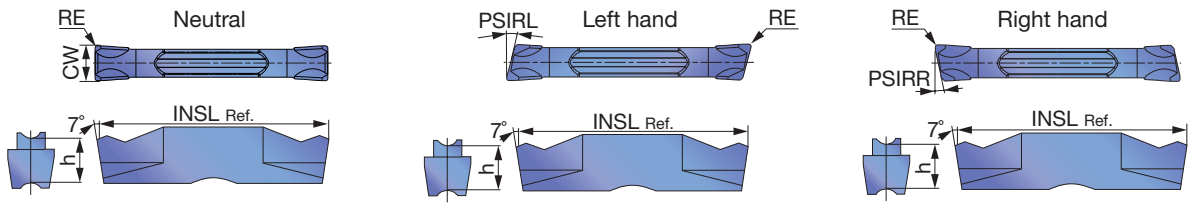
SPARE PARTS

Designation	Clamping screw	Clamp	Wrench	O-ring
CTBU16-32-U-CHP	SRM6X16DIN912-12.9	CT-110	P-5	OR14X2.5NN

INSERT

DGM

External grooving and parting, 2 corners



P	Steel	★	★	★	☆		☆			★		
M	Stainless	★		★	☆		★					
K	Cast iron	☆		★		☆	☆			☆		
N	Non-ferrous											
S	Superalloys			★	☆	★						
H	Hard materials											

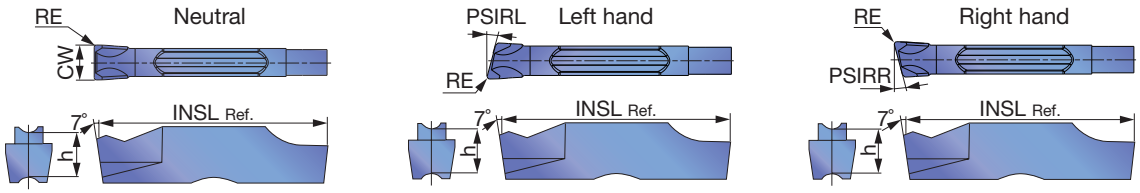
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet				INSL (in)	h (in)	PSIRL	PSIRR
						T9225	T9125	AH7025	AH725	AH905	GH130			NS9530							
DGM2-020	2	N	2	0.079	0.008	●	▲	●	●		●			●				0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008			●	●		●							0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008			●	●		●							0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008				●		●							0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008				●		●							0.762	0.197	15°	0°
DGM3-020	3	N	3	0.118	0.008	●	▲	●	●	●	●			●				0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008			●	●		●							0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008			●	●		●							0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.0008				●		●							0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.0008				●		●							0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008			●	●		●							0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008			●	●		●							0.787	0.197	15°	0°
DGM4-030	4	N	4	0.157	0.012	●	▲	●	●	●	●			●				0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012			●	●		●							0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012			●	●		●							0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012			●	●		●							0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012			●	●		●							0.787	0.197	15°	0°
DGM5-030	5	N	5	0.197	0.012	●	▲	●	●	●	●			●				0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012			●	●		●							0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	▲	●	●	●	●							0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	▲	●	●		●							1.181	0.264	0°	0°

● : Line up ▲ : To be discontinued

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

External deep grooving and parting, 1corner



P	Steel	★	☆	☆			
M	Stainless	★	☆	★			
K	Cast iron	★		☆			
N	Non-ferrous						
S	Superalloys	★	☆				
H	Hard materials						

★ : First choice
☆ : Second choice

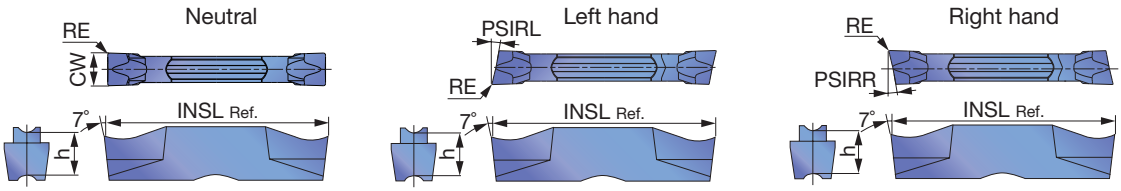
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated									INSL (in)	h (in)	PSIRL	PSIRR
						AH7025	AH725	GH130										
SGM2-020	2	N	2	0.079	0.008	●	●	●							0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●	●							0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●	●							0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●							0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●	●							0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●	●							0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●	●							0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●	●							0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●							0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●	●							0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●	●							0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●							0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●							0.984	0.217	0°	0°

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

External grooving and parting, 2 corners



		Coated							Cermet						
P	Steel	★	★	★	☆	☆			★						
M	Stainless	★		★	☆	★									
K	Cast iron	☆		★		☆			☆						
N	Non-ferrous														
S	Superalloys			★	☆										
H	Hard materials														

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	T9225	T9125	AH7025	AH725	GH130			NS9530						INSL (in)	h (in)	PSIRL	PSIRR
DGS1.4-016	1	N	1.4	0.055	0.006			●	●	●									0.630	0.169	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008			●	●	●									0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008			●	●	●									0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008				●	●									0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008				●	●									0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008			●	●	●									0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008			●	●	●									0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008				●	●									0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008				●	●									0.768	0.197	15°	0°
DGS3-020	3	N	3	0.118	0.008	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008			●	●	●									0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008			●	●	●									0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008				●	●									0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008				●	●									0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008			●	●	●									0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008			●	●	●									0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008				●	●									0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008				●	●									0.766	0.197	15°	0°
DGS4-030	4	N	4	0.157	0.012	●	▲	●	●	●			●						0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012			●	●	●									0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012			●	●	●									0.787	0.197	4°	0°
DGS5-030	5	N	5	0.197	0.012	●	▲	●	●	●			●						0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	▲	●	●	●									0.984	0.217	0°	0°

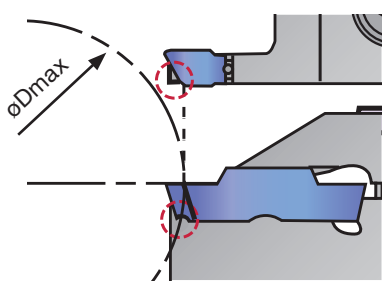
● : Line up
▲ : To be discontinued

Caution

The tool will interfere with the workpiece when grooving larger diameter than øDmax.

Designation	øDmax (in)
DGM2-002-15R/L	1.102
DGM3-002-15R/L	1.141
DGM4-030-15R/L	1.181
SGM3-020-15R/L	4.055

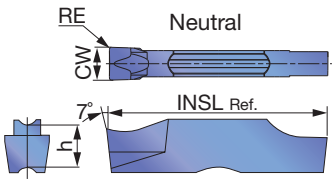
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338

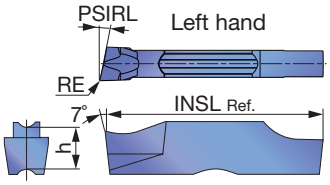


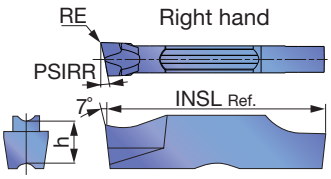
Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

SGS

External deep grooving and parting, 1corner







P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

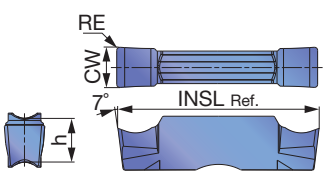
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●	●	0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●	●	0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●	●	0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●	●	0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●	●	0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●	●	0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	0.984	0.217	0°	0°

● : Line up

DGG

External grooving (for high precision)



P	Steel	★			★		
M	Stainless	★					
K	Cast iron	★			☆		☆
N	Non-ferrous						★
S	Superalloys	★					☆
H	Hard materials						

★ : First choice
☆ : Second choice

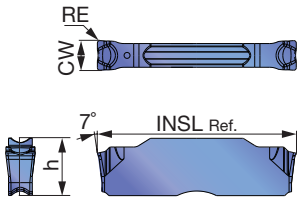
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL (in)	h (in)
DGG200-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGG300-020	3	3	0.118	0.008	●	●	●	0.787	0.197
DGG400-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DGG500-040	5	5	0.197	0.016	●	●	●	0.984	0.217
DGG600-040	6	6	0.236	0.016	●	●	●	0.984	0.217

● : Line up

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

DGL

External grooving and parting



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

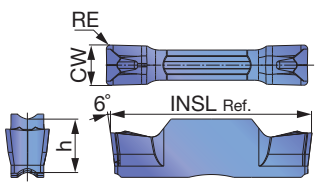
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DGL3-025	3	3	0.118	0.010	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	0.984	0.217

● : Line up

DTM

External face grooving and turning



P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

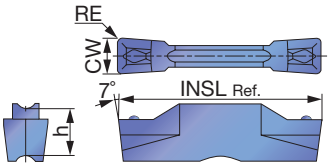
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
DTM3-030	3	3	0.118	0.012	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	0.984	0.217
DTM8-080	8	8	0.315	0.031	●	1.181	0.264

● : Line up

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

DTE

External face grooving and turning (for high precision)



		T9225	T9125	AH7025	AH725	GH130			NS9530					
P	Steel	★	★	★	☆	☆			★					
M	Stainless	★		★	☆	★								
K	Cast iron	☆		★		☆								
N	Non-ferrous													
S	Superalloys			★	☆									
H	Hard materials													

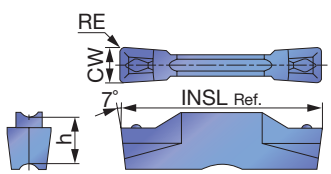
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DTE265-015	3	2.65	0.104	0.006	●	▲	●	●	●			●						0.787	0.197
DTE300-020	3	3	0.118	0.008	●	▲	●	●	●			●						0.787	0.197
DTE300-040	3	3	0.118	0.016	●	▲	●	●	●			●						0.787	0.197
DTE315-015	3	3.15	0.124	0.006	●	▲	●	●	●			●						0.787	0.197
DTE400-040	4	4	0.157	0.016	●	▲	●	●	●			●						0.787	0.197
DTE400-080	4	4	0.157	0.031	●	▲	●	●	●			●						0.787	0.197
DTE415-015	4	4.15	0.163	0.006	●	▲	●	●	●			●						0.787	0.197
DTE478-055	5	4.78	0.188	0.022	●	▲	●	●	●			●						0.984	0.217
DTE500-040	5	5	0.197	0.016	●	▲	●	●	●			●						0.984	0.217
DTE500-080	5	5	0.197	0.031	●	▲	●	●	●			●						0.984	0.217
DTE515-015	5	5.15	0.203	0.006	●	▲	●	●	●									0.984	0.217
DTE600-080	6	6	0.236	0.031	●	▲	●	●	●									0.984	0.217
DTE600-120	6	6	0.236	0.047	●	▲	●	●	●									0.984	0.217
DTE800-080	8	8	0.315	0.031	●	▲	●	●	●									1.181	0.264
DTE800-120	8	8	0.315	0.047	●	▲	●	●	●									1.181	0.264

● : Line up
▲ : To be discontinued

DTE

External face grooving and turning



		T9225	T9125	T515	AH7025	AH725	GH130			NS9530				
P	Steel	★	★		★	☆	☆			★				
M	Stainless	★			★	☆	★							
K	Cast iron	☆		★	★		☆							
N	Non-ferrous													
S	Superalloys				★	☆								
H	Hard materials													

★ : First choice
☆ : Second choice

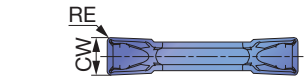
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet					INSL (in)	h (in)
					T9225	T9125	T515	AH7025	AH725	GH130			NS9530						
DTE3-040	3	3	0.118	0.016	●	▲	●	●	●	●			●					0.787	0.197
DTE4-040	4	4	0.157	0.016	●	▲	●	●	●	●			●					0.787	0.197
DTE5-040	5	5	0.197	0.016			●	●										0.984	0.217
DTE6-080	6	6	0.236	0.031			●	●										0.984	0.217

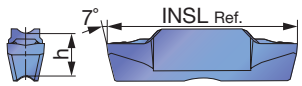
● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

DTX

External/Internal face grooving and turning





		T9225	T9125	AH7025	AH725	GH130			NS9530					
P	Steel	★	★	★	☆	☆			★					
M	Stainless	★		★	☆	★								
K	Cast iron	☆		★		☆			☆					
N	Non-ferrous													
S	Superalloys			★	☆									
H	Hard materials													

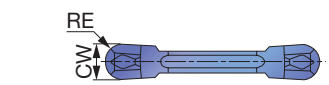
★ : First choice
☆ : Second choice

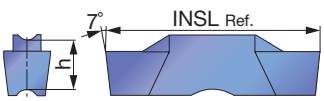
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DTX3-030	3	3	0.118	0.012	●	▲	●	●	●			●						0.787	0.197
DTX4-040	4	4	0.157	0.016	●	▲	●	●	●			●						0.787	0.197
DTX5-040	5	5	0.197	0.016	●	▲	●	●	●			●						0.984	0.217
DTX6-080	6	6	0.236	0.031			●	●	●									0.984	0.197

● : Line up
▲ : To be discontinued

DTR

Profiling and undercutting (for high precision)





		T9225	T9125	AH7025	AH725	GH130			NS9530					
P	Steel	★	★	★	☆	☆			★					
M	Stainless	★		★	☆	★								
K	Cast iron	☆		★		☆			☆					
N	Non-ferrous													
S	Superalloys			★	☆									
H	Hard materials													

★ : First choice
☆ : Second choice

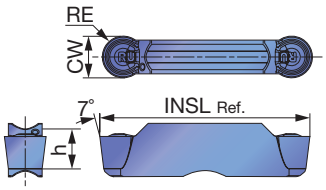
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	GH130			NS9530							
DTR300-150	3	3	0.118	0.059	●	▲	●	●	●			●						0.787	0.197
DTR400-200	4	4	0.157	0.079	●	▲	●	●	●			●						0.787	0.197
DTR478-239	5	4.78	0.188	0.094	●	▲	●	●	●			●						0.984	0.217
DTR500-250	5	5	0.197	0.098	●	▲	●	●	●			●						0.984	0.217
DTR600-300	6	6	0.236	0.118	●	▲	●	●	●									0.984	0.217

● : Line up
▲ : To be discontinued

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

DTR

Profiling and undercutting



P	Steel	★	★	★	☆		☆			★			
M	Stainless	★		★	☆		★						
K	Cast iron	☆		★		☆	☆			☆			
N	Non-ferrous												
S	Superalloys			★	☆	★							
H	Hard materials												

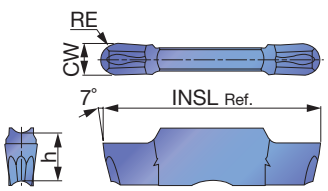
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated								Cermet				INSL (in)	h (in)
					T9225	T9125	AH7025	AH725	AH905	GH130			NS9530					
DTR3-150	3	3	0.118	0.059	●	▲	●	●	●	●			●				0.787	0.197
DTR4-200	4	4	0.157	0.079	●	▲	●	●	●	●			●				0.787	0.197
DTR5-250	5	5	0.197	0.098	●	▲	●	●	●	●			●				0.984	0.217
DTR6-300	6	6	0.236	0.118	●	▲	●	●		●							0.984	0.217
DTR8-400	8	8	0.315	0.157	●	▲	●	●		●							1.181	0.264

● : Line up
▲ : To be discontinued

DTIU

Profiling and undercutting (for high precision)



P	Steel	★	☆	☆						
M	Stainless	★	☆	★						
K	Cast iron	★		☆						
N	Non-ferrous									
S	Superalloys	★	☆							
H	Hard materials									

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated												INSL (in)	h (in)
					AH7025	AH725	GH130											
DTIU300-150	3	3	0.118	0.059	●	●	●										0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●										0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●										0.984	0.217
DTIU600-300	6	6	0.236	0.118	●	●	●										0.984	0.217

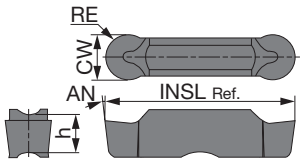
● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

DTA

Aluminum wheel machining (for high precision)



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

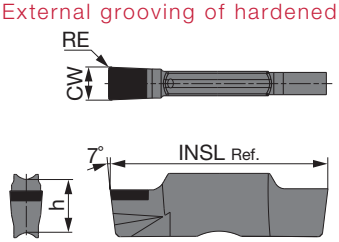
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Uncoated TH10	INSL (in)	h (in)	AN
DTA600-300	6	6	0.236	0.118	●	0.984	0.217	7°
DTA800-400	8	8	0.315	0.157	●	1.181	0.264	10°

● : Line up

SGN

External grooving of hardened steel



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

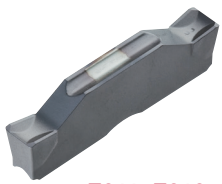
Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN BX360	INSL (in)	h (in)
SGN200-020	2	2	0.079	0.008	●	0.787	0.197
SGN300-020	3	3	0.118	0.008	●	0.787	0.197
SGN400-020	4	4	0.157	0.008	●	0.787	0.197

● : Line up

Reference pages: Toolholders → F209 - F210, Standard cutting conditions → F224

External grooving and parting

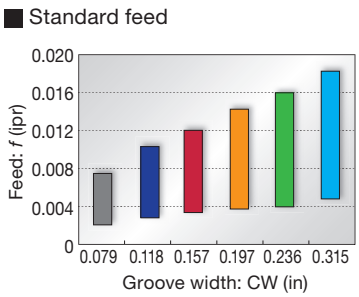
DGM type (2 corners) SGM type (1 corner)

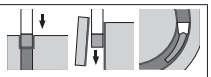


F211, F212 page

1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 0.079" - 0.315"



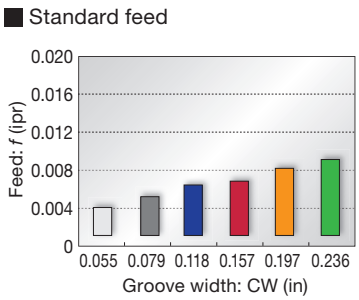


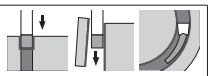
DGS type (2 corners) SGS type (1 corner)

F213, F214 page

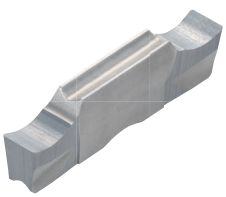
Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 0.055" - 0.236"





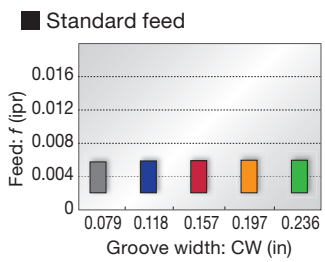
DGG type (2 corners)

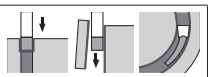


F214 page

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 0.079" - 0.236"



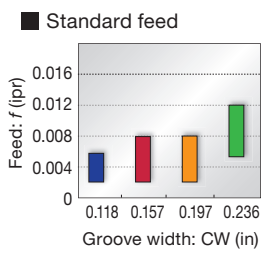


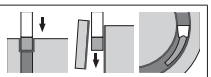
DGL type (2 corners)

F215 page

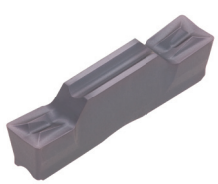
1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often has difficulties with chip control
CW = 0.118" - 0.236"





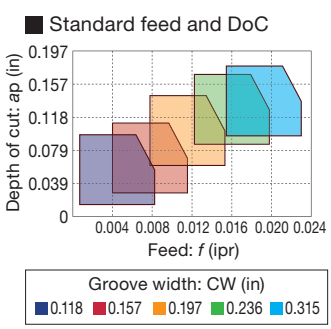
DTM type (2 corners)

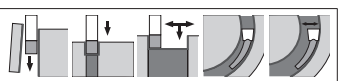


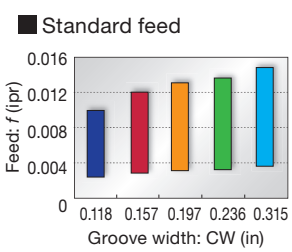
F215 page

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.118" - 0.315"







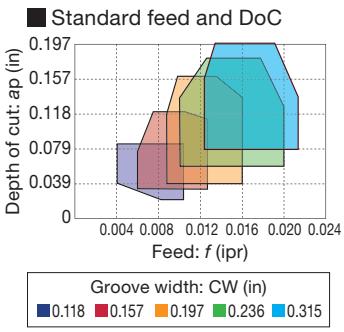
External grooving and turning

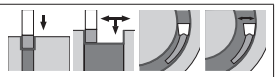
DTE type (2 corners)

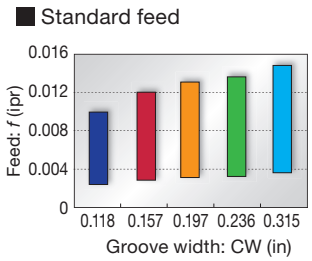
F216 page

General purpose

Unique chipbreaker makes chips shorter
Molded and ground inserts available
CW = 0.118" - 0.315"





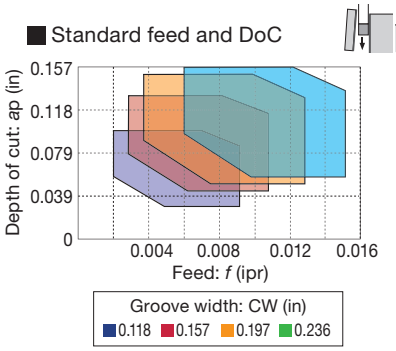


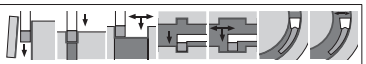
DTX type (2 corners)

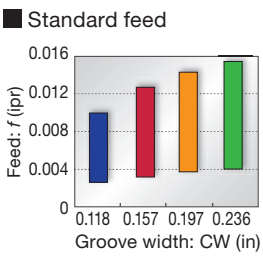
F217 page

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.118" - 0.236"







Profiling and undercutting

DTR type (2 corners)

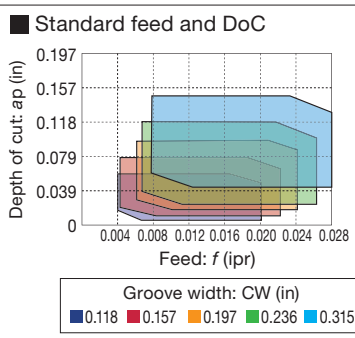
Molded

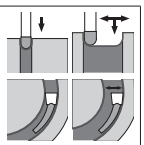
Ground

F217, F218 page

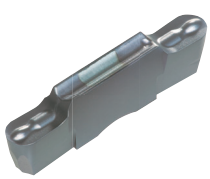
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.118" - 0.315"





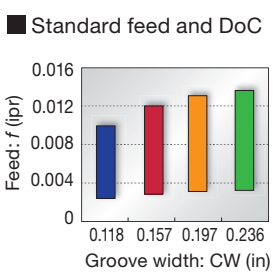
DTIU type (2 corners)

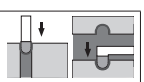


F218 page

Full radius type

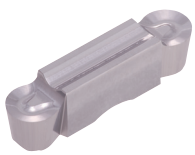
Excellent chip control
For undercutting
CW = 0.118" - 0.236"





Aluminum wheel machining

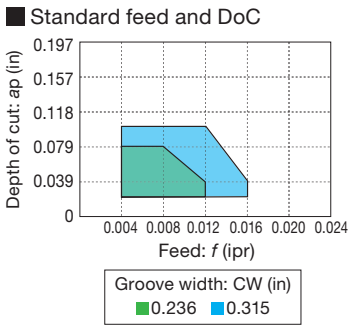
DTA type (2 corners)

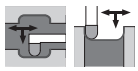


F219 page

Full radius type

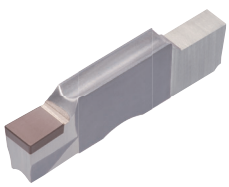
Excellent chip control
For aluminum wheel profiling
Ground insert
CW = 0.236" - 0.315"





External grooving of hardened steel

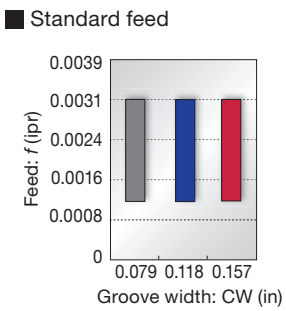
SGN-CBN type (1 corner)

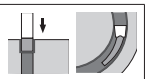


F219 page

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.157"
(CW = ±0.001")



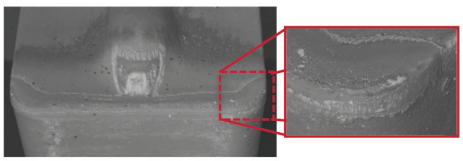


AH7025 Cutting performance

First choice grade for grooving
AH7025 grade: Tungaloy's unique coating technology for drastically improved reliability

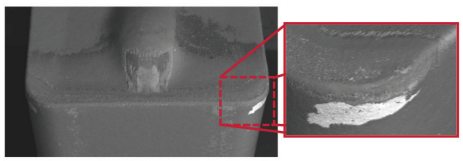
Tool life comparison

AH7025



Tool wear after 60 grooves

Conventional grade



Tool wear after 30 grooves

P Alloy steel (4140)

Insert	: DTE3-040 AH7025
Cutting speed	: *Vc* = 492 sfm
Feed	: *f* = 0.007 ipr
Groove depth	: 0.669"
Machining	: External grooving
Coolant	: Wet

AH7025 provides stability, while preventing coating from peeling off even after machining twice the number of passes compared to the conventional grade.

→ **The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations.**

Grades

AH7025 P M K S

- First choice for various applications
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- Recommended for various applications
- Newly developed coating with well controlled crystal structure and fracture resistance
- Improved adhesion strength

T515 K

- First recommended grade for cast iron
- Excellent wear resistance in high-speed machining

T9225 P

- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K

- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S

- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S

- Recommended for non-ferrous materials and titanium

TH10 N

- Recommended for non-ferrous materials

BX360 H

- Suitable for hardened steel machining
- Ideal balance of wear and chipping resistance due to the optimum CBN content and grain size

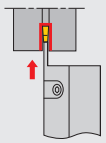
STANDARD CUTTING CONDITIONS

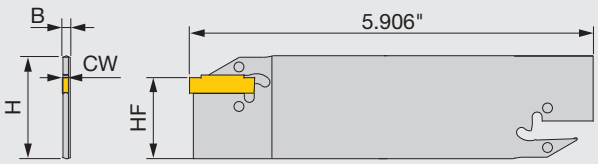
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Priority for wear resistance	T9225	262 - 984
		< 300 HB	Priority for impact resistance	GH130	164 - 394
		< 300 HB	Priority for surface finish	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Priority for impact resistance	GH130	164 - 394
K	Gray cast iron No.250B, No.300B, etc.	-	First choice	T515, AH7025	164 - 591
		-	Priority for impact resistance	GH130	164 - 591
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	First choice	T515, AH7025	164 - 394
		-	Priority for impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel 718, etc.	< HRC 40	First choice	AH7025	66 - 197
		< HRC 40	Priority for wear resistance	AH905	66 - 262
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	66 - 262
		< HRC 40	Priority for impact resistance	AH7025, AH725	66 - 262
		< HRC 40	Priority for surface finish	KS05F	66 - 197
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

*See page F220 - F222 for feed: *f* (ipr).

MY-T SERIES
CCH-W

External grooving and parting blade, for 2 corner inserts





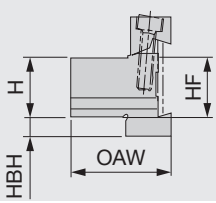
Inch	CW	CUTDIA	H	B	HF	Insert
CCH32-W20	0.079	1.3	(1.26)	0.063	0.968	WGE20, WGE20R/L
CCH32-W30	0.118	1.3	(1.26)	0.087	0.968	WG*30, WGE30R/L
CCH32-W40	0.157	1.65	(1.26)	0.126	0.965	WG*40, WGE40R/L
CCH32-W50	0.197	1.65	(1.26)	0.165	0.965	WG*50, WGE50R/L

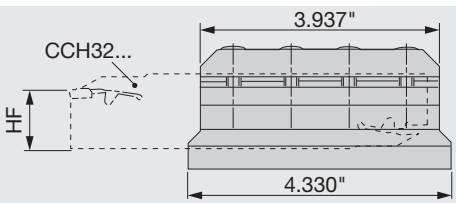
SPARE PARTS

Designation	Wrench (Optional)
CCH32-W...	CRW33

MY-T SERIES
CCBS-32

Tool block for CCH blade





Inch	H	HF	HBH	OAW	Blade*
CCBS12-32-U	0.75	0.75	0.55	1.49	CCH32...
CCBS16-32-U	1.00	1.00	0.30	1.66	CCH32...
CCBS20-32-U	1.25	1.25	0.21	1.66	CCH32...

* Blade sold separately.

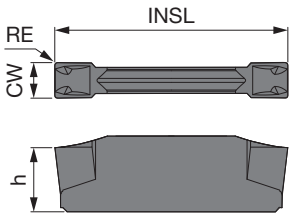
SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS**-32-U	CC-32	CM6X25	P-5

Reference pages: Inserts → F226 - F227, Standard cutting conditions → F227

WGE

For external grooving and parting



P	Steel	★	☆	★	★			★			
M	Stainless	★		★	★						
K	Cast iron	☆		★	☆			☆			
N	Non-ferrous										
S	Superalloys			☆							
H	Hard materials										

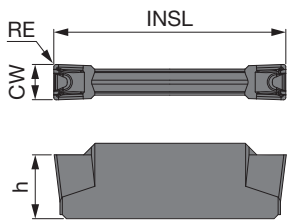
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530							
WGE20	2	0.079	0.008	●	▲	●	●			●						0.787	0.185
WGE30	3	0.118	0.008	●	▲	●	●			●						0.787	0.217
WGE40	4	0.157	0.008	●	▲	●	●			●						0.984	0.224
WGE50	5	0.197	0.008	●	▲	●	●			●						0.984	0.232

● : Line up
▲ : To be discontinued

WGT

For turning (External grooving and parting)



P	Steel	★	☆	★	★			★			
M	Stainless	★		★	★						
K	Cast iron	☆		★	☆			☆			
N	Non-ferrous										
S	Superalloys			☆							
H	Hard materials										

★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	T9125	AH120	GH730			NS9530							
WGT30	3	0.118	0.016	●	▲	●	●			●						0.787	0.217
WGT40	4	0.157	0.016	●	▲	●	●			●						0.984	0.224
WGT50	5	0.197	0.016	●	▲	●	●			●						0.984	0.232

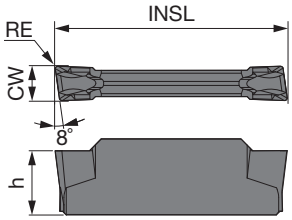
● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F225

WGE(R/L)

For parting (with hand)



Right hand (R) shown.

P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	☆
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	CW$^{+0.1}_{0}$ (mm)	CW$^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
WGE20R	R	2	0.079	0.008		●	0.787	0.185
WGE20L	L	2	0.079	0.008		●	0.787	0.185
WGE30R	R	3	0.118	0.008	●	●	0.787	0.217
WGE30L	L	3	0.118	0.008		●	0.787	0.217
WGE40R	R	4	0.157	0.008		●	0.984	0.224
WGE40L	L	4	0.157	0.008		●	0.984	0.224
WGE50R	R	5	0.197	0.008		●	0.984	0.232
WGE50L	L	5	0.197	0.008		●	0.984	0.232

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730	164 - 591
	Medium carbon steel Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730	164 - 492
	High carbon steel Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730	164 - 492
M	Stainless steel	T9225	262 - 591
		GH730	164 - 394
K	Gray iron, Ductile cast iron	T9225	262 - 820
		GH730	164 - 591

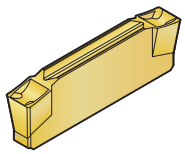
Operation	Feed: *f* (ipr) Groove width: CW (in) 2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (WGE**)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting (WGE**R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Turning (WGT**)	-	ap = 0.020 - 0.059 *f* = 0.0024 - 0.008	ap = 0.020 - 0.079 *f* = 0.0024 - 0.010	ap = 0.020 - 0.098 *f* = 0.0024 - 0.011

Reference pages: Toolholders → F225

2 corner insert

External grooving and parting

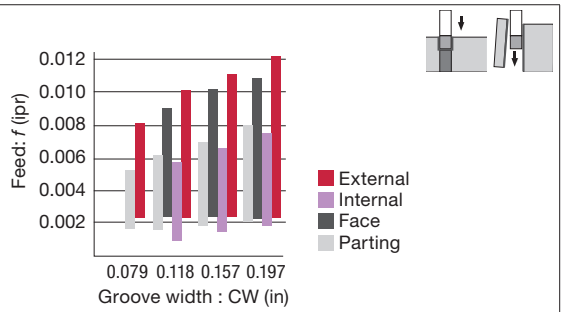
WGE



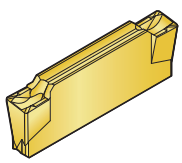
F226 page

1st choice for external grooving and parting
Excellent chip control for grooving

CW = 0.079" - 0.197"



WGE R/L



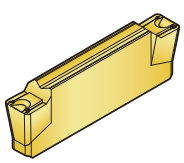
F227 page

Handed insert
Minimize burr generation when workpiece is cut off

CW = 0.079" - 0.197"

External grooving and turning

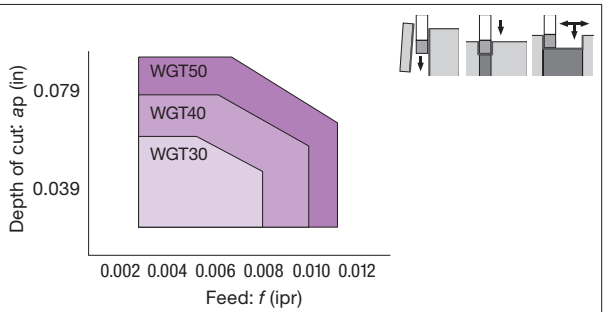
WGT



F226 page

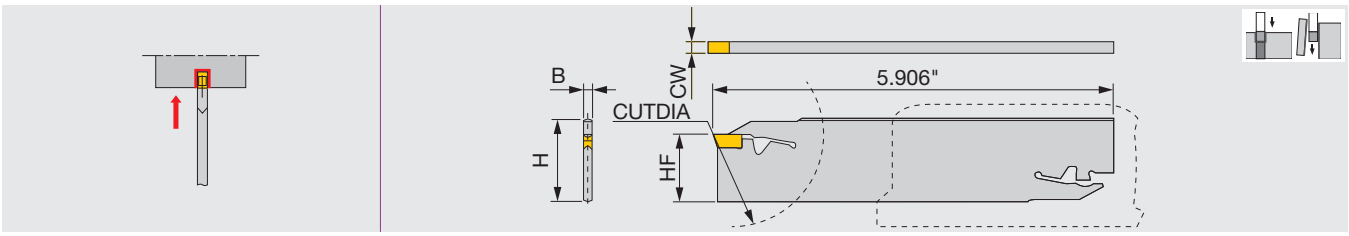
1st choice for turning
Low cutting force and good chip control for traversing

CW = 0.118" - 0.197"



CCH

External grooving and parting blade, for 1 corner inserts



Inch	CW	CUTDIA	H	B	HF	Insert
CCH26-30	0.118	2.76	0.979	0.087	0.843	GE30,GE30R/L,GE30-AL
CCH26-40	0.157	2.76	0.968	0.126	0.837	GE40,GE40R/L,GE40-AL
CCH32-30U	0.118	3.94	1.230	0.087	0.968	GE30,GE30R/L,GE30-AL
CCH32-40U	0.157	3.94	1.220	0.126	0.963	GE40,GE40R/L,GE40-AL
CCH32-50U	0.197	4.72	1.210	0.165	0.958	GE50,GE50R/L,GE50-AL

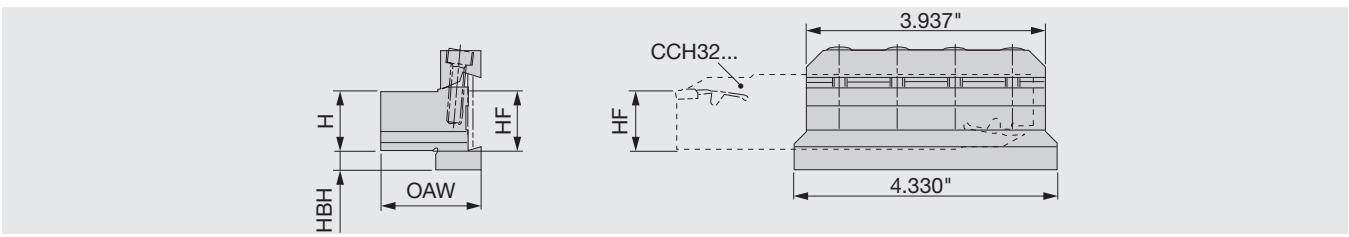
CUTDIA: Max. parting dia.

SPARE PARTS

Designation	Wrench
CCH**-...	CTL-2

CCBS-32

Tool block for CCH blade



Inch	H	HF	HBH	OAW	Blade
CCBS12-32-U	0.750	0.75	0.55	1.49	CCH32...
CCBS16-32-U	1.000	1.00	0.30	1.66	CCH32...
CCBS20-32-U	1.250	1.25	0.21	1.66	CCH32...

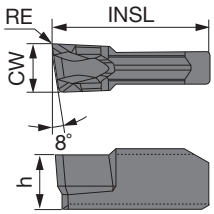
SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS**-32-U	CC-32	CM6X25	P-5

Reference pages: Inserts → F230 - F232, Standard cutting conditions → F235

GE-R/L

For parting (with hand)



Right hand (R) shown.

		AH120	GH730
P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	☆
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

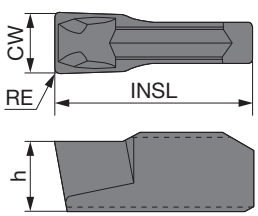
★ : First choice
☆ : Second choice

Designation	HAND	CW $^{+0.1}_{0}$ (mm)	CW $^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
GE30R	R	3	0.118	0.008	●	●	0.394	0.138
GE30L	L	3	0.118	0.008		●	0.394	0.138
GE40R	R	4	0.157	0.008	●	●	0.394	0.157
GE40L	L	4	0.157	0.008		●	0.394	0.157
GE50R	R	5	0.197	0.008		●	0.472	0.177
GE50L	L	5	0.197	0.008	●	●	0.472	0.177

● : Line up

GE

For general grooving



		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

★ : First choice
☆ : Second choice

Designation	CW $^{+0.1}_{0}$ (mm)	CW $^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GE20	2	0.079	0.008			●	●	●	0.394	0.138
GE30	3	0.118	0.008	●	▲	●	●	●	0.394	0.138
GE40	4	0.157	0.008	●	▲	●	●	●	0.394	0.157
GE50	5	0.197	0.008	●	▲	●	●	●	0.472	0.177

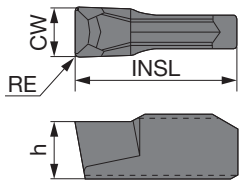
● : Line up
▲ : To be discontinued

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F229, Standard cutting conditions → F235

GF

For face grooving



P	Steel	★	★
M	Stainless	★	
K	Cast iron	☆	☆
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

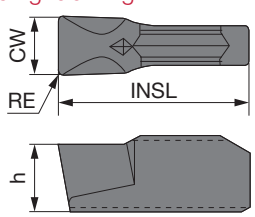
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated	Cermet	INSL (in)	h (in)
				GH730	NS9530		
GF30	3	0.118	0.008	●	●	0.394	0.138
GF40	4	0.157	0.008	●	●	0.394	0.157
GF50	5	0.197	0.008	●	●	0.472	0.177

● : Line up

GN

For internal grooving



P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

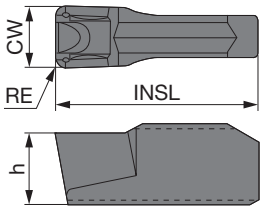
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated	INSL (in)	h (in)
				GH730		
GN30	3	0.118	0.008	●	0.394	0.138
GN40	4	0.157	0.008	●	0.394	0.157
GN50	5	0.197	0.008	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F229, Standard cutting conditions → F235

GT

For turning



		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

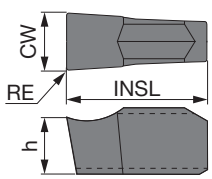
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated				Cermet	INSL (in)	h (in)
				T9225	T9125	AH120	GH730	NS9530		
GT30	3	0.118	0.016			●	●	●	0.394	0.138
GT40	4	0.157	0.016			●	●	●	0.394	0.157
GT50	5	0.197	0.016	●	▲	●	●	●	0.472	0.177

● : Line up
▲ : To be discontinued

GE-AL

For aluminum and non-ferrous metal



		KS05F
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Uncoated	INSL (in)	h (in)
				KS05F		
GE20-AL	2	0.079	0.008	●	0.394	0.138
GE30-AL	3	0.118	0.008	●	0.394	0.138
GE40-AL	4	0.157	0.008	●	0.394	0.157

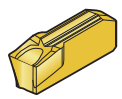
● : Line up

Reference pages: Toolholders → F229, Standard cutting conditions → F235

1 corner insert

External grooving and parting

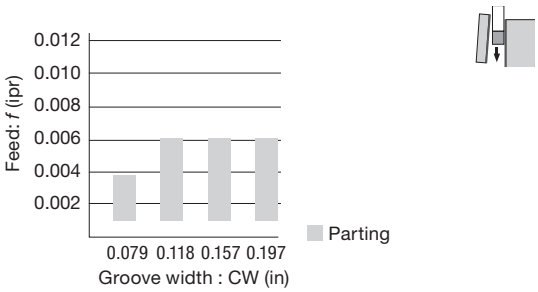
GE R/L



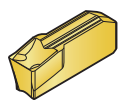
F230 page

Handed insert
Minimize burr generation when workpiece is cut off

CW = 0.118" - 0.197"



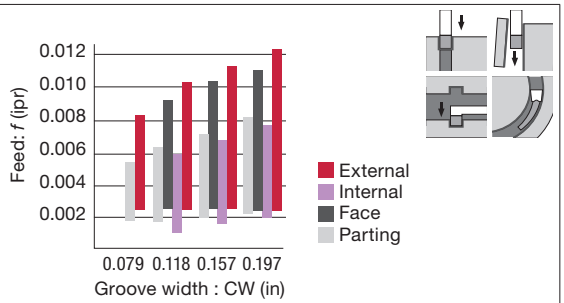
GE



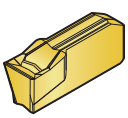
F230 page

1st choice for external grooving and parting
Excellent chip control

CW = 0.079" - 0.197"



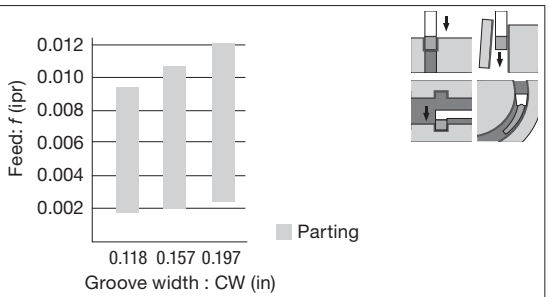
GF



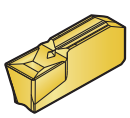
F231 page

1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 0.118" - 0.197"



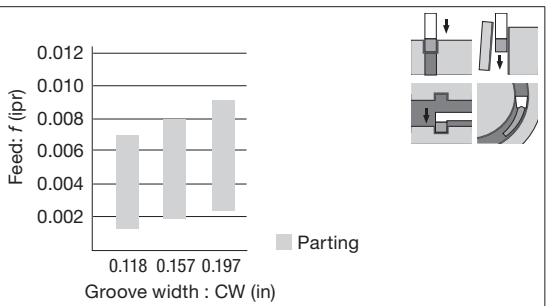
GN



F231 page

1st choice for internal grooving
Low cutting force and good chip control for internal grooving

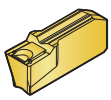
CW = 0.118" - 0.197"



1 corner insert

External grooving and turning

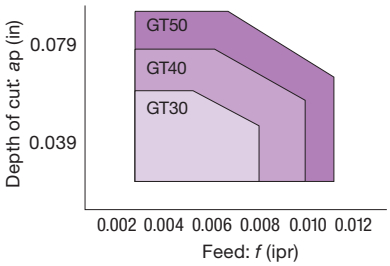
GT

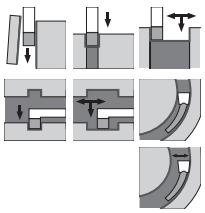


F232 page

1st choice for turning
Low cutting force and good chip control for traversing

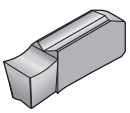
CW = 0.118" - 0.197"





For aluminum and non-ferrous metal

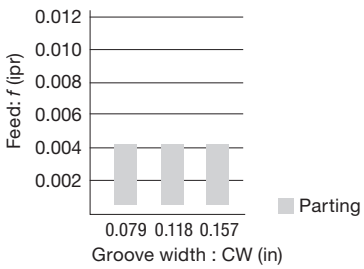
GE-AL

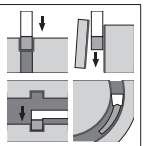


F232 page

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.079" - 0.157"





STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (- HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730	164 - 591
	Medium carbon steel, Alloy steel (HB150 - 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730	164 - 492
	High carbon steel, Alloy steel (HB250 -)	T9225	262 - 722
		NS9530	262 - 492
		GH730	164 - 394
M	Stainless steel	T9225	262 - 591
		GH730	164 - 394
K	Gray iron, Ductile cast iron	T9225	262 - 820
		GH730	164 - 591
N	Aluminum alloys, Non-ferrous metal	KS05F	656 - 984

For Parting off

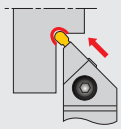
Operation	Feed: *f* (ipr)			
	Groove width: CW (in)			
	2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (GE**)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting off (GE**R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Traversing (GT**)	-	Depth of cut *ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	Depth of cut *ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	Depth of cut *ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Parting off for Aluminum alloys (GE**-AL)	0.0012 - 0.004	0.0012 - 0.004	0.0012 - 0.004	-

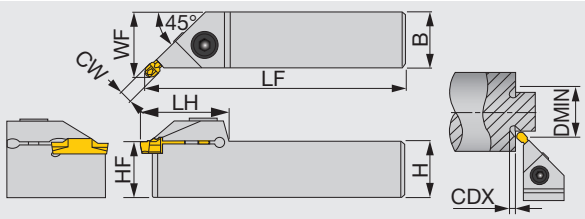
For diameter compensation values in traversing, see page F111.

TUNGCUT

CGEUR/L

External 45° undercutting toolholder





Right hand (R) shown.

Metric	CW	DMIN	Seat size	CDX	H	B	LF	LH	HF	WF (1)	Insert	Torque
CGEUR/L1616-3T02	3	32	3	2.8	16	16	110	30	16	19.3	DTIU...	5
CGEUR/L2020-3T02	3	32	3	2.8	20	20	125	30	20	23.3	DTIU...	5
CGEUR/L2525-3T02	3	32	3	2.8	25	25	150	30	25	28.3	DTIU...	5
CGEUR/L1616-4T02	4	32	4	2.8	16	16	110	31	16	19.5	DTIU...	8.5
CGEUR/L2020-4T02	4	32	4	2.8	20	20	125	31	20	23.5	DTIU...	8.5
CGEUR/L2525-4T02	4	32	4	2.8	25	25	150	31	25	28.5	DTIU...	8.5
CGEUR/L2525-6T03	6	34	5, 6	3.4	25	25	150	35	25	28.9	DTIU...	8.5

(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: N·m

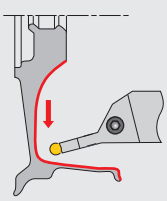
SPARE PARTS

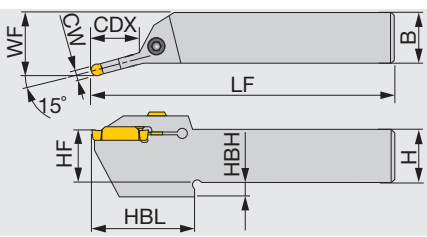
Designation	Clamping screw	Wrench
CGEUR/L****-3T02	CM5X0.8X16-A	P-4
CGEUR/L1616-4T02	CM6X1X16-A	P-5
CGEUR/L2020-4T02	CM6X1X20-A	P-5
CGEUR/L2525-4T02/6T03	CM6X1X25-A	P-5

TUNGCUT

CTER/L-15A

Square shank toolholder for profiling aluminum wheel





Right hand (R) shown.

Metric	CW	Seat size	CDX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque
CTER/L2525-6T25-15A	6	6	25	25	25	150	25	32.2	7	50.5	DTA...	5
CTER/L2525-8T30-15A	8	8	30	25	25	150	25	32.9	7	55	DTA...	5

Torque: Recommended clamping torque: N·m

SPARE PARTS

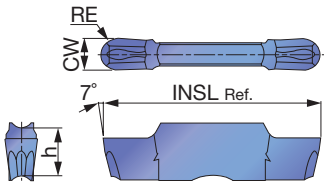
Designation	Clamping screw	Wrench
CTER/L2525-****-15A	CM6X1X25-A	P-5

Reference pages: Inserts → F237, Standard cutting conditions → F238

INSERT

DTIU

Profiling and undercutting (for high precision)



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

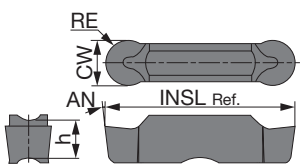
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.0008 (in)	CW±0.02 (mm)	RE (mm)	Coated			INSL (in)	h (in)
					AH7025	AH725	GH130		
DTIU300-150	3	0.118	3	1.5	●	●	●	0.787	0.197
DTIU400-200	4	0.157	4	2	●	●	●	0.787	0.197
DTIU500-250	5	0.197	5	2.5	●	●	●	0.984	0.217
DTIU600-300	6	0.236	6	3	●	●	●	0.984	0.217

● : Line up

DTA

Aluminum wheel machining (for high precision)



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.0008 (in)	CW±0.02 (mm)	RE (mm)	Uncoated	INSL (in)	h (in)	AN
					TH10			
DTA600-300	6	0.236	6	3	●	0.984	0.217	7°
DTA800-400	8	0.315	8	4	●	1.181	0.264	10°

● : Line up

Reference pages: Toolholders → F236, Standard cutting conditions → F238

STANDARD CUTTING CONDITIONS

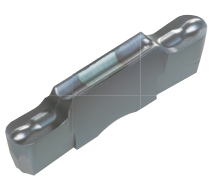
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Priority for wear resistance	T9225	262 - 984
		< 300 HB	Priority for impact resistance	GH130	164 - 394
		< 300 HB	Priority for surface finish	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Priority for impact resistance	GH130	164 - 394
K	Gray cast iron No.250B, No.300B, etc.	-	First choice	T515, AH7025	164 - 591
		-	Priority for impact resistance	GH130	164 - 591
	Ductile cast iron 60-40-18, 60-55-06, etc.	-	First choice	T515, AH7025	164 - 394
		-	Priority for impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel 718, etc.	< HRC 40	First choice	AH7025	66 - 197
		< HRC 40	Priority for wear resistance	AH905	66 - 262
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	66 - 262
		< HRC 40	Priority for impact resistance	AH7025, AH725	66 - 262
		< HRC 40	Priority for surface finish	KS05F	66 - 197
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

*Please see below for feed: *f* (ipr).

TUNGCUT - Chipbreaker Guide

Profiling and undercutting

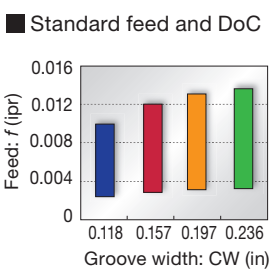
DTIU type (2 corners)

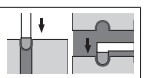


F237 page

Full radius type

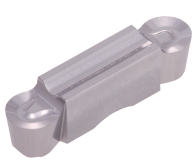
Excellent chip control
For undercutting
CW = 0.118" - 0.236"





Aluminum wheel machining

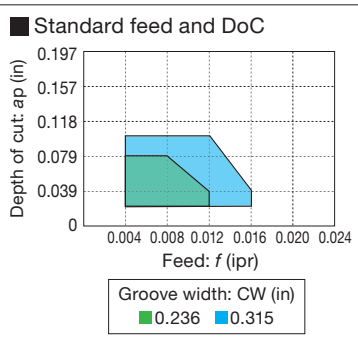
DTA type (2 corners)

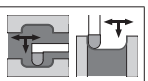


F237 page

Full radius type

Excellent chip control
For aluminum wheel profiling
Ground insert
CW = 0.236" - 0.315"



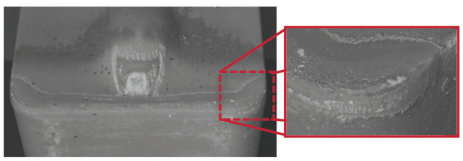


AH7025 Cutting performance

First choice grade for grooving
AH7025 grade: Tungaloy's unique coating technology for drastically improved reliability

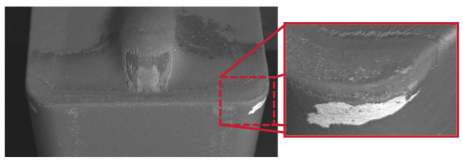
Tool life comparison

AH7025



Tool wear after 60 grooves

Conventional grade



Tool wear after 30 grooves

P Alloy steel (4140)

Insert	: DTE3-040 AH7025
Cutting speed	: *Vc* = 492 sfm
Feed	: *f* = 0.007 ipr
Groove depth	: 0.669"
Machining	: External grooving
Coolant	: Wet

AH7025 provides stability, while preventing coating from peeling off even after machining twice the number of passes compared to the conventional grade.

→ **The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations.**

Grades

AH7025 P M K S

- First choice for various applications
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- Recommended for various applications
- Newly developed coating with well controlled crystal structure and fracture resistance
- Improved adhesion strength

T515 K

- First recommended grade for cast iron
- Excellent wear resistance in high-speed machining

T9225 P

- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K

- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S

- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S

- Recommended for non-ferrous materials and titanium

TH10 N

- Recommended for non-ferrous materials

BX360 H

- Suitable for hardened steel machining
- Ideal balance of wear and chipping resistance due to the optimum CBN content and grain size

PARTS FOR COOLANT HOSE

Connecting hose

Fig.1

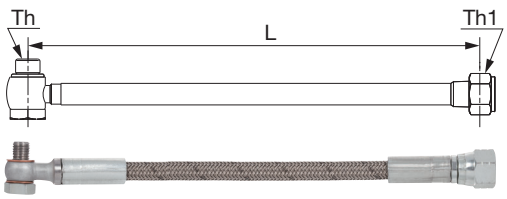
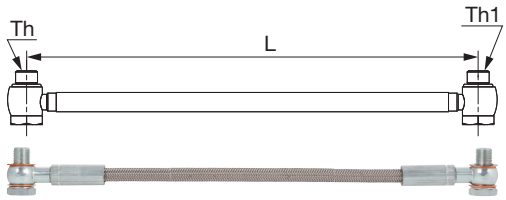
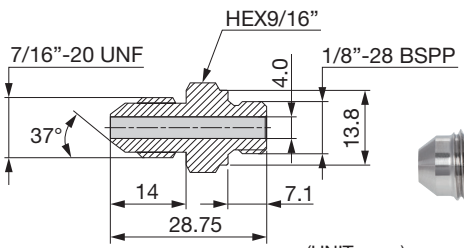


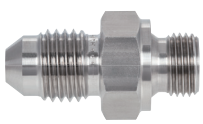
Fig.2



Designation	Length L (in)	Screw Th	Screw Th1	Max. pressure (Mpa)	Fig.
CHP-HOSE-G1/8-7/16-200BS	7.874	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	9.843	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-5/16-7/16-200BS	7.874	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	7.874	5/16"-24UNF	G1/8"-28 BSPP	20	1
CHP-HOSE-G1/8-G1/8-200BB	7.874	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2
CHP-HOSE-G1/8-G1/8-250BB	9.843	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2

Connector

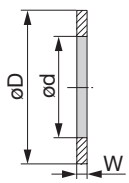


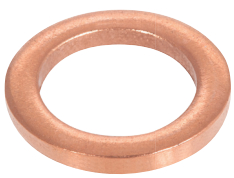


(UNIT : mm)

Designation
CHP-NIPPLE-G1/8-7/16UNF

Seal washer

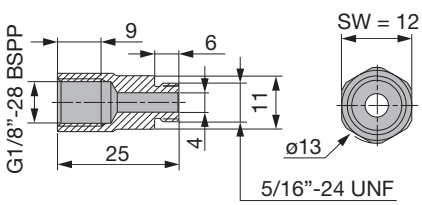


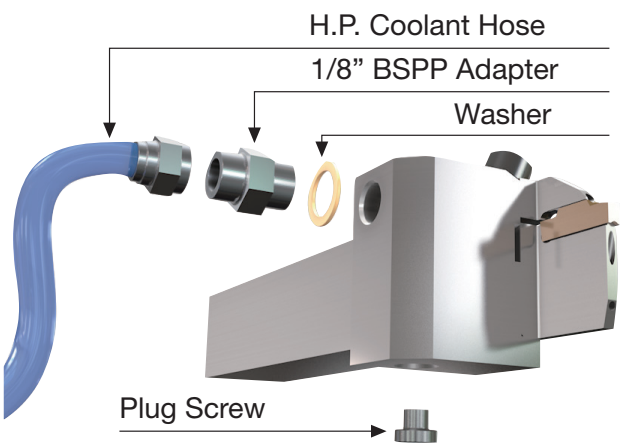


Designation	øD	ød	W
CHP-COPPER-SEAL1/8	0.591	0.394	0.039
CHP-COPPER-SEAL5/16	0.469	0.321	0.053
CHP-COPPER-SEAL5/16-2.5	0.370	0.315	0.098

(UNIT : in)

Connector for small lathe with seal washer



(UNIT : mm)

Designation
CHP-CONECTOR5/16-G1/8