

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 (①) at the left end of each page and choose a designation you need (④) in the dimension table (③). Applicable inserts are shown in (⑥).

TETRAMCUT
STCR/L-18
Precision grooving tools with uniquely shaped insert for swiss type machine and general lathes

Fig. 1 Fig. 2

① ④ ③ ⑥

Designation	CW	CWX	H	B	LF	LH	HF	WF	HBM	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC18...	1.2	1
STCR/L1212P18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC18...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC18...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16	16	-	TC18...	1.2	1
STCR/L2020H18	0.33	3.18	20	20	100	18.5	20	20	-	TC18...	1.2	1
STCR/L2020P18	0.33	3.18	20	20	100	23	20	25	-	TC18...	1.2	2
STCR/L2525Z18	0.33	3.18	25	25	135	23	25	30	-	TC18...	1.2	2

STCR/L-18-CHP
External grooving and threading toolholder, high pressure coolant compatible

③ ⑥

Method ②

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

Machining Overview

External grooving F012 page

Max. groove depth: 6.4 mm

Max. groove depth: 50 mm

TETRAMCUT F044 page

TETRAFCUT F059 page

GBR/L F059 page

TUNGECUT F014 page

ADDFCUT F012 page

DUOJCUT F071 page

TUNING GROOVE F065 page

MY-T SERIES F077 page

Internal grooving F120 page

General internal grooving and turning

ADDFCUT F120 page

TUNGECUT F126 page

ADDFCUT F122 page

MY-T SERIES F148 page

GBR/L F156 page

SNE / CNE F159 page

F004 tungaloy.com

Method ③

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

Quick Guide

Series	Insert shape	External grooving				Parting			
		CW (mm)	CDX (mm)	Priority	Page	CW (mm)	CUTTER (mm)	Priority	Page
ADDFCUT		2-5	33	○	F012	2-5	120	○	F024
TUNGECUT		1.2-8	35	○	F014	1.2-8	120	○	F229
TETRAFCUT		0.5-4	10	○	F059	0.5-4	20	○	F059
TETRAMCUT		0.33-3.5	3.5	○	F044	0.33-3	7	○	F044
DUOJCUT		0.6-2.5	10.5	○	F071	0.6-2	20	○	F047
GBR/L		0.33-4.5	5	○	F059				
MY-T SERIES		2-5	25	○	F077	2-5	120	○	F052
EASYMCUT									
TUNING GROOVE		10-25	50	○	F065				
SNE / CNE									
XQ/XN		1-4.5 (GBR/L)	6	○	F105				
Other		1-3 (FLD-CB)	4.07	○	F081				
		1-2.25 (GTON)	1.8	○	F093				
		1.15-4.2 (GBR/L)	4	○	F103				

F006 tungaloy.com

2 **TETRAMCUT**
STCR/L-18

Precision grooving tools with uniquely shaped insert for swiss type machine and general lathes

5

4 **STCR/L-18-CHP**
External grooving and threading toolholder, high pressure coolant compatible

3

6 Direct connection

7

10 Reference pages: Inserts → F051 - F057, Standard cutting conditions → F058
Parts for coolant hose → F266

F044 tungaloy.com

8 **INSERTS**
TCS18R/L (3D chipbreaker, honed edge)

5 **STC** **R** **1212** **F18**

6 **1212**

7 **F18**

10 Reference pages: Toolholders → F044 - F050, Standard cutting conditions → F058

F052 tungaloy.com

9 **STANDARD CUTTING CONDITIONS**

TCS18R/L, TCL18R/L (3D chipbreaker), TCG18R/L (honed edge), TCG18R/L (Full R)

ISO	Workpiece materials	Grade	Cutting speed Vc (m/min)	TC18	TC18	Feed: f (mm/rev)
P	Low carbon steel S15C, S45C, etc., C15E4, E275A, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
P	Carbon steel, alloy steel S55C, SCr440, etc., CR5, 42CrMo4, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
M	Prehardened steel NAK80, P18, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
M	Stainless steel SUS304, SUS316, etc., SCr440, SCr440Mn17-0.3, etc.	AH7025	50 - 120	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
K	Gray cast iron FC250, FC300, etc., 250, 300, etc., GG25, GG30, etc.	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
K	Ductile cast iron FCDA00, etc., 400-155, etc., GGG40, etc.	AH7025	30 - 60	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	30 - 60	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
S	Superalloys Inconel718, etc.	AH7025	20 - 40	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14

TCP18R/L (lightly honed edge), TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed Vc (m/min)	Feed: f (mm/rev)
P	Low carbon steel S15C, S45C, etc., C15E4, E275A, etc.	First choice	SH725	80 - 180	0.03 - 0.1
P	Carbon steel, alloy steel S55C, SCr440, etc., CR5, 42CrMo4, etc.	Toughness	AH725	80 - 180	0.03 - 0.1
P	Prehardened steel NAK80, P18, etc.	Toughness	AH725	80 - 180	0.03 - 0.1
M	Stainless steel SUS304, SUS316, etc., SCr440, SCr440Mn17-0.3, etc.	First choice	SH725	50 - 120	0.03 - 0.1
M	Gray cast iron FC250, FC300, etc., 250, 300, etc., GG25, GG30, etc.	First choice	AH725	50 - 180	0.03 - 0.1
K	Ductile cast iron FCDA00, etc., 400-155, etc., GGG40, etc.	First choice	SH725	30 - 60	0.03 - 0.1
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	30 - 60	0.03 - 0.1
S	Superalloys Inconel718, etc.	First choice	AH725	20 - 40	0.03 - 0.1

1 : Application

2 : Tool series name

3 : Dimension table

4 : Toolholder designation

e.g. right-hand, 12x12 mm square shank

→ **STC** **R** **1212** **F18**

5 : Dimension (conforming to ISO13399)

6 : Applicable insert

7 : Spare parts

8 : Insert

9 : Standard cutting conditions

10 : Reference pages

When ordering

- Please specify the designation and quantity for toolholders.

e.g. **CTER2020-4T25 ... 1**

- Please specify the designation and quantity for shank and adapter set when ordering both.

e.g. **CHSR2020-CHP ... 1**, **CAER-3T20-CHP ... 1** (one shank per package, one adapter per package)

* Clamp screw for adapter 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.

Machining Overview

External grooving

F012 page

Max. groove depth: 6.4 mm

Economy **TETRAMCUT** F044 page

Economy **TETRAFCUT** F059 page

GBR/L F099 page



Max. groove depth: 50 mm

First choice **TUNG**CUT F014 page

ADDFCUT F012 page

DUOJCUT F071 page

TUNGH^{HY}GROOVE F095 page

MY-T SERIES F077 page



Internal grooving

F120 page

General internal grooving and turning

First choice **ADD**^{INTERNAL}CUT F120 page

TUNGCUT F126 page

ADDFCUT F122 page

MY-T SERIES F146 page

GBR/L F156 page

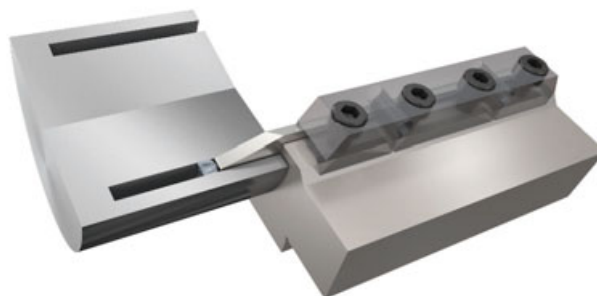
SNG / CNG F159 page



Face grooving

F168 page

First choice	TUNG CUT	F172 page
	EASY ^{ULTRA} M CUT	F168 page
Economy	TETRA ^{MC} CUT	F199 page
	MY-T SERIES	F214 page



Parting

F224 page

General parting

First choice	ADD ^{FACE} F CUT	F224 page
	TUNG CUT	F229 page
Economy	TETRA ^{FACE} F CUT	F059 page
Economy	TETRA ^{MC} CUT	F044 page
	DUO ^{JUST} J CUT	F247 page
	MY-T SERIES	F252 page



Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

Endmill

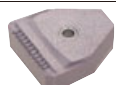
Drilling tool

Tooling System

User's Guide

Index

Quick Guide

Series	Insert shape	External grooving				Parting			
		CW (mm)	CDX (mm)	Priority	Page	CW (mm)	CUTDIA (mm)	Priority	Page
ADD^{FORCE}CUT		2 - 5	33	◎ F012		2 - 5	120	First choice ◎ F224	
ADD^{INTERNAL}CUT									
TUNG^{CUT}		1.2 - 8	35	First choice ◎ F014		1.2 - 8	120	◎ F229	
TETRA^{FORCE}CUT		0.5 - 4	10	Economy ◎ F059		0.5 - 4	20	Economy ◎ F059	
TETRA^{MULTI}CUT		0.33 - 3	3.5	Economy ◎ F044		0.33 - 3	7	Economy ◎ F044	
DUO^{JUST}CUT		0.6 - 2.5	10.5	◎ F071		0.6 - 2	20	◎ F247	
GBR/L		0.33 - 4.5	5	○ F099					
MY-T SERIES		2 - 5	25	○ F077		2 - 5	120	○ F252	
EASY^{MULTI}CUT									
TUNG^{HYX}GROOVE		10 - 25	50	◎ F095					
SNG / CNG									
XG/XN		1 - 4.5 (XGR/L)	6	○ F105					
Other		1 - 3 (FLG-CB)	4.07	○ F091					
		1 - 2.25 (GTGN)	1.8	○ F093					
		1.15 - 4.2 (GLR/L)	4	○ F103					

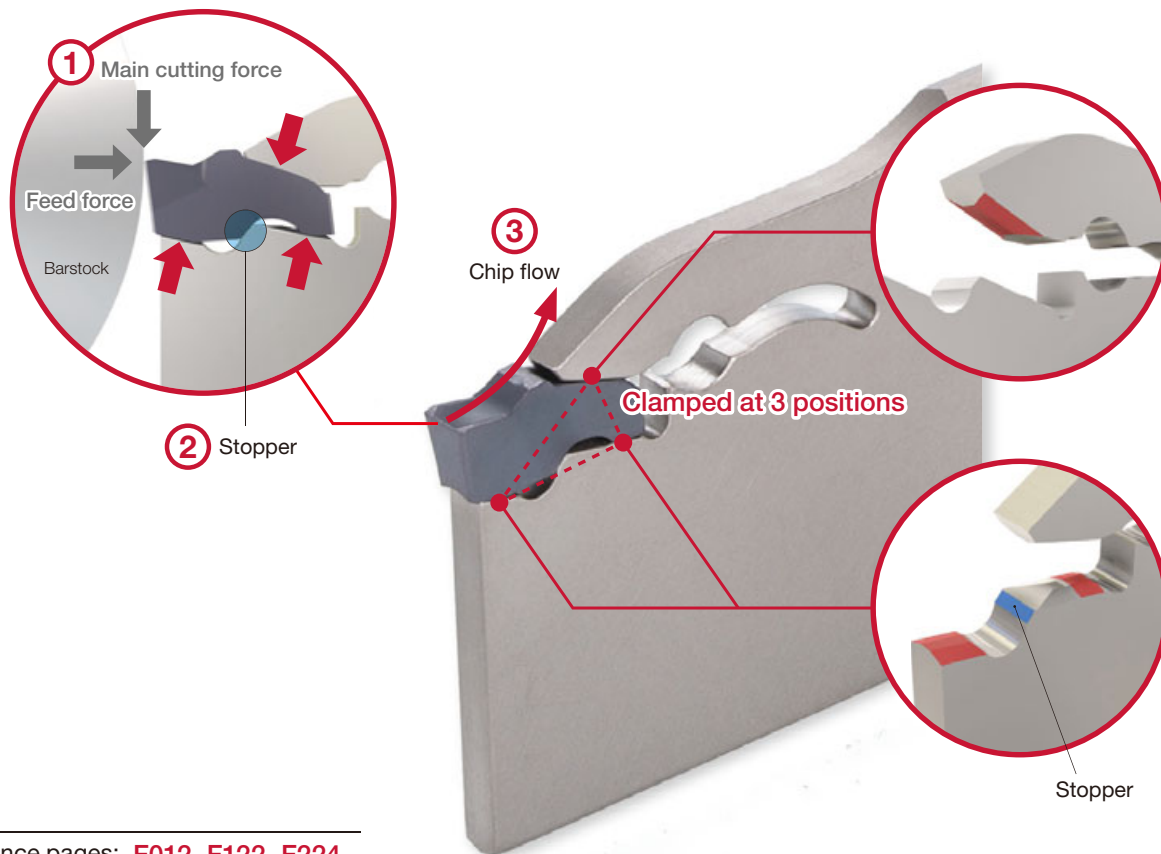
⊙ : First choice
○ : Usable

Face grooving						Internal grooving					Profiling (Full-R)				Turning			
CW (mm)	CDX (mm)	DAXN (mm)	Priority	Page		CW (mm)	CDX (mm)	DMIN (mm)	Priority	Page	CW (mm)	CDX (mm)	Priority	Page	CW (mm)	CDX (mm)	Priority	Page
						2 - 4	32	55	⊙	F122								
						0.5 - 3	3	10.5	First choice ⊙	F120								
2 - 6	25	25	First choice ⊙	F172		2 - 8	10	25	⊙	F126	2 - 8	35	First choice ⊙	F014 F262	2 - 8	35	First choice ⊙	F014
											1.57 - 3	6.4	Economy ⊙	F059				
0.33 - 3	3	6	Economy ⊙	F199							1 - 3.18	3.5	Economy ⊙	F044				
															2 - 2.5 (JDX)	6	⊙	F071
						0.33 - 4.5	2.5	35	○	F156	1 - 4	5	○	F099				
3 - 5	22	30	○	F214		3 - 5	6	25	○	F146	3 - 5	25	○	F077	3 - 5	25	○	F077
4 - 6	65	30	⊙	F168														
						1 - 3.5	3	8	○	F159								
1 - 4.5 (XNR/L)	6	55	○	F222		1 - 4.5 (XGR/L)	6	55	○	F166								
						1 - 3 (FLG-CB)	4.07	34.9	○	F152								
						1 - 2.25 (GTGN)	1.8	24	○	F154								

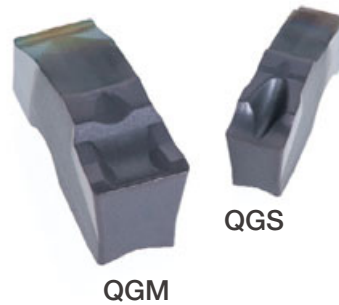


Highly rigid self-clamping system improves productivity for deep grooving and parting-off operations

- ① The stopper supporting the insert bottom ensures secure edge position for excellent repeatability
- ② The pocket is designed to securely spring-clamp the insert with three contact faces for stability
- ③ Smooth uninterrupted chip flow is possible thanks to two variations of effective 3D chipbreakers



Reference pages: **F012, F122, F224**



Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

Endmill

Drilling tool

Tooling System

User's Guide

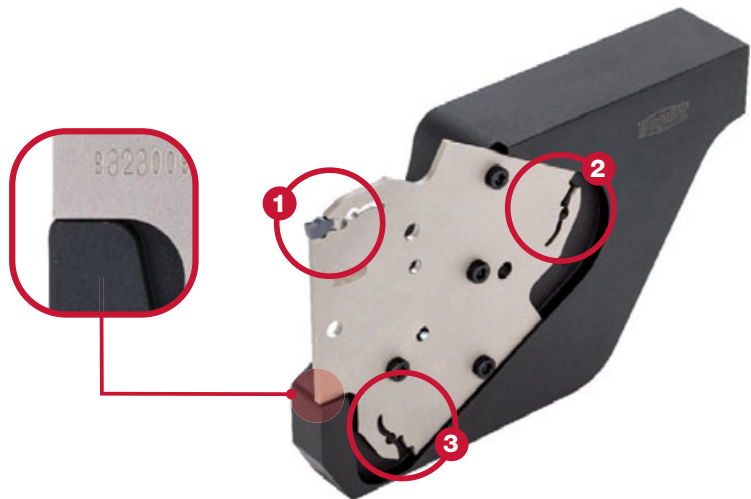
Index

Strong holder design ensures tool stability and productivity gains during demanding cutting conditions

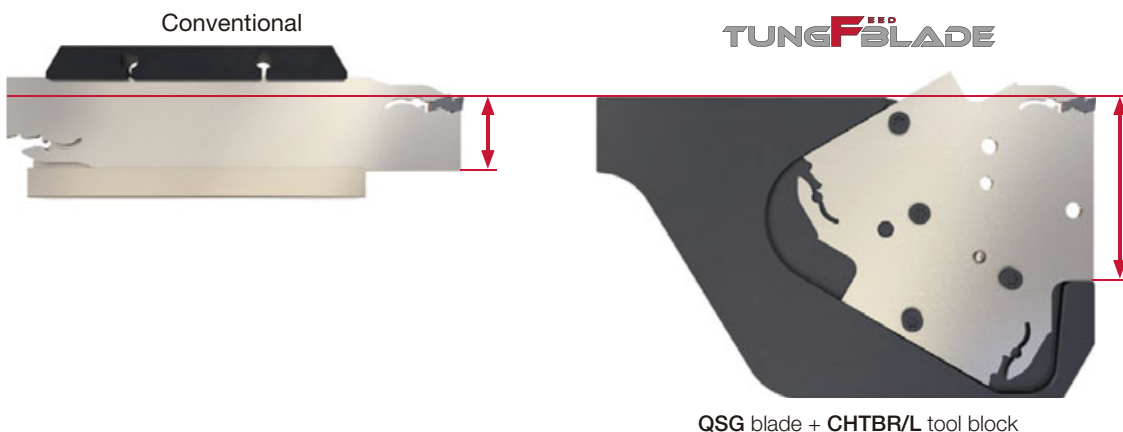
The blade provides reduced tooling cost with three insert pockets, while its strong backing beneath the insert withstands heavy cutting loads during machining.

Economical blade with three insert pockets.

Specially designed tool block has two contact faces to provide enhanced tool rigidity.



With much thicker support than existing grooving blades, tool deflection and chatter are minimized even at higher feed rates.



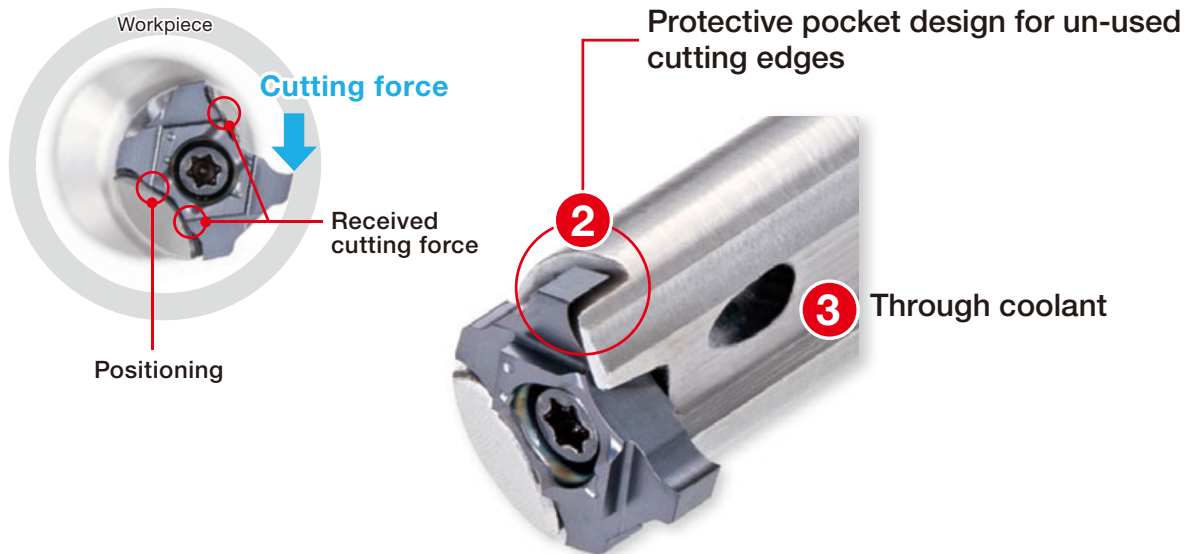
QSG blade + CHTBR/L tool block

Reference pages: **F226, F234, F235**



Unique insert clamping system ensures high indexing repeatability and clamping rigidity

- 1 The insert is supported at three optimized positions for rigid clamping and superior repeatability



- 4 The same insert can be assembled on either left- or right-handed holder



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.

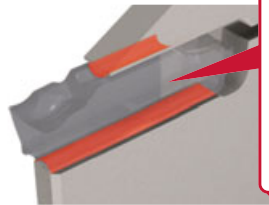
High clamping rigidity

For stable tool life and accuracy

Clamping system

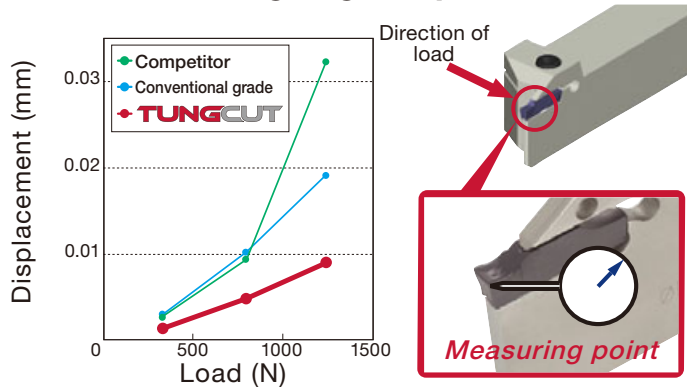


Stable and safe contact areas



High repeatability and durability due to long pocket!

Minimizes cutting edge displacement



Excellent chip control at low feed rates

P Bearing steel (B1/52100/SUJ2)

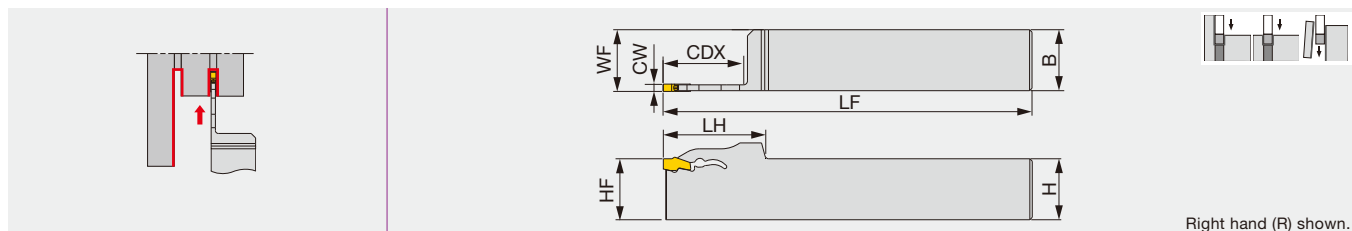
First choice chipbreaker for bearing steel. Excellent chip control at low feed rates.



DGL

Workpiece material : SUJ2
Toolholder : CTER2525-3T09
Insert : DGL3-025
Cutting speed : $V_c = 50, 100$ m/min
Groove width : 3 mm

Cutting speed: V_c (m/min)		Feed: f (mm/rev)			
		0.03	0.05	0.07	0.1
100					
50					



Right hand (R) shown.

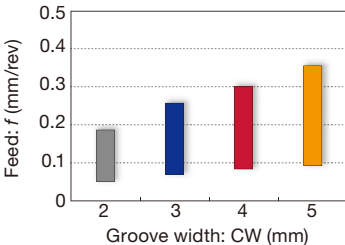
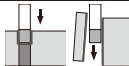
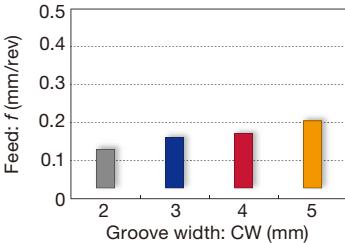
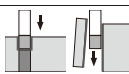
Designation	CW	CDX	Seat size	H	B	LF	LH	HF	WF
QSER/L2020-2T26	2	26	2	20	20	125	36	20	20.1
QSER/L2020-2T33	2	33	2	20	20	125	42	20	20.1
QSER/L2525-2T26	2	26	2	25	25	150	36	25	25.1
QSER/L2525-2T33	2	33	2	25	25	150	42	25	25.1
QSER/L2020-3T26	3	26	3	20	20	125	36	20	20.3
QSER/L2020-3T33	3	33	3	20	20	125	42	20	20.3
QSER/L2525-3T26	3	26	3	25	25	150	36	25	25.3
QSER/L2525-3T33	3	33	3	25	25	150	42	25	25.3
QSER/L2020-4T33	4	33	4	20	20	125	42	20	20.4
QSER/L2525-4T33	4	33	4	25	25	150	42	25	25.4
QSER/L2525-5T33	5	33	5	25	25	150	42	25	25.5

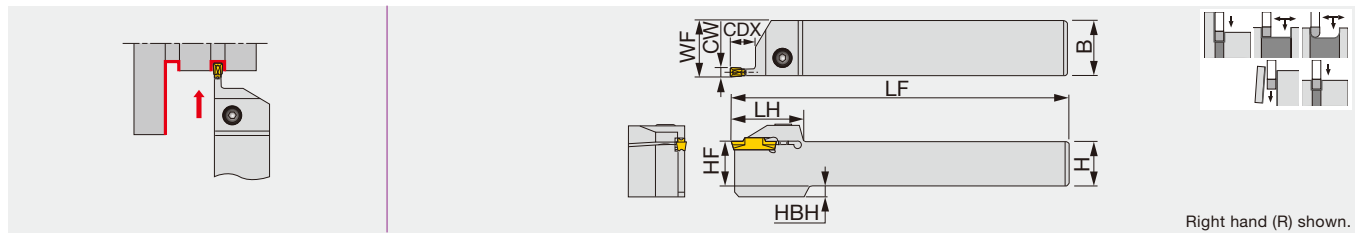
SPARE PARTS

Designation	Wrench
QSER/L...	QL-39



CHIPBREAKER GUIDE

QGM 	First choice for grooving and parting Smooth chip evacuation Well-designed edge with high strength CW = 2 - 5 mm	■ Standard feed <table><thead><tr><th>Groove width: CW (mm)</th><th>Feed: f (mm/rev)</th></tr></thead><tbody><tr><td>2</td><td>0.18</td></tr><tr><td>3</td><td>0.25</td></tr><tr><td>4</td><td>0.30</td></tr><tr><td>5</td><td>0.35</td></tr></tbody></table> 	Groove width: CW (mm)	Feed: f (mm/rev)	2	0.18	3	0.25	4	0.30	5	0.35
Groove width: CW (mm)	Feed: f (mm/rev)											
2	0.18											
3	0.25											
4	0.30											
5	0.35											
QGS 	Lower cutting force and superior sharpness Uniquely designed edge and chipbreaker CW = 2 - 5 mm	■ Standard feed <table><thead><tr><th>Groove width: CW (mm)</th><th>Feed: f (mm/rev)</th></tr></thead><tbody><tr><td>2</td><td>0.12</td></tr><tr><td>3</td><td>0.15</td></tr><tr><td>4</td><td>0.18</td></tr><tr><td>5</td><td>0.20</td></tr></tbody></table> 	Groove width: CW (mm)	Feed: f (mm/rev)	2	0.12	3	0.15	4	0.18	5	0.20
Groove width: CW (mm)	Feed: f (mm/rev)											
2	0.12											
3	0.15											
4	0.18											
5	0.20											



Designation	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/L2525-2T20	2	2	20	25	25	150	38.5	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/L1616-3T12	3	3	12	16	16	110	32	16	16.3	4	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/L2525-5T17	5	5	17	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/L2525-6T16	6	6	16	25	25	150	39	25	25.6	7	12
CTER/L2525-6T20	6	6	20	25	25	150	41	25	25.6	7	12
CTER/L2525-6T25	6	6	25	25	25	150	47	25	25.6	7	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/L3232-8T32	8	8	32	32	32	170	56	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/L1616-2T08	CM5X0.8X16-A	P-4
CTER/L2020-2T08	CM5X0.8X20-A	P-4
CTER/L2525-2T08	CM5X0.8X25-A	P-4
CTER/L1616-2T12	CM5X0.8X16-A	P-4
CTER/L2020-2T12	CM5X0.8X20-A	P-4
CTER/L2525-2T12	CM5X0.8X25-A	P-4
CTER/L1616-2T17	CM5X0.8X16-A	P-4
CTER/L2020-2T17	CM5X0.8X20-A	P-4
CTER/L2525-2T17	CM5X0.8X25-A	P-4
CTER/L2525-2T20	CM5X0.8X25-A	P-4
CTER/L1616-3T09	CM5X0.8X16-A	P-4
CTER/L2020-3T09	CM5X0.8X20-A	P-4
CTER/L2525-3T09	CM5X0.8X25-A	P-4
CTER/L1616-3T12	CM5X0.8X16-A	P-4
CTER/L2020-3T12	CM5X0.8X20-A	P-4
CTER/L2525-3T12	CM5X0.8X25-A	P-4
CTER/L1616-3T20	CM5X0.8X16-A	P-4
CTER/L2020-3T20	CM5X0.8X20-A	P-4
CTER/L2525-3T20	CM5X0.8X25-A	P-4
CTER/L2525-3T25	CM5X0.8X25-A	P-4
CTER/L1616-4T10	CM6X1X16-A	P-5
CTER/L2020-4T10	CM6X1X20-A	P-5
CTER/L2525-4T10	CM6X1X25-A	P-5
CTER/L2020-4T15	CM6X1X20-A	P-5
CTER/L2525-4T15	CM6X1X25-A	P-5
CTER/L1616-4T25	CM6X1X16-A	P-5
CTER/L2020-4T25	CM6X1X20-A	P-5
CTER/L2525-4T25	CM6X1X25-A	P-5
CTER/L3232-4T25	CM6X1X25-A	P-5
CTER/L2020-5T12	CM6X1X20-A	P-5
CTER/L2525-5T12	CM6X1X25-A	P-5
CTER/L2525-5T17	CM6X1X25-A	P-5
CTER/L2525-5T20	CM6X1X25-A	P-5
CTER/L2525-5T32	CM6X1X25-A	P-5
CTER/L3232-5T32	CM6X1X25-A	P-5
CTER/L2020-6T12	CM8X1.25X20-A	P-6
CTER/L2525-6T12	CM8X1.25X25-A	P-6
CTER/L2525-6T16	CM8X1.25X25-A	P-6
CTER/L2525-6T20	CM8X1.25X25-A	P-6
CTER/L2525-6T25	CM8X1.25X25-A	P-6
CTER/L2525-6T32	CM8X1.25X25-A	P-6
CTER/L3232-6T32	CM8X1.25X25-A	P-6
CTER/L2525-8T16	CM8X1.25X25-A	P-6
CTER/L2525-8T25	CM8X1.25X25-A	P-6
CTER/L3232-8T25	CM8X1.25X25-A	P-6
CTER/L3232-8T32	CM8X1.25X25-A	P-6
CTER/L2525-8T36	CM8X1.25X25-A	P-6
CTER/L3232-8T36	CM8X1.25X25-A	P-6

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

Endmill

Drilling tool

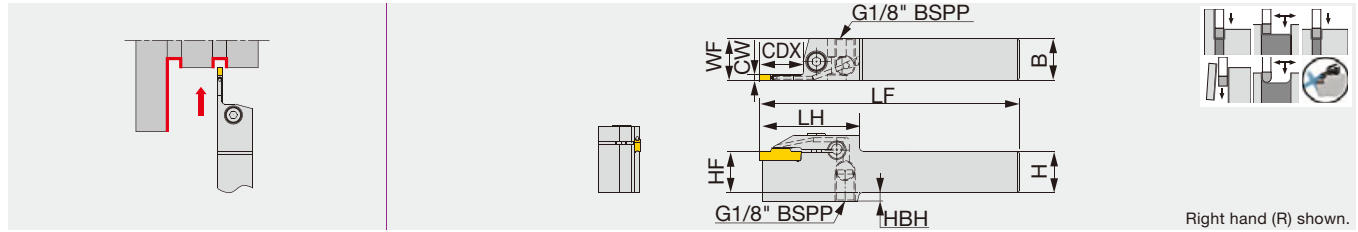
Tooling System

User's Guide

Index

Reference pages: Inserts → **F028 - F042**, Standard cutting conditions → **F043**

External grooving and parting toolholder, with high pressure coolant capability



Right hand (R) shown.

Designation	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 - 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)

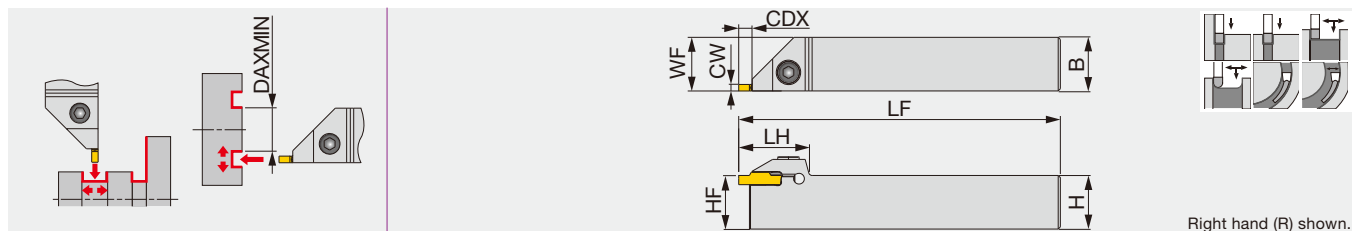
SPARE PARTS

Designation	Clamping screw	Wrench
CTER/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

Reference pages: Inserts → **F028 - F042**, Standard cutting conditions → **F043**
Parts for coolant hose → **F266**

CTEFR/L

External face grooving and turning toolholder



Designation	CW	Seat size	CDX	H	B	LF	LH	HF	WF ⁽¹⁾	Torque*
CTEFR/L2020-4T04	4	2, 3, 4	4.8	20	20	125	33	20	20.5	8.5
CTEFR/L2525-4T04	4	2, 3, 4	4.8	25	25	150	33	25	25.5	8.5
CTEFR/L2020-6T04	6	5, 6	4.8	20	20	125	37	20	20.6	8.5
CTEFR/L2525-6T04	6	5, 6	4.8	25	25	150	37	25	25.6	8.5

Use the right-hand insert for the right-hand holder with DTF insert.

(1) "WF" value is calculated with groove width "CW" shown in the table.

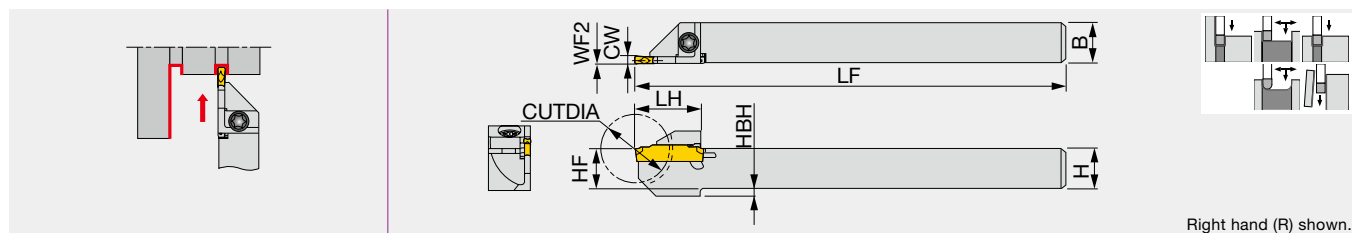
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
CTEFR/L2020-4T04	CM6X1X20-A	P-5
CTEFR/L2525-4T04	CM6X1X25-A	P-5
CTEFR/L2020-6T04	CM6X1X20-A	P-5
CTEFR/L2525-6T04	CM6X1X25-A	P-5

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
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

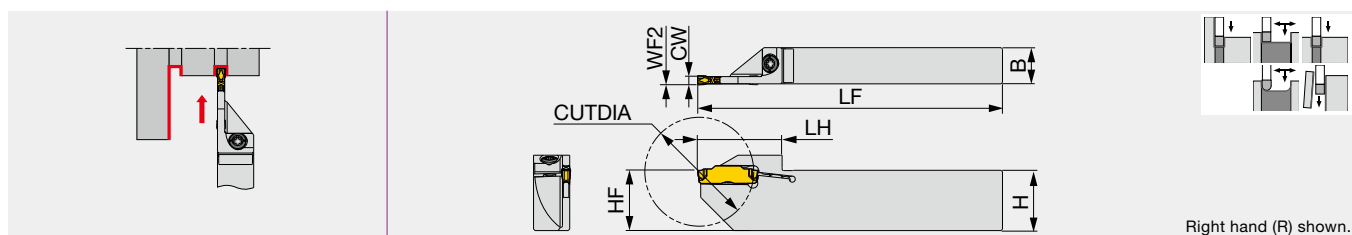


Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	Torque*
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	0.2/10.2	-	3
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	0.2/12.2	-	3
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	0.2/12.2	-	3
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	0.2/14.2	-	3
JCTER/L1616X1.4T16	1.4	1	32	16	16	120	24	16	0.2/16.2	-	3
JCTER/L1010X2T10	2	2	20	10	10	120	19	10	0.1/10.1	2	3
JCTER/L1212F2T12	2	2	24	12	12	85	19	12	0.1/12.1	2	3
JCTER/L1212X2T12	2	2	24	12	12	120	19	12	0.1/12.1	2	3
JCTER/L1414-2T12	2	2	24	14	14	125	19	14	0.1/14.1	-	3
JCTER/L1616X2T16	2	2	32	16	16	120	24	16	0.1/16.1	-	3
JCTER/L1212F3T12	3	3	24	12	12	85	19	12	0.3/12.3	2	3
JCTER/L1212X3T12	3	3	24	12	12	120	19	12	0.3/12.3	2	3
JCTER/L1616X3T16	3	3	32	16	16	120	24	16	0.3/16.3	-	3
JCTER/L2020H3T16	3	3	32	20	20	100	24	20	0.3/20.3	-	3

(1) "WF2" value is calculated with groove width "CW" shown in the table.
Torque*: Recommended clamping torque (N·m)

JCTER/L2012

External grooving and parting toolholder, for Swiss lathes, with 20 mm shank height



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	Torque*
JCTER/L2012H2T18	2	2	36	20	12	100	25	20	0.1/12.1	3
JCTER/L2012H3T21	3	3	42	20	12	100	28	20	0.3/12.3	3

(1) "WF2" value is calculated with groove width "CW" shown in the table.
Torque*: Recommended clamping torque (N·m)

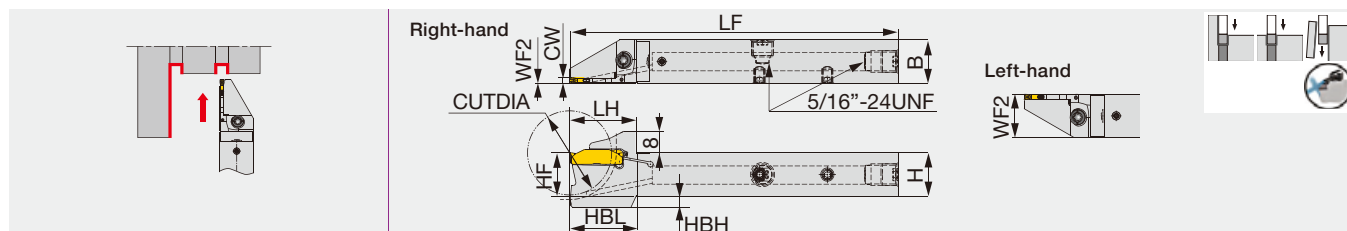
SPARE PARTS

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

JCTER/L-CHP

Direct connection

External grooving and parting toolholder, with high pressure coolant capability



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽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) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

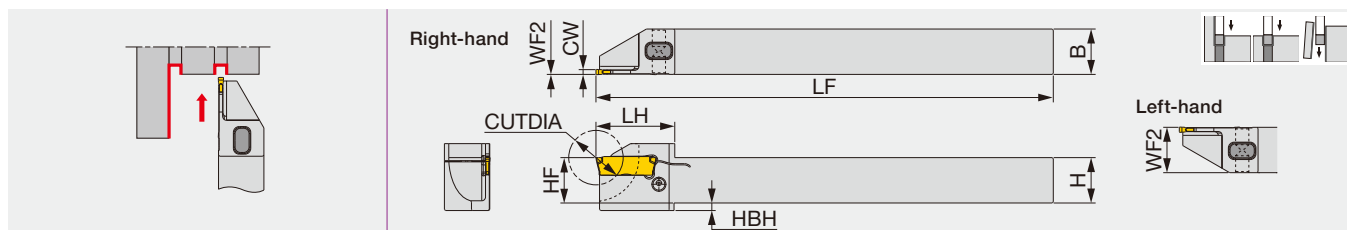
Torque*: Recommended clamping torque (N·m)

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

JTTER/L

External grooving and parting toolholder, for Swiss lathes



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	Torque*
JTTER/L1010H1.2D12	1.2	0.9	12	10	10	100	17	10	0/10	-	1.5
JTTER/L1212F1.2D16	1.2	0.9	16	12	12	85	19	12	0/12	-	1.5
JTTER/L1212X1.2D16	1.2	0.9	16	12	12	120	19	12	0/12	-	1.5
JTTER/L1212X1.2D20	1.2	0.9	20	12	12	120	21	12	0/12	2	1.5
JTTER/L1616X1.2D20	1.2	0.9	20	16	16	120	21	16	0/16	-	2

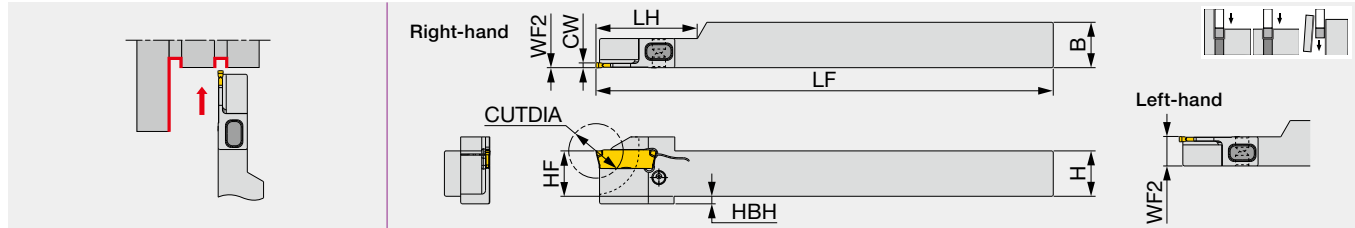
(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Clamping pin	Wrench
JTTER/L1010...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1212...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1616...	SRM5-24145-RL	PIN-32121	P-2.5F

Reference pages: Inserts → **F028 - F042**, Standard cutting conditions → **F043**
Parts for coolant hose → **F266**



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	Torque*
JTTER/L1010H1.2D12-S	1.2	0.9	12	10	10	100	22.8	10	0/7.7	-	1.5
JTTER/L1212F1.2D16-S ⁽²⁾	1.2	0.9	16	12	12	85	22.8	12	0	-	1.5
JTTER/L1212X1.2D16-S	1.2	0.9	16	12	12	120	26.8	12	0/7.7	-	1.5
JTTER/L1212X1.2D20-S	1.2	0.9	20	12	12	120	26.8	12	0/7.7	2	1.5
JTTER/L1616X1.2D20-S	1.2	0.9	20	16	16	120	26.8	16	0/7.7	-	1.5

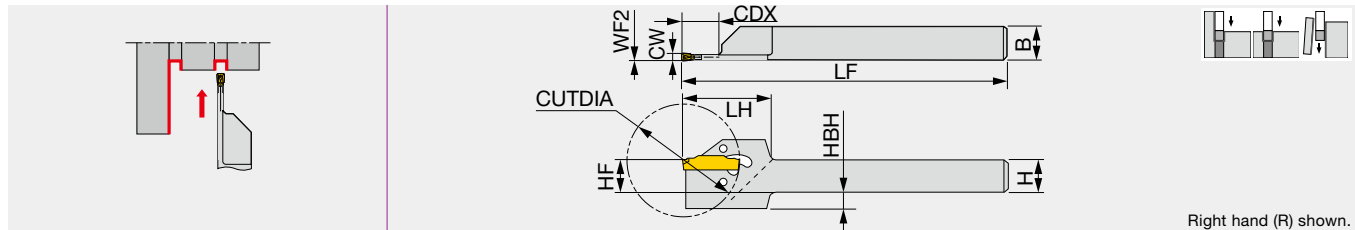
(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(2) No clamping screw from the insert side.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Clamping pin	Wrench
JTTER/L*-S	SSM3.5x0.35	PIN-SL-TC	P-2F

CGER/L



Designation	CW	Seat size	CUTDIA ⁽¹⁾	CDX	H	B	LF	LH	HF	WF2 ⁽²⁾	HBH
CGER/L2020-1.4T14	1.4	1	29/29	9.7	20	20	125	31	20	0.2/20.2	-
CGER/L1212-2T17	2	2	35/35	11.8	12	12	150	31	12	0.1/12.1	6
CGER/L1616-2T17	2	2	35/35	11.8	16	16	150	31	16	0.1/16.1	2
CGER/L2020-2T17	2	2	35/35	9.8	20	20	125	31	20	0.1/20.1	-
CGER/L1212-3T19	3	3	38/40	12	12	12	150	31	12	0.3/12.3	6
CGER/L1616-3T19	3	3	38/45	14.9	16	16	150	31	16	0.3/16.3	2
CGER/L2020-3T19	3	3	38/45	13.2	20	20	125	31	20	0.3/20.3	-
CGER/L2020-4T19	4	4	38/55	20.3	20	20	125	33	20	0.4/20.4	-

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.

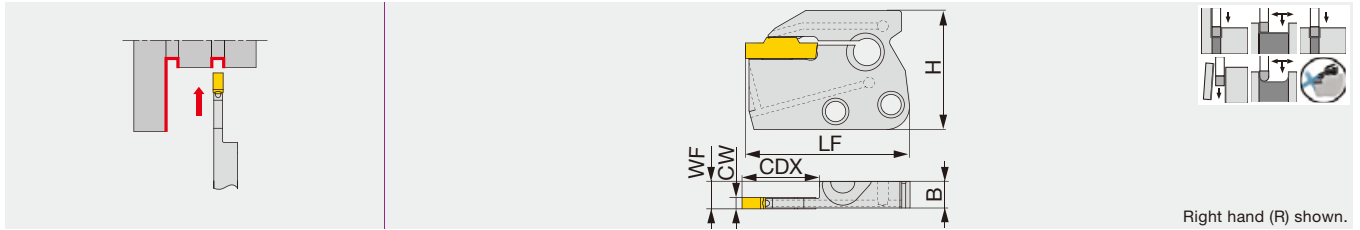
(2) "WF2" value is calculated with groove width "CW" shown in the table.

SPARE PARTS

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

CAER/L-CHP

External grooving and parting adapter, with high pressure coolant capability

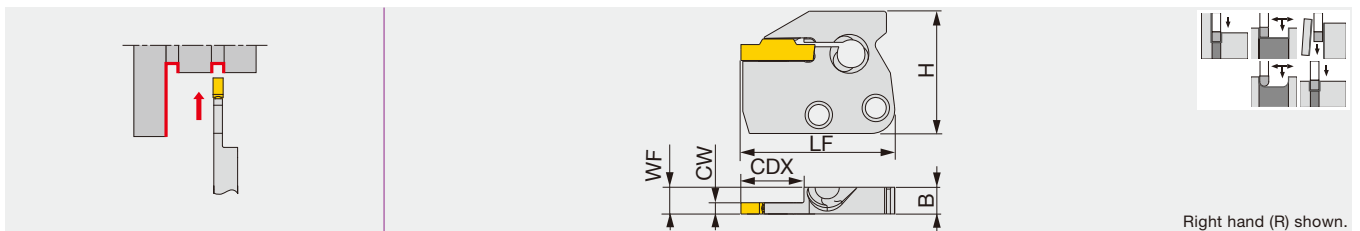


Designation	CW	Seat size	CDX	H	B	LF	WF ⁽¹⁾
CAER/L-2T16-CHP	2	2	16	33	7.2	41.5	7.3
CAER/L-2T20-CHP	2	2	20	33	7.2	45.5	7.3
CAER/L-3T16-CHP	3	3	16	33	7.2	41.5	7.4
CAER/L-3T20-CHP	3	3	20	33	7.2	45.5	7.5
CAER/L-4T16-CHP	4	4	16	33	7.2	41.5	7.7
CAER/L-4T20-CHP	4	4	20	33	7.2	45.5	7.7
CAER/L-5T20-CHP	5	5	20	33	7.2	46.3	7.8
CAER/L-6T20-CHP	6	6	20	33	7.2	46.3	7.8
CAER/L-8T25-CHP	8	8	25	33	7.2	51.1	8.3

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
(1) WF is calculated with the groove width (CW) in the above table.

CAER/L-MD

External grooving and parting adapter

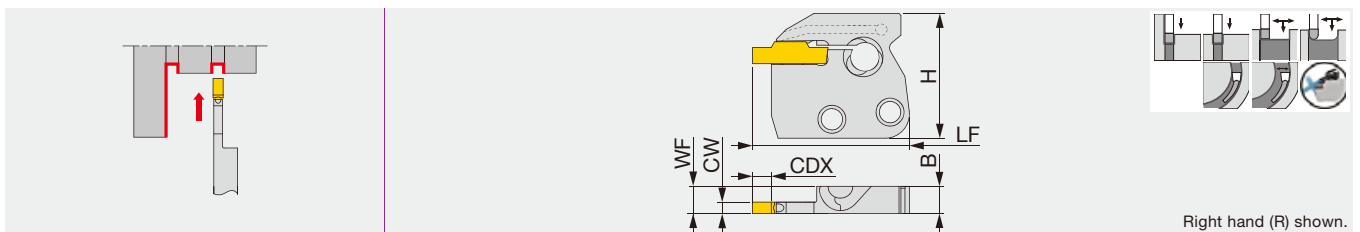


Designation	CW	Seat size	CDX	H	B	LF	WF ⁽¹⁾
CAER/L-2T16-MD	2	2	16	33	7.2	41.5	7.3
CAER/L-3T16-MD	3	3	16	33	7.2	41.5	7.4
CAER/L-4T16-MD	4	4	16	33	7.2	41.5	7.7
CAER/L-5T20-MD	5	5	20	33	7.2	46.3	7.8
CAER/L-6T20-MD	6	6	20	33	7.2	46.3	7.8
CAER/L-8T25-MD	8	8	25	33	7.2	51.1	8.3

(1) WF is calculated with the groove width (CW) in the above table.

CAEFR/L-CHP

Face and external grooving adapter, with high pressure coolant capability

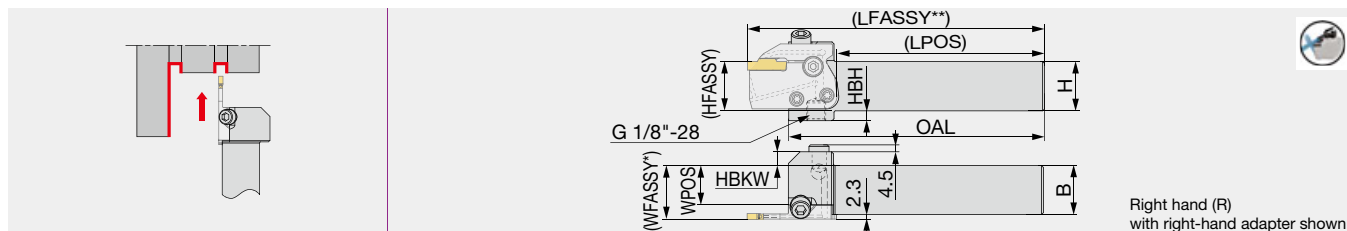


Designation	CW	Seat size	CDX	H	B	LF	WF ⁽¹⁾
CAEFR/L-4T04-CHP	4	2,3,4	4.8	33	7.2	41.5	7.7
CAEFR/L-6T04-CHP	6	5,6	4.8	33	7.2	46.3	7.8

Use the right-hand insert for the right-hand holder with DTF insert.
(1) "WF" value is calculated with groove width "CW" shown in the table.

Reference pages: Inserts → **F028 - F042**, Shanks and toolholders → **F022 - F024**
Standard cutting conditions → **F043**, Technical Reference → **L053**

Shank for adapter, with high pressure coolant capability



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

Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	CAE*R/L**-CHP, -MD	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	CAE*R/L**-CHP, -MD	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

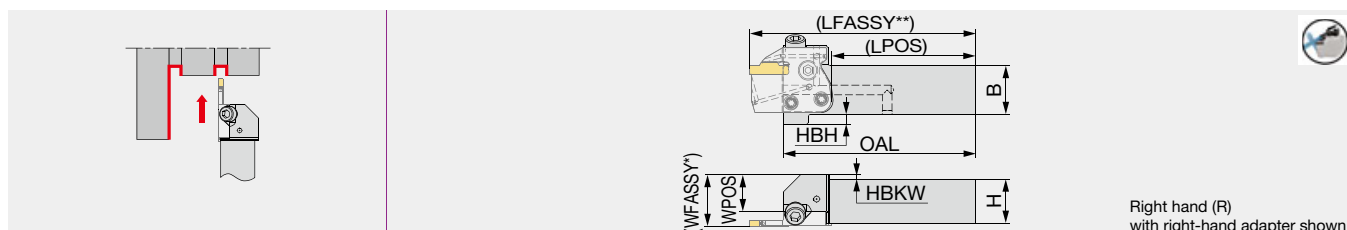
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability



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

Designation	H	B	OAL	LPOS	WPOS	HBKW	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP-MC	20	20	98	73.5	14	6	10	CAE*R/L**-CHP, -MD	6.5
CHSR/L2525-CHP-MC	25	25	98	73.5	19	-	5	CAE*R/L**-CHP, -MD	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

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
CHSR/L**-CHP-MC	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

Combination of adapter and shank

Shank	External grooving adapter		Face grooving adapter		External and face grooving adapter	
	CAE**R/L**-CHP, -MD	CAEL**R/L**-CHP, -MD	CAFR**R/L**-CHP	CAFL**R/L**-CHP	CAEFR**R/L**-CHP	CAEFL**R/L**-CHP
CHSR**R/L**-CHP (-MC)	●			●	●	
CHSL**R/L**-CHP (-MC)		●	●			●

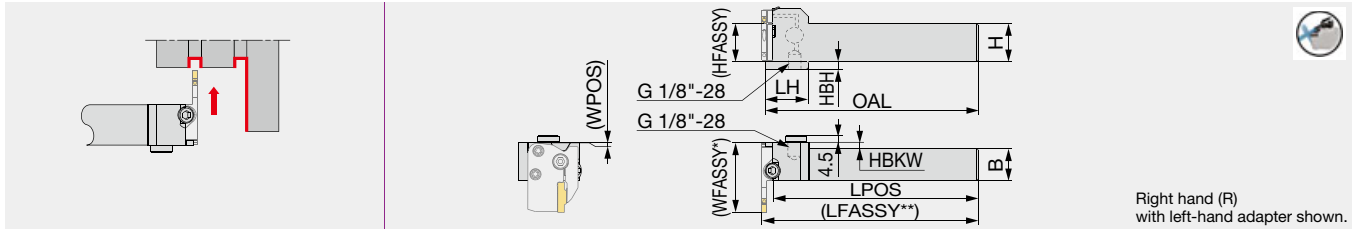
● : Corresponding

Reference pages: Inserts → F028 - F042, Adapters → F021, Standard cutting conditions → F043
Parts for coolant hose → F266, Technical Reference → L053

CHFVR/L-CHP

Tube connection

Shank for perpendicularly-mounted adapter, with high pressure coolant capability



Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	CAE*L/R**-CHP, -MD	6.5
CHFVR/L2525-CHP	25	25	140	28	135.1	0.5	0	25	5	CAE*L/R**-CHP, -MD	6.5

WFASSY* : Shank (WPOS) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter 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 (N·m)

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

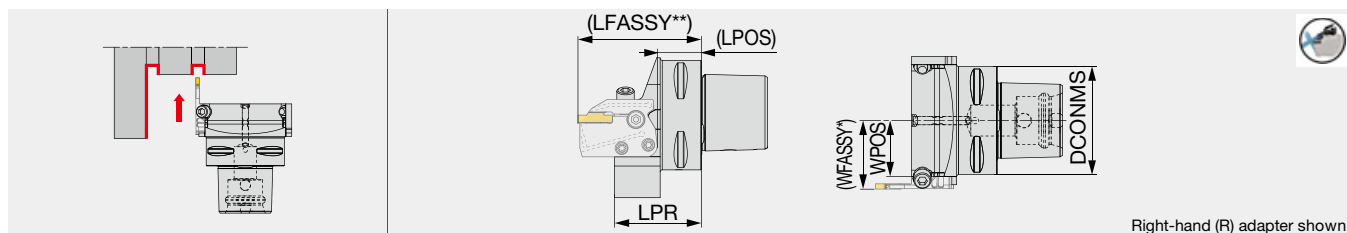
Combination of adapter and shank

Shank	External grooving adapter		Face grooving adapter		External and face grooving adapter	
	CAER**-CHP, -MD	CAEL**-CHP, -MD	CAFR**-CHP	CAFL**-CHP	CAEFR**-CHP	CAEFL**-CHP
CHFVR**-CHP		●	●			●
CHFVL**-CHP	●			●	●	

● : Corresponding

Reference pages: Inserts → F028 - F042, Adapters → F021, Standard cutting conditions → F043
Parts for coolant hose → F266, Technical Reference → L053

Toolholder with TungCap connection, for adapter, with high pressure coolant capability



Right-hand (R) adapter shown.

Designation	DCONMS	LPR	LPOSS	WPOSS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	CAE*R/L**-CHP, -MD	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	CAE*R/L**-CHP, -MD	6.5
C5CHSN26047-CHP	50	47	22.5	26	CAE*R/L**-CHP, -MD	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	CAE*R/L**-CHP, -MD	6.5

WFASSY* : Toolholder (WPOSS) + adapter (WF)

LFASSY** : Toolholder (LPOSS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

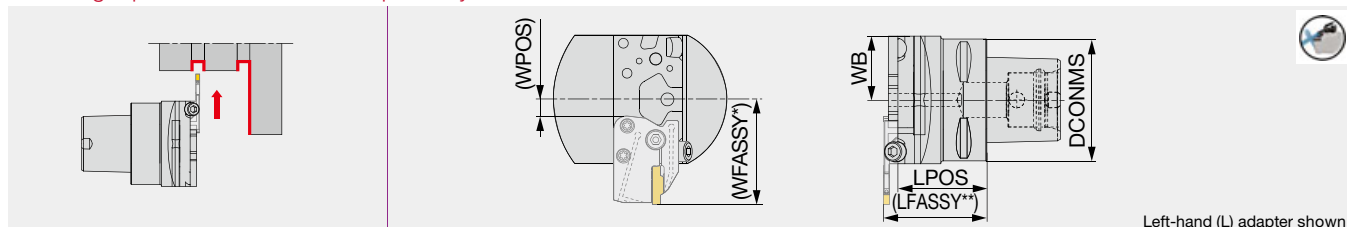
Please see page L053 for instructions on installing and removing the adapter or the insert.



C*CHFVN-CHP

Direct connection

Toolholder with TungCap connection, for perpendicularly-mounted adapter, with high pressure coolant capability



Left-hand (L) adapter shown.

Designation	DCONMS	LPOSS	WB	WPOSS	Adapter (Option)	Torque*
C3CHFVN26040-CHP	32	40	26	1.5	CAE*R/L**-CHP, -MD	6.5
C4CHFVN26046-CHP	40	46	26	1.5	CAE*R/L**-CHP, -MD	6.5
C5CHFVN26046-CHP	50	46	26	1.5	CAE*R/L**-CHP, -MD	6.5
C6CHFVN33046-CHP	63	46	33	8.5	CAE*R/L**-CHP, -MD	6.5

WFASSY* : Toolholder (WPOSS) + adapter (LF)

LFASSY** : Toolholder (LPOSS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

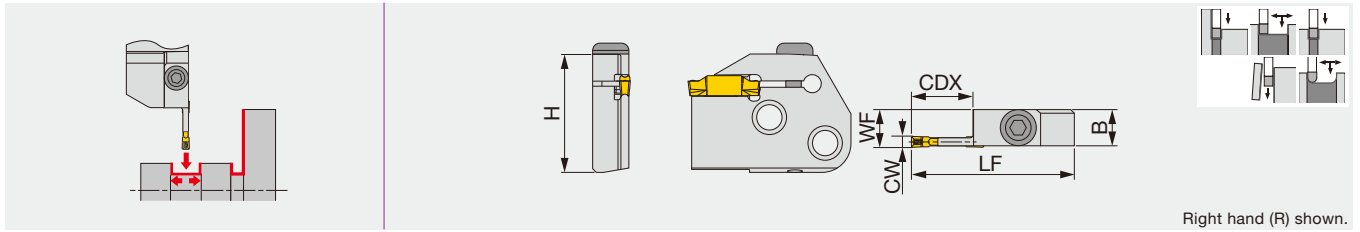
Recommended clamping torque (N·m)

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

Reference pages: Inserts → **F028 - F042**, Adapters → **F021**, Standard cutting conditions → **F043**
Technical Reference → **L053**

CAER/L

External grooving, parting and turning adapter



Designation	CW	Seat size	CDX	H	B	LF	WF	Torque*
CAER/L-3T16	3	3	16	32.7	10	45	10.4	5
CAER/L-4T16	4	4	16	32.7	10	45	10.5	5
CAER/L-5T20	5	5	20	32.7	10	49	10.5	5
CAER/L-6T20	6	6	20	32.7	10	49	10.5	5

Torque*: Recommended clamping torque (N·m)

Not compatible with TungModularSystem

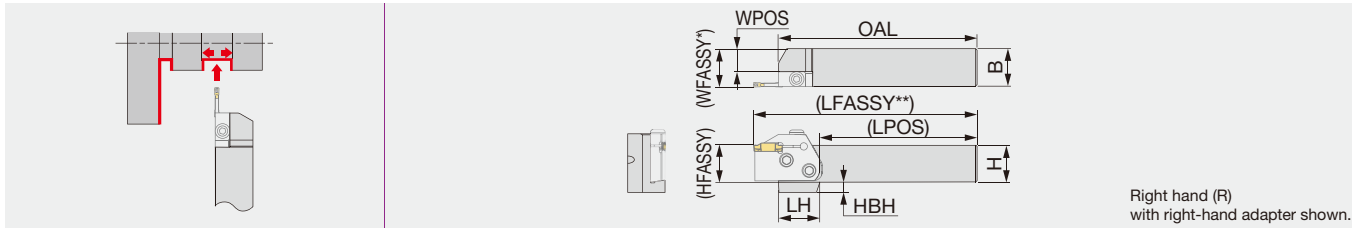
When groove depth is larger than insert length - 1.5 mm, please use 1-cornered insert.

SPARE PARTS

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

Reference pages: Inserts → **F028 - F042**, Shanks and toolholders → **F026, F027**
Standard cutting conditions → **F043**

Shank for adapter



Designation	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Adapter (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	125	-	22	32	-	CAER/L...

WFASSY* : Shank (WPOS) + adapter (WF)

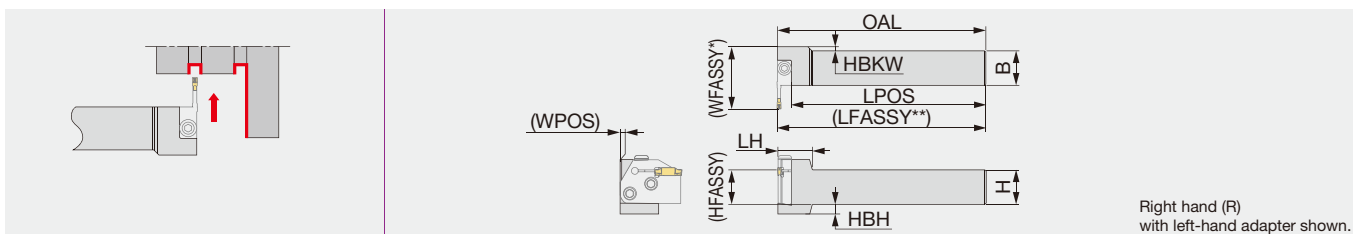
LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Not compatible with TungModularSystem

CHFVR/L

Shank for adapter, perpendicularly mounted



Designation	H	B	OAL	LPOS	LH	WPOS	HBKW	HFASSY	HBH	Adapter (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) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Not compatible with TungModularSystem

SPARE PARTS

Designation	Clamping screw	Wrench
CH**R/L...	CSHB-6-A	P-4

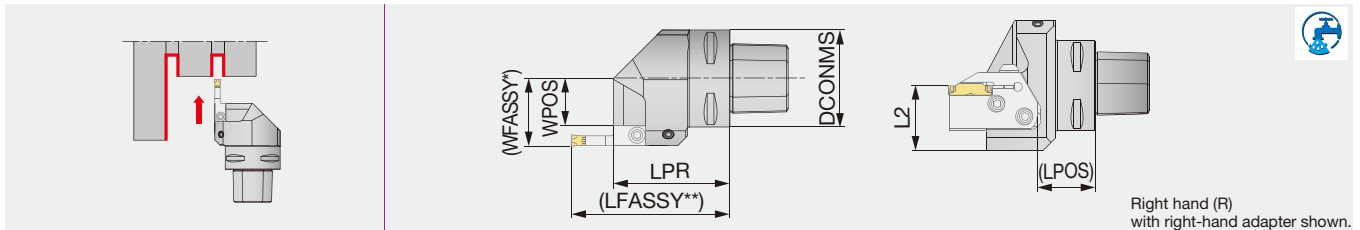
Combination of adapter and shank

Shank	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

● : Corresponding

C-CHSR/L

Toolholder with TungCap connection for adapter



Designation	DCONMS	LPR	LPOS	L2	WPOS	Adapter (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* : Toolholder (WPOS) + adapter (WF)

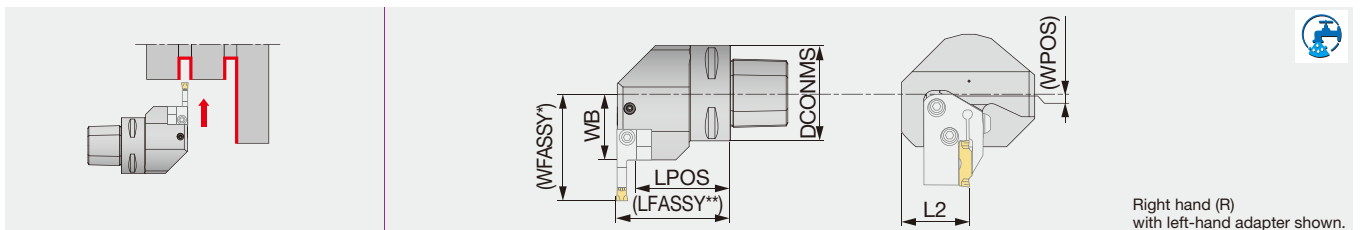
LFASSY** : Toolholder (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change. If needed, the coolant direction can be adjusted by the nozzle.

Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

C-CHFVR/L

Toolholder with TungCap connection for adapter, perpendicularly mounted



Designation	DCONMS	LPOS	L2	WB	WPOS	Adapter (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* : Toolholder (WPOS) + adapter (LF)

LFASSY** : Toolholder (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change. If needed, the coolant direction can be adjusted by the nozzle.

Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

SPARE PARTS

Designation	Coolant parts	Clamping screw	Wrench
C3CH**R/L...	SATZ-M8X1-M3	CSHB-6-A	P-4
C4CH**R/L...	SATZ-M8X1-M3	CSHB-6-A	P-4
C5CH**R/L...	SATZ-M10X1-M5	CSHB-6-A	P-4
C6CH**R/L...	SATZ-M10X1-M5	CSHB-6-A	P-4

Combination of adapter and toolholder

Toolholder	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

● : Corresponding

External grooving and parting

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

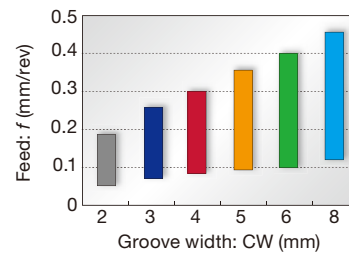


F032, F033

1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 2 - 8 mm

■ Standard feed



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

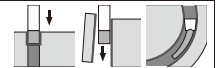
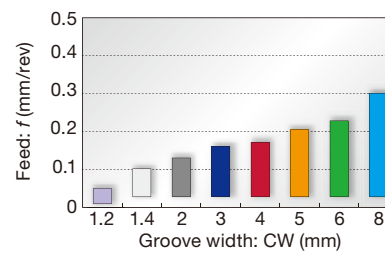


F034, F035

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 1.2 - 8 mm

■ Standard feed



DGL type (2 corners)

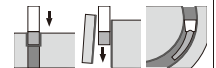
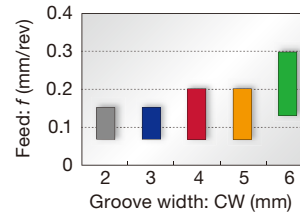


F035

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often gives difficulties in chip control
CW = 2 - 6 mm

■ Standard feed



DGG type (2 corners)

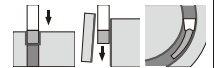
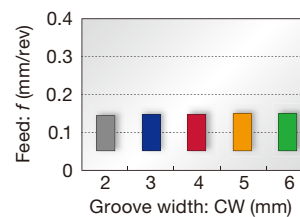


F036

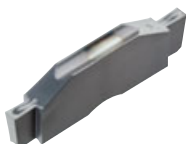
For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 2 - 6 mm

■ Standard feed



DGE type (2 corners)

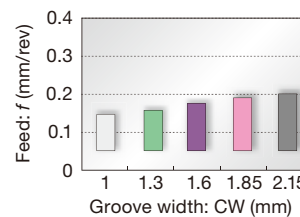


F036

For high accurate and shallow groove

Excellent chip control
CW = 1 - 2.15 mm

■ Standard feed



Please see page F*** for the product details.

External and face grooving, and turning

DTM type
(2 corners)

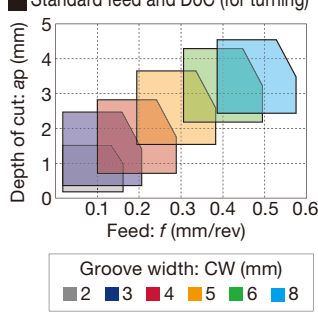


F037

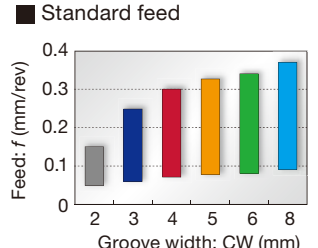
General purpose

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 = 2 - 8 mm

Standard feed and DoC (for turning)



Standard feed



DTE type
(2 corners)

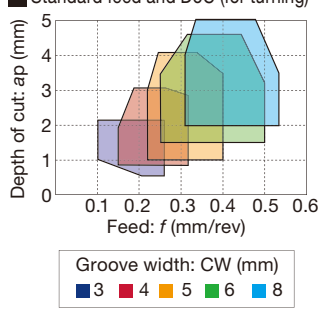


F037, F038

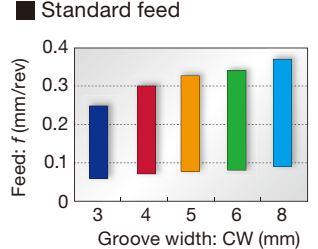
General purpose

Unique chipbreaker makes
chips shorter
Molded and ground insert
available
CW = 2.65 - 8 mm

Standard feed and DoC (for turning)



Standard feed



External, internal and face grooving, and turning

DTX type
(2 corners)

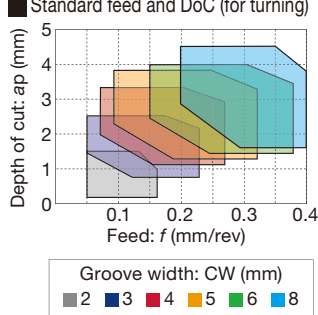


F038

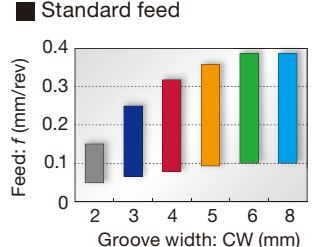
Multi-functional type

Well balanced sharpness
and strength
Multi-functional insert
CW = 2 - 8 mm

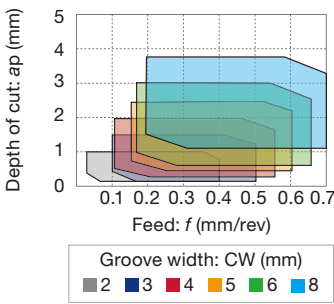
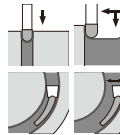
Standard feed and DoC (for turning)

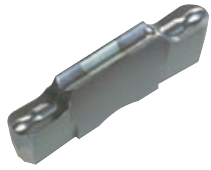
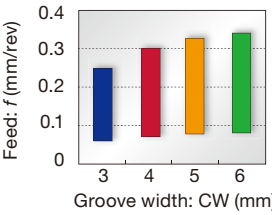
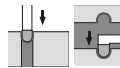


Standard feed

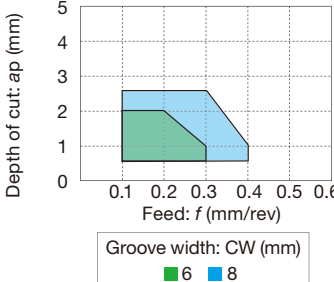


Profiling and undercutting

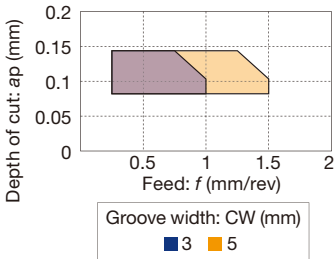
DTR type (2 corners) STR type (1 corner) Molded DTR, STR Ground DTR  F039, F040	Full radius type Excellent chip control Molded and ground inserts available CW = 2 - 8 mm	■ Standard feed and DoC (for turning) 	
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DTIU type (2 corners)  F040	Full radius type Excellent chip control for undercutting CW = 3 - 6 mm	■ Standard feed and DoC 	
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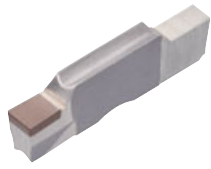
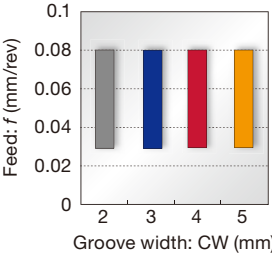
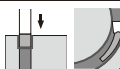
Aluminium wheel machining

DTA type (2 corners)  F041	Full radius type Excellent chip control For aluminium wheel profiling Ground insert CW = 6 - 8 mm	■ Standard feed and DoC (for turning) 	
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For high feed external and face turning of hardened steel parts

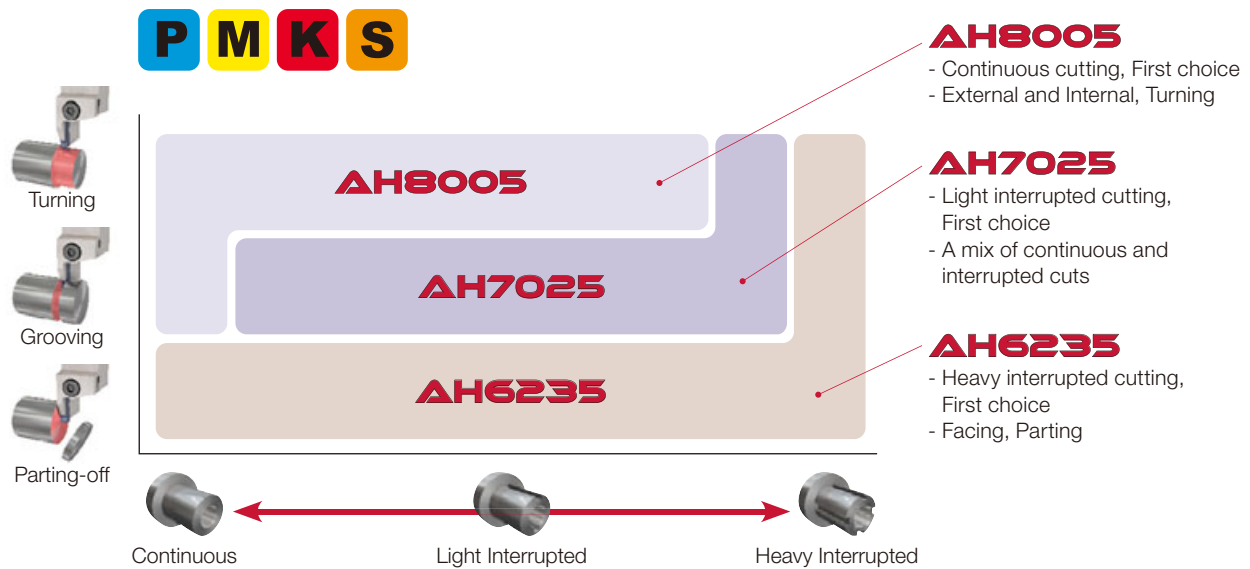
STH type (1 corner)  F041	External and face turning of hardened steel parts High efficiency machining using light D.O.C. and increased feeds CW = 3, 5 mm	■ Standard feed and DoC (for turning) 	
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External grooving of hardened steel

SGN-CBN type (1 corner)  F042	For hardened steel cutting Optimum cutting edge shape for grooving of hardened steels High tolerance width for finishing CW = 2 - 5 mm (CW = ±0.025 mm)	■ Standard feed 	
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Please see page F*** for the product details.

GRADE SELECTION



GRADES

AH8005

P M K S

- First choice for external, internal, and side-turning, continuous cuts

AH7025

P M K S

- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235

P M K

- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725

P M S

- General purpose PVD grade for high fracture resistance

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

BXA10

H

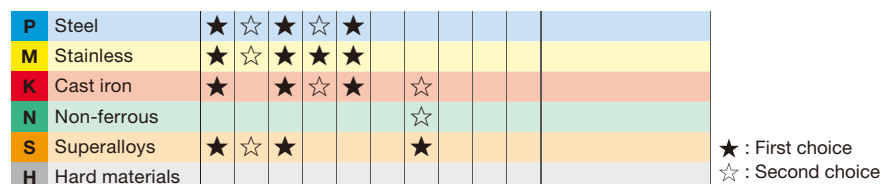
- Coated CBN grade designed for turning hardened steel parts

BX360

H

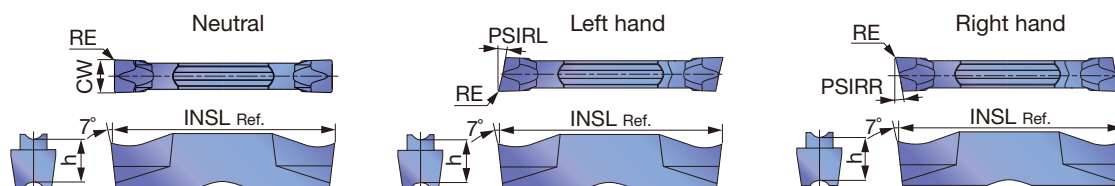
- Developed for grooving applications of hardened steel parts

External deep grooving and parting



● : Line up

Tungaloy F033

[illegible]

★ : First choice
☆ : Second choice

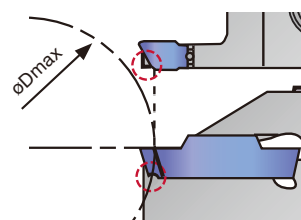


Designation	Seat size	HAND	CW±0.05	RE	Coated					Cermet	Uncoated			INSL	h	PSIRL	PSIRR
					T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F					
DGS1.2-003	0.9	N	1.2	0.03			●							16	4.7	0°	0°
DGS1.4-005	1	N	1.4	0.05			●							16	4.3	0°	0°
DGS1.4-010	1	N	1.4	0.1			●							16	4.3	0°	0°
DGS1.4-016	1	N	1.4	0.16		●	●		●					16	4.3	0°	0°
DGS2-005	2	N	2	0.05			●							20	5	0°	0°
DGS2-010	2	N	2	0.1			●							20	5	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●	●	●		●	20	5	0°	0°
DGS2-020-6R	2	R	2	0.2		●	●		●					20	5	0°	6°
DGS2-020-6L	2	L	2	0.2		●	●		●					20	5	6°	0°
DGS2-002-6R	2	R	2	0.02			●		●					19.5	5	0°	6°
DGS2-002-6L	2	L	2	0.02			●		●					19.5	5	6°	0°
DGS2-020-15R	2	R	2	0.2		●	●		●					20	5	0°	15°
DGS2-020-15L	2	L	2	0.2		●	●		●					20	5	15°	0°
DGS2-002-15R	2	R	2	0.02			●		●					19.5	5	0°	15°
DGS2-002-15L	2	L	2	0.02			●		●					19.5	5	15°	0°
DGS2.39-020	2	N	2.39	0.2		●		●		●				20	5	0°	0°
DGS3-020	3	N	3	0.2	●	●	●	●	●	●	●		●	20	5	0°	0°
DGS3-020-6R	3	R	3	0.2		●	●		●					20	5	0°	6°
DGS3-020-6L	3	L	3	0.2		●	●		●					20	5	6°	0°
DGS3-002-6R	3	R	3	0.02			●		●					19.45	5	0°	6°
DGS3-002-6L	3	L	3	0.02			●		●					19.45	5	6°	0°
DGS3-020-15R	3	R	3	0.2		●	●		●					20	5	0°	15°
DGS3-020-15L	3	L	3	0.2		●	●		●					20	5	15°	0°
DGS3-002-15R	3	R	3	0.02			●		●					19.45	5	0°	15°
DGS3-002-15L	3	L	3	0.02			●		●					19.45	5	15°	0°
DGS3.18-020	3	N	3.18	0.2		●		●		●				20	5	0°	0°
DGS4-030	4	N	4	0.3	●	●	●	●	●	●	●		●	20	5	0°	0°
DGS4-030-4R	4	R	4	0.3		●	●		●					20	5	0°	4°
DGS4-030-4L	4	L	4	0.3		●	●		●					20	5	4°	0°
DGS4.76-040	5	N	4.76	0.4		●		●		●				25	5.5	0°	0°
DGS5-030	5	N	5	0.3	●	●	●	●	●	●	●		●	25	5.5	0°	0°
DGS6-030	6	N	6	0.3	●	●	●	●	●	●			●	25	5.5	0°	0°
DGS6.35-040	6	N	6.35	0.4		●		●		●				25	5.5	0°	0°
DGS8-040	8	N	8	0.4		●		●		●			●	30	6.7	0°	0°

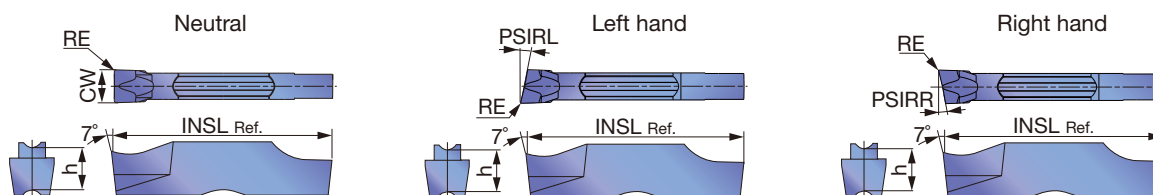
● : Line up

The tool will interfere with the workpiece when grooving larger diameters than ϕD_{max} .

Designation	øDmax (mm)	Designation	øDmax (mm)
DGM2-002-15R/L	28	DGS2-002-15R/L	28
DGM3-002-15R/L	29	DGS3-002-15R/L	29
DGM4-030-15R/L	30	SGS3-020-15R/L	103
SGM3-020-15R/L	103	SGS3-002-15R/L	34



Reference pages: Toolholders → **F014 - F027**, Standard cutting conditions → **F043**

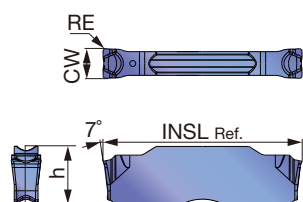
[illegible]

Designation	Seat size	HAND	CW±0.05	RE	Coated					Uncoated								
					AH7025	AH725	AH8005	GH130	AH6235	KS05F								
SGS2-020	2	N	2	0.2	●	●	●	●	●	●					20	5	0°	0°
SGS2-020-6R	2	R	2	0.2	●	●		●							20	5	0°	6°
SGS2-020-6L	2	L	2	0.2	●	●		●							20	5	6°	0°
SGS2-020-15R	2	R	2	0.2	●	●		●							20	5	0°	15°
SGS2-020-15L	2	L	2	0.2	●	●		●							20	5	15°	0°
SGS3-020	3	N	3	0.2	●	●	●	●	●	●					20	5	0°	0°
SGS3-020-6R	3	R	3	0.2	●	●		●							20	5	0°	6°
SGS3-020-6L	3	L	3	0.2	●	●		●							20	5	6°	0°
SGS3-002-6R	3	R	3	0.02		●		●							19.8	5	0°	6°
SGS3-002-6L	3	L	3	0.02		●		●							19.8	5	6°	0°
SGS3-020-15R	3	R	3	0.2	●	●		●							20	5	0°	15°
SGS3-020-15L	3	L	3	0.2	●	●		●							20	5	15°	0°
SGS3-002-15R	3	R	3	0.02		●		●							19.8	5	0°	15°
SGS3-002-15L	3	L	3	0.02		●		●							19.8	5	15°	0°
SGS4-030	4	N	4	0.3	●	●	●	●	●	●					20	5	0°	0°
SGS5-030	5	N	5	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGS6-030	6	N	6	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGS8-040	8	N	8	0.4	●		●		●						30	6.7	0°	0°

● : Line up

DGL

External grooving and parting



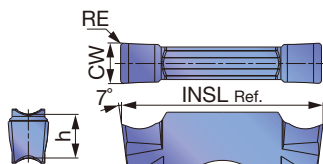
P	Steel	★	★	★					
M	Stainless	★	★	★					
K	Cast iron	★	★	★					
N	Non-ferrous								
S	Superalloys	★	★						
H	Hard materials								

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated									INSL	h
				AH7025	AH8005	AH6235								
DGL2-020	2	2	0.2	●	●	●							20	5
DGL3-025	3	3	0.25	●	●	●							20	5
DGL4-030	4	4	0.3	●	●	●							20	5
DGL5-030	5	5	0.3	●	●	●							25	5.5
DGL6-080	6	6	0.8	●	●	●							25	5.5

● : Line up

External grooving (for high precision)



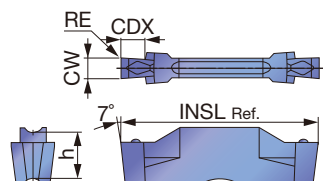
P	Steel	★		★							
M	Stainless	★									
K	Cast iron	★		☆		☆					
N	Non-ferrous					★					
S	Superalloys	★				☆					
H	Hard materials										

★ : First choice
 ☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated		Cermet		Uncoated		INSL	h
				AH7025		NS9530		KS05F			
DGG200-020	2	2	0.2	●		●		●		20	5
DGG300-020	3	3	0.2	●		●		●		20	5
DGG400-040	4	4	0.4	●		●		●		20	5
DGG500-040	5	5	0.4	●		●		●		25	5.5
DGG600-040	6	6	0.4	●		●		●		25	5.5

●: Line up

External grooving (for high precision)



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

★ : First choice
☆ : Second choice

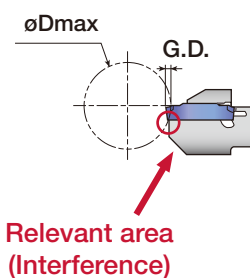
Designation	Seat size	CW±0.02	RE	Coated			Cermet						CDX	INSL	h		
				AH7025	AH725	GH130	NS9530										
DGE100-000	2	1	0		●	●		●							2.5	20	5
DGE130-000	2	1.3	0		●	●		●							2.5	20	5
DGE160-010	2	1.6	0.1	●	●	●		●							2.5	20	5
DGE185-010	2	1.85	0.1	●	●	●		●							3.5	20	5
DGE215-015	2	2.15	0.15	●	●	●		●							3.5	20	5

●: Line up

ϕ_{Dmax} is limited as shown in the picture to the right according to the groove depth, G.D. Please refer to the following table.

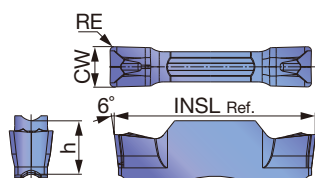
G.D = Groove depth

Designation	Max. groove depth (mm)	øDmax (mm)				
		G.D. = 1	G.D. = 1.5	G.D. = 2	G.D. = 2.5	G.D. = 3
DGE100-000	2	∞	18.6	11.5	-	-
DGE130-000						
DGE160-010						
DGE185-010	3				8.8	7
DGE215-015						



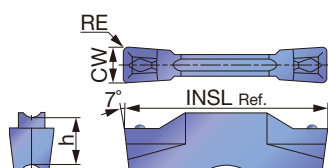
Reference pages: Toolholders → **F014 - F027**, Standard cutting conditions → **F043**

External face grooving and turning



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External face grooving and turning (for high precision)

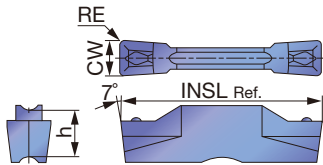
[illegible]

●: Line up

Reference pages: Toolholders → **F014 - F027**, Standard cutting conditions → **F043**

DTE

External face grooving and turning



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

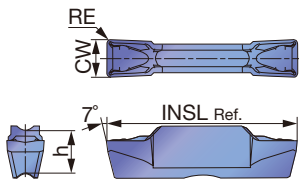
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated						Cermet				INSL	h
				T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530				
DTE3-020	3	3	0.2			●		●		●				20	5
DTE3-040	3	3	0.4	●	●	●	●	●	●	●	●			20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●	●			20	5
DTE4-080	4	4	0.8			●		●		●				20	5
DTE5-040	5	5	0.4		●	●		●		●				25	5.5
DTE5-080	5	5	0.8			●		●		●				25	5.5
DTE6-080	6	6	0.8		●	●		●		●				25	5.5

● : Line up

DTX

External, internal and face grooving, and turning



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

★ : First choice
☆ : Second choice

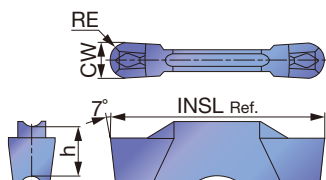
Designation	Seat size	CW±0.05	RE	Coated						Cermet		Uncoated		INSL	h
				T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530		KS05F			
DTX2-020	2	2	0.2		●		●		●			●		20	5
DTX3-030	3	3	0.3	●	●	●	●	●	●	●		●		20	5
DTX4-040	4	4	0.4	●	●	●	●	●	●	●		●		20	5
DTX5-040	5	5	0.4	●	●	●	●	●	●	●		●		25	5.5
DTX6-080	6	6	0.8		●	●	●	●	●			●		25	5.5
DTX8-080	8	8	0.8		●		●		●			●		30	6.7

● : Line up

Reference pages: Toolholders → **F014 - F027**, Standard cutting conditions → **F043**

DTR

Profiling and undercutting (for high precision)



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

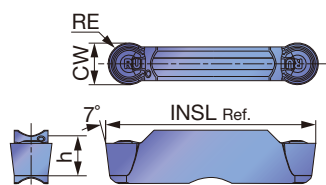
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated				Cermet						INSL	h
				T9225	AH7025	AH725	GH130		NS9530						
DTR300-150	3	3	1.5	●	●	●	●		●					20	5
DTR400-200	4	4	2	●	●	●	●		●					20	5
DTR478-239	5	4.78	2.39	●	●	●	●		●					25	5.5
DTR500-250	5	5	2.5	●	●	●	●		●					25	5.5
DTR600-300	6	6	3	●	●	●	●							25	5.5

● : Line up

DTR

Profiling and undercutting



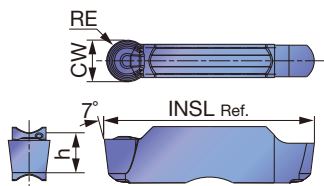
P	Steel	★	★	☆	★		☆	★		★					
M	Stainless		★	☆	★		★	★							
K	Cast iron		★		★	☆	☆	★		☆		☆			
N	Non-ferrous											☆			
S	Superalloys		★	☆	★	★						★			
H	Hard materials														

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				Cermet		Uncoated				INSL	h
				T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530		KS05F		
DTR2-100	2	2	1		●		●			●			●	20	5
DTR3-150	3	3	1.5	●	●	●	●	●	●	●	●		●	20	5
DTR4-200	4	4	2	●	●	●	●	●	●	●	●		●	20	5
DTR5-250	5	5	2.5	●	●	●	●	●	●	●	●		●	25	5.5
DTR6-300	6	6	3	●	●	●	●		●	●			●	25	5.5
DTR8-400	8	8	4	●	●	●	●		●	●			●	30	6.7

● : Line up

Profiling and undercutting



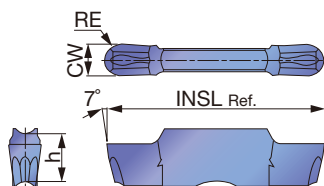
P	Steel	★	★										
M	Stainless	★	★										
K	Cast iron	★	★					☆					
N	Non-ferrous							☆					
S	Superalloys	★	★					★					
H	Hard materials												

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				Uncoated						INSL	h	
				AH7025	AH8005					KS05F						
STR2-100	2	2	1	●	●					●					20	5
STR3-150	3	3	1.5	●	●					●					20	5
STR4-200	4	4	2	●	●					●					20	5
STR5-250	5	5	2.5	●	●					●					25	5.5
STR6-300	6	6	3	●	●					●					25	5.5
STR8-400	8	8	4	●	●					●					30	6.7

●: Line up

Profiling and undercutting (for high precision)



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

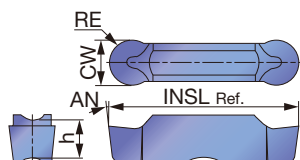
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated								INSL	h	
				AH7025	AH725	GH130								
DTIU300-150	3	3	1.5	●	●	●							20	5
DTIU400-200	4	4	2	●	●	●							20	5
DTIU500-250	5	5	2.5	●	●	●							25	5.5
DTIU600-300	6	6	3	●	●	●							25	5.5

●: Line up

Reference pages: Toolholders → **F014 - F027**, Standard cutting conditions → **F043**

Aluminium wheel machining (for high precision)

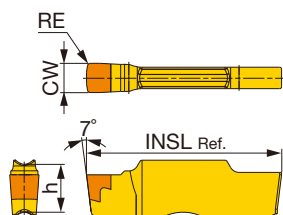


	PSteel												
	MStainless												
	KCast iron												
	NNon-ferrous	★										★ : First choice	
	SSuperalloys											☆ : Second choice	
	HHard materials												

Designation	Seat size	CW±0.02	RE	Uncoated						INSL	h	AN	
				TH10									
DTA600-300	6	6	3	●							25	5.5	7°
DTA800-400	8	8	4	●							30	6.7	10°

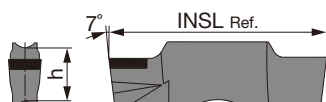
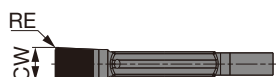
●: Line up

External and face turning



Designation	Seat size	CW ± 0.025	RE	CBN							INSL	h
				●								
STH300-SR	3	3	0.3	●							20	5
STH500-SR	5	5	0.3	●							25	5.5

●: Line up



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

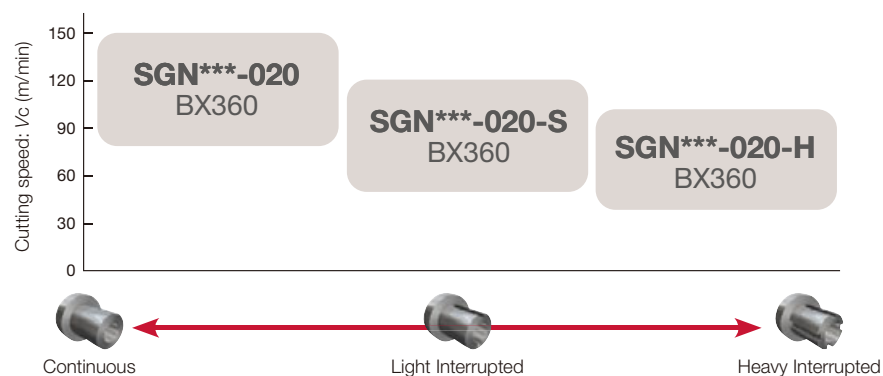
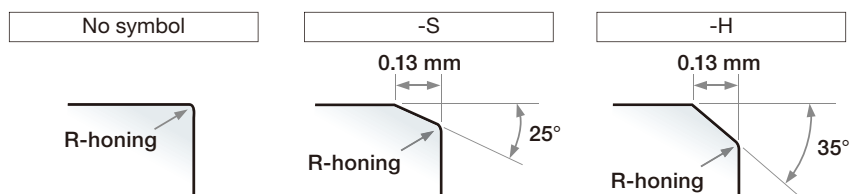
★ : First choice
☆ : Second choice



Designation	Seat size	CW±0.025	RE	CBN			INSL	h	Condition		
				BX360					Continuous	Light interrupted	Heavy interrupted
SGN200-020	2	2	0.2	●			20	5	○		
SGN200-020-S	2	2	0.2	●			20	5		○	
SGN200-020-H	2	2	0.2	●			20	5			○
SGN300-020	3	3	0.2	●			20	5	○		
SGN300-020-S	3	3	0.2	●			20	5		○	
SGN300-020-H	3	3	0.2	●			20	5			○
SGN400-020	4	4	0.2	●			20	5	○		
SGN400-020-S	4	4	0.2	●			20	5		○	
SGN400-020-H	4	4	0.2	●			20	5			○
SGN500-020-S	5	5	0.2	●			25	5.5		○	
SGN500-020-H	5	5	0.2	●			25	5.5			○

●: Line up

■ Edge preparations



Reference pages: Toolholders → **F014 - F027**, Standard cutting conditions → **F043**

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed V _c (m/min)
P	Steel S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225, AH8005	80 - 300
		< 300 HB	Impact resistance	AH6235, GH130	50 - 120
		< 300 HB	Surface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, X5CrNi18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Wear resistance	AH8005	50 - 120
		< 200 HB	Impact resistance	AH6235, GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515	150 - 700
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 180
	Ductile cast iron FCD450, etc. 450-10S, etc.	-	First choice	T515	150 - 300
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	20 - 60
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	20 - 40
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	20 - 100
		< HRC 40	Impact resistance	AH7025, AH725	20 - 80

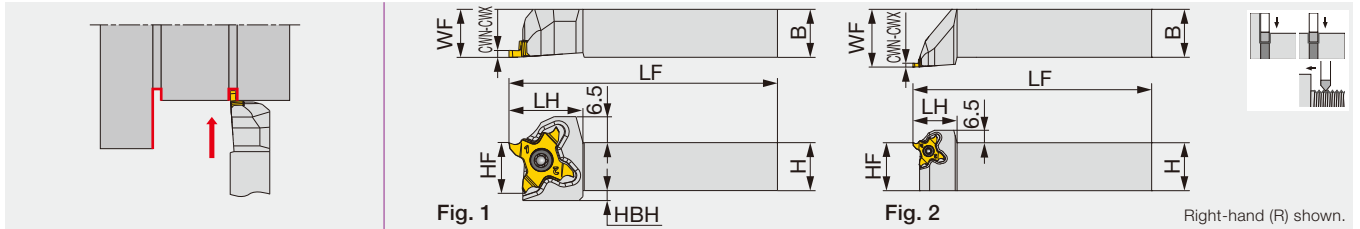
Please see page **F028 - F030** for feed: *f* (mm/rev).

STH

ISO	Grade	CW	Application	Cutting speed V _c (m/min)	Depth of cut a _p (mm)	Feed <i>f</i> (mm/rev)
H	BXA10	3	External turning	100 - 230	0.08 - 0.12	0.4 - 1
			Face turning	100 - 230	0.08 - 0.12	0.4 - 0.8
		5	External turning	100 - 230	0.08 - 0.12	0.5 - 1.5
			Face turning	100 - 230	0.08 - 0.12	0.5 - 0.8

SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed V _c (m/min)	Feed <i>f</i> (mm/rev)
H	BX360	No symbol	Continuous	80 - 150	0.03 - 0.08
		-S	Light interrupted	50 - 120	0.03 - 0.08
		-H	Heavy interrupted	40 - 100	0.03 - 0.06



Designation	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC*18...	1.2	1
STCR/L1212F18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16	16	-	TC*18...	1.2	1
STCR/L2020H18	0.33	3.18	20	20	100	18.5	20	20	-	TC*18...	1.2	1
STCR/L2020X18	0.33	3.18	20	20	120	23	20	25	-	TC*18...	1.2	2
STCR/L2525Z18	0.33	3.18	25	25	135	23	25	30	-	TC*18...	1.2	2

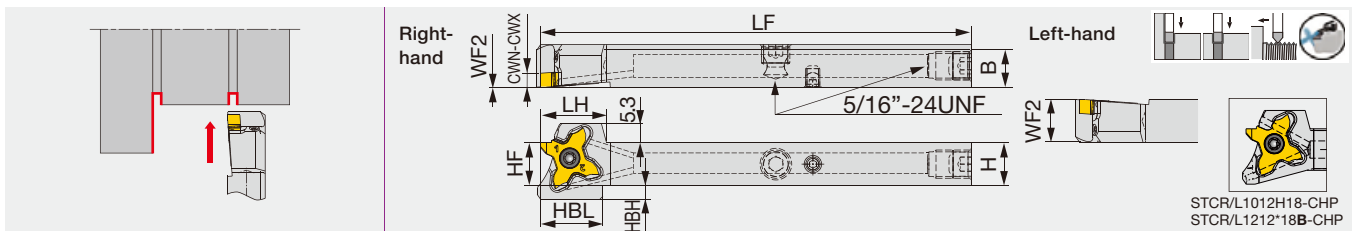
The right hand insert (TC*18R...) is used for the right hand toolholders (STCR...), and the left hand insert is used for the left hand toolholders

*Torque: Recommended clamping torque: N·m

STCR/L-18-CHP

Direct connection

External grooving and threading toolholder, high pressure coolant compatible



Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF2	HBH	Insert	Torque*
STCR/L1012H18-CHP	0.33	3.18	10	12	100	17.1	17.1	10	0/12	4	TC*18...	1.2
STCR/L1212X18B-CHP	0.33	3.18	12	12	120	18.5	17.5	12	0/12	4	TC*18...	1.2
STCR/L1616X18-CHP	0.33	3.18	16	16	120	18.5	-	16	0/16	0	TC*18...	1.2

The right hand insert (TC*18R...) is used for the right hand toolholders (STCR...), and the left hand insert (TC*18L...) is used for the left hand toolholders (STCL...).

*Torque: Recommended torque (N·m) for clamping

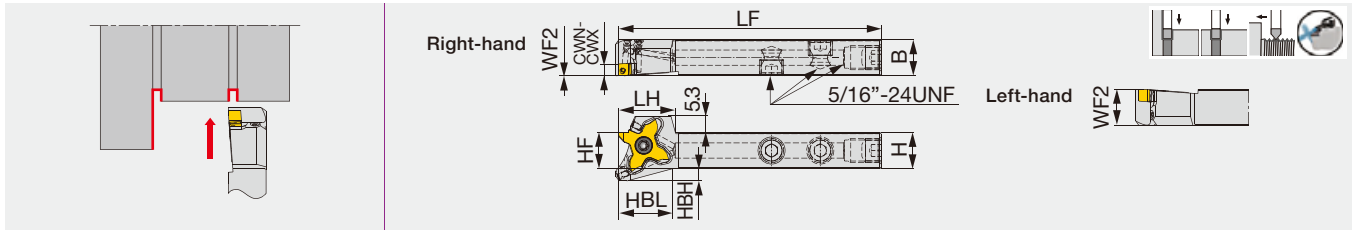
SPARE PARTS

Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**18	CSTC-4L100DL	T-1008/5	-	-	-	-
STCL**18	CSTC-4L100DR	T-1008/5	-	-	-	-
STCL**18-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2
STCR**18-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2

STCR/L-18-CHP

Tube connection

External grooving and threading toolholder. High pressure coolant capability.



Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF2 ⁽¹⁾	HBH	Insert	Torque*
STCR/L1212F18B-CHP	0.33	3.18	12	12	85	18.5	17.5	12	0/12	4	TC*18...	1.2

The right hand insert (TC*18R**) is used for the right hand toolholders (STCR**), and the left hand insert (TC*18L**) is used for the left hand toolholders (STCL**).

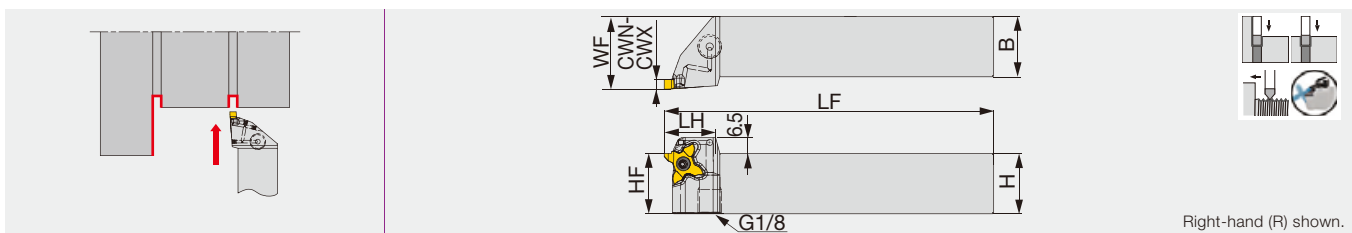
(1) "0/12" for the WF2 dimension indicates WF2 = 0 for the right handed tool, WF2 = 12 for the left handed tool.

*Torque: Recommended torque (N·m) for clamping

STCR/L-18-CHP

Tube connection

Threading tool - for external theading with high pressure coolant capability



Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque*
STCR/L2020X18-CHP	0.33	3.18	20	20	120	23	-	20	25	-	TC*18...	1.2
STCR/L2525Z18-CHP	0.33	3.18	25	25	135	23	-	25	30	-	TC*18...	1.2

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...).

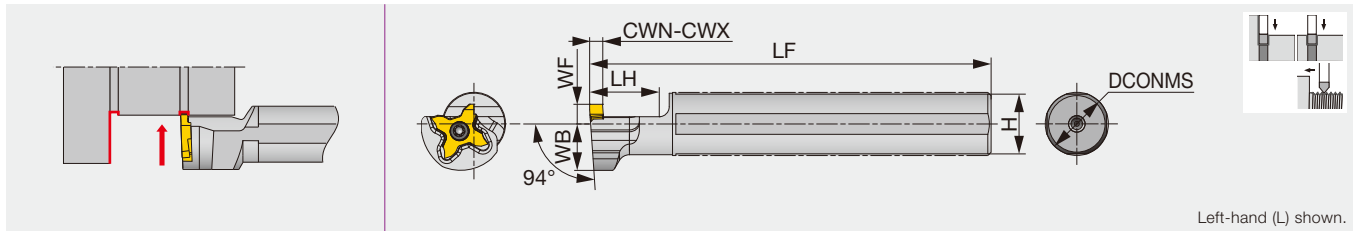
*Torque: Recommended torque (N·m) for clamping

SPARE PARTS

Designation	Clamping screw	Wrench	Coolant plug	Wrench
STCL**F18B-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4
STCR**F18B-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4
STCL**18-CHP	CSTC-4L100DR	T-1008/5	-	-
STCR**18-CHP	CSTC-4L100DL	T-1008/5	-	-

Reference pages: Inserts → **F051 - F057**, Standard cutting conditions → **F058**
Parts for coolant hose → **F266**

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



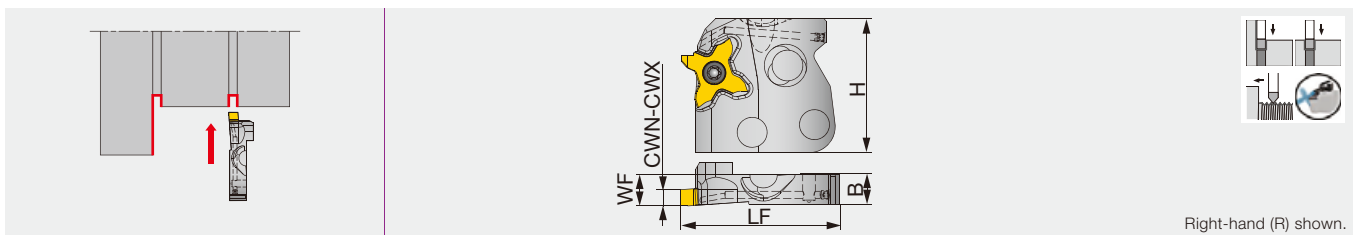
Designation	CWN	CWX	DCONMS	LF	LH	H	WB	WF	Insert	Torque*
JS14H-STCL18	0.33	3.18	14	100	20	13	14	6	TC*18R...	1.2
JS159F-STCL18	0.33	3.18	15.875	85	20	15	14	6	TC*18R...	1.2
JS16F-STCL18	0.33	3.18	16	85	20	15	14	6	TC*18R...	1.2
JS19G-STCL18	0.33	3.18	19.05	90	20	18	14	6	TC*18R...	1.2
JS19X-STCL18	0.33	3.18	19.05	120	20	18	14	6	TC*18R...	1.2
JS20G-STCL18	0.33	3.18	20	90	20	19	14	6	TC*18R...	1.2
JS20X-STCL18	0.33	3.18	20	120	20	19	14	6	TC*18R...	1.2
JS22X-STCL18	0.33	3.18	22	120	20	21	12.25	10	TC*18R...	1.2
JS25H-STCL18	0.33	3.18	25	100	20	24	12.25	10	TC*18R...	1.2
JS254X-STCL18	0.33	3.18	25.4	120	20	24	12.25	10	TC*18R...	1.2

The left hand toolholder (STCL...) is used with the right hand inserts (TC*18R...)

*Torque: Recommended clamping torque: N·m

STCAR/L18-CHP

External grooving and threading adapter, with high pressure coolant capability



Designation	CWN	CWX	WF	H	LF	B	Insert	Torque*
STCAR/L18-CHP	0.33	3.18	7.5	33	38	7.2	TC*18...	1.2

Use the right hand insert (TC*18R...) with the right hand adapter (STCAR...). Use the left hand insert (TC*18L...) with the left hand adapter (STCAL...).

*Torque: Recommended torque (N·m) for clamping

SPARE PARTS



Designation	Clamping screw	Wrench
JS**STCL18	CSTC-4L100DL	T-1008/5
STCAL18-CHP	CSTC-4L100DR	T-1008/5
STCAR18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: JS-STCL18: Inserts → **F051 - F057**, Standard cutting conditions → **F058**

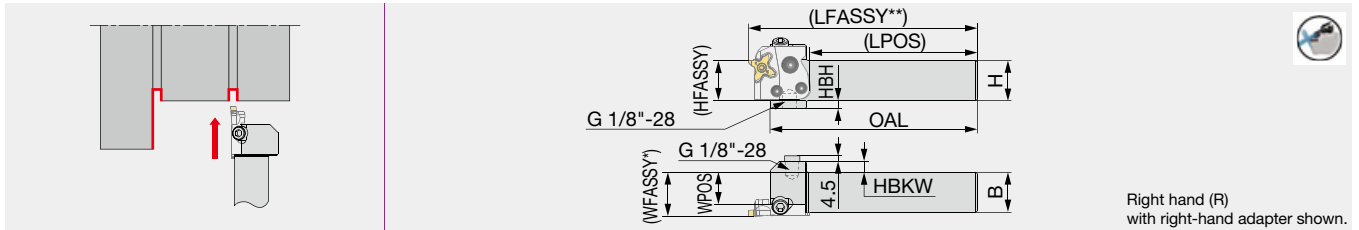
STCAR/L18-CHP: Inserts → **F051 - F057**, Shanks and toolholders → **F047 - F049**

Standard cutting conditions → **F058**, Technical Reference → **L053**

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability



Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L18-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

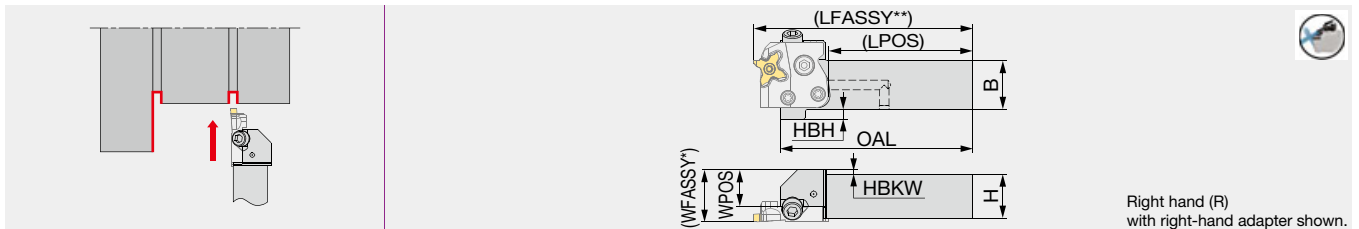
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability



Designation	H	B	OAL	LPOS	WPOS	HBKW	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP-MC	20	20	98	73.5	14	6	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP-MC	25	25	98	73.5	19	-	5	STCAR/L18-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

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
CHSR/L*-CHP-MC	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

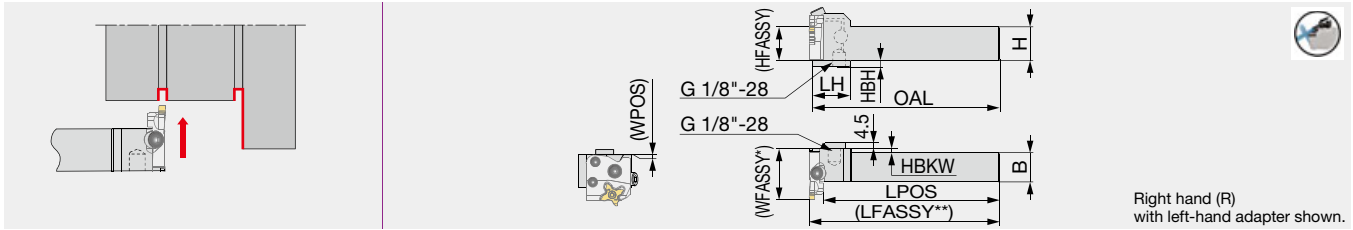
Combination of adapter and shank

Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

Reference pages: Inserts → F051 - F057, Adapters → F046, Standard cutting conditions → F058
Parts for coolant hose → F266, Technical Reference → L053

Shank for perpendicularly-mounted adapter, with high pressure coolant capability



Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	STCAL/R18-CHP	6.5
CHFVR/L2525-CHP	25	25	140	28	135.1	0.5	0	25	5	STCAL/R18-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter 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 (N·m)

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

Combination of adapter and shank

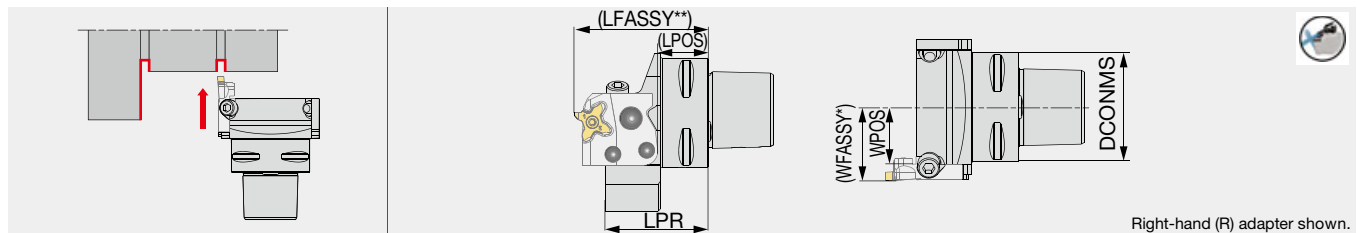
Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

C*CHSN-CHP

Direct connection

Toolholder with TungCap connection, for adapter, with high pressure coolant capability



Right-hand (R) adapter shown.

Designation	DCONMS	LPR	LPOSS	WPOSS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L18-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L18-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L18-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L18-CHP	6.5

WFOSS*: Toolholder (WPOSS) + adapter (WF)

LFOSS*: Toolholder (LPOSS) + adapter (LF)

Depend on the adapter type, the value of LFOSS or WFOSS may change.

Torque*: Recommended clamping torque (N·m)

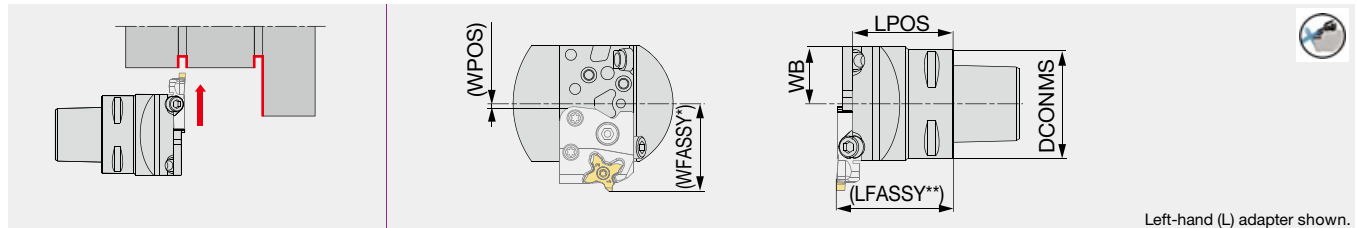
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

Toolholder with TungCap connection, for perpendicularly-mounted adapter, with high pressure coolant capability



Left-hand (L) adapter shown.

Designation	DCONMS	LPOSS	WB	WPOSS	Adapter (Option)	Torque*
C3CHFVN26040-CHP	32	40	26	1.5	STCAR/L18-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	STCAR/L18-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	STCAR/L18-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	STCAR/L18-CHP	6.5

WFOSS*: Toolholder (WPOSS) + adapter (LF)

LFOSS*: Toolholder (LPOSS) + adapter (WF)

Depend on the adapter type, the value of LFOSS or WFOSS may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

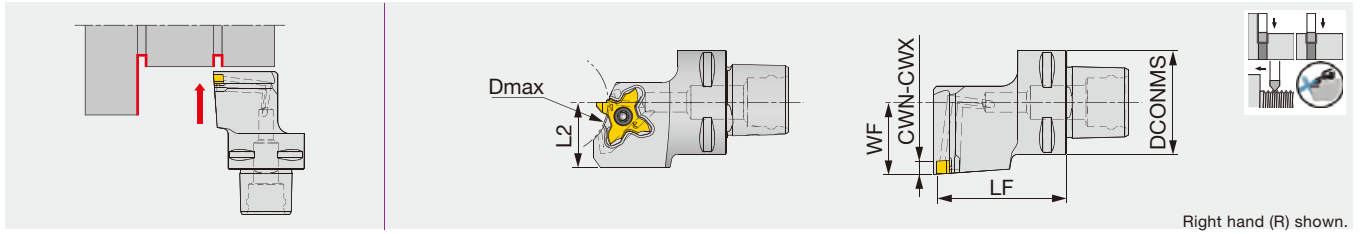
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CH**N*-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

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 → F051 - F057, Adapters → F046, Standard cutting conditions → F058
Technical Reference → L053

External grooving and threading toolholder, with high pressure coolant capability



Right hand (R) shown.

Designation	CWN	CWX	DCONMS	LF	L2	WF	Dmax	Insert	Torque*
C3STCR/L22040-18-CHP	0.33	3.18	32	40	20	22	32	TC*18...	1.2
C4STCR/L27050-18-CHP	0.33	3.18	40	50	25	27	75 ⁽¹⁾	TC*18...	1.2

Applicable for 14 MPa coolant

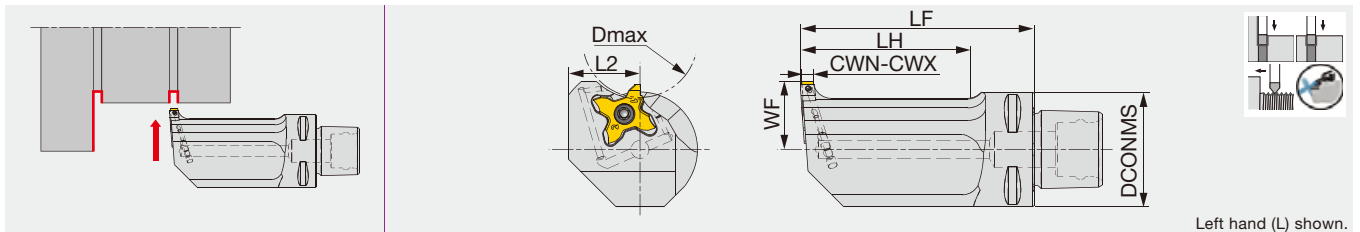
Use the right hand insert (TC*18R...) with the right hand holder (STCR...). Use the left hand insert (TC*18L...) with the left hand holder (STCL...).

(1) The value for 3.5 mm groove depth. Dmax varies according to the grooving depth required.

*Torque: Recommended clamping torque (N·m)

C-STCFL-18-CHP

External grooving and threading toolholder, with high pressure coolant capability



Left hand (L) shown.

Designation	CWN	CWX	DCONMS	LF	LH	L2	WF	Dmax	Insert	Torque*
C3STCFL18040-18-CHP	0.33	3.18	32	40	21.5	20	18	32	TC*18R...	1.2
C3STCFL18065-18-CHP	0.33	3.18	32	65	46.5	20	18	32	TC*18R...	1.2

Applicable for 14 MPa coolant

Use the right hand insert (TC*18R...) with the left hand holder (STCFL...).

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
C*STCL*-18-CHP	CSTC-4L100DR	T-1008/5
C*STCR*-18-CHP	CSTC-4L100DL	T-1008/5
C3STCFL*-18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: Inserts → **F051 - F057**, Standard cutting conditions → **F058**

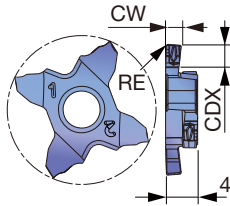
External grooving

TCS18 (4 corners)  F052, F053	First choice for O.D. grooving General-purpose pressed-in 3D chipbreaker for smooth chip control CW = 1 - 3 mm CDX = 3.5 mm 	TCL18 (4 corners)  F053	For lighter cutting action Features pressed-in 3D chipbreaker with sharp cutting edge for light cutting action. Provides excellent chip control at low feed rates. CW = 1.5 - 3 mm CDX = 3.5 mm 
TCG18 (4 corners)  F054, F055	For better chipping resistance Features an optimum rake angle and edge preparation for a good balance of light cutting action and fracture resistance. CW = 1 - 3.18 mm CDX = 3.5 mm 	TCP18 (4 corners)  F056, F057	For higher surface quality Featuring a large rake angle, providing light cutting action and better surface finish. TCP-F style insert is also available for sharp cutting edge. CW = 0.33 - 3 mm CDX = 3.5 mm 

Please see page **F***** for the product details.

INSERTS

TCS18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

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

★ : First choice



Designation	HAND	CW±0.02	RE	Coated										CDX
				AH7025										
TCS18R100-010	R	1	0.1	●										2
TCS18L100-010	L	1	0.1	●										2
TCS18R120-010	R	1.2	0.1	●										2
TCS18L120-010	L	1.2	0.1	●										2
TCS18R125-010	R	1.25	0.1	●										2
TCS18L125-010	L	1.25	0.1	●										2
TCS18R125-020	R	1.25	0.2	●										2
TCS18L125-020	L	1.25	0.2	●										2
TCS18R130-020	R	1.3	0.2	●										3.5
TCS18L130-020	L	1.3	0.2	●										3.5
TCS18R140-010	R	1.4	0.1	●										3.5
TCS18L140-010	L	1.4	0.1	●										3.5
TCS18R140-020	R	1.4	0.2	●										3.5
TCS18L140-020	L	1.4	0.2	●										3.5
TCS18R145-010	R	1.45	0.1	●										3.5
TCS18L145-010	L	1.45	0.1	●										3.5
TCS18R150-010	R	1.5	0.1	●										3.5
TCS18L150-010	L	1.5	0.1	●										3.5
TCS18R150-020	R	1.5	0.2	●										3.5
TCS18L150-020	L	1.5	0.2	●										3.5
TCS18R160-020	R	1.6	0.2	●										3.5
TCS18L160-020	L	1.6	0.2	●										3.5
TCS18R170-020	R	1.7	0.2	●										3.5
TCS18L170-020	L	1.7	0.2	●										3.5
TCS18R175-010	R	1.75	0.1	●										3.5
TCS18L175-010	L	1.75	0.1	●										3.5
TCS18R175-020	R	1.75	0.2	●										3.5
TCS18L175-020	L	1.75	0.2	●										3.5
TCS18R185-020	R	1.85	0.2	●										3.5
TCS18L185-020	L	1.85	0.2	●										3.5
TCS18R195-020	R	1.95	0.2	●										3.5
TCS18L195-020	L	1.95	0.2	●										3.5
TCS18R200-010	R	2	0.1	●										3.5
TCS18L200-010	L	2	0.1	●										3.5
TCS18R200-020	R	2	0.2	●										3.5
TCS18L200-020	L	2	0.2	●										3.5
TCS18R225-020	R	2.25	0.2	●										3.5
TCS18L225-020	L	2.25	0.2	●										3.5
TCS18R230-020	R	2.3	0.2	●										3.5
TCS18L230-020	L	2.3	0.2	●										3.5
TCS18R250-010	R	2.5	0.1	●										3.5
TCS18L250-010	L	2.5	0.1	●										3.5

5 pieces per package

● : Line up

Reference pages: Toolholders → **F044 - F050**, Standard cutting conditions → **F058**

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

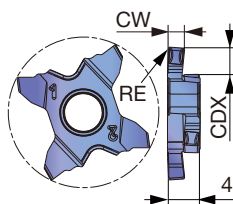
★ : First choice

Designation	HAND	CW±0.02	RE	Coated					CDX
				AH7025					
TCS18R250-020	R	2.5	0.2	●					3.5
TCS18L250-020	L	2.5	0.2	●					3.5
TCS18R250-030	R	2.5	0.3	●					3.5
TCS18L250-030	L	2.5	0.3	●					3.5
TCS18R265-030	R	2.65	0.3	●					3.5
TCS18L265-030	L	2.65	0.3	●					3.5
TCS18R280-030	R	2.8	0.3	●					3.5
TCS18L280-030	L	2.8	0.3	●					3.5
TCS18R300-010	R	3	0.1	●					3.5
TCS18L300-010	L	3	0.1	●					3.5
TCS18R300-020	R	3	0.2	●					3.5
TCS18L300-020	L	3	0.2	●					3.5
TCS18R300-030	R	3	0.3	●					3.5
TCS18L300-030	L	3	0.3	●					3.5

5 pieces per package

● : Line up

TCL18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

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

★ : First choice

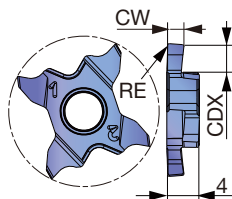
Designation	HAND	CW±0.02	RE	Coated					CDX
				AH7025					
TCL18R150-010	R	1.5	0.1	●					3.5
TCL18L150-010	L	1.5	0.1	●					3.5
TCL18R150-020	R	1.5	0.2	●					3.5
TCL18L150-020	L	1.5	0.2	●					3.5
TCL18R175-020	R	1.75	0.2	●					3.5
TCL18L175-020	L	1.75	0.2	●					3.5
TCL18R200-010	R	2	0.1	●					3.5
TCL18L200-010	L	2	0.1	●					3.5
TCL18R200-020	R	2	0.2	●					3.5
TCL18L200-020	L	2	0.2	●					3.5
TCL18R250-030	R	2.5	0.3	●					3.5
TCL18L250-030	L	2.5	0.3	●					3.5
TCL18R300-010	R	3	0.1	●					3.5
TCL18L300-010	L	3	0.1	●					3.5
TCL18R300-020	R	3	0.2	●					3.5
TCL18L300-020	L	3	0.2	●					3.5
TCL18R300-030	R	3	0.3	●					3.5
TCL18L300-030	L	3	0.3	●					3.5

5 pieces per package

● : Line up

Reference pages: Toolholders → **F044 - F050**, Standard cutting conditions → **F058**

TCG18R/L (honed edge)



Right-hand (R) shown.

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

★ : F

★ : First choice



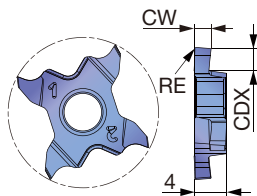
Designation	HAND	CW±0.02	RE	Coated		CDX
				AH7025		
TCG18R100-010	R	1	0.1	●		2
TCG18L100-010	L	1	0.1	●		2
TCG18R120-010	R	1.2	0.1	●		2
TCG18L120-010	L	1.2	0.1	●		2
TCG18R125-010	R	1.25	0.1	●		2
TCG18L125-010	L	1.25	0.1	●		2
TCG18R125-020	R	1.25	0.2	●		2
TCG18L125-020	L	1.25	0.2	●		2
TCG18R130-020	R	1.3	0.2	●		2
TCG18L130-020	L	1.3	0.2	●		2
TCG18R140-010	R	1.4	0.1	●		3.5
TCG18L140-010	L	1.4	0.1	●		3.5
TCG18R140-020	R	1.4	0.2	●		3.5
TCG18L140-020	L	1.4	0.2	●		3.5
TCG18R145-010	R	1.45	0.1	●		3.5
TCG18L145-010	L	1.45	0.1	●		3.5
TCG18R145-020	R	1.45	0.2	●		3.5
TCG18L145-020	L	1.45	0.2	●		3.5
TCG18R150-010	R	1.5	0.1	●		3.5
TCG18L150-010	L	1.5	0.1	●		3.5
TCG18R150-020	R	1.5	0.2	●		3.5
TCG18L150-020	L	1.5	0.2	●		3.5
TCG18R160-020	R	1.6	0.2	●		3.5
TCG18L160-020	L	1.6	0.2	●		3.5
TCG18R170-020	R	1.7	0.2	●		3.5
TCG18L170-020	L	1.7	0.2	●		3.5
TCG18R175-010	R	1.75	0.1	●		3.5
TCG18L175-010	L	1.75	0.1	●		3.5
TCG18R175-020	R	1.75	0.2	●		3.5
TCG18L175-020	L	1.75	0.2	●		3.5
TCG18R185-020	R	1.85	0.2	●		3.5
TCG18L185-020	L	1.85	0.2	●		3.5
TCG18R195-020	R	1.95	0.2	●		3.5
TCG18L195-020	L	1.95	0.2	●		3.5
TCG18R200-010	R	2	0.1	●		3.5
TCG18L200-010	L	2	0.1	●		3.5
TCG18R200-020	R	2	0.2	●		3.5
TCG18L200-020	L	2	0.2	●		3.5
TCG18R225-020	R	2.25	0.2	●		3.5
TCG18L225-020	L	2.25	0.2	●		3.5
TCG18R230-020	R	2.3	0.2	●		3.5
TCG18L230-020	L	2.3	0.2	●		3.5
TCG18R250-010	R	2.5	0.1	●		3.5
TCG18L250-010	L	2.5	0.1	●		3.5

5 pieces per package

● : Line up

Reference pages: Toolholders → **F044 - F050**, Standard cutting conditions → **F058**

TCP18R/L (lightly honed edge)



Right-hand (R) shown.

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

★ : First choice



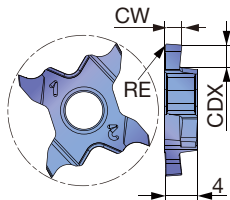
Designation	HAND	CW±0.02	RE	Coated								CDX
				AH725								
TCP18R033-005	R	0.33	0.05	●								0.8
TCP18L033-005	L	0.33	0.05	●								0.8
TCP18R043-005	R	0.43	0.05	●								1.2
TCP18L043-005	L	0.43	0.05	●								1.2
TCP18R050-005	R	0.5	0.05	●								1.2
TCP18L050-005	L	0.5	0.05	●								1.2
TCP18R075-005	R	0.75	0.05	●								2
TCP18L075-005	L	0.75	0.05	●								2
TCP18R095-005	R	0.95	0.05	●								2
TCP18L095-005	L	0.95	0.05	●								2
TCP18R100-010	R	1	0.1	●								2
TCP18L100-010	L	1	0.1	●								2
TCP18R120-010	R	1.2	0.1	●								2
TCP18L120-010	L	1.2	0.1	●								2
TCP18R125-010	R	1.25	0.1	●								2
TCP18L125-010	L	1.25	0.1	●								2
TCP18R140-010-35	R	1.4	0.1	●								3.5
TCP18L140-010-35	L	1.4	0.1	●								3.5
TCP18R145-010	R	1.45	0.1	●								2
TCP18L145-010	L	1.45	0.1	●								2
TCP18R145-010-35	R	1.45	0.1	●								3.5
TCP18L145-010-35	L	1.45	0.1	●								3.5
TCP18R150-010	R	1.5	0.1	●								2
TCP18L150-010	L	1.5	0.1	●								2
TCP18R150-010-35	R	1.5	0.1	●								3.5
TCP18L150-010-35	L	1.5	0.1	●								3.5
TCP18R175-010	R	1.75	0.1	●								2
TCP18L175-010	L	1.75	0.1	●								2
TCP18R175-010-35	R	1.75	0.1	●								3.5
TCP18L175-010-35	L	1.75	0.1	●								3.5
TCP18R200-010	R	2	0.1	●								2.5
TCP18L200-010	L	2	0.1	●								2.5
TCP18R200-010-35	R	2	0.1	●								3.5
TCP18L200-010-35	L	2	0.1	●								3.5
TCP18R250-010	R	2.5	0.1	●								2.5
TCP18L250-010	L	2.5	0.1	●								2.5
TCP18R250-010-35	R	2.5	0.1	●								3.5
TCP18L250-010-35	L	2.5	0.1	●								3.5
TCP18R300-010	R	3	0.1	●								2.5
TCP18L300-010	L	3	0.1	●								2.5
TCP18R300-010-35	R	3	0.1	●								3.5
TCP18L300-010-35	L	3	0.1	●								3.5

5 pieces per package

● : Line up

Reference pages: Toolholders → **F044 - F050**, Standard cutting conditions → **F058**

TCP18R/L-F (sharp edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02	RE	Coated										CDX
				SH725										
TCP18R033F-005	R	0.33	0.05	●										0.8
TCP18L033F-005	L	0.33	0.05	●										0.8
TCP18R043F-005	R	0.43	0.05	●										1.2
TCP18L043F-005	L	0.43	0.05	●										1.2
TCP18R050F-005	R	0.5	0.05	●										1.2
TCP18L050F-005	L	0.5	0.05	●										1.2
TCP18R075F-005	R	0.75	0.05	●										2
TCP18L075F-005	L	0.75	0.05	●										2
TCP18R095F-005	R	0.95	0.05	●										2
TCP18L095F-005	L	0.95	0.05	●										2
TCP18R100F-005	R	1	0.05	●										2
TCP18R100F-010	R	1	0.1	●										2
TCP18L100F-010	L	1	0.1	●										2
TCP18R120F-005	R	1.2	0.05	●										2
TCP18R120F-010	R	1.2	0.1	●										2
TCP18L120F-010	L	1.2	0.1	●										2
TCP18R125F-005	R	1.25	0.05	●										2
TCP18R125F-010	R	1.25	0.1	●										2
TCP18L125F-010	L	1.25	0.1	●										2
TCP18R140F-010-35	R	1.4	0.1	●										3.5
TCP18R145F-005-35	R	1.45	0.05	●										3.5
TCP18R145F-010	R	1.45	0.1	●										2
TCP18L145F-010	L	1.45	0.1	●										2
TCP18R145F-010-35	R	1.45	0.1	●										3.5
TCP18L145F-010-35	L	1.45	0.1	●										3.5
TCP18R150F-005-35	R	1.5	0.05	●										3.5
TCP18R150F-010	R	1.5	0.1	●										2
TCP18L150F-010	L	1.5	0.1	●										2
TCP18R150F-010-35	R	1.5	0.1	●										3.5
TCP18L150F-010-35	L	1.5	0.1	●										3.5
TCP18R175F-005-35	R	1.75	0.05	●										3.5
TCP18R175F-010	R	1.75	0.1	●										2
TCP18L175F-010	L	1.75	0.1	●										2
TCP18R175F-010-35	R	1.75	0.1	●										3.5
TCP18L175F-010-35	L	1.75	0.1	●										3.5
TCP18R200F-005-35	R	2	0.05	●										3.5
TCP18R200F-010	R	2	0.1	●										2.5
TCP18L200F-010	L	2	0.1	●										2.5
TCP18R200F-010-35	R	2	0.1	●										3.5
TCP18L200F-010-35	L	2	0.1	●										3.5
TCP18R250F-010	R	2.5	0.1	●										2.5
TCP18L250F-010	L	2.5	0.1	●										2.5
TCP18R250F-010-35	R	2.5	0.1	●										3.5
TCP18L250F-010-35	L	2.5	0.1	●										3.5
TCP18R300F-010	R	3	0.1	●										2.5
TCP18L300F-010	L	3	0.1	●										2.5
TCP18R300F-010-35	R	3	0.1	●										3.5
TCP18L300F-010-35	L	3	0.1	●										3.5

5 pieces per package
● : Line up

Reference pages: Toolholders → **F044 - F050**, Standard cutting conditions → **F058**

STANDARD CUTTING CONDITIONS

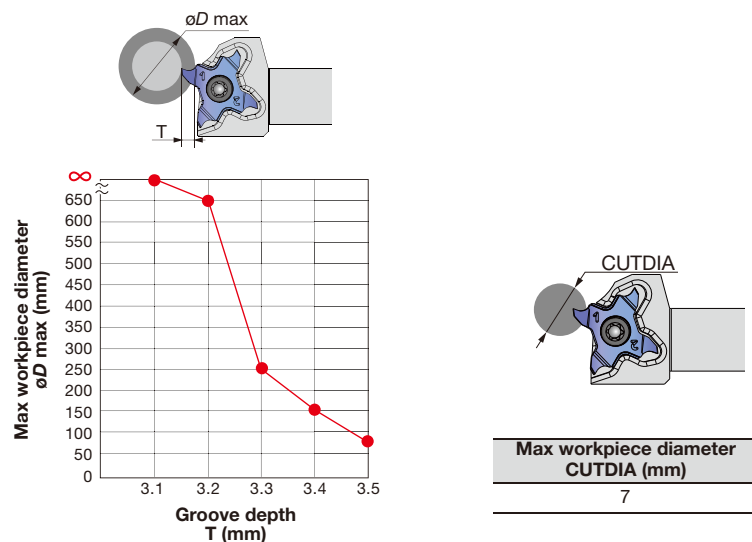
TCS18R/L, TCL18R/L (3D chipbreaker), TCG18R/L (honed edge), TCG18R/L (Full R)

ISO	Workpiece materials	Grade	Cutting speed Vc (m/min)	Feed: f (mm/rev)		
				TCL18	TCS18	TCG18
P	Low carbon steel S15C, SS400, etc., C15E4, E275A, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Carbon steel, Alloy steel S55C, SCM440, etc., C55, 42CrMo4, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Prehardened steel NAK80, PX5, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
M	Stainless steel SUS304, SUS316, etc., X5CrNi18-9, X5CrNiMo17-12-3, etc.	AH7025	50 - 120	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
K	Grey cast iron FC250, FC300, etc., 250, 300, etc., GG25, GG30, etc.	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Ductile cast iron FCD400, etc., 400-15S, etc., GGG40, etc.	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	30 - 60	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Superalloys Inconel718, etc.	AH7025	20 - 40	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14

TCP18R/L (lightly honed edge), TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Low carbon steel S15C, SS400, etc., C15E4, E275A, etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Carbon steel, Alloy steel S55C, SCM440, etc., C55, 42CrMo4, etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Prehardened steel NAK80, PX5, etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
M	Stainless steel SUS304, SUS316, etc., X5CrNi18-9, X5CrNiMo17-12-3, etc.	First choice	SH725	50 - 120	0.03 - 0.1
		Toughness	AH725	50 - 120	0.03 - 0.1
K	Grey cast iron FC250, FC300, etc., 250, 300, etc., GG25, GG30, etc.	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
	Ductile cast iron FCD400, etc., 400-15S, etc., GGG40, etc.	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	30 - 80	0.03 - 0.1
		Toughness	AH725	30 - 80	0.03 - 0.1
	Superalloys Inconel718, etc.	First choice	AH725	20 - 40	0.03 - 0.1

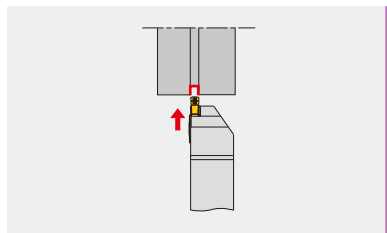
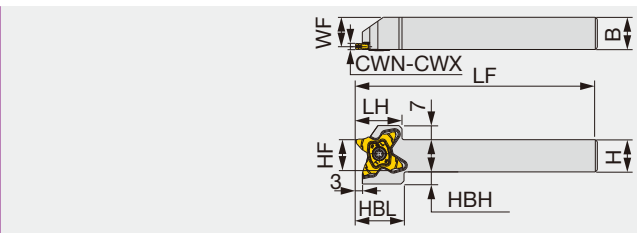
Precautions of processing



*Groove depth and max workpiece diameter (øDmax)

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

External toolholders for grooving, parting

Right-hand (R) shown.

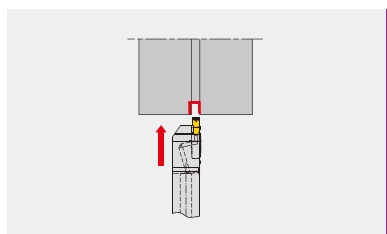
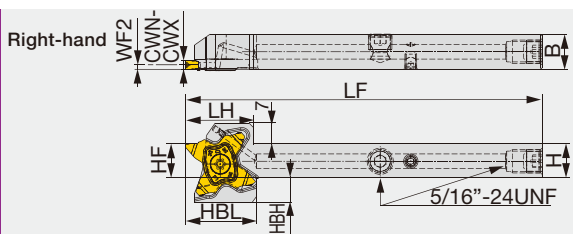
Designation	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque*
STCR/L1010-27	0.5	3.18	10	10	120	23	24	10	8.5	9.5	TC*27...	2.5
STCR/L1212-27	0.5	3.18	12	12	120	23	24	12	10.5	8	TC*27...	2.5
STCR/L1616-27	0.5	3.18	16	16	120	23	24	16	14.5	6	TC*27...	2.5
STCR/L2020-27	0.5	3.18	20	20	120	23	24	20	18.5	2	TC*27...	2.5
STCR/L2525-27	0.5	3.18	25	25	135	23	-	25	23.5	-	TC*27...	2.5

*Torque: Recommended clamping torque: N·m

STCR/L-27-CHP

Direct connection

Grooving and parting-off toolholder. High pressure coolant capability.

Right-hand Left-hand

Designation	CWN	CWX	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	HBL	Insert	Torque*
STCR/L1212-27-CHP	0.5	3.18	12	12	120	23	12	1.5/10.5	8	24	TC*27...	2.5

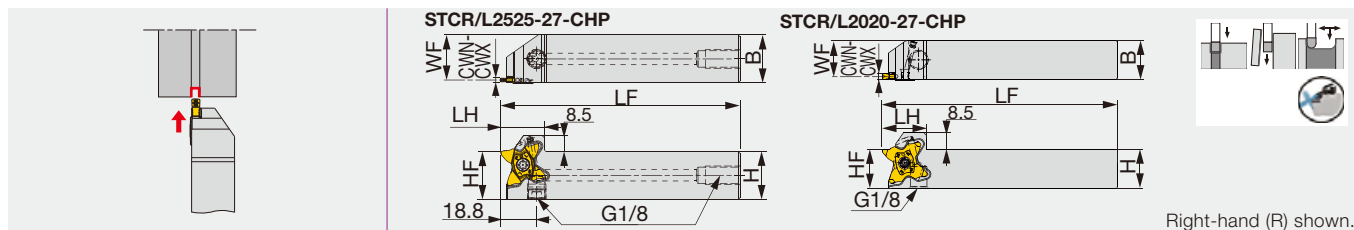
- Make sure to avoid tool interferences when used on Swiss machines
(1) The above WF2 value is valid when an insert width of CW=3 is mounted.
*Torque: Recommended torque (N·m) for clamping

SPARE PARTS



Designation	Screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**27	SR16-212-01397L	T-2010/5	-	-	-	-
STCL**27	SR16-212-01397	T-2010/5	-	-	-	-
STCR1212-27-CHP	SR16-212-01397L	T-2010/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2
STCL1212-27-CHP	SR16-212-01397	T-2010/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2

External grooving and parting toolholder, with high pressure coolant capability



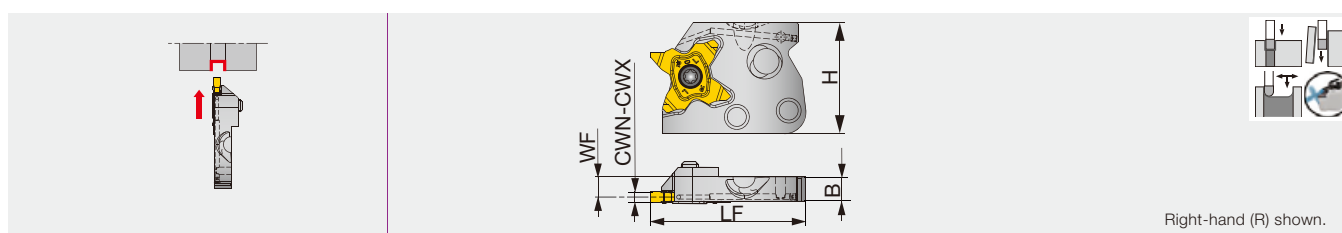
Right-hand (R) shown.

Designation	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 torque (N·m) for clamping

STCAR/L27-CHP

External grooving and parting adapter, with high pressure coolant capability



Right-hand (R) shown.

Designation	CWN	CWX	WF	H	LF	B	Insert	Torque*
STCAR/L27-CHP	0.5	3.18	6	33	46	7.2	TC*27...	2.5

*Torque: Recommended torque (N·m) for clamping

SPARE PARTS

Designation	Screw	Wrench
STCR*-27-CHP	SR16-212-01397L	T-2010/5
STCL*-27-CHP	SR16-212-01397	T-2010/5
STCAR27-CHP	SR16-212-01397L	T-2010/5
STCAL27-CHP	SR16-212-01397	T-2010/5

Reference pages: STCR/L-27-CHP: Inserts → **F065 - F069**, Standard cutting conditions → **F070**

Parts for coolant hose → **F266**

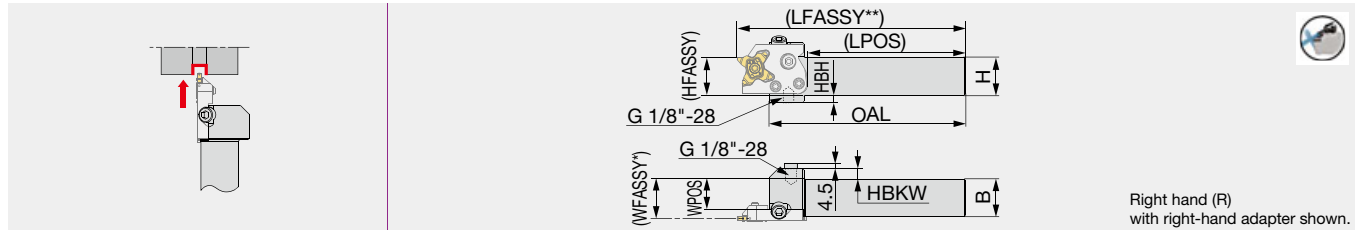
STCAR/L27-CHP: Inserts → **F065 - F069**, Shanks and toolholders → **F061 - F063**

Standard cutting conditions → **F070**, Technical Reference → **L053**

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability



Designation	H	B	OAL	LPOS	WPOS	HBK	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L27-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L27-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

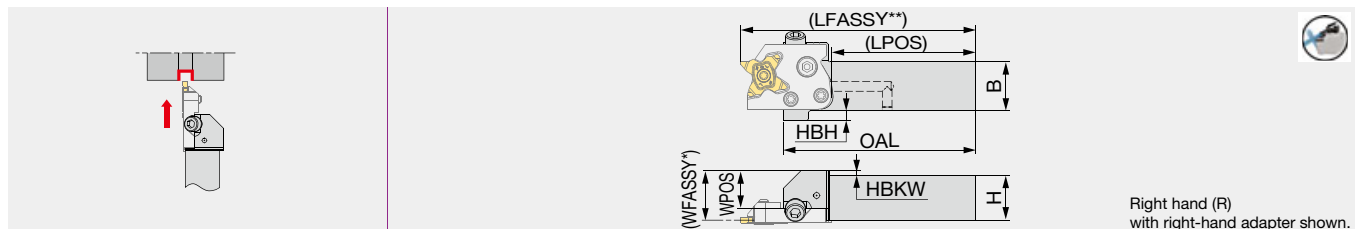
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability



Designation	H	B	OAL	LPOS	WPOS	HBK	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP-MC	20	20	98	73.5	14	6	10	10	STCAR/L27-CHP	6.5
CHSR/L2525-CHP-MC	25	25	98	73.5	19	-	5	5	STCAR/L27-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

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
CHSR/L*-CHP-MC	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	5
SR M6X12DIN6912	8.5
SR M6X20-XT	8.5

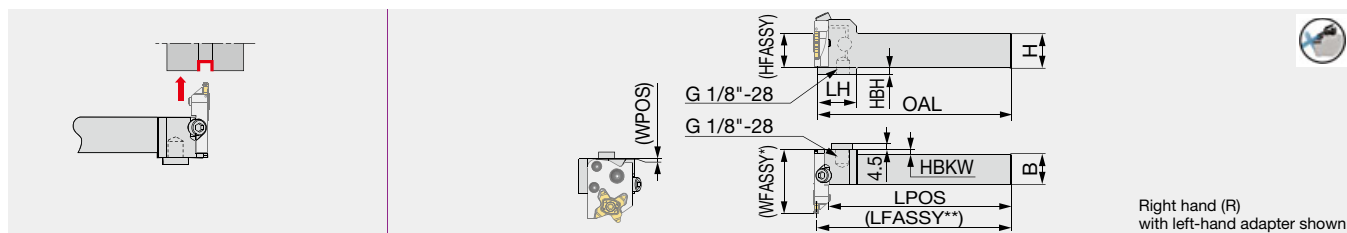
Combination of adapter and shank

Shank	Adapter	
	STCAR27-CHP	STCAL27-CHP
CHSR*-CHP (-MC)	●	
CHSL*-CHP (-MC)		●
CHFVR*-CHP		●
CHFVL*-CHP	●	

● : Corresponding

Reference pages: Inserts → F065 - F069, Adapters → F060, Standard cutting conditions → F070
Parts for coolant hose → F266, Technical Reference → L053

Shank for perpendicularly-mounted adapter, with high pressure coolant capability



Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	STCAL/R27-CHP	6.5
CHFVR/L2525-CHP	25	25	140	28	135.1	0.5	0	25	5	STCAL/R27-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter 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 (N·m)

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

Combination of adapter and shank

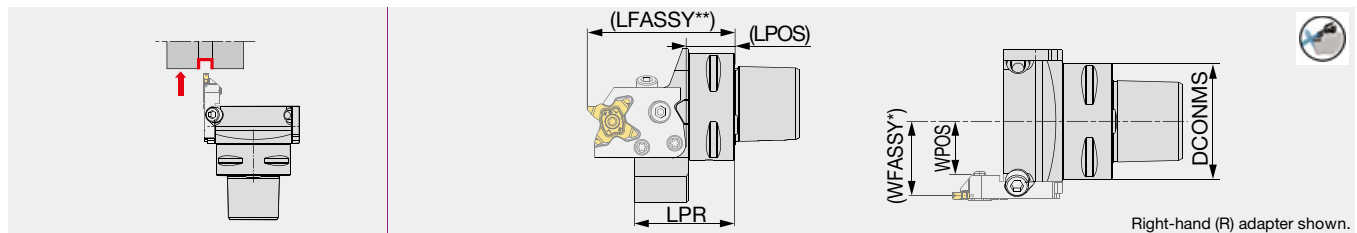
Shank	Adapter	
	STCAR27-CHP	STCAL27-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

C*CHSN-CHP

Direct connection

Toolholder with TungCap connection, for adapter, with high pressure coolant capability



Right-hand (R) adapter shown.

Designation	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L27-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L27-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L27-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L27-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (WF)

LFASSY** : Toolholder (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

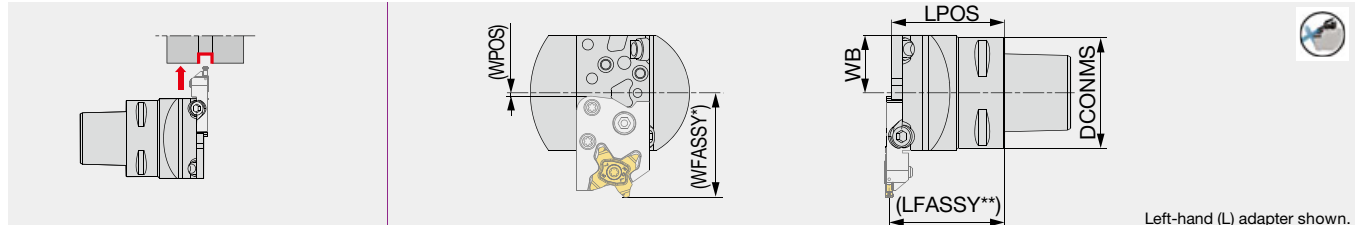
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

Toolholder with TungCap connection, for perpendicularly-mounted adapter, with high pressure coolant capability



Left-hand (L) adapter shown.

Designation	DCONMS	LPOS	WB	WPOS	Adapter (Option)	Torque*
C3CHFVN26040-CHP	32	40	26	1.5	STCAR/L27-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	STCAR/L27-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	STCAR/L27-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	STCAR/L27-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (LF)

LFASSY** : Toolholder (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

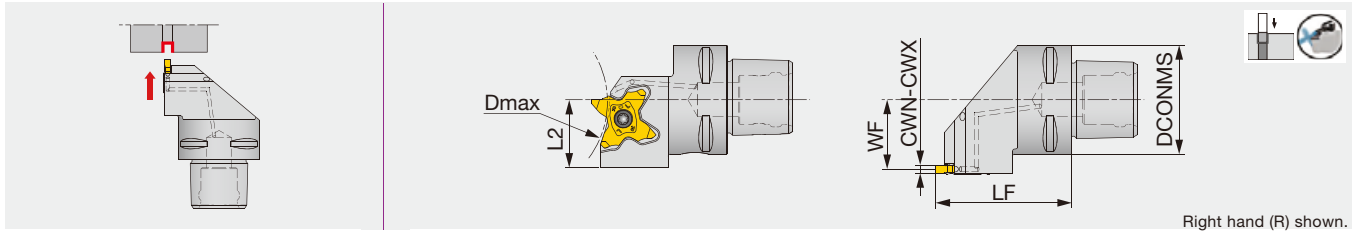
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CH**N*-CHP	SR M5-04451	T-20/5	SR M6X12DIN6912	SR M6X20-XT	HW5.0	OR 5X1N

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 → F065 - F069, Adapters → F060, Standard cutting conditions → F070
Technical Reference → L053

External grooving toolholder, with high pressure coolant capability



Designation	CWN	CWX	DCONMS	LF	L2	WF	Dmax	Insert	Torque*
C4STCR/L27050-27-CHP	0.5	3.18	40	50	25	25.5	68 ⁽¹⁾	TC*27R/L...	2.5

Applicable for 14 MPa coolant.

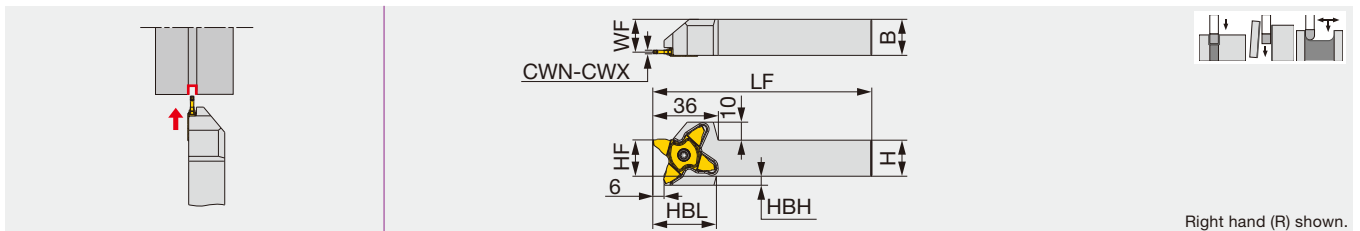
(1) The value for 6.4 mm groove depth. Dmax varies according to the grooving depth required.

*Torque: Recommended clamping torque (N·m)



STCR/L-38

External grooving and parting toolholder



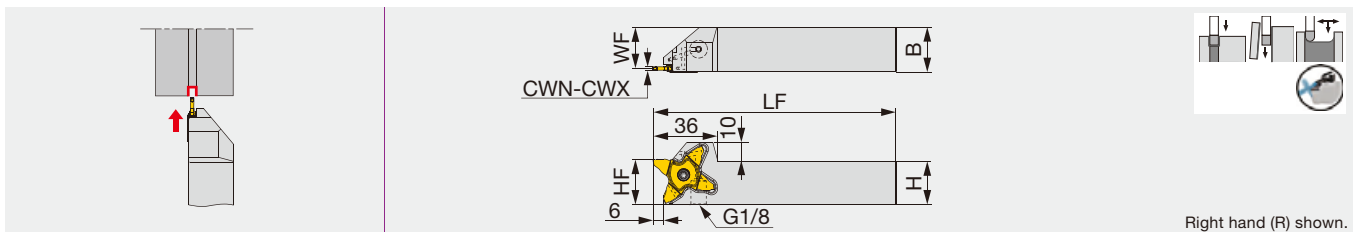
Designation	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque*
STCR/L2020-38	1.5	4	20	20	120	20	18.1	5	35	TCL38...	2.5
STCR/L2525-38	1.5	4	25	25	135	25	23.1	-	-	TCL38...	2.5
STCR/L3232-38	1.5	4	32	32	135	32	30.1	-	-	TCL38...	2.5

*Torque: Recommended clamping torque (N·m)

STCR/L-38-CHP

Tube connection

External grooving and parting toolholder, with high pressure coolant capability



Designation	CWN	CWX	H	B	LF	HF	WF	Insert	Torque*
STCR/L2525-38-CHP	1.5	4	25	25	135	25	23.1	TCL38...	2.5

*Torque: Recommended clamping torque (N·m)

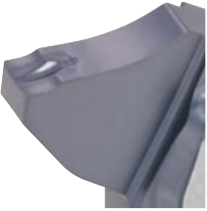
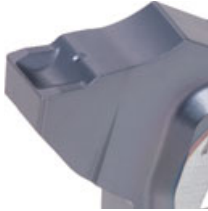
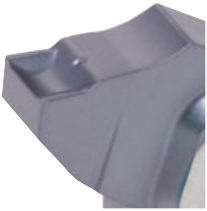
SPARE PARTS



Designation	Screw	Wrench
C4STCR27050-27-CHP	SR16-212-01397L	T-2010/5
C4STCL27050-27-CHP	SR16-212-01397	T-2010/5
STCR...	SR16-212-01397L	T-2010/5
STCL...	SR16-212-01397	T-2010/5

Reference pages: Inserts → **F065 - F069**, Standard cutting conditions → **F070**
Parts for coolant hose → **F266**

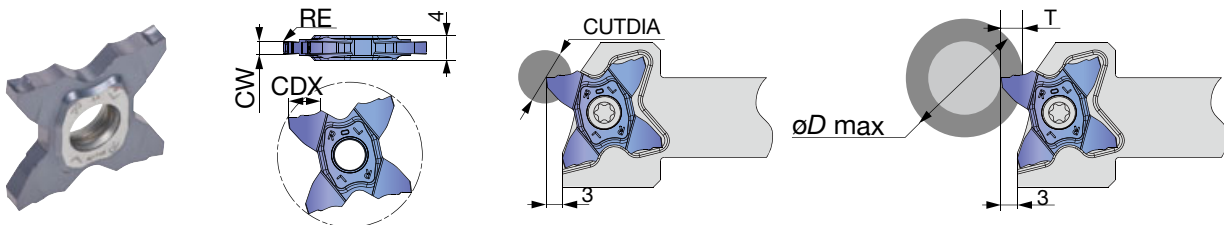
External grooving and parting

TCS27 (4 corners)  F066, F067	First choice for grooving For general machining Lower cutting force and superior sharpness CW = 0.5 - 3.18 mm CDX = 6.4 mm	TCM27 (4 corners)  F068, F069	For higher efficiency For high feed machining Well-designed edge with high strength and fracture resistance CW = 1.5 - 3.18 mm CDX = 6.4 mm
TCL27 (4 corners)  F065	For lighter cutting action Extremely sharp cutting edge A large dimple geometry eliminates chip jamming CW = 1.5 - 3 mm CDX = 6.4 mm	TCL38 (4 corners)  F069	For lighter cutting action Sharp edge for light cutting action Excellent chip control at low feeds CW = 1.5 - 4 mm CDX = 10 mm

Please see page F*** for the product details.

INSERTS

TCL27 (for grooving and parting off)



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

★ : First choice

Designation	CW±0.02	RE	Coated				CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH725	AH7025	AH8005	AH6235			T ≤ 3	T ≤ 3.5	T ≤ 4	T ≤ 4.5	T ≤ 5	T ≤ 5.5	T ≤ 5.7	T ≤ 6	T ≤ 6.2	T ≤ 6.4
TCL27-150-015	1.5	0.15	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCL27-200-020	2	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	130	105	85	60	50	30
TCL27-250-020	2.5	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	130	105	85	60	50	30
TCL27-300-020	3	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55

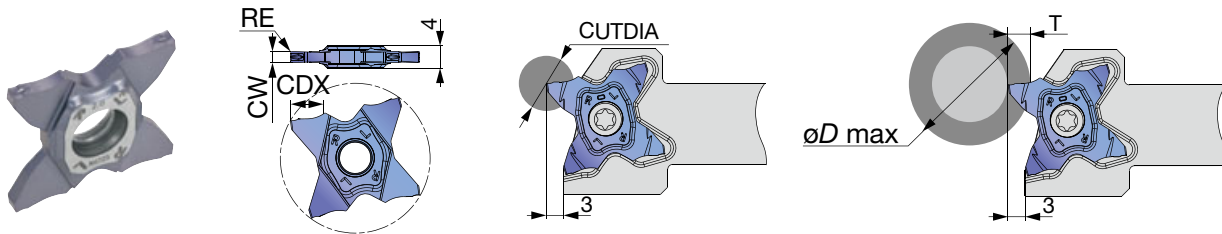
5 pieces per package

● : Line up

▲ : To be discontinued

Reference pages: Toolholders → F059 - F064, Standard cutting conditions → F070

TCS27 (for grooving and parting off)



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

★ : First choice

Designation	CW±0.02	RE	Coated				CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH725	AH7025	AH8005	AH6235			T ≤ 3	T ≤ 3.5	T ≤ 4	T ≤ 4.5	T ≤ 5	T ≤ 5.5	T ≤ 5.7	T ≤ 6	T ≤ 6.2	T ≤ 6.4
TCS27-050-000	0.5	0	▲	★	★	★	1	2	∞	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.04	▲	★	★	★	2.5	5	∞	-	-	-	-	-	-	-	-	-
TCS27-075-010	0.75	0.1	▲	●	●	●	2.5	5	∞	-	-	-	-	-	-	-	-	-
TCS27-080-000	0.8	0	▲	★	★	★	1.6	3.2	∞	-	-	-	-	-	-	-	-	-
TCS27-100-006	1	0.06	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCS27-100-010	1	0.1	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCS27-104-000	1.04	0	▲	★	★	★	2	4	∞	-	-	-	-	-	-	-	-	-
TCS27-120-000	1.2	0	▲	★	★	★	2	4	∞	-	-	-	-	-	-	-	-	-
TCS27-125-010	1.25	0.1	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCS27-125-020	1.25	0.2	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCS27-140-000	1.4	0	▲	★	★	★	2	4	∞	-	-	-	-	-	-	-	-	-
TCS27-147-000	1.47	0	▲	★	★	★	2.5	5	∞	-	-	-	-	-	-	-	-	-
TCS27-150-010	1.5	0.1	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCS27-150-020	1.5	0.2	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCS27-157-015	1.57	0.15	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-170-010	1.7	0.1	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-175-010	1.75	0.1	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-175-020	1.75	0.2	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-178-018	1.78	0.18	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-185-020	1.85	0.2	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-196-015	1.96	0.15	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCS27-200-010	2	0.1	▲	●	●	●	6.4	12.8	∞	600	280	180	130	105	85	60	50	30
TCS27-200-020	2	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	130	105	85	60	50	30
TCS27-222-015	2.22	0.15	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCS27-230-020	2.3	0.2	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCS27-239-015	2.39	0.15	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCS27-247-020	2.47	0.2	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCS27-250-010	2.5	0.1	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCS27-250-030	2.5	0.3	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCS27-270-010	2.7	0.1	▲	●	●	●	6.2	12.4	∞	600	280	180	135	105	95	85	78	-
TCS27-287-020	2.87	0.2	▲	●	●	●	6.2	12.4	∞	600	280	180	135	105	95	85	78	-
TCS27-300-000	3	0	▲	★	★	★	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCS27-300-020	3	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCS27-300-030	3	0.3	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCS27-300-040	3	0.4	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCS27-315-015	3.15	0.15	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	68
TCS27-318-020	3.18	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	68

5 pieces per package

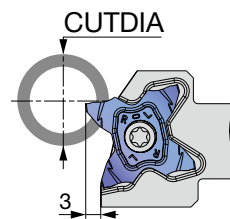
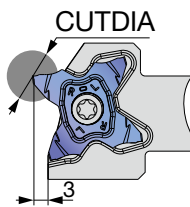
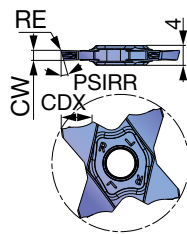
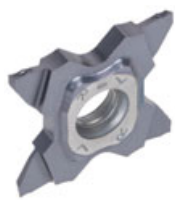
★ : Will be released in January 2025

● : Line up

▲ : To be discontinued

Reference pages: Toolholders → **F059 - F064**, Standard cutting conditions → **F070**

TCS27-R/L (for parting off)



Right hand (R) shown.

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

★ : First choice

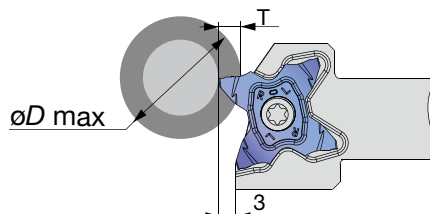
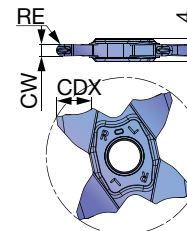
Designation	HAND	CW±0.02	RE	Coated				CDX	PSIRL	PSIRR	Max. parting off dia. CUTDIA	
				AH725	AH7025	AH8005	AH6235				Solid bar	Tube
TCS27-100-15R	R	1	0.06	▲	●	●	●	3.5	0°	15°	7	600
TCS27-100-15L	L	1	0.06	▲	●	●	●	3.5	15°	0°	7	600
TCS27-150-6R	R	1.5	0.06	▲	●	●	●	5.7	0°	6°	11.4	35
TCS27-150-6L	L	1.5	0.06	▲	●	●	●	5.7	6°	0°	11.4	35
TCS27-150-15R	R	1.5	0.06	▲	●	●	●	5.7	0°	15°	11.4	35
TCS27-150-15L	L	1.5	0.06	▲	●	●	●	5.7	15°	0°	11.4	35
TCS27-200-6R	R	2	0.1	▲	●	●	●	6.4	0°	6°	12.8	30
TCS27-200-6L	L	2	0.1	▲	●	●	●	6.4	6°	0°	12.8	30
TCS27-200-15R	R	2	0.1	▲	●	●	●	6.4	0°	15°	12.8	30
TCS27-200-15L	L	2	0.1	▲	●	●	●	6.4	15°	0°	12.8	30

5 pieces per package

●: Line up

▲: To be discontinued

TCS27 (for grooving and profiling, full R)



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

★ : First choice

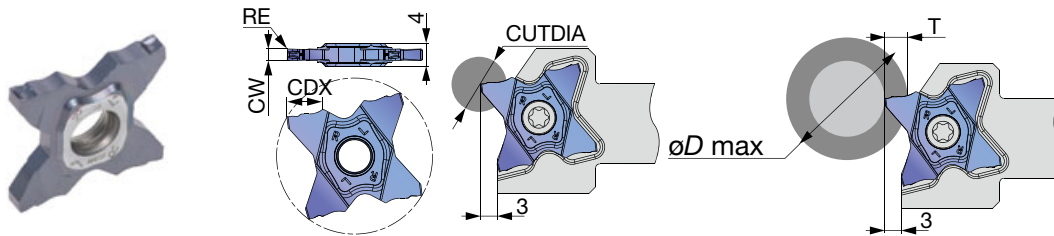
Designation	CW±0.02	RE	Coated				CDX	Relation of groove depth (T) and Max. diameter (øD max)									
			AH725	AH7025	AH8005	AH6235		T ≤ 3	T ≤ 3.5	T ≤ 4	T ≤ 4.5	T ≤ 5	T ≤ 5.5	T ≤ 5.7	T ≤ 6	T ≤ 6.2	T ≤ 6.4
TCS27-157-079	1.57	0.79	▲	●	●	●	3	∞	-	-	-	-	-	-	-	-	-
TCS27-200-100	2	1	▲	●	●	●	3	∞	-	-	-	-	-	-	-	-	-
TCS27-239-120	2.39	1.2	▲	●	●	●	5.7	∞	600	280	180	130	50	35	-	-	-
TCS27-300-150	3	1.5	▲	●	●	●	6.4	∞	600	280	180	135	105	95	85	78	55

5 pieces per package

●: Line up

▲: To be discontinued

TCM27 (for grooving and parting off)



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

★ : First choice

Designation	CW±0.02	RE	Coated				CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH725	AH7025	AH8005	AH6235			T ≤ 3	T ≤ 3.5	T ≤ 4	T ≤ 4.5	T ≤ 5	T ≤ 5.5	T ≤ 5.7	T ≤ 6	T ≤ 6.2	T ≤ 6.4
TCM27-150-010	1.5	0.1	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-150-020	1.5	0.2	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-157-015	1.57	0.15	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-170-010	1.7	0.1	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-175-010	1.75	0.1	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-175-020	1.75	0.2	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-178-018	1.78	0.18	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-185-020	1.85	0.2	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-196-015	1.96	0.15	▲	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-200-010	2	0.1	▲	●	●	●	6.4	12.8	∞	600	280	180	130	105	85	60	50	30
TCM27-200-020	2	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	130	105	85	60	50	30
TCM27-222-015	2.22	0.15	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCM27-230-020	2.3	0.2	▲	●	●	●	3.5	7	∞	600	-	-	-	-	-	-	-	-
TCM27-239-015	2.39	0.15	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-247-020	2.47	0.2	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-250-010	2.5	0.1	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-250-030	2.5	0.3	▲	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-270-010	2.7	0.1	▲	●	●	●	6.2	12.4	∞	600	280	180	135	105	95	85	78	-
TCM27-287-020	2.87	0.2	▲	●	●	●	6.2	12.4	∞	600	280	180	135	105	95	85	78	-
TCM27-300-000	3	0	▲	★	★	★	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCM27-300-020	3	0.2	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCM27-300-030	3	0.3	▲	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCM27-300-040	3	0.4	●	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55
TCM27-315-015	3.15	0.15	●	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	68
TCM27-318-020	3.18	0.2	●	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	68

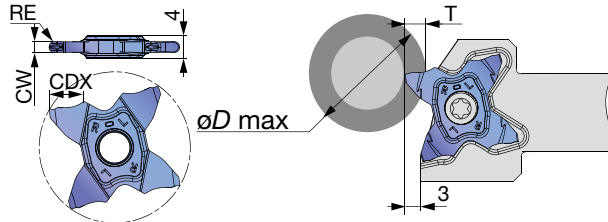
5 pieces per package

★: Will be released in January 2025

●: Line up

▲: To be discontinued

TCM27 (for grooving and profiling, full R)



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

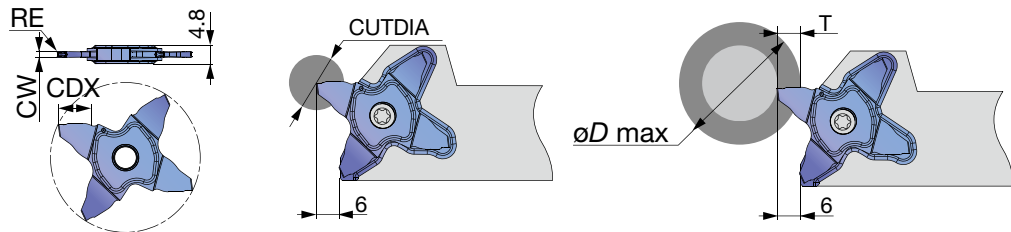
★ : First choice

Designation	CW±0.02	RE	Coated			CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH7025	AH8005	AH6235			T ≤ 3	T ≤ 3.5	T ≤ 4	T ≤ 4.5	T ≤ 5	T ≤ 5.5	T ≤ 5.7	T ≤ 6	T ≤ 6.2	T ≤ 6.4
TCM27-157-079	1.57	0.79	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-200-100	2	1	●	●	●	3	6	∞	-	-	-	-	-	-	-	-	-
TCM27-239-120	2.39	1.2	●	●	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-300-150	3	1.5	●	●	●	6.4	12.8	∞	600	280	180	135	105	95	85	78	55

5 pieces per package

● : Line up

TCL38 (for grooving and parting off)



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

★ : First choice

Designation	CW±0.02	RE	Coated		CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)					
			AH7025				T ≤ 5	T ≤ 6	T ≤ 7	T ≤ 8	T ≤ 9	T ≤ 10
TCL38-150-020	1.5	0.2	●		9	18	∞	950	315	190	45	-
TCL38-200-020	2	0.2	●		9	18	∞	950	315	190	45	-
TCL38-300-020	3	0.2	●		10	20	∞	950	315	190	130	50
TCL38-400-030	4	0.3	●		10	20	∞	950	315	190	130	50

5 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

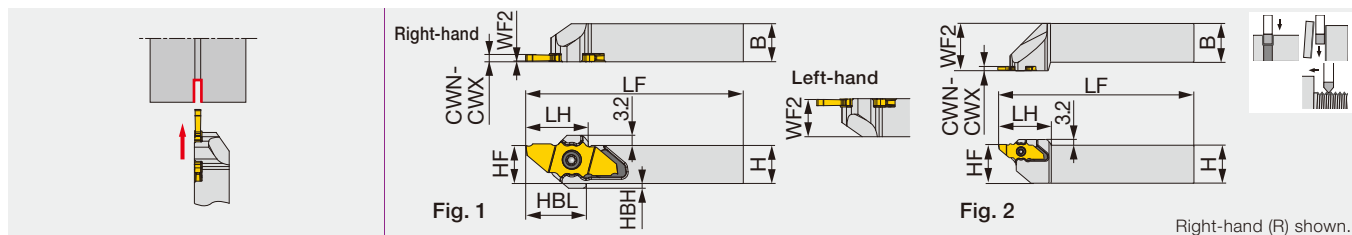
TCL27, TCS27, TCM27

ISO	Workpiece materials	Grades	Cutting speed Vc (m/min)	Feed: <i>f</i> (mm/rev)						Depth of cut for profiling (with full radius insert)
				Grooving, Parting-off			Parting-off (with hand)	Profiling (with full radius insert)		
				TCL27	TCS27	TCM27	TCS27	TCS27	TCM27	
P	Carbon steel (S45C / C45, etc.)	AH725	100 - 200	0.03 - 0.12	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Alloy steel (SCM435 / 34CrMo4, etc.)	AH725	50 -180	0.03 - 0.12	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
M	Stainless steel (SUS304 / X5CrNi18-9, etc.)	AH725	100 - 150	0.03 - 0.12	0.05 - 0.15	0.05 - 0.2	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
K	Grey cast iron (FC250 / 250 / GG25, etc.)	AH725	50 - 180	0.03 - 0.12	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Ductile cast iron (FCD400 / 400-15 / GGG400, etc.)	AH725	50 - 120	0.03 - 0.12	0.05 - 0.15	0.05 - 0.2	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
S	Titanium alloys (Ti-6Al-4V, etc.)	AH725	30 - 60	0.03 - 0.12	0.05 - 0.15	0.05 - 0.15	0.04 - 0.12	0.05 - 0.1	0.05 - 0.1	0.5
	Superalloys (Inconel718, etc.)	AH725	20 - 50	0.03 - 0.12	0.05 - 0.15	0.05 - 0.15	0.04 - 0.12	0.05 - 0.1	0.05 - 0.1	0.5

TCL38

ISO	Workpiece materials	Grades	Cutting speed Vc (m/min)	Feed: <i>f</i> (mm/rev)
				Grooving, Parting-off
				TCL38
P	Carbon steel (S45C / C45, etc.)	AH7025	80 - 180	0.03 - 0.18
	Alloy steel (SCM435 / 34CrMo4, etc.)	AH7025	50 - 180	0.03 - 0.18
M	Stainless steel (SUS304 / X5CrNi18-9, etc.)	AH7025	50 - 150	0.03 - 0.14
K	Grey cast iron (FC250 / 250 / GG25, etc.)	AH7025	50 - 180	0.03 - 0.14
	Ductile cast iron (FCD400 / 400-15 / GGG400, etc.)	AH7025	50 - 120	0.03 - 0.14
S	Titanium alloys (Ti-6Al-4V, etc.)	AH7025	30 - 60	0.03 - 0.14
	Superalloys (Inconel718, etc.)	AH7025	20 - 50	0.03 - 0.14

Parting-off and grooving toolholders



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBL ⁽¹⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1010X09	0.6	2.5	10	10	120	19.65	10	0.2/9.8	19	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09	0.6	2.5	12	12	85	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09	0.6	2.5	12	12	120	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09	0.6	2.5	16	16	120	19.65	16	0.2/15.8	-	-	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L2020H09	0.6	2.5	20	20	100	22.5	20	0.2/19.8	-	-	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L2525Z09	0.6	2.5	25	25	135	34	25	30	-	-	JX**06...,12...,16..., 20...	1.2	2

*Torque: Recommended clamping torque (N·m)

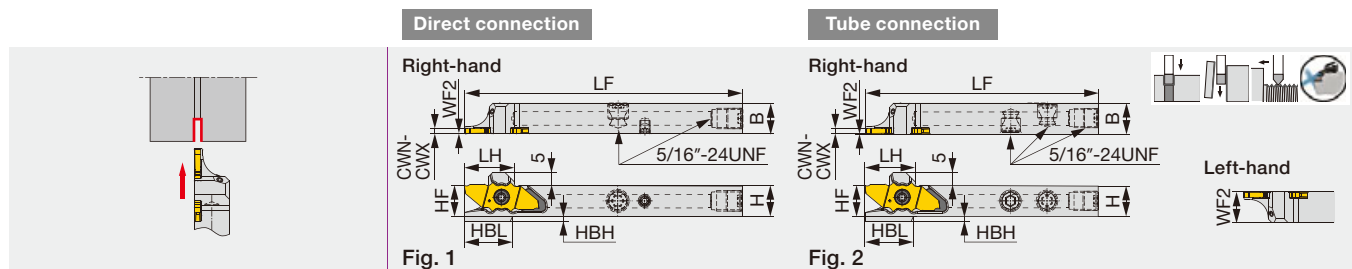
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/H/X-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBL ⁽¹⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP ⁽³⁾	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP ⁽³⁾	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09-CHP ^{(3),(4)}	0.6	2.5	16	16	120	19.4	16	0.2	18.7	2.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP ⁽³⁾	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.

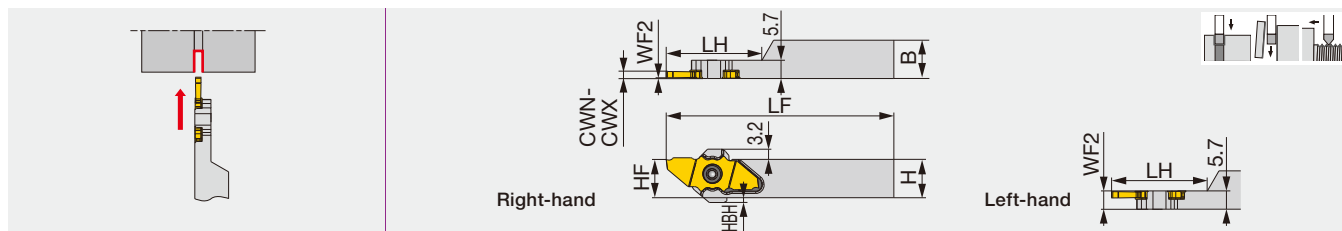
(4) To be replaced with the new design

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**09	CSTC-4L100DL	T-1008/5	-	-	-	-
JSXXL**09	CSTC-4L100DR	T-1008/5	-	-	-	-
JSXXR**F**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2
JSXXL**H**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2

Parting-off toolholders, for swiss lathes (for sub spindle)



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBH	Insert	Torque*
JSXXR/L1010X09-S	0.6	2.5	10	10	120	26	10	0.2/5.5	3	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1212F09-S	0.6	2.5	12	12	85	26	12	0.2/5.5	1.5	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1212X09-S	0.6	2.5	12	12	120	30	12	0.2/5.5	1.5	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1616X09-S	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 2 mm shorter than the above value with JX**12... and JX**20... inserts; 4 mm shorter with JX**06... insert.

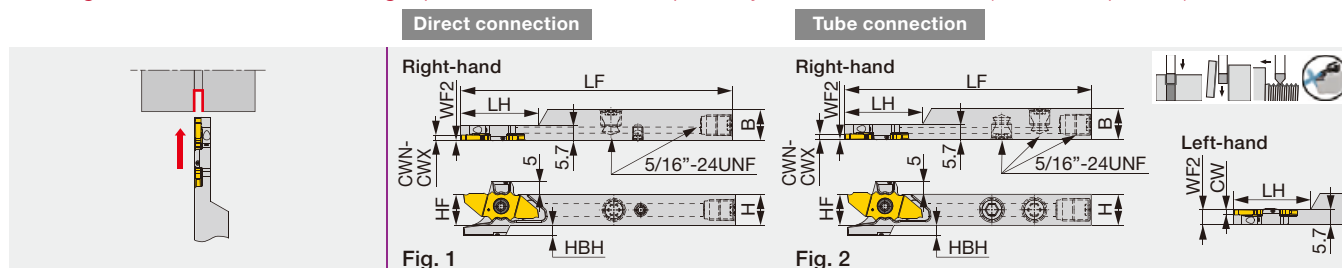
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(3) JX**20... insert will not fit.

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/X-S-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes (for sub spindle)



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1212F09-S-CHP ⁽⁴⁾	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP ^{(3),(4)}	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP ⁽³⁾	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09-S-CHP ^{(3),(4)}	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP ⁽³⁾	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 2 mm shorter than the above value with JX**12... and JX**20... inserts; 4 mm shorter with JX**06... insert.

(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.

(4) To be replaced with the new design

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

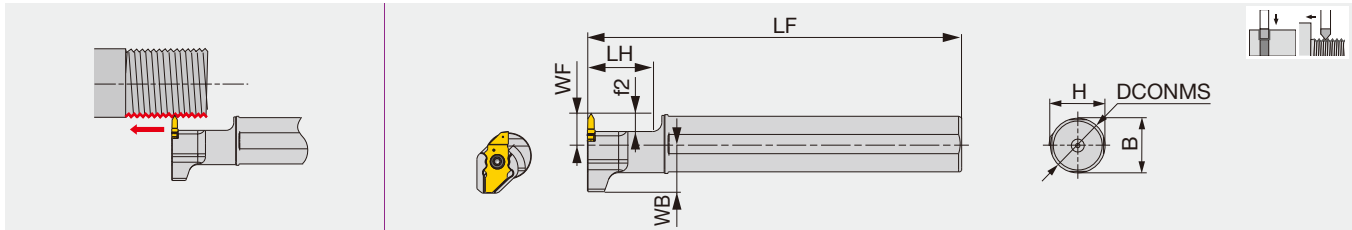
SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**-S	CSTC-4L055DL	T-1008/5	-	-	-	-
JSXXL**-S	CSTC-4L055DR	T-1008/5	-	-	-	-
JSXXR**F**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**X**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2
JSXXL**X**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	SSH4-6-TB	P-2

Reference pages: Inserts → **F074, F075**, Standard cutting conditions → **F076**
Parts for coolant hose → **F266**

JS-SXXL09

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



Designation	DCONMS	H	B	LF	LH	WB	WF ⁽¹⁾	f2 ⁽¹⁾	Insert	Torque*
JS19G-SXXL09	19.05	18	18	90	21	15.43	10	6	JX**06,12*R	1.2
JS19X-SXXL09	19.05	18	18	120	21	15.43	10	6	JX**06,12*R	1.2
JS20G-SXXL09	20	19	19	90	21	15.4	10	6	JX**06,12*R	1.2
JS20X-SXXL09	20	19	19	120	21	15.4	10	6	JX**06,12*R	1.2
JS22X-SXXL09	22	21	21	120	21	15.4	10	6	JX**06,12*R	1.2
JS25H-SXXL09	25	24	24	100	21	15.4	10	6	JX**06,12*R	1.2
JS254X-SXXL09	25.4	24	24	120	21	15.4	10	6	JX**06,12*R	1.2

*Torque: Recommended clamping torque (N·m)

(1) When using JX..06... insert, both WF and f2 sizes will be 2 mm shorter than the values provided above.

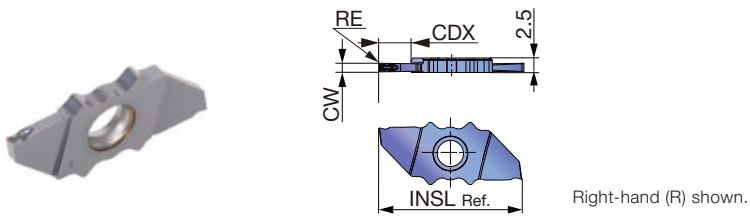
SPARE PARTS



Designation	Clamping screw	Wrench
JS***-SXXL09	CSTC-4L100DL	T-1008/5

INSERTS

JXPS**R/L-F (with 3D chipbreaker, sharp edge)



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

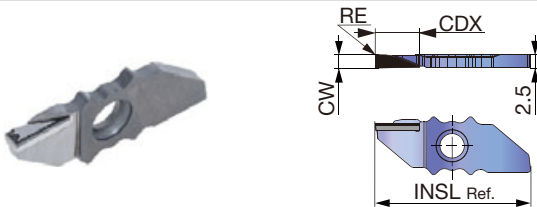
★ : First choice

Designation	HAND	CW±0.025	RE	Coated				CUTDIA	CDX*	INSL
				SH725						
JXPS06R06F	R	0.6	0.05	●				6	3.5	21
JXPS06L06F	L	0.6	0.05	●				6	3.5	21
JXPS12R08F	R	0.8	0.05	●				12	6.5	25
JXPS12L08F	L	0.8	0.05	●				12	6.5	25
JXPS12R10F	R	1	0.05	●				12	6.5	25
JXPS12L10F	L	1	0.05	●				12	6.5	25
JXPS12R15F	R	1.5	0.05	●				12	6.5	25
JXPS12L15F	L	1.5	0.05	●				12	6.5	25
JXPS16R15F	R	1.5	0.05	●				16	8.5	29
JXPS16L15F	L	1.5	0.05	●				16	8.5	29
JXPS20R20F	R	2	0.05	●				20	10.5	33
JXPS20L20F	L	2	0.05	●				20	10.5	33

*Max grooving depth (CDX) varies depending on workpiece diameters.

● : Line up

JXDX**R-F (PCD insert)



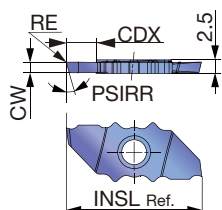
P	Steel							
M	Stainless							
K	Cast iron							
N	Non-ferrous	★						
S	Superalloys							
H	Hard materials							

★ : First choice

Designation	HAND	CW±0.05	RE	PCD				CDX	INSL
				DX110					
JXDX12R20F	R	2	< 0.1	●				6	25
JXDX12R25F	R	2.5	< 0.1	●				6.5	25
JXDX16R25F	R	2.5	< 0.1	●				7	29

● : Line up

Reference pages: Toolholders → **F071 - F073**, Standard cutting conditions → **F076**

JXPGR/L-F (Sharp edge)**


Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.025	RE	Coated				CUTDIA	CDX*	INSL	PSIRR
				SH725							
JXPG06R10F	R	1	0.05	●				6	3.5	21	0°
JXPG06L10F	L	1	0.05	●				6	3.5	21	0°
JXPG06R15F	R	1.5	0.05	●				6	3.5	21	0°
JXPG06L15F	L	1.5	0.05	●				6	3.5	21	0°
JXPG06R10F-15	R	1	0.05	●				6	3.5	21	15°
JXPG06L10F-15	L	1	0.05	●				6	3.5	21	15°
JXPG06R15F-15	R	1.5	0.05	●				6	3.5	21	15°
JXPG06L15F-15	L	1.5	0.05	●				6	3.5	21	15°
JXPG12R15F	R	1.5	0.05	●				12	6.5	25	0°
JXPG12L15F	L	1.5	0.05	●				12	6.5	25	0°
JXPG12R20F	R	2	0.05	●				12	6.5	25	0°
JXPG12L20F	L	2	0.05	●				12	6.5	25	0°
JXPG12R15F-15	R	1.5	0.05	●				12	6.5	25	15°
JXPG12L15F-15	L	1.5	0.05	●				12	6.5	25	15°
JXPG12R20F-15	R	2	0.05	●				12	6.5	25	15°
JXPG12L20F-15	L	2	0.05	●				12	6.5	25	15°
JXPG16R15F	R	1.5	0.05	●				16	8.5	29	0°
JXPG16L15F	L	1.5	0.05	●				16	8.5	29	0°
JXPG16R20F	R	2	0.05	●				16	8.5	29	0°
JXPG16L20F	L	2	0.05	●				16	8.5	29	0°
JXPG16R15F-15	R	1.5	0.05	●				16	8.5	29	15°
JXPG16L15F-15	L	1.5	0.05	●				16	8.5	29	15°
JXPG16R20F-15	R	2	0.05	●				16	8.5	29	15°
JXPG16L20F-15	L	2	0.05	●				16	8.5	29	15°
JXPG20R15F	R	1.5	0.05	●				20	10.5	33	0°
JXPG20L15F	L	1.5	0.05	●				20	10.5	33	0°
JXPG20R20F	R	2	0.05	●				20	10.5	33	0°
JXPG20L20F	L	2	0.05	●				20	10.5	33	0°
JXPG20R15F-15	R	1.5	0.05	●				20	10.5	33	15°
JXPG20L15F-15	L	1.5	0.05	●				20	10.5	33	15°
JXPG20R20F-15	R	2	0.05	●				20	10.5	33	15°
JXPG20L20F-15	L	2	0.05	●				20	10.5	33	15°

*Max grooving depth (CDX) varies depending on workpiece diameters.

● : Line up

STANDARD CUTTING CONDITIONS

Parting, Grooving

ISO	Workpiece materials	Grades	Cutting speed V_c (m/min)	Feed f (mm/rev)
P	Low carbon steels S15C, SS400, etc. C15E4, E275A, etc.	SH725	50 - 200	0.01 - 0.05
	Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMo4, etc.	SH725	50 - 200	0.01 - 0.05
	Free cutting steels SUH22, SUH23, etc.	SH725	50 - 200	0.01 - 0.05
M	Stainless steels SUS304, X5CrNi18-9, etc.	SH725	50 - 200	0.01 - 0.05
N	Aluminium alloys A5056, A6061, etc.	SH725	150 - 200	0.01 - 0.05
	Copper alloy C2600, C280C, etc.	SH725	100 - 200	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V, etc.	SH725	30 - 80	0.01 - 0.05
	Superalloys Inconel718, etc.	SH725	30 - 80	0.01 - 0.05

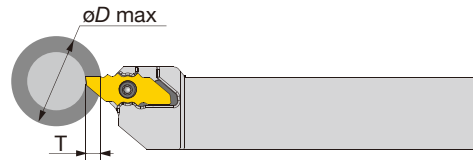


For aluminium and non-ferrous metal PCD insert

ISO	Workpiece materials	Grades	Operation	Cutting speed V_c (m/min)	Feed f (mm/rev)	Depth of cut a_p (mm)
N	Aluminium alloys A5056, A6061, etc.	DX110	Grooving	100 - 300	0.03 - 0.15	-
		DX110	Turning	100 - 300	0.03 - 0.15	< 6

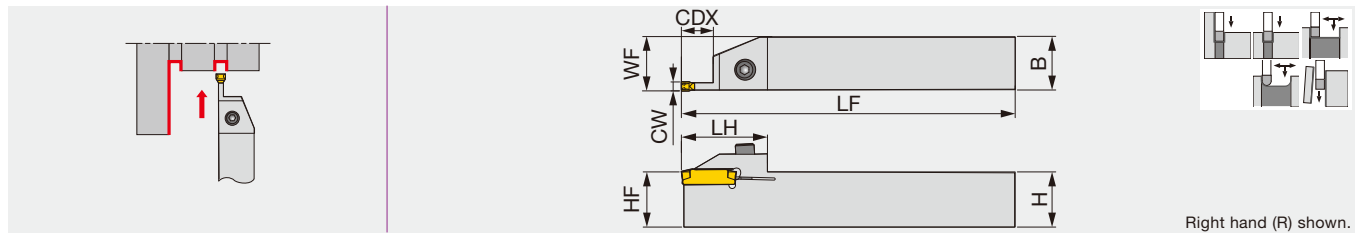
Maximum grooving depths (T) in relation to workpiece diameters (ϕD max) without interference

Maximum grooving depth (T) is limited relative to workpiece diameter (ϕD max) to avoid interference between workpiece and insert.



Grooving depths (T) and workpiece diameters (ϕD max) for each insert

Designation	$T \leq 1.0$	$T \leq 2.0$	$T \leq 2.5$	$T \leq 3.0$	$T \leq 3.5$	$T \leq 4.0$	$T \leq 5.0$	$T \leq 5.5$	$T \leq 6.0$	$T \leq 6.5$	$T \leq 7.0$	$T \leq 7.5$	$T \leq 8.0$	$T \leq 8.5$	$T \leq 9.0$	$T \leq 9.5$	$T \leq 10.0$	$T \leq 10.5$
JXP*06...	∞	∞	200	60	30	-	-	-	-	-	-	-	-	-	-	-	-	-
JXP*12...	∞	∞	∞	∞	∞	∞	∞	100	60	35	-	-	-	-	-	-	-	-
JXP*16...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	200	90	50	25	-	-	-	-
JXP*20...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	200	80	50	25

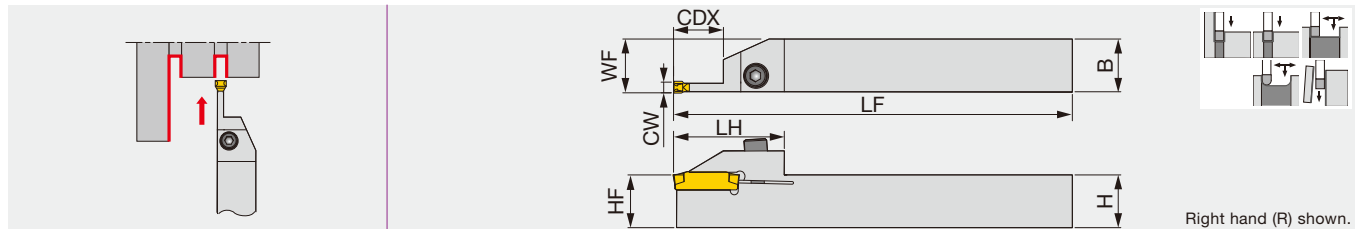


Designation	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque*
CGWSR/L1616-W30	3	12	16	16	125	34	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30	3	12	20	20	150	34	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30	3	12	25	25	150	34	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40	4	13	20	20	150	39	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40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

CGWSR/L-W-L

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



Designation	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 ⁽¹⁾	16	16	125	37	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30-L	3	16.5, 17.5 ⁽¹⁾	20	20	150	37	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30-L	3	16.5, 17.5 ⁽¹⁾	25	25	150	37	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40-L	4	21, 21.5 ⁽¹⁾	20	20	150	42	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40-L	4	21, 21.5 ⁽¹⁾	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)

(1) The value is true when using the WGR insert.

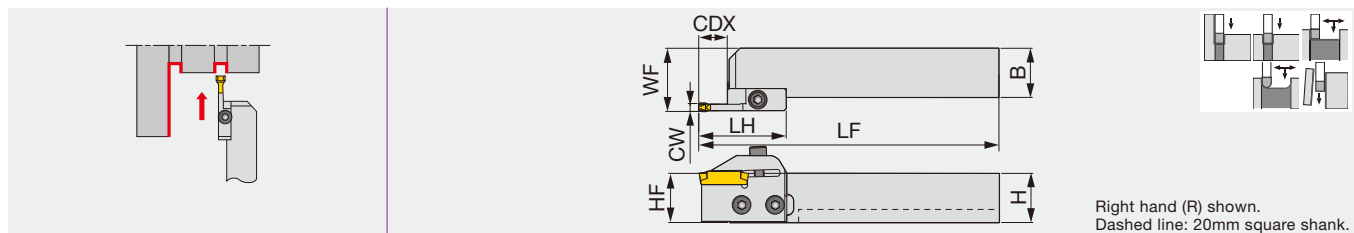
SPARE PARTS

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

MY-T SERIES

CGWSR/L-WG

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



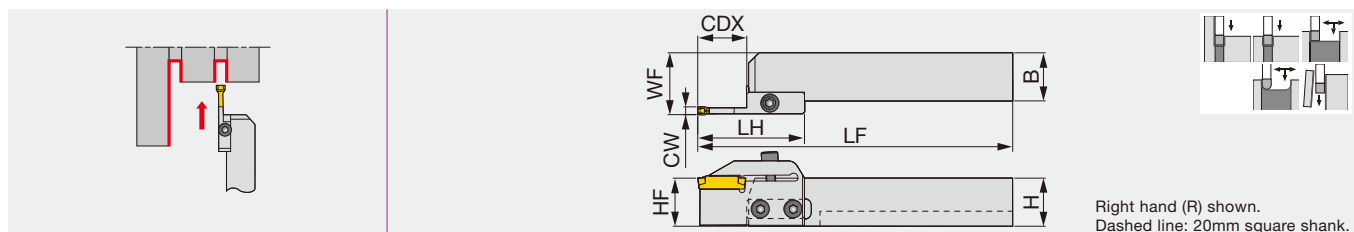
Designation	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Adapter	Torque*
CGWSR/L2020-W30GR/L	3	12	20	20	150.5	43.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L	5
CGWSR/L2525-W30GR/L	3	12	25	25	150.5	43.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L	5
CGWSR/L2020-W40GR/L	4	13	20	20	151.5	44.5	20	26.9	WG*40, WGE40R/L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

Note: Use right-hand adapters (R) with right-hand shanks (R); and left-hand adapters (L) with left-hand shanks (L).

*Torque: Recommended clamping torque (N·m)

CGWSR/L-WG-L

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



Designation	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Adapter	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-W20GR/L-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 ⁽¹⁾	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 ⁽¹⁾	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 ⁽¹⁾	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 ⁽¹⁾	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

Note: Use right-hand adapters (R) with right-hand shanks (R); and left-hand adapters (L) with left-hand shanks (L).

*Torque: Recommended clamping torque (N·m)

(1) The value is true when using the WGR insert.

SPARE PARTS

Designation	Clamping screw	Adapter screw	Wrench
CGWSR/L***-W**G...	CHHM5-18	CSHB-6	P-4

Combination of adapter and shank

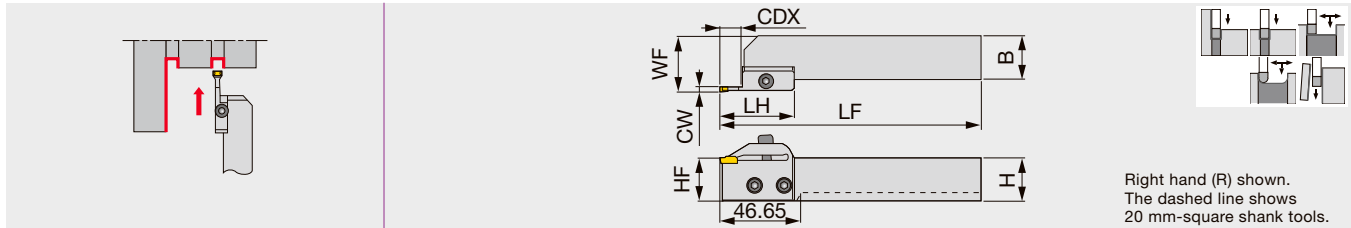
Shank	Adapter	
	**GR, **GR-L	**GL, **GL-L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

● : Corresponding

Reference pages: Inserts → **F082 - F084**, Shanks → **F081**, Standard cutting conditions → **F084**

CGWSR/L-G

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



Designation	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Adapter	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

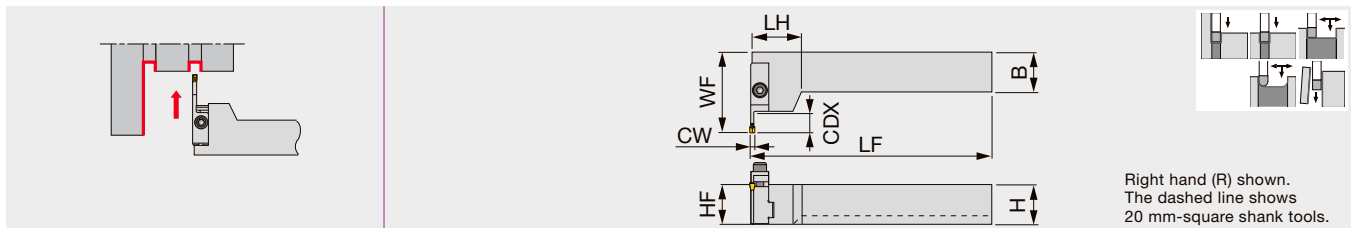
Note: For diameter compensation values in traversing, see page F115.

Use right-hand adapters (R) with right-hand shanks (R); and left-hand adapters (L) with left-hand shanks (L).

*Torque: Recommended clamping torque (N·m)

CGWTR/L-G

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



Designation	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Adapter	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	CGWTR/L2020	50GL/R	5
CGWTR/L2525-50GL/R	5	12	25	25	150.2	12.9	25	49.9	G*50,GE50R/L	CGWTR/L2525	50GL/R	5

Note: For diameter compensation values in traversing, see page F115.

Use left-hand adapters (L) with right-hand shanks (R); and right-hand adapters (R) with left-hand shanks (L).

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Adapter screw	Wrench
CGW*R/L***-**G...	CHHM5-18	CSHB-6	P-4

Combination of adapter and shank

Shank	Adapter	
	**GR, **GR-L	**GL, **GL-L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

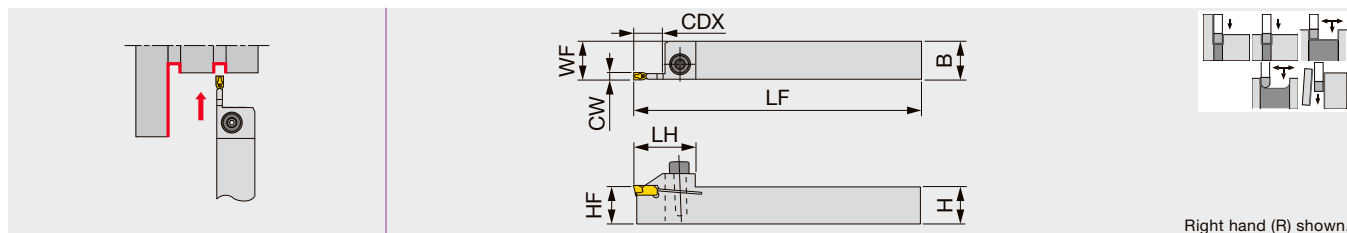
● : Corresponding

Reference pages: Inserts → F085 - F090, Shanks → F081, Standard cutting conditions → F090

MY-T SERIES

CGSSR/L

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



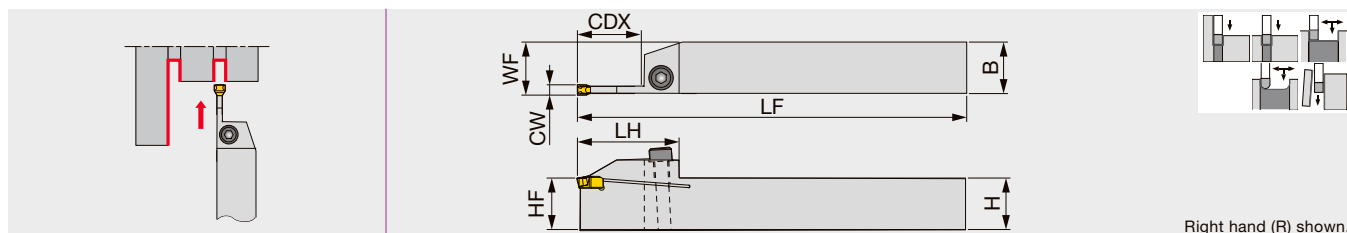
Right hand (R) shown.

Designation	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	5
CGSSR/L2525-50	5	12	25	25	150	27	25	25.7	G*50, GE50R/L	5

*Torque: Recommended clamping torque (N·m)

CGSSR/L-D

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



Right hand (R) shown.

Designation	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)

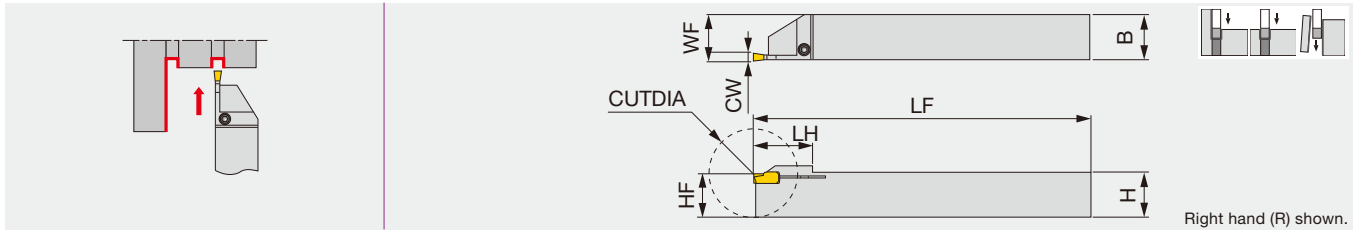
SPARE PARTS

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

Reference pages: Inserts → **F085 - F090**, Standard cutting conditions → **F090**

JCGSSR/L

External grooving and parting toolholder, for Swiss lathes



Designation	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

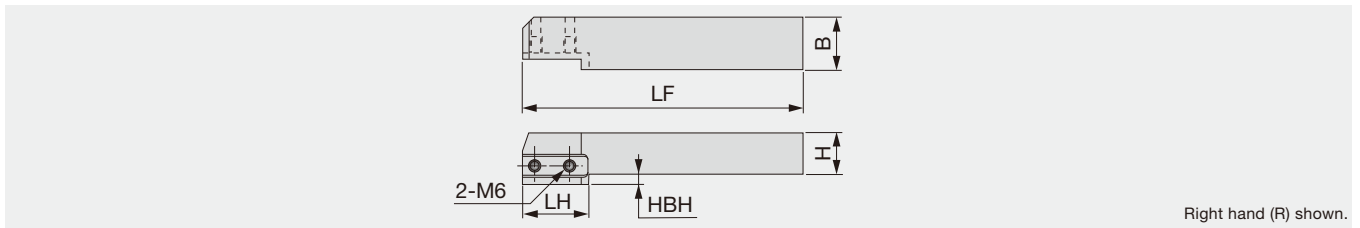
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

CGWSR/L

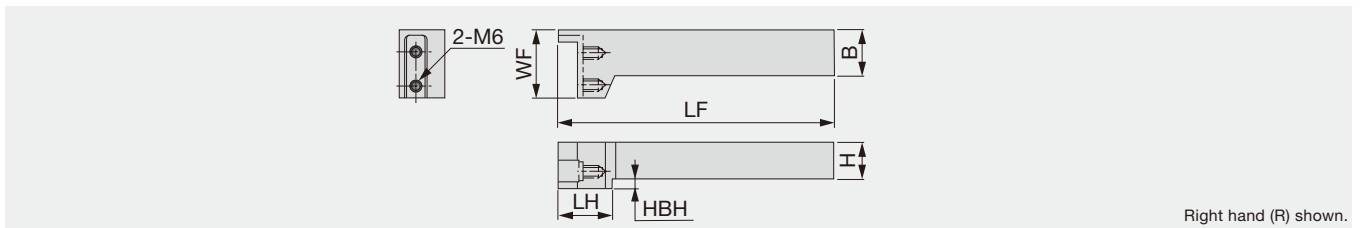
Shank for CGWSR/L-WG, -WG-L, -G, -CGD, -FL-G/TP, and -#S/D toolholders



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

CGWTR/L

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



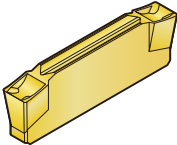
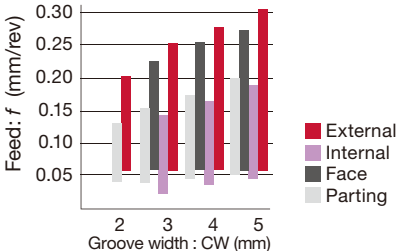
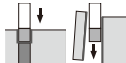
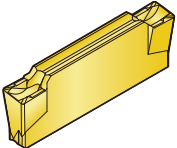
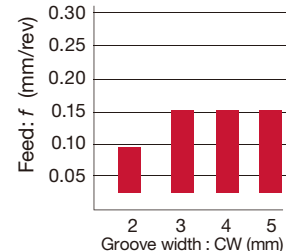
Designation	H	B	LF	LH	WF	HBH
CGWTR/L2020	20	20	150	30.5	37	5
CGWTR/L2525	25	25	150	-	37	-

SPARE PARTS

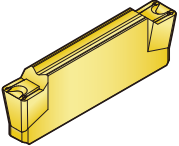
Designation	Adapter screw
CGWTR/L...	CSHB-6

CHIPBREAKER GUIDE (for 2 corner inserts)

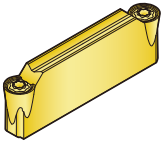
External grooving and parting

WGE  F083	1st choice for external grooving and parting Excellent chip control for grooving CW = 2 - 5 mm <table><thead><tr><th>Groove width : CW (mm)</th><th>External</th><th>Internal</th><th>Face</th><th>Parting</th></tr></thead><tbody><tr><td>2</td><td>0.20</td><td>0.13</td><td>0.05</td><td>0.05</td></tr><tr><td>3</td><td>0.25</td><td>0.17</td><td>0.05</td><td>0.05</td></tr><tr><td>4</td><td>0.28</td><td>0.17</td><td>0.05</td><td>0.05</td></tr><tr><td>5</td><td>0.30</td><td>0.17</td><td>0.05</td><td>0.05</td></tr></tbody></table> 	Groove width : CW (mm)	External	Internal	Face	Parting	2	0.20	0.13	0.05	0.05	3	0.25	0.17	0.05	0.05	4	0.28	0.17	0.05	0.05	5	0.30	0.17	0.05	0.05
Groove width : CW (mm)	External	Internal	Face	Parting																						
2	0.20	0.13	0.05	0.05																						
3	0.25	0.17	0.05	0.05																						
4	0.28	0.17	0.05	0.05																						
5	0.30	0.17	0.05	0.05																						
WGE R/L  F083	Handed insert Minimize burr generation when workpiece is cut off CW = 2 - 5 mm <table><thead><tr><th>Groove width : CW (mm)</th><th>External</th></tr></thead><tbody><tr><td>2</td><td>0.10</td></tr><tr><td>3</td><td>0.15</td></tr><tr><td>4</td><td>0.15</td></tr><tr><td>5</td><td>0.15</td></tr></tbody></table> 	Groove width : CW (mm)	External	2	0.10	3	0.15	4	0.15	5	0.15															
Groove width : CW (mm)	External																									
2	0.10																									
3	0.15																									
4	0.15																									
5	0.15																									

External grooving and turning

WGT  F084	1st choice for turning Low cutting force and good chip control for traversing CW = 3 - 5 mm	<table border="1"> <caption>Depth of cut ap (mm) vs Feed: f (mm/rev) for WGT</caption> <thead> <tr> <th>Feed: f (mm/rev)</th> <th>WGT50</th> <th>WGT40</th> <th>WGT30</th> </tr> </thead> <tbody> <tr> <td>0.05</td> <td>1.5</td> <td>1.2</td> <td>1.0</td> </tr> <tr> <td>0.10</td> <td>1.8</td> <td>1.4</td> <td>1.1</td> </tr> <tr> <td>0.15</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> <tr> <td>0.20</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> <tr> <td>0.25</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> <tr> <td>0.30</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> </tbody> </table>	Feed: f (mm/rev)	WGT50	WGT40	WGT30	0.05	1.5	1.2	1.0	0.10	1.8	1.4	1.1	0.15	2.0	1.6	1.2	0.20	2.0	1.6	1.2	0.25	2.0	1.6	1.2	0.30	2.0	1.6	1.2	
Feed: f (mm/rev)	WGT50	WGT40	WGT30																												
0.05	1.5	1.2	1.0																												
0.10	1.8	1.4	1.1																												
0.15	2.0	1.6	1.2																												
0.20	2.0	1.6	1.2																												
0.25	2.0	1.6	1.2																												
0.30	2.0	1.6	1.2																												

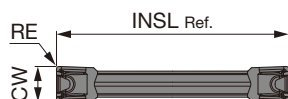
Profiling

WGR  F084	Low cutting force and good chip control for profiling CW = 3 - 5 mm	<table border="1"> <caption>Depth of cut ap (mm) vs Feed: f (mm/rev) for WGR</caption> <thead> <tr> <th>Feed: f (mm/rev)</th> <th>WGR50</th> <th>WGR40</th> <th>WGR30</th> </tr> </thead> <tbody> <tr> <td>0.05</td> <td>1.5</td> <td>1.2</td> <td>1.0</td> </tr> <tr> <td>0.10</td> <td>1.8</td> <td>1.4</td> <td>1.1</td> </tr> <tr> <td>0.15</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> <tr> <td>0.20</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> <tr> <td>0.25</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> <tr> <td>0.30</td> <td>2.0</td> <td>1.6</td> <td>1.2</td> </tr> </tbody> </table>	Feed: f (mm/rev)	WGR50	WGR40	WGR30	0.05	1.5	1.2	1.0	0.10	1.8	1.4	1.1	0.15	2.0	1.6	1.2	0.20	2.0	1.6	1.2	0.25	2.0	1.6	1.2	0.30	2.0	1.6	1.2	
Feed: f (mm/rev)	WGR50	WGR40	WGR30																												
0.05	1.5	1.2	1.0																												
0.10	1.8	1.4	1.1																												
0.15	2.0	1.6	1.2																												
0.20	2.0	1.6	1.2																												
0.25	2.0	1.6	1.2																												
0.30	2.0	1.6	1.2																												

Please see page F*** for the product details.

WGT

For external grooving, parting, and turning



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

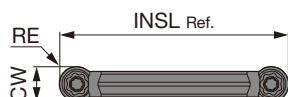
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet							INSL	h
			T9225	AH120	GH730		NS9530							
WGT30	3	0.4	●	●	●		●						20	5.5
WGT40	4	0.4	●	●	●		●						25	5.7
WGT50	5	0.4	●	●	●		●						25	5.9

● : Line up

WGR

For profiling (full radius)



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

★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet							INSL	h
			T9225	AH120	GH730		NS9530							
WGR30	3	1.5	●	●	●		●						20	5.5
WGR40	4	2	●	●	●		●						25	5.7
WGR50	5	2.5	●	●	●		●						25	5.9

● : Line up

STANDARD CUTTING CONDITIONS (for 2 corner inserts)

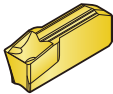
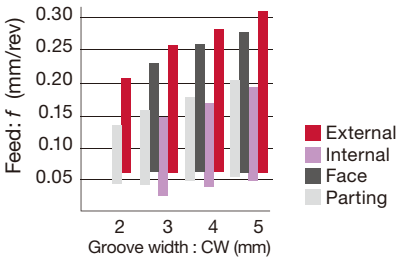
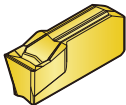
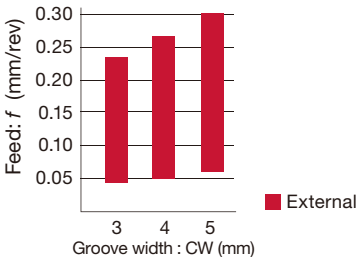
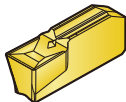
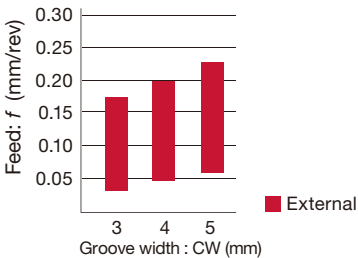
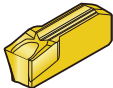
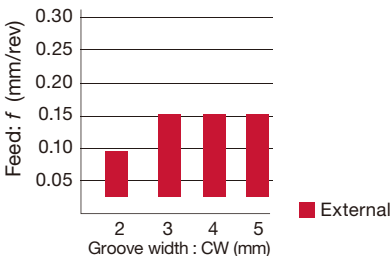
ISO	Workpiece material	Recommended grade	Cutting speed V _c (m/min)	Operation	Feed: f (mm/rev)			
					Groove width: CW (mm)			
					2	3	4	5
P	Low carbon steels Alloy steels (~ HB150)	T9225	80 - 300	Grooving (WGE□□)	0.06 ~ 0.20	0.06 ~ 0.25	0.07 ~ 0.27	0.07 ~ 0.30
		NS9530	100 - 200					
		GH730, AH120	50 - 180	Parting (WGE□□R/L)	0.04 ~ 0.10	0.04 ~ 0.14	0.04 ~ 0.14	0.04 ~ 0.14
	Medium carbon steels Alloy steels (HB150 ~ 250)	T9225	80 - 220					
		NS9530	80 - 180					
	High carbon steels Alloy steels (HB250 ~)	T9225	80 - 220	Turning (WGT□□)	-	ap = 0.5 ~ 1.5 f = 0.06 ~ 0.2	ap = 0.5 ~ 2.0 f = 0.06 ~ 0.25	ap = 0.5 ~ 2.5 f = 0.06 ~ 0.27
		NS9530	80 - 150					
M	Stainless steels	GH730, AH120	50 - 120	Profiling (WGR□□)	-	ap = 0.5 ~ 1.4 f = 0.05 ~ 0.25	ap = 0.5 ~ 1.5 f = 0.05 ~ 0.26	ap = 0.5 ~ 1.6 f = 0.05 ~ 0.3
K	Grey and ductile cast irons	GH730, AH120	50 - 180					

Note: For diameter compensation values in traversing, see page F115.

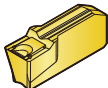
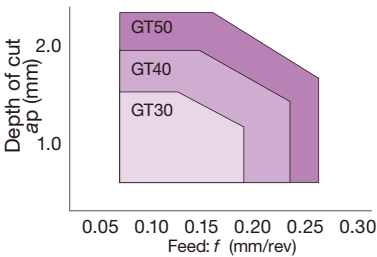
Reference pages: Toolholders → F077, F078

CHIPBREAKER GUIDE (for 1 corner inserts)

External grooving and parting

GE  F087	1st choice for external grooving and parting Excellent chip control CW = 2 - 5 mm 
GF  F088	1st choice for face grooving Low cutting force and good chip control for face grooving CW = 3 - 5 mm 
GN  F089	1st choice for internal grooving Low cutting force and good chip control for internal grooving CW = 3 - 5 mm 
GE R/L  F089	Handed insert Minimize burr generation when workpiece is cut off CW = 3 - 5 mm 

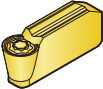
External grooving and turning

GT  F087	1st choice for turning Low cutting force and good chip control for traversing CW = 3 - 5 mm 
--	--

Please see page F*** for the product details.

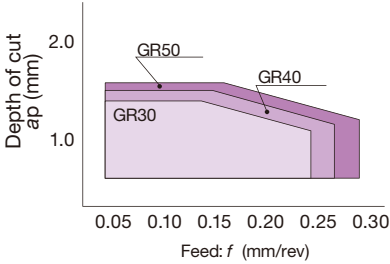
Profiling

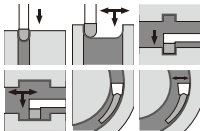
GR



F088

Full radius type
Low cutting force and good chip control for profiling
CW = 3 - 5 mm





For aluminium and non-ferrous metal

External

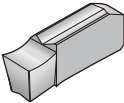
Internal

Face

Parting

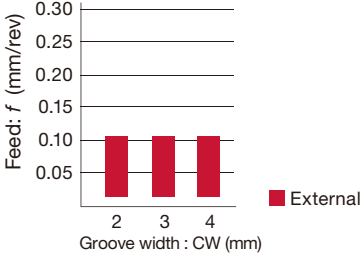
Others

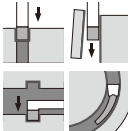
GE-AL



F090

Reduce cutting force and welding
due to sharp chipbreaker
CW = 2 - 4 mm



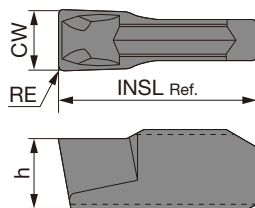


Please see page F*** for the product details.

INSERTS (1 corner)

GE

For external grooving and parting



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

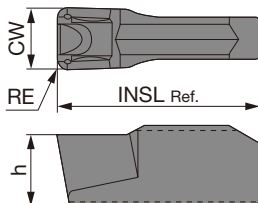
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet			INSL	h
			T9225	AH120	GH730					
GE20	2	0.2		●	●			●	10	3.5
GE30	3	0.2	●	●	●			●	10	3.5
GE40	4	0.2	●	●	●			●	10	4
GE50	5	0.2	●	●	●			●	12	4.5

● : Line up

GT

For external grooving and turning



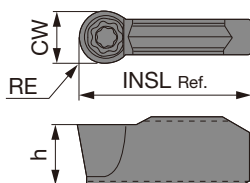
P	Steel	★	★	★				★					
M	Stainless		★	★									
K	Cast iron		★	☆				☆					
N	Non-ferrous												
S	Superalloys		☆										
H	Hard materials												

★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet			INSL	h
			T9225	AH120	GH730					
GT30	3	0.4		●	●			●	10	3.5
GT40	4	0.4	●	●	●			●	10	4
GT50	5	0.4	●	●	●			●	12	4.5

● : Line up

For profiling (full radius)



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

★ : First choice
☆ : Second choice

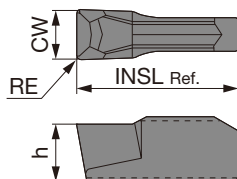
Designation	CW ^{+0.1} ₀	RE	Coated				Cermet						INSL	h	
			T9225	AH120	GH730			NS9530							
GR30	3	1.5	●	●	●			●						10	3.5
GR40	4	2	●	●	●			●						10	4
GR50	5	2.5	●	●	●			●						12	4.5

● : Line up



GF

For face grooving



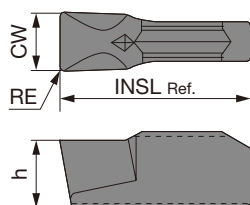
P	Steel	★		★			
M	Stainless	★					
K	Cast iron	☆		☆			
N	Non-ferrous						
S	Superalloys						
H	Hard materials						

★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated	Cermet						INSL	h	
			GH730		NS9530							
GF30	3	0.2	●		●						10	3.5
GF40	4	0.2	●		●						10	4
GF50	5	0.2	●		●						12	4.5

● : Line up

For internal grooving



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

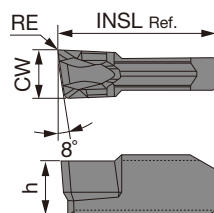
★ : First choice
☆ : Second choice

Designation	$CW_0^{+0.1}$	RE	Coated						INSL	h
			GH730							
GN30	3	0.2	●						10	3.5
GN40	4	0.2	●						10	4
GN50	5	0.2	●						12	4.5

● : Line up

GE-R/L

For parting off (handed inserts)



Right hand (R) shown.

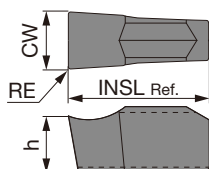
P	Steel	★	★				
M	Stainless	★	★				
K	Cast iron	★	☆				
N	Non-ferrous						
S	Superalloys	☆					
H	Hard materials						

★ : First choice
☆ : Second choice

[illegible]

● : Line up

For aluminium and non-ferrous metal



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

★ : First choice
☆ : Second choice

Designation	$CW_{0}^{+0.1}$	RE	Uncoated						INSL	h
			KS05F							
GE20-AL	2	0.2	●						10	3.5
GE30-AL	3	0.2	●						10	3.5
GE40-AL	4	0.2	●						10	4

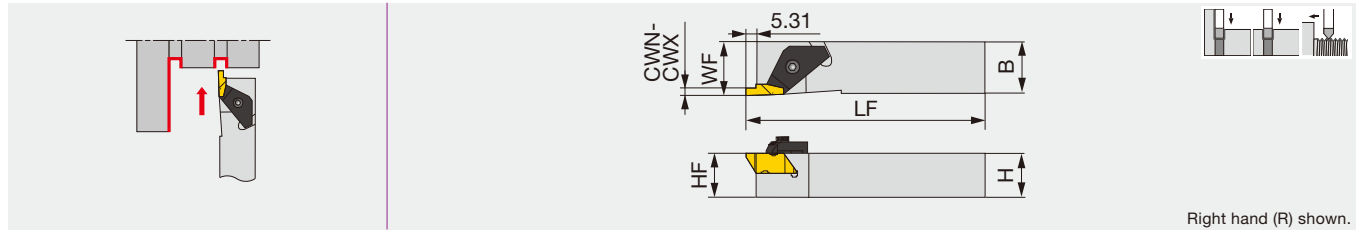
● : Line up

ISO	Workpiece material	Grades	Cutting speed Vc (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		NS9530	100 - 200
		GH730, AH120	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		NS9530	80 - 180
		GH730, AH120	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		NS9530	80 - 150
		GH730, AH120	50 - 120
M	Stainless steel	GH730, AH120	50 - 120
K	Grey iron, Ductile cast iron	GH730, AH120	50 - 180
N	Aluminium alloy, Non-ferrous metal	KS05F	200 - 300

Operation	Feed: f (mm/rev)			
	Groove width: CW (mm)			
	2	3	4	5
Grooving (GE**)	0.06 - 0.2	0.06 - 0.25	0.07 - 0.27	0.07 - 0.3
Parting off (GE**R/L)	0.04 - 0.1	0.04 - 0.14	0.04 - 0.14	0.04 - 0.14
Traversing (GT**)	-	$ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	$ap = 0.5 - 2$ $f = 0.06 - 0.25$	$ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Profiling (GR**)	-	$ap = 0.5 - 1.4$ $f = 0.05 - 0.25$	$ap = 0.5 - 1.5$ $f = 0.05 - 0.26$	$ap = 0.5 - 1.6$ $f = 0.05 - 0.3$
Grooving for Aluminium alloys (GE**-AL)	0.03 - 0.1	0.03 - 0.1	0.03 - 0.1	-

For diameter compensation values in traversing, see page **F115**.

Reference pages: Toolholders → **F079 - F081**



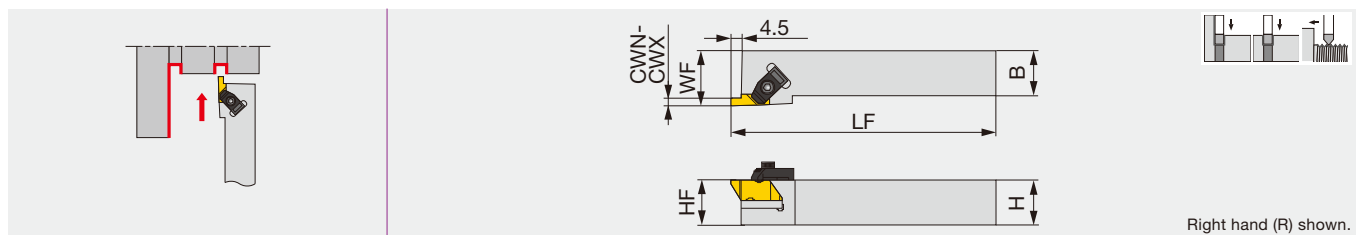
Designation	CWN	CWX	HF	H	B	LF	WF	Insert	Torque*
FLASR/L-1616M3	1	3	16	16	16	125	16	FL*-3**R/L...	3

Note: 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)

FLSR/L

External grooving and threading toolholder, for Swiss lathes



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

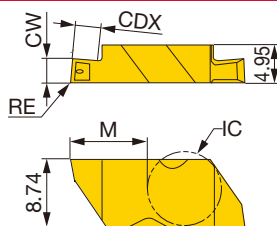
Note: Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
FLASR-1616M3	TF-184	S-412	5/32HEX
FLASL-1616M3	TF-185	S-412	5/32HEX
FLSR-****M3	TF-72	S-412	5/32HEX
FLSL-****M3	TF-73	S-412	5/32HEX

FLG-CB (For grooving)



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

★ : First choice
☆ : Second choice



Designation	HAND	CW±0.025	RE	Coated								CDX	IC	M	
				AH110											
FLG-3M100R-CB	R	1	0.19	●									1.4	9.525	10.3
FLG-3M100L-CB	L	1	0.19	●									1.4	9.525	10.3
FLG-3M150R-CB	R	1.5	0.19	●									2.55	9.525	10.3
FLG-3M150L-CB	L	1.5	0.19	●									2.55	9.525	10.3
FLG-3M200R-CB	R	2	0.19	●									2.55	9.525	10.3
FLG-3M200L-CB	L	2	0.19	●									2.55	9.525	10.3
FLG-3M250R-CB	R	2.5	0.19	●									4.07	9.525	10.3
FLG-3M250L-CB	L	2.5	0.19	●									4.07	9.525	10.3
FLG-3M300R-CB	R	3	0.19	●									4.07	9.525	10.3
FLG-3M300L-CB	L	3	0.19	●									4.07	9.525	10.3

● : Line up

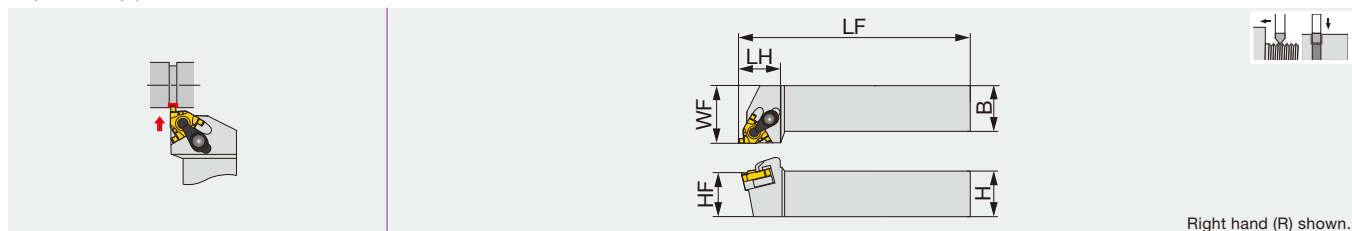
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Application	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	High carbon steel S45C, etc. C45, etc.	AH110	Grooving	100 - 200	0.12 - 0.35
	Alloy steel SCM435, etc. 34CrMo4, etc.	AH110	Grooving	50 - 80	0.12 - 0.3
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	AH110	Grooving	50 - 150	0.1 - 0.2
K	Gray cast iron FC250, etc. 250, etc.	AH110	Grooving	50 - 180	0.1 - 0.25
	Ductile cast iron FCD400, etc. 40-15. etc.	AH110	Grooving	50 - 120	0.1 - 0.25

Reference pages: Toolholders → **F091**

CER/L

External grooving and threading toolholder (The -DT holders can be used either with the insert screw or top-clamp)



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

Note: 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 toolholder.

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.

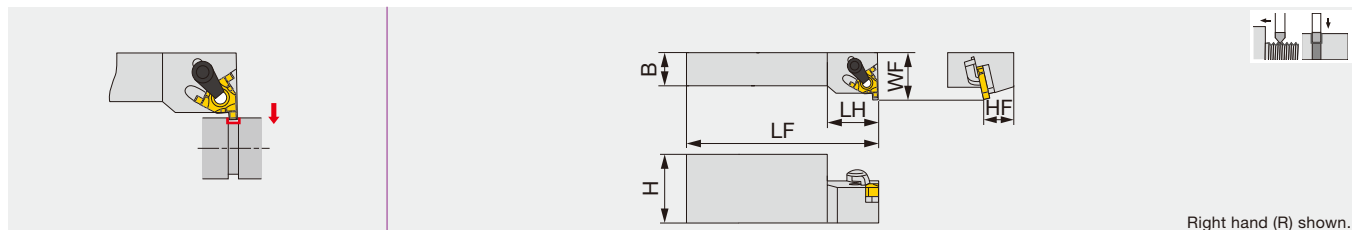
Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).

*Torque: Recommended clamping torque (N·m)

Designation	Clamp set	Clamp screw	Shim screw	*Optional: Shim for grooving	Wrench 1	Wrench 2
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 and grooving toolholder, for Swiss lathes



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

Note: 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).

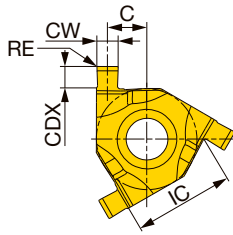
*Torque: Recommended clamping torque (N·m)

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 → **F094**

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	RE	Coated			Insert size	CDX	IC	C	Shim	
				SH730							Dual-clamp toolholder: screw-on and clamp-on	Clamp-on toolholder
GTGN-16ER/IL100	R	1	0.1	●			16	1.25	9.525	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	L	1	0.1	●			16	1.25	9.525	4.22	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL120	R	1.2	0.1	●			16	1.3	9.525	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR120	L	1.2	0.1	●			16	1.3	9.525	4.12	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL140	R	1.4	0.1	●			16	1.5	9.525	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR140	L	1.4	0.1	●			16	1.5	9.525	4.02	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL170	R	1.7	0.1	●			16	1.7	9.525	3.67	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR170	L	1.7	0.1	●			16	1.7	9.525	3.67	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL195	R	1.95	0.1	●			16	1.7	9.525	3.75	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR195	L	1.95	0.1	●			16	1.7	9.525	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL225	R	2.25	0.1	●			16	1.8	9.525	3.6	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR225	L	2.25	0.1	●			16	1.8	9.525	3.6	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.

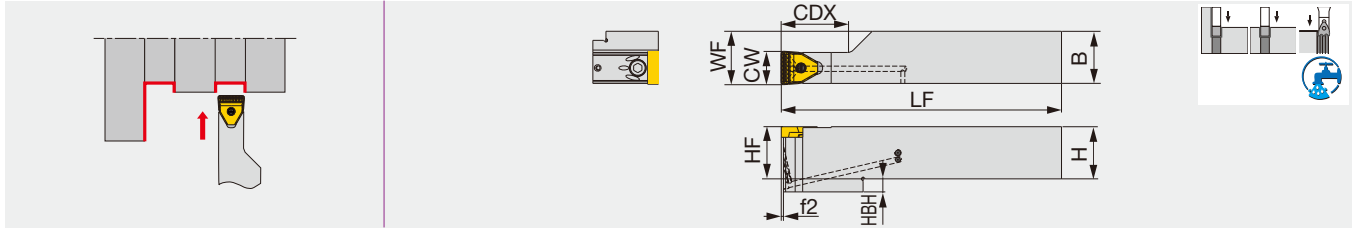
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Steels S45C, SCM440 etc. C45, 42CrMo4, etc.	SH730	50 - 150	0.05 - 0.1
M	Stainless steels SUS304, SUS316 etc. X5CrNi18-9, X5CrNiMo17-12-2, etc.	SH730	30 - 120	0.05 - 0.1
S	Heat-resistant alloys, Titanium alloys etc. Ti-6Al-4V, etc.	SH730	30 - 40	0.05 - 0.1

Reference pages: Toolholders → **F093**

External grooving toolholder



Designation	CW	CDX	H	B	LF	HF	WF	HBH	f2	Insert ⁽¹⁾	Torque*
FPGR2525M-10T20	10	20	25	25	150	25	25.5	-	0.5	PSG*10...	2.2
FPGR3232P-10T36	10	36	32	32	170	32	32.5	-	0.5	PSG*10...	2.2
FPGR2525M-15T20	15	20	25	25	150	25	25.5	-	0.5	PSG*15...	2.2
FPGR3232P-15T40	15	40	32	32	170	32	32.5	-	0.4	PSG*15...	2.2
FPGR3232P-20T40	20	40	32	32	170	32	32.5	8	0.4	PSG*20...	8.5
FPGR4040R-20T50	20	50	40	40	200	40	40.5	8	0.4	PSG*20...	8.5
FPGR3232P-25T40	25	40	32	32	170	32	32.5	8	0.4	PSG*25...	8.5
FPGR4040R-25T50	25	50	40	40	200	40	40.5	8	0.4	PSG*25...	8.5

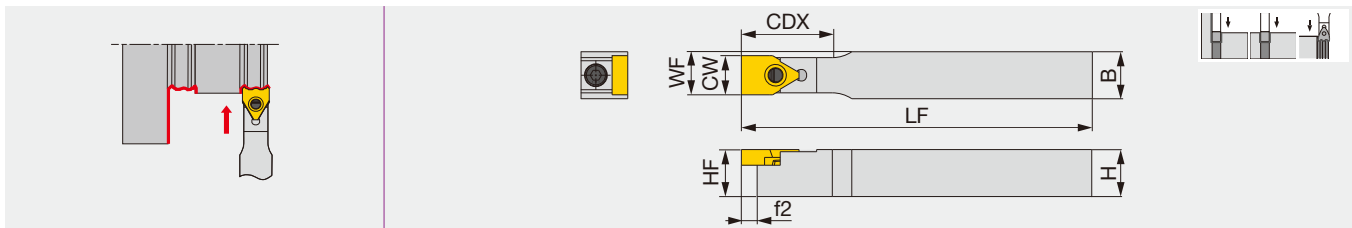
(1) Can be used for both wide grooving and wide profile grooving

*Torque: Recommended clamping torque (N·m)

CDX, LF, f2 are dimensions when PSGM insert is attached. When mounting PSGB insert, the dimensions will be 5 mm longer.

FPGN

External profile grooving toolholder



Designation	CW	CDX	H	B	LF	HF	WF	f2	Insert ⁽¹⁾	Torque*
FPGN1212X-10T20	10	25	12	12	125	12	11	5.5	PSG*10...	2.2
FPGN1616X-10T20	10	25	16	16	125	16	13	5.5	PSG*10...	2.2
FPGN2020K-10T20	10	25	20	20	130	20	15	5.5	PSG*10...	2.2
FPGN1616X-15T25	15	30	16	16	125	16	15.5	5.5	PSG*15...	2.2
FPGN2020K-15T25	15	30	20	20	130	20	17.5	5.5	PSG*15...	2.2
FPGN2020K-20T32	20	37	20	20	130	20	20	5.5	PSG*20...	8.5
FPGN2525M-20T32	20	37	25	25	155	25	22.5	5.5	PSG*20...	8.5
FPGN2525M-25T36	25	41	25	25	155	25	25	5.5	PSG*25...	8.5

*PSGB insert blank is available for tailored inserts.

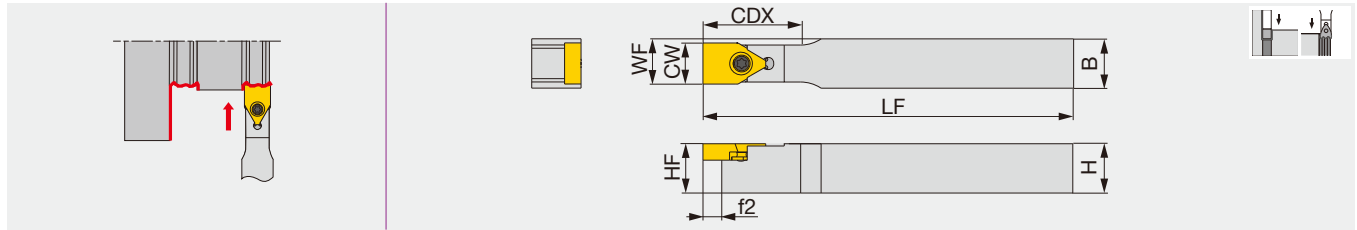
(1) Can be used for both wide grooving and wide profile grooving

*Torque: Recommended clamping torque (N·m)

CDX, LF, f2 are dimensions when PSGB insert is attached. When mounting PSGM insert, the dimensions will be 5 mm shorter.

SPARE PARTS

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



Designation	CW	CDX	H	B	LF	HF	WF	f2	Insert ⁽¹⁾	Torque*
SPGN1212X-10T20	10	25	12	12	125	12	11	5.5	PSGB10	1.3
SPGN1616X-10T20	10	25	16	16	125	16	13	5.5	PSGB10	1.3
SPGN2020K-10T20	10	25	20	20	130	20	15	5.5	PSGB10	1.3
SPGN1616X-15T25	15	30	16	16	125	16	15.5	5.5	PSGB15	3.5
SPGN2020K-15T25	15	30	20	20	130	20	17.5	5.5	PSGB15	3.5
SPGN2020K-20T32	20	37	20	20	130	20	20	5.5	PSGB20	5
SPGN2525M-20T32	20	37	25	25	155	25	22.5	5.5	PSGB20	5
SPGN2525M-25T36	25	41	25	25	155	25	25	5.5	PSGB25	5

*PSGB insert blank is available for tailored inserts.

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

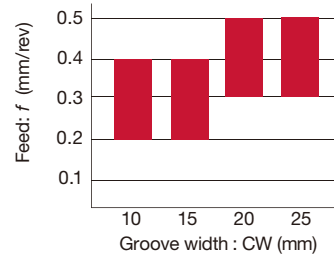
Designation	Clamping screw	Wrench
SPGN*****-10T20	CSTB-3L081	T-8F
SPGN*****-15T25	CSTB-4	T-15F
SPGN*****-20T..., 25T...	CSTB-5	T-20F

CHIPBREAKER GUIDE

PSGM



For wide grooving
Improved productivity with excellent chip control and the chipbreaker designed for high feed
CW = 10 - 25 mm

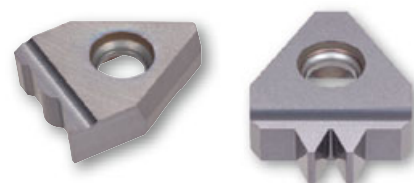


PSGB

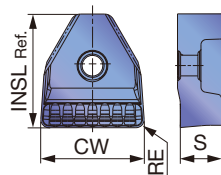


Blank for wide profile grooving inserts
Can be prepared for various insert shapes Shortened cutting time and improved productivity with one-pass operations
CW = 10 - 25 mm

Specially tailored inserts (example)



PSGM



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

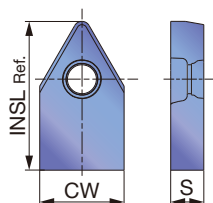
★ : First choice
☆ : Second choice

[illegible]

*Tolerance: CW $\pm$ 0.08 (CW = 10 mm), $\pm$ 0.1 (CW $\geq$ 15 mm)

● : Line up

PSGB



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

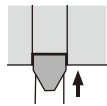
★ : First choice
☆ : Second choice

[illegible]

● : Line up

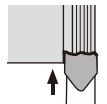
Reference pages: Toolholders → **F095, F096**, Standard cutting conditions → **F098**

STANDARD CUTTING CONDITIONS



Wide grooving (PSGM insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting Speed Vc (m/min)
P	Alloy steel SCM440, etc. 42CrMo4, etc.	< 300	AH725	50 - 180
Groove width: CW (mm)				
	10	15	20	25
Feed: f (mm/rev)	0.2 - 0.4	0.2 - 0.4	0.3 - 0.5	0.3 - 0.5

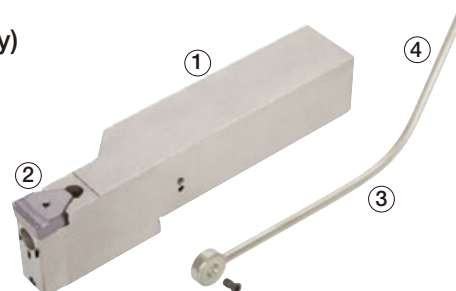


Wide profile grooving (PSGB insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting Speed Vc (m/min)
P	Carbon steel S45C, etc. C45, etc.	< 200	UX30	50 - 150
P	Alloy steel SCM440, etc. 42CrMo4, etc.	< 300	UX30	50 - 120
M	Stainless steel SUS303, etc. X10CrNiS18-9, etc.	< 200	UX30	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	TH10	50 - 150
K	Ductile cast irons FCD450, etc. 450-10S, etc.	-	TH10	50 - 120
N	Aluminium alloy Si < 12%, etc.	-	TH10	100 - 500

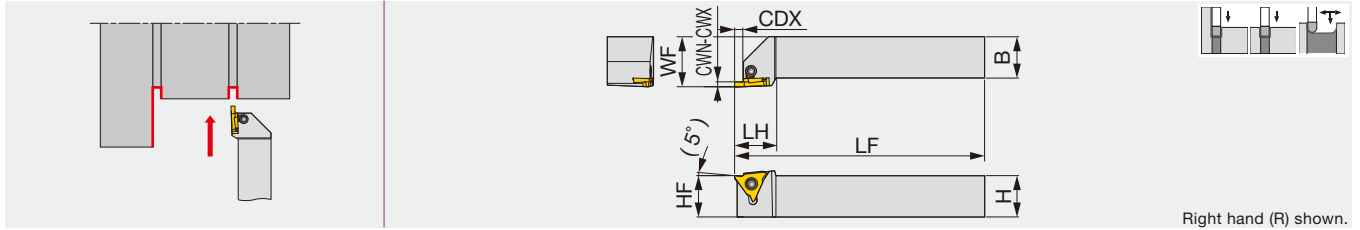
■ Spare parts for internal coolant supply attachment (Order separately)

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



TGTSR/L

External grooving toolholder, for 3 corner insert



Designation	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 (TGTSR) with left-hand inserts (GBL).
*Torque: Recommended clamping torque (N·m)

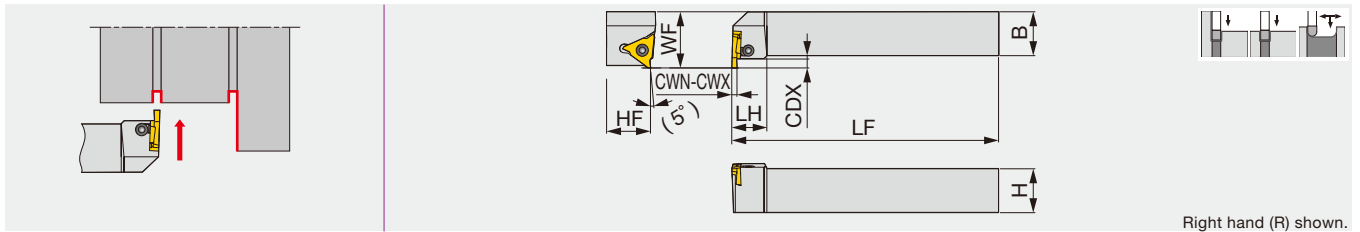
Designation	Insert
TGTSR/L2020K16	GBR/L32...
TGTSR/L2525M16	GBR/L32...
TGTSR/L2020K22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2020K22-2	GBR/L43150 ~ 230 GBR/L43075R ~ 100R
TGTSR/L2020K22-3	GBR/L43250 ~ 450 GBR/L43125R ~ 200R
TGTSR/L2525M22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2525M22-2	GBR/L43150 ~ 230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

SPARE PARTS

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

TGTTR/L

External grooving with tangential pocket, for 3 corner insert



Designation	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).
*Torque: Recommended clamping torque (N·m)

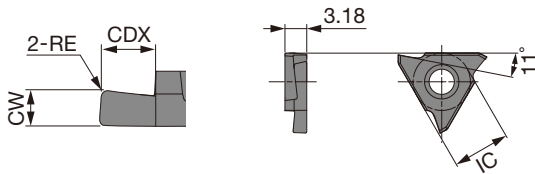
Designation	Insert
TGTTR/L2020K16	GBL/R32...
TGTTR/L2525M16	GBL/R32...
TGTTR/L2020K22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTTR/L2020K22-2	GBL/R43150 ~ 230 GBL/R43075R ~ 100R
TGTTR/L2020K22-3	GBL/R43250 ~ 450 GBL/R43125R ~ 200R
TGTTR/L2525M22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTTR/L2525M22-2	GBL/R43150 ~ 230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

Reference pages: Inserts → **F100 - F102**, Standard cutting conditions → **F102**

GBR/L32



Right hand (R) shown.

[illegible]

★ : First choice
☆ : Second choice

[illegible]

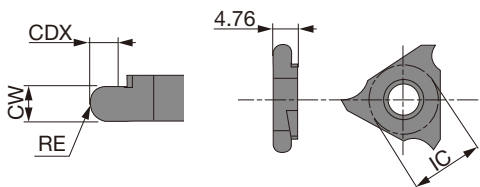
● : Line up

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

Designation	HAND	CW±0.025	RE	Coated		Cermet		Uncoated			CDX	IC
				AH710		NS9530		KS05F				
GBR43125	R	1.25	0.2	●		●		●			2	12.7
GBL43125	L	1.25	0.2	●							2	12.7
GBR43145	R	1.45	0.2	●		●		●			2	12.7
GBL43145	L	1.45	0.2	●							2	12.7
GBR43150	R	1.50	0.2	●		●		●			3.5	12.7
GBL43150	L	1.50	0.2	●		●					3.5	12.7
GBR43175	R	1.75	0.2	●		●		●			3.5	12.7
GBL43175	L	1.75	0.2	●		●					3.5	12.7
GBR43185	R	1.85	0.2	●		●		●			3.5	12.7
GBL43185	L	1.85	0.2	●		●					3.5	12.7
GBR43200	R	2	0.2	●		●		●			3.5	12.7
GBL43200	L	2	0.2	●		●					3.5	12.7
GBR43230	R	2.3	0.2	●		●		●			3.5	12.7
GBL43230	L	2.3	0.2	●		●					3.5	12.7
GBR43250	R	2.5	0.3	●		●		●			5	12.7
GBL43250	L	2.5	0.3	●							5	12.7
GBR43265	R	2.65	0.3	●		●		●			5	12.7
GBL43265	L	2.65	0.3	●							5	12.7
GBR43280	R	2.8	0.3	●		●		●			5	12.7
GBL43280	L	2.8	0.3	●							5	12.7
GBR43300	R	3	0.3	●		●		●			5	12.7
GBL43300	L	3	0.3	●							5	12.7
GBR43330	R	3.3	0.3	●		●		●			5	12.7
GBL43330	L	3.3	0.3	●							5	12.7
GBR43350	R	3.5	0.3	●		●		●			5	12.7
GBL43350	L	3.5	0.3	●							5	12.7
GBR43400	R	4	0.4	●		●		●			5	12.7
GBL43400	L	4	0.4	●							5	12.7
GBR43430	R	4.3	0.4	●		●		●			5	12.7
GBL43430	L	4.3	0.4	●							5	12.7
GBR43450	R	4.5	0.4	●		●		●			5	12.7
GBL43450	L	4.5	0.4	●							5	12.7

Tungaloy F101

GBR/L43-R(full radius)



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	RE	Coated	Cermet	Uncoated					CDX	IC
				AH710	NS9530	KS05F						
GBR43050R	R	1	0.5	●	●	●					2	12.7
GBL43050R	L	1	0.5	●		●					2	12.7
GBR43075R	R	1.5	0.75	●	●	●					3.5	12.7
GBL43075R	L	1.5	0.75	●		●					3.5	12.7
GBR43100R	R	2	1	●	●	●					3.5	12.7
GBL43100R	L	2	1	●		●					3.5	12.7
GBR43125R	R	2.5	1.25	●	●	●					5	12.7
GBL43125R	L	2.5	1.25	●		●					5	12.7
GBR43150R	R	3	1.5	●	●	●					5	12.7
GBL43150R	L	3	1.5	●		●					5	12.7
GBR43200R	R	4	2	●	●	●					5	12.7
GBL43200R	L	4	2	●		●					5	12.7

● : Line up

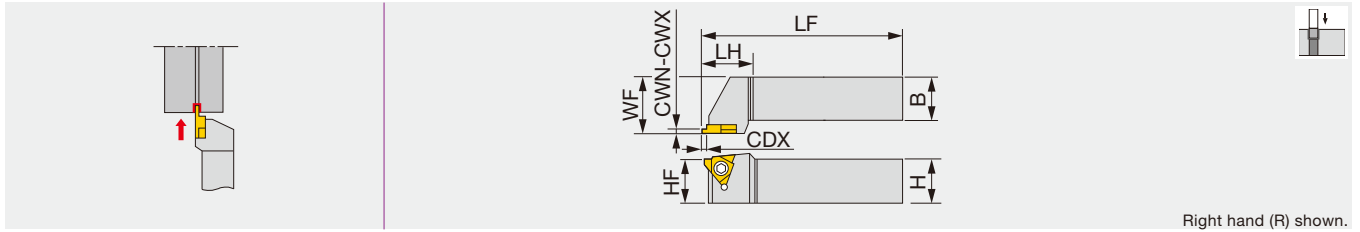
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting Speed Vc (m/min)	Feed f (mm/rev)
P	Carbon steels, Alloy steels S45C, SCM415, etc. C45, 18CrMo4, etc.	150 - 240HB	NS9530	100 - 200	0.02 - 0.25
		150 - 240HB	AH710	60 - 150	0.05 - 0.25
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	≤ 240HB	AH710	60 - 150	0.05 - 0.15
K	Cast irons FC250, etc. 250, etc.	Tensile strength ≤ 350 N/mm ²	AH710	60 - 150	0.05 - 0.15
N	Non-ferrous metal Aluminum, etc.	-	KS05F	200 - 300	0.05 - 0.15

Reference pages: Toolholders → **F099**

SGTR/L

External grooving toolholder, for 3 corner inserts



Designation	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

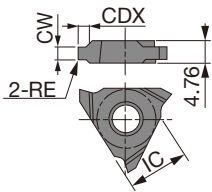
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

INSERTS

GOR/L (For O-ring)



Right hand (R) shown.

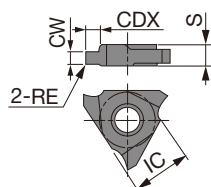
P	Steel	★		★						
M	Stainless			★						
K	Cast iron	☆								
N	Non-ferrous									
S	Superalloys									
H	Hard materials									

★ : First choice
☆ : Second choice

Designation	HAND	CW ^{+0.1 +0.05}	RE	Cement		Uncoated		CDX	IC
				NS9530	UX30				
GOR4190	R	2.5	0.4	●	●			1.5	12.7
GOR4240	R	3.2	0.4	●	●			2	12.7
GOR4310	R	4.1	0.7	●	●			2.5	12.7

● : Line up

GLR/L (For lock 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 ^{+0.1 +0.05}	RE	Cermet		Uncoated								CDX	IC	S
				NS9530		UX30										
GLR3115	R	1.15	0.1	●		●								1.5	9.53	3.18
GLL3115	L	1.15	0.1	●		●								1.5	9.53	3.18
GLR3135	R	1.35	0.1	●		●								1.5	9.53	3.18
GLL3135	L	1.35	0.1	●										1.5	9.53	3.18
GLR3165	R	1.65	0.1	●		●								2	9.53	3.18
GLR3175	R	1.75	0.1	●		●								2	9.53	3.18
GLL3175	L	1.75	0.1	●		●								2	9.53	3.18
GLR3195	R	1.95	0.1	●		●								2.5	9.53	3.18
GLL3195	L	1.95	0.1	●		●								2.5	9.53	3.18
GLR3220	R	2.2	0.1	●		●								3	9.53	3.18
GLL3220	L	2.2	0.1			●								3	9.53	3.18
GLR3270	R	2.7	0.1	●		●								3	9.53	3.18
GLL3270	L	2.7	0.1			●								3	9.53	3.18
GLR4115	R	1.15	0.1	●		●								1.5	12.7	4.76
GLR4135	R	1.35	0.1	●		●								1.5	12.7	4.76
GLR4165	R	1.65	0.1	●		●								2	12.7	4.76
GLR4175	R	1.75	0.1	●		●								2	12.7	4.76
GLR4190	R	1.9	0.1	●										2.5	12.7	4.76
GLR4195	R	1.95	0.1	●		●								2.5	12.7	4.76
GLR4220	R	2.2	0.1	●		●								3.5	12.7	4.76
GLL4220	L	2.2	0.1			●								3.5	12.7	4.76
GLR4270	R	2.7	0.1	●		●								3.5	12.7	4.76
GLR4320	R	3.2	0.1	●		●								4	12.7	4.76
GLL4320	L	3.2	0.1			●								4	12.7	4.76
GLR4420	R	4.2	0.1	●		●								4	12.7	4.76
GLL4420	L	4.2	0.1			●								4	12.7	4.76

● : Line up

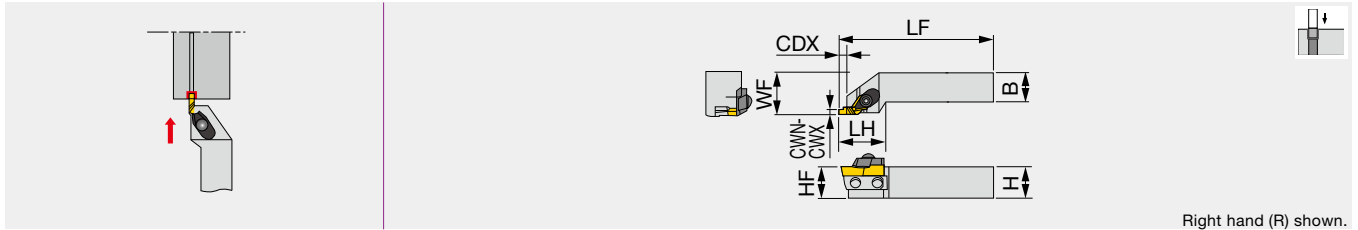
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting Speed Vc (m/min)	Feed: f (mm/rev)		
				CW < 2 mm	CW = 2 ~ 4 mm	CW > 4 mm
	Carbon steel	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		UX30	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25

Reference pages: Toolholders → **F103**

GX-R/LE

External grooving toolholder, for 2 corner inserts



Right hand (R) shown.

Designation	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 (N-m)

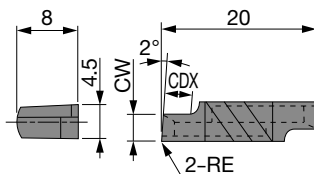
SPARE PARTS

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

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

INSERTS

XGR/L



Right hand (R) shown.

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

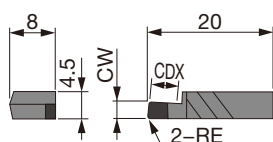
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05	RE	Cermet		Uncoated						CDX
				NS9530		TH10	UX30					
XGR6310-02	R	1	0.2	●		●	●					1.5
XGL6310-02	L	1	0.2	●		●	●					1.5
XGR6315-02	R	1.5	0.2	●		●	●					2.3
XGL6315-02	L	1.5	0.2	●		●	●					2.3
XGR6320-02	R	2	0.2	●		●	●					3
XGL6320-02	L	2	0.2	●		●	●					3
XGR6325-02	R	2.5	0.2	●		●	●					3.8
XGL6325-02	L	2.5	0.2	●		●	●					3.8
XGR6330-02	R	3	0.2	●		●	●					4.5
XGL6330-02	L	3	0.2	●		●	●					4.5
XGR6335-02	R	3.5	0.2	●		●	●					5.3
XGL6335-02	L	3.5	0.2	●		●	●					5.3
XGR6340-02	R	4	0.2	●		●	●					6
XGL6340-02	L	4	0.2	●		●	●					6
XGR6345-02	R	4.5	0.2	●		●	●					6
XGL6345-02	L	4.5	0.2	●		●	●					6

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: Inserts → **F105, F106**, Standard cutting conditions → **F106**



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	RE	CBN								CDX
				BX360								
XGL6310S-QBN	L	1	0.2	●								1.5
XGR6315S-QBN	R	1.5	0.2	●								2.3
XGL6315S-QBN	L	1.5	0.2	●								2.3
XGR6320S-QBN	R	2	0.2	●								3
XGL6320S-QBN	L	2	0.2	●								3
XGR6325S-QBN	R	2.5	0.2	●								3.8
XGL6325S-QBN	L	2.5	0.2	●								3.8
XGR6330S-QBN	R	3	0.2	●								4.5
XGL6330S-QBN	L	3	0.2	●								4.5
XGR6335S-QBN	R	3.5	0.2	●								5.3
XGL6335S-QBN	L	3.5	0.2	●								5.3
XGR6340S-QBN	R	4	0.2	●								6
XGL6340S-QBN	L	4	0.2	●								6
XGR6345S-QBN	R	4.5	0.2	●								6
XGL6345S-QBN	L	4.5	0.2	●								6

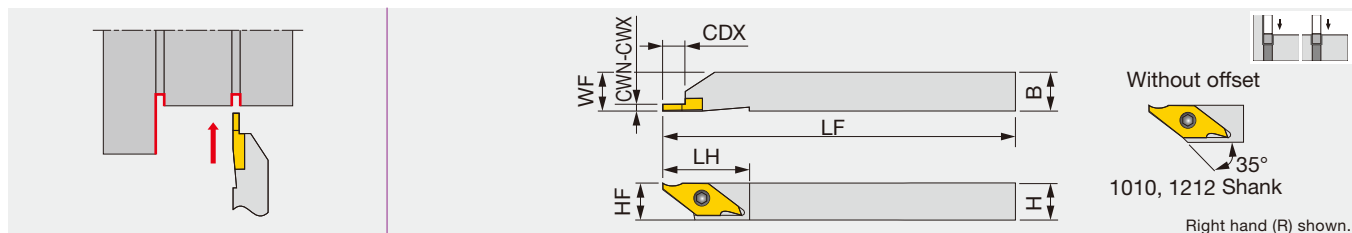
Use right-hand toolholders (GX-****RE) with right-hand inserts (XGR...) left-hand toolholders (GX-****LE) with left-hand inserts (XGL...).

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting Speed Vc (m/min)	Feed: f (mm/rev)		
				CW < 2 mm	CW = 2 ~ 4 mm	CW > 4 mm
	Carbon steel	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		UX30	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
	Cast irons , Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
	Hardened steels	BX360	50 - 180	0.05 - 0.15	0.05 - 0.15	0.05 - 0.15

Reference pages: Toolholders → **F105**



Designation	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

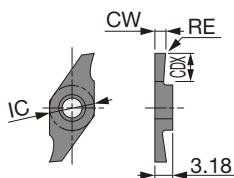
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSVGR/L...	CSTB-3S	T-9F	(T-9L)

INSERT

JVG (with hand, sharp edge)



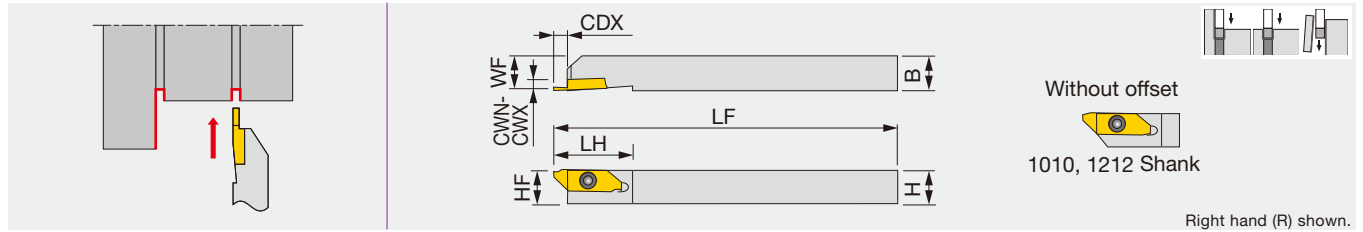
Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	CW ^{+0.05} ₀	RE	Coated			Cermet		Uncoated			CDX	IC
				SH725	J740		NS9530		TH10				
JVGR033F	R	0.33	0	●	●				●			0.7	7.94
JVGL033F	L	0.33	0	●	●				●			0.7	7.94
JVGR050F	R	0.5	0	●	●				●			1.1	7.94
JVGL050F	L	0.5	0	●	●				●			1.1	7.94
JVGR075F	R	0.75	0	●	●				●			1.9	7.94
JVGL075F	L	0.75	0	●	●				●			1.9	7.94
JVGR095F	R	0.95	0	●	●				●			1.9	7.94
JVGL095F	L	0.95	0	●	●				●			1.9	7.94
JVGR100F	R	1	0	●	●		●		●			5.5	7.94
JVGL100F	L	1	0	●	●		●		●			5.5	7.94
JVGR125F	R	1.25	0	●	●				●			5	7.94
JVGL125F	L	1.25	0	●	●				●			5	7.94
JVGR150F	R	1.5	0	●	●		●		●			5.5	7.94
JVGL150F	L	1.5	0	●	●		●		●			5.5	7.94
JVGR200F	R	2	0	●	●		●		●			5.5	7.94
JVGL200F	L	2	0	●	●		●		●			5.5	7.94

● : Line up



Designation	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

Can be wrenched also from the back with a double-head screw.

This toolholder can be used for JXF front-turning insert, JXR reverse-turning insert, and JXG parting and grooving insert.

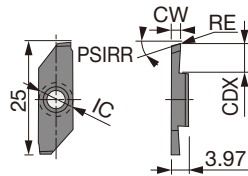
*Torque: Recommended clamping torque (N-m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSXGR/L...	CSTB-4SD	T-8F	(T-8L)

INSERT

JXG (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

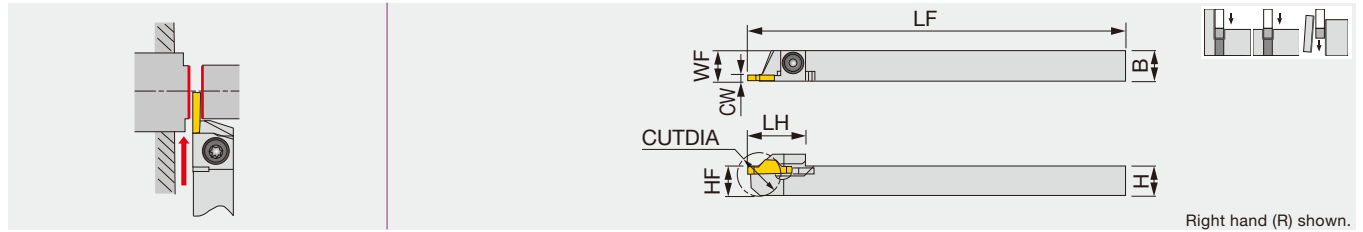
Designation	HAND	CW±0.025	RE	Coated		Uncoated		CDX	IC	PSIRR
				J740	TH10					
JXGR8070FA	R	0.7	0	●	●			4.5	8	15°
JXGL8070FA	L	0.7	0	●	●			4.5	8	15°
JXGR8070FA-005	R	0.7	0.05	●				4.5	8	15°
JXGR8100FA	R	1	0	●	●			6	8	15°
JXGL8100FA	L	1	0	●	●			6	8	15°
JXGR8100FA-005	R	1	0.05	●				6	8	15°
JXGR8100FA45	R	1	0	●	●			4.5	8	15°
JXGR8100FA45-005	R	1	0.05	●				4.5	8	15°
JXGR8150FA	R	1.5	0	●	●			6	8	15°
JXGL8150FA	L	1.5	0	●	●			6	8	15°
JXGR8150FA-005	R	1.5	0.05	●				6	8	15°
JXGR8150FA50	R	1.5	0	●	●			5	8	15°
JXGR8150FA50-005	R	1.5	0.05	●				5	8	15°
JXGR8180FA	R	1.8	0	●	●			6	8	15°
JXGR8180FA-005	R	1.8	0.05	●				6	8	15°
JXGR8200FA	R	2	0	●	●			6	8	15°
JXGL8200FA	L	2	0	●	●			6	8	15°
JXGR8200FA-005	R	2	0.05	●				6	8	15°
JXGR8200FN	R	2	0	●	●			6	8	0°
JXGL8200FN	L	2	0	●	●			6	8	0°
JXGR8200FN-005	R	2	0.05	●				6	8	0°

● : Line up

Reference pages: Standard cutting conditions → **F114**

JCCWSR/L

External grooving and parting toolholder, for Swiss lathes



Designation	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

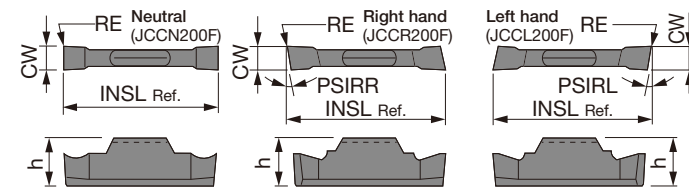
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JCCWSR/L...	CSTB-4S	T-15F	(T-15L)

INSERT

JCC (Sharp edge)

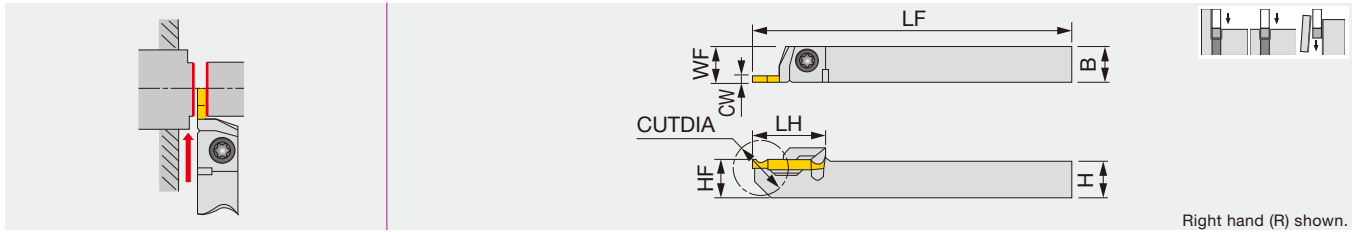


P Steel	★		☆						
M Stainless	★								
K Cast iron			☆						
N Non-ferrous			★						
S Superalloys			★						
H Hard materials									

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated		Uncoated		INSL	h	PSIRL	PSIRR
				J740	TH10						
JCCN200F	N	2	0	●	●			15	4.8	0°	0°
JCCN200F-005	N	2	0.05	●				15	4.8	0°	0°
JCCR200F	R	2	0	●	●			15	4.8	0°	15°
JCCL200F	L	2	0	●	●			15	4.8	15°	0°
JCCR200F-005	R	2	0.05	●				15	4.8	0°	15°
JCCL200F-005	L	2	0.05	●				15	4.8	15°	0°

● : Line up



Designation	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

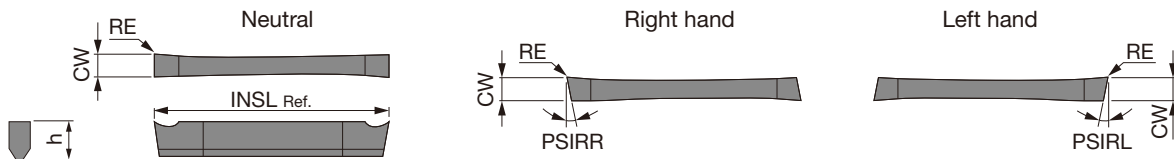
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JCGWSR/L...	CSTB-4S	T-15F	(T-15L)

INSERT

JCGN (Sharp edge)

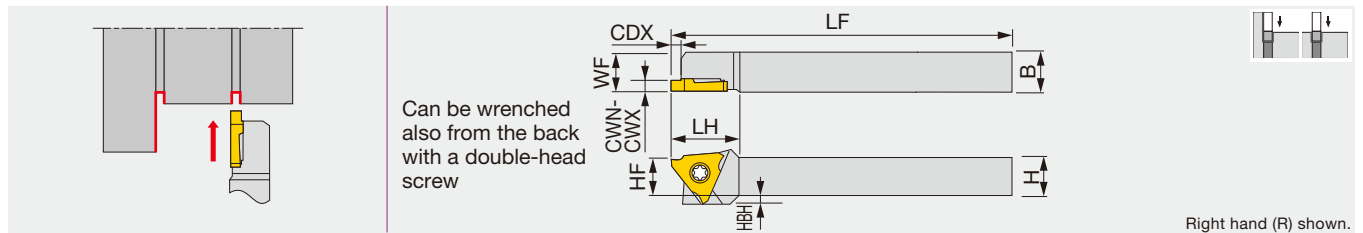


Designation	HAND	CW±0.025	RE	Coated		Uncoated		INSL	h	PSIRL	PSIRR
				J740	TH10						
JCGN200F	N	2	0.05	●	●			20	3	0°	0°
JCGN200FR	R	2	0.05	●	●			20	3	0°	8°
JCGN200FL	L	2	0.05	●	●			20	3	8°	0°

● : Line up

JSTGR/L

External grooving toolholder, for Swiss lathes

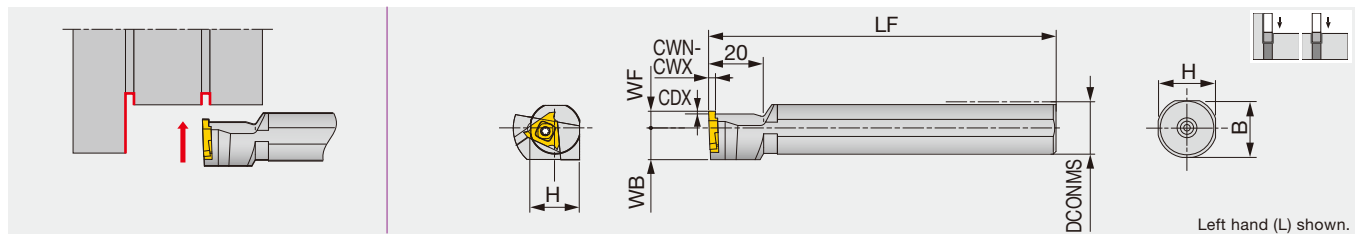


Designation	CWN	CWX	CDX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*
JSTGR/L1010X3	0.33	3	0.7 - 2.6	10	10	120	18.5	10	10	2	JTGR/L3...	1.2
JSTGR/L1212F3	0.33	3	0.7 - 2.6	12	12	85	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1212X3	0.33	3	0.7 - 2.6	12	12	120	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1616X3	0.33	3	0.7 - 2.6	16	16	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 (N·m)

JS-TGL3

External grooving toolholder, for Swiss lathes



Designation	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

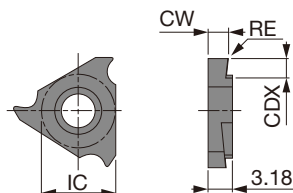
Note: Use left-hand toolholders (L) with right-hand inserts (R).

*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JSTGR/L...	CSTB-4SD	T-8F	(T-8L)
JS***-TGL3	CSTB-4S	T-15F	-

JTG (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



External

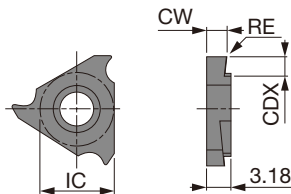


Designation	HAND	CW ₀ ^{+0.05}	RE	Coated		Cermet	Uncoated		CDX	IC
				SH725	J740	NS9530	TH10			
JTGR3033F	R	0.33	0.03	●	●		●		0.7	9.53
JTGL3033F	L	0.33	0.03		●		●		0.7	9.53
JTGR3033F-005	R	0.33	0.05	●					0.7	9.53
JTGR3043F	R	0.43	0.03		●				1.1	9.53
JTGR3050F	R	0.5	0.03	●	●	●	●		1.1	9.53
JTGL3050F	L	0.5	0.03	●	●		●		1.1	9.53
JTGR3050F-005	R	0.5	0.05	●					1.1	9.53
JTGL3050F-005	L	0.5	0.05	●					1.1	9.53
JTGR3065F	R	0.65	0.03	●	●				1.9	9.53
JTGR3065F-010	R	0.65	0.1	●					1.9	9.53
JTGR3075F	R	0.75	0.03	●	●	●	●		1.9	9.53
JTGL3075F	L	0.75	0.03	●	●	●	●		1.9	9.53
JTGR3075F-010	R	0.75	0.1	●					1.9	9.53
JTGL3075F-010	L	0.75	0.1	●					1.9	9.53
JTGR3080F	R	0.8	0.03	●	●				1.9	9.53
JTGR3080F-010	R	0.8	0.1	●					1.9	9.53
JTGR3085F	R	0.85	0.03	●	●				1.9	9.53
JTGR3095F	R	0.95	0.03	●	●	●	●		1.9	9.53
JTGL3095F	L	0.95	0.03	●	●		●		1.9	9.53
JTGR3095F-010	R	0.95	0.1	●					1.9	9.53
JTGL3095F-010	L	0.95	0.1	●					1.9	9.53
JTGR3100F	R	1	0.05	●	●	●	●		2.1	9.53
JTGL3100F	L	1	0.05	●	●		●		2.1	9.53
JTGR3100F-010	R	1	0.1	●					2.1	9.53
JTGL3100F-010	L	1	0.1	●					2.1	9.53
JTGR3110F	R	1.1	0.05	●	●				2.1	9.53
JTGR3120F	R	1.2	0.05	●	●				2.1	9.53
JTGR3120F-010	R	1.2	0.1	●					2.1	9.53
JTGR3125F	R	1.25	0.05	●	●	●	●		2.1	9.53
JTGL3125F	L	1.25	0.05	●	●		●		2.1	9.53
JTGR3125F-010	R	1.25	0.1	●					2.1	9.53
JTGL3125F-010	L	1.25	0.1	●					2.1	9.53
JTGR3130F	R	1.3	0.05	●	●				2.1	9.53
JTGR3140F	R	1.4	0.05	●	●				2.1	9.53
JTGR3140F-010	R	1.4	0.1	●					2.1	9.53
JTGR3145F	R	1.45	0.05	●	●	●	●		2.1	9.53
JTGL3145F	L	1.45	0.05		●		●		2.1	9.53
JTGR3145F-010	R	1.45	0.1	●					2.1	9.53
JTGR3150F	R	1.5	0.05	●	●	●	●		2.1	9.53
JTGL3150F	L	1.5	0.05	●	●		●		2.1	9.53
JTGR3150F-010	R	1.5	0.1	●					2.1	9.53
JTGL3150F-010	L	1.5	0.1	●					2.1	9.53

● : Line up

Reference pages: Toolholders → **F111**, Standard cutting conditions → **F114**

JTG (Sharp edge)



Right hand (R) shown.

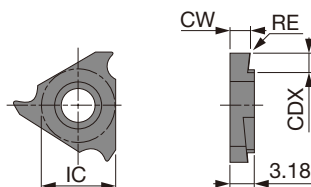
P	Steel	★	★		★		☆		
M	Stainless	★	★						
K	Cast iron				☆		★		
N	Non-ferrous						★		
S	Superalloys						★		
H	Hard materials								

★ : First choice
☆ : Second choice

Designation	HAND	CW ^{+0.05} ₀	RE	Coated		Cermet	Uncoated		CDX	IC
				SH725	J740	NS9530	TH10			
JTGR3175F	R	1.75	0.05	●	●	●	●		2.1	9.53
JTGL3175F	L	1.75	0.05		●	●	●		2.1	9.53
JTGR3175F-010	R	1.75	0.1	●					2.1	9.53
JTGR3180F	R	1.8	0.05	●	●				2.1	9.53
JTGR3200F	R	2	0.05	●	●	●	●		2.6	9.53
JTGL3200F	L	2	0.05	●	●		●		2.6	9.53
JTGR3200F-010	R	2	0.1	●					2.6	9.53
JTGL3200F-010	L	2	0.1	●					2.6	9.53
JTGR3225F	R	2.25	0.05	●	●				2.6	9.53
JTGR3250F	R	2.5	0.05	●	●	●	●		2.6	9.53
JTGL3250F	L	2.5	0.05	●	●		●		2.6	9.53
JTGR3250F-010	R	2.5	0.1	●					2.6	9.53
JTGL3250F-010	L	2.5	0.1	●					2.6	9.53
JTGR3275F	R	2.75	0.05		●				2.6	9.53
JTGR3300F	R	3	0.05	●	●				2.6	9.53
JTGR3300F-010	R	3	0.1	●					2.6	9.53

● : Line up

JTG (honed edge)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

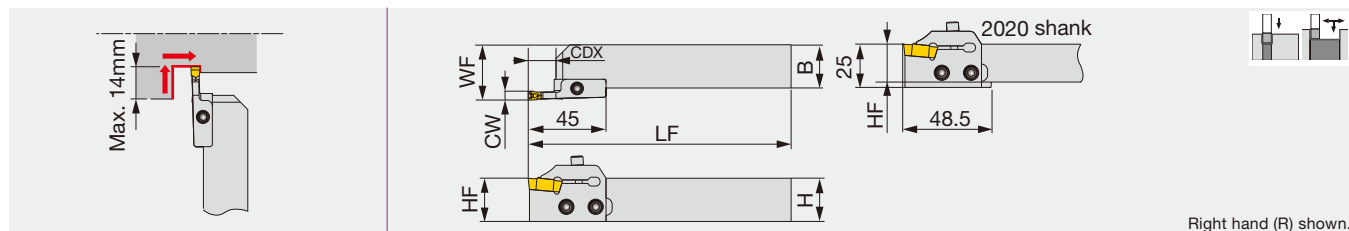
Designation	HAND	CW ^{+0.05} ₀	RE	Coated cermet		CDX	IC
				J9530			
JTGR3100	R	1	0.05	●		2.1	9.53
JTGR3125	R	1.25	0.05	●		2.1	9.53
JTGR3150	R	1.5	0.05	●		2.1	9.53
JTGR3200	R	2	0.05	●		2.6	9.53

● : Line up

STANDARD CUTTING CONDITIONS (J-Series grooving tool)

ISO	Workpiece material	Grade	Cutting Speed Vc (m/min)	Feed f (mm/rev)
P	General steels, Free-cutting steels, etc.	J740	10 - 100	0.01 - 0.1
		SH725	50 - 150	0.01 - 0.1
		NS9530	50 - 150	0.01 - 0.1
		J9530	50 - 150	0.01 - 0.1
M	Stainless steels, etc.	J740	10 - 100	0.01 - 0.1
		SH725	50 - 150	0.01 - 0.1
N	Aluminium alloys, copper alloys, etc.	TH10	10 - 200	0.01 - 0.1
S	Difficult-to-cut materials, titanium alloys, etc.	TH10	10 - 30	0.01 - 0.1





Designation	CW	CDX	H	B	LF	HF	WF	Insert	Shank	Adapter	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 adapter; a shank; a adapter. Combining the designations of a adapter 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 adapter.

Use right-hand toolholders (CGWSR...) with right-hand adapter (FLR...); and left-hand toolholders (CGWSL...) with left-hand adapter (FLL...).

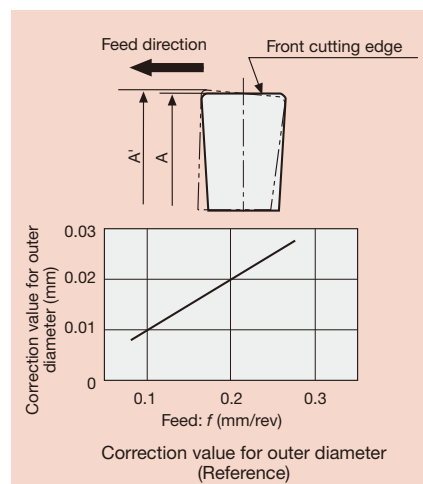
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

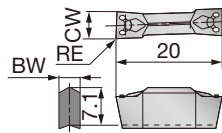
Caution

Toolholders with FLEX insert have 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.

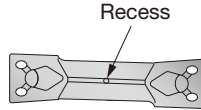


INSERT

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

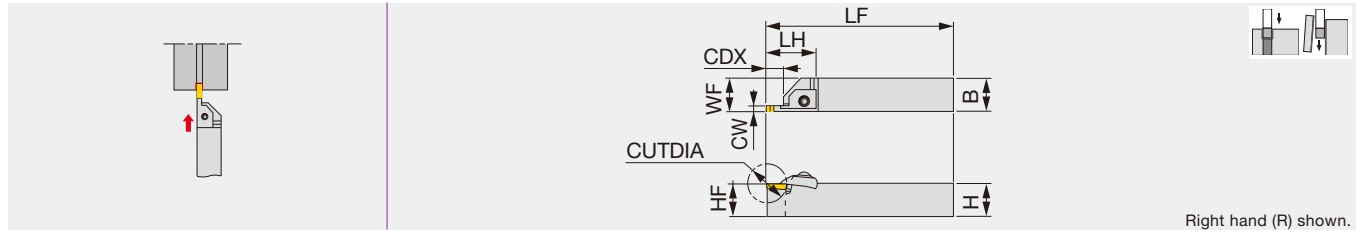
Designation	HAND	CW±0.05	RE	Coated		Cermet		Uncoated		BW
				T9225		NS9530		UX30		
FLEX30R	R	3	0.4			●				2.2
FLEX30L	L	3	0.4			●				2.2
FLEX40R	R	4	0.4			●				3.1
FLEX40L	L	4	0.4			●				3.1
FLEX50R	R	5	0.4	●		●		●		4
FLEX50L	L	5	0.4	●		●		●		4

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting Speed Vc (m/min)	Feed: f (mm/rev)	
				Grooving	Turning
P	Carbon steel	T9225	80 - 300	0.05 - 0.25	0.1 - 0.3
		NS9530	80 - 200	0.05 - 0.25	0.1 - 0.3
		UX30	60 - 150	0.05 - 0.25	0.1 - 0.3

External grooving and parting toolholder, for 2 corner inserts



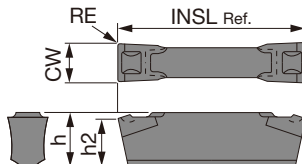
*Torque: Recommended clamping torque (N·m)

SPARE PARTS



■ INSERT

CTD



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

Designation	CW±0.1	RE	Coated							INSL	h	h2
			AH725									
CTD3	3	0.2	●							20	4.3	4
CTD4	4	0.2	●							20	5.3	5
CTD5	5	0.2	●							25	6.3	6

● : Line up

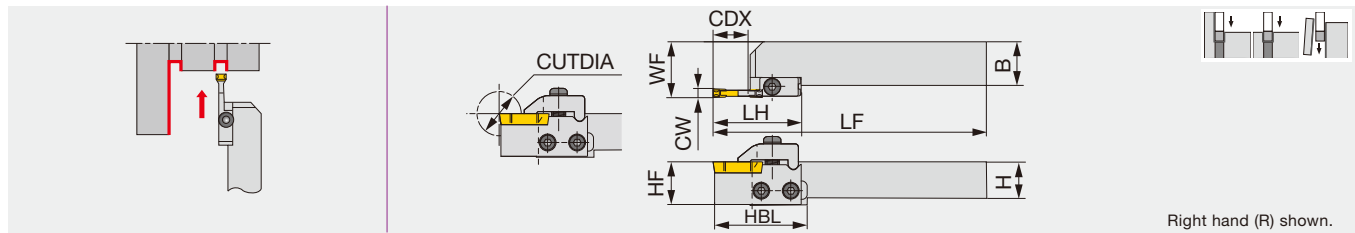
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting Speed V _c (m/min)	Feed: <i>f</i> (mm/rev)	
				Grooving	Parting off
P	Carbon steel	AH725	80 - 180	0.08 - 0.3	0.08 - 0.15
M	Stainless steel	AH725	50 - 120	0.08 - 0.25	0.08 - 0.1

MY-T SERIES

CGWSR/L-CGD

External grooving and parting toolholder



Designation	CW	CUTDIA	CDX	H	B	LF	LH	HBL	HF	WF	Insert	Shank	Adapter 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

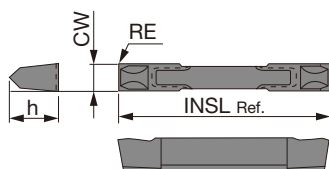
When using a right or left hand adapter set, the right hand adapter set is used with right hand shank and the left hand adapter set is used with left hand shank.
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Adapter	Clamp	Clamping screw	Adapter 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
CGWSL****-CGDL6	TCL6	CCL6	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-8	-	CCR/L-8	CHHM6-20	-	5X14AW	BP-9	P-5

INSERT

CGD



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

★ : First choice
☆ : Second choice

Designation	CW±0.025	RE	Coated		Cermet		Uncoated		INSL	h
			GH330		NS9530		UX30			
CGD200	2	0.2	●		●		●		20	3.25
CGD300	3	0.2	●		●		●		28.6	6.3
CGD400	4	0.2	●		●		●		28.6	6.3
CGD500	5	0.2	●		●		●		28.6	6.3
CGD600	6	0.2	●		●		●		28.6	8.5
CGD700	7	0.2	●				●		28.6	8.5
CGD800	8	0.2	●				●		28.6	8.5

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting Speed V _c (m/min)	Feed: f (mm/rev)	
				Grooving	Parting off
P	Carbon steel	GH330	70 - 180	0.08 - 0.3	0.08 - 0.15
		NS9530	80 - 200	0.08 - 0.3	0.08 - 0.15
		UX30	60 - 150	0.08 - 0.3	0.08 - 0.15

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

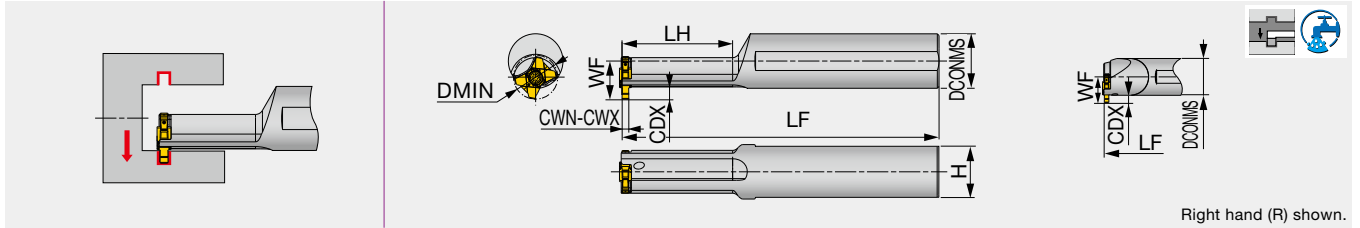
Endmill

Drilling tool

Tooling System

User's Guide

Index



Designation	Material	CWN	CWX	DMIN	DCONMS	LH	LF	WF	H	Insert	Torque*
A12H-STCIR/L10-D105	Steel	0.5	3	10.5	12	25	100	8.3	11	TCIG10...	1
A12H-STCIR/L10-D120	Steel	0.5	3	12	12	31	100	8.3	11	TCIG10...	1
E12K-STCIR/L10-D150	Carbide	0.5	3	15	12	-	125	8.3	11	TCIG10...	1
A16J-STCIR/L12-D130	Steel	1	3	13	16	33	110	11.3	15	TCIG12...	1.3
A16J-STCIR/L12-D160	Steel	1	3	16	16	41	110	11.3	15	TCIG12...	1.3
E16M-STCIR/L12-D200	Carbide	1	3	20	16	-	150	11.3	15	TCIG12...	1.3

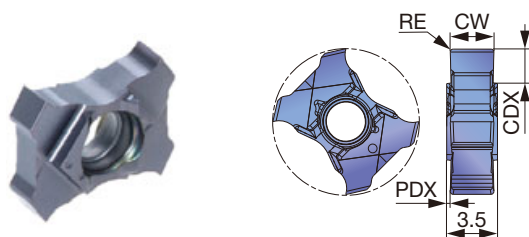
Torque*: Recommended clamping torque (N-m)

SPARE PARTS



Designation	Clamping screw
A/E-STCIR10-...	CSTB-2.2L053DR
A/E-STCIL10-...	CSTB-2.2L053DL
A/E-STCIR12-...	CSTB-2.5L054DR
A/E-STCIL12-...	CSTB-2.5L054DL

TCIG



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

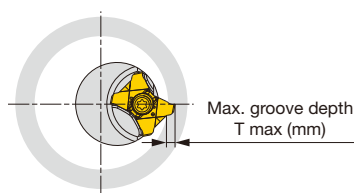
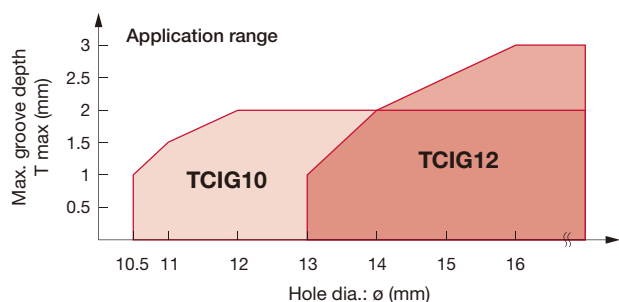
★ : First choice

[illegible]

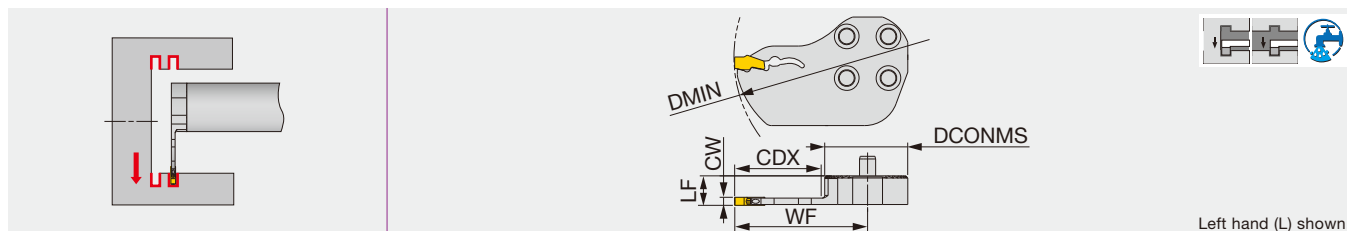
Shallower groove depths (T max) for smaller bores

Maximum groove depths (T max) for TCIG10 inserts are smaller than the CDX value shown above when the grooving bore diameter is < 12 mm; and for TCIG12, when the bore diameter is < 16 mm.

See the chart below for T max values in relation to the given bore diameter.



ISO	Workpiece material	Hardness	Priority	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Steel S45C, C45, SCM435, 34CrMo4, etc.	< 300 HB	First choice	30 - 80	0.01 - 0.05
M	Stainless steel SUS303, X10CrNiS18-9, etc.	< 200 HB	First choice	30 - 50	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	10 - 50	0.01 - 0.05



Left hand (L) shown.

Designation	CW	CDX	DMIN	DCONMS*	Seat size	LF	WF	Shank
S25-QSIR/L2T26D550-H	2	26	55	25	2	8.5	40.1	D25
S25-QSIR/L3T26D550-H	3	26	55	25	3	9	40.1	D25
S32-QSIR/L3T32D700-H	3	32	70	32	3	11	49.6	D32
S32-QSIR/L4T32D700-H	4	32	70	32	4	11.5	49.6	D32

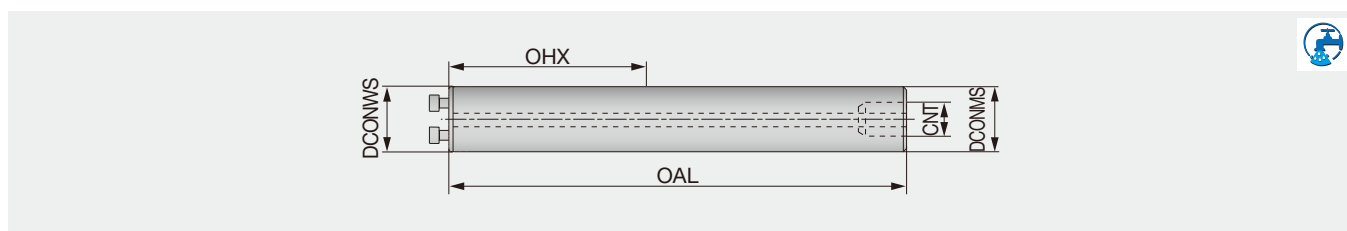
DCONMS*: Mounting part diameter on the shank

SPARE PARTS

Designation	Wrench
S**-QSIR/L...	QL-39

Straight Shank

Anti-vibration bars with through coolant for interchangeable turning heads, for S-QSIR/L modular heads



Designation	Material	DCONWS*	DCONMS	OAL	OHX	CNT
D25-L255-7D-C	Steel	25	25	257.5	155	G1/4
D25-L330-10D-C	Steel	25	25	332.5	230	G1/4
D32-L320-7D-C	Steel	32	32	323	192	G3/8
D32-L416-10D-C	Steel	32	32	419	288	G3/8

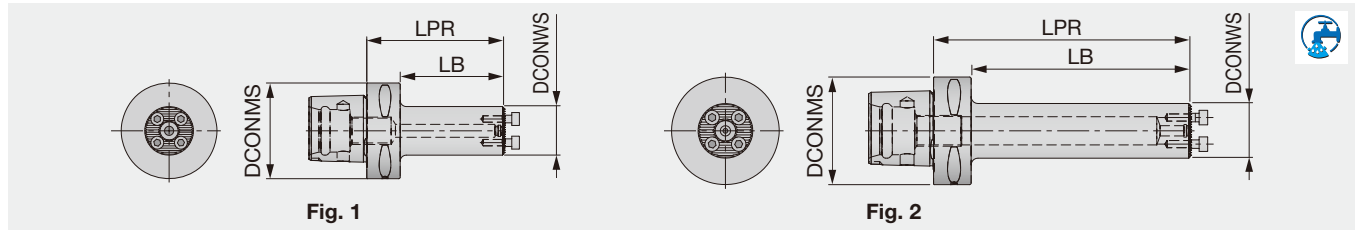
DCONWS*: Mounting part diameter on the head

SPARE PARTS

Designation	Clamping screw	Wrench
D25-L...	SRM4X12DIN912	HW3.0
D32-L...	SRM5X12DIN912	HW4.0

C#-SH-CHP / C#-SH-E-CHP

Tool adapter with PSC connection (made of steel or carbide), for S-QSIR/L modular heads

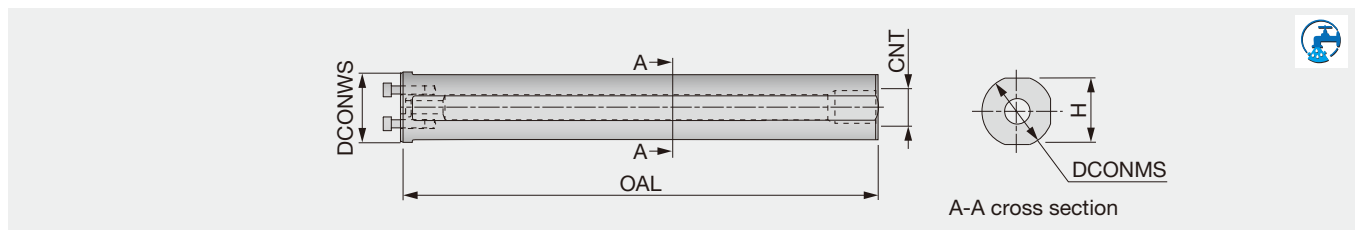


Designation	Material	DCONWS*	DCONMS	LPR	LB	Fig
C4-SH-D25-2.5D-CHP	Steel	25	40	55	35	1
C4-SH-D32-2.5D-CHP	Steel	32	40	75	55	1
C6-SH-D25-5D-E-CHP	Carbide	25	63	115	93	2
C6-SH-D32-5D-E-CHP	Carbide	32	63	150	128	2

DCONWS*: Mounting part diameter on the head

D#4D-SH

Steel shank for internal turning, with through coolant, for S-QSIR/L modular heads

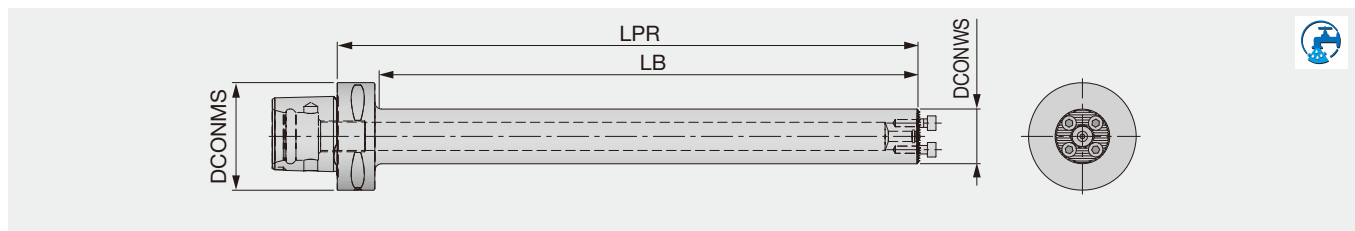


Designation	Material	DCONWS*	DCONMS	OAL	CNT	H
D25-L200-4D-SH	Steel	25	25	200	UNF-2B 1/2"-20	23
D32-L218-4D-SH	Steel	32	32	218	UNF-2B 1/2"-20	29

DCONWS*: Mounting part diameter on the head

C6-9D-C

Vibration-dampening toolholder with PSC connection, 9xD, for S-QSIR/L modular heads



Designation	Material	DCONWS*	DCONMS	LPR	LB	WT (kg)
C6-D25-L230-9D-C	Steel	25	63	230.5	200.1	1.65
C6-D32-L288-9D-C	Steel	32	63	288.5	259.5	2.73

DCONWS*: Mounting part diameter on the head

SPARE PARTS

Designation	Clamping screw	Wrench
C4/C6**D25... D25-L...	SRM4X12DIN912	HW3.0
C4/C6**D32... D32-L...	SRM5X12DIN912	HW4.0

CHIPBREAKER GUIDE

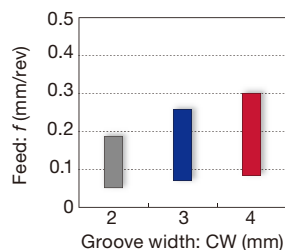
QGM



First choice for grooving and parting

Smooth chip evacuation
Well-designed edge with
high strength
CW = 2 - 4 mm

■ Standard feed



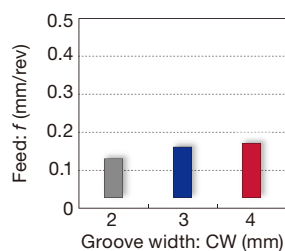
QGS



Lower cutting force and superior sharpness

Uniquely designed edge
and chipbreaker
CW = 2 - 4 mm

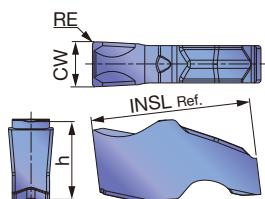
■ Standard feed



■ INSERTS

QGM

External/internal deep grooving and parting



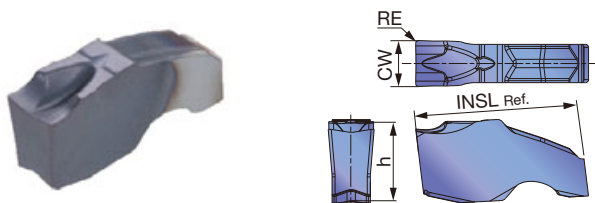
P	Steel	★			
M	Stainless	★			
K	Cast iron	★			
N	Non-ferrous				
S	Superalloys	★			
H	Hard materials				

★ : First choice

Designation	Seat size	CW±0.05	RE	Coated						INSL	h
				AH7025							
QGM2-020	2	2	0.2	●						11	5.3
QGM3-020	3	3	0.2	●						11	5.3
QGM4-030	4	4	0.3	●						13	7.3

● : Line up

External/internal deep grooving and parting



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

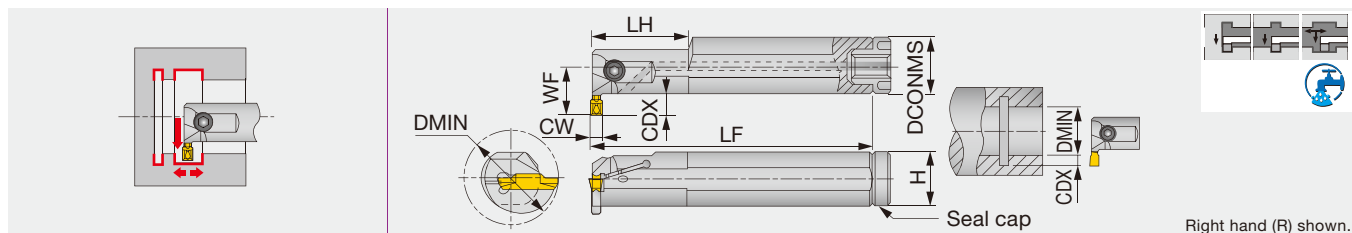
★ : First choice

[illegible]

● : Line up

ISO	Workpiece material	Hardness	Grade	Cutting speed Vc (m/min)
P	Steels C45, 34CrMo4, etc.	< 300 HB	AH7025	50 - 180
M	Stainless steel X10CrNiS18-9, etc.	< 200 HB	AH7025	50 - 120
K	Gray cast iron GG25, 250, etc.	-	AH7025	50 - 180
	Ductile cast irons GGG45, 450-10S, etc.	-	AH7025	50 - 120
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	20 - 40
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	20 - 60

Please see page **F124** for feed: f (mm/rev).



Right hand (R) shown.

Designation	CW	DMIN	Seat size	CDX	DCONMS	H	LF ⁽¹⁾	LH	WF	Insert	Torque*
CTIR/L16-2T08-D250	2	25	2	8	16	14	125	-	16.5	DGIM..., DGIS..., DTX...	5
CTIR/L20-2T06-D250	2	25	2	6	20	18	160	40	15.8	DGIM..., DGIS..., DTX...	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)

SPARE PARTS

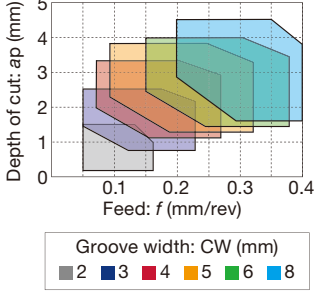
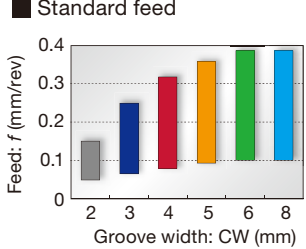
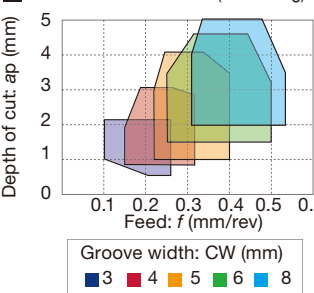
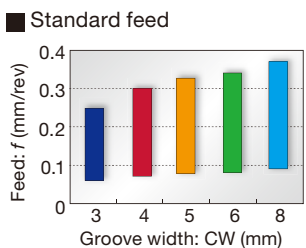
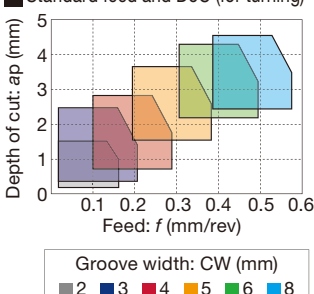
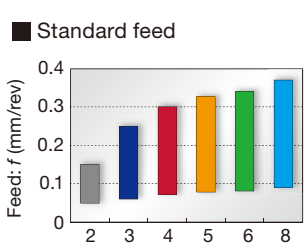
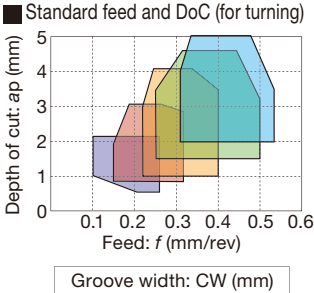
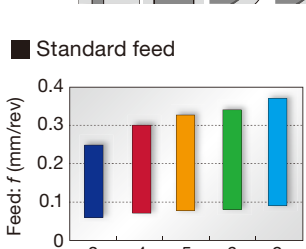


Designation	Clamping screw	Wrench	Seal cap	Thread type for connection
CTIR/L16-2T08-D250	CM5X0.8X10-A	P-4	CA-16	M6
CTIR/L20-2T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L20-3T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L25-3T05-D250	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L25-3T08-D320	CM5X0.8X16-A	P-4	CA-25	R1/8"
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"

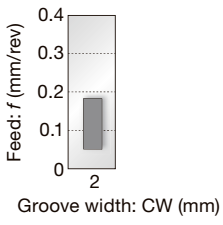
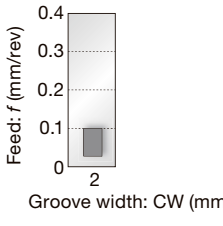
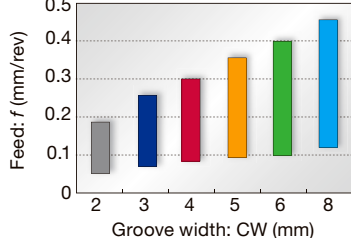
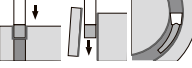
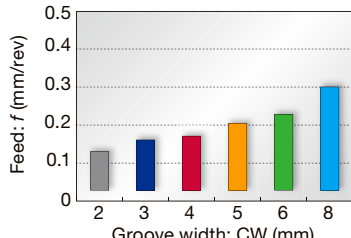
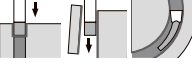
When using the inserts that are not in the above

INSERT	Groove width CW	Min. diameter DMIN
DGM / DGS / SGN / DGL / DTM	2	50
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	2	45
DTR	3	38
DTR	4	38
DTR	5	43
DTR	6	46
DTR	8	56

Internal grooving and turning

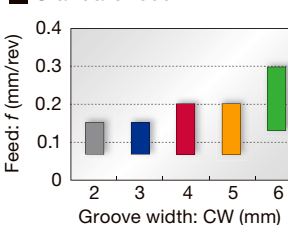
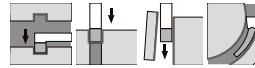
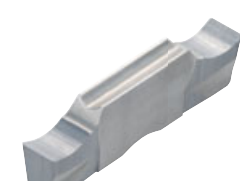
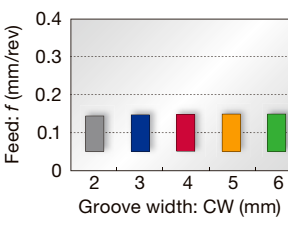
DTX type (2 corners) First choice  F132	Multi-functional type Well balanced sharpness and strength Multi-functional insert CW = 2 - 8 mm Standard feed and DoC (for turning)  Standard feed 
DTI type (2 corners)  F133, F134	For general purpose I.D. grooving Unique chipbreaker makes chips shorter Molded and ground inserts available CW = 3 - 8 mm Standard feed and DoC (for turning)  Standard feed 
DTM type (2 corners)  F134	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 = 2 - 8 mm Standard feed and DoC (for turning)  Standard feed 
DTE type (2 corners)  F139	General purpose Unique chipbreaker makes chips shorter Molded and ground insert available CW = 2.65 - 8 mm Standard feed and DoC (for turning)  Standard feed 

Internal grooving

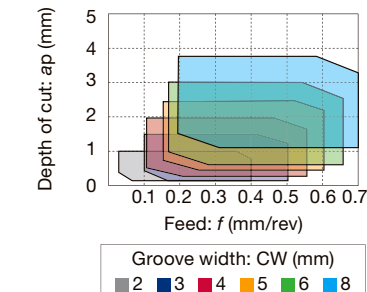
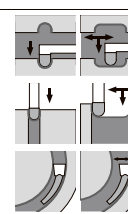
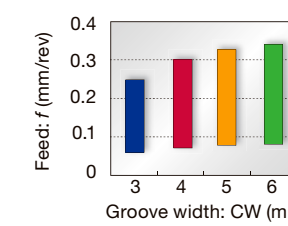
DGIM type (2 corners)  F132	2 mm insert width only (For general purpose) Unique chipbreaker for excellent chip control Excellent fracture resistance due to optimum land on the cutting edge For general applications on steels & stainless steels CW = 2 mm	■ Standard feed  Feed: f (mm/rev) Groove width: CW (mm) 
DGIS type (2 corners)  F133	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 = 2 mm	■ Standard feed  Feed: f (mm/rev) Groove width: CW (mm) 
DGM type (2 corners) SGM type (1 corner)  F135, F136	1st choice for grooving and parting Smooth chip evacuation Well-designed edge with high strength Handed insert available CW = 2 - 8 mm	■ Standard feed  Feed: f (mm/rev) Groove width: CW (mm) 
DGS type (2 corners) SGS type (1 corner)  F137, F138	Lower cutting force and superior sharpness Unique-designed edge and chipbreaker Handed insert available CW = 2 - 8 mm	■ Standard feed  Feed: f (mm/rev) Groove width: CW (mm) 

Please see page F*** for the product details.

Internal grooving

DGL type (2 corners)  F139	1st choice for mild steel Chipbreaker with excellent chip control at low feed Suitable for mild steel that often gives difficulties in chip control CW = 2 - 6 mm	■ Standard feed 	
DGG type (2 corners)  F140	For non-ferrous materials and titanium Chipbreaker with low cutting force Sharp cutting edge that prevents vibration and delivers fine surface finish CW = 2 - 6 mm	■ Standard feed 	

Profiling and undercutting

DTR type (2 corners) STR type (1 corner) Molded DTR, STR  Ground DTR  F141, F142	Full radius type Excellent chip control Molded and ground inserts available CW = 2 - 8 mm	■ Standard feed and DoC (for turning) 	
DTIU type (2 corners)  F142	Full radius type Excellent chip control for undercutting CW = 3 - 6 mm	■ Standard feed and DoC 	

Aluminium wheel machining

DTA type (2 corners)

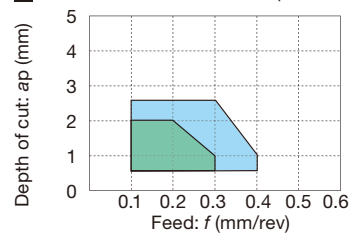


F143

Full radius type

Excellent chip control
For aluminium wheel profiling
Ground insert
CW = 6 - 8 mm

Standard feed and DoC (for turning)



Groove width: CW (mm)

6 8



For high feed external/internal/face turning of hardened steel parts

STH type (1 corner)

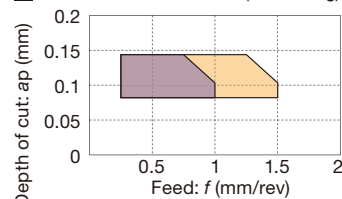


F143

External and face turning of hardened steel parts

High efficiency machining using light D.O.C. and increased feeds
CW = 3, 5 mm

Standard feed and DoC (for turning)



Groove width: CW (mm)

3 5



External/internal grooving of hardened steel

SGN-CBN type (1 corner)

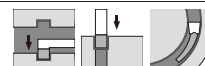
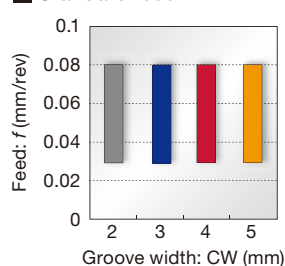


F144

For hardened steel cutting

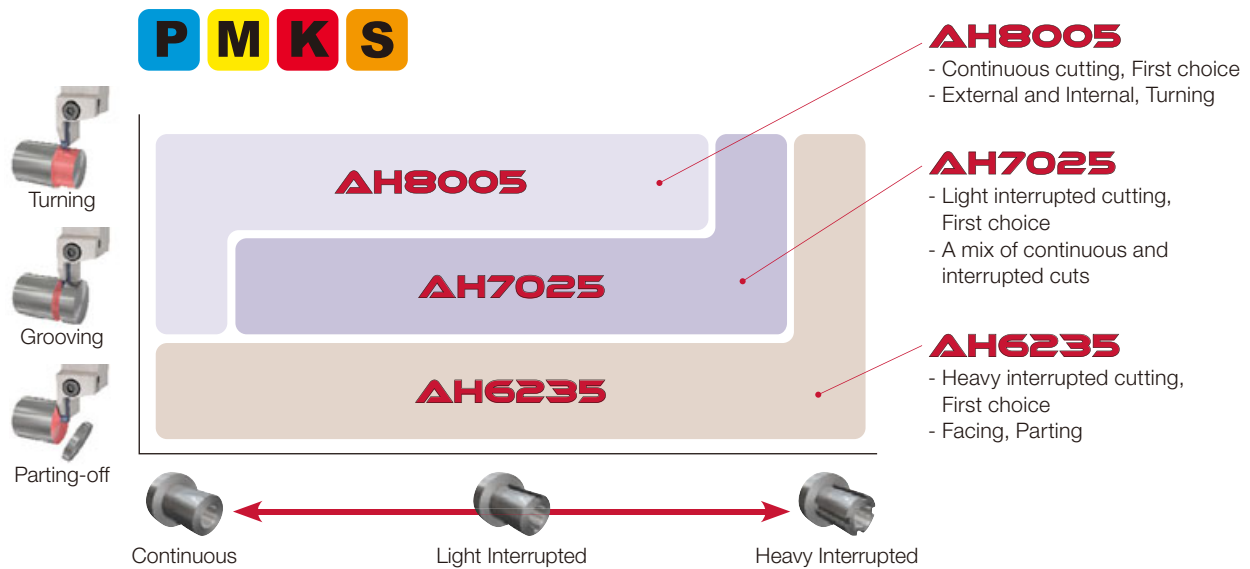
Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 2 - 5 mm
(CW = ± 0.025 mm)

Standard feed



Please see page F*** for the product details.

GRADE SELECTION



GRADES

AH8005

P M K S

- First choice for external, internal, and side-turning, continuous cuts

AH7025

P M K S

- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235

P M K

- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725

P M S

- General purpose PVD grade for high fracture resistance

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

BXA10

H

- Coated CBN grade designed for turning hardened steel parts

BX360

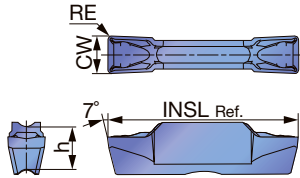
H

- Developed for grooving applications of hardened steel parts

INSERTS

DTX

External/internal/face grooving and turning



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

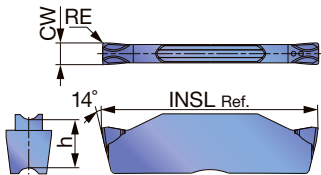
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated					Cermet		Uncoated		INSL	h
				T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530		KS05F		
DTX2-020	2	2	0.2	●	●	●	●	●	●		●		20	5
DTX3-030	3	3	0.3	●	●	●	●	●	●		●		20	5
DTX4-040	4	4	0.4	●	●	●	●	●	●		●		20	5
DTX5-040	5	5	0.4	●	●	●	●	●	●		●		25	5.5
DTX6-080	6	6	0.8	●	●	●	●	●	●		●		25	5.5
DTX8-080	8	8	0.8	●	●	●	●	●	●		●		30	6.7

●: Line up

DGIM

Internal grooving



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

★ : First choice
☆ : Second choice

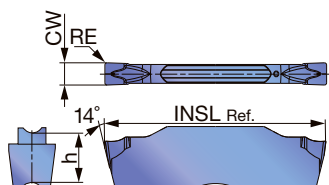
Designation	Seat size	CW±0.05	RE	Coated				Cermet						INSL	h	
				T9225	AH7025	AH725	GH130			NS9530						
DGIM2-020	2	2	0.2	●	●	●	●			●					20	5

●: Line up

Reference pages: Toolholders → **F126**, Standard cutting conditions → **F145**

DGIS

Internal grooving



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

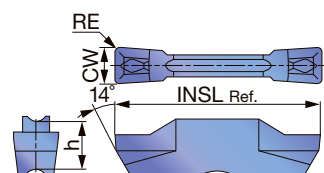
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				Cermet				INSL	h
				T9225	AH7025	AH725	GH130			NS9530			
DGIS2-020	2	2	0.2	●	●	●	●			●		20	5

●: Line up

DTI

Internal grooving and turning (for high precision)



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

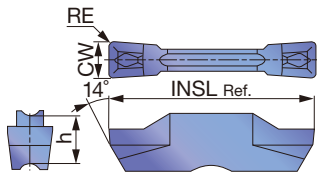
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated				Cermet				INSL	h
				T9225	AH7025	AH725	GH130			NS9530			
DTI300-040	3	3	0.4	●	●	●	●			●		20	5
DTI400-040	4	4	0.4	●	●	●	●			●		20	5
DTI400-080	4	4	0.8	●	●	●	●			●		20	5
DTI500-040	5	5	0.4	●	●	●	●			●		25	5.5
DTI500-080	5	5	0.8	●	●	●	●			●		25	5.5
DTI600-080	6	6	0.8	●	●	●	●					25	5.5
DTI600-120	6	6	1.2	●	●	●	●					25	5.5
DTI800-080	8	8	0.8	●	●	●	●					30	6.7
DTI800-120	8	8	1.2	●	●	●	●					30	6.7

●: Line up

DTI

Internal grooving and turning



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

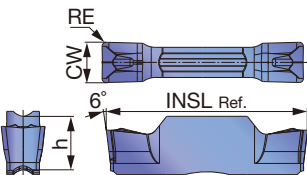
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				Cermet				INSL	h
				T9225	AH7025	AH725	GH130			NS9530			
DTI3-040	3	3	0.4	●	●	●	●			●		20	5
DTI4-040	4	4	0.4	●	●	●	●			●		20	5

●: Line up

DTM

External/internal/face grooving and turning



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

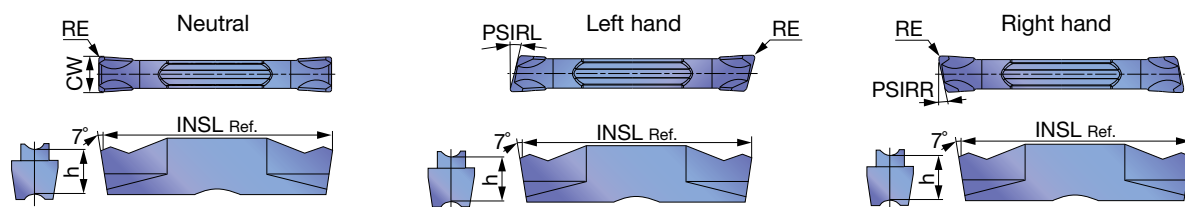
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				INSL	h
				AH7025	AH8005	AH6235			
DTM2-020	2	2	0.2	●	●	●		20	5
DTM3-030	3	3	0.3	●	●	●		20	5
DTM4-040	4	4	0.4	●	●	●		20	5
DTM4-080	4	4	0.8	●	●	●		20	5
DTM5-080	5	5	0.8	●	●	●		25	5.5
DTM6-080	6	6	0.8	●	●	●		25	5.5
DTM8-080	8	8	0.8	●	●	●		30	6.7

●: Line up

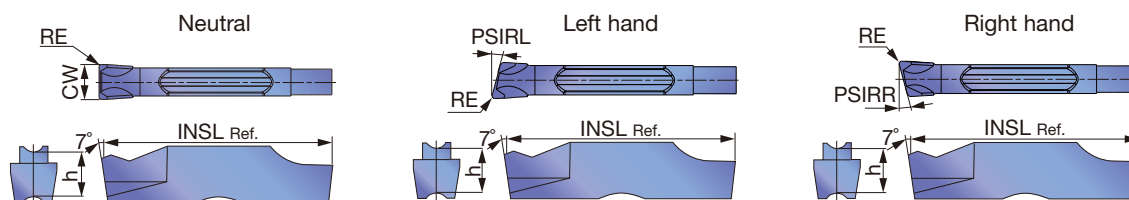
Reference pages: Toolholders → **F126**, Standard cutting conditions → **F145**

External/internal grooving and parting

[illegible]

Designation	Seat size	HAND	CW±0.05	RE	Coated						Cermet		Uncoated		INSL	h	PSIRL	PSIRR	
					T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530		KS05F					
DGM2-020	2	N	2	0.2	●	●		●		●	●	●		●		20	5	0°	0°
DGM2-020-6R	2	R	2	0.2		●	●									20	5	0°	6°
DGM2-020-6L	2	L	2	0.2		●	●									20	5	6°	0°
DGM2-020-8R	2	R	2	0.2		●	●				●					20	5	0°	8°
DGM2-020-8L	2	L	2	0.2		●	●				●					20	5	8°	0°
DGM2-020-15R	2	R	2	0.2		●	●				●					20	5	0°	15°
DGM2-020-15L	2	L	2	0.2		●	●				●					20	5	15°	0°
DGM2-002-15R	2	R	2	0.02			●				●					19.35	5	0°	15°
DGM2-002-15L	2	L	2	0.02			●				●					19.35	5	15°	0°
DGM2.39-020	2	N	2.39	0.2		●		●				●				20	5	0°	0°
DGM3-020	3	N	3	0.2	●	●	●	●	●	●	●	●	●	●		20	5	0°	0°
DGM3-020-6R	3	R	3	0.2		●	●				●					20	5	0°	6°
DGM3-020-6L	3	L	3	0.2		●	●				●					20	5	6°	0°
DGM3-002-6R	3	R	3	0.02			●				●					19.45	5	0°	6°
DGM3-002-6L	3	L	3	0.02			●				●					19.45	5	6°	0°
DGM3-020-15R	3	R	3	0.2		●	●				●					20	5	0°	15°
DGM3-020-15L	3	L	3	0.2		●	●				●					20	5	15°	0°
DGM3.18-020	3	N	3.18	0.2		●		●				●				20	5	0°	0°
DGM4-030	4	N	4	0.3	●	●	●	●	●	●	●	●	●	●		20	5	0°	0°
DGM4-030-4R	4	R	4	0.3		●	●				●					20	5	0°	4°
DGM4-030-4L	4	L	4	0.3		●	●				●					20	5	4°	0°
DGM4-030-15R	4	R	4	0.3		●	●				●					20	5	0°	15°
DGM4-030-15L	4	L	4	0.3		●	●				●					20	5	15°	0°
DGM4.76-040	5	N	4.76	0.4		●		●				●				25	5.5	0°	0°
DGM5-030	5	N	5	0.3	●	●	●	●	●	●	●	●	●	●		25	5.5	0°	0°
DGM5-030-4R	5	R	5	0.3		●	●				●					25	5.5	0°	4°
DGM6-030	6	N	6	0.3	●	●	●	●	●	●	●	●		●		25	5.5	0°	0°
DGM6.35-040	6	N	6.35	0.4		●		●				●				25	5.5	0°	0°
DGM8-040	8	N	8	0.4	●	●	●	●			●	●		●		30	6.7	0°	0°

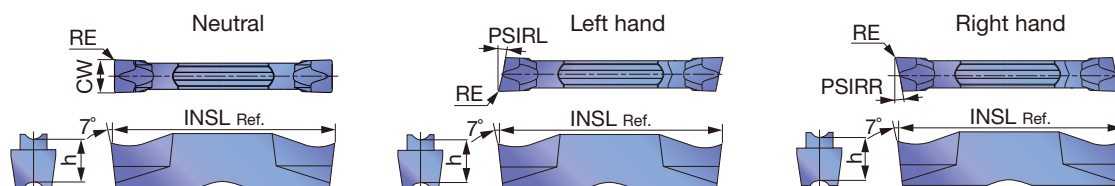
●: Line up

[illegible]

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated					Uncoated					INSL	h	PSIRL	PSIRR
					AH7025	AH725	AH8005	GH130	AH6235	KS05F								
SGM2-020	2	N	2	0.2	●	●	●	●	●	●					20	5	0°	0°
SGM2-020-6R	2	R	2	0.2	●	●		●							20	5	0°	6°
SGM2-020-6L	2	L	2	0.2	●	●		●							20	5	6°	0°
SGM3-020	3	N	3	0.2	●	●	●	●	●	●					20	5	0°	0°
SGM3-020-6R	3	R	3	0.2	●	●		●							20	5	0°	6°
SGM3-020-6L	3	L	3	0.2	●	●		●							20	5	6°	0°
SGM3-020-15R	3	R	3	0.2	●	●		●							20	5	0°	15°
SGM3-020-15L	3	L	3	0.2	●	●		●							20	5	15°	0°
SGM4-030	4	N	4	0.3	●	●	●	●	●	●					20	5	0°	0°
SGM4-030-4R	4	R	4	0.3	●	●		●							20	5	0°	4°
SGM4-030-4L	4	L	4	0.3	●	●		●							20	5	4°	0°
SGM5-030	5	N	5	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGM6-030	6	N	6	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGM8-040	8	N	8	0.4	●		●		●	●					30	6.7	0°	0°

●: Line up



		Strength	Stiffness	Toughness	Corrosion resistance	Wear resistance	Machinability	Cost	Availability	Weight	Thermal stability	Electrical properties	Biocompatibility	Environmental impact
P	Steel	★	★	☆	★	☆	★		★					
M	Stainless		★	☆	★	☆	★							
K	Cast iron		★		★	☆	★		☆			☆		
N	Non-ferrous											☆		
S	Superalloys		★	☆	★							★		
H	Hard materials													

★ : First choice
 ☆ : Second choice

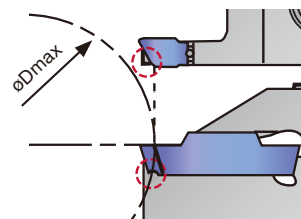
Designation	Seat size	HAND	CW±0.05	RE	Coated					Cermet	Uncoated			INSL	h	PSIRL	PSIRR
					T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F					
DGS2-005	2	N	2	0.05			●							20	5	0°	0°
DGS2-010	2	N	2	0.1			●							20	5	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●	●	●	●	●	20	5	0°	0°
DGS2-020-6R	2	R	2	0.2		●	●		●					20	5	0°	6°
DGS2-020-6L	2	L	2	0.2		●	●		●					20	5	6°	0°
DGS2-002-6R	2	R	2	0.02			●		●					19.5	5	0°	6°
DGS2-002-6L	2	L	2	0.02			●		●					19.5	5	6°	0°
DGS2-020-15R	2	R	2	0.2		●	●		●					20	5	0°	15°
DGS2-020-15L	2	L	2	0.2		●	●		●					20	5	15°	0°
DGS2-002-15R	2	R	2	0.02			●		●					19.5	5	0°	15°
DGS2-002-15L	2	L	2	0.02			●		●					19.5	5	15°	0°
DGS2.39-020	2	N	2.39	0.2		●		●		●				20	5	0°	0°
DGS3-020	3	N	3	0.2	●	●	●	●	●	●	●	●	●	20	5	0°	0°
DGS3-020-6R	3	R	3	0.2		●	●		●					20	5	0°	6°
DGS3-020-6L	3	L	3	0.2		●	●		●					20	5	6°	0°
DGS3-002-6R	3	R	3	0.02			●		●					19.45	5	0°	6°
DGS3-002-6L	3	L	3	0.02			●		●					19.45	5	6°	0°
DGS3-020-15R	3	R	3	0.2		●	●		●					20	5	0°	15°
DGS3-020-15L	3	L	3	0.2		●	●		●					20	5	15°	0°
DGS3-002-15R	3	R	3	0.02			●		●					19.45	5	0°	15°
DGS3-002-15L	3	L	3	0.02			●		●					19.45	5	15°	0°
DGS3.18-020	3	N	3.18	0.2		●		●		●				20	5	0°	0°
DGS4-030	4	N	4	0.3	●	●	●	●	●	●	●	●	●	20	5	0°	0°
DGS4-030-4R	4	R	4	0.3		●	●		●					20	5	0°	4°
DGS4-030-4L	4	L	4	0.3		●	●		●					20	5	4°	0°
DGS4.76-040	5	N	4.76	0.4		●		●		●				25	5.5	0°	0°
DGS5-030	5	N	5	0.3	●	●	●	●	●	●	●	●	●	25	5.5	0°	0°
DGS6-030	6	N	6	0.3	●	●	●	●	●	●		●	●	25	5.5	0°	0°
DGS6.35-040	6	N	6.35	0.4		●		●		●				25	5.5	0°	0°
DGS8-040	8	N	8	0.4		●		●		●		●	●	30	6.7	0°	0°

●: Line up

Caution

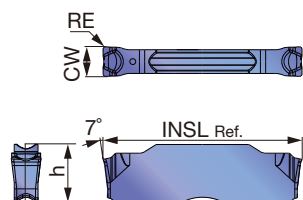
The tool will interfere with the workpiece when grooving larger diameters than $\phi D_{\max}$.

Designation	øDmax (mm)	Designation	øDmax (mm)
DGM2-002-15R/L	28	DGS2-002-15R/L	28
DGM3-002-15R/L	29	DGS3-002-15R/L	29
DGM4-030-15R/L	30	SGS3-020-15R/L	103
SGM3-020-15R/L	103	SGS3-002-15R/L	34



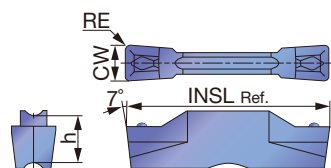
Designation	Seat size	HAND	CW±0.05	RE	Coated					Uncoated								
					AH7025	AH725	AH8005	GH130	AH6235	KS05F								
SGS2-020	2	N	2	0.2	●	●	●	●	●	●					20	5	0°	0°
SGS2-020-6R	2	R	2	0.2	●	●		●							20	5	0°	6°
SGS2-020-6L	2	L	2	0.2	●	●		●							20	5	6°	0°
SGS2-020-15R	2	R	2	0.2	●	●		●							20	5	0°	15°
SGS2-020-15L	2	L	2	0.2	●	●		●							20	5	15°	0°
SGS3-020	3	N	3	0.2	●	●	●	●	●	●					20	5	0°	0°
SGS3-020-6R	3	R	3	0.2	●	●		●							20	5	0°	6°
SGS3-020-6L	3	L	3	0.2	●	●		●							20	5	6°	0°
SGS3-002-6R	3	R	3	0.02		●		●							19.8	5	0°	6°
SGS3-002-6L	3	L	3	0.02		●		●							19.8	5	6°	0°
SGS3-020-15R	3	R	3	0.2	●	●		●							20	5	0°	15°
SGS3-020-15L	3	L	3	0.2	●	●		●							20	5	15°	0°
SGS3-002-15R	3	R	3	0.02		●		●							19.8	5	0°	15°
SGS3-002-15L	3	L	3	0.02		●		●							19.8	5	15°	0°
SGS4-030	4	N	4	0.3	●	●	●	●	●	●					20	5	0°	0°
SGS5-030	5	N	5	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGS6-030	6	N	6	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGS8-040	8	N	8	0.4	●		●		●						30	6.7	0°	0°

External/internal grooving and parting



P	Steel	★	★	★																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
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External/internal/face grooving and turning (for high precision)

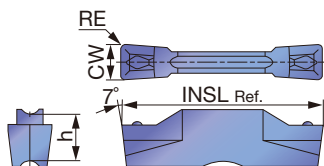


Designation	Seat size	CW±0.02	RE	Coated				Cermet		INSL	h
				T9225	AH7025	AH725	GH130	NS9530			
DTE265-015	3	2.65	0.15	●	●	●	●	●		20	5
DTE300-020	3	3	0.2	●	●	●	●	●		20	5
DTE300-040	3	3	0.4	●	●	●	●	●		20	5
DTE315-015	3	3.15	0.15	●	●	●	●	●		20	5
DTE400-040	4	4	0.4	●	●	●	●	●		20	5
DTE400-080	4	4	0.8	●	●	●	●	●		20	5
DTE415-015	4	4.15	0.15	●	●	●	●	●		20	5
DTE478-055	5	4.78	0.55	●	●	●	●	●		25	5.5
DTE500-040	5	5	0.4	●	●	●	●	●		25	5.5
DTE500-080	5	5	0.8	●	●	●	●	●		25	5.5
DTE515-015	5	5.15	0.15	●	●	●	●			25	5.5
DTE600-080	6	6	0.8	●	●	●	●			25	5.5
DTE600-120	6	6	1.2	●	●	●	●			25	5.5
DTE800-080	8	8	0.8	●	●	●	●			30	6.7
DTE800-120	8	8	1.2	●	●	●	●			30	6.7

●: Line up

Reference pages: Toolholders → **F126**, Standard cutting conditions → **F145**

External/internal/face grooving and turning



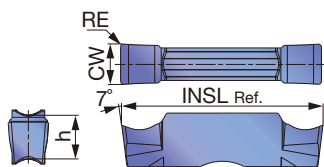
P	Steel	★		★	☆	★	☆	★		★									
M	Stainless			★	☆	★	★	★											
K	Cast iron		★	★		★	☆	★											
N	Non-ferrous																		
S	Superalloys			★	☆	★													
H	Hard materials																		

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h	
				T9225	T515	AH7025	AH725	AH8005	GH130	AH6235		NS9530						
DTE3-020	3	3	0.2			●		●	●								20	5
DTE3-040	3	3	0.4	●	●	●	●	●	●	●	●						20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●	●	●					20	5
DTE4-080	4	4	0.8			●		●		●							20	5
DTE5-040	5	5	0.4		●	●		●		●							25	5.5
DTE5-080	5	5	0.8			●		●		●							25	5.5
DTE6-080	6	6	0.8		●	●		●		●							25	5.5

●: Line up

External/internal grooving (for high precision)



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

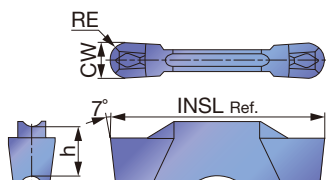
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated	Cermet	Uncoated					INSL	h
				AH7025	NS9530	KS05F						
DGG200-020	2	2	0.2	●	●	●					20	5
DGG300-020	3	3	0.2	●	●	●					20	5
DGG400-040	4	4	0.4	●	●	●					20	5
DGG500-040	5	5	0.4	●	●	●					25	5.5
DGG600-040	6	6	0.4	●	●	●					25	5.5

●: Line up

DTR

Profiling and undercutting (for high precision)



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

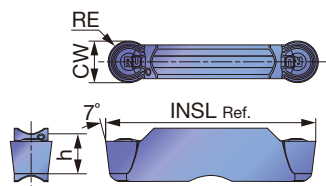
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated				Cermet						INSL	h
				T9225	AH7025	AH725	GH130			NS9530					
DTR300-150	3	3	1.5	●	●	●	●			●				20	5
DTR400-200	4	4	2	●	●	●	●			●				20	5
DTR478-239	5	4.78	2.39	●	●	●	●			●				25	5.5
DTR500-250	5	5	2.5	●	●	●	●			●				25	5.5
DTR600-300	6	6	3	●	●	●	●							25	5.5

●: Line up

DTR

Profiling and undercutting



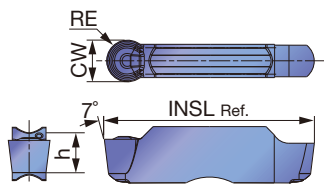
P	Steel	★	★	☆	★		☆	★		★					
M	Stainless		★	☆	★		★	★							
K	Cast iron		★		★	☆	☆	★		☆		☆			
N	Non-ferrous											☆			
S	Superalloys		★	☆	★	★						★			
H	Hard materials														

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				Cermet		Uncoated				INSL	h
				T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530		KS05F		
DTR2-100	2	2	1		●		●			●			●	20	5
DTR3-150	3	3	1.5	●	●	●	●	●	●	●	●		●	20	5
DTR4-200	4	4	2	●	●	●	●	●	●	●	●		●	20	5
DTR5-250	5	5	2.5	●	●	●	●	●	●	●	●		●	25	5.5
DTR6-300	6	6	3	●	●	●	●		●	●			●	25	5.5
DTR8-400	8	8	4	●	●	●	●		●	●			●	30	6.7

●: Line up

Profiling and undercutting



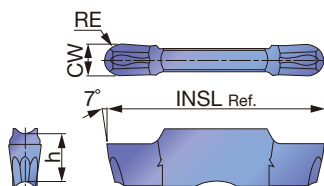
P	Steel	★	★									
M	Stainless	★	★									
K	Cast iron	★	★					☆				
N	Non-ferrous							☆				
S	Superalloys	★	★					★				
H	Hard materials											

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated				Uncoated						INSL	h	
				AH7025	AH8005					KS05F						
STR2-100	2	2	1	●	●					●					20	5
STR3-150	3	3	1.5	●	●					●					20	5
STR4-200	4	4	2	●	●					●					20	5
STR5-250	5	5	2.5	●	●					●					25	5.5
STR6-300	6	6	3	●	●					●					25	5.5
STR8-400	8	8	4	●	●					●					30	6.7

●: Line up

Profiling and undercutting (for high precision)



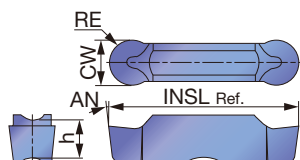
P	Steel	★	☆	☆			
M	Stainless	★	☆	★			
K	Cast iron	★		☆			
N	Non-ferrous						
S	Superalloys	★	☆				
H	Hard materials						

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated								INSL	h	
				AH7025	AH725	GH130								
DTIU300-150	3	3	1.5	●	●	●							20	5
DTIU400-200	4	4	2	●	●	●							20	5
DTIU500-250	5	5	2.5	●	●	●							25	5.5
DTIU600-300	6	6	3	●	●	●							25	5.5

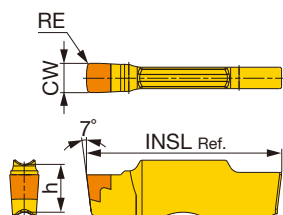
●: Line up

Aluminium wheel machining (for high precision)



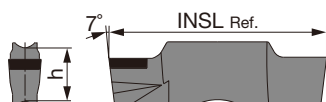
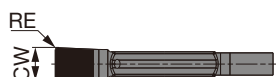
	P M K N S H	Steel Stainless Cast iron Non-ferrous Superalloys Hard materials																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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External/internal/face turning



Designation	Seat size	CW ± 0.025	RE	CBN							INSL	h
				●								
STH300-SR	3	3	0.3	●							20	5
STH500-SR	5	5	0.3	●							25	5.5

●: Line up



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

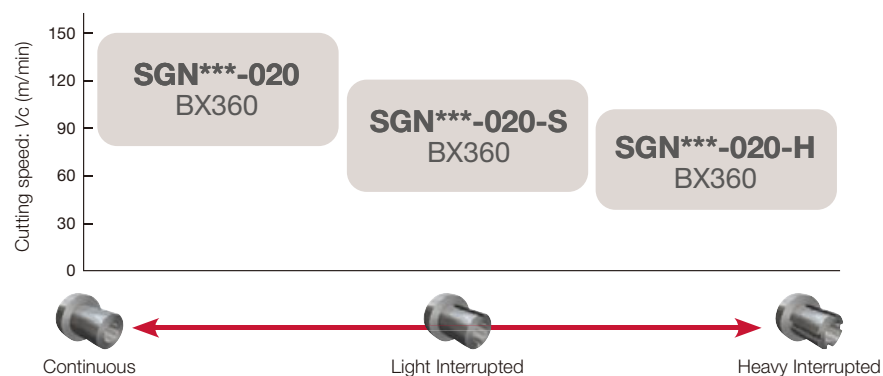
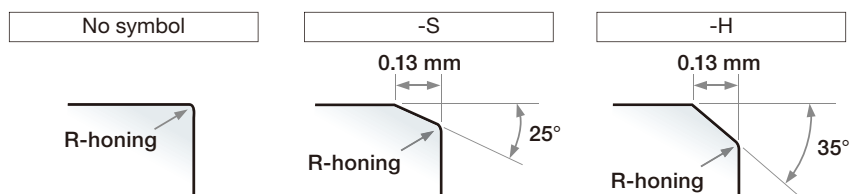
★ : First choice

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025	RE	CBN								INSL	h	Condition		
				BX360											Continuous	Light interrupted
SGN200-020	2	2	0.2	●								20	5	○		
SGN200-020-S	2	2	0.2	●								20	5		○	
SGN200-020-H	2	2	0.2	●								20	5			○
SGN300-020	3	3	0.2	●								20	5	○		
SGN300-020-S	3	3	0.2	●								20	5		○	
SGN300-020-H	3	3	0.2	●								20	5			○
SGN400-020	4	4	0.2	●								20	5	○		
SGN400-020-S	4	4	0.2	●								20	5		○	
SGN400-020-H	4	4	0.2	●								20	5			○
SGN500-020-S	5	5	0.2	●								25	5.5		○	
SGN500-020-H	5	5	0.2	●								25	5.5			○

●: Line up

■ Edge preparations



Reference pages: Toolholders → **F126**, Standard cutting conditions → **F145**

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed V _c (m/min)
P	Steel S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225, AH8005	80 - 300
		< 300 HB	Impact resistance	AH6235, GH130	50 - 120
		< 300 HB	Surface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, X5CrNi18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Wear resistance	AH8005	50 - 120
		< 200 HB	Impact resistance	AH6235, GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515	150 - 700
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 180
	Ductile cast iron FCD450, etc. 450-10S, etc.	-	First choice	T515	150 - 300
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	20 - 60
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	20 - 40
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	20 - 100
		< HRC 40	Impact resistance	AH7025, AH725	20 - 80

Please see page **F127 - F130** for feed: *f* (mm/rev).

STH

ISO	Grade	CW	Application	Cutting speed V _c (m/min)	Depth of cut a _p (mm)	Feed <i>f</i> (mm/rev)
H	BXA10	3	External turning	100 - 230	0.08 - 0.12	0.4 - 1
			Face turning	100 - 230	0.08 - 0.12	0.4 - 0.8
		5	External turning	100 - 230	0.08 - 0.12	0.5 - 1.5
			Face turning	100 - 230	0.08 - 0.12	0.5 - 0.8

SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed V _c (m/min)	Feed <i>f</i> (mm/rev)
H	BX360	No symbol	Continuous	80 - 150	0.03 - 0.08
		-S	Light interrupted	50 - 120	0.03 - 0.08
		-H	Heavy interrupted	40 - 100	0.03 - 0.06

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

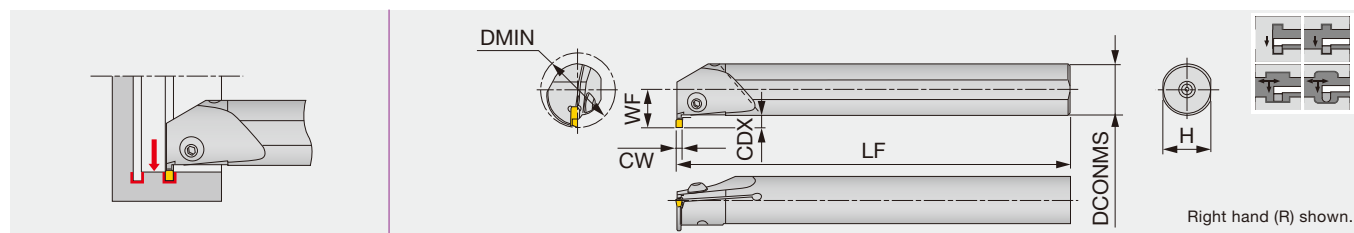
Endmill

Drilling tool

Tooling System

User's Guide

Index



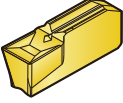
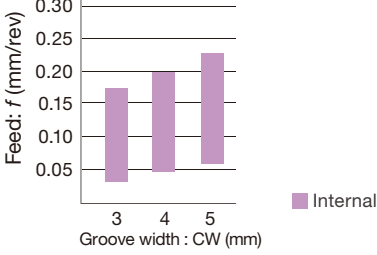
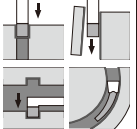
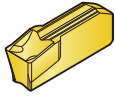
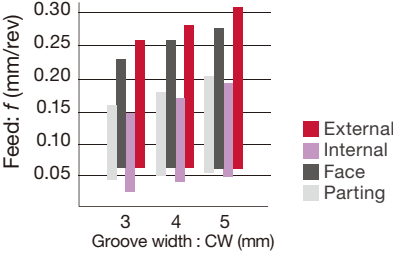
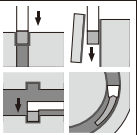
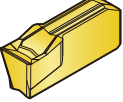
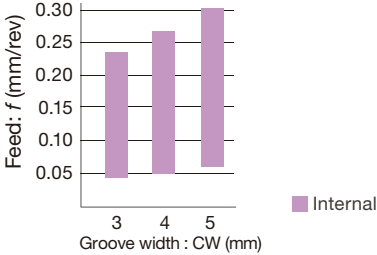
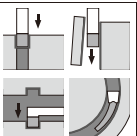
Designation	CW	DMIN	CDX	DCONMS	H	LF	WF	Insert	Torque*
S20Q-CGTR/L30	3	25	3.5	20	18	180	14.5	G*30, GE30-AL	3
S25R-CGTR/L30	3	32	5	25	23	200	18.5	G*30, GE30-AL	3
S25R-CGTR/L40	4	32	5	25	23	200	18.5	G*40, GE40-AL	3
S32S-CGTR/L40	4	40	6	32	30	250	23	G*40, GE40-AL	3
S25R-CGTR/L50	5	32	5	25	23	200	18.5	G*50	3
S32S-CGTR/L50	5	40	6	32	30	250	23	G*50	3

*Torque: Recommended clamping torque (N·m)

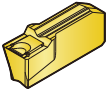
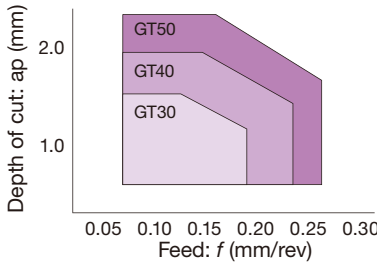
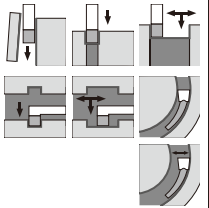
SPARE PARTS

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

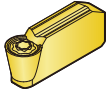
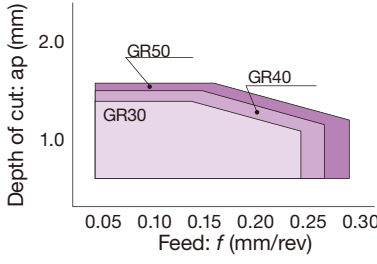
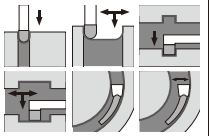
Internal grooving

GN  F150	1st choice for internal grooving Low cutting force and good chip control for internal grooving CW = 3 - 5 mm  
GE  F148	1st choice for external grooving and parting Excellent chip control CW = 3 - 5 mm  
GF  F149	1st choice for face grooving Low cutting force and good chip control for face grooving CW = 3 - 5 mm  

Grooving and turning

GT  F148	1st choice for turning Low cutting force and good chip control for traversing CW = 3 - 5 mm  
---	---

Profiling

GR  F149	Full radius type Low cutting force and good chip control for profiling CW = 3 - 5 mm  
---	--

Please see page **F***** for the product details.

For aluminium and non-ferrius metal

GE-AL



F150

Reduce cutting force and welding due to sharp chipbreaker

CW = 3 - 4 mm



Groove width : CW (mm)	Feed: f (mm/rev)
3	0.10
4	0.10

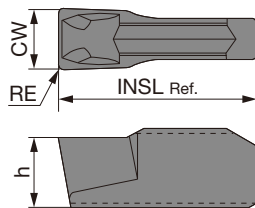


Please see page **F***** for the product details.

■ INSERTS

GE

For external grooving and parting



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

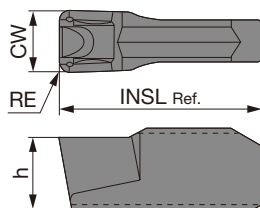
★ : First choice
☆ : Second choice

Designation	CW ₀ ^{+0.1}	RE	Coated			Cermet					INSL	h		
			T9225	AH120	GH730									
GE30	3	0.2	●	●	●		●						10	3.5
GE40	4	0.2	●	●	●		●						10	4
GE50	5	0.2	●	●	●		●						12	4.5

● : Line up

GT

For external grooving and turning



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

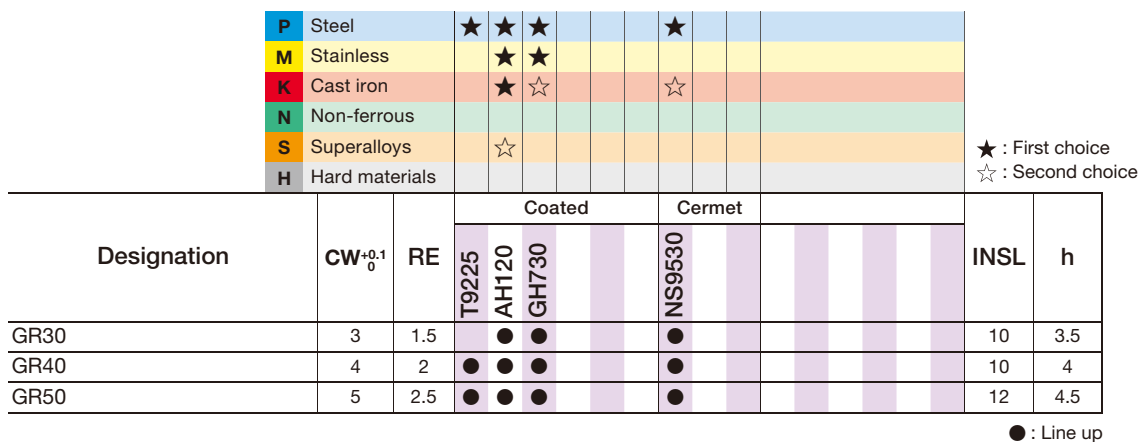
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated				Cermet						INSL	h	
			T9225	AH120	GH730			NS9530							
GT30	3	0.4		●	●			●						10	3.5
GT40	4	0.4		●	●			●						10	4
GT50	5	0.4	●	●	●			●						12	4.5

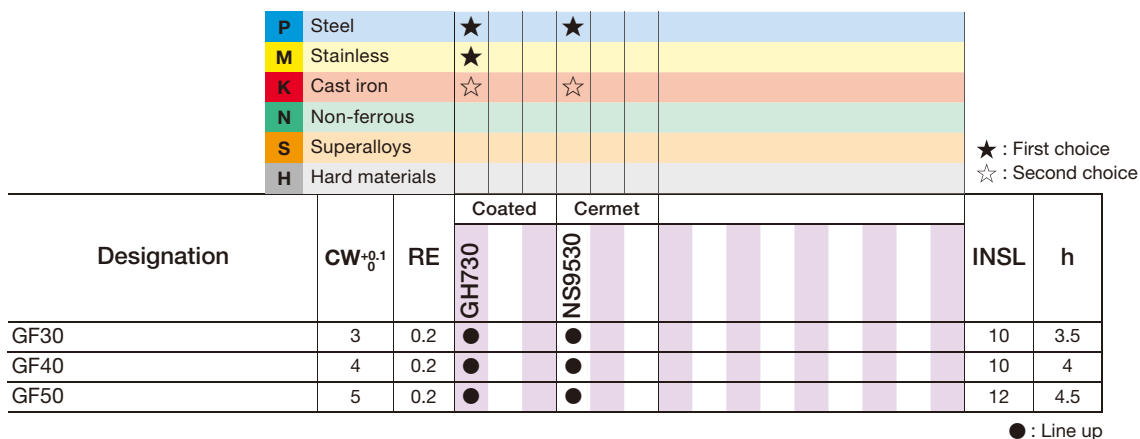
● : Line up

Reference pages: Toolholders → **F146**, Standard cutting conditions → **F151**

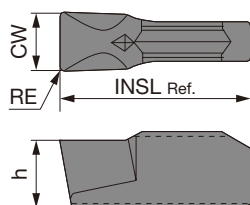
For profiling (full radius)



For face grooving



For internal grooving



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

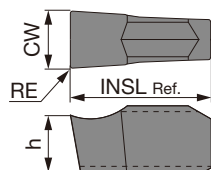
★ : First choice
☆ : Second choice

[illegible]

● : Line up

GE-AL

For aluminium 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 ^{+0.1}	RE	Uncoated						INSL	h
			KS05F							
GE30-AL	3	0.2	●						10	3.5
GE40-AL	4	0.2	●						10	4

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		NS9530	100 - 200
		GH730, AH120	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		NS9530	80 - 180
		GH730, AH120	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		NS9530	80 - 150
		GH730, AH120	50 - 120
M	Stainless steel	GH730, AH120	50 - 120
K	Grey iron, Ductile cast iron	GH730, AH120	50 - 180
N	Aluminium alloy, Non-ferrous metal	KS05F	200 - 300

Internal

Operation	Feed: f (mm/rev)		
	Groove width: CW (mm)		
	3	4	5
Internal grooving (GE**)	0.04 - 0.14	0.05 - 0.15	0.05 - 0.16
Internal grooving (GN**)	0.04 - 0.16	0.05 - 0.18	0.05 - 0.2
Internal traversing (GT**)	$ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	$ap = 0.5 - 2$ $f = 0.06 - 0.25$	$ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Internal traversing (GR**)	$ap = 0.5 - 1.4$ $f = 0.05 - 0.25$	$ap = 0.5 - 1.5$ $f = 0.05 - 0.26$	$ap = 0.5 - 1.6$ $f = 0.05 - 0.3$
Aluminium alloys (GE**-AL)	0.03 - 0.1	0.03 - 0.1	-

For diameter compensation values in traversing, see page **F115**.

When vibration occurs in turning, please use the lower limit value in the above table

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

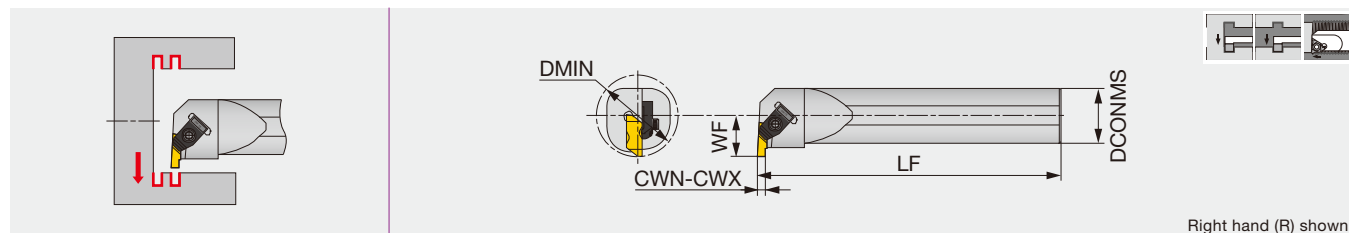
Endmill

Drilling tool

Tooling System

User's Guide

Index



Right hand (R) shown.

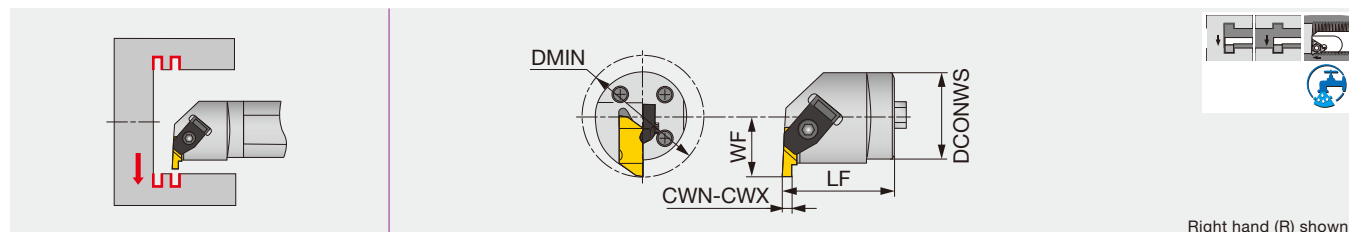
Designation	CWN	CWX	DMIN	DCONMS	LF	WF	Insert	Torque*
A25M-FLER/L3	1	3	34.9	25	300	17.7	FL*-3**/L/R...	3
A32M-FLER/L3	1	3	44.45	32	350	22.1	FL*-3**/L/R...	3
A40M-FLER3	1	3	50.8	40	350	24.5	FL*-3**/L...	3

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 (N·m)

HS-FLER/L

Internal grooving and threading head, for S-570 shank



Right hand (R) shown.

Designation	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).

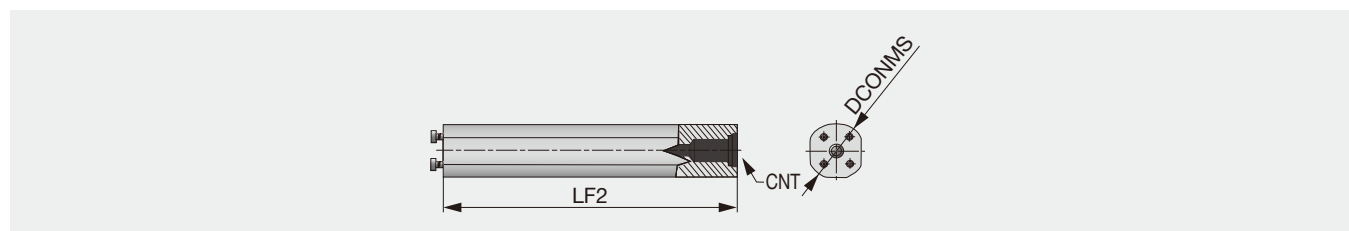
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

S-570

Steel shank for head exchangeable tools



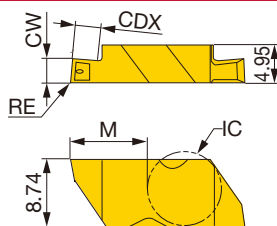
Designation	DCONMS	LF2	CNT
S-570-40M-40	40	273	1/2-14NPT
S-570-50M-50	50	366	1/2-14NPT

SPARE PARTS

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

INSERT

FLG-CB (For grooving)



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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated						CDX	IC	M
				AH110								
FLG-3M100R-CB	R	1	0.19	●						1.4	9.525	10.29
FLG-3M100L-CB	L	1	0.19	●						1.4	9.525	10.29
FLG-3M150R-CB	R	1.5	0.19	●						2.55	9.525	10.29
FLG-3M150L-CB	L	1.5	0.19	●						2.55	9.525	10.29
FLG-3M200R-CB	R	2	0.19	●						2.55	9.525	10.29
FLG-3M200L-CB	L	2	0.19	●						2.55	9.525	10.29
FLG-3M250R-CB	R	2.5	0.19	●						4.07	9.525	10.29
FLG-3M250L-CB	L	2.5	0.19	●						4.07	9.525	10.29
FLG-3M300R-CB	R	3	0.19	●						4.07	9.525	10.29
FLG-3M300L-CB	L	3	0.19	●						4.07	9.525	10.29

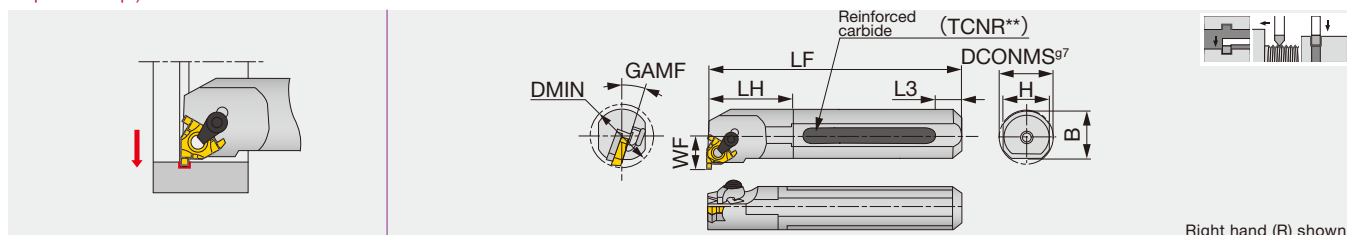
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Application	Cutting Speed Vc (m/min)	Feed f (mm/rev)
P	High carbon steel S45C, etc. C45, etc.	AH110	Grooving	100 - 200	0.12 - 0.35
	Alloy steel SCM435, etc. 34CrMo4, etc.	AH110	Grooving	50 - 80	0.12 - 0.3
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	AH110	Grooving	50 - 150	0.1 - 0.2
K	Grey cast iron FC250, etc. 250, etc.	AH110	Grooving	50 - 180	0.1 - 0.25
	Ductile cast iron FCD400, etc. 40-15, etc.	AH110	Grooving	50 - 120	0.1 - 0.25

CNR/L

Internal threading and grooving toolholder (The -DT holders can be used either with the insert screw or top-clamp)



Designation	Material	CWN	CWX	DMIN	DCONMS	H	B	LF	LH	WF	L3	GAMF	Insert	Torque*
TCNR0020R16DT	Reinforced	1	2.25	24	20	18	-	200	30	14	49	15°	GTGN-16...	3.5
TCNR0025S16DT	Reinforced	1	2.25	29	25	23	-	250	38	16.5	64	15°	GTGN-16...	3.5
CNR/L0020P16	Steel	1	2.25	24	20	18	19	170	30	14	-	15°	GTGN-16...	3.5
CNR/L0025R16	Steel	1	2.25	29	25	23	24	200	38	16.5	-	15°	GTGN-16...	3.5
CNR/L0032S16	Steel	1	2.25	37	32	30	31	250	48	20.1	-	15°	GTGN-16...	3.5

Note: 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 toolholder.

Use right-hand toolholders (T/CNR...) with right-hand inserts (**IR...); and left-hand toolholders (T/CNL...) with left-hand inserts (**IL...).

Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand.

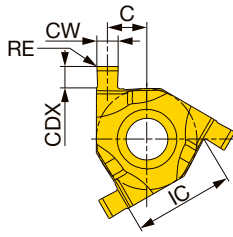
When using grooving inserts, please use shims for grooving. Shims for grooving inserts are sold separately.

*Torque: Recommended clamping torque (N·m)

SPARE PARTS						
Designation	Clamp set	Clamping screw	Shim screw	Shim (Optional)	Wrench1	Wrench2
TCNR002**16DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16EL/IR-DT	P-3.5	T-15F
CNR00***16	CSP16	-	-	G16EL/IR-S	-	T-15F
CNL00***16	CSP16	-	-	G16ER/IL-S	-	T-15F

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	RE	Coated			Insert size	CDX	IC	C	Shim	
				SH730							Dual-clamp toolholder: screw-on and clamp-on	Clamp-on toolholder
GTGN-16ER/IL100	L	1	0.1	●			16	1.25	9.525	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	R	1	0.1	●			16	1.25	9.525	4.22	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL120	L	1.2	0.1	●			16	1.3	9.525	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR120	R	1.2	0.1	●			16	1.3	9.525	4.12	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL140	L	1.4	0.1	●			16	1.5	9.525	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR140	R	1.4	0.1	●			16	1.5	9.525	4.02	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL170	L	1.7	0.1	●			16	1.7	9.525	3.67	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR170	R	1.7	0.1	●			16	1.7	9.525	3.67	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL195	L	1.95	0.1	●			16	1.7	9.525	3.75	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR195	R	1.95	0.1	●			16	1.7	9.525	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL225	L	2.25	0.1	●			16	1.8	9.525	3.6	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR225	R	2.25	0.1	●			16	1.8	9.525	3.6	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.

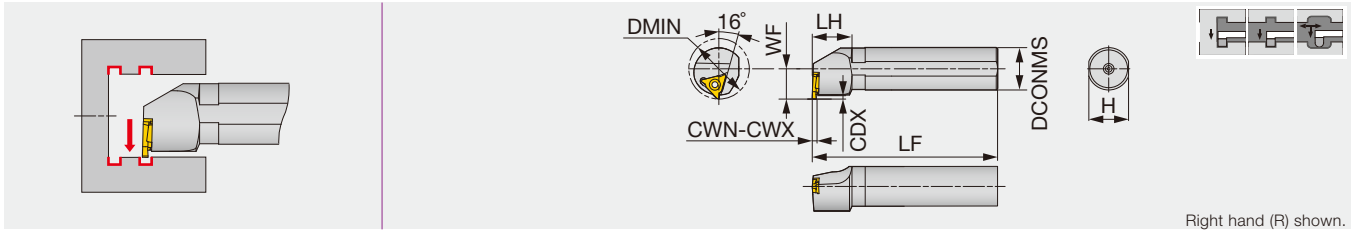
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting Speed Vc (m/min)	Feed f (mm/rev)
P	Steels S45C, SCM440, etc. C45, 42CrMo4, etc.	SH730	50 - 150	0.05 - 0.1
M	Stainless steels SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-2, etc.	SH730	30 - 150	0.05 - 0.1
S	Heat-resistant alloys, Titanium alloys etc. Ti-6Al-4V, etc.	SH730	30 - 100	0.05 - 0.1

S-SGTR/L

Internal grooving



Right hand (R) shown.

Designation	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

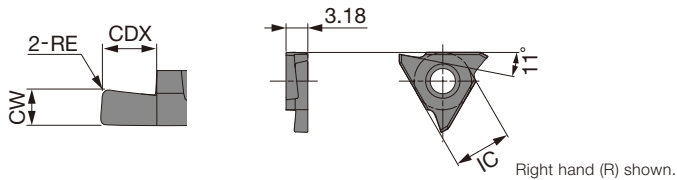
Use right-hand toolholders (SGTR) with left-hand inserts (GBL); and left-hand toolholders (SGTL) with right-hand inserts (GBR).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

INSERTS

GBR/L32



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

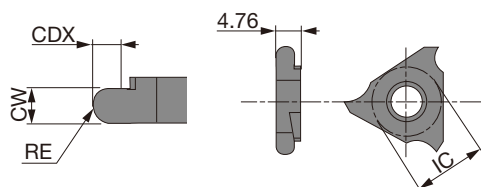
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated			Cermet			Uncoated			CDX	IC
				AH710			NS9530			KS05F				
GBR32033	R	0.33	0.03	●			●			●			0.8	9.53
GBL32033	L	0.33	0.03	●									0.8	9.53
GBR32050	R	0.5	0.05	●			●			●			1.2	9.53
GBL32050	L	0.5	0.05	●									1.2	9.53
GBR32075	R	0.75	0.05	●			●			●			2	9.53
GBL32075	L	0.75	0.05	●			●						2	9.53
GBR32095	R	0.95	0.05	●			●			●			2	9.53
GBL32095	L	0.95	0.05	●			●						2	9.53
GBR32100	R	1	0.05	●			●			●			2	9.53
GBL32100	L	1	0.05	●			●						2	9.53
GBR32125	R	1.25	0.2	●			●			●			2	9.53
GBL32125	L	1.25	0.2	●			●						2	9.53
GBR32145	R	1.45	0.2	●			●			●			2	9.53
GBL32145	L	1.45	0.2	●									2	9.53
GBR32150	R	1.5	0.2	●			●			●			2	9.53
GBL32150	L	1.5	0.2	●									2	9.53
GBR32200	R	2	0.2	●			●			●			2.5	9.53
GBL32200	L	2	0.2	●									2.5	9.53
GBR32250	R	2.5	0.2	●			●			●			2.5	9.53
GBL32250	L	2.5	0.2	●									2.5	9.53

● : Line up

Reference pages: Inserts → **F156 - F158**, Standard cutting conditions → **F158**

GBR/L43-R (full radius)



Right hand (R) shown.

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

★ : First choice

☆ : Second choice

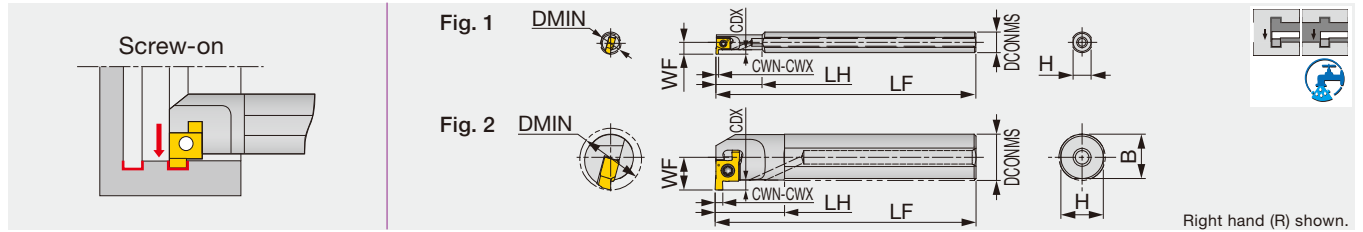
Designation	HAND	CW±0.025	RE	Coated		Cermet		Uncoated						CDX	IC
				AH710		NS9530		KS05F							
GBR43050R	R	1	0.5	●		●		●						2	12.7
GBL43050R	L	1	0.5	●				●						2	12.7
GBR43075R	R	1.5	0.75	●		●		●						3.5	12.7
GBL43075R	L	1.5	0.75	●				●						3.5	12.7
GBR43100R	R	2	1	●		●		●						3.5	12.7
GBL43100R	L	2	1	●				●						3.5	12.7
GBR43125R	R	2.5	1.25	●		●		●						5	12.7
GBL43125R	L	2.5	1.25	●				●						5	12.7
GBR43150R	R	3	1.5	●		●		●						5	12.7
GBL43150R	L	3	1.5	●				●						5	12.7
GBR43200R	R	4	2	●		●		●						5	12.7
GBL43200R	L	4	2	●				●						5	12.7

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Carbon steels, Alloy steels S45C, SCM415, etc. C45, 18CrMo4, etc.	150 - 240HB	NS9530	100 - 200	0.02 - 0.25
		150 - 240HB	AH710	60 - 150	0.05 - 0.25
M	Stainless steels SUS304, etc. X5CrNi18-9, etc.	≤ 240HB	AH710	60 - 150	0.05 - 0.15
K	Cast irons FC250, etc. 250, etc.	Tensile strength ≤ 350 N/mm ²	AH710	60 - 150	0.05 - 0.15
N	Non-ferrous metals Aluminium, etc.	-	KS05F	200 - 300	0.05 - 0.15

Reference pages: Toolholders → **F156**



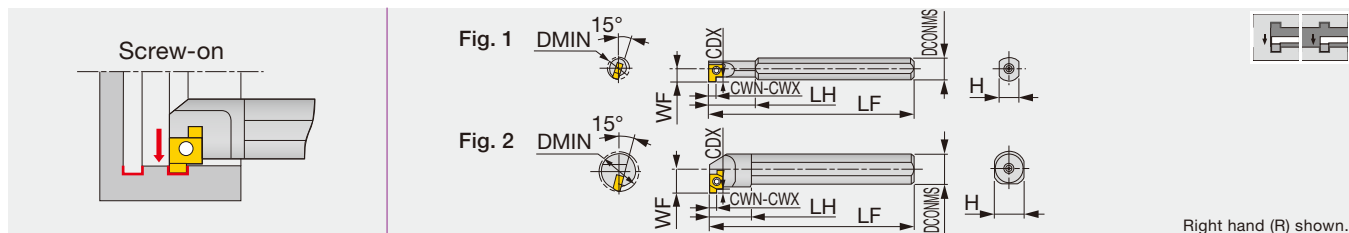
Designation	Material	CWN	CWX	DMIN	CDX	DCONMS	H	B	LF	LH	WF	Insert	Torque*	Fig.
A08H-SNGR06-D080	Steel	1	2	8	1.5	8	7	-	100	18	4.73	6GMR..., 6GR...	0.7	1
A08H-SNGR07-D100	Steel	1	2	10	1.5	8	7	-	100	23	5.8	7GMR..., 7GR...	1.0	1
A10K-SNGR07-D120	Steel	1	2	12	1.5	10	9	-	125	29	6.8	7GMR..., 7GR...	1.0	1
A10K-SNGR08-D140	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

Note: 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



Right hand (R) shown.

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

Note: Use the right-hand insert (□GR) with the right-hand holder (□NGR), and use the left-hand insert (□GL) with the left-hand holder (□NGL).

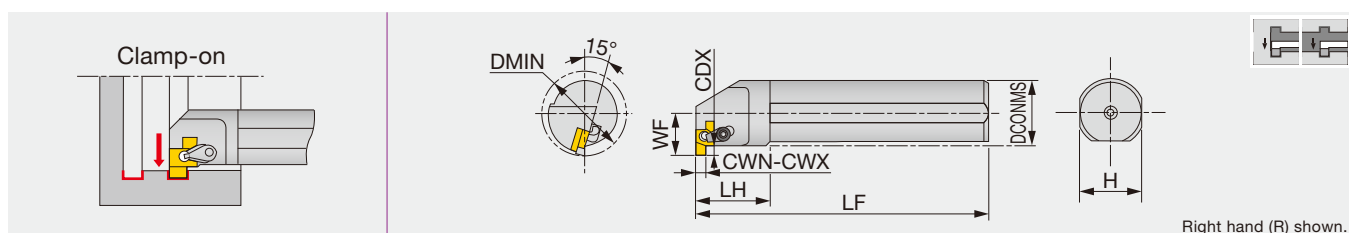
*Torque: Recommended clamping torque (N-m)

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

Toolholders for internal grooving



Right hand (R) shown.

Designation	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

Note: Use the right-hand insert (□GR) with the right-hand holder (□NGR), and use the left-hand insert (□GL) with the left-hand holder (□NGL).

*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 holders

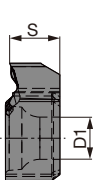
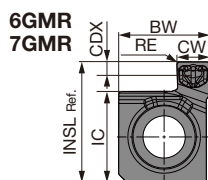
Use the following parts for screw clamp options.

Designation	Clamping screw	Wrench
CNGR/L...	CSTB-3.5L	T-15F

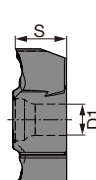
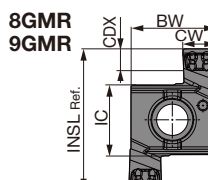
Reference pages: Inserts → **F161, F162**, Standard cutting conditions → **F163**

INSERTS

**GMR/L



Single edge



Double edge

Right hand (R) shown.

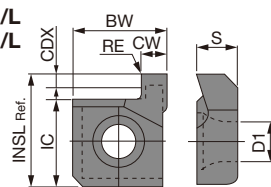
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice
☆ : Second choice

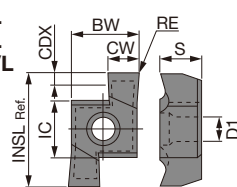
Designation	HAND	CW±0.025	RE	Coated					CDX	BW	S	IC	INSL	D1
				AH7025										
6GMR100-015	R	1	0.15	●					1.5	5.56	2.34	4.76	6.4	2.3
7GMR200-020	R	2	0.2	●					1.5	5.56	3.08	5.56	7.4	2.6
8GMR150-020	R	1.5	0.2	●					2	6.15	3.87	5.56	10.2	2.6
9GMR200-020	R	2	0.2	●					3	7.74	4.66	6.35	13	2.9
9GMR300-020	R	3	0.2	●					3	7.74	4.66	6.35	13	2.9

● : Line up

8GR/L
9GR/L
15GR/L



Single edge



Double edge

Right hand (R) shown.

[illegible]

★ : First choice
☆ : Second choice

Note: Use the right-hand insert (□GR) with the right-hand holder (□NGR), and use the left-hand insert (□GL) with the left-hand holder (□NGL).

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed rate: f (mm/rev)	
				**GMR...	**GR/L...
P	Carbon steel S45C, C45, etc.	AH7025	80 - 180	0.03 - 0.12	-
		NS9530	80 - 200	-	0.05 - 0.15
		UX30	40 - 150	-	0.05 - 0.15
	Alloy steel SCM435, 34CrMo4, etc.	AH7025	80 - 180	0.03 - 0.12	-
		NS9530	80 - 200	-	0.05 - 0.15
		UX30	40 - 150	-	0.05 - 0.15
M	Stainless steel SUS304, X5CrNi18-9, etc.	AH7025	50 - 120	0.03 - 0.12	-
		UX30	40 - 100	-	0.03 - 0.10
K	Grey cast irons F250, GG25, 250, etc.	AH7025	50 - 220	0.03 - 0.12	-
		TH10	60 - 200	-	0.05 - 0.15
	Ductile cast irons FCD400, etc.	AH7025	50 - 180	0.03 - 0.12	-
		TH10	40 - 160	-	0.05 - 0.15
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	30 - 80	0.03 - 0.12	-
		TH10	20 - 50	-	0.05 - 0.08
	Superalloys Inconel718, etc.	AH7025	20 - 40	0.03 - 0.12	-
		TH10	10 - 30	-	0.03 - 0.08

Grade
Insert
Ext. Toolholder
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Threading
Grooving
Miniature tool
Milling cutter
Endmill
Drilling tool
Tooling System
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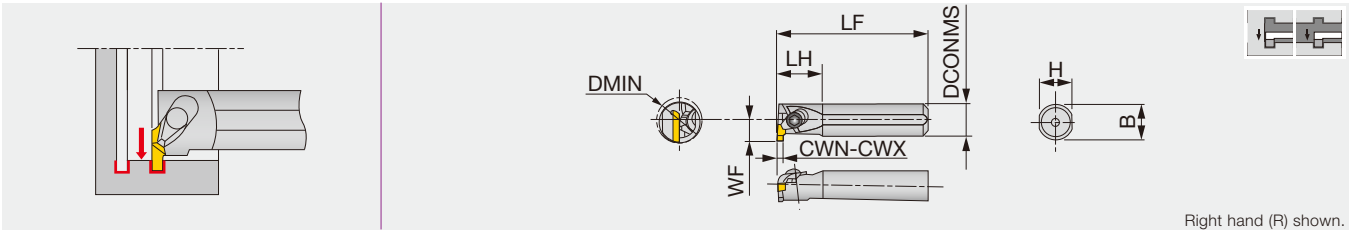
K

L

M

CGXR/L

Internal grooving



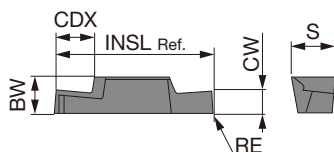
Designation	Material	CWN	CWX	DMIN	CDX	DCONMS	H	B	LF	LH	WF	Insert	Torque*
CGXR/L0016	Steel	1	3	20	3	16	15	15.5	150	24	11.3	GIR/L52...	2.2
CGXR/L0020	Steel	1	3	24	3	20	18	19	180	30	13.3	GIR/L52...	2.2
CGXR/L0025	Steel	1	5	32	5.3	25	23	24	200	38	18	GIR/L63...	5
CGXR/L0032	Steel	1	5	40	5.3	32	30	31	250	48	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

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±0.05	RE	Cermet		Uncoated										CDX	INSL	BW	S	
				NS9530		TH10														
GIR5210-02	R	1	0.2	●		●											1.5	15	3.5	4.4
GIL5210-02	L	1	0.2	●		●											1.5	15	3.5	4.4
GIR5215-02	R	1.5	0.2	●		●											2.3	15	3.5	4.4
GIL5215-02	L	1.5	0.2	●		●											2.3	15	3.5	4.4
GIR5220-02	R	2	0.2	●		●											3	15	3.5	4.4
GIL5220-02	L	2	0.2	●		●											3	15	3.5	4.4
GIR5225-02	R	2.5	0.2	●		●											3	15	3.5	4.4
GIL5225-02	L	2.5	0.2			●											3	15	3.5	4.4
GIR5230-02	R	3	0.2	●		●											3	15	3.5	4.4
GIL5230-02	L	3	0.2			●											3	15	3.5	4.4
GIR6310-02	R	1	0.2	●		●											1.5	24	5.5	6.4
GIL6310-02	L	1	0.2			●											1.5	24	5.5	6.4
GIR6315-02	R	1.5	0.2	●		●											2.3	24	5.5	6.4
GIL6315-02	L	1.5	0.2	●		●											2.3	24	5.5	6.4
GIR6320-02	R	2	0.2	●		●											3	24	5.5	6.4
GIL6320-02	L	2	0.2	●		●											3	24	5.5	6.4
GIR6325-02	R	2.5	0.2	●		●											3.8	24	5.5	6.4
GIL6325-02	L	2.5	0.2	●		●											3.8	24	5.5	6.4
GIR6330-02	R	3	0.2	●		●											4.5	24	5.5	6.4
GIL6330-02	L	3	0.2	●		●											4.5	24	5.5	6.4
GIR6335-02	R	3.5	0.2	●		●											5.3	24	5.5	6.4
GIL6335-02	L	3.5	0.2	●		●											5.3	24	5.5	6.4
GIR6340-02	R	4	0.2	●		●											5.3	24	5.5	6.4
GIL6340-02	L	4	0.2	●		●											5.3	24	5.5	6.4
GIR6345-02	R	4.5	0.2	●		●											5.3	24	5.5	6.4
GIL6345-02	L	4.5	0.2			●											5.3	24	5.5	6.4
GIR6350-02	R	5	0.2	●		●											5.3	24	5.5	6.4
GIL6350-02	L	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-****L) with left-hand inserts (XGR).

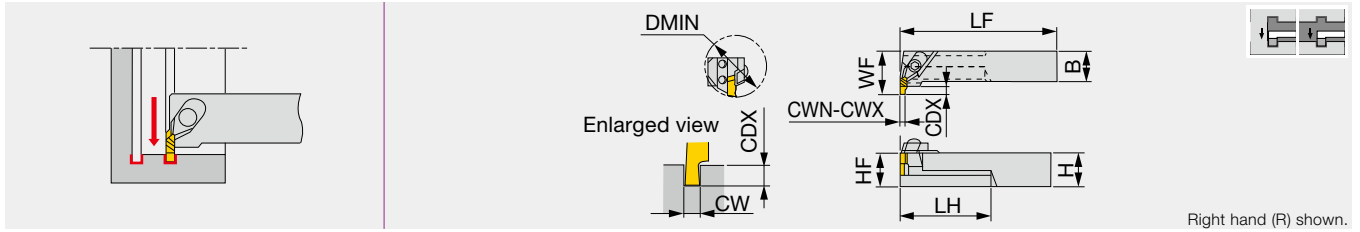
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)		
				W < 2 mm	W = 2 ~ 4 mm	W > 4 mm
	Carbon steels	NS9530	80 - 150	0.05 - 0.1	0.08 - 0.15	0.08 - 0.2
	Cast irons, Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.15	0.08 - 0.2

GX-R/LI

Internal grooving



Designation	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-****R) with left-hand inserts (XGL...); and left-hand toolholders (GX-****L) with right-hand inserts (XGR...).

*Torque: Recommended clamping torque (N-m)

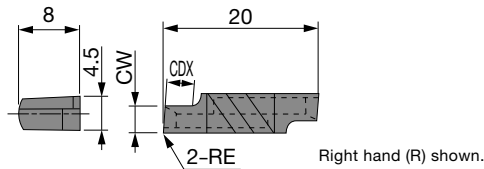
SPARE PARTS

Designation	Clamp set	Clamp screw	Shim	Shim screw	Wrench
GX-2525RI	CP81B	RT-1	SL-2R	BHM3-8	P-4
GX-2525LI	CP81B	RT-1	SL-2L	BHM3-8	P-4

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

INSERT

XGR/L



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

★ : First choice

☆ : Second choice

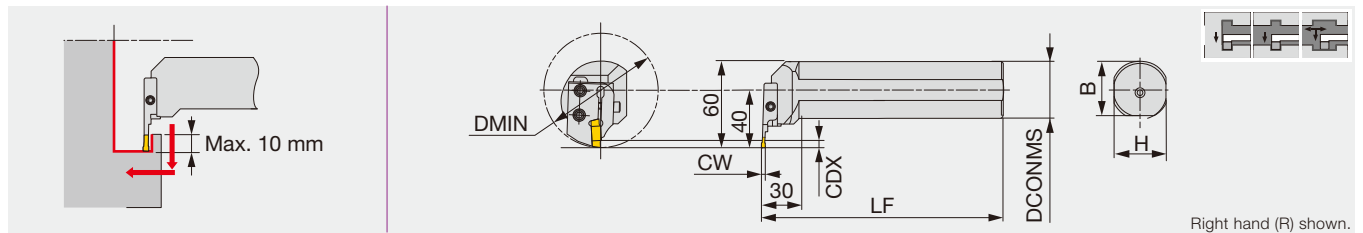
Designation	HAND	CW±0.05	RE	Cermet		Uncoated		CDX
				NS9530	TH10	UX30		
XGR6310-02	R	1	0.2	●	●	●		1.5
XGL6310-02	L	1	0.2	●	●	●		1.5
XGR6315-02	R	1.5	0.2	●	●	●		2.3
XGL6315-02	L	1.5	0.2	●	●	●		2.3
XGR6320-02	R	2	0.2	●	●	●		3
XGL6320-02	L	2	0.2	●	●	●		3
XGR6325-02	R	2.5	0.2	●	●	●		3.8
XGL6325-02	L	2.5	0.2	●	●	●		3.8
XGR6330-02	R	3	0.2	●	●	●		4.5
XGL6330-02	L	3	0.2	●	●	●		4.5
XGR6335-02	R	3.5	0.2	●	●	●		5.3
XGL6335-02	L	3.5	0.2	●	●	●		5.3
XGR6340-02	R	4	0.2	●	●	●		6
XGL6340-02	L	4	0.2	●	●	●		6
XGR6345-02	R	4.5	0.2	●	●	●		6
XGL6345-02	L	4.5	0.2	●	●	●		6

Use right-hand toolholders (GX-****R) with left-hand inserts (XGL...)
left-hand toolholders (GX-****L) with right-hand inserts (XGR...).

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)		
				W < 2 mm	W = 2 ~ 4 mm	W > 4 mm
P	Carbon steels	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		UX30	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
K	Cast irons, Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
H	Hardened steel	BX360	50 - 180	0.05 - 0.15	0.05 - 0.15	0.05 - 0.15



Designation	CW	DMIN	CDX	DCONMS	LF	H	B	Insert	Shank	Adapter 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 adapter

Note: Use right-hand shanks (CGWTR) with left-hand adapters (FLL3NP); and left-hand shanks (CGWTL) with right-hand adapters (FLR3NP).

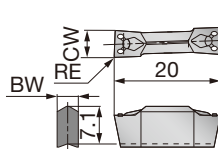
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

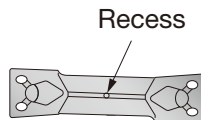
Designation	Clamping screw	Adapter screw	Wrench
CGWTR/L0040-FLL/R3NP	CHHM5-18	CSHB-6	P-4

■ 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								

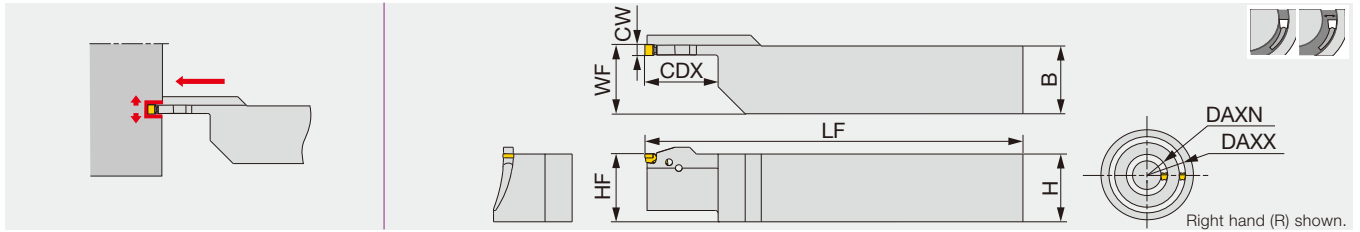
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05	RE	Coated		Cermet		Uncoated		BW
				T9225		NS9530		UX30		
FLEX30R	R	3	0.4							2.2
FLEX30L	L	3	0.4			●				2.2
FLEX40R	R	4	0.4			●				3.1
FLEX40L	L	4	0.4			●				3.1
FLEX50R	R	5	0.4	●		●		●		4
FLEX50L	L	5	0.4	●		●		●		4

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed: f (mm/rev)	
				Grooving	Turning
	Carbon steels	T9225	80 - 300	0.05 - 0.25	0.1 - 0.3
		NS9530	80 - 200	0.05 - 0.25	0.1 - 0.3
		UX30	60 - 150	0.05 - 0.25	0.1 - 0.3



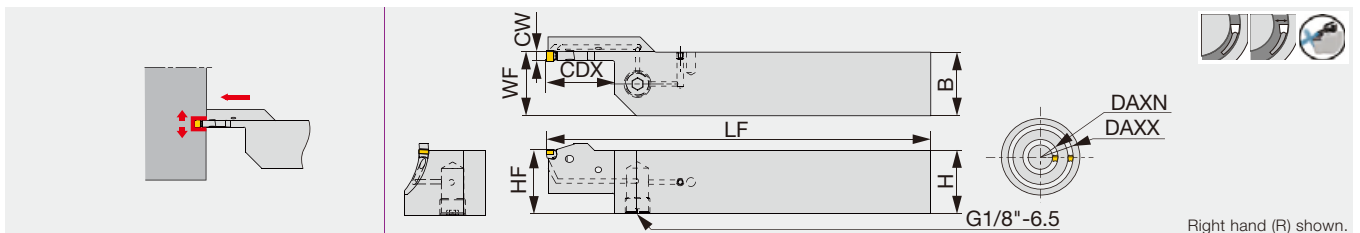
Designation	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert
ETFR/L2020-4T15-030035	4	30	35	15	20	20	125	20	20.5	E**4...
ETFR/L2525-4T15-030035	4	30	35	15	25	25	150	25	25.5	E**4...
ETFR/L2020-4T22-035045	4	35	45	22	20	20	125	20	20.5	E**4...
ETFR/L2525-4T22-035045	4	35	45	22	25	25	150	25	25.5	E**4...
ETFR/L2020-4T25-045055	4	45	55	25	20	20	125	20	20.5	E**4...
ETFR/L2525-4T25-045055	4	45	55	25	25	25	150	25	25.5	E**4...
ETFR/L2020-4T25-055075	4	55	75	25	20	20	125	20	20.5	E**4...
ETFR/L2525-4T25-055075	4	55	75	25	25	25	150	25	25.5	E**4...
ETFR/L2020-4T25-075120	4	75	120	25	20	20	125	20	20.5	E**4...
ETFR/L2525-4T25-075120	4	75	120	25	25	25	150	25	25.5	E**4...
ETFR/L2525-4T25-120200	4	120	200	25	25	25	150	25	25.5	E**4...
ETFR/L2525-4T25-200500	4	200	500	25	25	25	150	25	25.5	E**4...
ETFR/L2525-5T25-035045	5	35	45	25	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T25-045055	5	45	55	25	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T25-055075	5	55	75	25	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T32-075120	5	75	120	32	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T32-120200	5	120	200	32	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T32-200500	5	200	500	32	25	25	150	25	25.5	ETX5...
ETFR/L2525-6T25-040055	6	40	55	25	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T25-055075	6	55	75	25	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T32-075120	6	75	120	32	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T32-120200	6	120	200	32	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T32-200500	6	200	500	32	25	25	150	25	25.5	ETX6...

Wrench (ECW...) is not included. Please order it separately.

ETFR-CHP

Tube connection

Face grooving and turning toolholder, with high pressure coolant capability



Designation	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert
ETFR2525-4T15-030035-CHP	4	30	35	15	25	25	150	25	25.5	E**4...
ETFR2525-4T22-035045-CHP	4	35	45	22	25	25	150	25	25.5	E**4...
ETFR2525-4T25-045055-CHP	4	45	55	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-055075-CHP	4	55	75	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-075120-CHP	4	75	120	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-120200-CHP	4	120	200	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-200500-CHP	4	200	500	25	25	25	150	25	25.5	E**4...

Wrench (ECW...) is not included. Please order it separately.

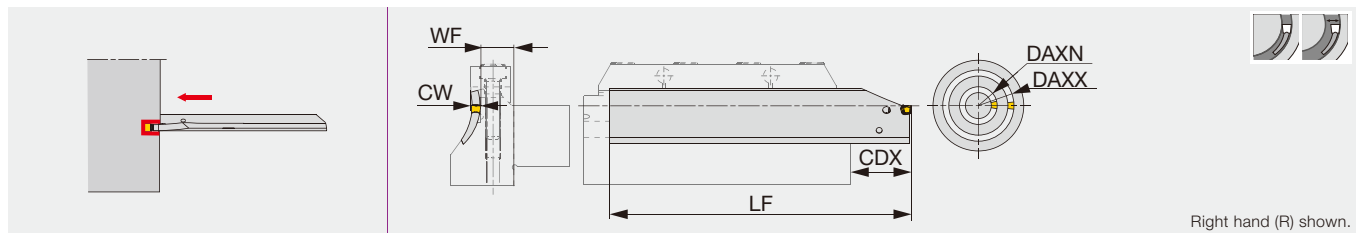
SPARE PARTS

Designation	Wrench (Optional)
ETFR/L...	ECW-456EF

Reference pages: Inserts → **F170, F171**, Standard cutting conditions → **F171**
Parts for coolant hose → **F266**

EFPR/L

Face grooving blade



Designation	CW	DAXN	DAXX	WF	LF	Min. CDX	Max. CDX	Insert
EFPR/L-4-030035	4	30	35	13.6	125	18	50	E**4...
EFPR-4-035045	4	35	45	13.6	125	18	50	E**4...
EFPR-4-045055	4	45	55	13.6	125	18	50	E**4...
EFPR-4-055075	4	55	75	13.6	125	18	50	E**4...
EFPR-4-075120	4	75	120	13.6	140	18	65	E**4...
EFPR-4-120200	4	120	200	13.6	140	18	65	E**4...
EFPR-4-200500	4	200	500	13.6	140	18	65	E**4...
EFPR-5-035045	5	35	45	13.6	125	19	50	ETX5...
EFPR-5-045055	5	45	55	13.6	125	19	50	ETX5...
EFPR-5-055075	5	55	75	13.6	125	19	50	ETX5...
EFPR-5-075120	5	75	120	13.6	140	19	65	ETX5...
EFPR-5-120200	5	120	200	13.6	140	19	65	ETX5...
EFPR-5-200500	5	200	500	13.6	140	19	65	ETX5...
EFPR-6-045055	6	45	55	13.6	125	20	50	ETX6...
EFPR-6-055075	6	55	75	13.6	125	20	50	ETX6...
EFPR-6-075120	6	75	120	13.6	140	20	65	ETX6...
EFPR-6-120200	6	120	200	13.6	140	20	65	ETX6...
EFPR/L-6-200500	6	200	500	13.6	140	20	65	ETX6...

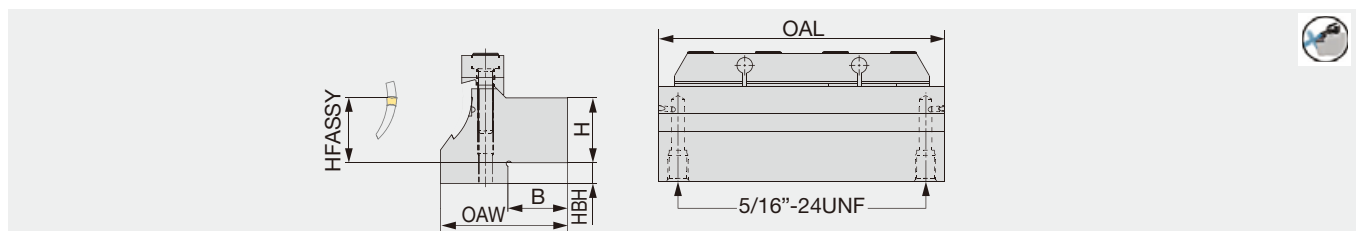
Wrench (ECW...) is not included. Please order it separately.

SPARE PARTS

Designation	Wrench (Optional)
EFPR/L...	ECW-456I

CTBU-CHP for EFPR/L

Tool block for EFP blades with high pressure coolant capability



Designation	CW	DAXN	H	B	HFASSY	HBH	OAW	OAL	Blade
CTBU25-030-4-CHP	4	30	25	23	25	8	49	110	EFPR/L-4-030035
CTBU25-035-4/5-CHP	4, 5	35	25	23	25	8	49	110	EFPR-4/5-035045
CTBU25-045-4/5-CHP	4, 5	45	25	23	25	8	49	110	EFPR-4/5-045055
CTBU25-055-4/5-CHP	4, 5	55	25	23	25	8	47	110	EFPR-4/5-055075
CTBU25-075-4/5-CHP	4, 5	75	25	23	25	8	45	110	EFPR-4/5-075120
CTBU25-120-4/5-CHP	4, 5	120	25	23	25	8	44	110	EFPR-4/5-120200
CTBU25-200-4/5-CHP	4, 5	200	25	23	25	8	41.5	110	EFPR-4/5-200500
CTBU25-045-6-CHP	6	45	25	23	25	8	51	110	EFPR-6-045055
CTBU25-055-6-CHP	6	55	25	23	25	8	49	110	EFPR-6-055075
CTBU25-075-6-CHP	6	75	25	23	25	8	47	110	EFPR-6-075120
CTBU25-120-6-CHP	6	120	25	23	25	8	46	110	EFPR-6-120200
CTBU25-200-6-CHP	6	200	25	23	25	8	43.5	110	EFPR/L-6-200500

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU25-***-***-CHP	CT-110	CM6X30-S	P-5

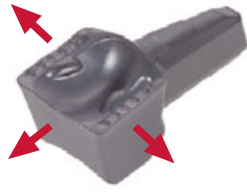
Reference pages: Inserts → **F170, F171**

Standard cutting conditions → **F171**

Parts for coolant hose → **F266**

CHIPBREAKER GUIDE

ETX type

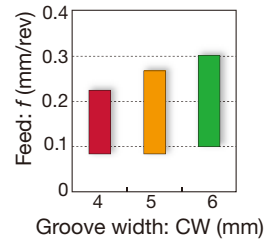


Multi-functional insert
Grooving and turning suitable
for light to medium cutting
Well-balanced sharpness and
strength

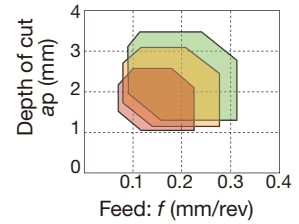
CW = 4 - 6 mm



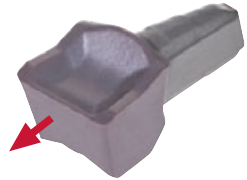
■ Standard feed



■ Standard feed and depth of cut for turning



EGM type

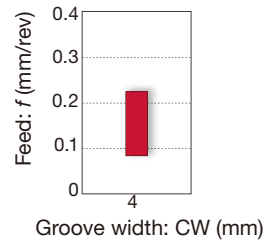


1st choice for parting
High strength
Well-designed edge

CW = 4 mm

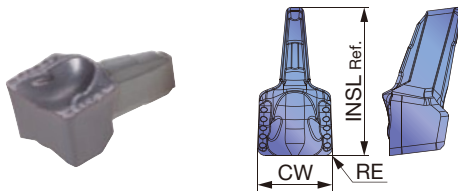


■ Standard feed



INSERTS

ETX



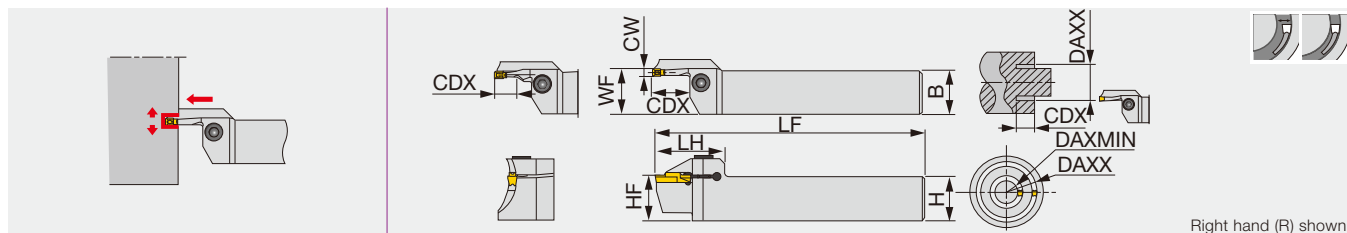
P	Steel	★			
M	Stainless	★			
K	Cast iron	☆			
N	Non-ferrous				
S	Superalloys				
H	Hard materials				

★ : First choice
☆ : Second choice

Designation	CW±0.05	RE	Coated							INSL
			AH725							
ETX4-040	4	0.4	●							8
ETX5-040	5	0.4	●							10
ETX6-040	6	0.4	●							12

● : Line up

Reference pages: Toolholders → **F168, F169**



Right hand (R) shown.

Designation	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.

Use the right-hand insert for the right-hand holder 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

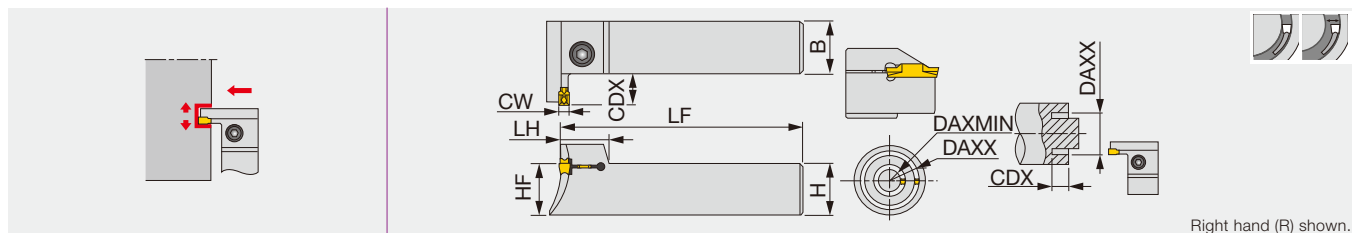
INSERT

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, SGN
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, SGN
CTFR/L2525-6T25-...	6	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL, SGN

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / 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

CTFVR/L

Face grooving and turning perpendicular toolholder



Designation	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.
 Use the right-hand insert for the right-hand holder with DTF insert.
 Torque*: Recommended clamping torque (N·m)

SPARE PARTS

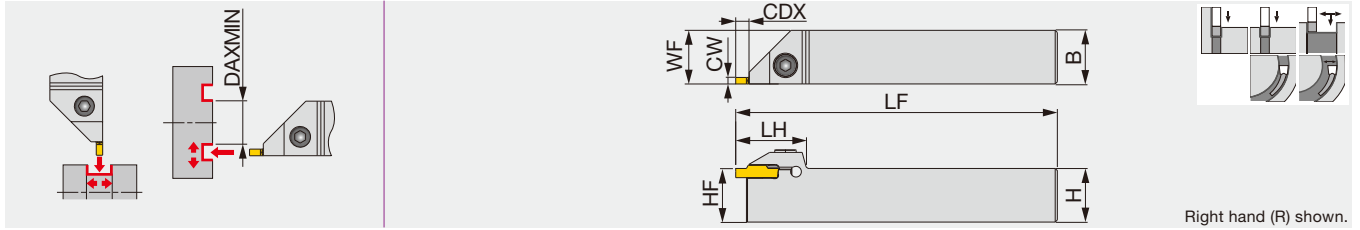
Designation	Clamping screw	Wrench
CTFVR/L2525-3T...	CM5X0.8X25-A	P-4
CTFVR/L2525-4T...	CM6X1X25-A	P-5
CTFVR/L2525-5T..., 6T...	CM8X1.25X25-A	P-6

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, SGN
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, SGN
CTFVR/L2525-6T20-...	6	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / 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 → **F183 - F197**, Standard cutting conditions → **F198**



Designation	CW	Seat size	CDX	H	B	LF	LH	HF	WF ⁽¹⁾	Torque*
CTEFR/L2020-4T04	4	2, 3, 4	4.8	20	20	125	33	20	20.5	8.5
CTEFR/L2525-4T04	4	2, 3, 4	4.8	25	25	150	33	25	25.5	8.5
CTEFR/L2020-6T04	6	5, 6	4.8	20	20	125	37	20	20.6	8.5
CTEFR/L2525-6T04	6	5, 6	4.8	25	25	150	37	25	25.6	8.5

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

SPARE PARTS

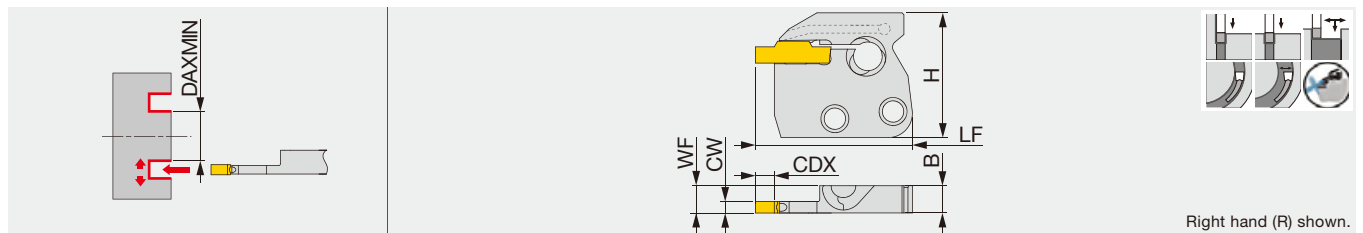
Designation	Clamping screw	Wrench
CTEFR/L2020-4T04	CM6X1X20-A	P-5
CTEFR/L2525-4T04	CM6X1X25-A	P-5
CTEFR/L2020-6T04	CM6X1X20-A	P-5
CTEFR/L2525-6T04	CM6X1X25-A	P-5

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
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

CAEFR/L-CHP

Face and external grooving adapter, with high pressure coolant capability



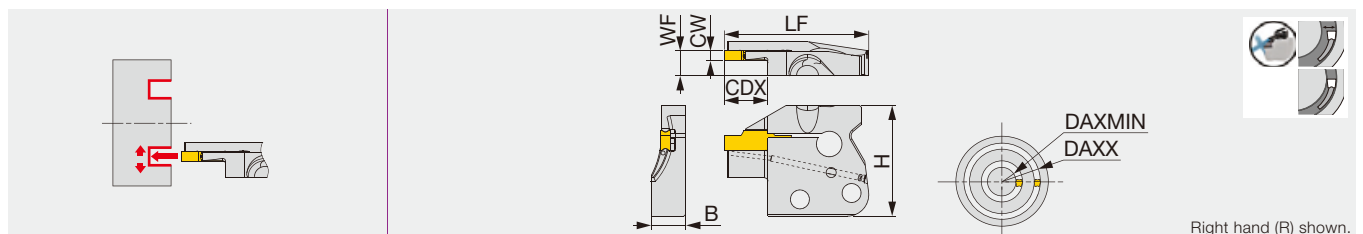
Right hand (R) shown.

Designation	CW	Seat size	CDX	H	B	LF	WF ⁽¹⁾
CAEFR/L-4T04-CHP	4	2,3,4	4.8	33	7.2	41.5	7.7
CAEFR/L-6T04-CHP	6	5,6	4.8	33	7.2	46.3	7.8

(1) "WF" value is calculated with groove width "CW" shown in the table.

CAFR/L-CHP

Face grooving and turning adapter, with high pressure coolant capability



Right hand (R) shown.

Designation	CW	DAXMIN	DAXX	Seat size	CDX	H	B	LF	WF ⁽¹⁾
CAFR/L-3T12-040055-CHP	3	40	55	3	12	33	10.2	43	7.5
CAFR/L-3T12-055075-CHP	3	55	75	3	12	33	10.2	43	7.5
CAFR/L-3T12-075100-CHP	3	75	100	3	12	33	10.2	43	7.5
CAFR/L-3T12-100140-CHP	3	100	140	3	12	33	10.2	43	7.5
CAFR/L-3T12-140200-CHP	3	140	200	3	12	33	10.2	43	7.5
CAFR/L-4T16-050070-CHP	4	50	70	4	16	33	10.2	43	8
CAFR/L-4T16-070100-CHP	4	70	100	4	16	33	10.2	43	8
CAFR/L-4T16-100150-CHP	4	100	150	4	16	33	10.2	43	8
CAFR/L-4T16-150250-CHP	4	150	250	4	16	33	10.2	43	8
CAFR/L-5T20-055080-CHP	5	55	80	5	20	33	10.2	47	8.5
CAFR/L-5T20-080120-CHP	5	80	120	5	20	33	10.2	47	8.5
CAFR/L-5T20-120180-CHP	5	120	180	5	20	33	10.2	47	8.5
CAFR/L-5T20-180300-CHP	5	180	300	5	20	33	10.2	47	8.5
CAFR/L-5T20-300000-CHP	5	300	∞	5	20	33	10.2	47	8.5
CAFR/L-6T25-060090-CHP	6	60	90	6	25	33	10.2	52	9
CAFR/L-6T25-090150-CHP	6	90	150	6	25	33	10.2	52	9
CAFR/L-6T25-150250-CHP	6	150	250	6	25	33	10.2	52	9
CAFR/L-6T25-250400-CHP	6	250	400	6	25	33	10.2	52	9

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
Max. groove depth will be 15 mm with DTF insert.

Use the right-hand insert for the right-hand holder with DTF insert.

(1) WF is calculated with the groove width (CW) in the above table.

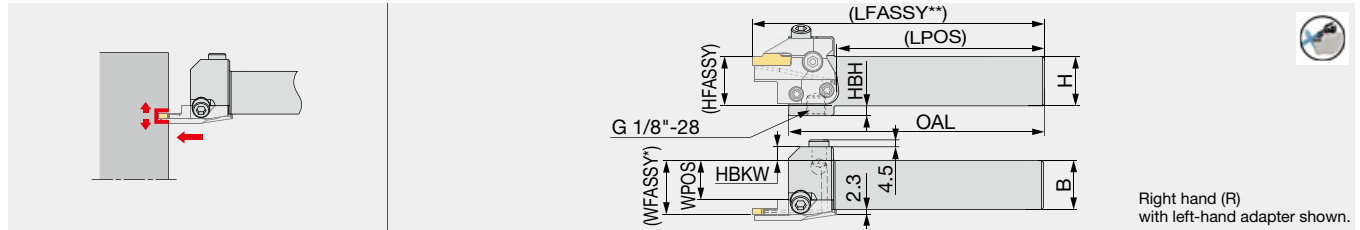
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
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 → **F183 - F197**, Shanks and toolholders → **F176 - F178**

Standard cutting conditions → **F198**, Technical Reference → **L053**

Shank for adapter, with high pressure coolant capability



Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	CA*FL/R**-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	CA*FL/R**-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

External

Internal

Face

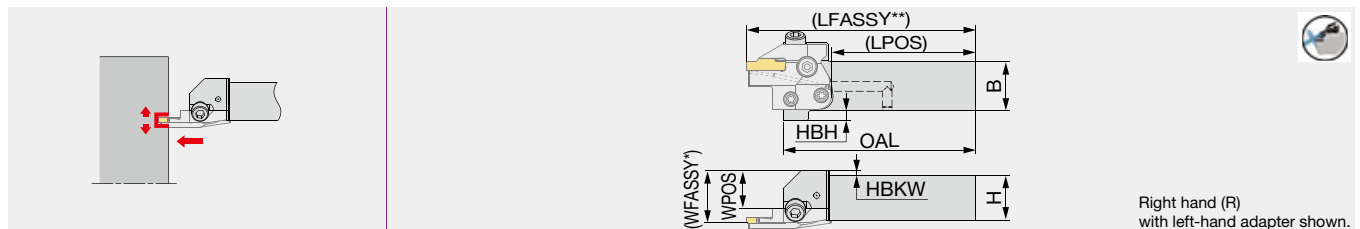
Parting

Others

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability



Designation	H	B	OAL	LPOS	WPOS	HBKW	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP-MC	20	20	98	73.5	14	6	10	CA*FL/R**-CHP	6.5
CHSR/L2525-CHP-MC	25	25	98	73.5	19	-	5	CA*FL/R**-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

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
CHSR/L**-CHP-MC	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

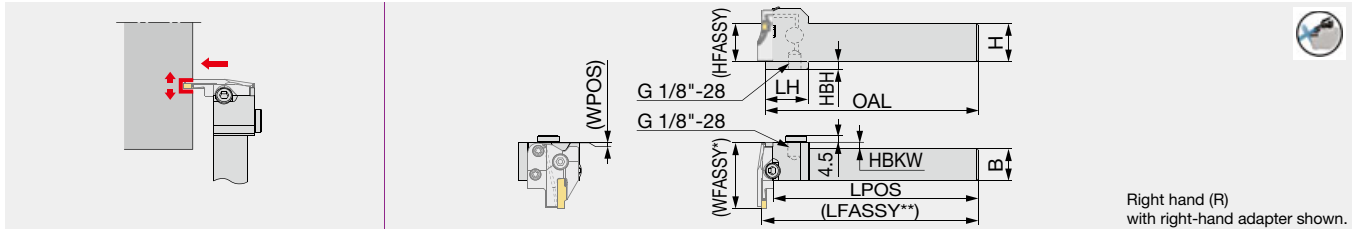
Combination of adapter and shank

Shank	External grooving adapter		Face grooving adapter		External and face grooving adapter	
	CAER**-CHP, -MD	CAEL**-CHP, -MD	CAFR**-CHP	CAFL**-CHP	CAEFR**-CHP	CAEFL**-CHP
CHSR**-CHP (-MC)	●			●	●	
CHSL**-CHP (-MC)		●	●			●

● : Corresponding

Reference pages: Inserts → **F183 - F197**, Adapters → **F175**, Standard cutting conditions → **F198**
Parts for coolant hose → **F266**, Technical Reference → **L053**

Shank for perpendicularly-mounted adapter, with high pressure coolant capability

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

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

WFASSY* : Shank (WPOS) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter 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 (N·m)

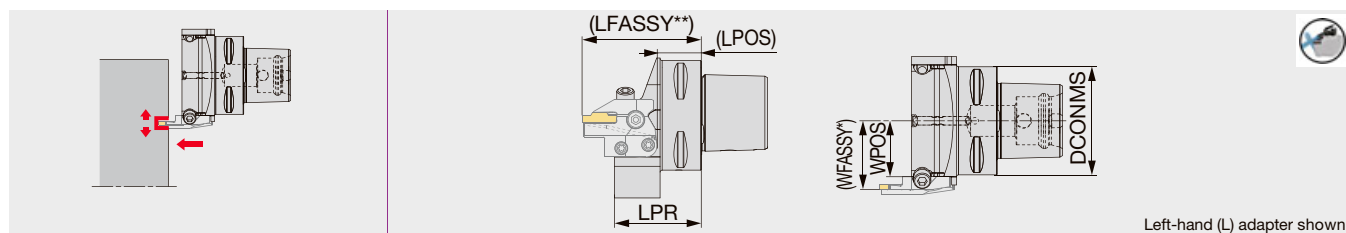
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

Combination of adapter and shank

Shank	External grooving adapter		Face grooving adapter		External and face grooving adapter	
	CAER**-CHP, -MD	CAEL**-CHP, -MD	CAFR**-CHP	CAFL**-CHP	CAEFR**-CHP	CAEFL**-CHP
CHFVR**-CHP		●	●			●
CHFVL**-CHP	●			●	●	

● : Corresponding

Toolholder with TungCap connection, for adapter, with high pressure coolant capability



Left-hand (L) adapter shown.

Designation	DCONMS	LPR	LPOSS	WPOSS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	CA*FR/L*-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	CA*FR/L*-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	CA*FR/L*-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	CA*FR/L*-CHP	6.5

WFASSY* : Toolholder (WPOSS) + adapter (WF)

LFASSY** : Toolholder (LPOSS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

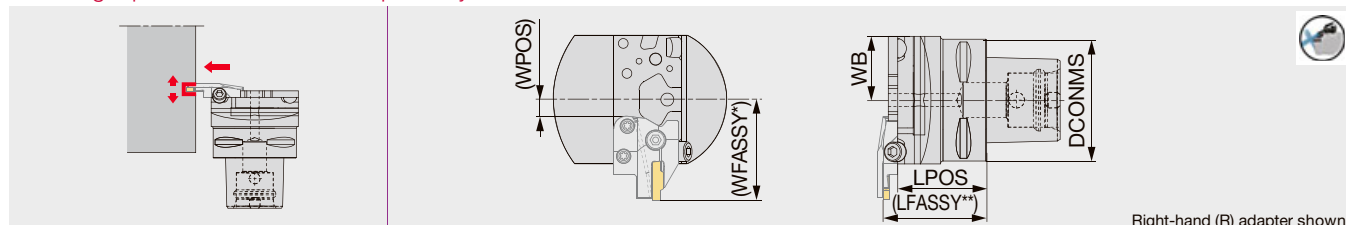
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

Toolholder with TungCap connection, for perpendicularly-mounted adapter, with high pressure coolant capability



Right-hand (R) adapter shown.

Designation	DCONMS	LPOSS	WB	WPOSS	Adapter (Option)	Torque*
C3CHFVN26040-CHP	32	40	26	1.5	CA*FR/L*-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	CA*FR/L*-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	CA*FR/L*-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	CA*FR/L*-CHP	6.5

WFASSY* : Toolholder (WPOSS) + adapter (LF)

LFASSY** : Toolholder (LPOSS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

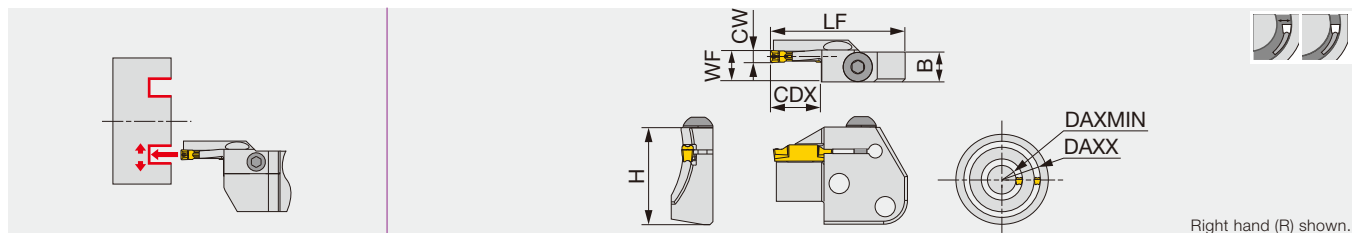
Recommended clamping torque (N·m)

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

Reference pages: Inserts → **F183 - F197**, Adapters → **F175**, Standard cutting conditions → **F198**
Technical Reference → **L053**

CAFR/L

Face grooving and turning adapter



Designation	CW	DAXMIN	DAXX	Seat size	CDX	H	B	LF	WF ⁽¹⁾	Torque*
CAFR/L-3T12-040055	3	40	55	3	12	32.7	10	45	10.4	5
CAFR/L-3T12-055075	3	55	75	3	12	32.7	10	45	10.4	5
CAFR/L-3T12-075100	3	75	100	3	12	32.7	10	45	10.4	5
CAFR/L-3T12-100140	3	100	140	3	12	32.7	10	45	10.4	5
CAFR/L-3T12-140200	3	140	200	3	12	32.7	10	45	10.4	5
CAFR/L-4T16-050070	4	50	70	4	16	32.7	10	45	10.5	5
CAFR/L-4T16-070100	4	70	100	4	16	32.7	10	45	10.5	5
CAFR/L-4T16-100150	4	100	150	4	16	32.7	10	45	10.5	5
CAFR/L-4T16-150250	4	150	250	4	16	32.7	10	45	10.5	5
CAFR/L-5T20-055080	5	55	80	5	20	32.7	10	49	10.5	5
CAFR/L-5T20-080120	5	80	120	5	20	32.7	10	49	10.5	5
CAFR/L-5T20-120180	5	120	180	5	20	32.7	10	49	10.5	5
CAFR/L-5T20-180300	5	180	300	5	20	32.7	10	49	10.5	5
CAFR/L-5T20-300000	5	300	∞	5	20	32.7	10	49	10.5	5
CAFR/L-6T25-060090	6	60	90	6	25	32.7	10	55	10.5	5
CAFR/L-6T25-090150	6	90	150	6	25	32.7	10	55	10.5	5
CAFR/L-6T25-150250	6	150	250	6	25	32.7	10	55	10.5	5
CAFR/L-6T25-250400	6	250	400	6	25	32.7	10	55	10.5	5

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.

Max. groove depth will be 15 mm with DTF insert.

Use the right-hand insert for the right-hand holder with DTF insert.

Not compatible with TungModularSystem

(1) WF is calculated with the groove width (CW) in the above table.

Torque*: Recommended clamping torque (N·m)

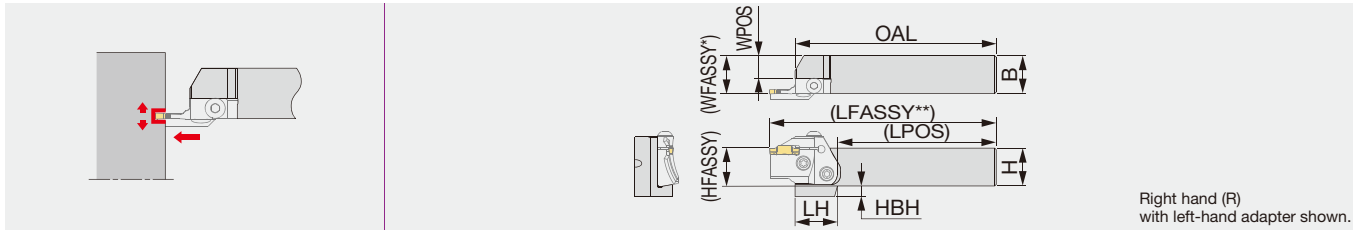
SPARE PARTS

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

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / 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 → **F183 - F197**, Shanks and toolholders → **F180, F181**
Standard cutting conditions → **F198**

Shank for adapter



Designation	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Adapter (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	125	-	22	32	-	CAFL/R...

WFASSY* : Shank (WPOS) + adapter (WF)

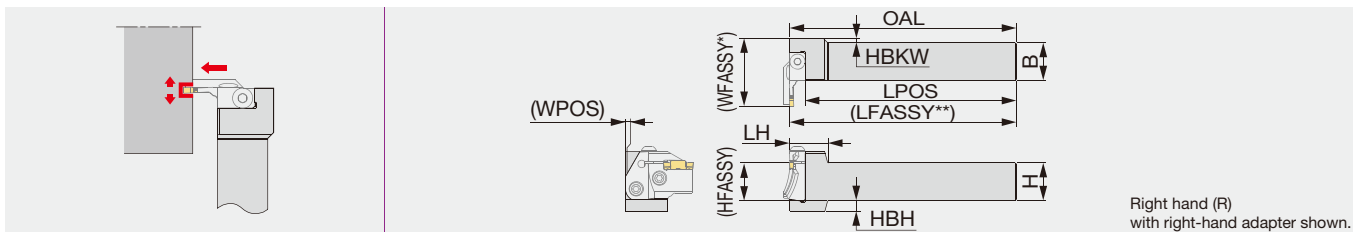
LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Not compatible with TungModularSystem

CHFVR/L

Shank for adapter, perpendicularly mounted



Designation	H	B	OAL	LPOS	LH	WPOS	HBKW	HFASSY	HBH	Adapter (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) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Not compatible with TungModularSystem

SPARE PARTS

Designation	Clamping screw	Wrench
CH**R/L...	CSHB-6-A	P-4

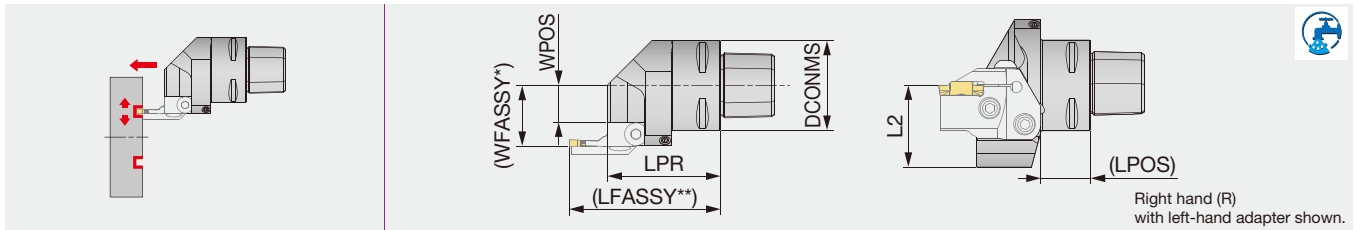
Combination of adapter and shank

Shank	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

● : Corresponding

C-CHSR/L

Toolholder with TungCap connection for adapter



Designation	DCONMS	LPR	LPOS	L2	WPOS	Adapter (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* : Toolholder (WPOS) + adapter (WF)

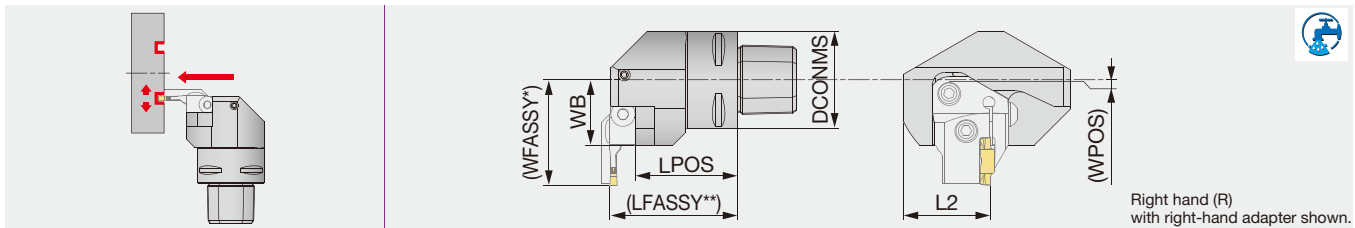
LFASSY** : Toolholder (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change. If needed, the coolant direction can be adjusted by the nozzle.

Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

C-CHFVR/L

Toolholder with TungCap connection for adapter, perpendicularly mounted



Designation	DCONMS	LPOS	L2	WB	WPOS	Adapter (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* : Toolholder (WPOS) + adapter (LF)

LFASSY** : Toolholder (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change. If needed, the coolant direction can be adjusted by the nozzle.

Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

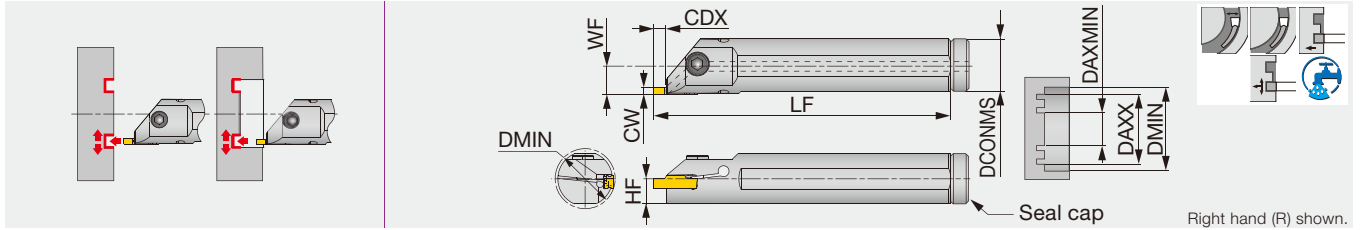
SPARE PARTS

Designation	Coolant parts	Clamping screw	Wrench
C3CH**R/L...	SATZ-M8X1-M3	CSHB-6-A	P-4
C4CH**R/L...	SATZ-M8X1-M3	CSHB-6-A	P-4
C5CH**R/L...	SATZ-M10X1-M5	CSHB-6-A	P-4
C6CH**R/L...	SATZ-M10X1-M5	CSHB-6-A	P-4

Combination of adapter and toolholder

Toolholder	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

● : Corresponding



Designation	CW	Seat size	CDX	DCONMS	LF	HF	WF ⁽¹⁾	Torque*
CTIFR/L25-4T05-D270	4	2, 3, 4	5.5	25	200	11.5	13.3	5
CTIFR/L32-4T05-D340	4	2, 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

Use the right-hand insert for the right-hand holder with DTF insert.

(1) WF is calculated with the groove width CW in the above table.

Torque*: Recommended clamping torque (N·m)

SPARE PARTS

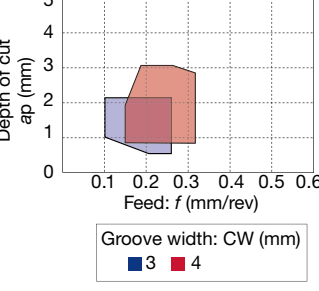
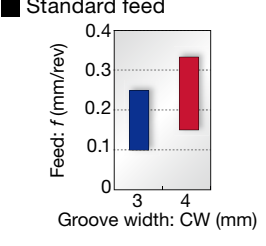
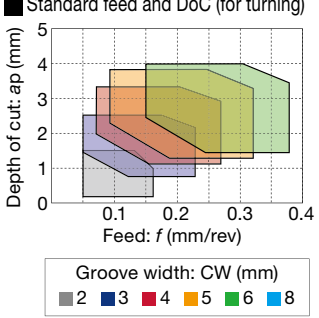
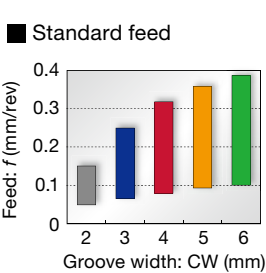
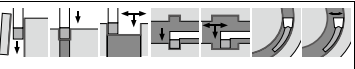
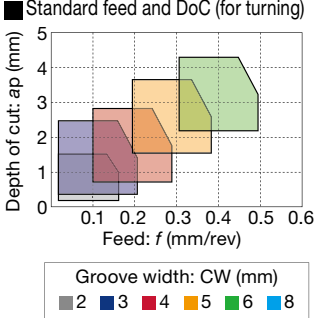
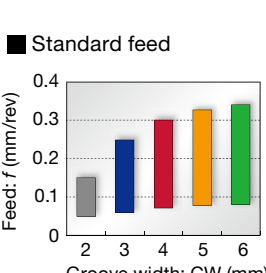
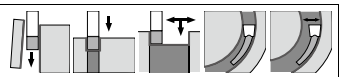
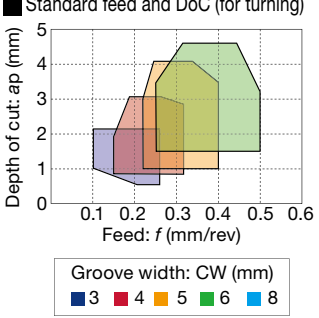
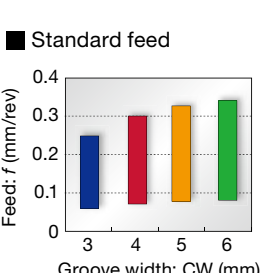
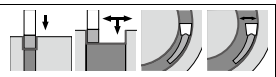
Designation	Clamping screw	Wrench	Seal cap
CTIFR/L25-4T05-D270	CM6X1X16-A	P-5	CA-25
CTIFR/L32-4T05-D340	CM6X1X20-A	P-5	CA-32
CTIFR/L25-5T05-D270	CM6X1X16-A	P-5	CA-25
CTIFR/L32-5T05-D340	CM6X1X20-A	P-5	CA-32

Seat size	Min. machining dia.: DMIN	
	DCONMS = 25 mm	DCONMS = 32 mm
2	299	299
3	26.3	33.3
4	26.8	33.8
5	26.3	33.3
6	26.8	33.8

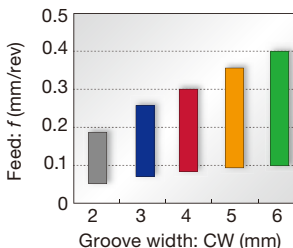
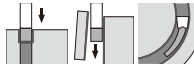
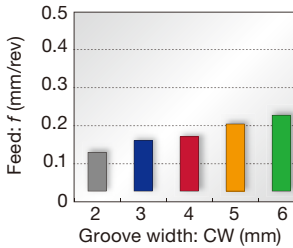
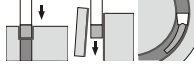
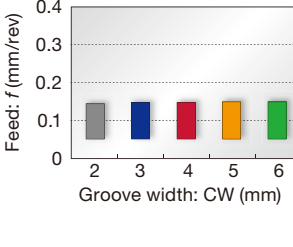
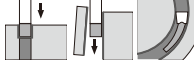
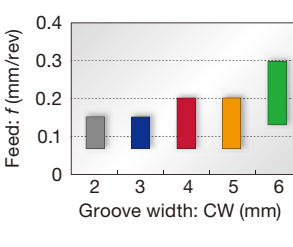
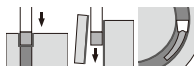
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
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

Face grooving and turning

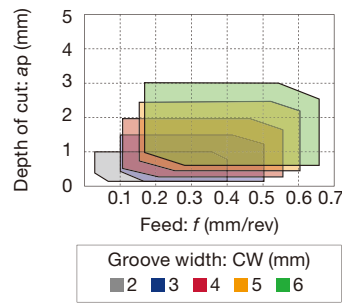
DTF type (2 corners) First choice  F187	1st choice for face grooving Unique chipbreaker makes chips shorter CW = 3 - 4 mm	Standard feed and DoC (for turning)  Standard feed 	
DTX type (2 corners)  F187	Multi-functional type Well balanced sharpness and strength Multi-functional insert CW = 2 - 6 mm	Standard feed and DoC (for turning)  Standard feed 	
DTM type (2 corners)  F188	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 = 2 - 6 mm	Standard feed and DoC (for turning)  Standard feed 	
DTE type (2 corners)  F188, F189	General purpose Unique chipbreaker makes chips shorter Molded and ground insert available CW = 2.65 - 6 mm	Standard feed and DoC (for turning)  Standard feed 	

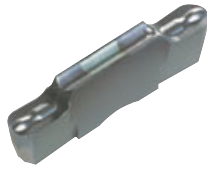
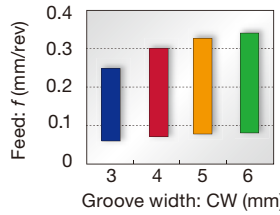
Grooving

DGM type (2 corners) SGM type (1 corner)  F190, F191	1st choice for grooving and parting Smooth chip evacuation Well-designed edge with high strength Handed insert available CW = 2 - 6.35 mm	■ Standard feed <table><thead><tr><th>Groove width: CW (mm)</th><th>Feed: f (mm/rev)</th></tr></thead><tbody><tr><td>2</td><td>0.18</td></tr><tr><td>3</td><td>0.25</td></tr><tr><td>4</td><td>0.30</td></tr><tr><td>5</td><td>0.35</td></tr><tr><td>6</td><td>0.40</td></tr></tbody></table> 	Groove width: CW (mm)	Feed: f (mm/rev)	2	0.18	3	0.25	4	0.30	5	0.35	6	0.40
Groove width: CW (mm)	Feed: f (mm/rev)													
2	0.18													
3	0.25													
4	0.30													
5	0.35													
6	0.40													
DGS type (2 corners) SGS type (1 corner)  F192, F193	Lower cutting force and superior sharpness Unique-designed edge and chipbreaker Handed insert available CW = 2 - 6.35 mm	■ Standard feed <table><thead><tr><th>Groove width: CW (mm)</th><th>Feed: f (mm/rev)</th></tr></thead><tbody><tr><td>2</td><td>0.12</td></tr><tr><td>3</td><td>0.15</td></tr><tr><td>4</td><td>0.18</td></tr><tr><td>5</td><td>0.20</td></tr><tr><td>6</td><td>0.22</td></tr></tbody></table> 	Groove width: CW (mm)	Feed: f (mm/rev)	2	0.12	3	0.15	4	0.18	5	0.20	6	0.22
Groove width: CW (mm)	Feed: f (mm/rev)													
2	0.12													
3	0.15													
4	0.18													
5	0.20													
6	0.22													
DGG type (2 corners)  F193	For non-ferrous materials and titanium Chipbreaker with low cutting force Sharp cutting edge that prevents vibration and delivers fine surface finish CW = 2 - 6 mm	■ Standard feed <table><thead><tr><th>Groove width: CW (mm)</th><th>Feed: f (mm/rev)</th></tr></thead><tbody><tr><td>2</td><td>0.15</td></tr><tr><td>3</td><td>0.15</td></tr><tr><td>4</td><td>0.15</td></tr><tr><td>5</td><td>0.15</td></tr><tr><td>6</td><td>0.15</td></tr></tbody></table> 	Groove width: CW (mm)	Feed: f (mm/rev)	2	0.15	3	0.15	4	0.15	5	0.15	6	0.15
Groove width: CW (mm)	Feed: f (mm/rev)													
2	0.15													
3	0.15													
4	0.15													
5	0.15													
6	0.15													
DGL type (2 corners)  F194	1st choice for mild steel Chipbreaker with excellent chip control at low feed Suitable for mild steel that often gives difficulties in chip control CW = 2 - 6 mm	■ Standard feed <table><thead><tr><th>Groove width: CW (mm)</th><th>Feed: f (mm/rev)</th></tr></thead><tbody><tr><td>2</td><td>0.15</td></tr><tr><td>3</td><td>0.15</td></tr><tr><td>4</td><td>0.20</td></tr><tr><td>5</td><td>0.20</td></tr><tr><td>6</td><td>0.30</td></tr></tbody></table> 	Groove width: CW (mm)	Feed: f (mm/rev)	2	0.15	3	0.15	4	0.20	5	0.20	6	0.30
Groove width: CW (mm)	Feed: f (mm/rev)													
2	0.15													
3	0.15													
4	0.20													
5	0.20													
6	0.30													

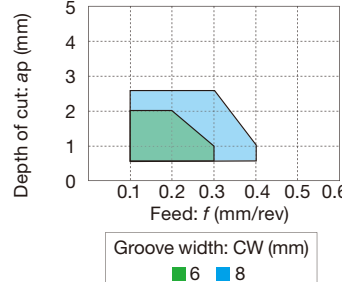
Please see page F*** for the product details.

Profiling and undercutting

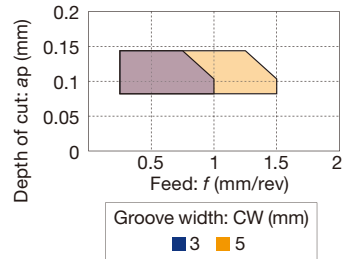
DTR type (2 corners) STR type (1 corner) Molded DTR, STR  Ground DTR  F194, F195	Full radius type Excellent chip control Molded and ground inserts available CW = 2 - 6 mm	■ Standard feed and DoC (for turning)  Depth of cut: ap (mm) Feed: f (mm/rev) Groove width: CW (mm) ■ 2 ■ 3 ■ 4 ■ 5 ■ 6
--	--	--

DTIU type (2 corners)  F196	Full radius type Excellent chip control for undercutting CW = 3 - 6 mm	■ Standard feed and DoC  Feed: f (mm/rev) Groove width: CW (mm) ■ 3 ■ 4 ■ 5 ■ 6
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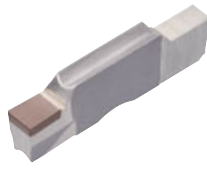
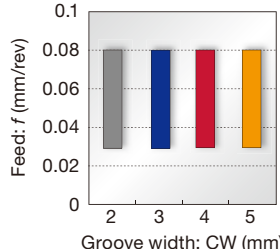
Aluminium wheel machining

DTA type (2 corners)  F196	Full radius type Excellent chip control For aluminium wheel profiling Ground insert CW = 6 - 8 mm	■ Standard feed and DoC (for turning)  Depth of cut: ap (mm) Feed: f (mm/rev) Groove width: CW (mm) ■ 6 ■ 8
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For high feed external and face turning of hardened steel parts

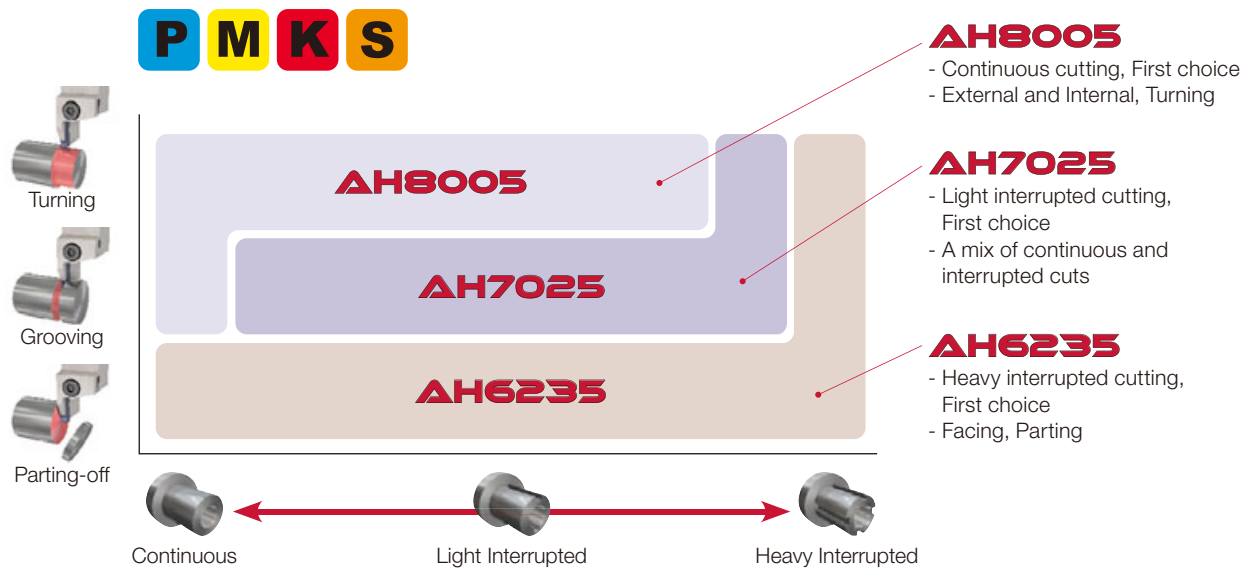
STH type (1 corner)  F197	External and face turning of hardened steel parts High efficiency machining using light D.O.C. and increased feeds CW = 3, 5 mm	■ Standard feed and DoC (for turning)  Depth of cut: ap (mm) Feed: f (mm/rev) Groove width: CW (mm) ■ 3 ■ 5
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External grooving of hardened steel

SGN-CBN type (1 corner)  F197	For hardened steel cutting Optimum cutting edge shape for grooving of hardened steels High tolerance width for finishing CW = 2 - 5 mm (CW = ±0.025 mm)	■ Standard feed  Feed: f (mm/rev) Groove width: CW (mm) ■ 2 ■ 3 ■ 4 ■ 5
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Please see page F*** for the product details.

GRADE SELECTION



GRADES

AH8005

P M K S

- First choice for external, internal, and side-turning, continuous cuts

AH7025

P M K S

- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235

P M K

- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725

P M S

- General purpose PVD grade for high fracture resistance

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

BXA10

H

- Coated CBN grade designed for turning hardened steel parts

BX360

H

- Developed for grooving applications of hardened steel parts

DTF

Technical drawing of a 3D printed part. The drawing includes a side view and a top view. The side view shows a part with a central cylindrical section and two end sections. The top view shows a rectangular part with a central rectangular section and two end sections. Dimensions and angles are indicated: a 12° angle, a 7° angle, a height h , a width RE , a depth CW , a length $L1$, and a reference length $INSL$ Ref.

[illegible]

Designation	Seat size	HAND	CW±0.05	RE	Coated				Cermet						INSL	h	L1		
					T9225	AH7025	AH725	GH130			NS9530								
DTF3-040-R	3	R	3	0.4	●	●	●	●			●						20	5	16
DTF3-040-L	3	L	3	0.4	●	●	●	●			●						20	5	16
DTF4-040-R	4	R	4	0.4	●	●	●	●			●						20	5	16
DTF4-040-L	4	L	4	0.4	●	●	●	●			●						20	5	16

DTX

[illegible]

Designation	Seat size	CW±0.05	RE	Coated					Cermet		Uncoated		INSL	h
				T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530		KS05F		
DTX2-020	2	2	0.2	●	●		●		●		●		20	5
DTX3-030	3	3	0.3	●	●	●	●	●	●		●		20	5
DTX4-040	4	4	0.4	●	●	●	●	●	●		●		20	5
DTX5-040	5	5	0.4	●	●	●	●	●	●		●		25	5.5
DTX6-080	6	6	0.8		●	●		●			●		25	5.5

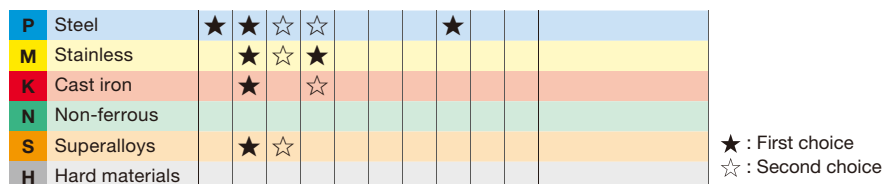
Tungaloy F187

External face grooving and turning

[illegible]

● : Line up

External face grooving and turning (for high precision)



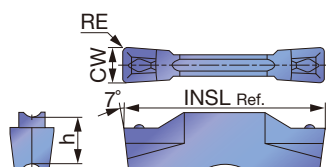
Designation	Seat size	CW±0.02	RE	Coated				Cermet		INSL	h
				T9225	AH7025	AH725	GH130	NS9530			
DTE265-015	3	2.65	0.15	●	●	●	●	●		20	5
DTE300-020	3	3	0.2	●	●	●	●	●		20	5
DTE300-040	3	3	0.4	●	●	●	●	●		20	5
DTE315-015	3	3.15	0.15	●	●	●	●	●		20	5
DTE400-040	4	4	0.4	●	●	●	●	●		20	5
DTE400-080	4	4	0.8	●	●	●	●	●		20	5
DTE415-015	4	4.15	0.15	●	●	●	●	●		20	5
DTE478-055	5	4.78	0.55	●	●	●	●	●		25	5.5
DTE500-040	5	5	0.4	●	●	●	●	●		25	5.5
DTE500-080	5	5	0.8	●	●	●	●	●		25	5.5
DTE515-015	5	5.15	0.15	●	●	●	●			25	5.5
DTE600-080	6	6	0.8	●	●	●	●			25	5.5
DTE600-120	6	6	1.2	●	●	●	●			25	5.5

●: Line up

Reference pages: Toolholders → **F172 - F182**, Standard cutting conditions → **F198**

DTE

External face grooving and turning



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

★ : First choice
☆ : Second choice

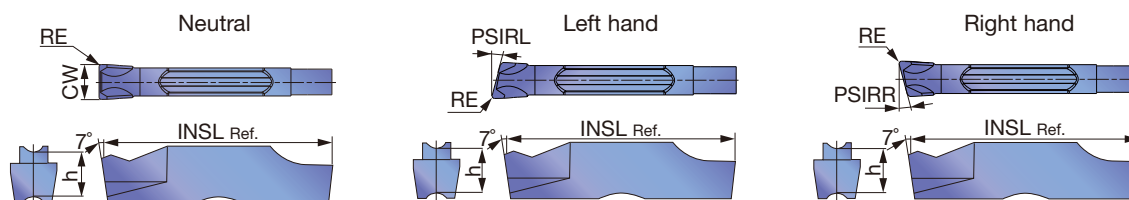
Designation	Seat size	CW±0.05	RE	Coated						Cermet				INSL	h
				T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530				
DTE3-020	3	3	0.2			●		●		●				20	5
DTE3-040	3	3	0.4	●	●	●	●	●	●	●	●			20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●	●			20	5
DTE4-080	4	4	0.8			●		●		●				20	5
DTE5-040	5	5	0.4		●	●		●		●				25	5.5
DTE5-080	5	5	0.8			●		●		●				25	5.5
DTE6-080	6	6	0.8		●	●		●		●				25	5.5

● : Line up



★ : First choice
☆ : Second choice

● : Line up



		Strength	Stiffness	Toughness	Corrosion resistance	Wear resistance	Machinability	Cost	Availability	
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	RE	Coated					Uncoated								
					AH7025	AH725	AH8005	GH130	AH6235	KS05F								
SGM2-020	2	N	2	0.2	●	●	●	●	●	●					20	5	0°	0°
SGM2-020-6R	2	R	2	0.2	●	●		●							20	5	0°	6°
SGM2-020-6L	2	L	2	0.2	●	●		●							20	5	6°	0°
SGM3-020	3	N	3	0.2	●	●	●	●	●	●					20	5	0°	0°
SGM3-020-6R	3	R	3	0.2	●	●		●							20	5	0°	6°
SGM3-020-6L	3	L	3	0.2	●	●		●							20	5	6°	0°
SGM3-020-15R	3	R	3	0.2	●	●		●							20	5	0°	15°
SGM3-020-15L	3	L	3	0.2	●	●		●							20	5	15°	0°
SGM4-030	4	N	4	0.3	●	●	●	●	●	●					20	5	0°	0°
SGM4-030-4R	4	R	4	0.3	●	●		●							20	5	0°	4°
SGM4-030-4L	4	L	4	0.3	●	●		●							20	5	4°	0°
SGM5-030	5	N	5	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGM6-030	6	N	6	0.3	●	●	●	●	●	●					25	5.5	0°	0°

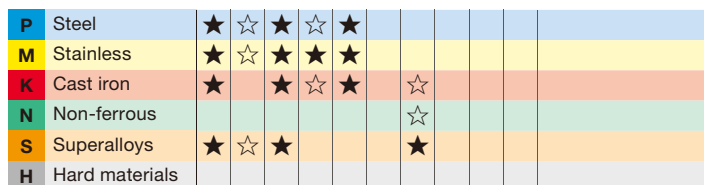
● : Line up



★ : First choice
☆ : Second choice

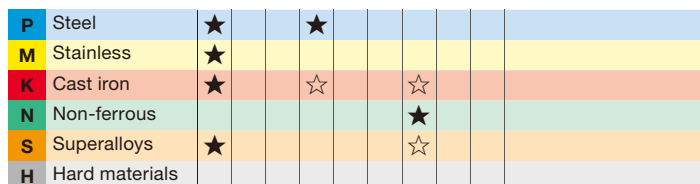
● : Line up

The tool will interfere with the workpiece when grooving larger diameters than $\phi D_{\max}$.



● : Line up

External/face grooving (for high precision)



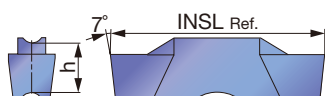
●: Line up

External/face grooving and parting

[illegible]

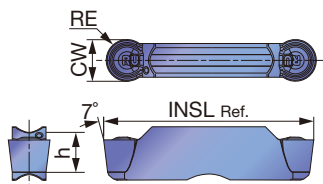
● : Line up

Profiling and undercutting (for high precision)

[illegible]

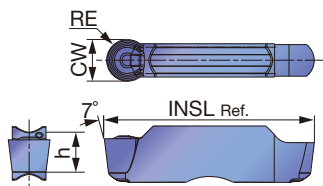
●: Line up

Profiling and undercutting



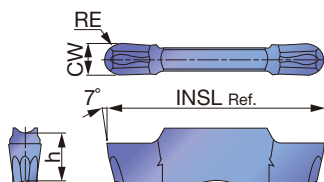
● : Line up

Profiling and undercutting



●: Line up

Profiling and undercutting (for high precision)



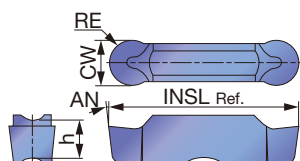
P	Steel	★	☆	☆			
M	Stainless	★	☆	★			
K	Cast iron	★		☆			
N	Non-ferrous						
S	Superalloys	★	☆				
H	Hard materials						

★ : First choice
 ☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated								INSL	h
				AH7025	AH725	GH130							
DTIU300-150	3	3	1.5	●	●	●						20	5
DTIU400-200	4	4	2	●	●	●						20	5
DTIU500-250	5	5	2.5	●	●	●						25	5.5
DTIU600-300	6	6	3	●	●	●						25	5.5

●: Line up

Aluminium wheel machining (for high precision)



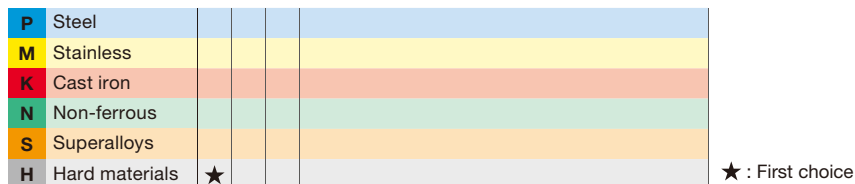
P	Steel				
M	Stainless				
K	Cast iron				
N	Non-ferrous	★			
S	Superalloys				
H	Hard materials				

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Uncoated										INSL	h	AN
				TH10												
DTA600-300	6	6	3	●										25	5.5	7°

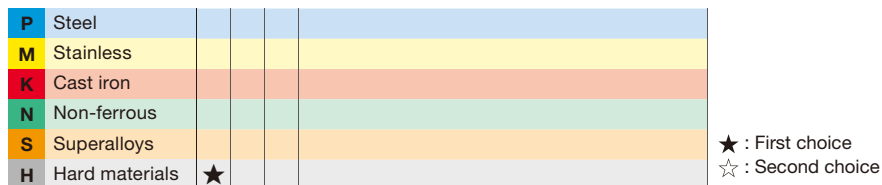
●: Line up

External and face turning



●: Line up

External/face grooving



●: Line up

■ Edge preparations



STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed V _c (m/min)
P	Steel S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225, AH8005	80 - 300
		< 300 HB	Impact resistance	AH6235, GH130	50 - 120
		< 300 HB	Surface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, X5CrNi18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Wear resistance	AH8005	50 - 120
		< 200 HB	Impact resistance	AH6235, GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515	150 - 700
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 180
	Ductile cast iron FCD450, etc. 450-10S, etc.	-	First choice	T515	150 - 300
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	20 - 60
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	20 - 40
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	20 - 100
		< HRC 40	Impact resistance	AH7025, AH725	20 - 80

Please see page **F183 - F185** for feed: *f* (mm/rev).

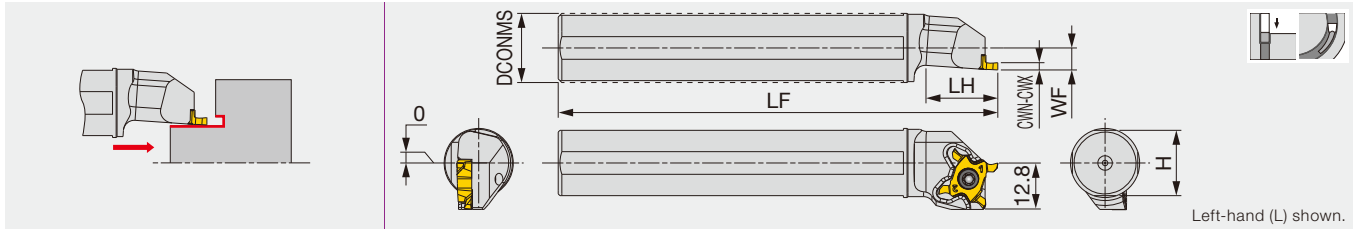
STH

ISO	Grade	CW	Application	Cutting speed V _c (m/min)	Depth of cut a _p (mm)	Feed <i>f</i> (mm/rev)
H	BXA10	3	External turning	100 - 230	0.08 - 0.12	0.4 - 1
			Face turning	100 - 230	0.08 - 0.12	0.4 - 0.8
		5	External turning	100 - 230	0.08 - 0.12	0.5 - 1.5
			Face turning	100 - 230	0.08 - 0.12	0.5 - 0.8

SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed V _c (m/min)	Feed <i>f</i> (mm/rev)
H	BX360	No symbol	Continuous	80 - 150	0.03 - 0.08
		-S	Light interrupted	50 - 120	0.03 - 0.08
		-H	Heavy interrupted	40 - 100	0.03 - 0.06

Face grooving toolholder with round shank



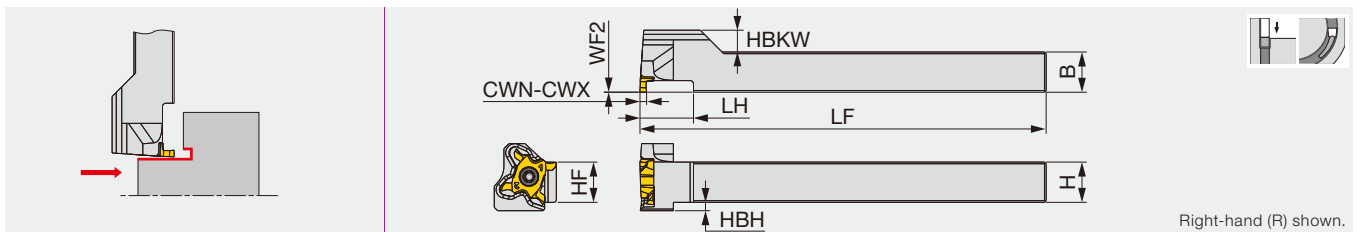
Designation	CWN	CWX	DCONMS	LF	LH	H	WF	Insert	Torque*
JS16F-STCFL18	0.33	3.18	16	85	20	15	6	TCF18L...	1.2
JS19G-STCFL18	0.33	3.18	19.05	90	20	18	6	TCF18L...	1.2
JS19X-STCFL18	0.33	3.18	19.05	120	20	18	6	TCF18L...	1.2
JS20G-STCFL18	0.33	3.18	20	90	20	19	6	TCF18L...	1.2
JS20X-STCFL18	0.33	3.18	20	120	20	19	6	TCF18L...	1.2
JS22X-STCFL18	0.33	3.18	22	120	20	21	6	TCF18L...	1.2
JS25H-STCFL18	0.33	3.18	25	100	20	24	6	TCF18L...	1.2
JS254X-STCFL18	0.33	3.18	25.4	120	20	24.5	6	TCF18L...	1.2

Note: The left hand insert (L) is used for the left hand toolholders (L).

Torque*: Recommended clamping torque: N·m

STCFVR-18

Face grooving toolholder with square shank, for Swiss lathes



Designation	CWN	CWX	H	B	LF	LH	HF	WF2	HBKW	HBH	Insert	Torque*
STCFVR1010H18	0.33	3.18	10	10	100	12	10	0	8.5	4.5	TCF18L...	1.2
STCFVR1212F18	0.33	3.18	12	12	85	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1212X18	0.33	3.18	12	12	120	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1616X18	0.33	3.18	16	16	120	20	16	0	2.5	0	TCF18L...	1.2

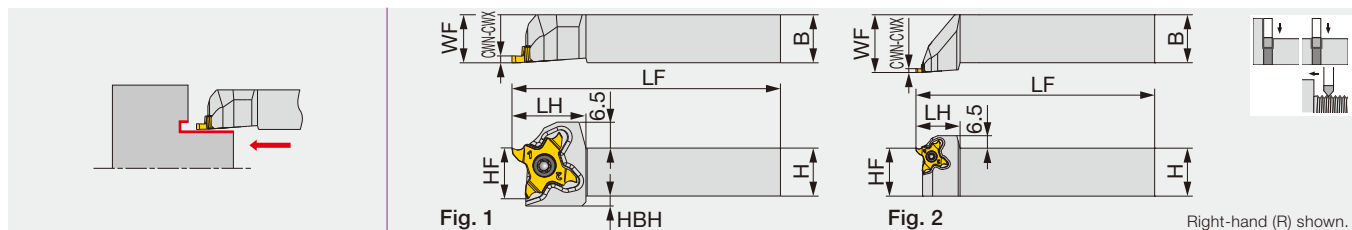
Note: The left hand insert (L) is used for the right hand toolholders (R).

Torque*: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench
JS**-STCFL18, STCFVR**18	CSTC-4L100DR	T-1008/5

Precision grooving tools with uniquely shaped insert for swiss type machine and general lathes



Designation	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC*18...	1.2	1
STCR/L1212F18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16	16	-	TC*18...	1.2	1
STCR/L2020H18	0.33	3.18	20	20	100	18.5	20	20	-	TC*18...	1.2	1
STCR/L2020X18	0.33	3.18	20	20	120	23	20	25	-	TC*18...	1.2	2
STCR/L2525Z18	0.33	3.18	25	25	135	23	25	30	-	TC*18...	1.2	2

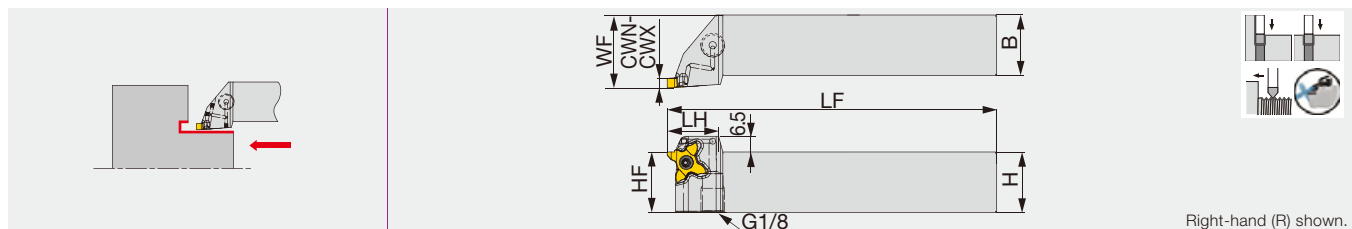
The right hand insert (TC*18R...) is used for the right hand toolholders (STCR...), and the left hand insert is used for the left hand toolholders

*Torque: Recommended clamping torque: N·m

STCR/L-18-CHP

Tube connection

Threading tool - for external threading with high pressure coolant capability



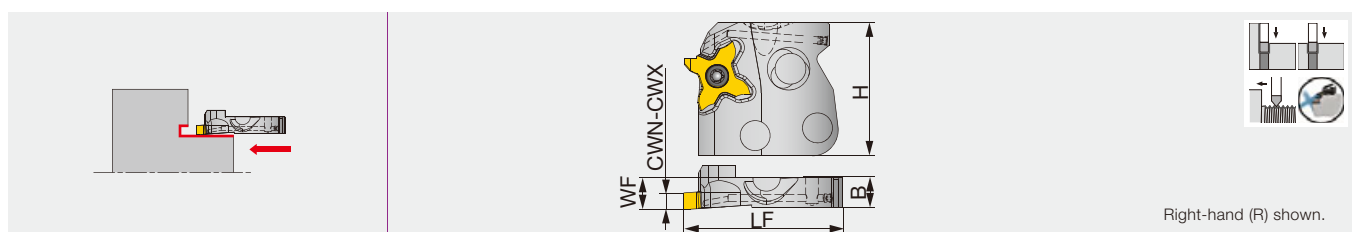
Designation	CWN	CWX	H	B	LF	LH	HBH	HF	WF	HBH	Insert	Torque*
STCR/L2020X18-CHP	0.33	3.18	20	20	120	23	-	20	25	-	TC*18...	1.2
STCR/L2525Z18-CHP	0.33	3.18	25	25	135	23	-	25	30	-	TC*18...	1.2

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 torque (N·m) for clamping

STCAR/L18-CHP

External grooving and threading adapter, with high pressure coolant capability



Designation	CWN	CWX	WF	H	LF	B	Insert	Torque*
STCAR/L18-CHP	0.33	3.18	7.5	33	38	7.2	TC*18...	1.2

Use the right hand insert (TC*18R...) with the right hand adapter (STCAR...). Use the left hand insert (TC*18L...) with the left hand adapter (STCAL...).

*Torque: Recommended torque (N·m) for clamping

SPARE PARTS

Designation	Clamping screw	Wrench
STCL**18, STCL**18-CHP, STCAL18-CHP	CSTC-4L100DR	T-1008/5
STCR**18, STCR**18-CHP, STCAR18-CHP	CSTC-4L100DL	T-1008/5

Reference pages: STCR/L-18: Inserts → **F204 - F211**, Standard cutting conditions → **F212**

STCR/L-18-CHP: Inserts → **F204 - F211**, Standard cutting conditions → **F212**

Parts for coolant hose → **F266**

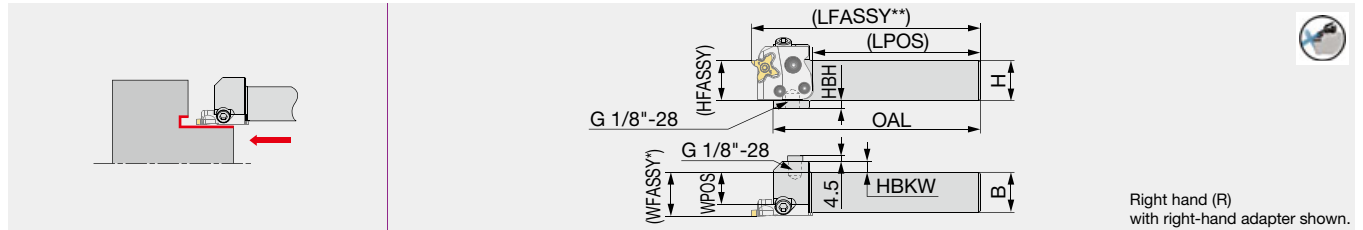
STCAR/L18-CHP: Inserts → **F204 - F211**, Shanks and toolholders → **F201 - F203**

Standard cutting conditions → **F212**, Technical Reference → **L053**

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability



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

Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L18-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

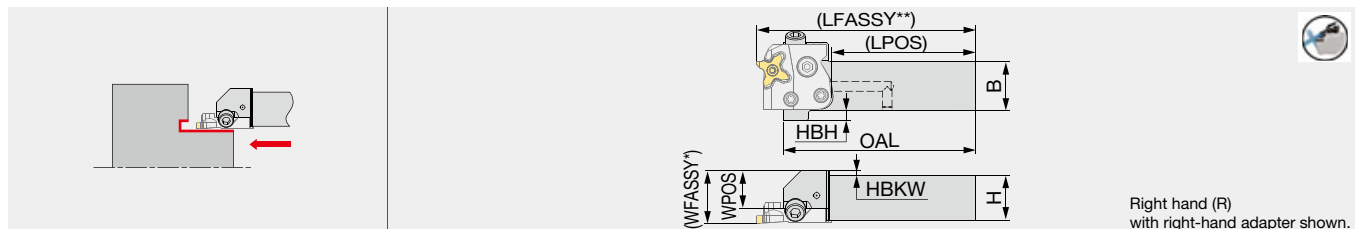
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability



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

Designation	H	B	OAL	LPOS	WPOS	HBKW	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP-MC	20	20	98	73.5	14	6	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP-MC	25	25	98	73.5	19	-	5	STCAR/L18-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (WF)

LFASSY** : Shank (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

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
CHSR/L*-CHP-MC	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

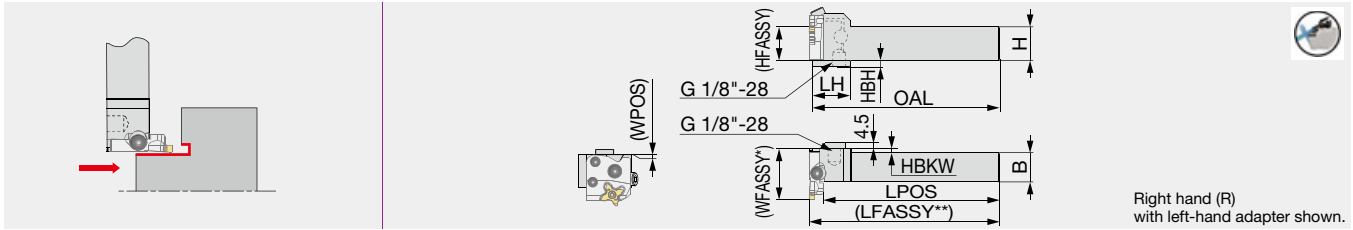
Combination of adapter and shank

Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

Reference pages: Inserts → **F204 - F211**, Adapters → **F200**, Standard cutting conditions → **F212**
Parts for coolant hose → **F266**, Technical Reference → **L053**

Shank for perpendicularly-mounted adapter, with high pressure coolant capability



Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10	STCAL/R18-CHP	6.5
CHFVR/L2525-CHP	25	25	140	28	135.1	0.5	0	25	5	STCAL/R18-CHP	6.5

WFASSY* : Shank (WPOS) + adapter (LF)

LFASSY** : Shank (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter 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 (N·m)

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

Combination of adapter and shank

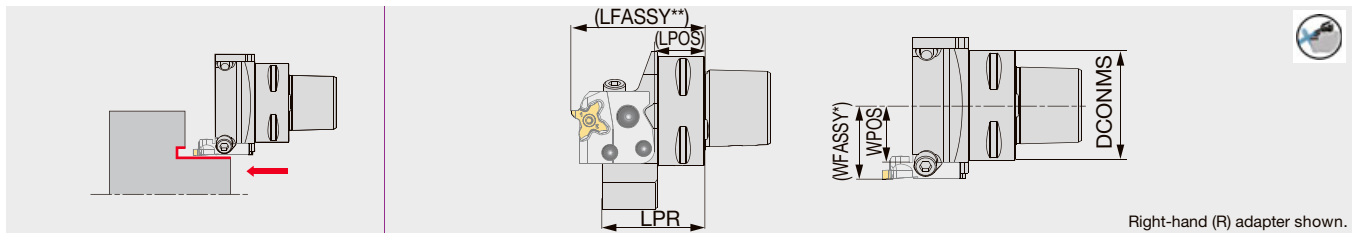
Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

C*CHSN-CHP

Direct connection

Toolholder with TungCap connection, for adapter, with high pressure coolant capability



Right-hand (R) adapter shown.

Designation	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L18-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L18-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L18-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L18-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (WF)

LFASSY** : Toolholder (LPOS) + adapter (LF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

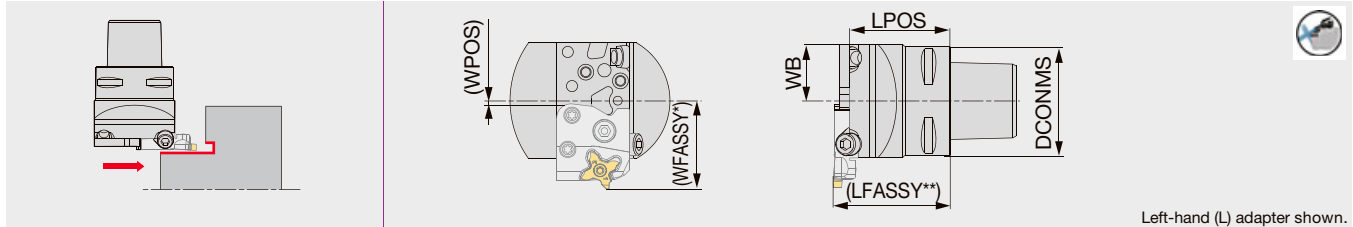
Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

Toolholder with TungCap connection, for perpendicularly-mounted adapter, with high pressure coolant capability



Left-hand (L) adapter shown.

Designation	DCONMS	LPOS	WB	WPOS	Adapter (Option)	Torque*
C3CHFVN26040-CHP	32	40	26	1.5	STCAR/L18-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	STCAR/L18-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	STCAR/L18-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	STCAR/L18-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (LF)

LFASSY** : Toolholder (LPOS) + adapter (WF)

Depend on the adapter type, the value of LFASSY or WFASSY may change.

Torque*: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant

Please see page L053 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CH**N*-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 → F204 - F211, Adapters → F200, Standard cutting conditions → F212
Technical Reference → L053

Face grooving

TCF18 (4 corners)



First choice for face grooving

Provides light cutting action and excellent surface finish.
Provides superior chip evacuation for face grooving operations.
CW = 0.5 - 2.5 mm
CDX = 3 mm



F205

External grooving

TCS18 (4 corners)



First choice for O.D. grooving

General-purpose pressed-in 3D chipbreaker for smooth chip control
CW = 1 - 3 mm
CDX = 3 mm



F205, F206

TCL18 (4 corners)



For lighter cutting action

Features pressed-in 3D chipbreaker with sharp cutting edge for light cutting action. Provides excellent chip control at low feed rates.
CW = 1.5 - 3 mm
CDX = 3 mm



F207

TCG18 (4 corners)



For better chipping resistance

Features an optimum rake angle and edge preparation for a good balance of light cutting action and fracture resistance.
CW = 1 - 3.18 mm
CDX = 3 mm



F208, F209

TCP18 (4 corners)



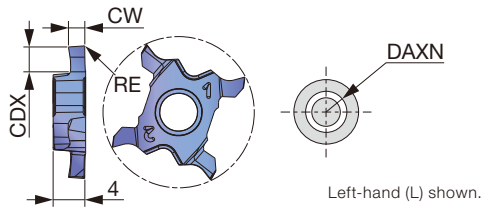
For higher surface quality

Featuring a large rake angle, providing light cutting action and better surface finish. TCP-F style insert is also available for sharp cutting edge.
CW = 0.33 - 3 mm
CDX = 3 mm



F210, F211

TCF18L (Face grooving, sharp edge)



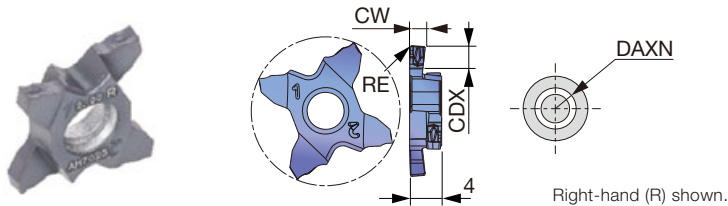
P	Steel	★				
M	Stainless	★				
K	Cast iron	★				
N	Non-ferrous					
S	Superalloys	★				
H	Hard materials					

★: First choice

Designation	HAND	CW±0.02	RE	Coated								CDX	DAXN
				SH725									
TCF18L050F-005	L	0.5	0.05	●								1	6
TCF18L100F-005	L	1	0.05	●								2.5	6
TCF18L150F-005	L	1.5	0.05	●								2.5	6
TCF18L200F-005	L	2	0.05	●								3	6
TCF18L250F-005	L	2.5	0.05	●								3	6

5 pieces per package
●: Line up

TCS18R/L (3D chipbreaker, honed edge)



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

★ : First choice

[illegible]

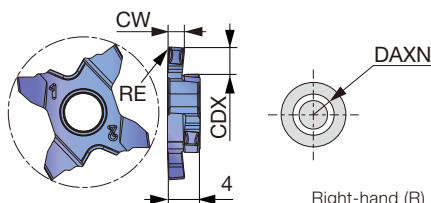
5 pieces per package
● : Line up

Reference pages: Toolholders → **F199 - F203**, Standard cutting conditions → **F212**

★ : First choice

5 pieces per package
● : Line up

F206 tungaloy.com



Right-hand (R) shown.

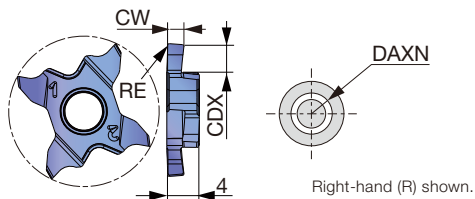
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice

Designation	HAND	CW±0.02	RE	Coated		CDX	DAXN
				AH7025			
TCL18R150-010	R	1.5	0.1	●		3	65
TCL18L150-010	L	1.5	0.1	●		3	65
TCL18R150-020	R	1.5	0.2	●		3	65
TCL18L150-020	L	1.5	0.2	●		3	65
TCL18R175-020	R	1.75	0.2	●		3	65
TCL18L175-020	L	1.75	0.2	●		3	65
TCL18R200-010	R	2	0.1	●		3	65
TCL18L200-010	L	2	0.1	●		3	65
TCL18R200-020	R	2	0.2	●		3	65
TCL18L200-020	L	2	0.2	●		3	65
TCL18R250-030	R	2.5	0.3	●		3	65
TCL18L250-030	L	2.5	0.3	●		3	65
TCL18R300-010	R	3	0.1	●		3	65
TCL18L300-010	L	3	0.1	●		3	65
TCL18R300-020	R	3	0.2	●		3	65
TCL18L300-020	L	3	0.2	●		3	65
TCL18R300-030	R	3	0.3	●		3	65
TCL18L300-030	L	3	0.3	●		3	65

5 pieces per package
● : Line up

TCG18R/L (honed edge)



Right-hand (R) shown.

★ : First choice

5 pieces per package
● : Line up

Reference pages: Toolholders → **F199 - F203**, Standard cutting conditions → **F212**

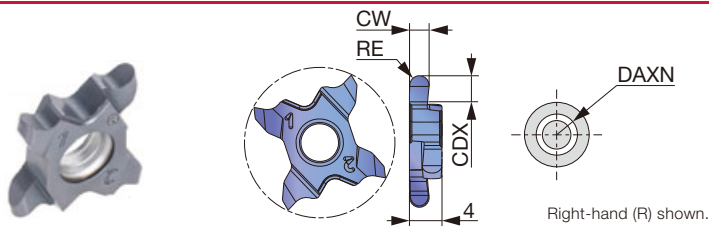
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice

Designation	HAND	CW±0.02	RE	Coated		CDX	DAXN
				AH7025			
TCG18R250-020	R	2.5	0.2	●		3	65
TCG18L250-020	L	2.5	0.2	●		3	65
TCG18R250-030	R	2.5	0.3	●		3	65
TCG18L250-030	L	2.5	0.3	●		3	65
TCG18R265-030	R	2.65	0.3	●		3	65
TCG18L265-030	L	2.65	0.3	●		3	65
TCG18R280-030	R	2.8	0.3	●		3	65
TCG18L280-030	L	2.8	0.3	●		3	65
TCG18R300-010	R	3	0.1	●		3	65
TCG18L300-010	L	3	0.1	●		3	65
TCG18R300-020	R	3	0.2	●		3	65
TCG18L300-020	L	3	0.2	●		3	65
TCG18R300-030	R	3	0.3	●		3	65
TCG18L300-030	L	3	0.3	●		3	65

5 pieces per package
● : Line up

TCG18R/L (Full R, honed edge)



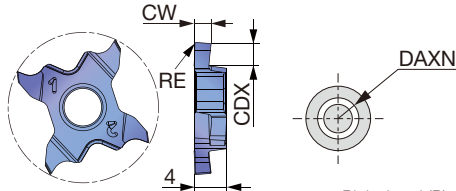
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	★		
H	Hard materials			

★ : First choice

Designation	HAND	CW±0.02	RE	Coated			CDX	DAXN
				AH7025				
TCG18R100-050	R	1	0.5	●			2	65
TCG18L100-050	L	1	0.5	●			2	65
TCG18R158-079	R	1.58	0.79	●			3	65
TCG18L158-079	L	1.58	0.79	●			3	65
TCG18R200-100	R	2	1	●			3	65
TCG18L200-100	L	2	1	●			3	65
TCG18R239-120	R	2.39	1.2	●			3	65
TCG18L239-120	L	2.39	1.2	●			3	65
TCG18R300-150	R	3	1.5	●			3	65
TCG18L300-150	L	3	1.5	●			3	65
TCG18R318-159	R	3.18	1.59	●			3	65
TCG18L318-159	L	3.18	1.59	●			3	65

5 pieces per package
● : Line up

TCP18R/L (lightly honed edge)



Right-hand (R) shown.

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

★ : First choice



Designation	HAND	CW±0.02	RE	Coated												CDX	DAXN	
				AH725														
TCP18R033-005	R	0.33	0.05	●													0.8	65
TCP18L033-005	L	0.33	0.05	●													0.8	65
TCP18R043-005	R	0.43	0.05	●													1.2	65
TCP18L043-005	L	0.43	0.05	●													1.2	65
TCP18R050-005	R	0.5	0.05	●													1.2	65
TCP18L050-005	L	0.5	0.05	●													1.2	65
TCP18R075-005	R	0.75	0.05	●													2	65
TCP18L075-005	L	0.75	0.05	●													2	65
TCP18R095-005	R	0.95	0.05	●													2	65
TCP18L095-005	L	0.95	0.05	●													2	65
TCP18R100-010	R	1	0.1	●													2	65
TCP18L100-010	L	1	0.1	●													2	65
TCP18R120-010	R	1.2	0.1	●													2	65
TCP18L120-010	L	1.2	0.1	●													2	65
TCP18R125-010	R	1.25	0.1	●													2	65
TCP18L125-010	L	1.25	0.1	●													2	65
TCP18R140-010-35	R	1.4	0.1	●													3	65
TCP18L140-010-35	L	1.4	0.1	●													3	65
TCP18R145-010	R	1.45	0.1	●													2	65
TCP18L145-010	L	1.45	0.1	●													2	65
TCP18R145-010-35	R	1.45	0.1	●													3	65
TCP18L145-010-35	L	1.45	0.1	●													3	65
TCP18R150-010	R	1.5	0.1	●													2	65
TCP18L150-010	L	1.5	0.1	●													2	65
TCP18R150-010-35	R	1.5	0.1	●													3	65
TCP18L150-010-35	L	1.5	0.1	●													3	65
TCP18R175-010	R	1.75	0.1	●													2	65
TCP18L175-010	L	1.75	0.1	●													2	65
TCP18R175-010-35	R	1.75	0.1	●													3	65
TCP18L175-010-35	L	1.75	0.1	●													3	65
TCP18R200-010	R	2	0.1	●													2.5	65
TCP18L200-010	L	2	0.1	●													2.5	65
TCP18R200-010-35	R	2	0.1	●													3	65
TCP18L200-010-35	L	2	0.1	●													3	65
TCP18R250-010	R	2.5	0.1	●													2.5	65
TCP18L250-010	L	2.5	0.1	●													2.5	65
TCP18R250-010-35	R	2.5	0.1	●													3	65
TCP18L250-010-35	L	2.5	0.1	●													3	65
TCP18R300-010	R	3	0.1	●													2.5	65
TCP18L300-010	L	3	0.1	●													2.5	65
TCP18R300-010-35	R	3	0.1	●													3	65
TCP18L300-010-35	L	3	0.1	●													3	65

5 pieces per package

● : Line up

STANDARD CUTTING CONDITIONS

TCF18L (Face grooving)

ISO	Workpiece materials	Grades	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Low carbon steel S15C, C15E, C15E4, S20C, C20, etc.	SH725	30 - 100	0.01 - 0.04
	Carbon steels, Alloy steel S55C, C55, SCM440, 42CrMoS4, etc.	SH725	30 - 100	0.01 - 0.04
	Prehardened steel NAK80, PX5, etc.	SH725	30 - 100	0.01 - 0.04
M	Stainless steel SUS304, X5CrNi18-9, X5CrNiMo17-12-2, etc.	SH725	30 - 100	0.01 - 0.04
K	Grey cast iron FC250, GG25, 250, FC300, GG30, 300, etc.	SH725	30 - 100	0.01 - 0.04
	Ductile cast iron FCD400, 400-15, FCD600, GGG60, 600-3, etc.	SH725	30 - 100	0.01 - 0.04
S	Titanium alloys Ti-6Al-4V, etc.	SH725	20 - 40	0.01 - 0.04
	Superalloys Inconel718, etc.	SH725	10 - 30	0.01 - 0.04

External

Internal

Face

Parting

Others

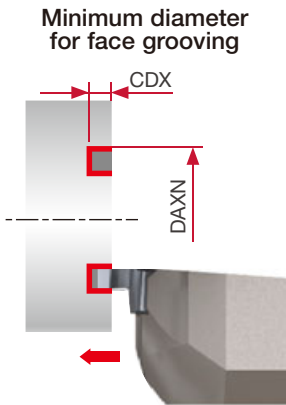
TCS18R/L, TCL18R/L (3D chipbreaker), TCG18R/L (honed edge), TCG18R/L (Full R)

ISO	Workpiece materials	Grade	Cutting speed V _c (m/min)	Feed: f (mm/rev)		
				TCL18	TCS18	TCG18
P	Low carbon steel S15C, SS400, etc., C15E4, E275A, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Carbon steel, Alloy steel S55C, SCM440, etc., C55, 42CrMo4, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Prehardened steel NAK80, PX5, etc.	AH7025	80 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
M	Stainless steel SUS304, SUS316, etc., X5CrNi18-9, X5CrNiMo17-12-3, etc.	AH7025	50 - 120	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
K	Grey cast iron FC250, FC300, etc., 250, 300, etc., GG25, GG30, etc.	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Ductile cast iron FCD400, etc., 400-15S, etc., GGG40, etc.	AH7025	50 - 180	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	30 - 60	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14
	Superalloys Inconel718, etc.	AH7025	20 - 40	0.03 - 0.12	0.04 - 0.16	0.04 - 0.14

TCP18R/L (lightly honed edge), TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Low carbon steel S15C, SS400, etc., C15E4, E275A, etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Carbon steel, Alloy steel S55C, SCM440, etc., C55, 42CrMo4, etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Prehardened steel NAK80, PX5, etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
M	Stainless steel SUS304, SUS316, etc., X5CrNi18-9, X5CrNiMo17-12-3, etc.	First choice	SH725	50 - 120	0.03 - 0.1
		Toughness	AH725	50 - 120	0.03 - 0.1
K	Grey cast iron FC250, FC300, etc., 250, 300, etc., GG25, GG30, etc.	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
	Ductile cast iron FCD400, etc., 400-15S, etc., GGG40, etc.	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	30 - 80	0.03 - 0.1
		Toughness	AH725	30 - 80	0.03 - 0.1
	Superalloys Inconel718, etc.	First choice	AH725	20 - 40	0.03 - 0.1

Precautions of processing



Minimum face diameter DAXN (mm)	Maximum groove depth CDX (mm)
65	3

Grade

A

Insert

B

Ext. Toolholder

C

Int. Toolholder

D

Threading

E

Grooving

F

Miniature tool

G

Milling cutter

H

Endmill

I

Drilling tool

J

Tooling System

K

User's Guide

L

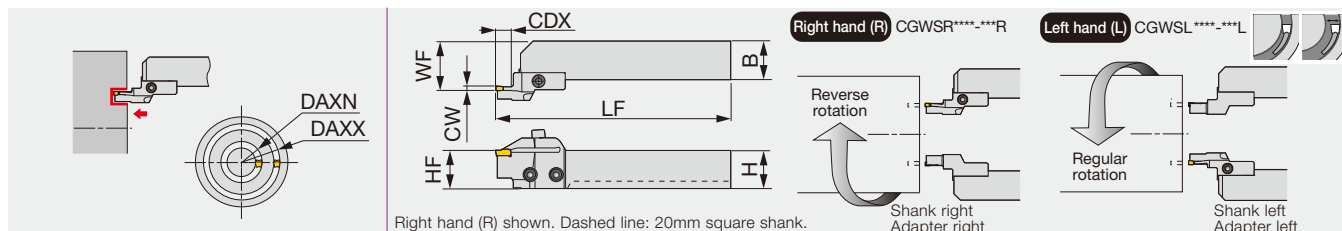
Index

M

MY-T SERIES

#S/D##R/L+CGWSR/L

Adapter for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)



Designation	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 adapter; a shank; a adapter. Combining the designations of a adapter 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 adapter.
Use right-hand shanks (CGWSR~) with right-hand adapters (~R); and left-hand shanks (CGWSL~) with left-hand adapters (~L).
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Adapter 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

Combination of adapter and shank

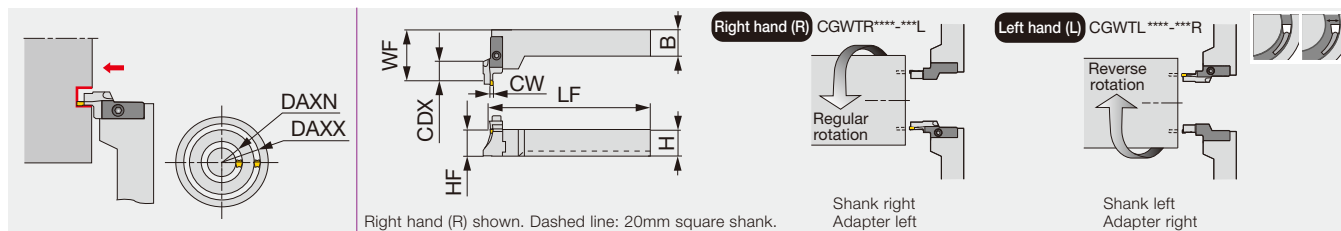
Shank	Adapter	
	S/DR	**S/D**L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

● : Corresponding

Reference pages: Inserts → **F217 - F220**, Shanks → **F216**, Standard cutting conditions → **F221**

#S/D##R/L+CGWTR/L

Adapter for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)



Designation	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 adapter; a shank; a adapter. Combining the designations of a adapter 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 adapter.
Use right-hand shanks (CGWTR~) with left-hand adapters (~L); and left-hand shanks (CGWTL~) with right-hand adapters (~R).
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Adapter 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

Combination of adapter and shank

Shank	Adapter	
	S/DR	**S/D**L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

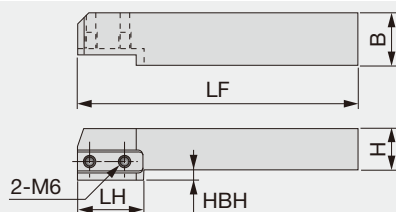
● : Corresponding

Reference pages: Inserts → **F217 - F220**, Shanks → **F216**, Standard cutting conditions → **F221**

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.

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



External



Internal



Face

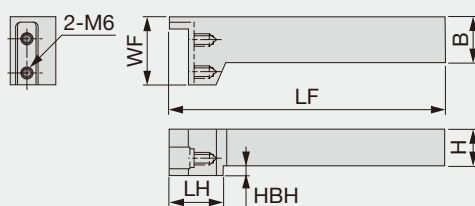


Parting

Others

CGWTR/L

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



Right hand (R) shown.

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

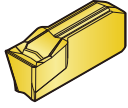
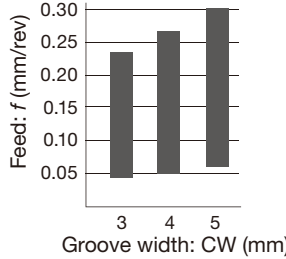
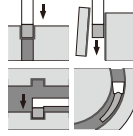
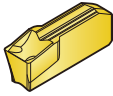
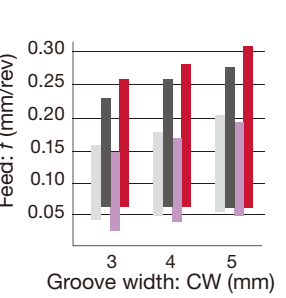
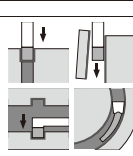
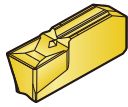
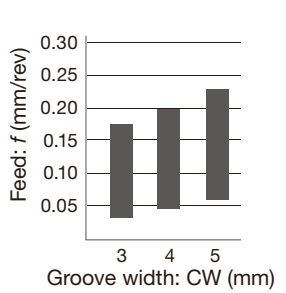
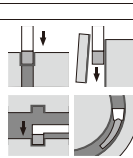
SPARE PARTS



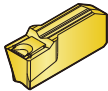
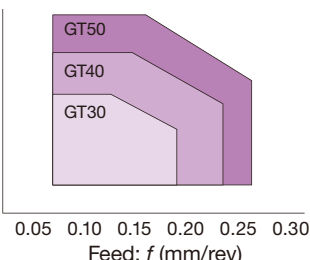
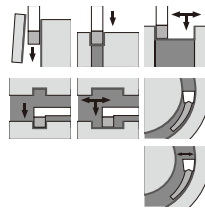
Designation	Adapter screw
CGW*R/L...	CSHB-6

Reference pages: Inserts → **F217 - F220**, Standard cutting conditions → **F221**

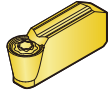
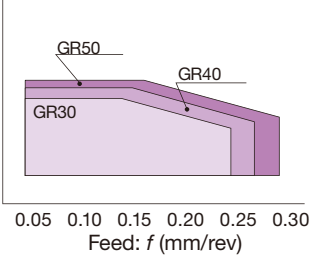
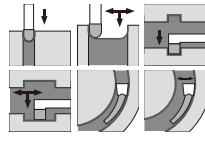
Face grooving

GF  F219	1st choice for face grooving Low cutting force and good chip control for face grooving CW = 3 - 5 mm	 Feed: f (mm/rev) Groove width: CW (mm) ■ Face grooving 
GE  F218	1st choice for external grooving and parting Excellent chip control for grooving CW = 3 - 5 mm	 Feed: f (mm/rev) Groove width: CW (mm) ■ External grooving ■ Internal grooving ■ Face grooving ■ Parting 
GN  F220	1st choice for internal grooving Low cutting force and good chip control for internal grooving CW = 3 - 5 mm	 Feed: f (mm/rev) Groove width: CW (mm) ■ Face grooving 

External grooving and turning

GT  F218	1st choice for turning Low cutting force and good chip control for traversing CW = 3 - 5 mm	 Depth of cut a_p (mm) Feed: f (mm/rev) GT50 GT40 GT30 
---	--	---

For profiling

GR  F219	Full radius type Low cutting force and good chip control for profiling CW = 3 - 5 mm	 Depth of cut a_p (mm) Feed: f (mm/rev) GR50 GR40 GR30 
---	---	---

For aluminium and non-ferrous metal

GE-AL



F220

Reduce cutting force and welding
due to sharp chipbreaker

CW = 3 - 4 mm



Groove width: CW (mm)	Feed: f (mm/rev)
3	0.10
4	0.10

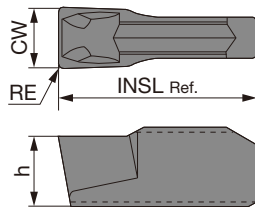


Please see page **F***** for the product details.

■ INSERTS

GE

For external grooving and parting



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

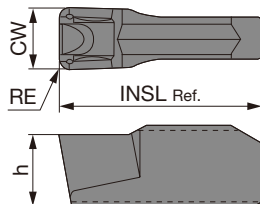
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated				Cermet						INSL	h	
			T9225	AH120	GH730			NS9530							
GE30	3	0.2	●	●	●			●						10	3.5
GE40	4	0.2	●	●	●			●						10	4
GE50	5	0.2	●	●	●			●						12	4.5

● : Line up

GT

For external grooving and turning



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

★ : First choice
☆ : Second choice

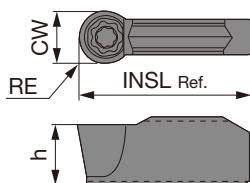
Designation	CW ₀ ^{+0.1}	RE	Coated				Cermet						INSL	h
			T9225	AH120	GH730			NS9530						
GT30	3	0.4	●	●			●						10	3.5
GT40	4	0.4		●	●			●					10	4
GT50	5	0.4	●	●	●			●					12	4.5

● : Line up

Reference pages: Toolholders → **F214 - F216**, Standard cutting conditions → **F221**

GR

For profiling (full radius)



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

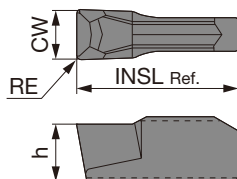
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet			INSL	h
			T9225	AH120	GH730	NS9530				
GR30	3	1.5	●	●	●	●			10	3.5
GR40	4	2	●	●	●	●			10	4
GR50	5	2.5	●	●	●	●			12	4.5

● : Line up

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	RE	Coated		Cermet		INSL	h
			GH730	NS9530				
GF30	3	0.2	●	●			10	3.5
GF40	4	0.2	●	●			10	4
GF50	5	0.2	●	●			12	4.5

● : Line up

For internal grooving

[illegible]

● : Line up

For aluminium and non-ferrous metal

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

★ : First choice
☆ : Second choice

Designation	$CW_{0}^{+0.1}$	RE	Uncoated							INSL	h
			KS05F								
GE30-AL	3	0.2	●							10	3.5
GE40-AL	4	0.2	●							10	4

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		NS9530	100 - 200
		GH730, AH120	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		NS9530	80 - 180
		GH730, AH120	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		NS9530	80 - 150
		GH730, AH120	50 - 120
M	Stainless steel	GH730, AH120	50 - 120
K	Grey iron, Ductile cast iron	GH730, AH120	50 - 180
N	Aluminium alloy, Non-ferrous metal	KS05F	200 - 300

For face grooving

Operation	Feed: f (mm/rev)		
	Groove width: CW (mm)		
	3	4	5
Face grooving (GE**)	0.06 - 0.22	0.06 - 0.24	0.07 - 0.26
Face grooving (GF**)	0.04 - 0.25	0.05 ~ 0.26	0.05 - 0.30
Traversing (GT**)	$ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	$ap = 0.5 - 2$ $f = 0.06 - 0.25$	$ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Traversing (GR**)	$ap = 0.5 - 1.4$ $f = 0.05 - 0.25$	$ap = 0.5 - 1.5$ $f = 0.05 - 0.26$	$ap = 0.5 - 1.6$ $f = 0.05 - 0.3$
Grooving for Aluminium alloys (GE*-AL)	0.03 - 0.1	0.03 - 0.1	-

For diameter compensation values in traversing, **F115** page

When vibration occurs in turning, please use the lower limit value in the above table.

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

Endmill

Drilling tool

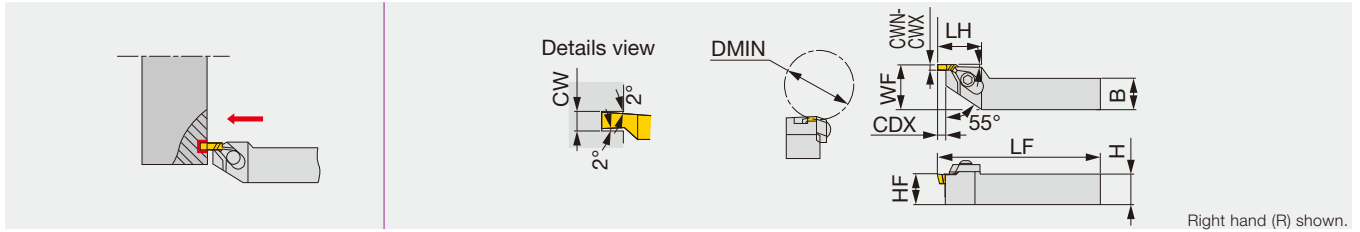
Tooling System

User's Guide

Index

GX-R/LF

Face grooving toolholder



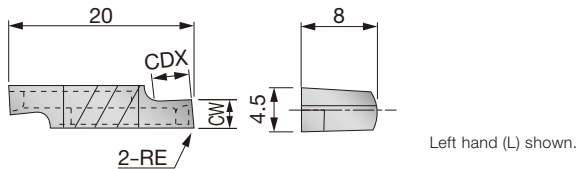
Designation	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque*
GX-2525R/LF	1	4.5	55	1.5 - 6	25	25	150	35	25	32	XNL/R63...	5

Use right-hand toolholders (GX-...RF) with left-hand inserts (XNL); and left-hand toolholders (GX-...LF) with right-hand inserts (XNR).
Torque*: Recommended clamping torque (N·m)

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



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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05	RE	Cermet		Uncoated						CDX
				NS9530		TH10						
XNR6310-02	R	1	0.2	●		●						1.5
XNL6310-02	L	1	0.2	●		●						1.5
XNR6315-02	R	1.5	0.2	●		●						2.3
XNL6315-02	L	1.5	0.2	●		●						2.3
XNR6320-02	R	2	0.2	●		●						3
XNL6320-02	L	2	0.2	●		●						3
XNR6325-02	R	2.5	0.2	●		●						3.8
XNL6325-02	L	2.5	0.2	●		●						3.8
XNR6330-02	R	3	0.2	●		●						4.5
XNL6330-02	L	3	0.2	●		●						4.5
XNR6335-02	R	3.5	0.2	●		●						5.3
XNL6335-02	L	3.5	0.2	●		●						5.3
XNR6340-02	R	4	0.2	●		●						6
XNL6340-02	L	4	0.2	●		●						6
XNR6345-02	R	4.5	0.2	●		●						6
XNL6345-02	L	4.5	0.2	●		●						6

● : Line up

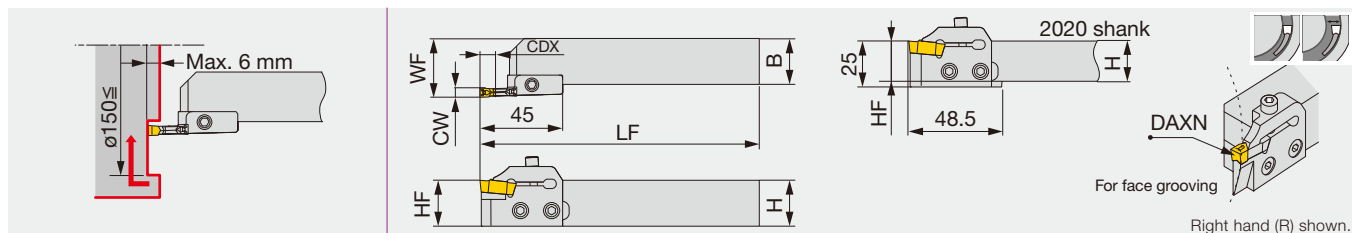
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed: f (mm/rev)		
				CW < 2 mm	CW = 2 ~ 4 mm	CW > 4 mm
P	Carbon steels	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
K	Cast irons, Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25

MY-T SERIES

CGWSR/L-FLR/L5TP

Face grooving and turning toolholder



Designation	CW	DAXN	CDX	H	B	LF	HF	WF	Insert	Shank	Adapter	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 adapter; a shank; a adapter. Combining the designations of a adapter 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 adapter.

Note: Use right-hand shanks (CGWSR...) with right-hand adapters (FLR5TP); and left-hand shanks (CGWSL...) with left-hand adapters (FLR5TP).

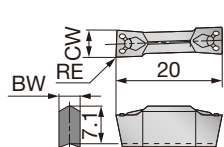
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

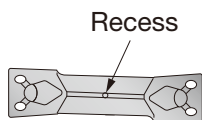
Designation	Clamping screw	Adapter screw	Wrench
CGWSR/L****-FLR/L5TP	CHHM5-18	CSHB-6	P-4

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)

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

★ : First choice
☆ : Second choice

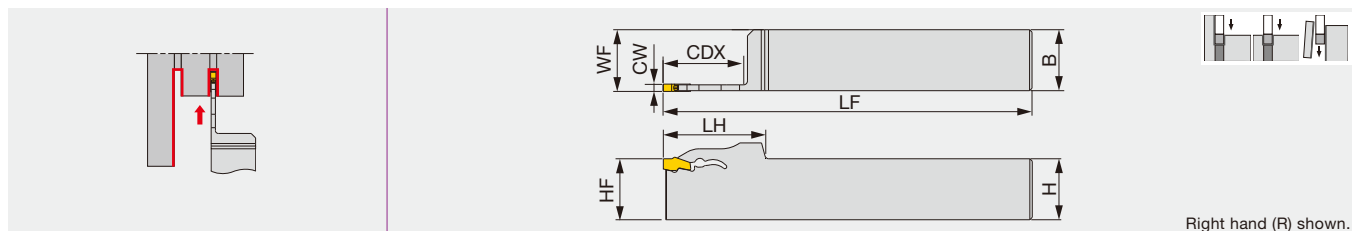
Designation	HAND	CW±0.05	RE	Coated		Cermet		Uncoated		BW
				T9225		NS9530		UX30		
FLEX30R	R	3	0.4			●				2.2
FLEX30L	L	3	0.4			●				2.2
FLEX40R	R	4	0.4			●				3.1
FLEX40L	L	4	0.4			●				3.1
FLEX50R	R	5	0.4	●		●		●		4
FLEX50L	L	5	0.4	●		●		●		4

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed: f (mm/rev)	
				Grooving	Turning
P	Carbon steels	T9225	80 - 300	0.05 - 0.25	0.1 - 0.3
		NS9530	80 - 200	0.05 - 0.25	0.1 - 0.3
		UX30	60 - 150	0.05 - 0.25	0.1 - 0.3

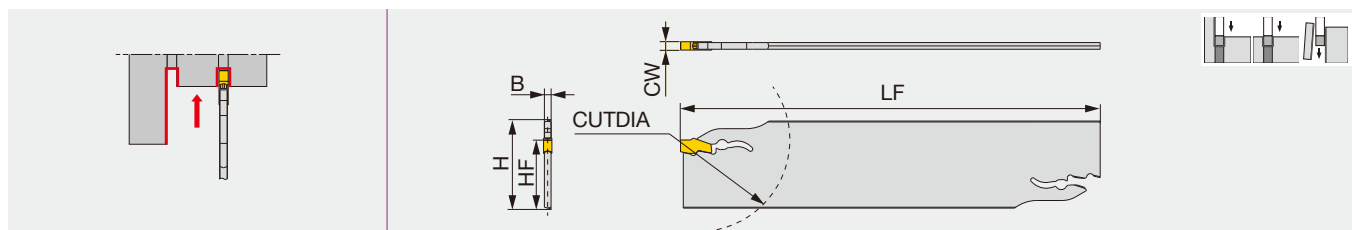
External toolholders for grooving and parting



Designation	CW	CDX	Seat size	H	B	LF	LH	HF	WF
QSER/L2020-2T26	2	26	2	20	20	125	36	20	20.1
QSER/L2020-2T33	2	33	2	20	20	125	42	20	20.1
QSER/L2525-2T26	2	26	2	25	25	150	36	25	25.1
QSER/L2525-2T33	2	33	2	25	25	150	42	25	25.1
QSER/L2020-3T26	3	26	3	20	20	125	36	20	20.3
QSER/L2020-3T33	3	33	3	20	20	125	42	20	20.3
QSER/L2525-3T26	3	26	3	25	25	150	36	25	25.3
QSER/L2525-3T33	3	33	3	25	25	150	42	25	25.3
QSER/L2020-4T33	4	33	4	20	20	125	42	20	20.4
QSER/L2525-4T33	4	33	4	25	25	150	42	25	25.4
QSER/L2525-5T33	5	33	5	25	25	150	42	25	25.5

QSP

Blades for external deep grooving and parting



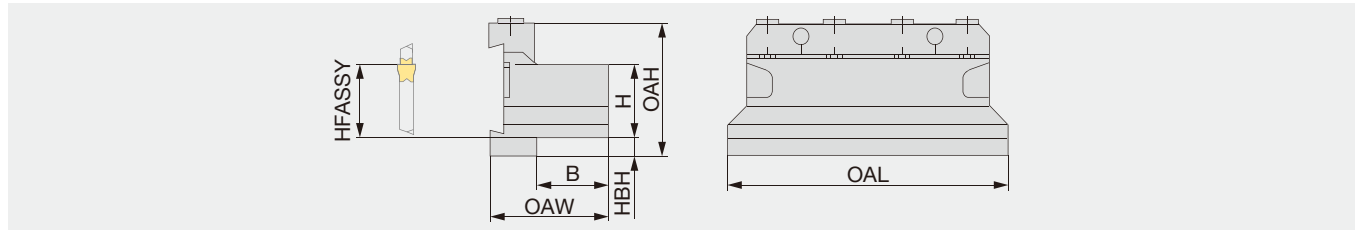
Designation	CW	CUTDIA	Seat size	H	B	LF	HF
QSP26-2D	2	52	2	26	1.8	150	21.4
QSP32-2D	2	66	2	32	1.8	150	24.8
QSP26-3D	3	75	3	26	2.4	150	21.4
QSP32-3D	3	120	3	32	2.4	150	24.8
QSP26-4D	4	80	4	26	3.2	150	21.4
QSP32-4D	4	120	4	32	3.2	150	24.9
QSP32-5D	5	120	5	32	4	150	24.9

SPARE PARTS

Designation	Wrench
QS...	QL-39

CTBU

Tool block for QSP blades



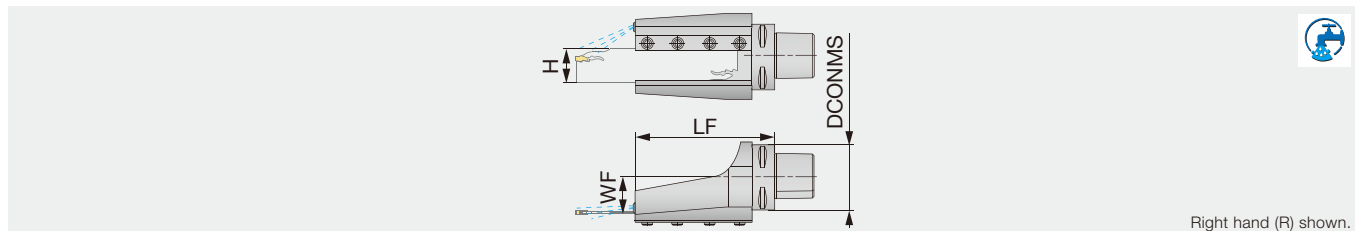
Designation	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU20-26	20	21	86	20	9	43	38	QSP26...
CTBU25-26	25	23	110	25	5	45	43	QSP26...
CTBU20-32	20	19	100	20	13	50	38	QSP32...
CTBU25-32	25	23	110	25	8	50	42	QSP32...
CTBU32-32	32	29	110	32	5	54	48	QSP32...

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

C-TBK-R/L

Toolholder with TungCap connection for parting-off blade



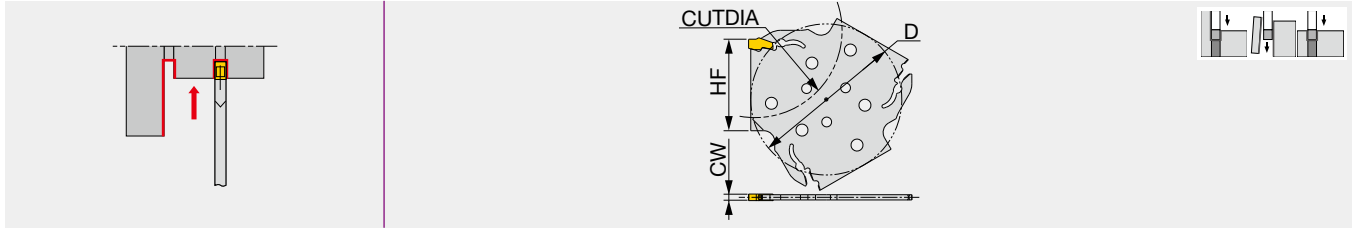
Designation	DCONMS	WF	LF	H
C6TBK-32R/L	63	32	138	32

Applicable for 3 MPa coolant

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench	Coolant parts
C6TBK-32R/L	BK32-9WEDG	SRM6X16DIN912-12.9	HW5.0	EZ125

Reference pages: Inserts → **F227, F228**, Standard cutting conditions → **F228**



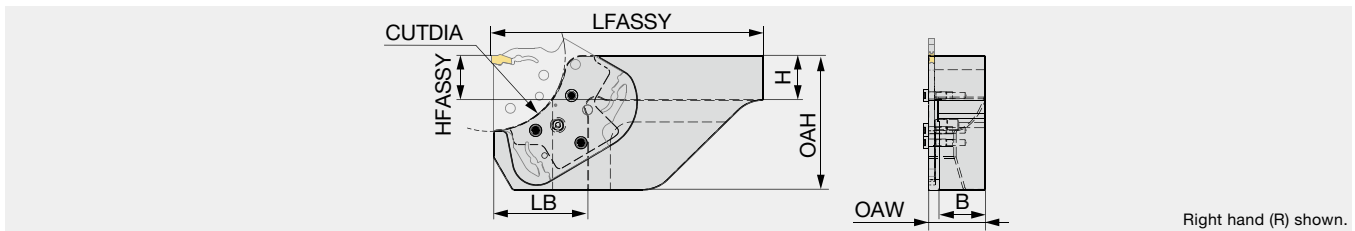
Designation	CW	Seat size	CUTDIA	HF	D
QSG52-2T	2	2	52	27	48.3
QSG82-2T	2	2	82	42	69.3
QSG52-3T	3	3	52	27	48.3
QSG82-3T	3	3	82	42	69.3
QSG120-3T	3	3	120	61	88
QSG52-4T	4	4	52	27	69.3
QSG82-4T	4	4	82	42	69.3
QSG120-4T	4	4	120	61	88
QSG120-5T	5	5	120	61	88

SPARE PARTS

Designation	Wrench
QSG...	QL-39

CHTBR/L

Tool block for QSG blade

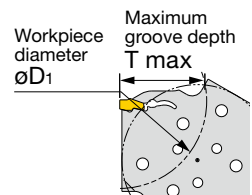


Designation	CUTDIA	H	B	LFASSY	HFASSY	OAH	OAW	LB
CHTBR/L2020-52	52	20	20.5	100	20	50	26.5	37
CHTBR/L2525-52	52	25	25.5	125	25	50	31.5	37
CHTBR/L2020-82	82	20	20.5	140	20	75	26.5	53
CHTBR/L2525-82	82	25	25.5	150	25	75	31.5	53
CHTBR/L2525-120	120	25	25.5	165	25	100	31.5	67
CHTBR/L3232-120	120	32	32.5	165	32	100	38.5	67

The blade clamping screw heads protrude out for as much as 3.1 mm over the insert cutting edge point. Maintain the clearance from the chucking device to avoid interference.

SPARE PARTS

Designation	Clamping screw	Grip	Torx bit
CHTBR/L...	SR ISO 14580 M4X10	SW6-SD	BLDT20/S7



Maximum groove depth (T max) as function of workpiece diameter (øD1)

Designation	øD ₁																	
CHTBR/L***-52	53	54	55	56	58	60	62	65	68	72	78	84	92	102	115	133	159	198
CHTBR/L***-82	104	108	112	116	121	127	134	142	151	162	176	192	212	237	270	313	375	468
CHTBR/L***-120	205	214	224	235	247	261	278	297	319	345	376	414	462	522	601	709	865	1112
T max	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4

Designation	øD1									
CHTBR/L****-82	83	84	84	85	86	87	89	90	92	94
CHTBR/L****-120	144	147	150	153	156	160	164	168	173	178
T max	34	33	32	31	30	29	28	27	26	25

Designation									øD1								
CHTBR/L****-120	121	122	123	124	125	126	127	128	129	130	131	133	134	136	138	140	142
T max	55	52	50	48	47	46	45	44	43	42	41	40	39	38	37	36	35

Reference pages: Inserts → **F227, F228**, Standard cutting conditions → **F228**

CHIPBREAKER GUIDE

QGM



First choice for grooving and parting

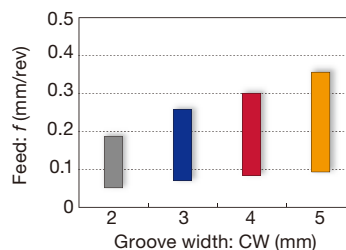
Smooth chip evacuation
Well-designed edge with
high strength
CW = 2 - 5 mm

TUNGF^{FEED}BLADE

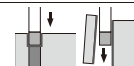
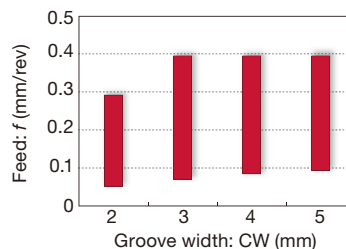
Enables high feed machining
when combined with extremely
rigid TungFeed-Blade toolholder

CW = 2 - 5 mm
CUTDIA = $\varnothing 52$, $\varnothing 82$, $\varnothing 120$ mm

■ Standard feed



■ Recommended feed when using TungFeed-Blade



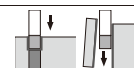
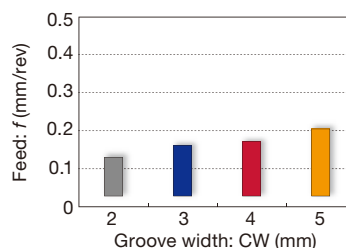
QGS



Lower cutting force and superior sharpness

Uniquely designed edge
and chipbreaker
CW = 2 - 5 mm

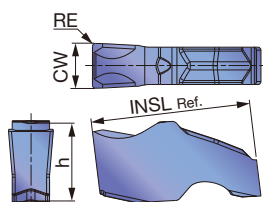
■ Standard feed



INSERTS

QGM

External deep grooving and parting



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

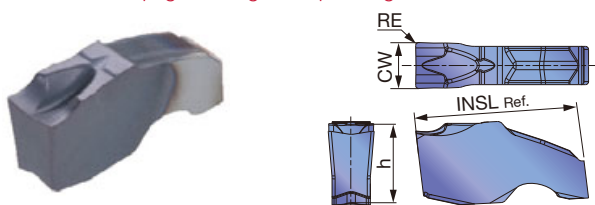
★ : First choice

Designation	Seat size	CW±0.05	RE	Coated						INSL	h
				AH7025							
QGM2-020	2	2	0.2	●						11	5.3
QGM3-020	3	3	0.2	●						11	5.3
QGM4-030	4	4	0.3	●						13	7.3
QGM5-030	5	5	0.3	●						13	7.3

●: Line up

Reference pages: Toolholders → **F224 - F226**, Standard cutting conditions → **F228**

External deep grooving and parting



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

★ : First choice

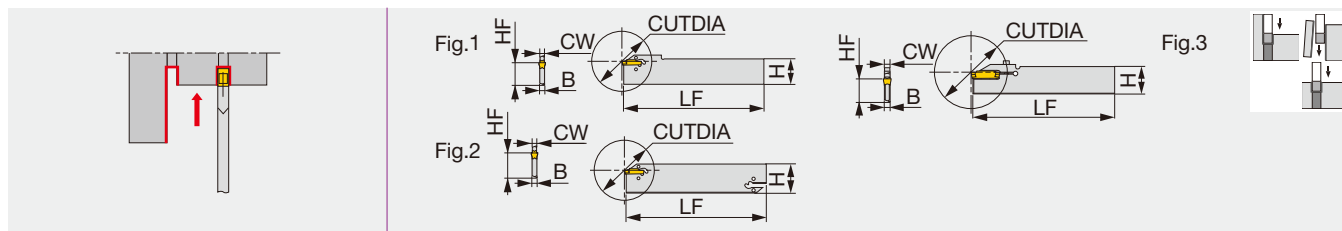
[illegible]

●: Line up

ISO

ISO	Workpiece material	Hardness	Grade	Cutting speed Vc (m/min)
P	Steels C45, 34CrMo4, etc.	< 300 HB	AH7025	50 - 180
M	Stainless steel X10CrNiS18-9, etc.	< 200 HB	AH7025	50 - 120
K	Gray cast iron GG25, 250, etc.	-	AH7025	50 - 180
	Ductile cast irons GGG45, 450-10S, etc.	-	AH7025	50 - 120
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	20 - 60
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	20 - 80

Please see page **F227** for feed: f (mm/rev).



Designation	CW	Seat size	CUTDIA	H	B	LF	HF	Fig.	Torque*
CGP26-1.4S	1.4	1	26	26	1	150	21.4	1	-
CGP32-1.4D	1.4	1	26	32	1	150	24.8	2	-
CGP26-2S	2	2	40	26	1.8	150	21.4	1	-
CGP32-2D	2	2	50	32	1.8	150	24.8	2	-
CGP26-3S	3	3	50	26	2.4	150	21.4	1	-
CGP32-3D	3	3	100	32	2.4	150	24.8	2	-
CGP26-4S	4	4	80	26	3.2	150	21.4	1	-
CGP32-4D	4	4	100	32	3.2	150	24.9	2	-
CGP45-4D	4	4	120	45	3.2	150	38.1	2	-
CGP32-5D	5	5	120	32	4	150	24.9	2	-
CGP32-6D	6	6	120	32	5.2	150	24.9	2	-
CGP32-8S-CL	8	8	80	32	6.2	150	24.9	3	3

When depth is deeper than (insert length - 1.5mm), 1 corner type is recommended.

Wrench (CRW...) is not included. Please order it separately.

*Torque: Recommended clamping torque (N·m)

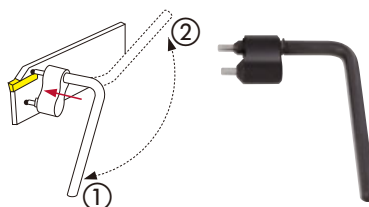
SPARE PARTS

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	-

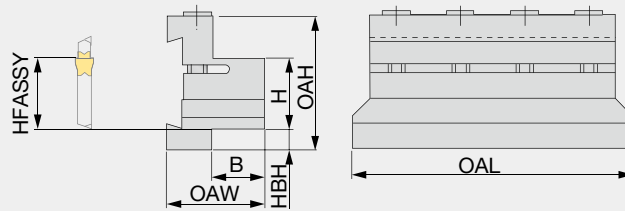
Caution

Newly developed clamp

Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.



①→② : unclamp
②→① : clamp



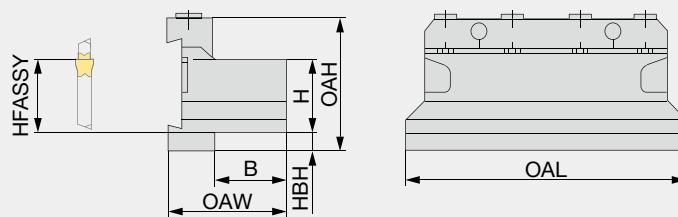
Designation	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBF25-45	25	22	110	25	25	66	40	CGP45...
CTBF32-45	32	28	120	32	18	66	45	CGP45...

External

Internal

CTBU

Tool block for CGP blade



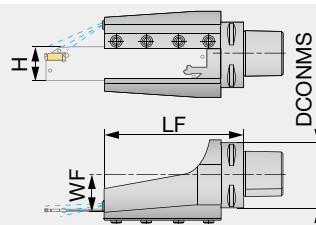
Designation	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU20-26	20	21	86	20	9	43	38	CGP26...
CTBU25-26	25	23	110	25	5	45	43	CGP26...
CTBU20-32	20	19	100	20	13	50	38	CGP32...
CTBU25-32	25	23	110	25	8	50	42	CGP32...
CTBU32-32	32	29	110	32	5	54	48	CGP32...

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBF...	-	CM6X1.0X40-A	P-5
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

C-TBK-R/L

Toolholder with TungCap connection for parting-off blade



Right hand (R) shown.

Designation	DCONMS	WF	LF	H
C6TBK-32R/L	63	32	138	32

Applicable for 3 MPa coolant

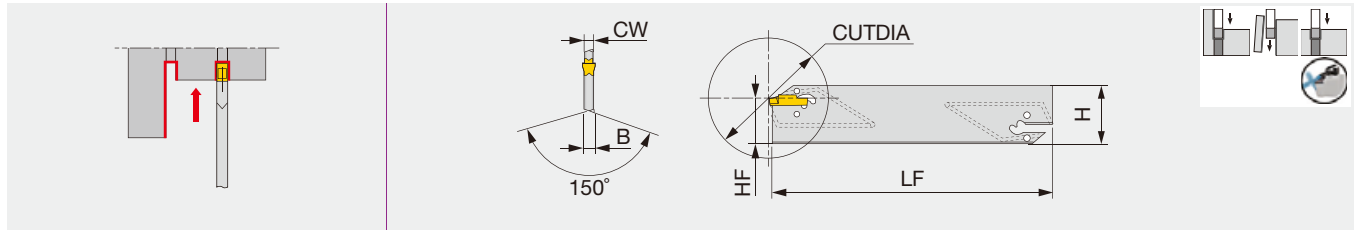
SPARE PARTS

Designation	Clamp	Clamping screw	Wrench	Coolant parts
C6TBK-32R/L	BK32-9WEDG	SRM6X16DIN912-12.9	HW5.0	EZ125

Reference pages: Inserts → **F236 - F245**, Blades → **F229**, Standard cutting conditions → **F246**

CGP32-CHP

External deep grooving and parting blade, with high pressure coolant capability



Designation	CW	Seat size	CUTDIA	H	B	LF	HF
CGP32-2D-CHP	2	2	50	32	1.8	150	24.8
CGP32-3D-CHP	3	3	90	32	2.5	150	24.8
CGP32-4D-CHP	4	4	90	32	3.2	150	24.9
CGP32-5D-CHP	5	5	110	32	4	150	24.9
CGP32-6D-CHP	6	6	110	32	5.2	150	24.9

When depth is deeper than (insert length - 1.5mm), 1 corner type is recommended.
Wrench (CRW...) is not included. Please order it separately.

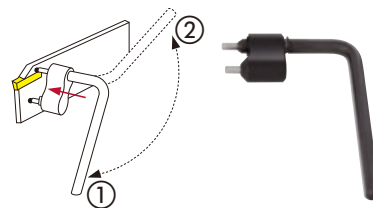
SPARE PARTS

Designation	Sealing screw	Wrench (Optional)
CGP32-*D-CHP	SGC340	CRW33

Caution

Newly developed clamp

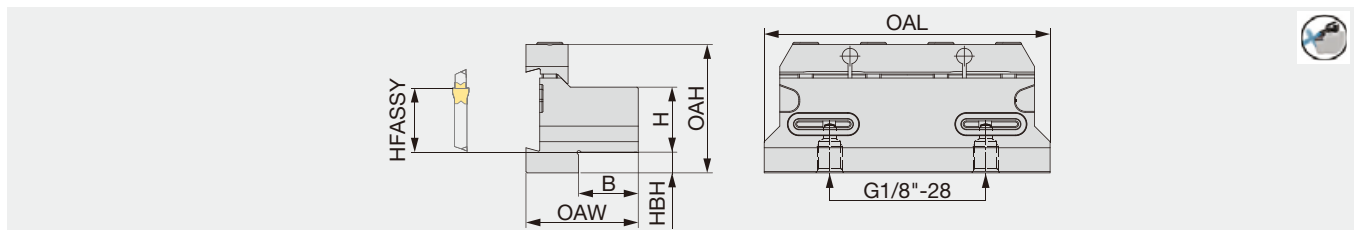
Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.



①→② : unclamp
②→① : clamp

CTBU-CHP

Tool block for CGP-CHP blade, with high pressure coolant capability



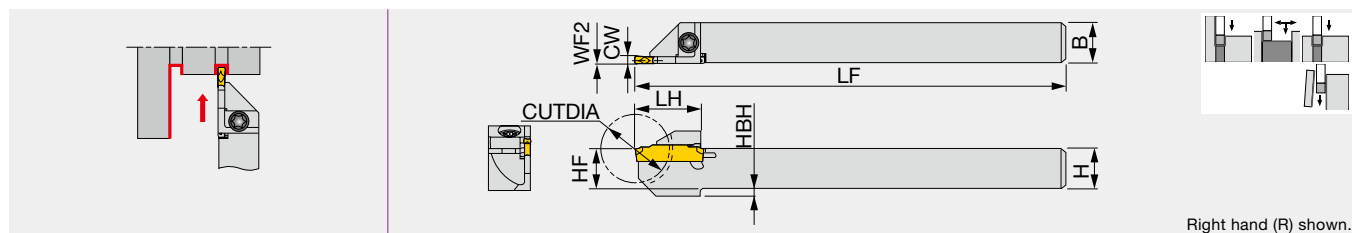
Designation	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU25-32-CHP	25	23	110	25	8	50	43.2	CGP32-*D-CHP

Applicable for 14 MPa coolant

SPARE PARTS

Designation	Clamping screw	Clamp	Wrench	O-ring
CTBU25-32-CHP	SRM6X16DIN912-12.9	CT-110	P-5	OR14X2.5NN

Reference pages: Inserts → **F236 - F245**, Standard cutting conditions → **F246**
Parts for coolant hose → **F266**

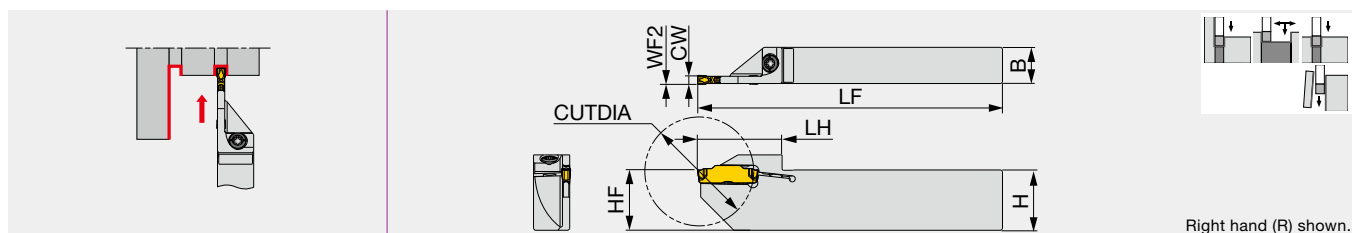


Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	Torque*
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	0.2/10.2	-	3
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	0.2/12.2	-	3
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	0.2/12.2	-	3
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	0.2/14.2	-	3
JCTER/L1616X1.4T16	1.4	1	32	16	16	120	24	16	0.2/16.2	-	3
JCTER/L1010X2T10	2	2	20	10	10	120	19	10	0.1/10.1	2	3
JCTER/L1212F2T12	2	2	24	12	12	85	19	12	0.1/12.1	2	3
JCTER/L1212X2T12	2	2	24	12	12	120	19	12	0.1/12.1	2	3
JCTER/L1414-2T12	2	2	24	14	14	125	19	14	0.1/14.1	-	3
JCTER/L1616X2T16	2	2	32	16	16	120	24	16	0.1/16.1	-	3
JCTER/L1212F3T12	3	3	24	12	12	85	19	12	0.3/12.3	2	3
JCTER/L1212X3T12	3	3	24	12	12	120	19	12	0.3/12.3	2	3
JCTER/L1616X3T16	3	3	32	16	16	120	24	16	0.3/16.3	-	3
JCTER/L2020H3T16	3	3	32	20	20	100	24	20	0.3/20.3	-	3

(1) "WF2" value is calculated with groove width "CW" shown in the table.
Torque*: Recommended clamping torque (N·m)

JCTER/L2012

External grooving and parting toolholder, for Swiss lathes, with 20 mm shank height



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	Torque*
JCTER/L2012H2T18	2	2	36	20	12	100	25	20	0.1/12.1	3
JCTER/L2012H3T21	3	3	42	20	12	100	28	20	0.1/12.1	3

(1) "WF2" value is calculated with groove width "CW" shown in the table.
Torque*: Recommended clamping torque (N·m)

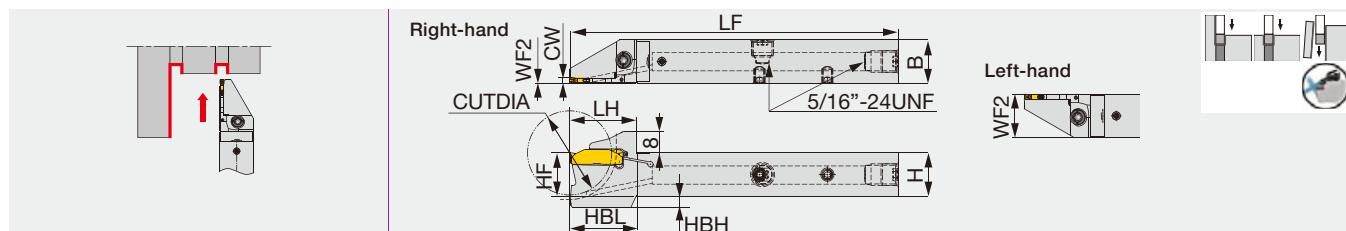
SPARE PARTS

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

JCTER/L-CHP

Direct connection

External grooving and parting toolholder, with high pressure coolant capability



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽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) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

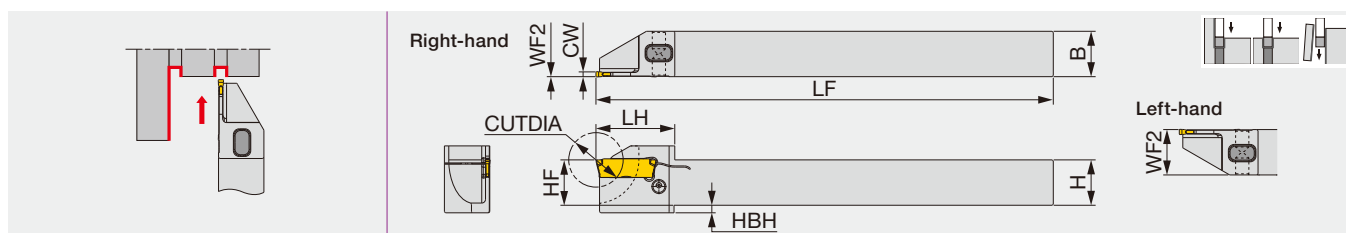
Torque*: Recommended clamping torque (N·m)

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

JTTER/L

External grooving and parting toolholder, for Swiss lathes



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	Torque*
JTTER/L1010H1.2D12	1.2	0.9	12	10	10	100	17	10	0/10	-	1.5
JTTER/L1212F1.2D16	1.2	0.9	16	12	12	85	19	12	0/12	-	1.5
JTTER/L1212X1.2D16	1.2	0.9	16	12	12	120	19	12	0/12	-	1.5
JTTER/L1212X1.2D20	1.2	0.9	20	12	12	120	21	12	0/12	2	1.5
JTTER/L1616X1.2D20	1.2	0.9	20	16	16	120	21	16	0/16	-	2

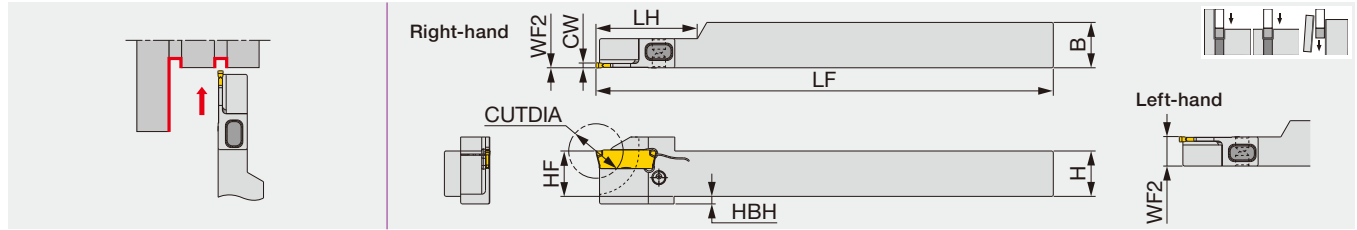
(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Clamping pin	Wrench
JTTER/L1010...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1212...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1616...	SRM5-24145-RL	PIN-32121	P-2.5F

Reference pages: Inserts → **F236 - F245**, Standard cutting conditions → **F246**
Parts for coolant hose → **F266**



Designation	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2 ⁽¹⁾	HBH	Torque*
JTTER/L1010H1.2D12-S	1.2	0.9	12	10	10	100	22.8	10	0/7.7	-	1.5
JTTER1212F1.2D16-S ⁽²⁾	1.2	0.9	16	12	12	85	22.8	12	0	-	1.5
JTTER/L1212X1.2D16-S	1.2	0.9	16	12	12	120	26.8	12	0/7.7	-	1.5
JTTER/L1212X1.2D20-S	1.2	0.9	20	12	12	120	26.8	12	0/7.7	2	1.5
JTTER/L1616X1.2D20-S	1.2	0.9	20	16	16	120	26.8	16	0/7.7	-	1.5

(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

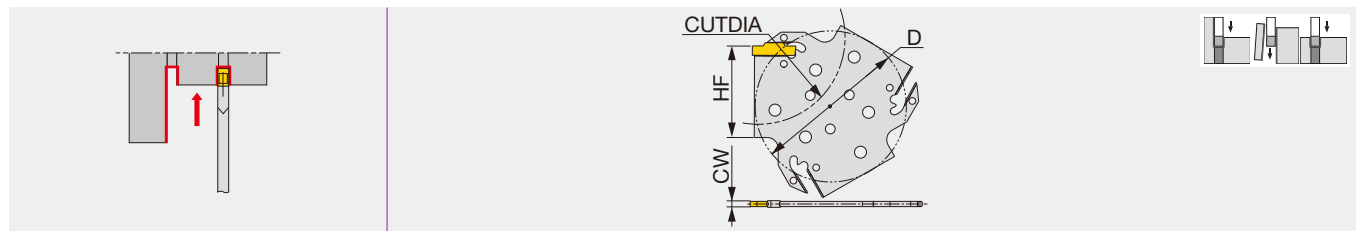
(2) No clamping screw from the insert side.
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Clamping pin	Wrench
JTTER/L*-S	SSM3.5x0.35	PIN-SL-TC	P-2F

CHGP

Parting-off and external grooving blade



Designation	CW	Seat size	CUTDIA	HF	D
CHGP52-2T	2	2	52	27	48.3
CHGP52-3T	3	3	52	27	48.3
CHGP82-3T	3	3	82	42	69.3
CHGP82-4T	4	4	82	42	69.3

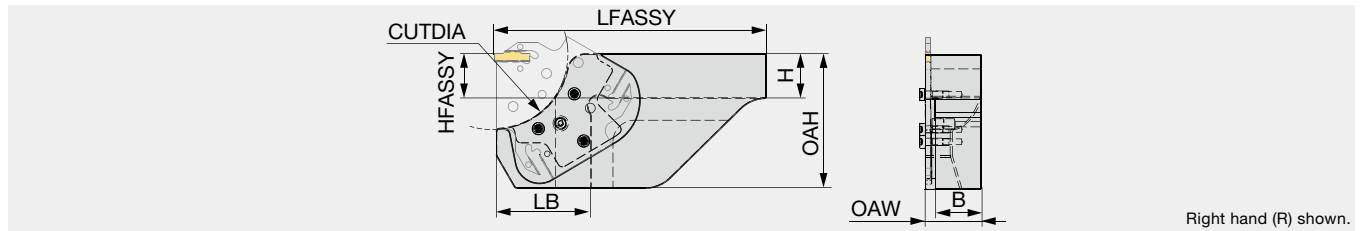
When depth is deeper than insert length - 1.5mm, 1 corner type is recommended.

SPARE PARTS

Designation	Wrench (Option)
CHGP...	CRW33

CHTBR/L

Tool block for CHGP blade



Designation	CUTDIA	H	B	LFASSY	HFASSY	OAH	OAW	LB
CHTBR/L2020-52	52	20	20.5	100	20	50	26.5	37
CHTBR/L2525-52	52	25	25.5	125	25	50	31.5	37
CHTBR/L2020-82	82	20	20.5	140	20	75	26.5	53
CHTBR/L2525-82	82	25	25.5	150	25	75	31.5	53

Note: The blade clamping screw heads protrude out for as much as 3.1 mm over the insert cutting edge point.
Maintain the clearance from the chucking device to avoid interference.

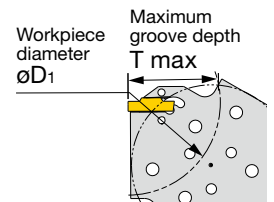
SPARE PARTS

Designation	Clamping screw	Grip	Torx bit
CHTBR/L...	SR ISO 14580 M4X10	SW6-SD	BLDT20/S7

Maximum groove depth (T max) as function of workpiece diameter (ϕD_1)

Designation	ϕD_1															
CHTBR/L****-52	53	54	55	56	58	60	62	65	68	72	78	84	92	102	115	133
CHTBR/L****-82	104	108	112	116	121	127	134	142	151	162	176	192	212	237	270	313
T max	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6

Designation	ϕD_1											
CHTBR/L****-82	83	84	85	86	87	89	90	92	94	96	98	101
T max	34	33	31	30	29	28	27	26	25	24	23	22



External grooving and parting

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



F239, F240

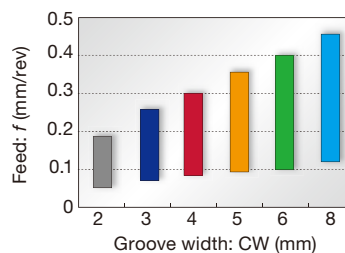
1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 2 - 8 mm

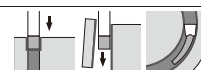
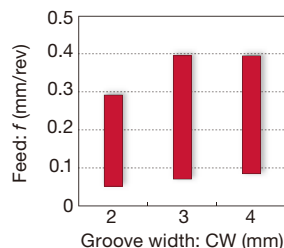
TUNGFEED^{BLADE}

Enables high feed machining when combined with extremely rigid TungFeed-Blade toolholder
CW = 2 - 4 mm
CUTDIA = $\varnothing 52$, $\varnothing 82$ mm

Standard feed



Recommended feed when using TungFeed-Blade



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

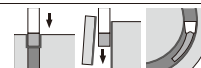
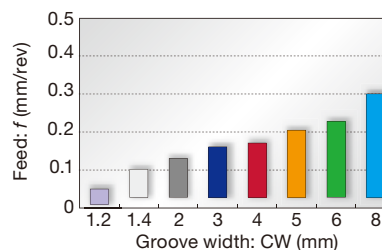


F241, F242

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 1.2 - 8 mm

Standard feed



DGG type (2 corners)

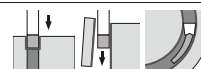
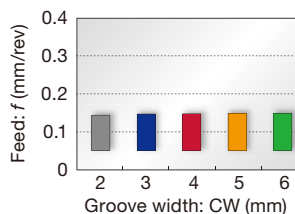


F243

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
CW = 2 - 6 mm

Standard feed



DGL type (2 corners)

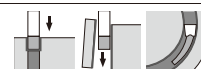
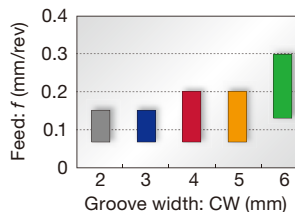


F243

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often gives difficulties in chip control
CW = 2 - 6 mm

Standard feed



External grooving and parting

DTM type
(2 corners)

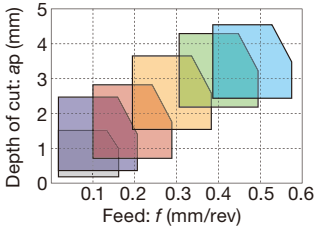


F244

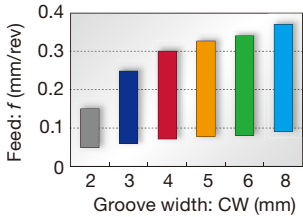
General purpose

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 = 2 - 8 mm

Standard feed and DoC (for turning)



Standard feed



External grooving, turning and parting

DTE type
(2 corners)

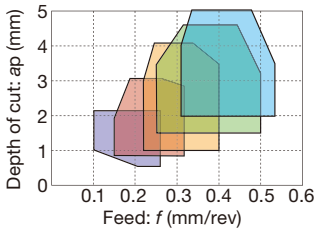


F244, F245

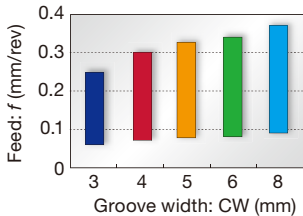
General purpose

Unique chipbreaker makes
chips shorter
Molded and ground insert
available
CW = 2.65 - 8 mm

Standard feed and DoC (for turning)



Standard feed



DTX type
(2 corners)

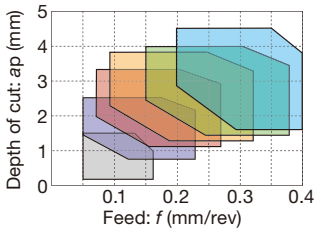


F245

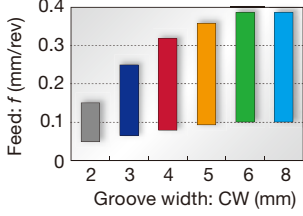
Multi-functional type

Well balanced sharpness
and strength
Multi-functional insert
CW = 2 - 8 mm

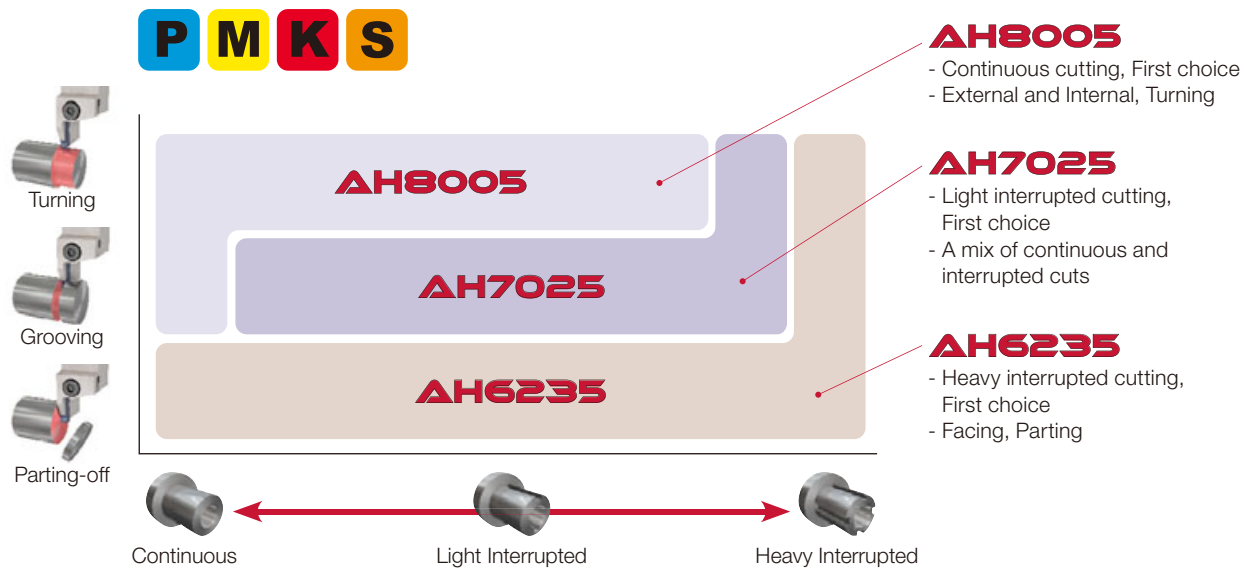
Standard feed and DoC (for turning)



Standard feed



GRADE SELECTION



GRADES

AH8005

P M K S

- First choice for external, internal, and side-turning, continuous cuts

AH7025

P M K S

- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235

P M K

- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725

P M S

- General purpose PVD grade for high fracture resistance

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

BXA10

H

- Coated CBN grade designed for turning hardened steel parts

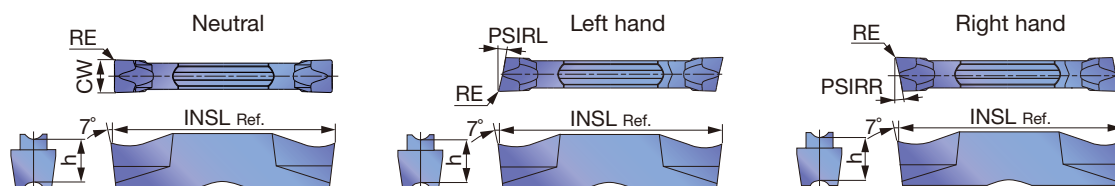
BX360

H

- Developed for grooving applications of hardened steel parts

★ : First choice
☆ : Second choice

● : Line up



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

★ : First choice
☆ : Second choice

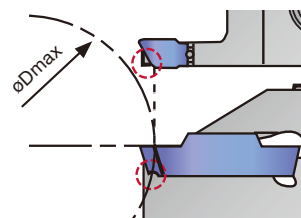
Designation	Seat size	HAND	CW±0.05	RE	Coated					Cermet	Uncoated			INSL	h	PSIRL	PSIRR
					T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F					
DGS1.2-003	0.9	N	1.2	0.03			●							16	4.7	0°	0°
DGS1.4-005	1	N	1.4	0.05			●							16	4.3	0°	0°
DGS1.4-010	1	N	1.4	0.1			●							16	4.3	0°	0°
DGS1.4-016	1	N	1.4	0.16		●	●		●					16	4.3	0°	0°
DGS2-005	2	N	2	0.05			●							20	5	0°	0°
DGS2-010	2	N	2	0.1			●							20	5	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●	●	●		●	20	5	0°	0°
DGS2-020-6R	2	R	2	0.2		●	●		●					20	5	0°	6°
DGS2-020-6L	2	L	2	0.2		●	●		●					20	5	6°	0°
DGS2-002-6R	2	R	2	0.02			●		●					19.5	5	0°	6°
DGS2-002-6L	2	L	2	0.02			●		●					19.5	5	6°	0°
DGS2-020-15R	2	R	2	0.2		●	●		●					20	5	0°	15°
DGS2-020-15L	2	L	2	0.2		●	●		●					20	5	15°	0°
DGS2-002-15R	2	R	2	0.02			●		●					19.5	5	0°	15°
DGS2-002-15L	2	L	2	0.02			●		●					19.5	5	15°	0°
DGS2.39-020	2	N	2.39	0.2		●		●		●				20	5	0°	0°
DGS3-020	3	N	3	0.2	●	●	●	●	●	●	●		●	20	5	0°	0°
DGS3-020-6R	3	R	3	0.2		●	●		●					20	5	0°	6°
DGS3-020-6L	3	L	3	0.2		●	●		●					20	5	6°	0°
DGS3-002-6R	3	R	3	0.02			●		●					19.45	5	0°	6°
DGS3-002-6L	3	L	3	0.02			●		●					19.45	5	6°	0°
DGS3-020-15R	3	R	3	0.2		●	●		●					20	5	0°	15°
DGS3-020-15L	3	L	3	0.2		●	●		●					20	5	15°	0°
DGS3-002-15R	3	R	3	0.02			●		●					19.45	5	0°	15°
DGS3-002-15L	3	L	3	0.02			●		●					19.45	5	15°	0°
DGS3.18-020	3	N	3.18	0.2		●		●		●				20	5	0°	0°
DGS4-030	4	N	4	0.3	●	●	●	●	●	●	●		●	20	5	0°	0°
DGS4-030-4R	4	R	4	0.3		●	●		●					20	5	0°	4°
DGS4-030-4L	4	L	4	0.3		●	●		●					20	5	4°	0°
DGS4.76-040	5	N	4.76	0.4		●		●		●				25	5.5	0°	0°
DGS5-030	5	N	5	0.3	●	●	●	●	●	●	●		●	25	5.5	0°	0°
DGS6-030	6	N	6	0.3	●	●	●	●	●	●			●	25	5.5	0°	0°
DGS6.35-040	6	N	6.35	0.4		●		●		●				25	5.5	0°	0°
DGS8-040	8	N	8	0.4		●		●		●			●	30	6.7	0°	0°

● : Line up

Caution

The tool will interfere with the workpiece when grooving larger diameters than ϕD_{max} .

Designation	øDmax (mm)	Designation	øDmax (mm)
DGM2-002-15R/L	28	DGS2-002-15R/L	28
DGM3-002-15R/L	29	DGS3-002-15R/L	29
DGM4-030-15R/L	30	SGS3-020-15R/L	103
SGM3-020-15R/L	103	SGS3-002-15R/L	34

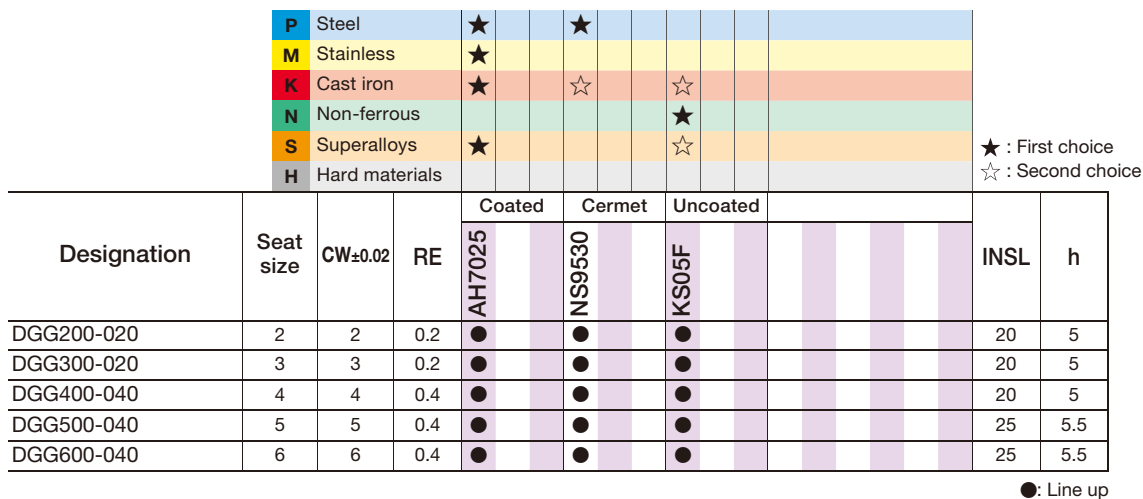




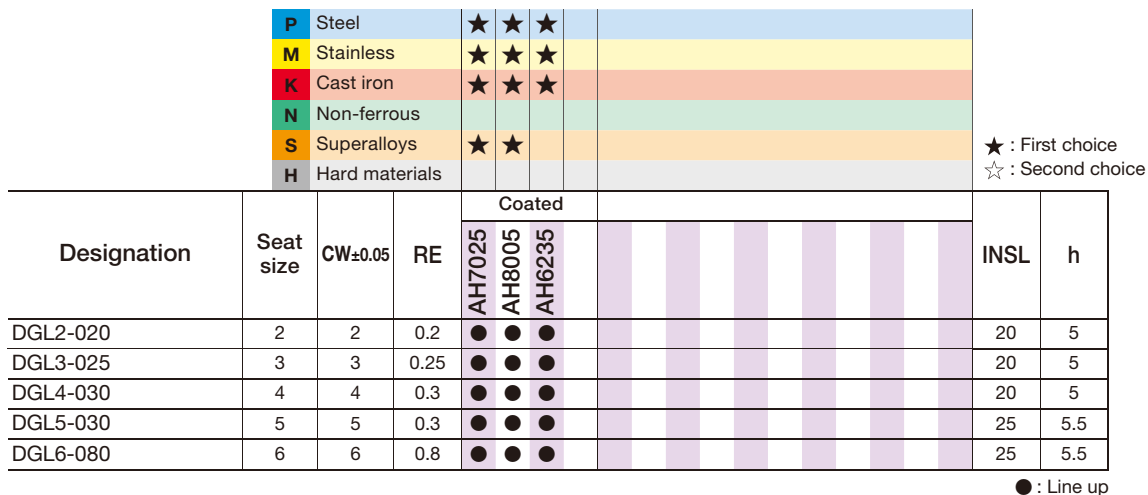
Designation	Seat size	HAND	CW±0.05	RE	Coated					Uncoated								
					AH7025	AH725	AH8005	GH130	AH6235	KS05F			INSL	h	PSIRL	PSIRR		
SGS2-020	2	N	2	0.2	●	●	●	●	●	●					20	5	0°	0°
SGS2-020-6R	2	R	2	0.2	●	●		●							20	5	0°	6°
SGS2-020-6L	2	L	2	0.2	●	●		●							20	5	6°	0°
SGS2-020-15R	2	R	2	0.2	●	●		●							20	5	0°	15°
SGS2-020-15L	2	L	2	0.2	●	●		●							20	5	15°	0°
SGS3-020	3	N	3	0.2	●	●	●	●	●	●					20	5	0°	0°
SGS3-020-6R	3	R	3	0.2	●	●		●							20	5	0°	6°
SGS3-020-6L	3	L	3	0.2	●	●		●							20	5	6°	0°
SGS3-002-6R	3	R	3	0.02		●		●							19.8	5	0°	6°
SGS3-002-6L	3	L	3	0.02		●		●							19.8	5	6°	0°
SGS3-020-15R	3	R	3	0.2	●	●		●							20	5	0°	15°
SGS3-020-15L	3	L	3	0.2	●	●		●							20	5	15°	0°
SGS3-002-15R	3	R	3	0.02		●		●							19.8	5	0°	15°
SGS3-002-15L	3	L	3	0.02		●		●							19.8	5	15°	0°
SGS4-030	4	N	4	0.3	●	●	●	●	●	●					20	5	0°	0°
SGS5-030	5	N	5	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGS6-030	6	N	6	0.3	●	●	●	●	●	●					25	5.5	0°	0°
SGS8-040	8	N	8	0.4	●		●		●						30	6.7	0°	0°

● : Line up

External grooving and parting (for high precision)



External grooving and parting



External/face grooving, turning and parting



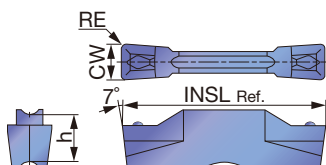
P	Steel	★	★	★		
M	Stainless	★	★	★		
K	Cast iron	★	★	★		
N	Non-ferrous					
S	Superalloys	★	★			
H	Hard materials					

★ : First choice
☆ : Second choice

[illegible]

● : Line up

External/face grooving, turning and parting (for high precision)



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

★ : First choice
☆ : Second choice

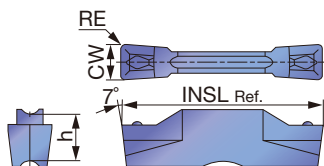
Designation	Seat size	CW±0.02	RE	Coated				Cermet			INSL	h
				T9225	AH7025	AH725	GH130		NS9530			
DTE265-015	3	2.65	0.15	●	●	●	●		●		20	5
DTE300-020	3	3	0.2	●	●	●	●		●		20	5
DTE300-040	3	3	0.4	●	●	●	●		●		20	5
DTE315-015	3	3.15	0.15	●	●	●	●		●		20	5
DTE400-040	4	4	0.4	●	●	●	●		●		20	5
DTE400-080	4	4	0.8	●	●	●	●		●		20	5
DTE415-015	4	4.15	0.15	●	●	●	●		●		20	5
DTE478-055	5	4.78	0.55	●	●	●	●		●		25	5.5
DTE500-040	5	5	0.4	●	●	●	●		●		25	5.5
DTE500-080	5	5	0.8	●	●	●	●		●		25	5.5
DTE515-015	5	5.15	0.15	●	●	●	●				25	5.5
DTE600-080	6	6	0.8	●	●	●	●				25	5.5
DTE600-120	6	6	1.2	●	●	●	●				25	5.5
DTE800-080	8	8	0.8	●	●	●	●				30	6.7
DTE800-120	8	8	1.2	●	●	●	●				30	6.7

●: Line up

Reference pages: Toolholders → **F229 - F235**, Standard cutting conditions → **F246**

DTE

External/face grooving, turning and parting



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

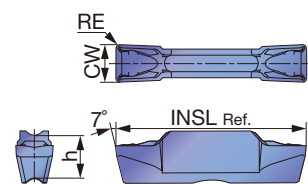
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated						Cermet				INSL	h
				T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530				
DTE3-020	3	3	0.2			●		●		●				20	5
DTE3-040	3	3	0.4	●	●	●	●	●	●	●	●			20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●	●			20	5
DTE4-080	4	4	0.8			●		●		●				20	5
DTE5-040	5	5	0.4		●	●		●		●				25	5.5
DTE5-080	5	5	0.8			●		●		●				25	5.5
DTE6-080	6	6	0.8		●	●		●		●				25	5.5

● : Line up

DTX

External/internal/face grooving, turning 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	RE	Coated						Cermet		Uncoated		INSL	h
				T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530		KS05F			
DTX2-020	2	2	0.2		●		●		●			●		20	5
DTX3-030	3	3	0.3	●	●	●	●	●	●	●		●		20	5
DTX4-040	4	4	0.4	●	●	●	●	●	●	●		●		20	5
DTX5-040	5	5	0.4	●	●	●	●	●	●	●		●		25	5.5
DTX6-080	6	6	0.8		●	●	●	●	●			●		25	5.5
DTX8-080	8	8	0.8		●		●		●			●		30	6.7

● : Line up

Reference pages: Toolholders → **F229 - F235**, Standard cutting conditions → **F246**

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed V _c (m/min)
P	Steel S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225, AH8005	80 - 300
		< 300 HB	Impact resistance	AH6235, GH130	50 - 120
		< 300 HB	Surface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, X5CrNi18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Wear resistance	AH8005	50 - 120
		< 200 HB	Impact resistance	AH6235, GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515	150 - 700
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 180
	Ductile cast iron FCD450, etc. 450-10S, etc.	-	First choice	T515	150 - 300
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	20 - 60
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	20 - 40
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	20 - 100
		< HRC 40	Impact resistance	AH7025, AH725	20 - 80

Please see page **F236, F237** for feed: f (mm/rev).

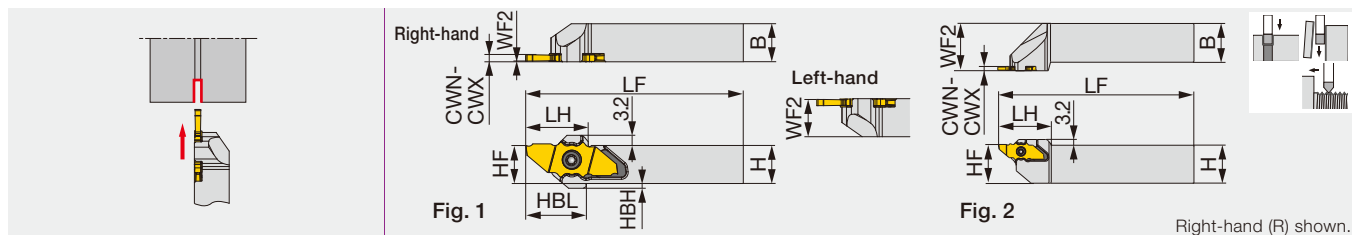
STH

ISO	Grade	CW	Application	Cutting speed V _c (m/min)	Depth of cut a _p (mm)	Feed f (mm/rev)
H	BXA10	3	External turning	100 - 230	0.08 - 0.12	0.4 - 1
			Face turning	100 - 230	0.08 - 0.12	0.4 - 0.8
		5	External turning	100 - 230	0.08 - 0.12	0.5 - 1.5
			Face turning	100 - 230	0.08 - 0.12	0.5 - 0.8

SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed V _c (m/min)	Feed f (mm/rev)
H	BX360	No symbol	Continuous	80 - 150	0.03 - 0.08
		-S	Light interrupted	50 - 120	0.03 - 0.08
		-H	Heavy interrupted	40 - 100	0.03 - 0.06

Parting-off and grooving toolholders



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBL ⁽¹⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1010X09	0.6	2.5	10	10	120	19.65	10	0.2/9.8	19	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09	0.6	2.5	12	12	85	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09	0.6	2.5	12	12	120	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09	0.6	2.5	16	16	120	19.65	16	0.2/15.8	-	-	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L2020H09	0.6	2.5	20	20	100	22.5	20	0.2/19.8	-	-	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L2525Z09	0.6	2.5	25	25	135	34	25	30	-	-	JX**06...,12...,16..., 20...	1.2	2

*Torque: Recommended clamping torque (N·m)

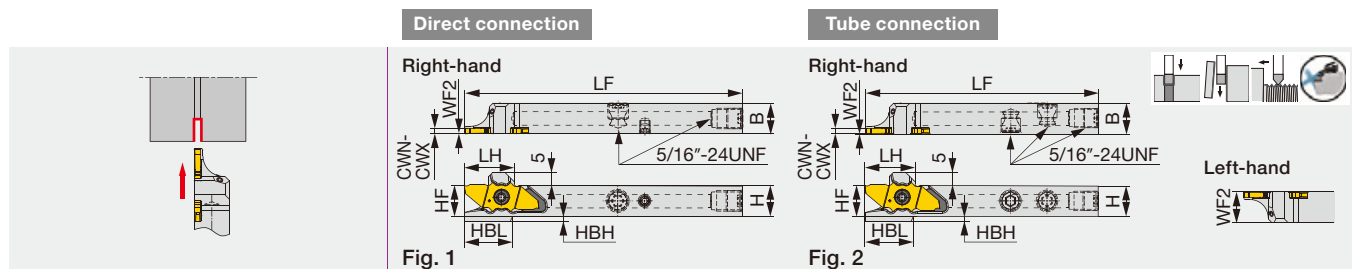
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/H/X-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBL ⁽¹⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP ⁽³⁾	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP ⁽³⁾	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09-CHP ^{(3),(4)}	0.6	2.5	16	16	120	19.4	16	0.2	18.7	2.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP ⁽³⁾	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.

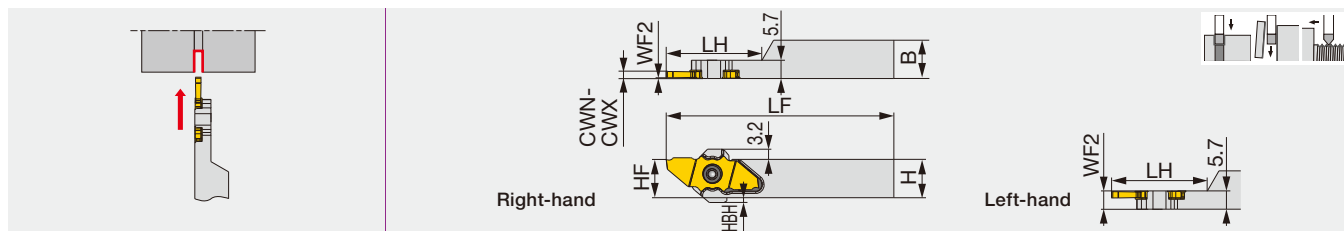
(4) To be replaced with the new design

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**09	CSTC-4L100DL	T-1008/5	-	-	-	-
JSXXL**09	CSTC-4L100DR	T-1008/5	-	-	-	-
JSXXR**F**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**H**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

Parting-off toolholders, for swiss lathes (for sub spindle)



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBH	Insert	Torque*
JSXXR/L1010X09-S	0.6	2.5	10	10	120	26	10	0.2/5.5	3	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1212F09-S	0.6	2.5	12	12	85	26	12	0.2/5.5	1.5	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1212X09-S	0.6	2.5	12	12	120	30	12	0.2/5.5	1.5	JX**06...,12...,16... ⁽³⁾	1.2
JSXXR/L1616X09-S	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 2 mm shorter than the above value with JX**12... and JX**20... inserts; 4 mm shorter with JX**06... insert.

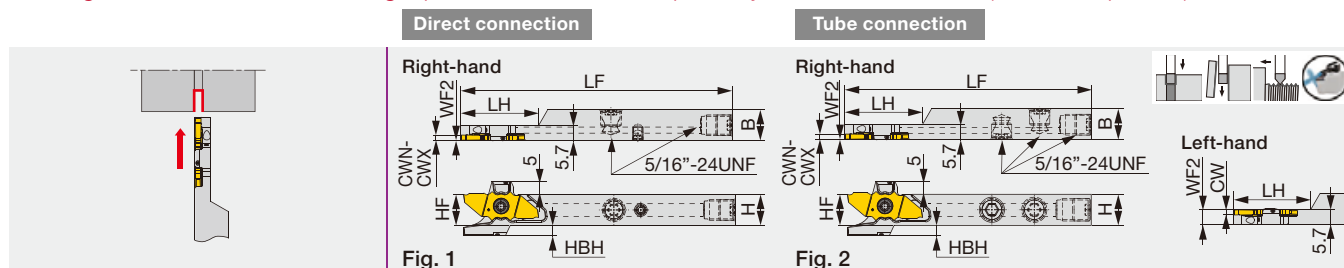
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(3) JX**20... insert will not fit.

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/X-S-CHP

Parting-off toolholders with high pressure coolant capability, for swiss lathes (for sub spindle)



Designation	CWN	CWX	H	B	LF ⁽¹⁾	LH ⁽¹⁾	HF	WF2 ⁽²⁾	HBH	Insert	Torque*	Fig.
JSXXR/L1212F09-S-CHP ⁽⁴⁾	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP ^{(3),(4)}	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP ⁽³⁾	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09-S-CHP ^{(3),(4)}	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP ⁽³⁾	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

*Torque: Recommended clamping torque (N·m)

(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 2 mm shorter than the above value with JX**12... and JX**20... inserts; 4 mm shorter with JX**06... insert.

(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.

(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.

(4) To be replaced with the new design

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

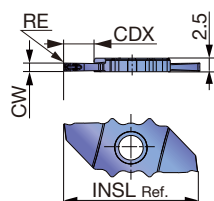
SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**-S	CSTC-4L055DL	T-1008/5	-	-	-	-
JSXXL**-S	CSTC-4L055DR	T-1008/5	-	-	-	-
JSXXR**F**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**X**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**X**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

Reference pages: Inserts → **F249, F250**, Standard cutting conditions → **F251**
Parts for coolant hose → **F266**

INSERTS

JXPS**R/L-F (with 3D chipbreaker, sharp edge)



Right-hand (R) shown.

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

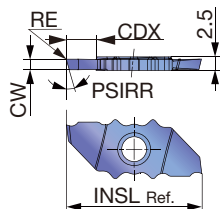
★ : First choice

Designation	HAND	CW±0.025	RE	Coated				CUTDIA	CDX*	INSL
				SH725						
JXPS06R06F	R	0.6	0.05	●				6	3.5	21
JXPS06L06F	L	0.6	0.05	●				6	3.5	21
JXPS12R08F	R	0.8	0.05	●				12	6.5	25
JXPS12L08F	L	0.8	0.05	●				12	6.5	25
JXPS12R10F	R	1	0.05	●				12	6.5	25
JXPS12L10F	L	1	0.05	●				12	6.5	25
JXPS12R15F	R	1.5	0.05	●				12	6.5	25
JXPS12L15F	L	1.5	0.05	●				12	6.5	25
JXPS16R15F	R	1.5	0.05	●				16	8.5	29
JXPS16L15F	L	1.5	0.05	●				16	8.5	29
JXPS20R20F	R	2	0.05	●				20	10.5	33
JXPS20L20F	L	2	0.05	●				20	10.5	33

*Max grooving depth (CDX) varies depending on workpiece diameters.

● : Line up

Reference pages: Toolholders → **F247, F248**, Standard cutting conditions → **F251**

JXPGR/L-F (Sharp edge)**


Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.025	RE	Coated				CUTDIA	CDX*	INSL	PSIRR
				SH725							
JXPG06R10F	R	1	0.05	●				6	3.5	21	0°
JXPG06L10F	L	1	0.05	●				6	3.5	21	0°
JXPG06R15F	R	1.5	0.05	●				6	3.5	21	0°
JXPG06L15F	L	1.5	0.05	●				6	3.5	21	0°
JXPG06R10F-15	R	1	0.05	●				6	3.5	21	15°
JXPG06L10F-15	L	1	0.05	●				6	3.5	21	15°
JXPG06R15F-15	R	1.5	0.05	●				6	3.5	21	15°
JXPG06L15F-15	L	1.5	0.05	●				6	3.5	21	15°
JXPG12R15F	R	1.5	0.05	●				12	6.5	25	0°
JXPG12L15F	L	1.5	0.05	●				12	6.5	25	0°
JXPG12R20F	R	2	0.05	●				12	6.5	25	0°
JXPG12L20F	L	2	0.05	●				12	6.5	25	0°
JXPG12R15F-15	R	1.5	0.05	●				12	6.5	25	15°
JXPG12L15F-15	L	1.5	0.05	●				12	6.5	25	15°
JXPG12R20F-15	R	2	0.05	●				12	6.5	25	15°
JXPG12L20F-15	L	2	0.05	●				12	6.5	25	15°
JXPG16R15F	R	1.5	0.05	●				16	8.5	29	0°
JXPG16L15F	L	1.5	0.05	●				16	8.5	29	0°
JXPG16R20F	R	2	0.05	●				16	8.5	29	0°
JXPG16L20F	L	2	0.05	●				16	8.5	29	0°
JXPG16R15F-15	R	1.5	0.05	●				16	8.5	29	15°
JXPG16L15F-15	L	1.5	0.05	●				16	8.5	29	15°
JXPG16R20F-15	R	2	0.05	●				16	8.5	29	15°
JXPG16L20F-15	L	2	0.05	●				16	8.5	29	15°
JXPG20R15F	R	1.5	0.05	●				20	10.5	33	0°
JXPG20L15F	L	1.5	0.05	●				20	10.5	33	0°
JXPG20R20F	R	2	0.05	●				20	10.5	33	0°
JXPG20L20F	L	2	0.05	●				20	10.5	33	0°
JXPG20R15F-15	R	1.5	0.05	●				20	10.5	33	15°
JXPG20L15F-15	L	1.5	0.05	●				20	10.5	33	15°
JXPG20R20F-15	R	2	0.05	●				20	10.5	33	15°
JXPG20L20F-15	L	2	0.05	●				20	10.5	33	15°

*Max grooving depth (CDX) varies depending on workpiece diameters.

● : Line up

 Reference pages: Toolholders → **F247, F248**

STANDARD CUTTING CONDITIONS

Parting, Grooving

ISO	Workpiece materials	Grades	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Low carbon steels S15C, SS400, etc. C15E4, E275A, etc.	SH725	50 - 200	0.01 - 0.05
	Carbon steels, Alloy steels S55C, SCM440, etc. C55, 42CrMo4, etc.	SH725	50 - 200	0.01 - 0.05
	Free cutting steels SUH22, SUH23, etc.	SH725	50 - 200	0.01 - 0.05
M	Stainless steels SUS304, X5CrNi18-9, etc.	SH725	50 - 200	0.01 - 0.05
N	Aluminium alloys A5056, A6061, etc.	SH725	150 - 200	0.01 - 0.05
	Copper alloy C2600, C280C, etc.	SH725	100 - 200	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V, etc.	SH725	30 - 80	0.01 - 0.05
	Superalloys Inconel718, etc.	SH725	30 - 80	0.01 - 0.05

Grade

Insert

Ext. Toolholder

Int. Toolholder

Threading

Grooving

Miniature tool

Milling cutter

Endmill

Drilling tool

Tooling System

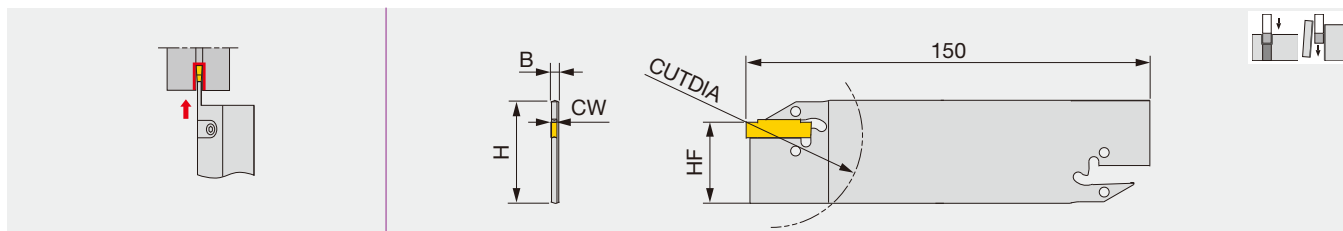
User's Guide

Index

MY-T SERIES

CCH-W

External grooving and parting blade, for 2 corner inserts



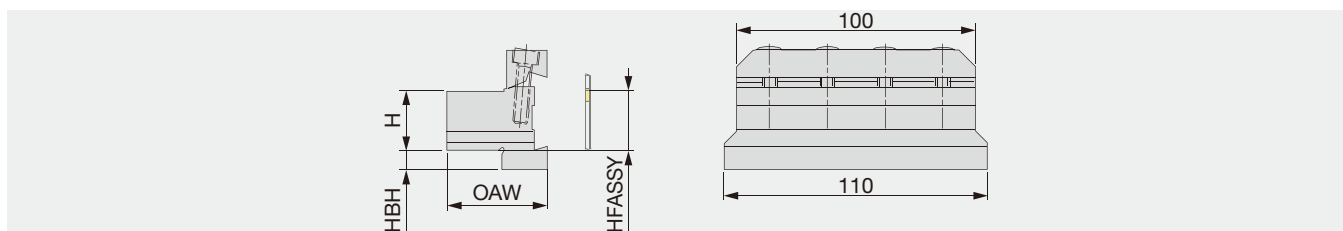
Designation	CW	CUTDIA	H	B	HF	Insert
CCH32-W20	2	33	32	1.6	24.6	WGE20, WGE20R/L
CCH32-W30	3	33	32	2.2	24.6	WG*30, WGE30R/L
CCH32-W40	4	42	32	3.2	24.5	WG*40, WGE40R/L
CCH32-W50	5	42	32	4.2	24.3	WG*50, WGE50R/L

SPARE PARTS

Designation	Wrench (Optional)
CCH32-W...	CRW33

CCBS-32

Tool block for CCH blade



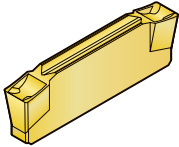
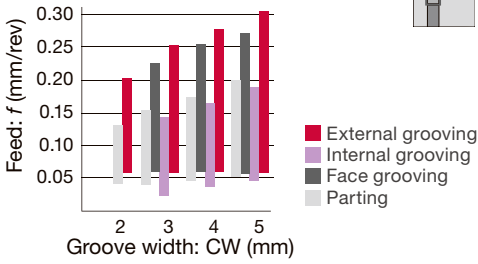
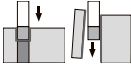
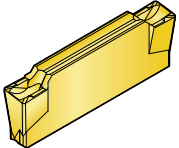
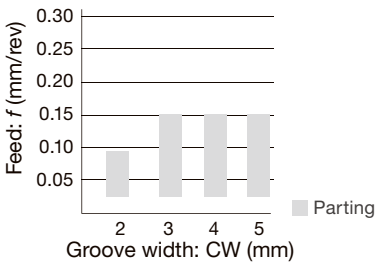
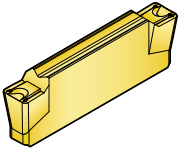
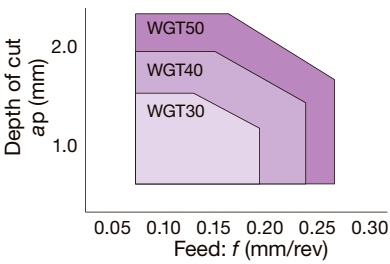
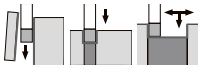
Designation	H	HFASSY	HBH	OAW	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS*-32	CC-32	CM6X25	P-5

Reference pages: Inserts → **F253 - F255**, Standard cutting conditions → **F255**

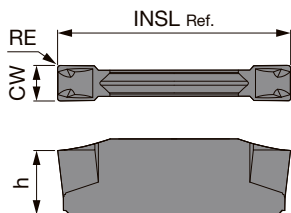
External grooving and parting

WGE  F254	1st choice for external grooving and parting Excellent chip control for grooving CW = 2 - 5 mm  
WGE R/L  F255	Handed insert Minimize burr generation when workpiece is cut off CW = 2 - 5 mm  
WGT  F254	1st choice for turning Low cutting force and good chip control for traversing CW = 3 - 5 mm  

INSERTS (2 corners)

WGE

For external grooving and parting



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

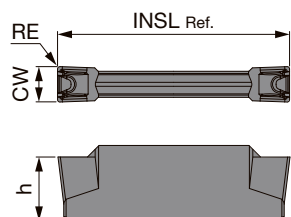
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet							INSL	h
			T9225	AH120	GH730		NS9530							
WGE20	2	0.2	●	●	●		●						20	4.7
WGE30	3	0.2	●	●	●		●						20	5.5
WGE40	4	0.2	●	●	●		●						25	5.7
WGE50	5	0.2	●	●	●		●						25	5.9

● : Line up

WGT

For external grooving, parting and turning



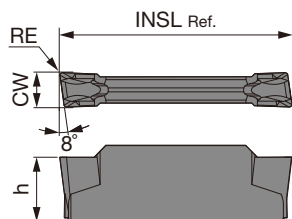
P	Steel	★	★	★				★					
M	Stainless		★	★									
K	Cast iron		★	☆				☆					
N	Non-ferrous												
S	Superalloys		☆										
H	Hard materials												

★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet							INSL	h
			T9225	AH120	GH730		NS9530							
WGT30	3	0.4	●		●		●						20	5.5
WGT40	4	0.4	●		●		●						25	5.7
WGT50	5	0.4	●	●	●		●						25	5.9

● : Line up

For parting off (handed inserts)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

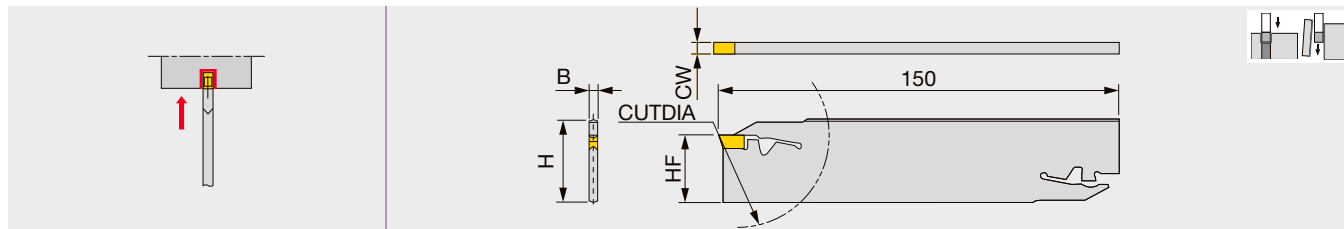
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●: Line up

STANDARD CUTTING CONDITIONS (for 2 corner inserts)

ISO	Workpiece material	Recommended grade	Cutting speed Vc (m/min)
P	Low carbon steels	T9225	80 - 300
	Alloy steels (~ HB150)	NS9530	100 - 200
		GH730, AH120	50 - 180
	Medium carbon steels	T9225	80 - 220
	Alloy steels (HB150 ~ 250)	NS9530	80 - 180
		GH730, AH120	50 - 150
	High carbon steels	T9225	80 - 220
M	Stainless steels	NS9530	80 - 150
		GH730, AH120	50 - 150
		GH730, AH120	50 - 120
K	Grey and ductile cast irons	GH730, AH120	50 - 180

Operation	Feed: f (mm/rev)			
	Groove width: CW (mm)			
	2	3	4	5
Grooving (WGE□□)	0.06 ~ 0.20	0.06 ~ 0.25	0.07 ~ 0.27	0.07 ~ 0.30
Parting-off (WGE□□R/L)	0.04 ~ 0.10	0.04 ~ 0.14	0.04 ~ 0.14	0.04 ~ 0.14
Turning (WGT□□)	-	$a_p = 0.5 \sim 1.5$ $f = 0.06 \sim 0.2$	$a_p = 0.5 \sim 2.0$ $f = 0.06 \sim 0.25$	$a_p = 0.5 \sim 2.5$ $f = 0.06 \sim 0.27$



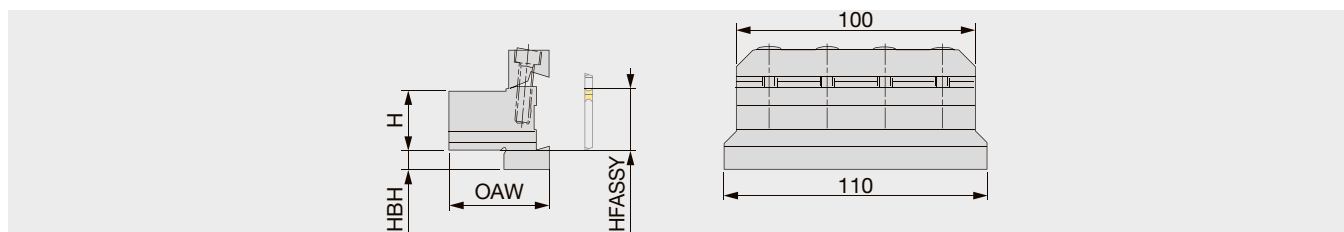
Designation	CW	CUTDIA	H	B	HF	Insert
CCH32-30	3	100	32	2.2	24.6	GE30, GE30R/L, GE30-AL
CCH32-40	4	100	32	3.2	24.5	GE40, GE40R/L, GE40-AL
CCH32-50	5	120	32	4.2	24.3	GE50, GE50R/L

SPARE PARTS

Designation	Wrench
CCH32-...	CTL-2

CCBS-32

Tool block for CCH blade



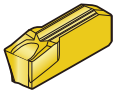
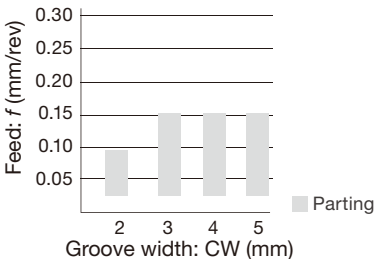
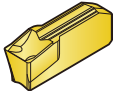
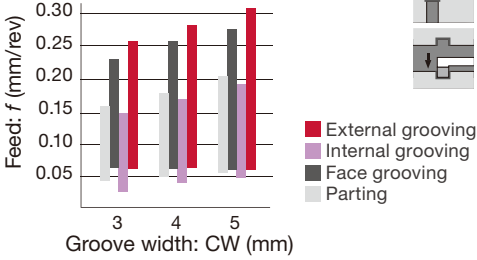
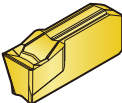
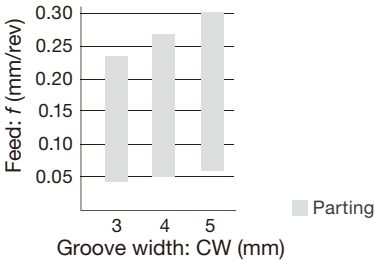
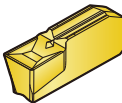
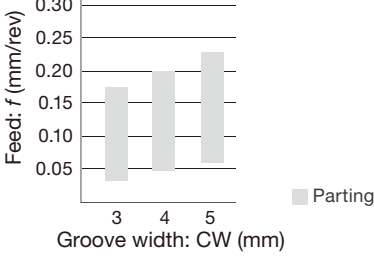
Designation	H	HFASSY	HBH	OAW	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

SPARE PARTS

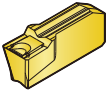
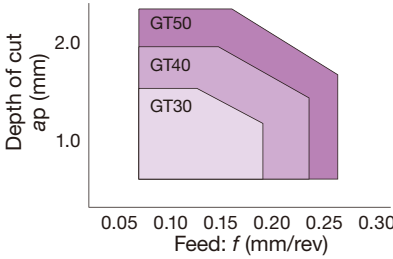
Designation	Clamp	Screw	Wrench
CCBS*-32	CC-32	CM6X25	P-5

CHIPBREAKER GUIDE (for 1 corner inserts)

External grooving and parting

GE R/L  F258	Handed insert Minimize burr generation when workpiece is cut off CW = 3 - 5 mm 
GE  F259	1st choice for external grooving and parting Excellent chip control for grooving CW = 3 - 5 mm 
GF  F259	1st choice for face grooving Low cutting force and good chip control for face grooving CW = 3 - 5 mm 
GN  F260	1st choice for internal grooving Low cutting force and good chip control for internal grooving CW = 3 - 5 mm 

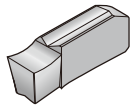
External grooving and turning

GT  F260	1st choice for turning Low cutting force and good chip control for traversing CW = 3 - 5 mm 
--	--

Please see page F*** for the product details.

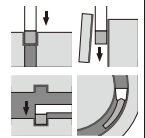
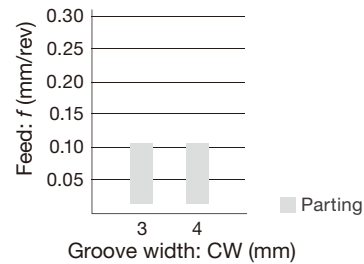
For aluminium and non-ferrous metal

GE-AL



Reduce cutting force and welding
due to sharp chipbreaker
CW = 3 - 4 mm

F261



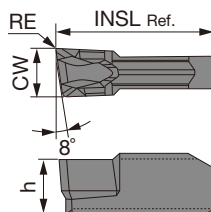
Please see page **F***** for the product details.



■ INSERTS (1 corner)

GE-R/L

For parting off (handed inserts)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

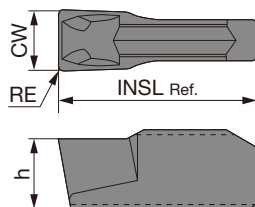
[illegible]

●: Line up

Reference pages: Toolholders → **F256**, Standard cutting conditions → **F261**

GE

For external grooving and parting



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

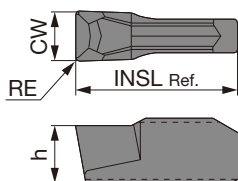
★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated			Cermet			INSL	h
			T9225	AH120	GH730	NS9530				
GE30	3	0.2	●	●	●	●			10	3.5
GE40	4	0.2	●	●	●	●			10	4
GE50	5	0.2	●	●	●	●			12	4.5

● : Line up

GF

For face grooving



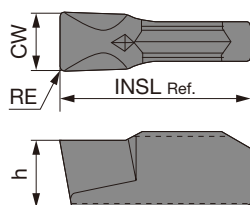
P	Steel	★		★				
M	Stainless	★						
K	Cast iron	☆		☆				
N	Non-ferrous							
S	Superalloys							
H	Hard materials							

★ : First choice
☆ : Second choice

Designation	CW ^{+0.1} ₀	RE	Coated		Cermet		INSL	h
			GH730		NS9530			
GF30	3	0.2	●		●		10	3.5
GF40	4	0.2	●		●		10	4
GF50	5	0.2	●		●		12	4.5

● : Line up

For internal grooving



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

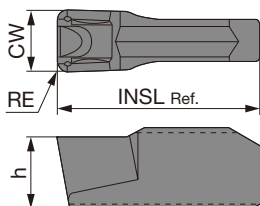
★ : First choice
☆ : Second choice

[illegible]

● : Line up

GT

For external grooving and turning



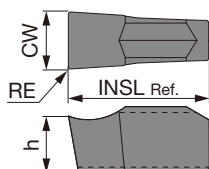
P	Steel	★	★	★			★			
M	Stainless		★	★						
K	Cast iron		★	☆			☆			
N	Non-ferrous									
S	Superalloys		☆							
H	Hard materials									

★ : First choice
☆ : Second choice

Designation	CW ₀ ^{+0.1}	RE	Coated				Cermet						INSL	h
			T9225	AH120	GH730			NS9530						
GT30	3	0.4		●	●			●					10	3.5
GT40	4	0.4		●	●			●					10	4
GT50	5	0.4	●	●	●			●					12	4.5

●: Line up

For aluminium 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	RE	Uncoated							INSL	h
			KS05F								
GE30-AL	3	0.2	●							10	3.5
GE40-AL	4	0.2	●							10	4

●: Line up

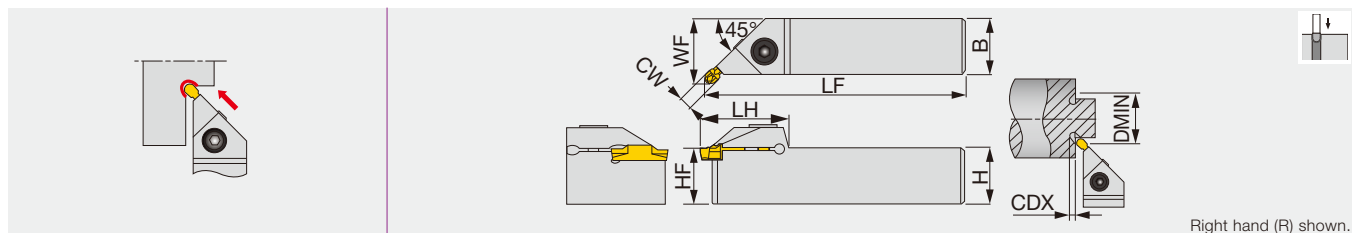
STANDARD CUTTING CONDITIONS (for 1 corner inserts)

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		NS9530	100 - 200
		GH730, AH120	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		NS9530	80 - 180
		GH730, AH120	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		NS9530	80 - 150
		GH730, AH120	50 - 120
M	Stainless steel	GH730, AH120	50 - 120
K	Grey iron, Ductile cast iron	GH730, AH120	50 - 180
N	Aluminium alloy, Non-ferrous metal	KS05F	200 - 300

For Parting

Operation	Feed: f (mm/rev)		
	Groove width: CW (mm)		
	3	4	5
Grooving (GE**)	0.06 - 0.25	0.07 - 0.27	0.07 - 0.3
Parting-off (GE**R/L)	0.04 - 0.14	0.04 - 0.14	0.04 - 0.14
Traversing (GT**)	$ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	$ap = 0.5 - 2$ $f = 0.06 - 0.25$	$ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Parting-off for Aluminium alloys (GE**-AL)	0.03 - 0.1	0.03 - 0.1	-

Reference pages: Toolholders → **F256**



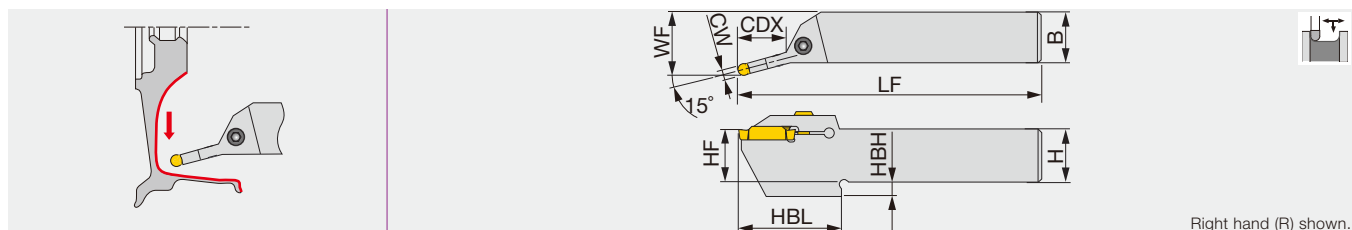
Right hand (R) shown.

Designation	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)

CTER/L-15A

Square shank toolholder for profiling aluminium wheel



Right hand (R) shown.

Designation	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

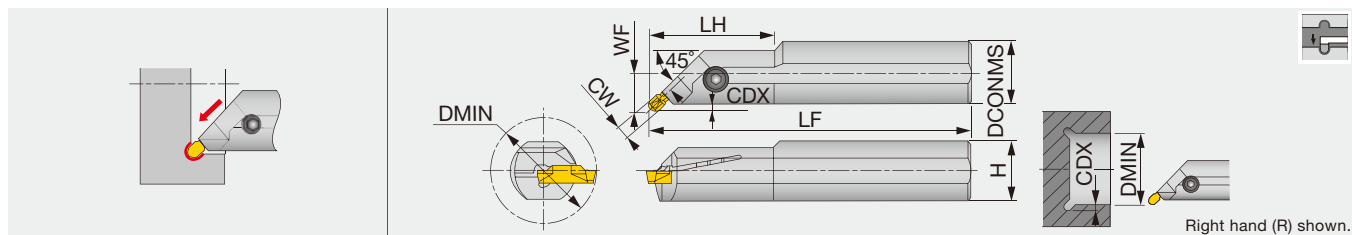
Torque*: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
CGEUR/L****-3T02	CM5X0.8X16-A	P-4
CGEUR/L1616-4T02	CM6X1X16-A	P-5
CGEUR/L2020-4T02	CM6X1X20-A	P-5
C**R/L2525-...	CM6X1X25-A	P-5

CGIUR/L

Internal 45° undercutting toolholder



Designation	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

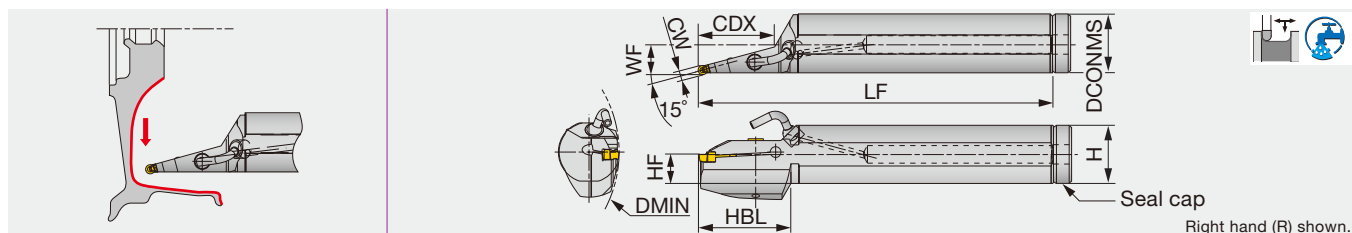
(1) WF is calculated with the groove width CW in the above table.
Torque*: Recommended clamping torque (N·m)

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

CGIUR/L-15A

Round-shank toolholder for profiling aluminium wheel



Designation	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

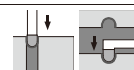
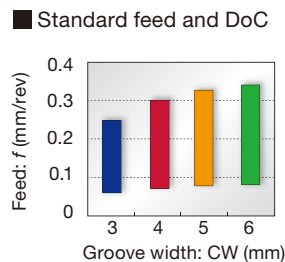
CHIPBREAKER GUIDE

Profiling and undercutting

DTIU type
(2 corners)

Full radius type

Excellent chip control for undercutting
CW = 3 - 6 mm

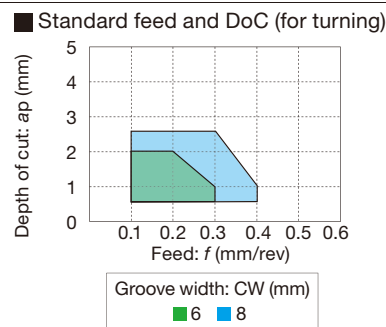


Aluminium wheel machining

DTA type
(2 corners)

Full radius type

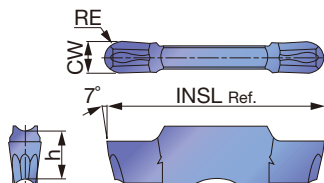
Excellent chip control
For aluminium wheel profiling
Ground insert
CW = 6 - 8 mm



INSERTS

DTIU

Profiling and undercutting (for high precision)



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

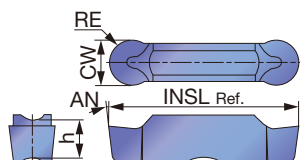
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated								INSL	h
				AH7025	AH725	GH130							
DTIU300-150	3	3	1.5	●	●	●						20	5
DTIU400-200	4	4	2	●	●	●						20	5
DTIU500-250	5	5	2.5	●	●	●						25	5.5
DTIU600-300	6	6	3	●	●	●						25	5.5

●: Line up

Reference pages: Toolholders → **F262, F263**

Aluminium wheel machining (for high precision)

[illegible]

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed Vc (m/min)
P	Steel S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Impact resistance	GH130	50 - 120
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, X5CrNi18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Impact resistance	GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	AH7025	150 - 700
		-	Impact resistance	GH130	50 - 180
	Ductile cast iron FCD450, etc. 450-10S, etc.	-	First choice	AH7025	150 - 300
		-	Impact resistance	GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH7025, AH725	20 - 60
		< HRC 40	Impact resistance	GH130	20 - 40
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	Impact resistance	AH7025, AH725	20 - 80

Please see page **F264** for feed: f (mm/rev).

PARTS FOR COOLANT HOSE

Connecting hose

Fig.1

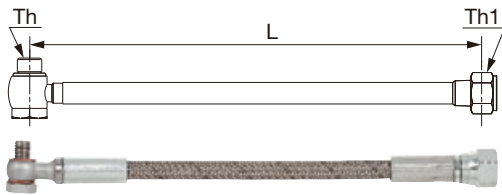
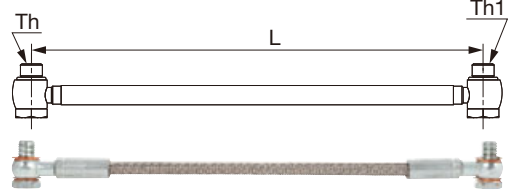
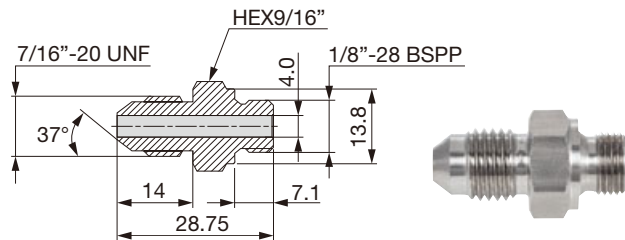


Fig.2



Designation	Length L	Screw		Max. pressure (Mpa)	Fig.
		Th	Th1		
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP	20	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2

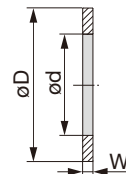
Connector



Designation

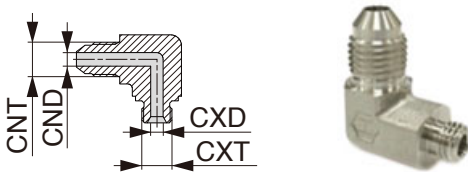
CHP-NIPPLE-G1/8-7/16UNF

Seal washer



Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	10	1
CHP-COPPER-SEAL5/16	11.9	8.15	1.35
CHP-COPPER-SEAL5/16-2.5	9.4	8	2.5

Connector elbow



Designation

Designation	CNT	CND	CXT	CXD
CHP-ELBOW-90-G1/8-7/16UNF	7/16"-20 UNF	4.4	1/8"-28 BSPP	4
CHP-ELBOW-90-5/16-7/16UNF	7/16"-20 UNF	4.4	5/16"-24 UNF	4

