reich
ADVANCED TECHNOLOGY TOOLS
Ihr persönlicher Werkzeugspezialist vor Ort.

Parting, Grooving

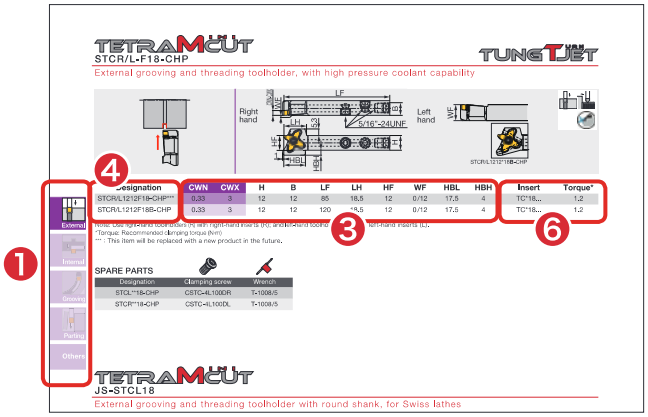
Parting, Grooving - Content structure

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

How to use the page

Method ①

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

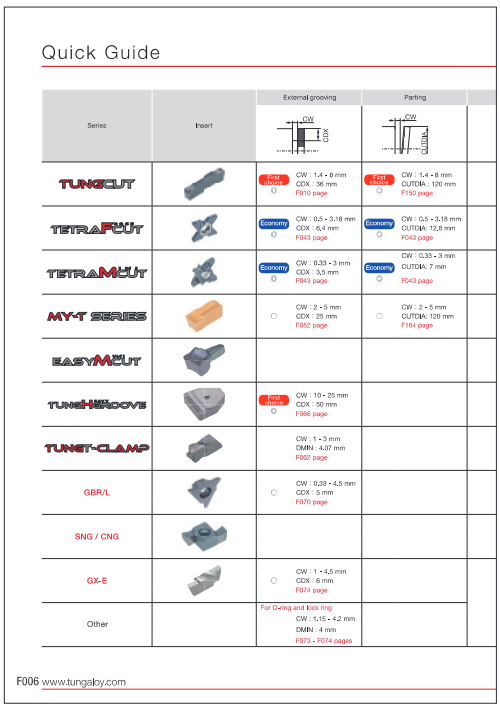


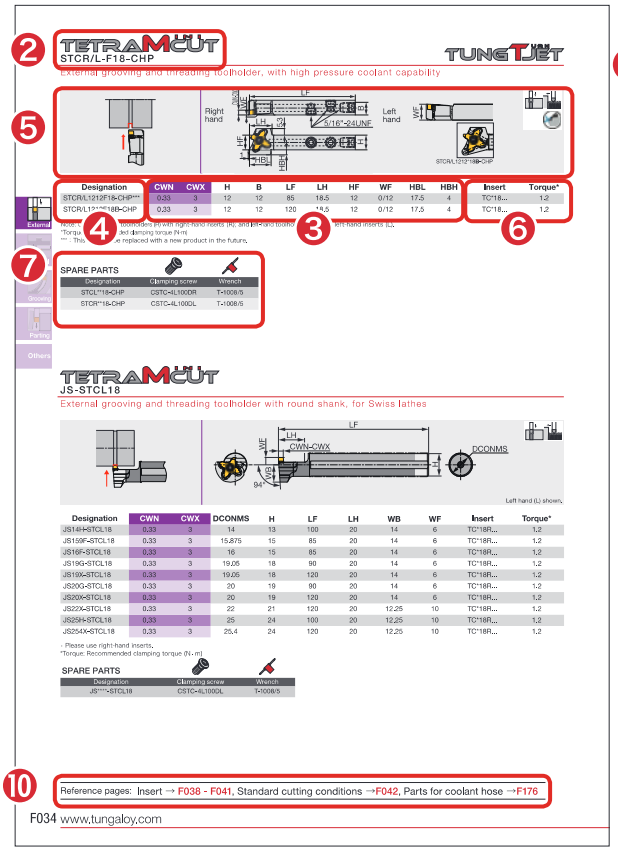
Method ②

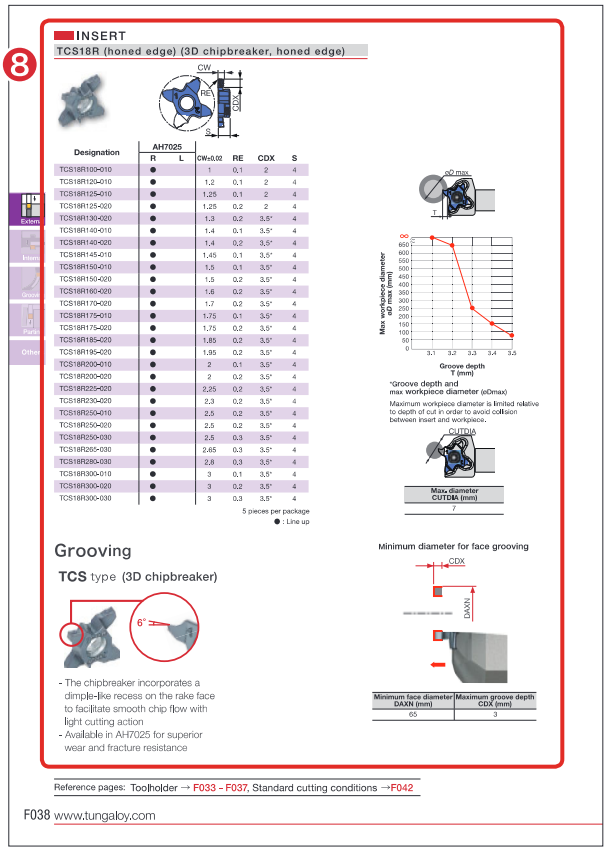
Select the tool series name on F004 – F005 and check the details on the product page.

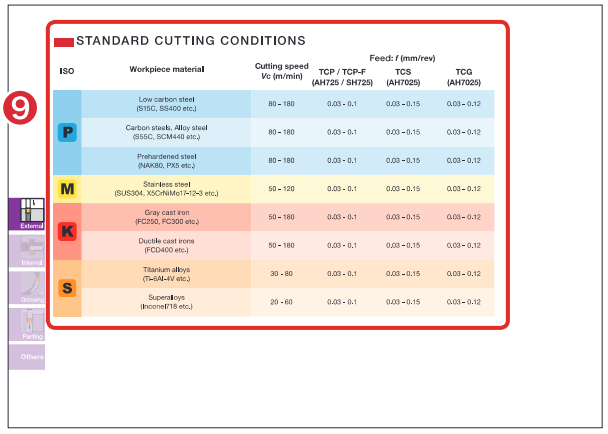
Method ③

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









❶ : Application
❷ : Tool series name
❸ : Dimension table
❹ : Toolholder designation
e.g. right-hand, 12x12 square shank

→ STC**R** **1212** **F18-CHP**

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

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

When ordering
- Please specify the designation and quantity for toolholders.
  e.g. **CTER2020-4T25 ...** 1
- Please specify the designation and quantity for shank and blade set when ordering both.
  e.g. **CHSR2020-CHP ...** 1, **CAER-3T20-CHP...** 1 (one shank per package, one blade per package)
  * Clamp screw for blade is included.
- Please specify the designation, grade, and quantity for inserts.
  e.g. **DGS3-020 AH7025 ...** 10 (10 inserts per package)
  *You will find a note if the number per package is not 10.

Parting, Grooving - Machining Overview

External grooving

F010 page

Max. groove depth: 6.4 mm

Economy TETRAMINICUT F035 page

Economy TETRAFORCECUT F046 page

GBR/L32 F076 page

GBR/L42 F076 page

GX-E F082 page

Max. groove depth: 50 mm

First choice TUNGCUT F010 page

TUNGHEAVYGROOVE F072 page

MY-T SERIES

Flex, CGD, G series , CDT F054 page

For Swiss lathes

Economy TETRAMINICUT F035 page

Economy TETRAFORCECUT F046 page

TUNGCUT F014 page

J-SERIES (JTGR/L) F088 page

TUNGHEAVYGROOVE F072 page

Internal grooving

F096 page

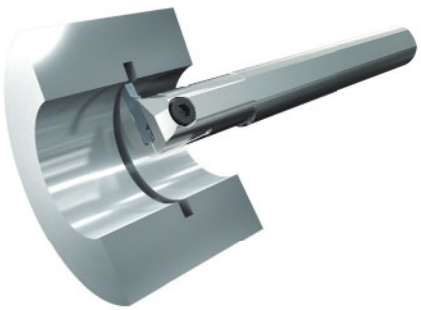
General internal grooving and turning

First choice TUNGCUT F096 page

MY-T SERIES

G series F114 page

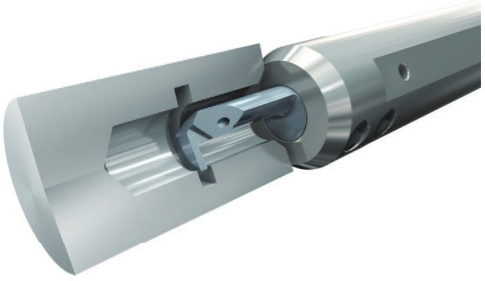
GBR/L32 F124 page



Small-diameter internal grooving

TINYMINITURN G055 page

SNG F127 page



Face grooving

F133 page

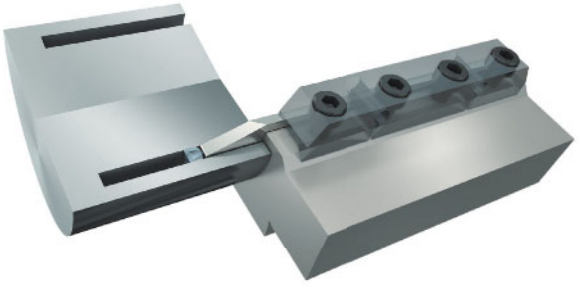
First choice TUNGCUT F137 page

EASYMCUT F133 page

Economy TETRAMINICUT F035 page

MY-T SERIES F158 page

GX-F F166 page



Parting

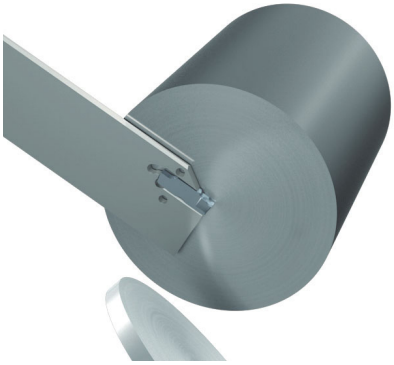
F168 page

General parting

First choice TUNGCUT F168 page

Economy TETRAFORCECUT F046 page

MY-T SERIES F184 page



For Swiss lathes

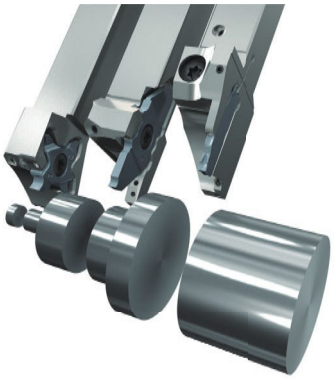
First choice DUOJUSTCUT G093 page

TUNGCUT F014 page

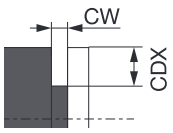
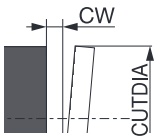
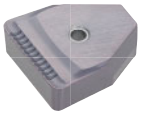
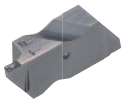
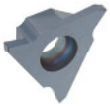
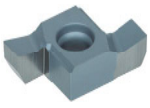
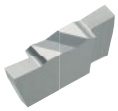
Economy TETRAFORCECUT F046 page

Economy TETRAMINICUT F035 page

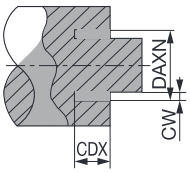
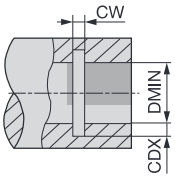
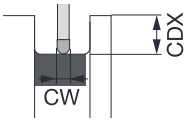
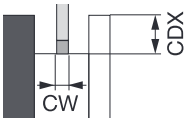
J-SERIES F084 page



Quick Guide

Series	Insert	External grooving	Parting	
				
TUNGCUT		First choice ◎ CW : 1.4 - 8 mm CDX : 36 mm F010 page	First choice ◎ CW : 1.4 - 8 mm CUTDIA : 120 mm F168 page	
TETRAFORCECUT		Economy ◎ CW : 0.5 - 3.18 mm CDX : 6.4 mm F046 page	Economy ◎ CW : 0.5 - 3.18 mm CUTDIA: 12.8 mm F046 page	
TETRAMINICUT		Economy ◎ CW : 0.33 - 3 mm CDX : 3.5 mm F035 page	Economy ◎ CW : 0.33 - 3 mm CUTDIA: 7 mm F035 page	
MY-T SERIES		○ CW : 2 - 5 mm CDX : 25 mm F054 page	○ CW : 2 - 5 mm CUTDIA: 120 mm F184 page	
EASYMULTICUT				
TUNGHEAVYGROOVE		First choice ◎ CW : 10 - 25 mm CDX : 50 mm F072 page		
TUNGT-CLAMP		CW : 1 - 3 mm DMIN : 4.07 mm F068 page		
GBR/L		○ CW : 0.33 - 4.5 mm CDX : 5 mm F076 page		
SNG / CNG				
GX-E / GX-I		○ CW : 1 - 4.5 mm CDX : 6 mm F082 page		
Other		For O-ring and lock ring CW : 1.15 - 4.2 mm DMIN : 4 mm F080 - F081 pages		

◎ : First choice
○ : Usable

	Face grooving	Internal grooving	Profiling (Full-R)	Turning
				
	First choice ◎ CW : 3 - 6 mm CDX : 25 mm DAXN : 25 mm F137 page	First choice ◎ CW : 2 - 8 mm CDX : 10 mm DMIN : 25 mm F096 page	First choice ◎ CW : 3 - 8 mm CDX : 36 mm F010 page	First choice ◎ CW : 3 - 8 mm CDX : 36 mm F010 page
			Economy ◎ CW : 1.57 - 3 mm CDX : 6.4 mm F046 page	
	○ CW : 0.33 - 3 mm CDX : 3 mm DAXN : 65 mm F035 page			
	○ CW : 3 - 5 mm CDX : 22 mm DAXN : 30 mm F158 page	○ CW : 3 - 5 mm CDX : 6 mm DMIN : 25 mm F114 page	○ CW : 3 - 5 mm CDX : 25 mm F054 page	○ CW : 3 - 5 mm CDX : 25 mm F054 page
	◎ CW : 4 - 6 mm CDX : 65 mm DAXN : 30 mm F133 page			
		CW : 1 - 3 mm CDX : 4.07 mm DMIN : 34.9 mm F120 page		
		◎ CW : 0.33 - 4.5 mm CDX : 2.5 mm DMIN : 35 mm F124 page	◎ CW : 1 - 4 mm CDX : 5 mm F076 page	
		○ CW : 1 - 5 mm CDX : 5 mm DMIN : 8 mm F127 page		
		○ CW : 1 - 4.5 mm CDX : 6 mm DMIN : 55 mm F131 page		
		· CGXR/L CW : 1 - 5 mm DMIN : 20 mm F129 page		

Multi-functional grooving tool series with excellent versatility

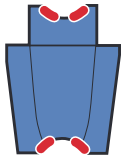
New modular holder system enhances versatility of existing monoblock holder and TungCap (PSC) lines.

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

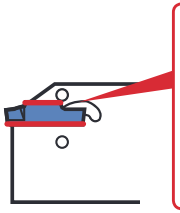
High clamping rigidity

For stable tool life and accuracy

Clamping system

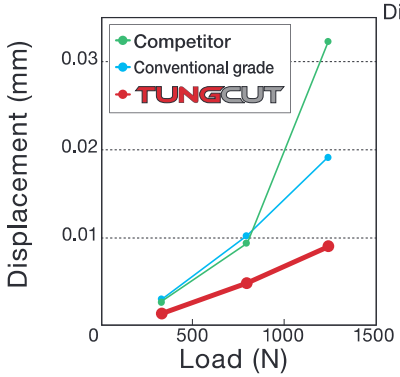


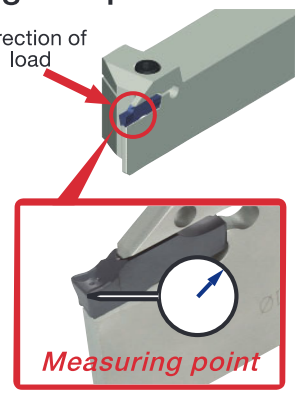
● *Stable and safe contact areas!*



High repeatability and durability due to long pocket!

Minimizes cutting edge displacement





Excellent chip control at low feed rates

P **Mild steel (SUJ2)**

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

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

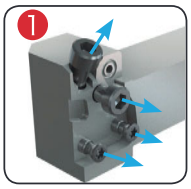
	f = 0.03	*f* = 0.05	*f* = 0.07	*f* = 0.1
Vc = 50				
Vc = 100				

Reference pages: F010, F096, F137, F168

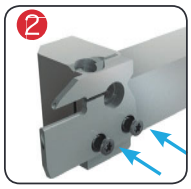
How to install and remove the blade and insert

TUNGMODULAR SYSTEM

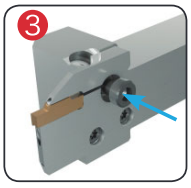
Assembly



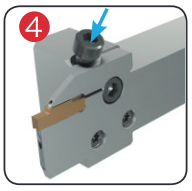
Remove all 4 screws and ensure the O rings are all in place.



Place the blade and tighten 2 bottom clamping screws.



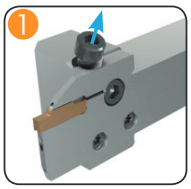
Place the insert in the pocket and tighten the fixing screw in the center.



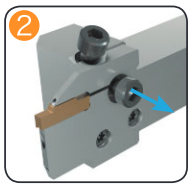
Place the long screw in the angular direction and tighten to clamp the insert.

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

Disassembly

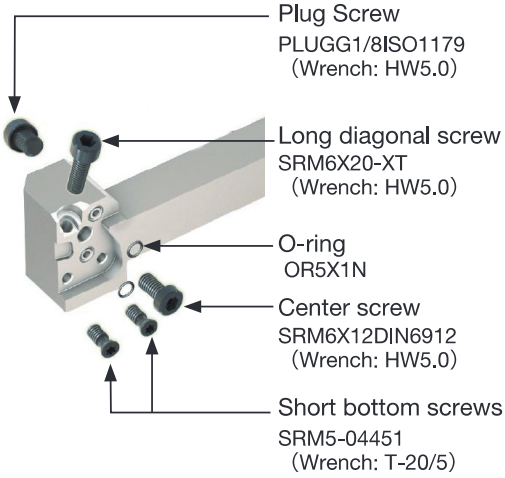


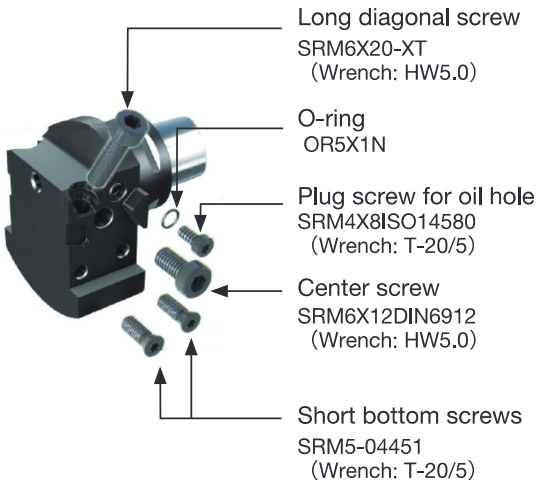
First loosen the long screw in the angular direction.



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

Loosing the long screw alone may not release the insert.

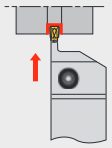


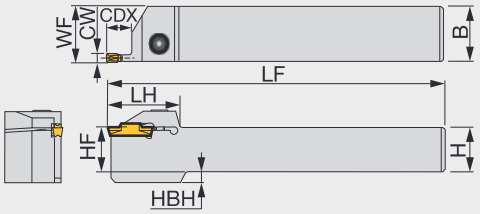


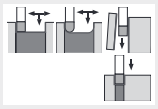
All parts listed here are included in the tool holder.

CTER/L

External grooving, parting and turning toolholder







Insert
DGM, SGM, DGS, SGS, DGG, DTX, DTE, DTR, DTA, SGN, DTM, DGL
Right hand (R) shown.

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/L1616-3T09	3	3	9	16	16	110	32	16	16.3	4	5
CTER/L2020-3T09	3	3	9	20	20	125	32	20	20.3	-	5
CTER/L2525-3T09	3	3	9	25	25	150	32	25	25.3	-	5
CTER/L2020-3T12	3	3	12	20	20	125	32	20	20.3	-	5
CTER/L2525-3T12	3	3	12	25	25	150	32	25	25.3	-	5
CTER/L1616-3T20	3	3	20	16	16	110	38.5	16	16.3	4	5
CTER/L2020-3T20	3	3	20	20	20	125	38.5	20	20.3	-	5
CTER/L2525-3T20	3	3	20	25	25	150	38.5	25	25.3	-	5
CTER/L2525-3T25	3	3	25	25	25	150	44.5	25	25.3	-	5
CTER/L1616-4T10	4	4	10	16	16	110	32	16	16.5	4	8.5
CTER/L2020-4T10	4	4	10	20	20	125	32	20	20.5	-	8.5
CTER/L2525-4T10	4	4	10	25	25	150	32	25	25.5	-	8.5
CTER/L2020-4T15	4	4	15	20	20	125	33	20	20.5	-	8.5
CTER/L2525-4T15	4	4	15	25	25	150	33	25	25.5	-	8.5
CTER/L1616-4T25	4	4	25	16	16	110	45	16	16.5	4	8.5
CTER/L2020-4T25	4	4	25	20	20	125	45	20	20.5	-	8.5
CTER/L2525-4T25	4	4	25	25	25	150	45	25	25.5	-	8.5
CTER/L3232-4T25	4	4	25	32	32	170	45	32	32.5	-	8.5
CTER/L2020-5T12	5	5	12	20	20	125	37	20	20.6	-	8.5
CTER/L2525-5T12	5	5	12	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T20	5	5	20	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T32	5	5	32	25	25	150	56	25	25.6	-	8.5
CTER/L3232-5T32	5	5	32	32	32	170	56	32	32.6	-	8.5
CTER/L2020-6T12	6	6	12	20	20	125	37	20	20.6	-	12
CTER/L2525-6T12	6	6	12	25	25	150	37	25	25.6	7	12
CTER/L2525-6T20	6	6	20	25	25	150	41	25	25.6	-	12
CTER/L2525-6T32	6	6	32	25	25	150	56	25	25.6	7	12
CTER/L3232-6T32	6	6	32	32	32	170	56	32	32.6	-	12
CTER/L2525-8T16	8	8	16	25	25	150	47	25	26.1	7	12
CTER/L2525-8T25	8	8	25	25	25	150	47	25	26.1	7	12
CTER/L3232-8T25	8	8	25	32	32	170	47	32	33.1	-	12
CTER/L2525-8T36	8	8	36	25	25	150	60	25	26.1	7	12
CTER/L3232-8T36	8	8	36	32	32	170	60	32	33.1	-	12

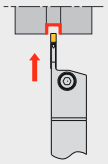
When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
(1) "WF" value is calculated with groove width "CW" shown in the table.
*Torque: Recommended clamping torque (N·m)

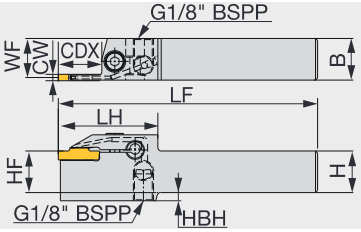
Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030

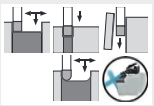
SPARE PARTS

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/L1616-3T09	CM5X0.8X16-A	P-4
CTER/L2020-3T09	CM5X0.8X20-A	P-4
CTER/L2525-3T09	CM5X0.8X25-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/L2525-5T20	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/L2525-6T20	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/L2525-8T36	CM8X1.25X25-A	P-6
CTER/L3232-8T36	CM8X1.25X25-A	P-6

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







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

Right hand (R) shown.

Designation	CW	Seat size	CDX	H	B	LF	LH	HF	WF	HBH	Torque*
CTER/L2020-2T17-CHP	2	2	17	20	20	125	45	20	19.1	4	5.5
CTER/L2525-2T17-CHP	2	2	17	25	25	150	45	25	24.1	-	5.5
CTER/L2020-3T20-CHP	3	3	20	20	20	125	48	20	18.8	4	5.5
CTER/L2525-3T20-CHP	3	3	20	25	25	150	48	25	23.8	-	5.5
CTER/L2525-3T25-CHP	3	3	25	25	25	150	51	25	23.8	-	5.5
CTER/L2525-4T25-CHP	4	4	25	25	25	150	55	25	23.5	-	8
CTER/L2525-5T20-CHP	5	5	20	25	25	150	49	25	23.08	-	8
CTER/L2525-6T20-CHP	6	6	20	25	25	150	52	25	22.58	7	12

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
*Torque: Recommended clamping torque (N·m)

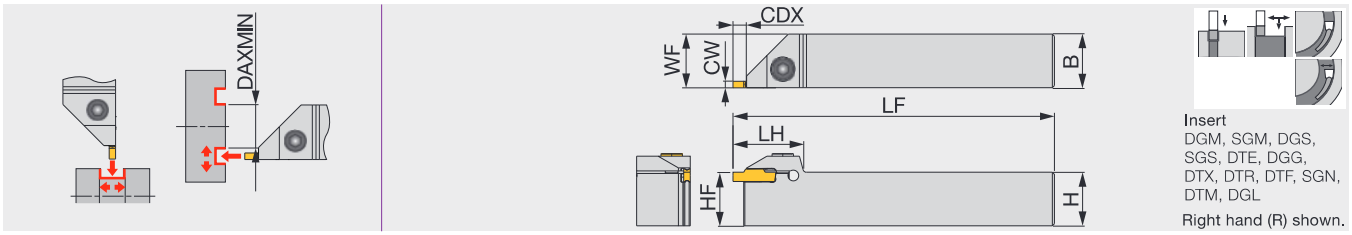
SPARE PARTS

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 → F021 - F034, Standard cutting conditions → F030
Parts for coolant hose → F198, Technical Reference → L042

CTEFR/L

External face grooving and turning toolholder



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

Right hand (R) shown.

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

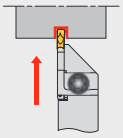
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61

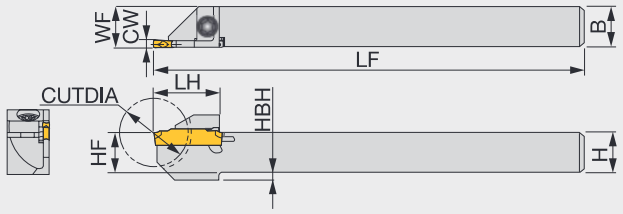
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

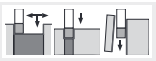
Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030

TUNGCUT
JCTER/L

External grooving and parting toolholder, for Swiss lathes







Insert
Seat size 1 = DGS1.4
Seat size 2, 3, = DGM, SGM, DGS, SGS, DGE, DTE, DGG, DGL

Right hand (R) shown.

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

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

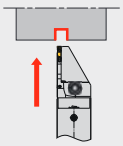
SPARE PARTS

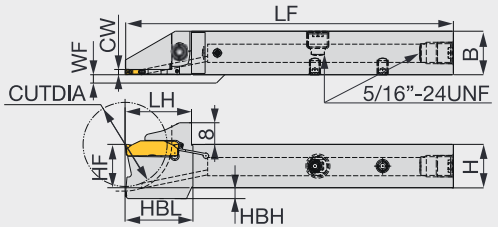
Designation	Clamping screw	Wrench
JCTER/L...	CSHB-4-A	T-15F

TUNGCUT
JCTER/L-CHP

DIRECT TUNG JET

External grooving and parting toolholder with DirectTungJet connection





Insert
Seat size 2 = DGM, SGM, DGS, SGS, DGE, DGG, SGN

Right hand (R) shown.

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

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

SPARE PARTS

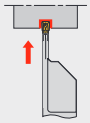
Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JCTER/L...	CSHB-4-A	T-15F	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

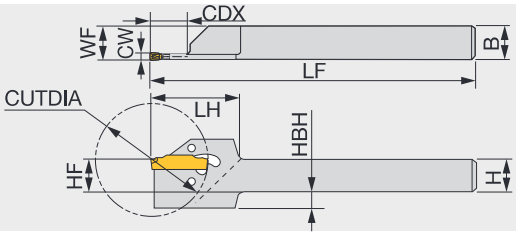
Groove width: 2.0 mm

Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030

TUNGCUT
CGER/L

External deep grooving and parting toolholder, for Swiss lathes





Insert
Seat size 1 = DGS1.4-016
Seat size 2, 3, 4, = DGM, SGM, DGS, SGS, SGN, DGG, DTM, DGL

Right hand (R) shown.

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

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

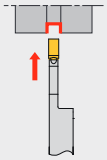
SPARE PARTS

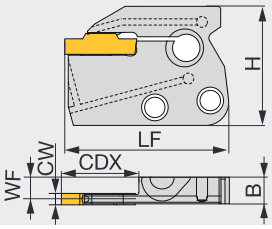
Designation	Wrench (Option)
CGER/L2020-1.4T14	CRW23
CGER/L****-2T17 - 4T19	CRW33

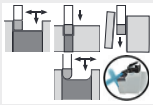
TUNGCUT
CAER/L-CHP

TUNGMODULAR SYSTEM

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







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

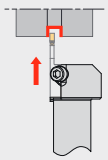
Right hand (R) shown.

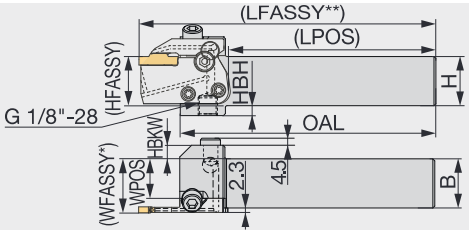
Designation	CW	Seat size	CDX	H	B	LF	WF
CAER/L-2T16-CHP	2	2	16	33	7.2	41.5	6.3
CAER/L-2T20-CHP	2	2	20	33	7.2	45.5	6.3
CAER/L-3T16-CHP	3	3	16	33	7.2	41.5	5.9
CAER/L-3T20-CHP	3	3	20	33	7.2	45.5	6
CAER/L-4T16-CHP	4	4	16	33	7.2	41.5	5.7
CAER/L-4T20-CHP	4	4	20	33	7.2	45.5	5.7
CAER/L-5T20-CHP	5	5	20	33	7.2	46.3	5.3
CAER/L-6T20-CHP	6	6	20	33	7.2	46.3	4.8

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

Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030
Technical Reference → L042

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





Right hand (R) shown.

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

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

*Please see the page L042 for the instruction on installing and removing the blade or the insert.
*Torque: Recommended clamping torque (N·m)
Note: Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
Applicable for 30 MPa coolant

External
Internal
Face
Parting
Others

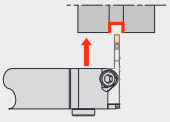
SPARE PARTS

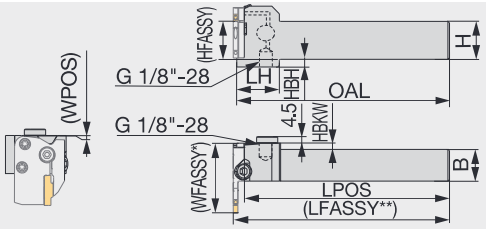
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHSR/L...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N	PLUGG1/8ISO1179

Recommended clamping torque (N·m)

Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

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





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

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

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

*Torque: Recommended clamping torque (N·m)
Note: Use right-hand blades (R) with left-hand shanks (L); and left-hand blades (L) with right-hand shanks (R).
Applicable for 30 MPa coolant

*Please see the page L042 for the instruction on installing and removing the blade or the insert.

SPARE PARTS

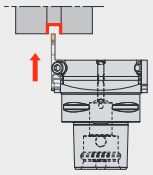
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHFVR/L...	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N	PLUGG1/8ISO1179

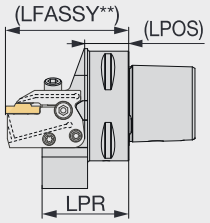
Recommended clamping torque (N·m)

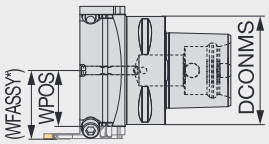
Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030
Parts for coolant hose → F198, Technical Reference → L042

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







Right-hand (R) blade shown.

Designation	DCONMS	LPR	LPOS	WPOS	Blade (Option)	Torque*
C3CHSN19045-CHP	32	45	17.5	18.5	CAER/L...-CHP	5
C4CHSN21047-CHP	40	46.5	21.5	21	CAER/L...-CHP	5
C5CHSN26047-CHP	50	47	22.5	26	CAER/L...-CHP	5
C6CHSN33050-CHP	63	50	24.5	32.5	CAER/L...-CHP	5

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

*Torque: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant
*Please see the page L042 for the instruction on installing and removing the blade or the insert.

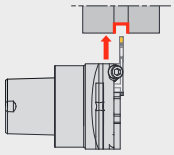
SPARE PARTS

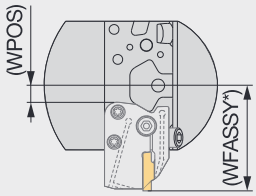
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHSN...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N

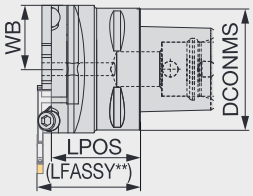
Recommended clamping torque (N·m)

Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

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







Left-hand (L) blade shown.

Designation	DCONMS	LPOS	WB	WPOS	Blade (Option)	Torque*
C3CHFVN26040-CHP	32	40	26	1.5	CAER/L...-CHP	5
C4CHFVN26046-CHP	40	46	26	1.5	CAER/L...-CHP	5
C5CHFVN26046-CHP	50	46	26	1.5	CAER/L...-CHP	5
C6CHFVN33046-CHP	63	46	33	8.5	CAER/L...-CHP	5

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

*Torque: Recommended clamping torque (N·m)

Applicable for 30 MPa coolant
*Please see the page L042 for the instruction on installing and removing the blade or the insert.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHFVN...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N

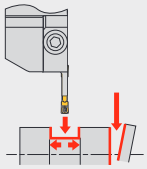
Recommended clamping torque (N·m)

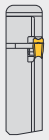
Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

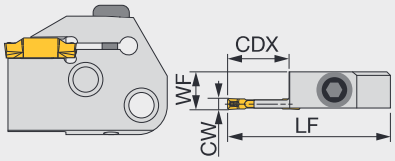
Reference pages: Inserts → F021 - F034, Standard cutting conditions →F030, Technical Reference → L042

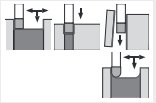
CAER/L

External grooving, parting, and turning blade









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

Right hand (R) shown.

Designation	CW	Seat size	CDX	LF	WF	Shank	Torque*
CAER/L-3T16	3	3	16	45	10.4	CHFVL/R..., CHSR/L...	5
CAER/L-4T16	4	4	16	45	10.5	CHFVL/R..., CHSR/L...	5
CAER/L-5T20	5	5	20	49	10.5	CHFVL/R..., CHSR/L...	5
CAER/L-6T20	6	6	20	49	10.5	CHFVL/R..., CHSR/L...	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.

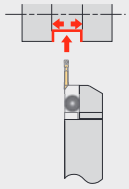
SPARE PARTS

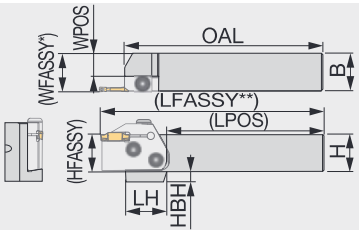
Designation	Clamping screw	Wrench
CAER/L...	BHM6-20-A	P-4

Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030

TUNGCUT
CHSR/L

Shank for CAER/L and CAFR/L blades





Right hand (R) shown.

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

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

SPARE PARTS

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

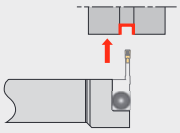
Combination of blade and toolholder

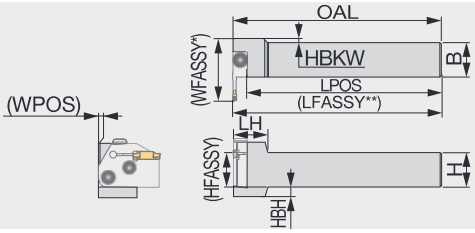
Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	

● : Corresponding

TUNGCUT
CHFVR/L

Shank for CAER/L and CAFR/L blades





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

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

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

SPARE PARTS

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

Combination of blade and toolholder

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

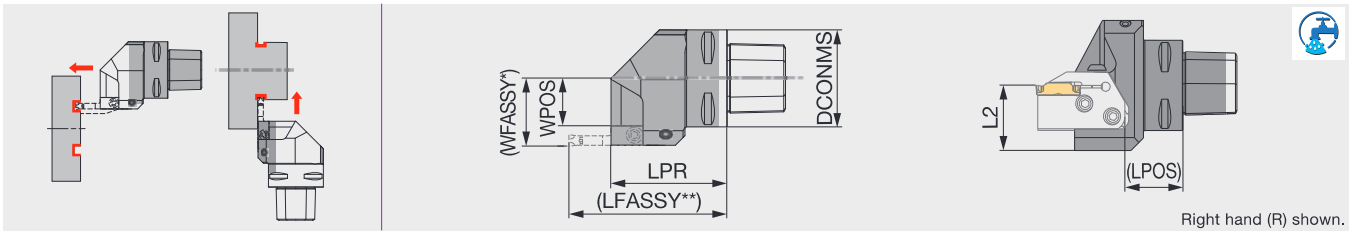
● : Corresponding

Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030

C-CHSR/L

TUNGCAP

TungCap shank for CAER/L and CAFR/L blades



Right hand (R) shown.

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

Applicable for 7 MPa coolant.
*WFASSY :Shank (WPOS) + blade (WF)
**LFASSY : Shank (LPOS) + blade (LF)

Not compatible with TungModularSystem

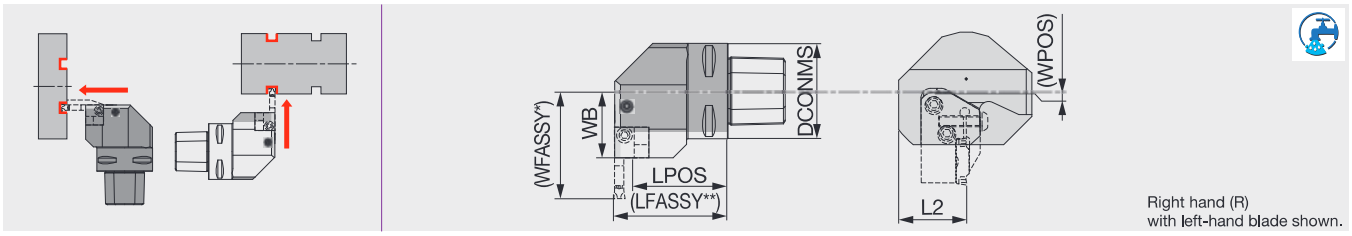
SPARE PARTS

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

C-CHFVR/L

TUNGCAP

TungCap shank for CAER/L and CAFR/L blades



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

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

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

Applicable for 7 MPa coolant.

Not compatible with TungModularSystem

SPARE PARTS

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

Combination of blade and toolholder

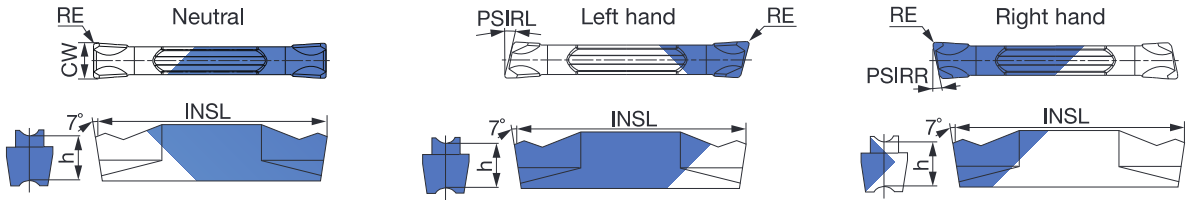
Toolholder	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

● : Corresponding

Reference pages: Inserts → F021 - F034, Standard cutting conditions → F030

DGM

External grooving and parting, 2 corners



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

★ : First choice
☆ : Second choice

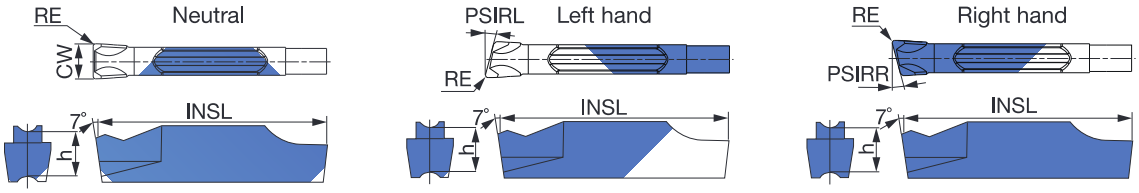
Designation	Seat size	HAND	CW±0.05	RE	Coated							Cermet				INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	AH905	GH130		NS9530							
DGM2-020	2	N	2	0.2	●	●	●	●		●		●				20	5	0°	0°
DGM2-020-6R	2	R	2	0.2			●	●		●						19.8	5	0°	6°
DGM2-020-6L	2	L	2	0.2			●	●		●						19.8	5	6°	0°
DGM2-020-8R	2	R	2	0.2			●	●		●						19.8	5	0°	8°
DGM2-020-8L	2	L	2	0.2			●	●		●						19.8	5	8°	0°
DGM2-020-15R	2	R	2	0.2			●	●		●						19.8	5	0°	15°
DGM2-020-15L	2	L	2	0.2			●	●		●						19.8	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°
DGM3-020	3	N	3	0.2	●	●	●	●	●	●		●				20	5	0°	0°
DGM3-020-6R	3	R	3	0.2			●	●		●						19.9	5	0°	6°
DGM3-020-6L	3	L	3	0.2			●	●		●						19.9	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			●	●		●						19.9	5	0°	15°
DGM3-020-15L	3	L	3	0.2			●	●		●						19.9	5	15°	0°
DGM4-030	4	N	4	0.3	●	●	●	●	●	●		●				20	5	0°	0°
DGM4-030-4R	4	R	4	0.3			●	●		●						19.8	5	0°	4°
DGM4-030-4L	4	L	4	0.3			●	●		●						19.8	5	4°	0°
DGM4-030-15R	4	R	4	0.3			●	●		●						19.8	5	0°	15°
DGM4-030-15L	4	L	4	0.3			●	●		●						19.8	5	15°	0°
DGM5-030	5	N	5	0.3	●	●	●	●	●	●		●				25	5.5	0°	0°
DGM5-030-4R	5	R	5	0.3			●	●		●						24.9	5.5	0°	4°
DGM6-030	6	N	6	0.3	●	●	●	●	●	●						25	5.5	0°	0°
DGM8-040	8	N	8	0.4	●	●	●	●		●						30	6.7	0°	0°

●: Line up

Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

SGM

External deep grooving and parting, 1corner



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

★ : First choice
☆ : Second choice

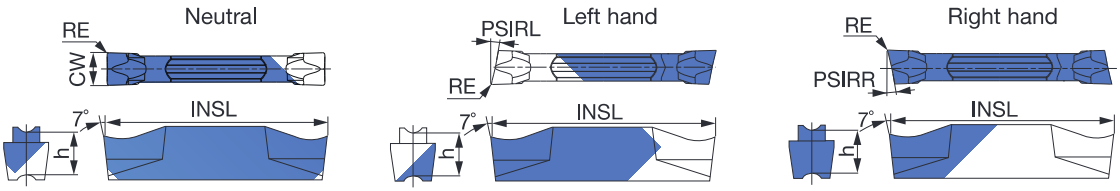
Designation	Seat size	HAND	CW±0.05	RE	Coated			INSL	h	PSIRL	PSIRR
					AH7025	AH725	GH130				
SGM2-020	2	N	2	0.2	●	●	●	20	5	0°	0°
SGM2-020-6R	2	R	2	0.2	●	●	●	20	5	0°	6°
SGM2-020-6L	2	L	2	0.2	●	●	●	20	5	6°	0°
SGM3-020	3	N	3	0.2	●	●	●	20	5	0°	0°
SGM3-020-6R	3	R	3	0.2	●	●	●	20	5	0°	6°
SGM3-020-6L	3	L	3	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

Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

DGS

External grooving and parting, 2 corners



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

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated						Cermet						INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	GH130		NS9530									
DGS1.4-016	1	N	1.4	0.16			●	●	●								16	4.3	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●		●						20	5	0°	0°
DGS2-020-6R	2	R	2	0.2			●	●	●								19.95	5	0°	6°
DGS2-020-6L	2	L	2	0.2			●	●	●								19.95	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			●	●	●								19.95	5	0°	15°
DGS2-020-15L	2	L	2	0.2			●	●	●								19.95	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°
DGS3-020	3	N	3	0.2	●	●	●	●	●		●						20	5	0°	0°
DGS3-020-6R	3	R	3	0.2			●	●	●								19.9	5	0°	6°
DGS3-020-6L	3	L	3	0.2			●	●	●								19.9	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			●	●	●								19.9	5	0°	15°
DGS3-020-15L	3	L	3	0.2			●	●	●								19.9	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°
DGS4-030	4	N	4	0.3	●	●	●	●	●		●						20	5	0°	0°
DGS4-030-4R	4	R	4	0.3			●	●	●								19.8	5	0°	4°
DGS4-030-4L	4	L	4	0.3			●	●	●								19.85	5	4°	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°

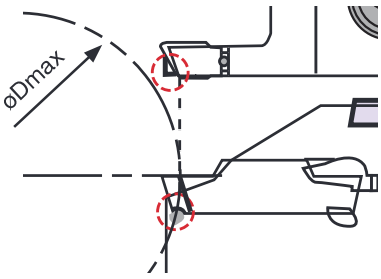
●: Line up

Caution

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

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

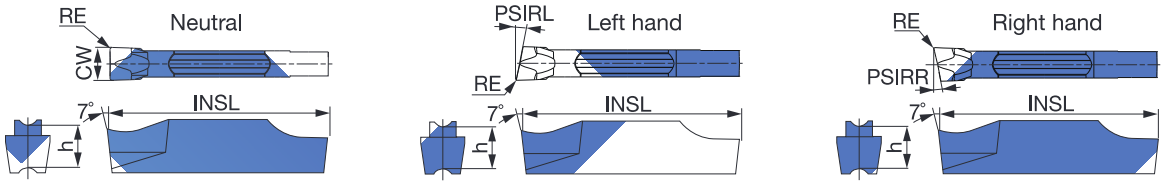
Designation	øDmax (mm)
DGS2-002-15R/L	28
DGS3-002-15R/L	29
SGS3-020-15R/L	103
SGS3-002-15R/L	34



Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

SGS

External deep grooving and parting, 1corner



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

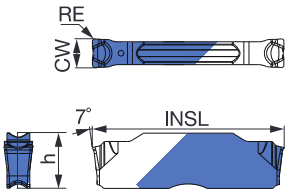
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated AH7025	Coated AH725	Coated GH130	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°

●: Line up

DGL

External grooving and parting



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

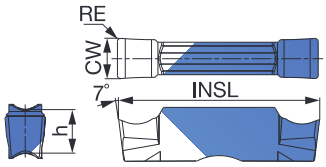
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated AH7025	INSL	h
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

Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

DGG
External grooving (for high precision)



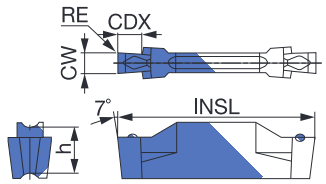
P	Steel	★	★	
M	Stainless	★		
K	Cast iron	★	☆	☆
N	Non-ferrous			★
S	Superalloys	★		☆
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	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

DGE
External grooving (for high precision)



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

★ : First choice
☆ : Second choice

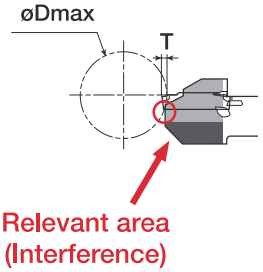
Designation	Seat size	CW±0.05	RE	Coated			Cermet	CDX	INSL	h
				AH7025	AH725	GH130	NS9530			
DGE100-000	2	1	0		●	●	●	2.5	20	5
DGE130-000	2	1.3	0		●	●	●	2.5	20	5
DGE160-010	2	1.6	0.1	●	●	●	●	2.5	20	5
DGE185-010	2	1.85	0.1	●	●	●	●	3.5	20	5
DGE215-015	2	2.15	0.15	●	●	●	●	3.5	20	5

●: Line up

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

T = Groove depth

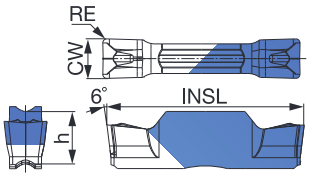
Designation	Max. groove depth (mm)	øDmax (mm)				
		T= 1	T = 1.5	T = 2	T = 2.5	T = 3
DGE100-000	2	∞	18.6	11.5	-	-
DGE130-000						
DGE160-010						
DGE185-010	3				8.8	7
DGE215-015						



Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

DTM

External face grooving and turning



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

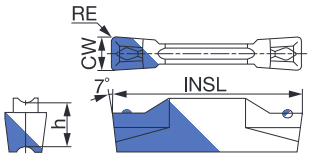
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated	INSL	h
				AH7025		
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

DTE

External face grooving and turning (for high precision)



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

★ : First choice
☆ : Second choice

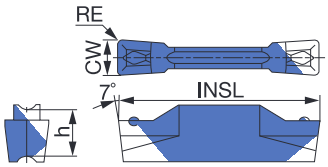
Designation	Seat size	CW±0.02	RE	Coated					Cermet		INSL	h
				T9225	T9125	AH7025	AH725	GH130	NS9530			
DTE265-015	3	2.65	0.15	●	●	●	●	●	●		20	5
DTE300-020	3	3	0.2	●	●	●	●	●	●		20	5
DTE300-040	3	3	0.4	●	●	●	●	●	●		20	5
DTE315-015	3	3.15	0.15	●	●	●	●	●	●		20	5
DTE400-040	4	4	0.4	●	●	●	●	●	●		20	5
DTE400-080	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 → F010 - F020, Standard cutting conditions → F030

DTE

External face grooving and turning



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

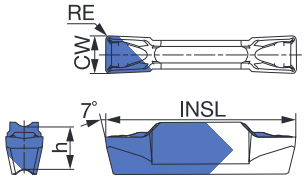
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated							Cermet						INSL	h
				T9225	T9125	T515	AH7025	AH725	GH130		NS9530							
DTE3-040	3	3	0.4	●	●	●	●	●	●		●						20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●		●						20	5
DTE5-040	5	5	0.4			●	●										25	5.5
DTE6-080	6	6	0.8			●	●										25	5.5

●: Line up

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

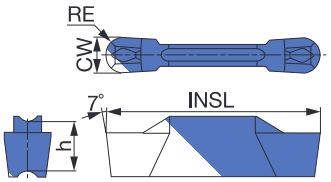
Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	AH7025	AH725	GH130		NS9530							
DTX3-030	3	3	0.3	●	●	●	●	●		●						20	5
DTX4-040	4	4	0.4	●	●	●	●	●		●						20	5
DTX5-040	5	5	0.4	●	●	●	●	●		●						25	5.5
DTX6-080	6	6	0.8			●	●	●								25	5

●: Line up

Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

DTR

Profiling and undercutting (for high precision)



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

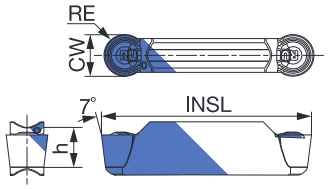
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated					Cermet	INSL	h
				T9225	T9125	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



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

★ : First choice
☆ : Second choice

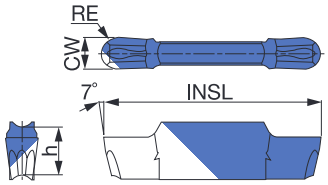
Designation	Seat size	CW±0.05	RE	Coated						Cermet	INSL	h
				T9225	T9125	AH7025	AH725	AH905	GH130	NS9530		
DTR3-150	3	3	1.5	●	●	●	●	●	●	●	20	5
DTR4-200	4	4	2	●	●	●	●	●	●	●	20	5
DTR5-250	5	5	2.5	●	●	●	●	●	●	●	25	5.5
DTR6-300	6	6	3	●	●	●	●		●		25	5.5
DTR8-400	8	8	4	●	●	●	●		●		30	6.7

●: Line up

Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

DTIU

Profiling and undercutting (for high precision)



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

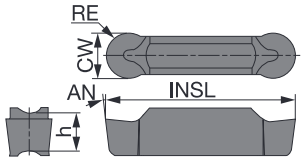
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated AH7025	Coated AH725	Coated GH130	INSL	h
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

DTA

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

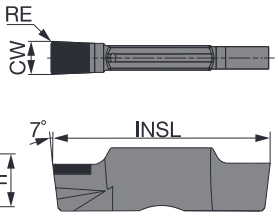
Designation	Seat size	CW±0.02	RE	Uncoated TH10	INSL	h	AN
DTA600-300	6	6	3	●	25	5.5	7
DTA800-400	8	8	4	●	30	6.7	10

●: Line up

Reference pages: Toolholders → F010 - F020, Standard cutting conditions → F030

SGN

External grooving of hardened steel



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

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025	RE	CBN	INSL	h
				BX360		
SGN200-020	2	2	0.2	●	20	5
SGN300-020	3	3	0.2	●	20	5
SGN400-020	4	4	0.2	●	20	5

●: Line up

STANDARD CUTTING CONDITIONS

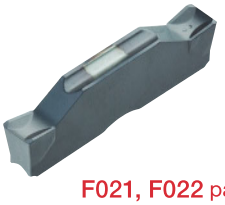
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (m/min)
P	Steels (C45, 34CrMo4, etc.)	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Priority for wear resistance	T9225	80 - 300
		< 300 HB	Priority for wear resistance	T9125	80 - 200
		< 300 HB	Priority for impact resistance	GH130	50 - 120
		< 300 HB	Priority for surface finish	NS9530	80 - 220
M	Stainless steel (X10CrNiS18-9, etc.)	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Priority for impact resistance	GH130	50 - 120
K	Gray cast iron (GG25, 250, etc.)	-	First choice	T515, AH7025	50 - 180
		-	Priority for impact resistance	GH130	50 - 180
	Ductile cast irons (GGG45, 450-10S, etc.)	-	First choice	T515, AH7025	50 - 120
		-	Priority for impact resistance	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	AH7025	20 - 60
		< HRC 40	Priority for wear resistance	AH905	20 - 80
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	20 - 80
		< HRC 40	Priority for impact resistance	AH7025, AH725	20 - 80
		< HRC 40	Priority for surface finish	KS05F	20 - 60
H	Hardened steels (34CrMo4, etc.)	> HRC 50	First choice	BX360	80 - 150

*Please see the page F031 - F033 for feed: f (mm/rev).

Reference pages: Toolholders → F010 - F020

External grooving and parting

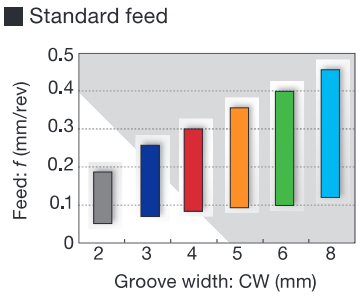
DGM type (2 corners) SGM type (1 corner)

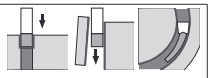


F021, F022 page

1st choice for grooving and parting

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



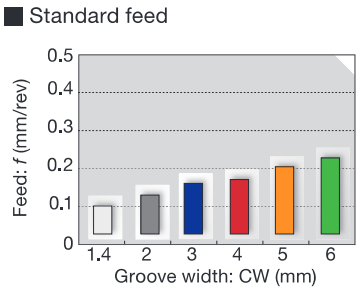


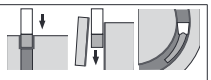
DGS type (2 corners) SGS type (1 corner)

F023, F024 page

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 1.4 - 6 mm



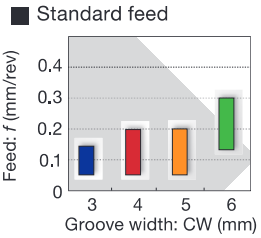


DGL type (2 corners)

F024 page

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 = 3 - 6 mm

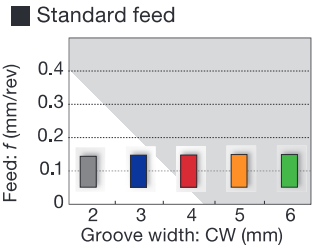


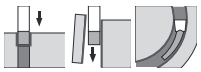
DGG type (2 corners)

F025 page

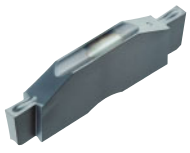
For non-ferrous materials and titanium

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





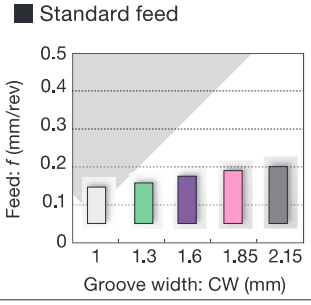
DGE type (2 corners)



F025 page

For high accurate and shallow groove

Excellent chip control
CW = 1 - 2.15 mm



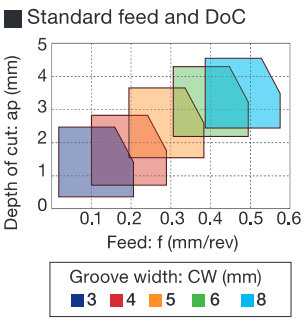
External grooving and turning

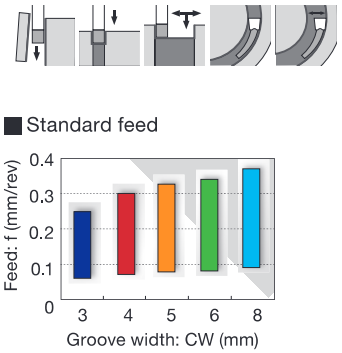
DTM type (2 corners)

F026 page

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 3 - 8 mm



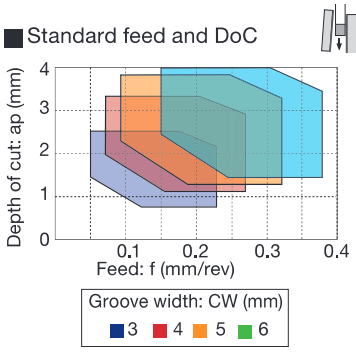


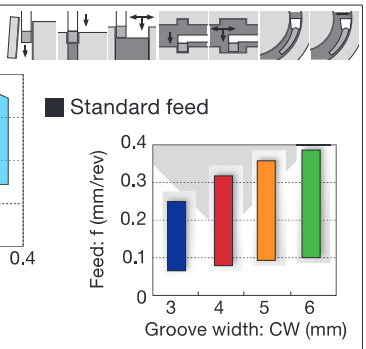
DTX type (2 corners)

F027 page

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 3 - 6 mm



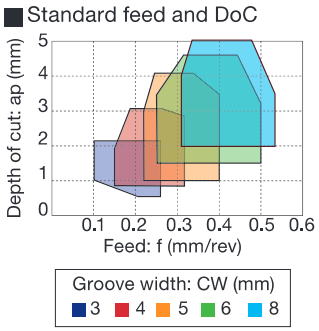


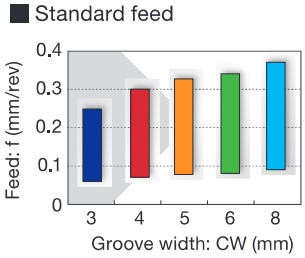
DTE type (2 corners)

F026, F027 page

General purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 3 - 8 mm





Profiling and undercutting

DTR type (2 corners)

Molded

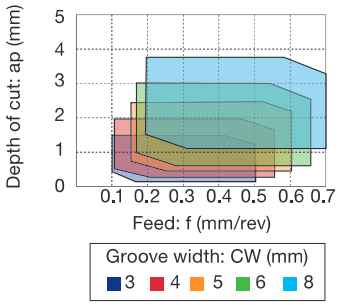
Ground

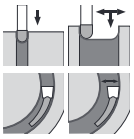
F028 page

Full radius type

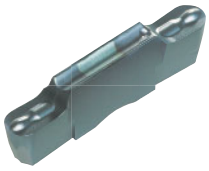
Excellent chip control
Molded and ground inserts available
CW = 3 - 8 mm

■Standard feed and DoC





DTIU type (2 corners)

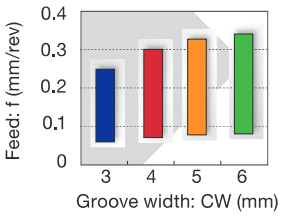


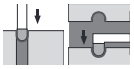
F029 page

Full radius type

Excellent chip control for undercutting
CW = 3 - 6 mm

■Standard feed and DoC





Aluminium wheel machining

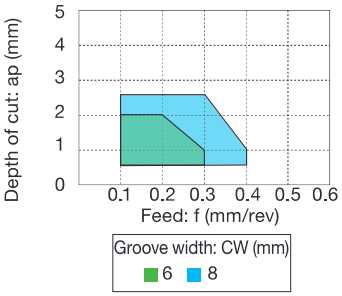
DTA type (2 corners)

F029 page

Full radius type

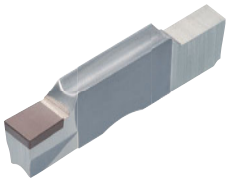
Excellent chip control
For aluminium wheel profiling
Ground insert
CW = 6 - 8 mm

■Standard feed and DoC



External grooving of hardened steel

SGN-CBN type (1 corner)

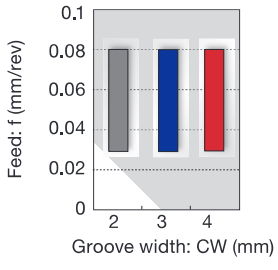


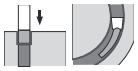
F030 page

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 2 - 4 mm
(CW = ±0.025 mm)

■Standard feed





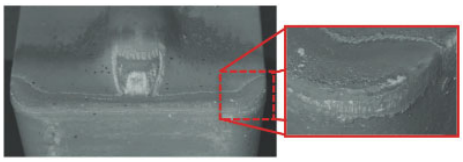
AH7025 Cutting performance

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

Tool life comparison

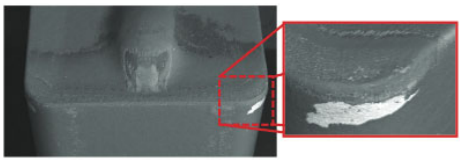
Alloy steel (SCM440 / 42CrMo4) **P**

AH7025



Tool wear after 60 grooves

Conventional grade



Tool wear after 30 grooves

Insert : DTE3-040 AH7025
Cutting speed : V_c = 150 m/min
Feed : f = 0.17 mm/rev
Groove depth : 17 mm
Machining : External grooving
Coolant : Wet

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

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

Grades

AH7025 P M K S

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

AH725 P M S

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

T515 K

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

T9225 P

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

T9125 P

- Suitable for steel machining at high speeds
- 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
- Recommended for non-ferrous materials and titanium

TH10 N

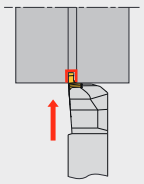
- Recommended for non-ferrous materials

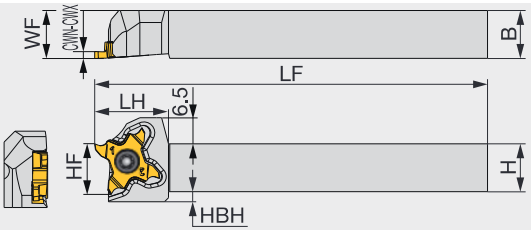
BX360 H

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

STCR/L-18

External grooving and threading toolholder





Right hand (R) shown.

Designation	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*
STCR/L1010X18	0.33	3	10	10	120	18.5	10	10	4.5	TC*18...	1.2
STCR/L1212F18	0.33	3	12	12	85	18.5	12	12	2.5	TC*18...	1.2
STCR/L1212X18	0.33	3	12	12	120	18.5	12	12	2.5	TC*18...	1.2
STCR/L1616X18	0.33	3	16	16	120	18.5	16	16	-	TC*18...	1.2
STCR/L2020H18	0.33	3	20	20	100	18.5	20	20	-	TC*18...	1.2
STCR/L2020X18	0.33	3	20	20	120	23	20	25	-	TC*18...	1.2
STCR/L2525Z18	0.33	3	25	25	135	23	25	30	-	TC*18...	1.2

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)

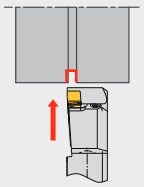
SPARE PARTS

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

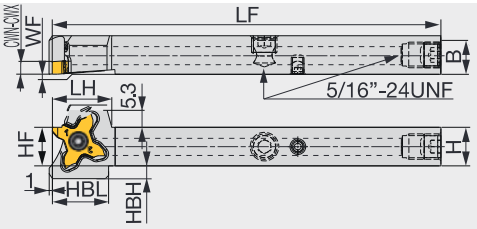
STCR/L-18-CHP

DIRECTTUNGJET

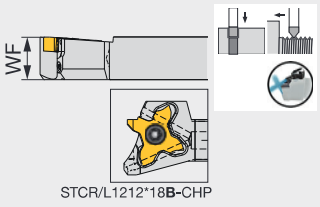
External grooving and threading toolholder with DirectTungJet connection



Right hand



Left hand



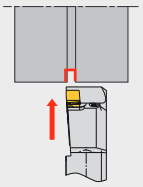
Designation	CWN	CWX	H	B	LF	LH	HF	WF	HBL	HBH	Insert	Torque*
STCR/L1212X18-CHP***(1)	0.33	3	12	12	120	18.5	12	0/12	17.5	4	TC*18...	1.2
STCR/L1212X18B-CHP (1)	0.33	3	12	12	120	18.5	12	0/12	17.5	4	TC*18...	1.2
STCR/L1616X18-CHP (1)	0.33	3	16	16	120	18.5	16	0/16	-	-	TC*18...	1.2

Note: Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
(1) This product can be used with DirectTungJet system.
*Torque: Recommended clamping torque (N·m)
***: This item will be replaced with a new product in the future.

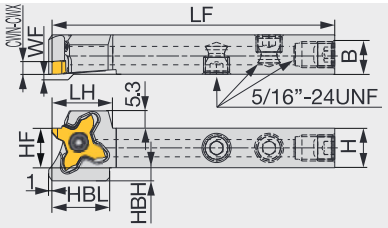
Reference pages: Inserts → F040 - F045, Standard cutting conditions → F045

STCR/L-F18-CHP

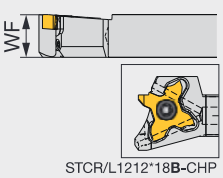
External grooving and threading toolholder, with high pressure coolant capability



Right hand



Left hand



STCR/L1212*18**B**-CHP

Designation	CWN	CWX	H	B	LF	LH	HF	WF	HBL	HBH	Insert	Torque*
STCR/L1212F18-CHP***	0.33	3	12	12	85	18.5	12	0/12	17.5	4	TC*18...	1.2
STCR/L1212F18B-CHP	0.33	3	12	12	120	18.5	12	0/12	17.5	4	TC*18...	1.2

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)
***: This item will be replaced with a new product in the future.

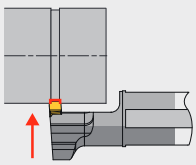
SPARE PARTS

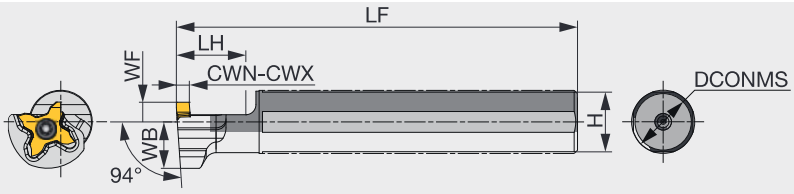
Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

TETRA MINI CUT

JS-STCL18

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





Left hand (L) shown.

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

• Please use right-hand inserts.
*Torque: Recommended clamping torque (N·m)

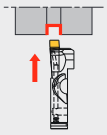
SPARE PARTS

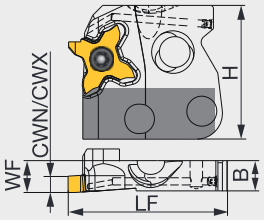
Designation	Clamping screw	Wrench
JS****-STCL18	CSTC-4L100DL	T-1008/5

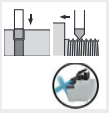
Reference pages: Inserts → F040 - F045, Standard cutting conditions → F045, Parts for coolant hose → F198

STCAR/L18-CHP

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







Right hand (R) shown.

Designation	CWN	CWX	H	B	LF	WF	Insert	Torque*
STCAR/L18-CHP	0.33	3	33	7.2	38	7.5	TC*18...	1.2

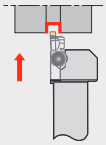
Note: Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
*Torque: Recommended clamping torque (N·m)

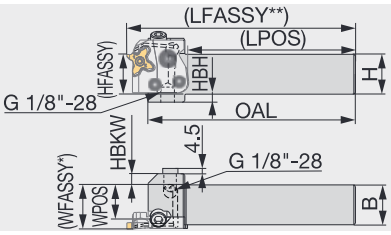
SPARE PARTS

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

CHSR/L-CHP

Shank for blades with high pressure coolant capability





Right hand (R) shown.

Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5

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

* Please see the page L042 for the instruction on installing and removing the blade.
Note: Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
• Applicable for 30 MPa coolant

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHSR/L...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N	PLUGG1/8ISO1179

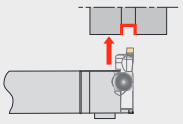
Recommended clamping torque (N·m)

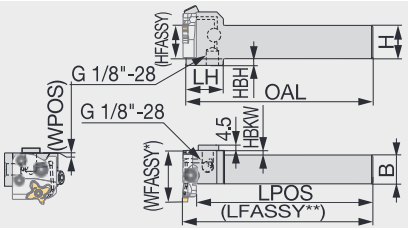
Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F040 - F045, Standard cutting conditions → F045, Parts for coolant hose → F198

CHFVR/L-CHP

Shank for blades with high pressure coolant capability





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

Designation	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH
CHFVR/L2020-CHP	20	20	140	28	135.1	0.5	5	20	10
CHFVR/L2525-CHP	25	25	140	28	135.1	0.5	0	25	5

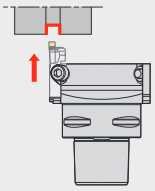
*WFASSY : shank (WPOS) + blade (LF)
**LFASSY : shank (LPOS) + blade (WF)
Note: Use left-hand blades (L) with right-hand shanks (R); and right-hand blades (R) with left-hand shanks (L).
• Applicable for 30 MPa coolant
* Please see the page L042 for the instruction on installing and removing the blade.

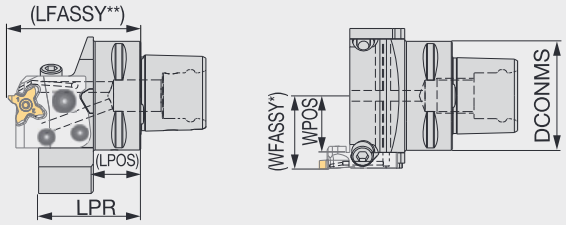
SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHFVR/L...	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N	PLUGG1/8ISO1179

C*CHSN-CHP

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





Right-hand (R) blade shown.

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

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

• Applicable for 30 MPa coolant
* Please see the page L042 for the instruction on installing and removing the blade.

SPARE PARTS

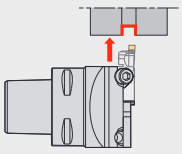
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHSN...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N

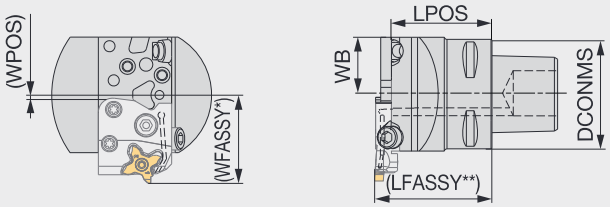
Recommended clamping torque (N·m)

Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F040 - F045, Standard cutting conditions → F045, Parts for coolant hose → F198

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





Left-hand (L) blade shown.

Designation	DCONMS	LPOS	WB	WPOS
C3CHFVN26040-CHP	32	40	26	1.5
C4CHFVN26046-CHP	40	46	26	1.5
C5CHFVN26046-CHP	50	46	26	1.5
C6CHFVN33046-CHP	63	46	33	8.5

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

• Applicable for 30 MPa coolant
* Please see the page L042 for the instruction on installing and removing the blade.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHFVN...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N

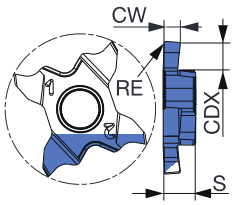
Recommended clamping torque (N·m)

Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F040 - F045, Standard cutting conditions →F045

INSERT

TCG18R/L (with edge preparation)



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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02	RE	Coated AH7025	CDX	S
TCG18R100-010	R	1	0.1	●	2	4
TCG18L100-010	L	1	0.1	●	2	4
TCG18R120-010	R	1.2	0.1	●	2	4
TCG18L120-010	L	1.2	0.1	●	2	4
TCG18R125-010	R	1.25	0.1	●	2	4
TCG18L125-010	L	1.25	0.1	●	2	4
TCG18R125-020	R	1.25	0.2	●	2	4
TCG18L125-020	L	1.25	0.2	●	2	4
TCG18R130-020	R	1.3	0.2	●	2	4
TCG18L130-020	L	1.3	0.2	●	2	4
TCG18R140-010	R	1.4	0.1	●	3.5	4
TCG18L140-010	L	1.4	0.1	●	3.5	4
TCG18R140-020	R	1.4	0.2	●	3.5	4
TCG18L140-020	L	1.4	0.2	●	3.5	4
TCG18R145-010	R	1.45	0.1	●	3.5	4
TCG18L145-010	L	1.45	0.1	●	3.5	4
TCG18R145-020	R	1.45	0.2	●	3.5	4
TCG18L145-020	L	1.45	0.2	●	3.5	4
TCG18R150-010	R	1.5	0.1	●	3.5	4
TCG18L150-010	L	1.5	0.1	●	3.5	4
TCG18R150-020	R	1.5	0.2	●	3.5	4
TCG18L150-020	L	1.5	0.2	●	3.5	4
TCG18R160-020	R	1.6	0.2	●	3.5	4
TCG18L160-020	L	1.6	0.2	●	3.5	4
TCG18R170-020	R	1.7	0.2	●	3.5	4
TCG18L170-020	L	1.7	0.2	●	3.5	4
TCG18R175-010	R	1.75	0.1	●	3.5	4
TCG18L175-010	L	1.75	0.1	●	3.5	4
TCG18R175-020	R	1.75	0.2	●	3.5	4
TCG18L175-020	L	1.75	0.2	●	3.5	4
TCG18R185-020	R	1.85	0.2	●	3.5	4
TCG18L185-020	L	1.85	0.2	●	3.5	4
TCG18R195-020	R	1.95	0.2	●	3.5	4
TCG18L195-020	L	1.95	0.2	●	3.5	4

Please see the page F045 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F035 - F039, Standard cutting conditions → F045

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02	RE	Coated		CDX	S
				AH7025			
TCG18R200-010	R	2	0.1	●		3.5	4
TCG18L200-010	L	2	0.1	●		3.5	4
TCG18R200-020	R	2	0.2	●		3.5	4
TCG18L200-020	L	2	0.2	●		3.5	4
TCG18R225-020	R	2.25	0.2	●		3.5	4
TCG18L225-020	L	2.25	0.2	●		3.5	4
TCG18R230-020	R	2.3	0.2	●		3.5	4
TCG18L230-020	L	2.3	0.2	●		3.5	4
TCG18R250-010	R	2.5	0.1	●		3.5	4
TCG18L250-010	L	2.5	0.1	●		3.5	4
TCG18R250-020	R	2.5	0.2	●		3.5	4
TCG18L250-020	L	2.5	0.2	●		3.5	4
TCG18R250-030	R	2.5	0.3	●		3.5	4
TCG18L250-030	L	2.5	0.3	●		3.5	4
TCG18R265-030	R	2.65	0.3	●		3.5	4
TCG18L265-030	L	2.65	0.3	●		3.5	4
TCG18R280-030	R	2.8	0.3	●		3.5	4
TCG18L280-030	L	2.8	0.3	●		3.5	4
TCG18R300-010	R	3	0.1	●		3.5	4
TCG18L300-010	L	3	0.1	●		3.5	4
TCG18R300-020	R	3	0.2	●		3.5	4
TCG18L300-020	L	3	0.2	●		3.5	4
TCG18R300-030	R	3	0.3	●		3.5	4
TCG18L300-030	L	3	0.3	●		3.5	4

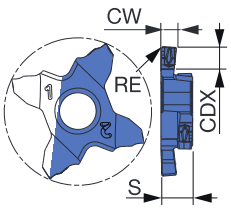
Please see the page F045 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F035 - F039, Standard cutting conditions → F045

INSERT

TCS18R (3D chipbreaker, honed edge)



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

★ : First choice
☆ : Second choice

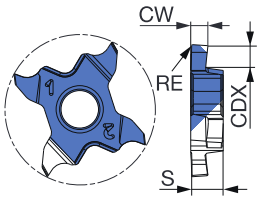
Designation	HAND	CW±0.02	RE	Coated	CDX	S
				AH7025		
TCS18R100-010	R	1	0.1	●	2	4
TCS18R120-010	R	1.2	0.1	●	2	4
TCS18R125-010	R	1.25	0.1	●	2	4
TCS18R125-020	R	1.25	0.2	●	2	4
TCS18R130-020	R	1.3	0.2	●	3.5	4
TCS18R140-010	R	1.4	0.1	●	3.5	4
TCS18R140-020	R	1.4	0.2	●	3.5	4
TCS18R145-010	R	1.45	0.1	●	3.5	4
TCS18R150-010	R	1.5	0.1	●	3.5	4
TCS18R150-020	R	1.5	0.2	●	3.5	4
TCS18R160-020	R	1.6	0.2	●	3.5	4
TCS18R170-020	R	1.7	0.2	●	3.5	4
TCS18R175-010	R	1.75	0.1	●	3.5	4
TCS18R175-020	R	1.75	0.2	●	3.5	4
TCS18R185-020	R	1.85	0.2	●	3.5	4
TCS18R195-020	R	1.95	0.2	●	3.5	4
TCS18R200-010	R	2	0.1	●	3.5	4
TCS18R200-020	R	2	0.2	●	3.5	4
TCS18R225-020	R	2.25	0.2	●	3.5	4
TCS18R230-020	R	2.3	0.2	●	3.5	4
TCS18R250-010	R	2.5	0.2	●	3.5	4
TCS18R250-020	R	2.5	0.2	●	3.5	4
TCS18R250-030	R	2.5	0.3	●	3.5	4
TCS18R265-030	R	2.65	0.3	●	3.5	4
TCS18R280-030	R	2.8	0.3	●	3.5	4
TCS18R300-010	R	3	0.1	●	3.5	4
TCS18R300-020	R	3	0.2	●	3.5	4
TCS18R300-030	R	3	0.3	●	3.5	4

Please see the page F045 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F035 - F039, Standard cutting conditions → F045

TCP18R/L (lightly honed edge)



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

★ : First choice
☆ : Second choice

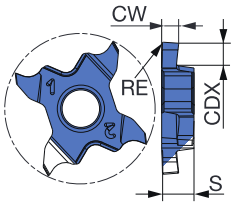
Designation	HAND	CW±0.02	RE	Coated	CDX	S
				AH725		
TCP18R033-005	R	0.33	0.05	●	0.8	4
TCP18L033-005	L	0.33	0.05	●	0.8	4
TCP18R043-005	R	0.43	0.05	●	1.2	4
TCP18L043-005	L	0.43	0.05	●	1.2	4
TCP18R050-005	R	0.50	0.05	●	1.2	4
TCP18L050-005	L	0.50	0.05	●	1.2	4
TCP18R075-005	R	0.75	0.05	●	2	4
TCP18L075-005	L	0.75	0.05	●	2	4
TCP18R095-005	R	0.95	0.05	●	2	4
TCP18L095-005	L	0.95	0.05	●	2	4
TCP18R100-010	R	1	0.1	●	2	4
TCP18L100-010	L	1	0.1	●	2	4
TCP18R120-010	R	1.2	0.1	●	2	4
TCP18L120-010	L	1.2	0.1	●	2	4
TCP18R125-010	R	1.25	0.1	●	2	4
TCP18L125-010	L	1.25	0.1	●	2	4
TCP18R140-010-35	R	1.4	0.1	●	3.5	4
TCP18L140-010-35	L	1.4	0.1	●	3.5	4
TCP18R145-010	R	1.45	0.1	●	2	4
TCP18L145-010	L	1.45	0.1	●	2	4
TCP18R145-010-35	R	1.45	0.1	●	3.5	4
TCP18L145-010-35	L	1.45	0.1	●	3.5	4
TCP18R150-010	R	1.5	0.1	●	2	4
TCP18L150-010	L	1.5	0.1	●	2	4
TCP18R150-010-35	R	1.5	0.1	●	3.5	4
TCP18L150-010-35	L	1.5	0.1	●	3.5	4
TCP18R175-010	R	1.75	0.1	●	2	4
TCP18L175-010	L	1.75	0.1	●	2	4
TCP18R175-010-35	R	1.75	0.1	●	3.5	4
TCP18L175-010-35	L	1.75	0.1	●	3.5	4
TCP18R200-010	R	2	0.1	●	2.5	4
TCP18L200-010	L	2	0.1	●	2.5	4
TCP18R200-010-35	R	2	0.1	●	3.5	4
TCP18L200-010-35	L	2	0.1	●	3.5	4
TCP18R250-010	R	2.5	0.1	●	2.5	4
TCP18L250-010	L	2.5	0.1	●	2.5	4
TCP18R250-010-35	R	2.5	0.1	●	3.5	4
TCP18L250-010-35	L	2.5	0.1	●	3.5	4
TCP18R300-010	R	3	0.1	●	2.5	4
TCP18L300-010	L	3	0.1	●	2.5	4
TCP18R300-010-35	R	3	0.1	●	3.5	4
TCP18L300-010-35	L	3	0.1	●	3.5	4

Please see the page F045 for precautions of processing.

5 pieces per package
● : Line up

Reference pages: Toolholders → F035 - F039, Standard cutting conditions → F045

TCP18R/L-F (sharp edge)



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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.02	RE	Coated											CDX	S
				SH725												
TCP18R033F-005	R	0.33	0.05	●											0.8	4
TCP18L033F-005	L	0.33	0.05	●											0.8	4
TCP18R043F-005	R	0.43	0.05	●											1.2	4
TCP18L043F-005	L	0.43	0.05	●											1.2	4
TCP18R050F-005	R	0.5	0.05	●											1.2	4
TCP18L050F-005	L	0.5	0.05	●											1.2	4
TCP18R075F-005	R	0.75	0.05	●											2	4
TCP18L075F-005	L	0.75	0.05	●											2	4
TCP18R095F-005	R	0.95	0.05	●											2	4
TCP18L095F-005	L	0.95	0.05	●											2	4
TCP18R100F-005	R	1	0.05	●											2	4
TCP18R100F-010	R	1	0.1	●											2	4
TCP18L100F-010	L	1	0.1	●											2	4
TCP18R120F-005	R	1.2	0.05	●											2	4
TCP18R120F-010	R	1.2	0.1	●											2	4
TCP18L120F-010	L	1.2	0.1	●											2	4
TCP18R125F-005	R	1.25	0.05	●											2	4
TCP18R125F-010	R	1.25	0.1	●											2	4
TCP18L125F-010	L	1.25	0.1	●											2	4
TCP18R140F-010-35	R	1.4	0.1	●											3.5	4
TCP18R145F-005-35	R	1.45	0.05	●											3.5	4
TCP18R145F-010	R	1.45	0.1	●											2	4
TCP18L145F-010	L	1.45	0.1	●											2	4
TCP18R145F-010-35	R	1.45	0.1	●											3.5	4
TCP18L145F-010-35	L	1.45	0.1	●											3.5	4
TCP18R150F-005-35	R	1.5	0.05	●											3.5	4
TCP18R150F-010	R	1.5	0.1	●											2	4
TCP18L150F-010	L	1.5	0.1	●											2	4
TCP18R150F-010-35	R	1.5	0.1	●											3.5	4
TCP18L150F-010-35	L	1.5	0.1	●											3.5	4
TCP18R175F-005-35	R	1.75	0.05	●											3.5	4
TCP18R175F-010	R	1.75	0.1	●											2	4
TCP18L175F-010	L	1.75	0.1	●											2	4
TCP18R175F-010-35	R	1.75	0.1	●											3.5	4
TCP18L175F-010-35	L	1.75	0.1	●											3.5	4
TCP18R200F-005-35	R	2	0.05	●											3.5	4
TCP18R200F-010	R	2	0.1	●											2.5	4
TCP18L200F-010	L	2	0.1	●											2.5	4
TCP18R200F-010-35	R	2	0.1	●											3.5	4
TCP18L200F-010-35	L	2	0.1	●											3.5	4
TCP18R250F-010	R	2.5	0.1	●											2.5	4
TCP18L250F-010	L	2.5	0.1	●											2.5	4
TCP18R250F-010-35	R	2.5	0.1	●											3.5	4
TCP18L250F-010-35	L	2.5	0.1	●											3.5	4
TCP18R300F-010	R	3	0.1	●											2.5	4
TCP18L300F-010	L	3	0.1	●											2.5	4
TCP18R300F-010-35	R	3	0.1	●											3.5	4
TCP18L300F-010-35	L	3	0.1	●											3.5	4

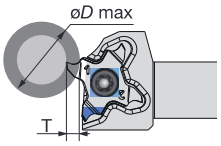
Please see the page F045 for precautions of processing.

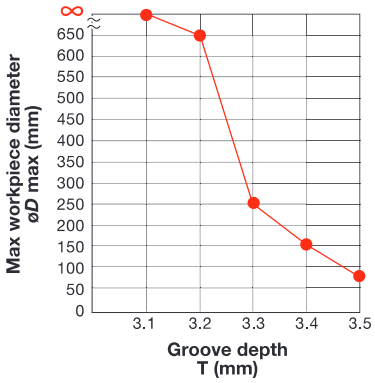
5 pieces per package

● : Line up

Reference pages: Toolholders → F035 - F039, Standard cutting conditions → F045

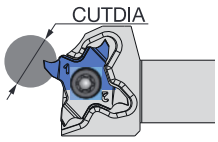
Precautions of processing





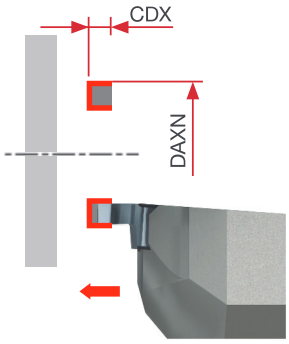
*Groove depth and max workpiece diameter (øDmax)

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



Max workpiece diameter CUTDIA (mm)
7

Minimum diameter for face grooving



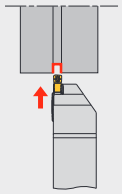
Minimum face diameter DAXN (mm)	Maximum groove depth CDX (mm)
65	3

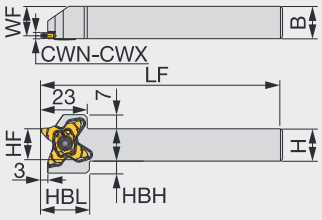
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed *Vc* (m/min)	Feed: *f* (mm/rev) TCP / TCP-F (AH725 / SH725)	TCS (AH7025)	TCG (AH7025)
P	Low carbon steel S15C, S20C, etc C15, C20, etc.	80 - 180	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
P	Carbon steels, Alloy steel S55C, SCM440, etc C55, 42CrMoS4, etc.	80 - 180	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
P	Prehardened steel NAK80, PX5 etc.	80 - 180	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
M	Stainless steel SUS304, etc X5CrNi18-9, X5CrNiMo17-12-2, etc	50 - 120	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
K	Gray cast iron FC250, FC300, etc. 250, 300, etc.	50 - 180	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
K	Ductile cast irons FCD400, FCD600, etc. 400-15, 600-3, etc.	50 - 180	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
S	Titanium alloys Ti-6Al-4V etc.	30 - 80	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12
S	Superalloys Inconel718 etc.	20 - 60	0.03 - 0.1	0.03 - 0.15	0.03 - 0.12

STCR/L-27

External grooving toolholder





Right hand (R) shown.

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

*Torque: Recommended clamping torque (N·m)

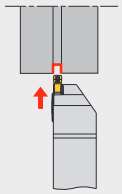
SPARE PARTS

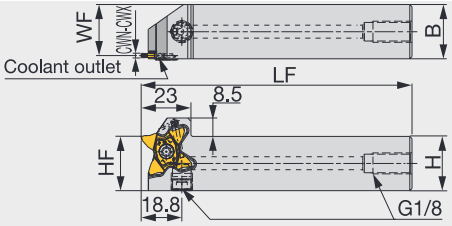
Designation	Screw	Wrench
STCR****-27	SR16-212-01397L	T-2010/5
STCL****-27	SR16-212-01397	T-2010/5

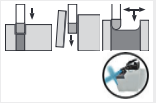
STCR/L-27-CHP

TUNG URN TJET

External grooving toolholder, with high pressure coolant capability







Right hand (R) shown.

Designation	CWN	CWX	H	B	LF	HF	WF	Insert	Torque*
STCR/L2525-27-CHP	0.5	3.18	25	25	125	25	23.5	TC*27...	2.5

*Torque: Recommended clamping torque (N·m)

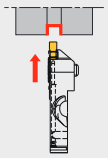
SPARE PARTS

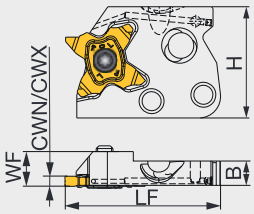
Designation	Screw	Wrench
STCR****-27-CHP	SR16-212-01397L	T-2010/5
STCL****-27-CHP	SR16-212-01397	T-2010/5

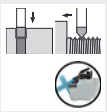
Reference pages: Inserts → F050 - F053, Standard cutting conditions → F053
Parts for coolant hose → F198

STCAR/L27-CHP

Modular-type external grooving and parting blade, 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

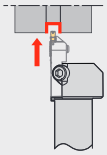
*Torque: Recommended clamping torque (N·m)

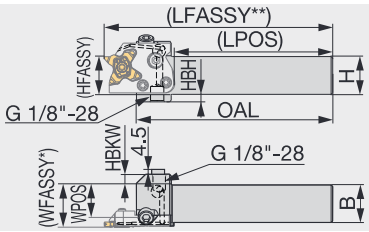
SPARE PARTS

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

CHSR/L-CHP

Shank for blades with high pressure coolant capability





Right hand (R) shown.

Designation	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5

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

* Please see the page L042 for the instruction on installing and removing the blade.
Note: Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
• Applicable for 30 MPa coolant

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHSR/L...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N	PLUGG1/8ISO1179

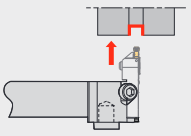
Recommended clamping torque (N·m)

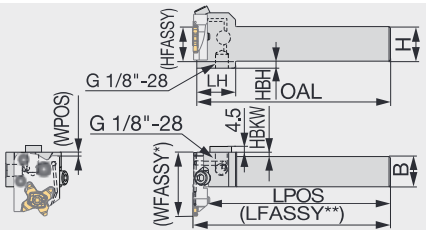
Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F050 - F053, Standard cutting conditions → F053
Parts for coolant hose → F198

CHFVR/L-CHP

Shank for blades with high pressure coolant capability





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

Designation	H	B	OAL	LPOS	WPOS	LH	HBKW	HFASSY	HBH
CHFVR/L2020-CHP	20	20	140	135.1	0.5	28	5	20	10
CHFVR/L2525-CHP	25	25	140	135.1	0.5	28	0	25	5

*WFASSY : shank (WPOS) + blade (LF)
**LFASSY : shank (LPOS) + blade (WF)
Note: Use left-hand blades (L) with right-hand shanks (R); and right-hand blades (R) with left-hand shanks (L).

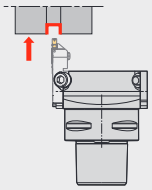
• Applicable for 30 MPa coolant
* Please see the page L042 for the instruction on installing and removing the blade.

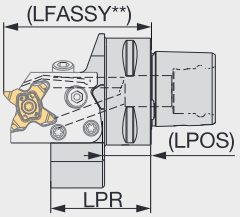
SPARE PARTS

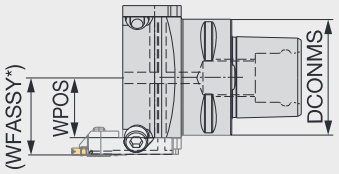
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring	Plug
CHFVR/L...	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N	PLUGG1/8ISO1179

C*CHSN-CHP

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







Right-hand (R) blade shown.

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

*WFASSY : shank (WPOS) + blade (WF)
**LFASSY : shank (LPOS) + blade (LF)
• Applicable for 30 MPa coolant
* Please see the page L042 for the instruction on installing and removing the blade.

SPARE PARTS

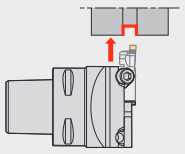
Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHSN...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N

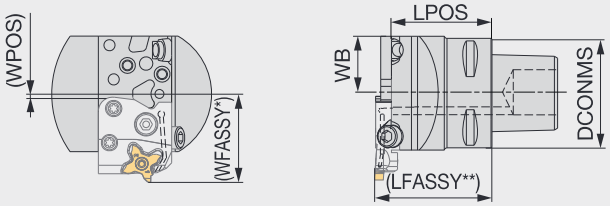
Recommended clamping torque (N·m)

Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F050 - F053, Standard cutting conditions → F053
Parts for coolant hose → F198

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





Left-hand (L) blade shown.

Designation	DCONMS	LPOS	WB	WPOS
C3CHFVN26040-CHP	32	40	26	1.5
C4CHFVN26046-CHP	40	46	26	1.5
C5CHFVN26046-CHP	50	46	26	1.5
C6CHFVN33046-CHP	63	46	33	8.5

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

• Applicable for 30 MPa coolant
* Please see the page L042 for the instruction on installing and removing the blade.

SPARE PARTS

Designation	Clamping screw 1	Wrench 1	Clamping screw 2	Clamping screw 3	Wrench 2	O-ring
C*CHFVN...-CHP	SRM5-04451	T-20/5	SRM6X12DIN6912	SRM6X20-XT	HW5.0	OR5X1N

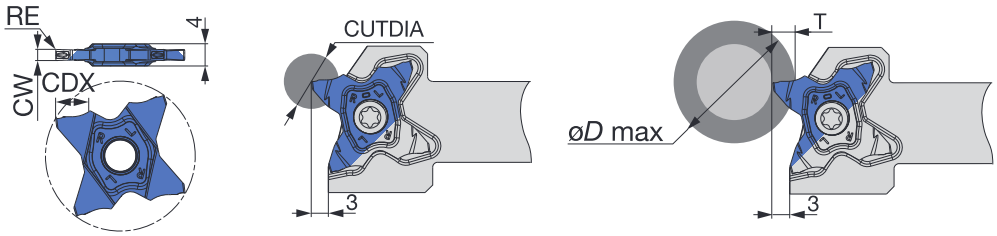
Recommended clamping torque (N·m)

Clamping screw	Torque (N · m)
SRM5-04451	5
SRM6X12DIN6912	8.5
SRM6X20-XT	8.5

Reference pages: Inserts → F050 - F053, Standard cutting conditions → F053

INSERT - FOR GROOVING AND PARTING OFF

TCS27



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

★ : First choice
☆ : Second choice

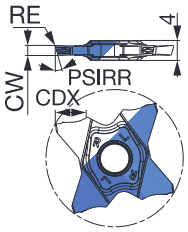
Designation	CW±0.02	RE	Coated	CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)											
			AH725			T≤1	T≤2	T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCS27-050-000	0.5	0	●	1	2	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.04	●	2.5	5	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-075-010	0.75	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

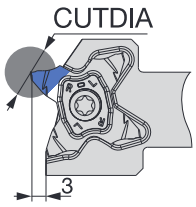
5 pieces per package
● : Line up

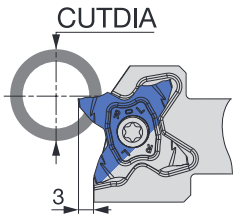
Reference pages: Toolholders → F046 - F049, Standard cutting conditions → F053

INSERT- FOR PARTING OFF

TCS27-R/L







Right hand (R) shown.

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

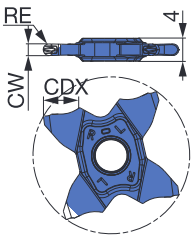
★ : First choice
☆ : Second choice

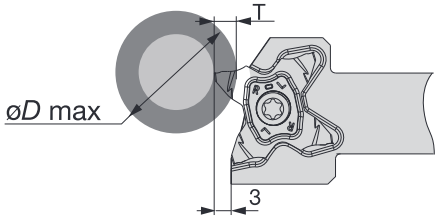
Designation	HAND	CW±0.02	RE	Coated AH725	CDX	PSIRL	PSIRR	Max. parting off dia. CUTDIA Solid bar	Max. parting off dia. CUTDIA Tube
TCS27-100-15R	R	1	0.06	●	3.5	0°	15°	7	600
TCS27-100-15L	L	1	0.06	●	3.5	15°	0°	7	600
TCS27-150-6R	R	1.5	0.06	●	5.7	0°	6°	11.4	35
TCS27-150-6L	L	1.5	0.06	●	5.7	6°	0°	11.4	35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

INSERT- FOR GROOVING AND PROFILING

TCS27 (Full R)





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

★ : First choice
☆ : Second choice

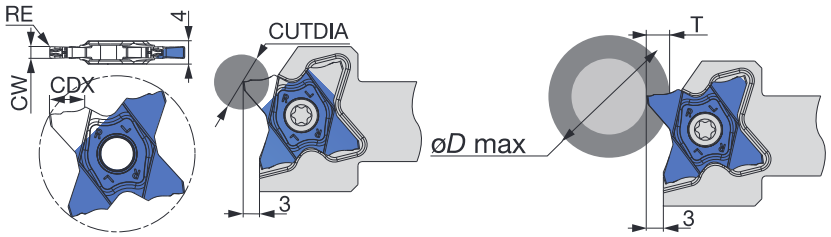
Designation	CW±0.02	RE	Coated AH725	CDX	Relation of groove depth (T) and Max. diameter (øD max) T≤1 T≤2 T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCS27-157-079	1.57	0.79	●	3	∞	-	-	-	-	-	-	-	-	-
TCS27-200-100	2	1	●	3	∞	-	-	-	-	-	-	-	-	-
TCS27-239-120	2.39	1.2	●	5.7	∞	600	280	180	130	50	35	-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

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F049, Standard cutting conditions → F053

INSERT- FOR GROOVING AND PARTING OFF

TCM27



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

★ : First choice
☆ : Second choice

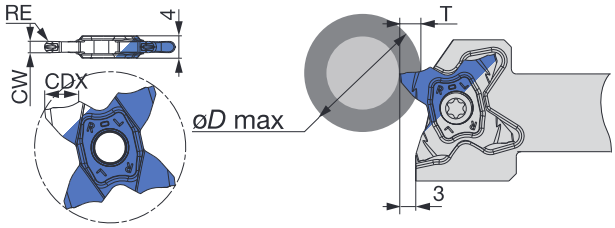
Designation	CW±0.02	RE	Coated	CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
			AH725			T≤1 T≤2 T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCM27-150-010	1.5	0.1	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-150-020	1.5	0.2	●	5.7	11.4	∞	600	280	180	130	50	35	-	-	-
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
● : Line up

Reference pages: Toolholders → F046 - F049, Standard cutting conditions → F053

INSERT - FOR GROOVING AND PROFILING

TCM27 (Full R)



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

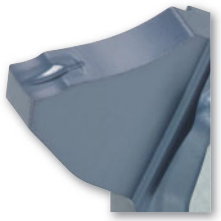
★ : First choice
☆ : Second choice

Designation	CW±0.02	RE	Coated AH725		CDX	CUTDIA	Relation of groove depth (T) and Max. diameter (øD max)									
							T≤1 T≤2 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	∞	600	-	-	-	-	-	-	-	-
TCM27-239-120	2.39	1.2	●		5.7	11.4	∞	600	280	180	130	50	35	-	-	-
TCM27-300-150	3	0.2	●		6.4	12.8	∞	600	280	180	135	105	95	85	78	55

5 pieces per package
● : Line up

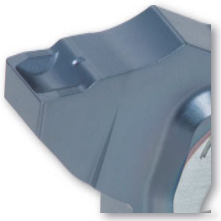
CHIPBREAKER

TCS27



CW = 0.5 mm – 3.18 mm
For general machining Lower cutting force and superior sharpness

TCM27



CW = 1.5 mm – 3.18 mm
For high feed machining Well-designed edge with high strength

STANDARD CUTTING CONDITIONS

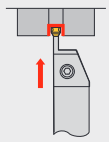
ISO	Workpiece material	Grades	Cutting speed Vc (m/min)	Feed f (mm/rev) Grooving, Parting TCS	Grooving, Parting TCM	Parting (with hand) TCS	Turning (full radius) TCS	Turning (full radius) TCM	Depth of cut for profiling Turning (full radius)
P	Carbon steel S45C, etc. C45, etc.	AH725	100 - 200	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.10	0.05 - 0.15	0.5
	Alloy steel SCM435, etc. 34CrMo4, etc.	AH725	50 -180	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.10	0.05 - 0.15	0.5
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	AH725	100 - 150	0.05 - 0.15	0.05 - 0.20	0.04 - 0.12	0.05 - 0.10	0.05 - 0.15	0.5
K	Gray cast iron FC250, etc. 250, etc.	AH725	50 - 180	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.10	0.05 - 0.15	0.5
	Ductile cast irons FCD400, etc. 400-15, etc.	AH725	50 - 120	0.05 - 0.15	0.05 - 0.20	0.04 - 0.12	0.05 - 0.10	0.05 - 0.15	0.5
S	Titanium alloys Ti-6Al-4V, etc.	AH725	30 - 60	0.05 - 0.15	0.05 - 0.15	0.04 - 0.12	0.05 - 0.10	0.05 - 0.10	0.5
	Superalloys Inconel718, etc.	AH725	20 - 50	0.05 - 0.15	0.05 - 0.15	0.04 - 0.12	0.05 - 0.10	0.05 - 0.10	0.5

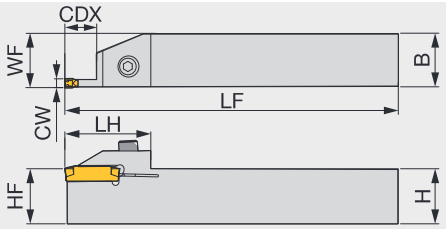
Reference pages: Toolholders → F046 - F053

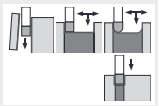
MY-T SERIES

CGWSR/L-W

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







Right hand (R) shown.

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)

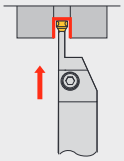
SPARE PARTS

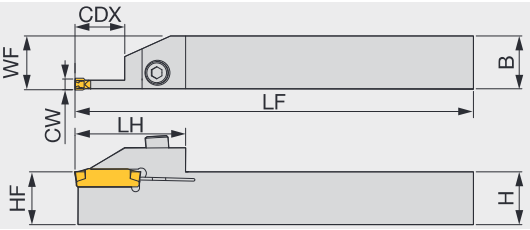
Designation	Clamping screw	Wrench
CGWSR/L****-W...	CHHM5-18	P-4

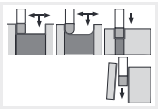
MY-T SERIES

CGWSR/L-W-L

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







Right hand (R) shown.

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	16	16	125	37	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30-L	3	16.5, 17.5	20	20	150	37	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30-L	3	16.5, 17.5	25	25	150	37	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40-L	4	21, 21.5	20	20	150	42	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40-L	4	21, 21.5	25	25	150	42	25	25.4	WG*40, WGE40R/L	5
CGWSR/L2020-W50-L	5	21	20	20	150	42	20	20.4	WG*50, WGE50R/L	5
CGWSR/L2525-W50-L	5	21	25	25	150	42	25	25.4	WG*50, WGE50R/L	5

*Torque: Recommended clamping torque (N·m)

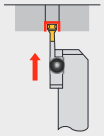
SPARE PARTS

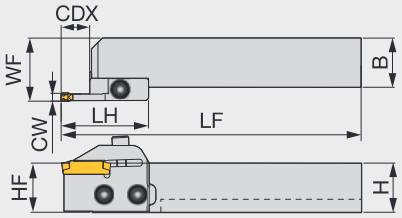
Designation	Clamping screw	Wrench
CGWSR/L****-W**-L	CHHM5-18	P-4

Reference pages: Inserts → F059 - F060, Standard cutting conditions → F060

MY-T SERIES
CGWSR/L-WG

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





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

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

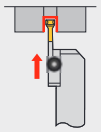
Note: Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
*Torque: Recommended clamping torque (N·m)

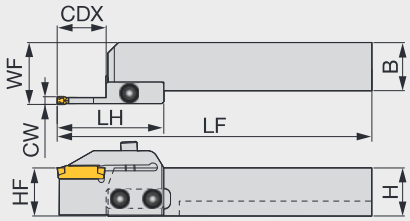
SPARE PARTS

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

MY-T SERIES
CGWSR/L-WG-L

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





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

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

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

SPARE PARTS

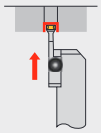
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-W**GR/L-L	CHHM5-18	CSHB-6	P-4

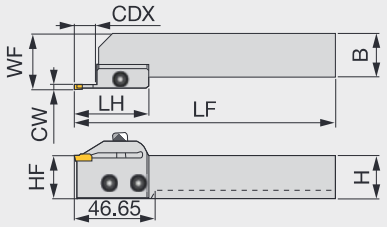
Reference pages: Inserts → F059 - F060, Standard cutting conditions → F060

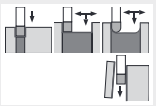
MY-T SERIES

CGWSR/L-G

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







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

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

Note: For diameter compensation values in traversing, see page F091.
Use right-hand blades (R) with right-hand shanks (R); and left-hand blades (L) with left-hand shanks (L).
*Torque: Recommended clamping torque (N·m)

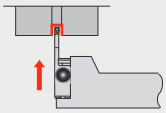
SPARE PARTS

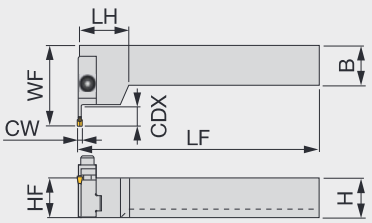
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-**GR/L	CHHM5-18	CSHB-6	P-4

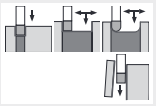
MY-T SERIES

CGWTR/L-G

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







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

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

Note: For diameter compensation values in traversing, see page F091.
Use left-hand blades (L) with right-hand shanks (R); and right-hand blades (R) with left-hand shanks (L).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

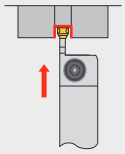
Designation	Clamping screw	Blade screw	Wrench
CGWTR/L****-**GL/R	CHHM5-18	CSHB-6	P-4

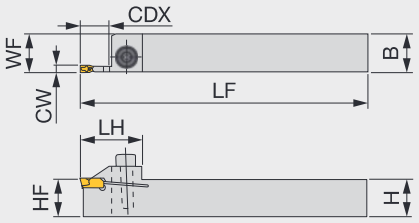
Reference pages: Inserts → F063 - F067, Standard cutting conditions → F067

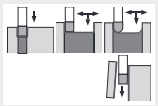
MY-T SERIES

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,GE50-AL	5
CGSSR/L2525-50	5	12	25	25	150	27	25	25.7	G*50,GE50R/L,GE50-AL	5

*Torque: Recommended clamping torque (N·m)

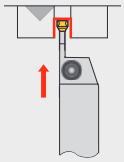
SPARE PARTS

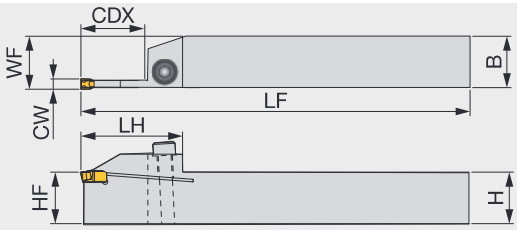
Designation	Clamping screw	Wrench
CGSSR/L...	CHHM5-18	P-4

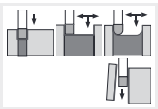
MY-T SERIES

CGSSR/L-D

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







Right hand (R) shown.

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

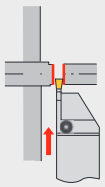
Designation	Clamping screw	Wrench
CGSSR/L****-**D	CHHM5-18	P-4

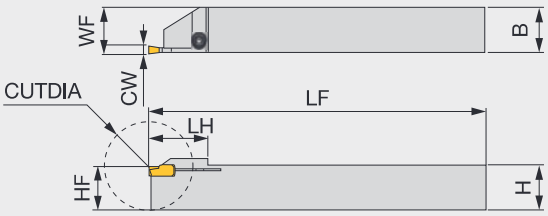
Reference pages: Inserts → F063 - F067, Standard cutting conditions → F067

MY-T SERIES

JCGSSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

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

• CUTDIA: Max. parting diameter
*Torque: Recommended clamping torque (N·m)

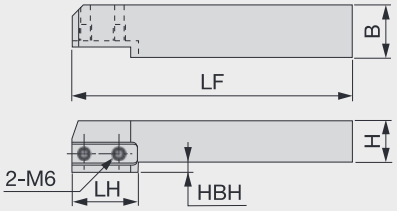
SPARE PARTS

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

MY-T SERIES

CGWSR/L

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



Right hand (R) shown.

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

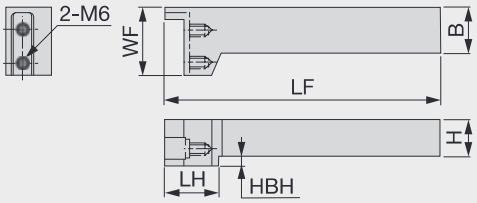
SPARE PARTS

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

MY-T SERIES

CGWTR/L

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



Right hand (R) shown.

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

SPARE PARTS

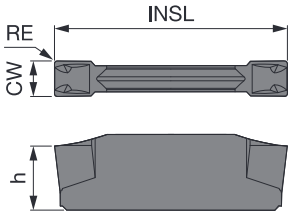
Designation	Blade screw
CGWTR/L...	CSHB-6

Reference pages: Inserts → F063 - F067, Standard cutting conditions → F067

INSERTS

WGE

For external grooving and parting



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

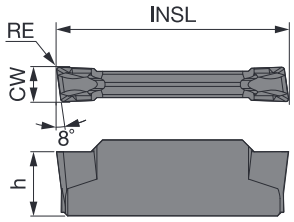
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL	h
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

WGE(R/L)

For parting (with hand)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

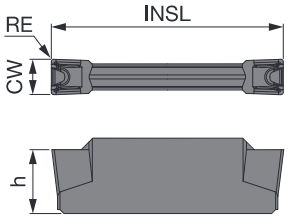
Designation	HAND	$CW^{+0.1}_{0}$	RE	Coated AH120	Coated GH730	INSL	h
WGE20R	R	2	0.2		●	20	4.7
WGE20L	L	2	0.2		●	20	4.7
WGE30R	R	3	0.2	●	●	20	5.5
WGE30L	L	3	0.2		●	20	5.5
WGE40R	R	4	0.2		●	25	5.7
WGE40L	L	4	0.2		●	25	5.7
WGE50R	R	5	0.2		●	25	5.9
WGE50L	L	5	0.2		●	25	5.9

●: Line up

Reference pages: Toolholders → F054 - F055

WGT

For turning (External grooving and parting)



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

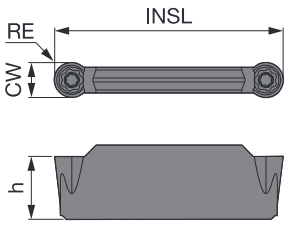
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$	RE	Coated				Cermet	INSL	h
			T9225	T9125	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)



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

★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$	RE	Coated				Cermet	INSL	h
			T9225	T9125	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

ISO	Workpiece material	Recommended grade	Cutting speed *Vc* (m/min)
P	Low carbon steels Alloy steels (~ HB150)	T9225	80 - 300
		T9125	80 - 200
		NS9530	100 - 200
		GH730	50 - 180
	Medium carbon steels Alloy steels (HB150 ~ 250)	T9225	80 - 220
		T9125	80 - 180
		NS9530	80 - 180
		GH730	50 - 150
	High carbon steels Alloy steels (HB250 ~)	T9225	80 - 220
		T9125	80 - 150
		NS9530	80 - 150
		GH730	50 - 150
M	Stainless steels	T9225	80 - 180
		T9125	80 - 150
		GH730	50 - 120
K	Grey and ductile cast irons	T9225	80 - 250
		T9125	80 - 200
		GH730	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 (WGE□□R/L)	0.04 ~ 0.10	0.04 ~ 0.14	0.04 ~ 0.14	0.04 ~ 0.14
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
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

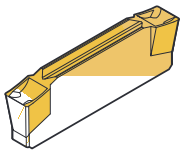
Note: For diameter compensation values in traversing, see page F091.

Reference pages: Toolholders → F054 - F055

2 corner insert

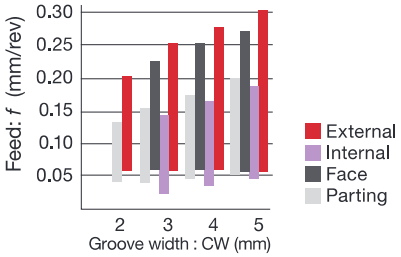
External grooving and parting

WGE

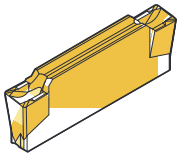


F059 page

1st choice for external grooving and parting
Excellent chip control for grooving
CW = 2 - 5 mm

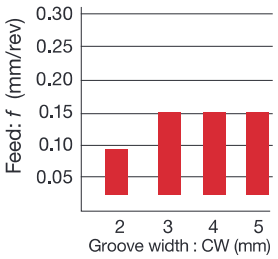


WGE R/L



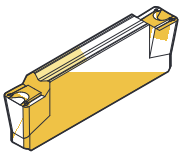
F059 page

Handed insert
Minimize burr generation when workpiece is cut off
CW = 2 - 5 mm



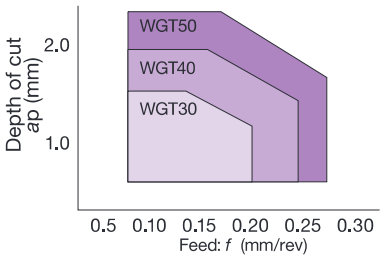
External grooving and turning

WGT



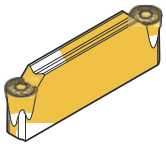
F060 page

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



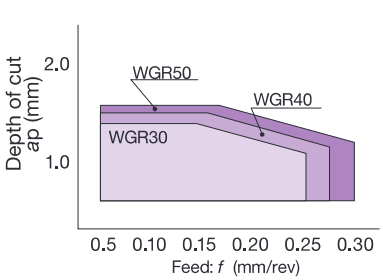
Profiling

WGR



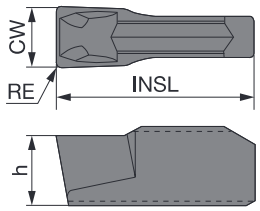
F060 page

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



GE

For general grooving



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

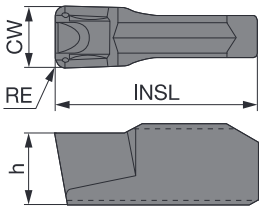
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	AH120	GH730		NS9530						
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 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	T9125	AH120	GH730		NS9530						
GT30	3	0.4			●	●		●					10	3.5
GT40	4	0.4			●	●		●					10	4
GT50	5	0.4	●	●	●	●		●					12	4.5

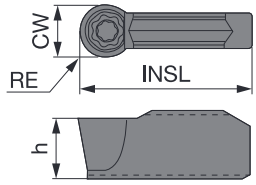
●: Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F056 - F058, Standard cutting conditions → F067

GR

For profiling (full radius)



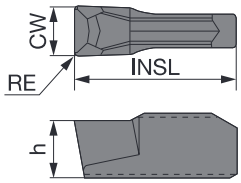
P	Steel	★	☆	★	★			★		
M	Stainless	★		★	★					
K	Cast iron	☆		★	☆			☆		
N	Non-ferrous									
S	Superalloys			☆						
H	Hard materials									

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	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



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

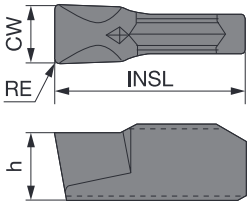
★ : First choice
☆ : Second choice

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

Reference pages: Toolholders → F056 - F058, Standard cutting conditions → F067

GN



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

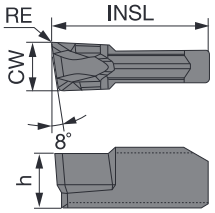
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	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 (with hand)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

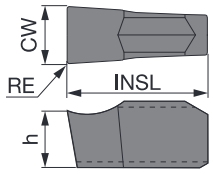
Designation	HAND	$CW^{+0.1}_{0}$	RE	Coated		INSL	h
				AH120	GH730		
GE30R	R	3	0.2	●	●	10	3.5
GE30L	L	3	0.2		●	10	3.5
GE40R	R	4	0.2	●	●	10	4
GE40L	L	4	0.2		●	10	4
GE50R	R	5	0.2		●	12	4.5
GE50L	L	5	0.2	●	●	12	4.5

●: Line up

Reference pages: Toolholders → F056 - F058, Standard cutting conditions → F067

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	$CW^{+0.1}_{0}$	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

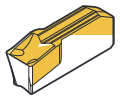
●: Line up

Reference pages: Toolholders → F056 - F058, Standard cutting conditions → F067

1 corner insert

External grooving and parting

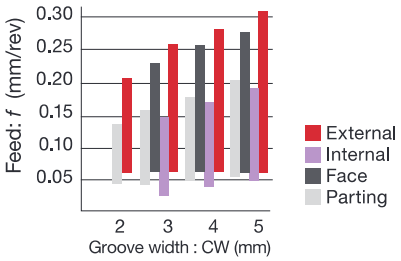
GE

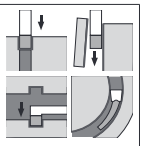


F062 page

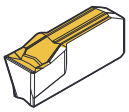
1st choice for external grooving and parting
Excellent chip control for grooving

CW = 2 - 5 mm





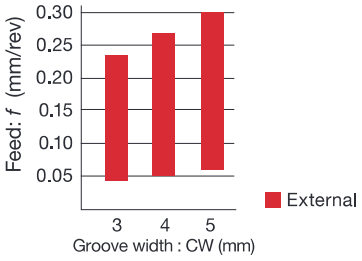
GF

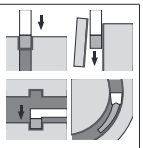


F063 page

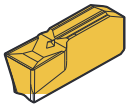
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 3 - 5 mm





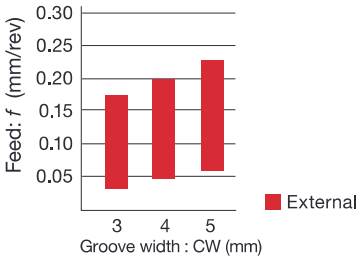
GN

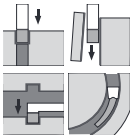


F064 page

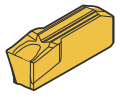
1st choice for internal grooving
Low cutting force and good chip control for internal grooving

CW = 3 - 5 mm





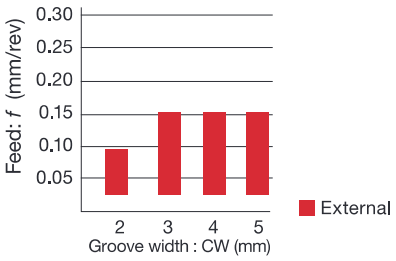
GE R/L



F064 page

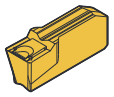
Handed insert
Minimize burr generation when work-piece is cut off

CW = 3 - 5 mm



External grooving and turning

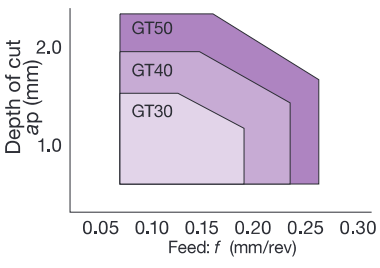
GT

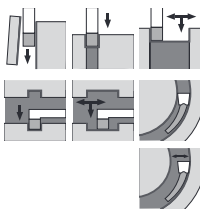


F062 page

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

CW = 3 - 5 mm

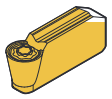




1 corner insert

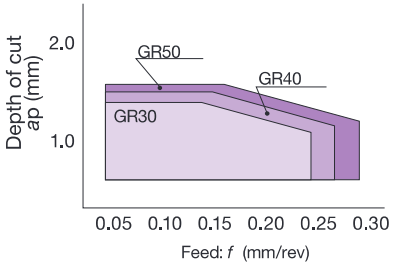
Profiling

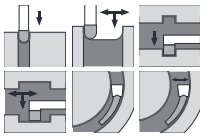
GR



F063 page

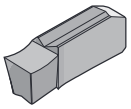
Full radius type
Low cutting force and good chip control for profiling
CW = 3 - 5 mm





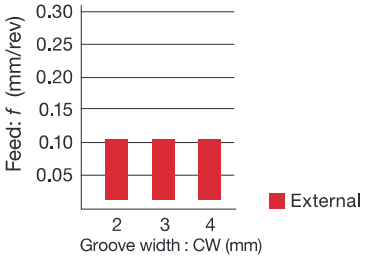
For aluminium and non-ferrous metal

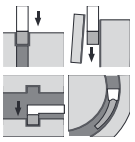
GE-AL



F065 page

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





STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grades	Cutting speed *Vc* (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		T9125	80 - 200
		NS9530	100 - 200
		GH730	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		T9125	80 - 180
		NS9530	80 - 180
		GH730	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		T9125	80 - 150
		NS9530	80 - 150
		GH730	50 - 120
M	Stainless steel	T9225	80 - 180
		T9125	80 - 150
		GH730	50 - 120
K	Grey iron, Ductile cast iron	T9225	80 - 250
		T9125	80 - 200
		GH730	50 - 180
N	Aluminium alloy, Non-ferrous metal	KS05F	200 - 300

For External

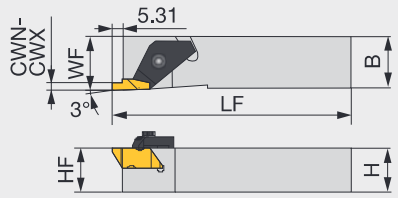
Operation	Feed: *f* (mm/rev) Groove width: CW (mm) 2	3	4	5
Grooving (GE**)	0.06 - 0.2	0.06 - 0.25	0.07 - 0.27	0.07 - 0.3
Parting off (GE**R/L)	0.04 - 0.1	0.04 - 0.14	0.04 - 0.14	0.04 - 0.14
Traversing (GT**)	-	Depth of cut *ap* = 0.5 - 1.5 *f* = 0.06 - 0.2	Depth of cut *ap* = 0.5 - 2 *f* = 0.06 - 0.25	Depth of cut *ap* = 0.5 - 2.5 *f* = 0.06 - 0.27
Profiling (GR**)	-	Depth of cut *ap* = 0.5 - 1.4 *f* = 0.05 - 0.25	Depth of cut *ap* = 0.5 - 1.5 *f* = 0.05 - 0.26	Depth of cut *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 F091.

Reference pages: Toolholders → F056 - F058

TUNGT-CLAMP
FLASR/L

External grooving and threading toolholder, for Swiss lathes



Right hand (R) shown.

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

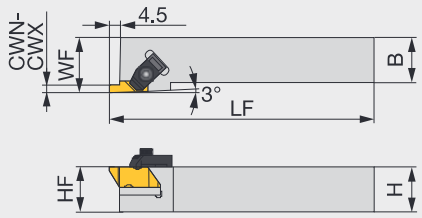
Note: Use right-hand toolholders (R) with right-hand inserts (R); and left-hand toolholders (L) with left-hand inserts (L).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

TUNGT-CLAMP
FLSR/L

External grooving and threading toolholder, for Swiss lathes



Right hand (R) shown.

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
FLSR-****M3	TF-72	S-412	5/32HEX
FLSL-****M3	TF-73	S-412	5/32HEX

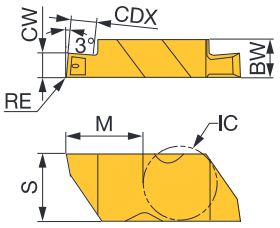
STANDARD CUTTING CONDITIONS

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
		AH725	Threading	80 - 180	-
	Alloy steel SCM435, etc. 34CrMo4, etc.	AH110	Grooving	50 - 80	0.12 - 0.3
		AH725	Threading	60 - 160	-
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	AH110	Grooving	50 - 150	0.1 - 0.2
		AH725	Threading	50 - 130	-
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: Inserts → F069

INSERT

FLG-CB (For grooving)



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

★ : First choice
☆ : Second choice

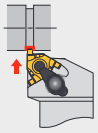
Designation	HAND	CW±0.025	RE	Coated	CDX	BW	S	M
				AH110				
FLG-3M100R-CB	R	1	0.19	●	1.4	4.95	8.74	10.29
FLG-3M100L-CB	L	1	0.19	●	1.4	4.95	8.74	10.29
FLG-3M150R-CB	R	1.5	0.19	●	2.55	4.95	8.74	10.29
FLG-3M150L-CB	L	1.5	0.19	●	2.55	4.95	8.74	10.29
FLG-3M200R-CB	R	2	0.19	●	2.55	4.95	8.74	10.29
FLG-3M200L-CB	L	2	0.19	●	2.55	4.95	8.74	10.29
FLG-3M250R-CB	R	2.5	0.19	●	4.07	4.95	8.74	10.29
FLG-3M250L-CB	L	2.5	0.19	●	4.07	4.95	8.74	10.29
FLG-3M300R-CB	R	3	0.19	●	4.07	4.95	8.74	10.29
FLG-3M300L-CB	L	3	0.19	●	4.07	4.95	8.74	10.29

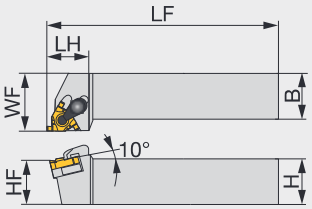
●: Line up

Reference pages: Toolholders → F068

CER/L

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





Right hand (R) shown.

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

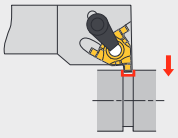
Note: A clamp set consists of a clamp and a clamping screw. A shim set consists of a shim and a shim screw to secure the shim to the shank.
Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand.
When using grooving inserts, please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

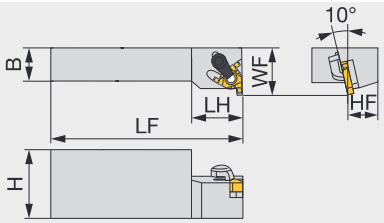
SPARE PARTS

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 toolholder, for Swiss lathes





Right hand (R) shown.

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

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)

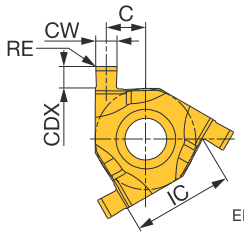
SPARE PARTS

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

Reference pages: Inserts, Standard cutting conditions → F071

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	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	9.53	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	L	1	0.1	●	16	1.25	9.53	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL120	R	1.2	0.1	●	16	1.3	9.53	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR120	L	1.2	0.1	●	16	1.3	9.53	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL140	R	1.4	0.1	●	16	1.5	9.53	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR140	L	1.4	0.1	●	16	1.5	9.53	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL170	R	1.7	0.1	●	16	1.7	9.53	3.67	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR170	L	1.7	0.1	●	16	1.7	9.53	3.67	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL195	R	1.95	0.1	●	16	1.7	9.53	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR195	L	1.95	0.1	●	16	1.7	9.53	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL225	R	2.25	0.1	●	16	1.8	9.53	3.6	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR225	L	2.25	0.1	●	16	1.8	9.53	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

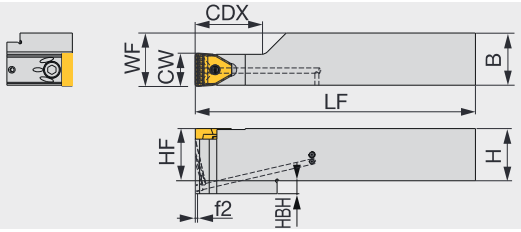
ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)
P	Steels S45C, SCM440 etc. C45, 42CrMo4, etc.	SH730	50 - 150	0.05 - 0.1
M	Stainless steels SUS304, SUS316 etc. X5CrNi18-9, X5CrNiMo17-12-2, etc.	SH730	30 - 150	0.05 - 0.1
S	Heat-resistant alloys, Titanium alloys etc. Ti-6Al-4V,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

Reference pages: Toolholders → F070

TUNGHEAVYGROOVE

FPGR

Lever-lock external wide 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.

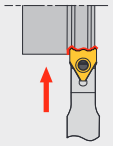
SPARE PARTS

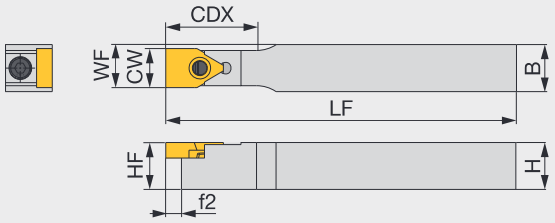
Designation	Lever	Clamping screw	Spring	Wrench
FPGR*****-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGR*****-20T..., 25T...	FCL8	FCS6	BP-9	P-5

TUNGHEAVYGROOVE

FPGN

Lever-lock external wide profile grooving toolholder





Designation	CW	CDX	H	B	LF	HF	WF	f2	Insert (1)	Torque*
FPGN1212X-10T20	10	20	12	12	120	12	11	0.5	PSG*10...	2.2
FPGN1616X-10T20	10	20	16	16	120	16	13	0.5	PSG*10...	2.2
FPGN2020K-10T20	10	20	20	20	125	20	15	0.5	PSG*10...	2.2
FPGN1616X-15T25	15	25	16	16	120	16	15.5	0.4	PSG*15...	2.2
FPGN2020K-15T25	15	25	20	20	125	20	17.5	0.4	PSG*15...	2.2
FPGN2020K-20T32	20	32	20	20	125	20	20	0.4	PSG*20...	8.5
FPGN2525M-20T32	20	32	25	25	150	25	22.5	0.4	PSG*20...	8.5
FPGN2525M-25T36	25	36	25	25	150	25	25	0.4	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.

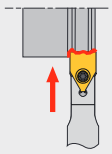
SPARE PARTS

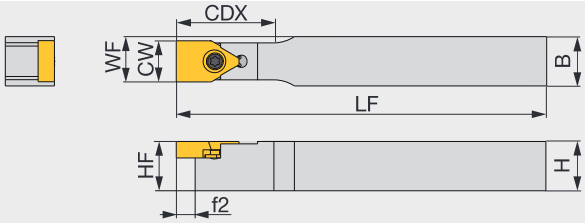
Designation	Lever	Clamping screw	Spring	Wrench
FPGN*****-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGN*****-20T..., 25T...	FCL8	FCS6	BP-9	P-5

Reference pages: Inserts → F073 - F074, Standard cutting conditions → F075

SPGN

Screw-on external wide profile grooving toolholder





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

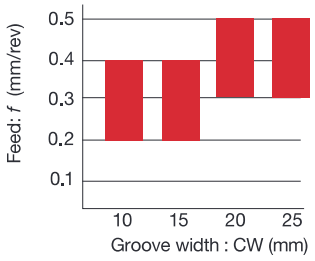
Designation	Clamping screw	Wrench
SPGN*****-10T20	CSTB-3L081	T-8F
SPGN*****-15T25	CSTB-4	T-15F
SPGN*****-20T..., 25T...	CSTB-5	T-20F

TUNGHEAVY GROOVE - Chipbreaker Guide

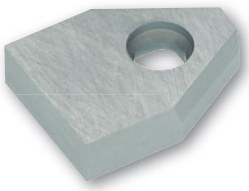
PSGM

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

CW = 10 - 25 mm



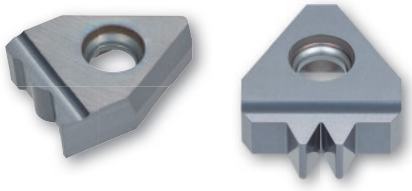
PSGB



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

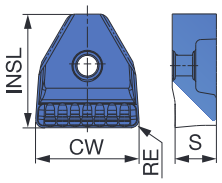
CW = 10 - 25 mm

Specially tailored inserts (example)



Reference pages: Inserts → F073 - F074, Standard cutting conditions → F075

PSGM



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

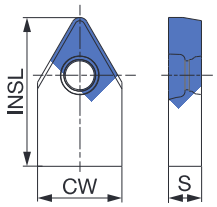
★ : First choice
☆ : Second choice

Designation	CW*	RE	Coated	INSL	S
			AH725		
PSGM10-08	10	0.8	●	11	4
PSGM15-15	15	1.5	●	15	5
PSGM20-20	20	2	●	22	6.5
PSGM25-20	25	2	●	22	6.5

*Tolerance CW ± 0.08 (CW = 10 mm), ± 0.1 (CW ≥ 15 mm)

●: Line up

PSGB



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

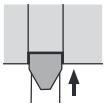
★ : First choice
☆ : Second choice

Designation	CW±0.025	Uncoated		INSL	S
		TH10	UX30		
PSGB10	10.2	●	●	18	4
PSGB15	15.2	●	●	20	5
PSGB20	20.2	●	●	27	6.5
PSGB25	25.2	●	●	27	6.5

●: Line up

Reference pages: Toolholders → F072 - F073

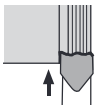
STANDARD CUTTING CONDITIONS



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
	Alloy steel SCM440, etc. 42CrMo4, etc.	< 300	UX30	50 - 120

	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

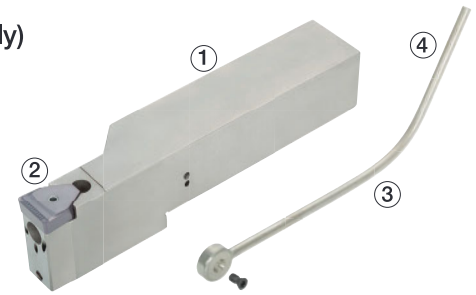


Wide profile grooving (PSGB insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting Speed *Vc* (m/min)
P	Carbon steel S45C, etc. C45, etc.	< 200	UX30	50 - 150
	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
	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)

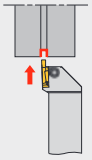
No.	Designatlon	Part Type	Note
①	Body	FPGR...	-
②	INSERT	PSGM...	-
③	Coolant supply attachment	SGCU-341	-
④	Connector	Commercial items can be used	G 1/8 thread
			NPT 1/8 thread

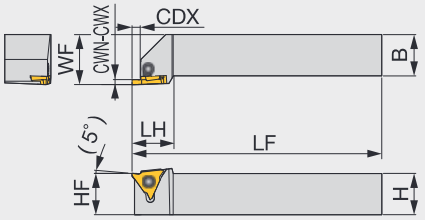


Reference pages: Toolholders → F072 - F073

TGTSR/L

External grooving toolholder, for 3 corner inserts





Right hand (R) shown.

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

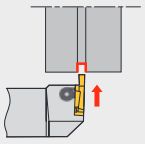
Designation	Insert
TGTSR/L2020K16	GBR/L32...
TGTSR/L2525M16	GBR/L32...
TGTSR/L2020K22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2020K22-2	GBR/L43150 ~ 230 GBR/L43075R ~ 100R
TGTSR/L2020K22-3	GBR/L43250 ~ 450 GBR/L43125R ~ 200R
TGTSR/L2525M22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2525M22-2	GBR/L43150 ~ 230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

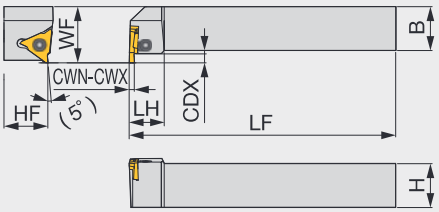
SPARE PARTS

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

Perpendicular toolholder for external grooving, for 3 corner inserts





Right hand (R) shown.

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)

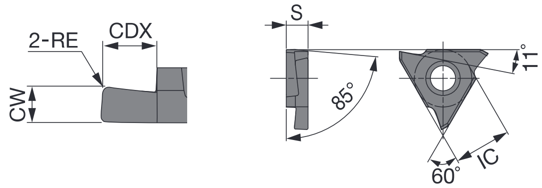
Designation	Insert
TGTTR/L2020K16	GBL/R32...
TGTTR/L2525M16	GBL/R32...
TGTTR/L2020K22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTTR/L2020K22-2	GBL/R43150 ~ 230 GBL/R43075R ~ 100R
TGTTR/L2020K22-3	GBL/R43250 ~ 450 GBL/R43125R ~ 200R
TGTTR/L2525M22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTTR/L2525M22-2	GBL/R43150 ~ 230 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 → F077 - F079, Standard cutting conditions → F079

GBR/L32



Right hand (R) shown.

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

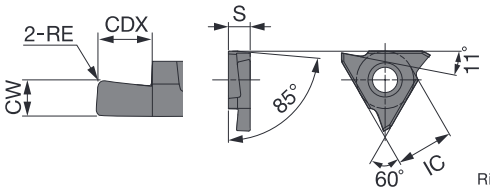
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated	Cermet	Uncoated	CDX	IC	S
				AH710	NS9530	KS05F			
GBR32033	R	0.33	0.03	●	●	●	0.8	9.53	3.18
GBL32033	L	0.33	0.03	●			0.8	9.53	3.18
GBR32050	R	0.5	0.05	●	●	●	1.2	9.53	3.18
GBL32050	L	0.5	0.05	●			1.2	9.53	3.18
GBR32075	R	0.75	0.05	●	●	●	2	9.53	3.18
GBL32075	L	0.75	0.05	●	●		2	9.53	3.18
GBR32095	R	0.95	0.05	●	●	●	2	9.53	3.18
GBL32095	L	0.95	0.05	●	●		2	9.53	3.18
GBR32100	R	1	0.05	●	●	●	2	9.53	3.18
GBL32100	L	1	0.05	●	●		2	9.53	3.18
GBR32125	R	1.25	0.2	●	●	●	2	9.53	3.18
GBL32125	L	1.25	0.2	●	●		2	9.53	3.18
GBR32145	R	1.45	0.2	●	●	●	2	9.53	3.18
GBL32145	L	1.45	0.2	●			2	9.53	3.18
GBR32150	R	1.5	0.2	●	●	●	2	9.53	3.18
GBL32150	L	1.5	0.2	●			2	9.53	3.18
GBR32200	R	2	0.2	●	●	●	2.5	9.53	3.18
GBL32200	L	2	0.2	●			2.5	9.53	3.18
GBR32250	R	2.5	0.2	●	●	●	2.5	9.53	3.18
GBL32250	L	2.5	0.2	●			2.5	9.53	3.18

●: Line up

Reference pages: Toolholders → F076

GBR/L43



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

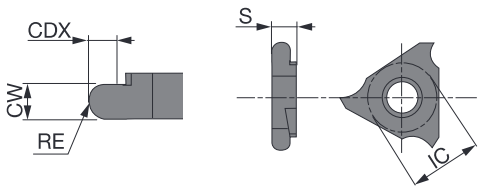
Designation	HAND	CW±0.025	RE	Coated	Cermet	Uncoated	CDX	IC	S
				AH710	NS9530	KS05F			
GBR43125	R	1.25	0.2	●	●	●	2	12.7	4.76
GBL43125	L	1.25	0.2	●			2	12.7	4.76
GBR43145	R	1.45	0.2	●	●	●	2	12.7	4.76
GBL43145	L	1.45	0.2	●			2	12.7	4.76
GBR43150	R	1.50	0.2	●	●	●	3.5	12.7	4.76
GBL43150	L	1.50	0.2	●	●		3.5	12.7	4.76
GBR43175	R	1.75	0.2	●	●	●	3.5	12.7	4.76
GBL43175	L	1.75	0.2	●	●		3.5	12.7	4.76
GBR43185	R	1.85	0.2	●	●	●	3.5	12.7	4.76
GBL43185	L	1.85	0.2	●	●		3.5	12.7	4.76
GBR43200	R	2	0.2	●	●	●	3.5	12.7	4.76
GBL43200	L	2	0.2	●	●		3.5	12.7	4.76
GBR43230	R	2.3	0.2	●	●	●	3.5	12.7	4.76
GBL43230	L	2.3	0.2	●	●		3.5	12.7	4.76
GBR43250	R	2.5	0.3	●	●	●	5	12.7	4.76
GBL43250	L	2.5	0.3	●			5	12.7	4.76
GBR43265	R	2.65	0.3	●	●	●	5	12.7	4.76
GBL43265	L	2.65	0.3	●			5	12.7	4.76
GBR43280	R	2.8	0.3	●	●	●	5	12.7	4.76
GBL43280	L	2.8	0.3	●			5	12.7	4.76
GBR43300	R	3	0.3	●	●	●	5	12.7	4.76
GBL43300	L	3	0.3	●			5	12.7	4.76
GBR43330	R	3.3	0.3	●	●	●	5	12.7	4.76
GBL43330	L	3.3	0.3	●			5	12.7	4.76
GBR43350	R	3.5	0.3	●	●	●	5	12.7	4.76
GBL43350	L	3.5	0.3	●			5	12.7	4.76
GBR43400	R	4	0.4	●	●	●	5	12.7	4.76
GBL43400	L	4	0.4	●			5	12.7	4.76
GBR43430	R	4.3	0.4	●	●	●	5	12.7	4.76
GBL43430	L	4.3	0.4	●			5	12.7	4.76
GBR43450	R	4.5	0.4	●	●	●	5	12.7	4.76
GBL43450	L	4.5	0.4	●			5	12.7	4.76

●: Line up

Reference pages: Toolholders → F076

INSERT

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 AH710	Cermet NS9530	Uncoated KS05F	CDX	IC	S
GBR43050R	R	1	0.5	●	●	●	2	12.7	4.76
GBL43050R	L	1	0.5	●		●	2	12.7	4.76
GBR43075R	R	1.5	0.75	●	●	●	3.5	12.7	4.76
GBL43075R	L	1.5	0.75	●		●	3.5	12.7	4.76
GBR43100R	R	2	1	●	●	●	3.5	12.7	4.76
GBL43100R	L	2	1	●		●	3.5	12.7	4.76
GBR43125R	R	2.5	1.25	●	●	●	5	12.7	4.76
GBL43125R	L	2.5	1.25	●		●	5	12.7	4.76
GBR43150R	R	3	1.5	●	●	●	5	12.7	4.76
GBL43150R	L	3	1.5	●		●	5	12.7	4.76
GBR43200R	R	4	2	●	●	●	5	12.7	4.76
GBL43200R	L	4	2	●		●	5	12.7	4.76

●: Line up

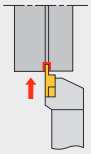
STANDARD CUTTING CONDITIONS

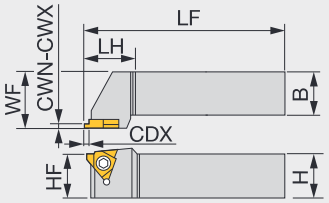
ISO	Workpiece material	Hardness	Grade	Cutting Speed *Vc* (m/min)	Feed *f* (mm/rev)
P	Carbon steels, Alloy steels S45C, SCM415, etc. C45, 18CrMo4, etc.	150 - 240HB	NS9530	100 - 200	0.02 - 0.25
		150 - 240HB	AH710	60 - 150	0.05 - 0.25
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	≤ 240HB	AH710	60 - 150	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 → F076

SGTR/L

External grooving toolholder, for 3 corner inserts





Right hand (R) shown.

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

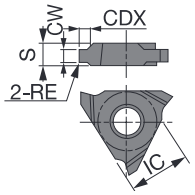
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

INSERT

GOR/L (For O-ring)



Right hand (R) shown.

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

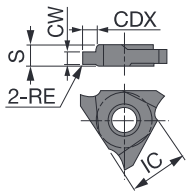
★ : First choice
☆ : Second choice

Designation	HAND	$CW^{+0.1}_{+0.05}$	RE	Cermet NS9530	Uncoated UX30	CDX	IC	S
GOR4190	R	2.5	0.4	●	●	1.5	12.7	4.76
GOR4240	R	3.2	0.4	●	●	2	12.7	4.76
GOR4310	R	4.1	0.7	●	●	2.5	12.7	4.76

●: Line up

Reference pages: Inserts → F080 - F081

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

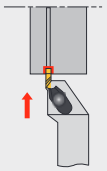
Designation	HAND	$CW^{+0.1}_{+0.05}$	RE	Cermet	Uncoated	CDX	IC	S
				NS9530	UX30			
GLR3115	R	1.15	0.1	●	●	1.5	9.53	3.18
GLL3115	L	1.15	0.1	●	●	1.5	9.53	3.18
GLR3135	R	1.35	0.1	●	●	1.5	9.53	3.18
GLL3135	L	1.35	0.1	●		1.5	9.53	3.18
GLR3165	R	1.65	0.1	●	●	2	9.53	3.18
GLR3175	R	1.75	0.1	●	●	2	9.53	3.18
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

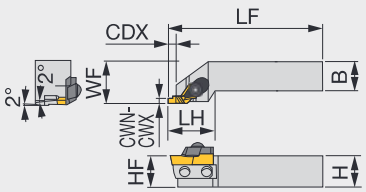
●: Line up

Reference pages: Toolholders → F080

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)

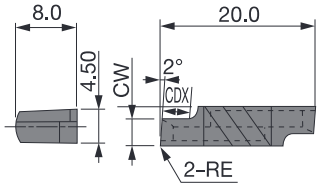
SPARE PARTS

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.

INSERT

XGR/L



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

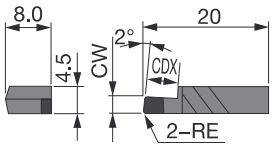
Designation	HAND	CW±0.025	RE	Cermet			Uncoated						CDX
				NS9530			TH10	UX30					
XGR6310-02	R	1	0.2	●			●	●					1.5
XGL6310-02	L	1	0.2	●			●	●					1.5
XGR6315-02	R	1.5	0.2	●			●	●					2.3
XGL6315-02	L	1.5	0.2	●			●	●					2.3
XGR6320-02	R	2	0.2	●			●	●					3
XGL6320-02	L	2	0.2	●			●	●					3
XGR6325-02	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 → F082 - F083, Standard cutting conditions → F083

XGR/L-QBN



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

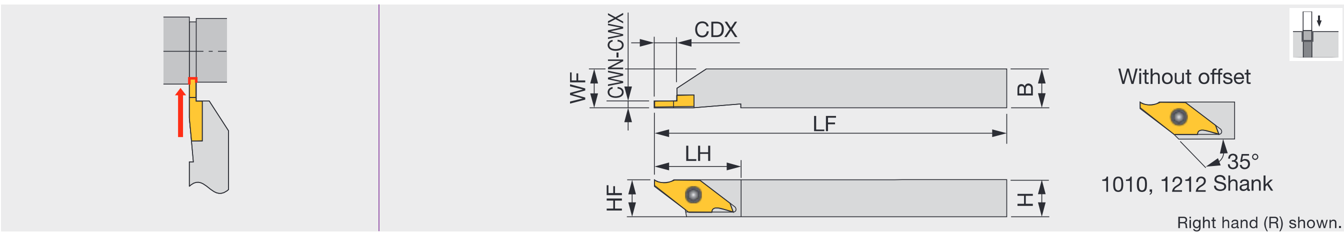
ISO	Workpiece material	Grade	Cutting Speed *Vc* (m/min)	Feed: *f* (mm/rev)		
				W < 2 mm	*W* = 2 ~ 4 mm	*W* > 4 mm
P	Carbon steel	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		UX30	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
K	Cast irons , Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 -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

Reference pages: Toolholders → F082

J-SERIES

JSVGR/L

External grooving toolholder, for Swiss lathes



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)

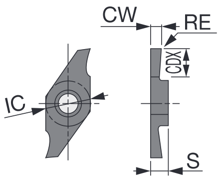
External
Internal
Face
Parting
Others

SPARE PARTS

Designation	Clamping screw	Wrench
JSVGR/L...	CSTB-3S	T-9F Option T-9L

INSERT

JVG (with hand, sharp edge)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

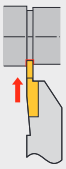
Designation	HAND	$CW^{+0.05}_{0}$	RE	SH725 (Coated)	J740 (Coated)	NS9530 (Cermet)	TH10 (Uncoated)	CDX	IC	S
JVGR033F	R	0.33	0	●	●		●	0.7	7.94	3.18
JVGL033F	L	0.33	0	●				0.7	7.94	3.18
JVGR050F	R	0.5	0	●	●		●	1.1	7.94	3.18
JVGL050F	L	0.5	0	●				1.1	7.94	3.18
JVGR075F	R	0.75	0	●	●		●	1.9	7.94	3.18
JVGL075F	L	0.75	0	●				1.9	7.94	3.18
JVGR095F	R	0.95	0	●	●		●	1.9	7.94	3.18
JVGL095F	L	0.95	0	●				1.9	7.94	3.18
JVGR100F	R	1	0	●	●	●	●	5.5	7.94	3.18
JVGL100F	L	1	0	●		●	●	5.5	7.94	3.18
JVGR125F	R	1.25	0	●	●		●	5	7.94	3.18
JVGL125F	L	1.25	0	●				5	7.94	3.18
JVGR150F	R	1.5	0	●	●	●	●	5.5	7.94	3.18
JVGL150F	L	1.5	0	●		●	●	5.5	7.94	3.18
JVGR200F	R	2	0	●	●	●	●	5.5	7.94	3.18
JVGL200F	L	2	0	●				5.5	7.94	3.18

●: Line up

Reference pages: Standard cutting conditions → F091

JSXGR/L

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



Without offset

1010, 1212 Shank

Right hand (R) shown.

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

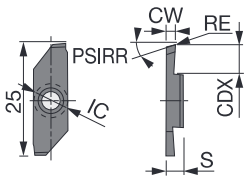
Can be wrenched also from the back with a double-head screw.
This toolholder can be used for JXF front-turning insert, JXR reverse-turning insert, and JXG parting and grooving insert.
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

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

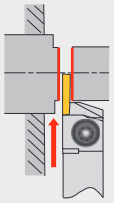
Designation	HAND	CW±0.025	RE	Coated				Uncoated					CDX	IC	PSIRR	S
				J740				TH10								
JXGR8070FA	R	0.7	0	●				●					4.5	8	15°	3.97
JXGL8070FA	L	0.7	0	●				●					4.5	8	15°	3.97
JXGR8070FA-005	R	0.7	0.05	●									4.5	8	15°	3.97
JXGR8100FA	R	1	0	●				●					6	8	15°	3.97
JXGL8100FA	L	1	0	●				●			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

●: Line up

Reference pages: Standard cutting conditions → F091

JCCWSR/L

External grooving and parting toolholder, for Swiss lathes



Right hand (R) shown.

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

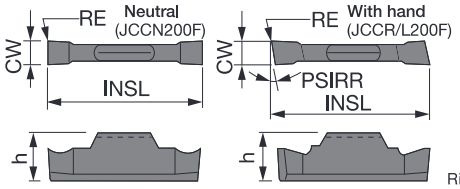
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

INSERT

JCC (Sharp edge)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

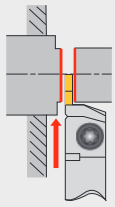
Designation	HAND	CW±0.025	RE	Coated J740	Uncoated TH10	PSIRR	INSL	h
JCCN200F	N	2	0	●	●	0°	15	4.8
JCCN200F-005	N	2	0.05	●		0°	15	4.8
JCCR200F	R	2	0	●	●	15°	15	4.8
JCCL200F	L	2	0	●	●	15°	15	4.8
JCCR200F-005	R	2	0.05	●		15°	15	4.8
JCCL200F-005	L	2	0.05	●		15°	15	4.8

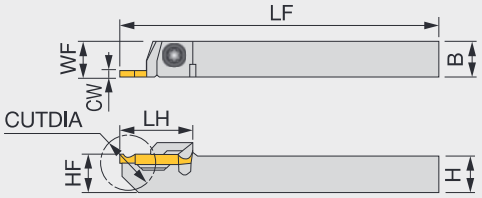
●: Line up

Reference pages: Standard cutting conditions → F091

JCGWSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

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

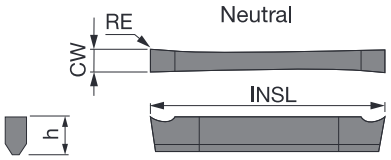
*Torque: Recommended clamping torque (N·m)

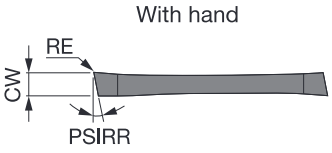
SPARE PARTS

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

INSERT

JCGN (Sharp edge)





Right hand (R) shown.

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

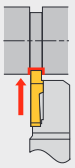
★ : First choice
☆ : Second choice

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

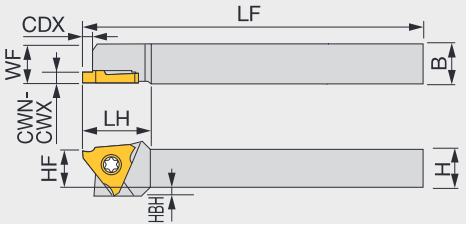
●: Line up

Reference pages: Standard cutting conditions → F091

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



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



Right hand (R) shown.

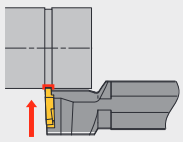
Designation	CWN	CWX	CDX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*
JSTGR/L1010X3	0.33	3	0.7 - 2.6	10	10	120	18.5	10	10	2	JTGR/L3...	1.2
JSTGR/L1212F3	0.33	3	0.7 - 2.6	12	12	85	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1212X3	0.33	3	0.7 - 2.6	12	12	120	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1616X3	0.33	3	0.7 - 2.6	16	16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

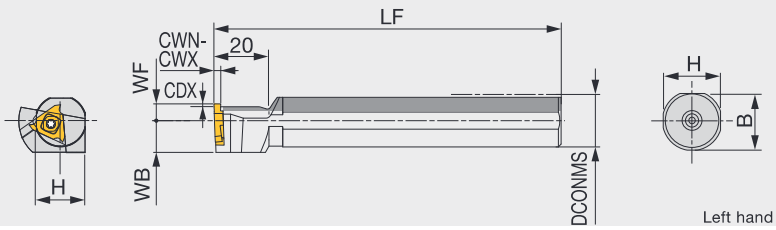
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

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





Left hand (L) shown.

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)

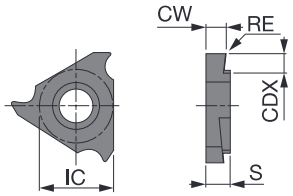
SPARE PARTS

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

Reference pages: Inserts → F089 - F090, Standard cutting conditions → F091

INSERT

JTG (Sharp edge)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

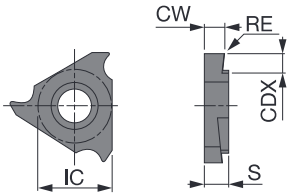
Designation	HAND	CW$^{+0.05}_{0}$	RE	SH725	J740	NS9530	TH10	CDX	IC	S
JTGR3033F	R	0.33	0.03	●	●		●	0.7	9.53	3.18
JTGL3033F	L	0.33	0.03		●		●	0.7	9.53	3.18
JTGR3033F-005	R	0.33	0.05	●				0.7	9.53	3.18
JTGR3043F	R	0.43	0.03		●			1.1	9.53	3.18
JTGR3050F	R	0.5	0.03	●	●	●	●	1.1	9.53	3.18
JTGL3050F	L	0.5	0.03	●	●		●	1.1	9.53	3.18
JTGR3050F-005	R	0.5	0.05	●				1.1	9.53	3.18
JTGL3050F-005	L	0.5	0.05	●				1.1	9.53	3.18
JTGR3065F	R	0.65	0.03	●	●			1.9	9.53	3.18
JTGR3065F-010	R	0.65	0.1	●				1.9	9.53	3.18
JTGR3075F	R	0.75	0.03	●	●	●	●	1.9	9.53	3.18
JTGL3075F	L	0.75	0.03	●	●	●	●	1.9	9.53	3.18
JTGR3075F-010	R	0.75	0.1	●				1.9	9.53	3.18
JTGL3075F-010	L	0.75	0.1	●				1.9	9.53	3.18
JTGR3080F	R	0.8	0.03	●	●			1.9	9.53	3.18
JTGR3080F-010	R	0.8	0.1	●				1.9	9.53	3.18
JTGR3085F	R	0.85	0.03	●	●			1.9	9.53	3.18
JTGR3095F	R	0.95	0.03	●	●	●	●	1.9	9.53	3.18
JTGL3095F	L	0.95	0.03	●	●		●	1.9	9.53	3.18
JTGR3095F-010	R	0.95	0.1	●				1.9	9.53	3.18
JTGL3095F-010	L	0.95	0.1	●				1.9	9.53	3.18
JTGR3100F	R	1	0.05	●	●	●	●	2.1	9.53	3.18
JTGL3100F	L	1	0.05	●	●		●	2.1	9.53	3.18
JTGR3100F-010	R	1	0.1	●				2.1	9.53	3.18
JTGL3100F-010	L	1	0.1	●				2.1	9.53	3.18
JTGR3110F	R	1.1	0.05	●	●			2.1	9.53	3.18
JTGR3120F	R	1.2	0.05	●	●			2.1	9.53	3.18
JTGR3120F-010	R	1.2	0.1	●				2.1	9.53	3.18
JTGR3125F	R	1.25	0.05	●	●	●	●	2.1	9.53	3.18
JTGL3125F	L	1.25	0.05	●	●		●	2.1	9.53	3.18
JTGR3125F-010	R	1.25	0.1	●				2.1	9.53	3.18
JTGL3125F-010	L	1.25	0.1	●				2.1	9.53	3.18
JTGR3130F	R	1.3	0.05	●	●			2.1	9.53	3.18
JTGR3140F	R	1.4	0.05	●	●			2.1	9.53	3.18
JTGR3140F-010	R	1.4	0.1	●				2.1	9.53	3.18
JTGR3145F	R	1.45	0.05	●	●	●	●	2.1	9.53	3.18
JTGL3145F	L	1.45	0.05		●		●	2.1	9.53	3.18
JTGR3145F-010	R	1.45	0.1	●				2.1	9.53	3.18
JTGR3150F	R	1.5	0.05	●	●	●	●	2.1	9.53	3.18
JTGL3150F	L	1.5	0.05	●	●		●	2.1	9.53	3.18
JTGR3150F-010	R	1.5	0.1	●				2.1	9.53	3.18
JTGL3150F-010	L	1.5	0.1	●				2.1	9.53	3.18

●: Line up

Reference pages: Toolholders →F088, Standard cutting conditions → F091

INSERT

JTG (Sharp edge)



Right hand (R) shown.

| | | |

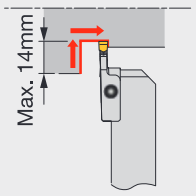
STANDARD CUTTING CONDITIONS (J-Series grooving tool)

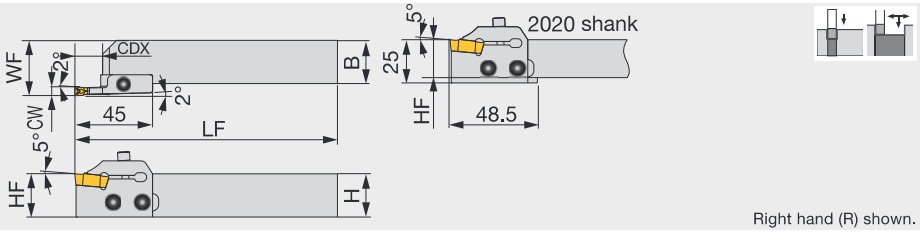
ISO	Workpiece material	Grade	Cutting Speed *Vc* (m/min)	Feed *f* (mm/rev)
P	General steels, Free-cutting steels, etc.	J740	10 - 100	0.01 - 0.1
		SH725	50 - 150	0.01 - 0.1
		NS9530	50 - 150	0.01 - 0.1
		J9530	50 - 150	0.01 - 0.1
M	Stainless steels, etc.	J740	10 - 100	0.01 - 0.1
		SH725	50 - 150	0.01 - 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

MY-T SERIES

CGWSR/L-FLR/L#GP

External grooving and turning toolholder





Right hand (R) shown.

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

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

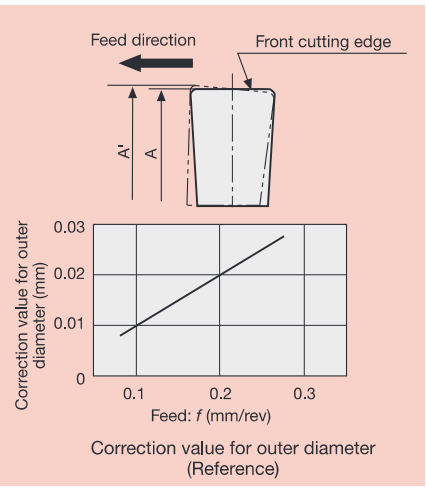
SPARE PARTS

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

Caution

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

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

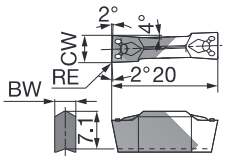


Correction value for outer diameter (Reference)

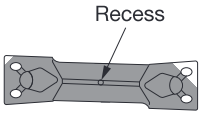
Reference pages: Inserts, Standard cutting conditions → F092

INSERT

FLEX(R/L)



Right hand (R) shown.



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

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05	RE	T9225	T9125	NS9530	UX30	BW
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

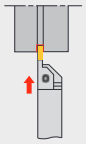
STANDARD CUTTING CONDITIONS

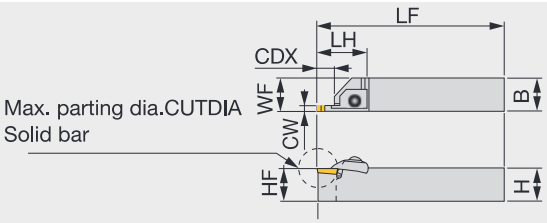
ISO	Workpiece material	Grade	Cutting Speed *Vc* (m/min)	Feed: *f* (mm/rev) Grooving	Turning
P	Carbon steel	T9225	80 - 300	0.05 - 0.25	0.1 - 0.3
		T9125	80 - 200	0.05 - 0.25	0.1 - 0.3
		NS9530	80 - 200	0.05 - 0.25	0.1 - 0.3
		UX30	60 - 150	0.05 - 0.25	0.1 - 0.3

Reference pages: Toolholders →F091

CTWR/L

External grooving and parting toolholder, for 2 corner inserts





Right hand (R) shown.

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

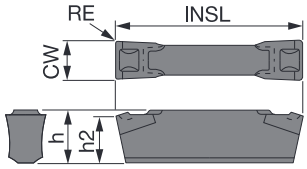
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

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

INSERT

CTD



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

★ : First choice
☆ : Second choice

Designation	CW±0.1	RE	AH725	INSL	h	h2
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

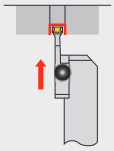
STANDARD CUTTING CONDITIONS

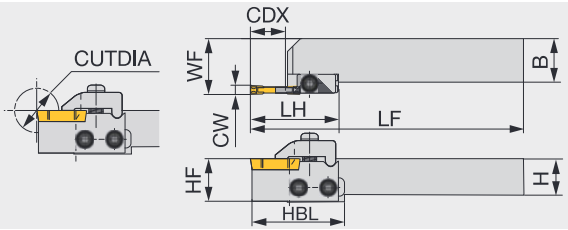
ISO	Workpiece material	Grade	Cutting Speed *Vc* (m/min)	Feed: *f* (mm/rev) Grooving	Parting off
P	Carbon steel	AH725	80 - 180	0.08 - 0.3	0.08 - 0.15
M	Stainless steel	AH725	50 - 120	0.08 - 0.25	0.08 - 0.1

MY-T SERIES

CGWSR/L-CGD

External grooving and parting toolholder





Right hand (R) shown.

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

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

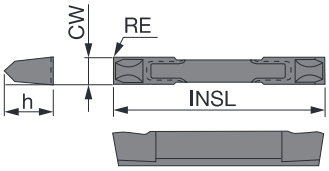
SPARE PARTS

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

Reference pages: Inserts, Standard cutting conditions → F095

INSERT

CGD



		Coated			Cermet			Uncoated		
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 GH330	Cermet NS9530	Uncoated UX30	INSL	h
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

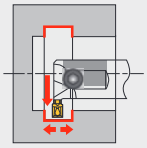
STANDARD CUTTING CONDITIONS

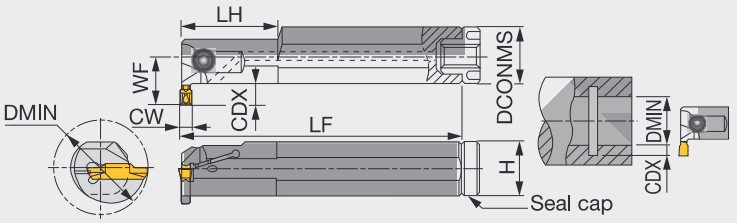
ISO	Workpiece material	Grade	Cutting Speed *Vc* (m/min)	Feed: *f* (mm/rev) Grooving	Parting off
P	Carbon steel	GH330	70 - 180	0.08 - 0.3	0.08 - 0.15
		NS9530	80 - 200	0.08 - 0.3	0.08 - 0.15
		UX30	60 - 150	0.08 - 0.3	0.08 - 0.15

Reference pages: Toolholders → F094

CTIR/L

Internal grooving and turning toolholder





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...	5
CTIR/L20-2T06-D250	2	25	2	6	20	18	160	40	15.8	DGIM..., DGIS...	5
CTIR/L20-3T06-D250	3	25	3	6	20	18	160	40	15.8	DTI..., DTX...	5
CTIR/L25-3T05-D250	3	25	3	5.1	25	23	200	40	17.5	DTI..., DTX...	5
CTIR/L25-3T08-D320	3	32	3	8	25	23	200	40	21.5	DTI..., DTX...	5
CTIR/L32-3T10-D400	3	40	3	10	32	30	250	60	27	DTI..., DTX...	5
CTIR/L20-4T06-D250	4	25	4	6	20	18	160	40	15.8	DTI..., DTX...	5
CTIR/L25-4T08-D320	4	32	4	8	25	23	200	40	21.5	DTI..., DTX...	5
CTIR/L32-4T04-D310	4	31	4	4	32	30	250	60	20.8	DTI..., DTX...	5
CTIR/L32-4T10-D400	4	40	4	10	32	30	250	60	27	DTI..., DTX...	5
CTIR/L25-5T05-D310	5	31	5	5	25	23	200	60	17.3	DTI..., DTX...	8.5
CTIR/L32-5T10-D400	5	40	5	10	32	30	250	60	27	DTI..., DTX...	8.5
CTIR/L32-6T04-D310	6	31	6	4	32	30	250	60	20.8	DTI..., DTX...	8.5
CTIR/L32-6T10-D400	6	40	6	10	32	30	250	60	27	DTI..., DTX...	8.5
CTIR/L32-8T05-D370	8	37	8	5	32	30	250	60	21.3	DTI..., DTX...	8.5
CTIR/L40-8T05-D420	8	42	8	5.8	40	38	300	65	25.8	DTI..., DTX...	8.5

(1) L1 is calculated with the groove width CW in the above table.
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

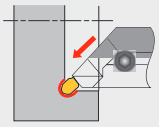
Designation	Clamping screw	Wrench	Seal cap	Thread type for connection
CTIR/L16-2T08-D250	CM5X0.8X10-A	P-4	CA-16	M6
CTIR/L20-2T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L20-3T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L25-3T05-D250	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L25-3T08-D320	CM5X0.8X16-A	P-4	CA-25	R1/8"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

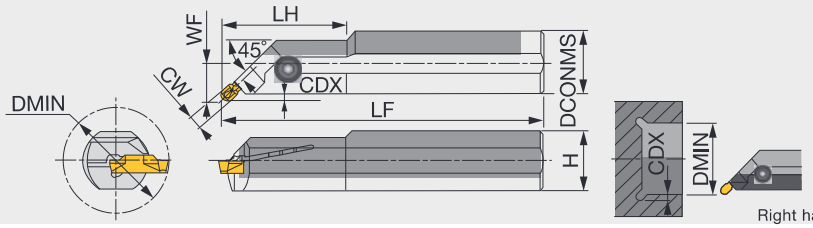
When using the inserts that are not in the above

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

Reference pages: Inserts → F098 - F113, Standard cutting conditions → F113

TUNGCUT
CGIUR/L
Internal 45° undercutting toolholder





Right hand (R) shown.

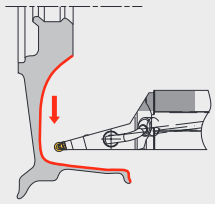
Designation	CW	DMIN	Seat size	CDX	DCONMS	H	LF	LH	WF (1)	Insert	Torque*
CGIUR/L20-3T02-D380	3	38	3	2.8	20	19	160	-	12.8	DTIU...	5
CGIUR/L25-3T02-D380	3	38	3	2.8	25	23	200	40	14.8	DTIU...	5
CGIUR/L20-4T02-D380	4	38	4	2.8	20	19	160	-	12.9	DTIU...	5
CGIUR/L25-4T02-D460	4	46	4	2.8	25	23	200	40	14.9	DTIU...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

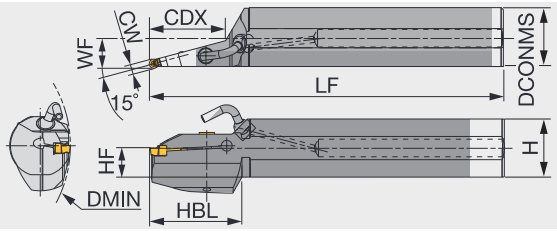
(1) WF is calculated with the groove width CW in the above table.
*Torque: Recommended clamping torque (N·m)

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

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





Right hand (R) shown.

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

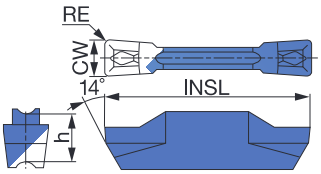
NOZZLE

Coolant pipe	Coolant nozzle
PNZ5	CNZ125

Reference pages: Inserts → F098 - F113, Standard cutting conditions → F113

DTI

Internal grooving and turning (for high precision)



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

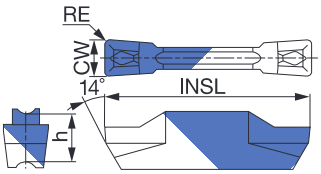
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated						Cermet						INSL	h
				T9225	T9125	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

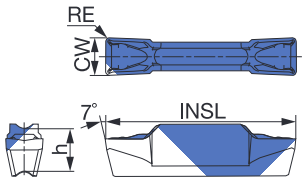
Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	AH7025	AH725	GH130		NS9530							
DTI3-040	3	3	0.4	●	●	●	●	●		●						20	5
DTI4-040	4	4	0.4	●	●	●	●	●		●						20	5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DTX

External/Internal face grooving and turning



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

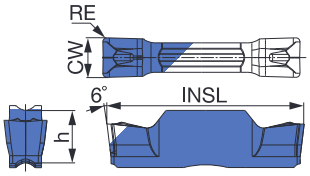
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated							Cermet					INSL	h
				T9225	T9125	AH7025	AH725	GH130			NS9530						
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

●: Line up

DTM

External face grooving and turning



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

★ : First choice
☆ : Second choice

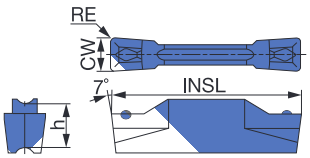
Designation	Seat size	CW±0.05	RE	Coated												INSL	h
				AH7025													
DTM3-030	3	3	0.3	●												20	5
DTM4-040	4	4	0.4	●												20	5
DTM4-080	4	4	0.8	●												20	5
DTM5-080	5	5	0.8	●												25	5.5
DTM6-080	6	6	0.8	●												25	5.5
DTM8-080	8	8	0.8	●												30	6.7

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DTE

External face grooving and turning (for high precision)



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

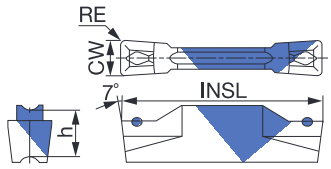
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated						Cermet						INSL	h
				T9225	T9125	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

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

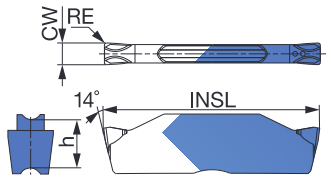
Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	T515	AH7025	AH725	GH130	NS9530							
DTE3-040	3	3	0.4	●	●	●	●	●	●	●						20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●						20	5
DTE5-040	5	5	0.4			●	●									25	5.5
DTE6-080	6	6	0.8			●	●									25	5.5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DGIM

Small diameter internal grooving



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

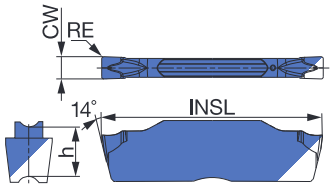
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	AH7025	AH725	GH130		NS9530							
DGIM2-020	2	2	0.2	●	●	●	●	●		●						20	5

●: Line up

DGIS

Small diameter internal grooving



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

★ : First choice
☆ : Second choice

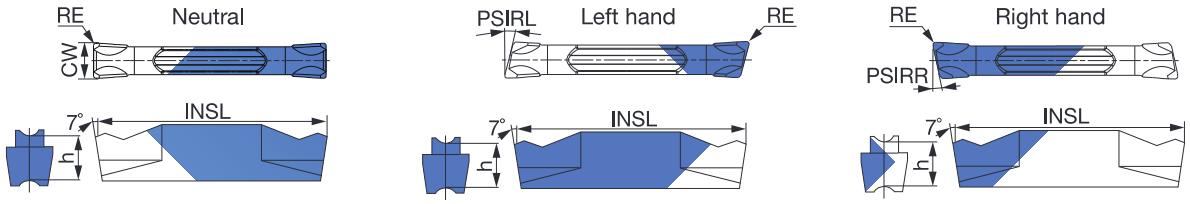
Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	AH7025	AH725	GH130		NS9530							
DGIS2-020	2	2	0.2	●	●	●	●	●		●						20	5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DGM

External grooving and parting, 2 corners



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

★ : First choice
☆ : Second choice

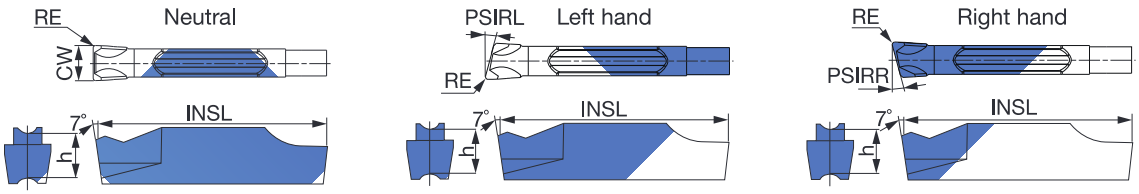
Designation	Seat size	HAND	CW±0.05	RE	Coated							Cermet				INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	AH905	GH130		NS9530							
DGM2-020	2	N	2	0.2	●	●	●	●		●		●				20	5	0°	0°
DGM2-020-6R	2	R	2	0.2			●	●		●						19.8	5	0°	6°
DGM2-020-6L	2	L	2	0.2			●	●		●						19.8	5	6°	0°
DGM2-020-8R	2	R	2	0.2			●	●		●						19.8	5	0°	8°
DGM2-020-8L	2	L	2	0.2			●	●		●						19.8	5	8	0°
DGM2-020-15R	2	R	2	0.2			●	●		●						19.8	5	0°	15°
DGM2-020-15L	2	L	2	0.2			●	●		●						19.8	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°
DGM3-020	3	N	3	0.2	●	●	●	●	●	●		●				20	5	0°	0°
DGM3-020-6R	3	R	3	0.2			●	●		●						19.9	5	0°	6°
DGM3-020-6L	3	L	3	0.2			●	●		●						19.9	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			●	●		●						19.9	5	0°	15°
DGM3-020-15L	3	L	3	0.2			●	●		●						19.9	5	15°	0°
DGM4-030	4	N	4	0.3	●	●	●	●	●	●		●				20	5	0°	0°
DGM4-030-4R	4	R	4	0.3			●	●		●						19.8	5	0°	4°
DGM4-030-4L	4	L	4	0.3			●	●		●						19.8	5	4°	0°
DGM4-030-15R	4	R	4	0.3			●	●		●						19.8	5	0°	15°
DGM4-030-15L	4	L	4	0.3			●	●		●						19.8	5	15°	0°
DGM5-030	5	N	5	0.3	●	●	●	●	●	●		●				25	5.5	0°	0°
DGM5-030-4R	5	R	5	0.3			●	●		●						24.9	5.5	0°	4°
DGM6-030	6	N	6	0.3	●	●	●	●	●	●						25	5.5	0°	0°
DGM8-040	8	N	8	0.4	●	●	●	●		●						30	6.7	0°	0°

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

SGM

External deep grooving and parting, 1corner



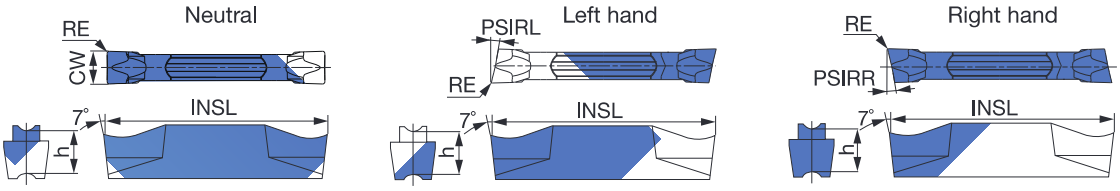
P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated AH7025	Coated AH725	Coated GH130	INSL	h	PSIRL	PSIRR
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

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113



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						INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	GH130		NS9530									
DGS1.4-016	1	N	1.4	0.16			●	●	●								16	4.3	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●		●						20	5	0°	0°
DGS2-020-6R	2	R	2	0.2			●	●	●								19.95	5	0°	6°
DGS2-020-6L	2	L	2	0.2			●	●	●								19.95	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			●	●	●								19.95	5	0°	15°
DGS2-020-15L	2	L	2	0.2			●	●	●								19.95	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°
DGS3-020	3	N	3	0.2	●	●	●	●	●		●						20	5	0°	0°
DGS3-020-6R	3	R	3	0.2			●	●	●								19.9	5	0°	6°
DGS3-020-6L	3	L	3	0.2			●	●	●								19.9	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			●	●	●								19.9	5	0°	15°
DGS3-020-15L	3	L	3	0.2			●	●	●								19.9	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°
DGS4-030	4	N	4	0.3	●	●	●	●	●		●						20	5	0°	0°
DGS4-030-4R	4	R	4	0.3			●	●	●								19.8	5	0°	4°
DGS4-030-4L	4	L	4	0.3			●	●	●								19.85	5	4°	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°

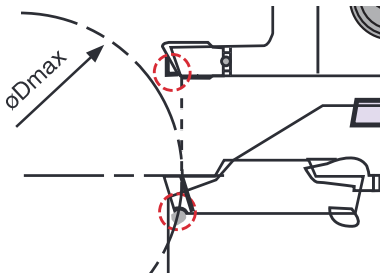
●: Line up

Caution

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

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

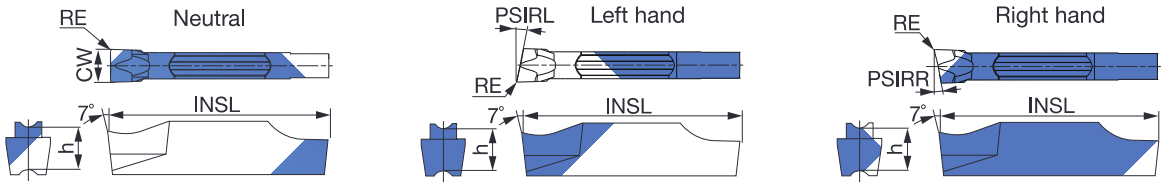
Designation	øDmax (mm)
DGS2-002-15R/L	28
DGS3-002-15R/L	29
SGS3-020-15R/L	103
SGS3-002-15R/L	34



Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

SGS

External deep grooving and parting, 1corner



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

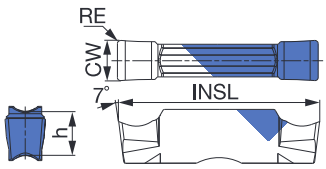
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated AH7025	Coated AH725	Coated GH130	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°

●: Line up

DGG

External grooving (for high precision)



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

★ : First choice
☆ : Second choice

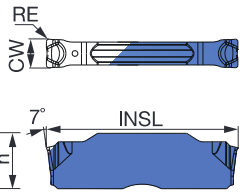
Designation	CW±0.02	RE	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL	h
DGG200-020	2	0.2	●	●	●	20	5
DGG300-020	3	0.2	●	●	●	20	5
DGG400-040	4	0.4	●	●	●	20	5
DGG500-040	5	0.4	●	●	●	25	5.5
DGG600-040	6	0.4	●	●	●	25	5.5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DGL

External grooving and parting



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

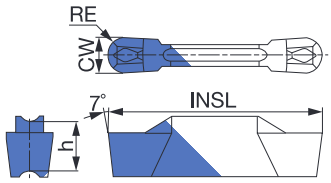
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated	INSL	h
				AH7025		
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

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

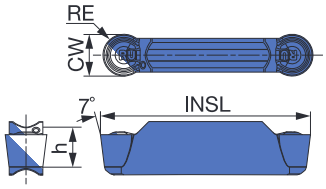
Designation	Seat size	CW±0.02	RE	Coated						Cermet				INSL	h
				T9225	T9125	AH7025	AH725	GH130		NS9530					
DTR300-150	3	3	1.5	●	●	●	●	●		●				20	5
DTR400-200	4	4	2	●	●	●	●	●		●				20	5
DTR478-239	5	4.78	2.39	●	●	●	●	●		●				25	5.5
DTR500-250	5	5	2.5	●	●	●	●	●		●				25	5.5
DTR600-300	6	6	3	●	●	●	●	●						25	5.5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DTR

Profiling and undercutting



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

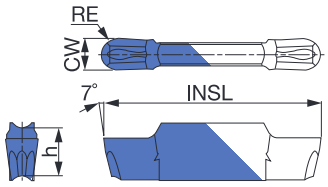
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated							Cermet				INSL	h
				T9225	T9125	AH7025	AH725	AH905	GH130		NS9530					
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

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

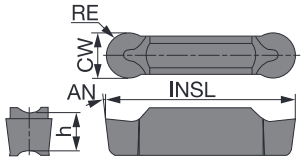
Designation	Seat size	CW±0.02	RE	Coated											INSL	h
				AH7025	AH725	GH130										
DTIU300-150	3	3	1.5	●	●	●									20	5
DTIU400-200	4	4	2	●	●	●									20	5
DTIU500-250	5	5	2.5	●	●	●									25	5.5
DTIU600-300	6	6	3	●	●	●									25	5.5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

DTA

Aluminium wheel machining (for high precision)



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

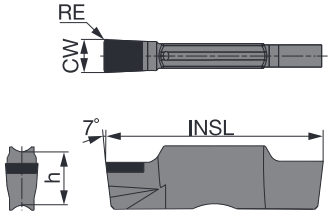
★ : First choice
☆ : Second choice

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

●: Line up

SGN

External grooving of hardened steel



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

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025	RE	CBN BX360	INSL	h
SGN200-020	2	2	0.2	●	20	5
SGN300-020	3	3	0.2	●	20	5
SGN400-020	4	4	0.2	●	20	5

●: Line up

Reference pages: Toolholders → F096 - F097, Standard cutting conditions → F113

Internal grooving and turning

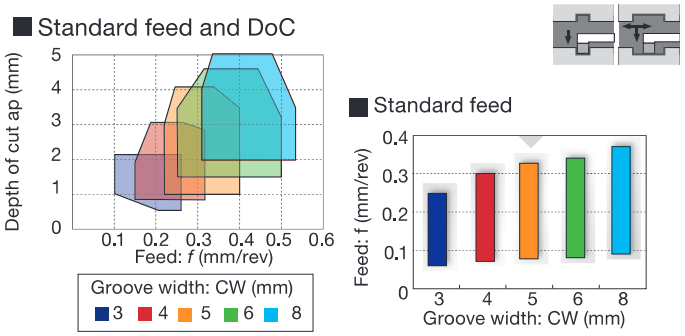
DTI type (2 corners)

1st choice

F098 page

Internal

Unique chipbreaker
makes chips shorter
Molded and ground
inserts available
CW = 3 - 8 mm

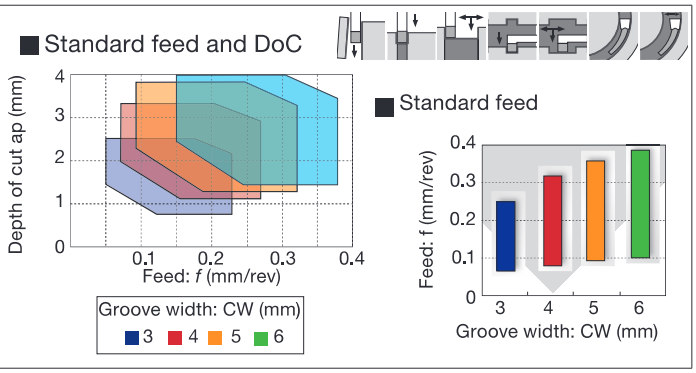


DTX type (2 corners)

F099 page

Multi-functional type

Well balanced sharp-
ness and strength
Multi-functional insert
CW = 3 - 6 mm

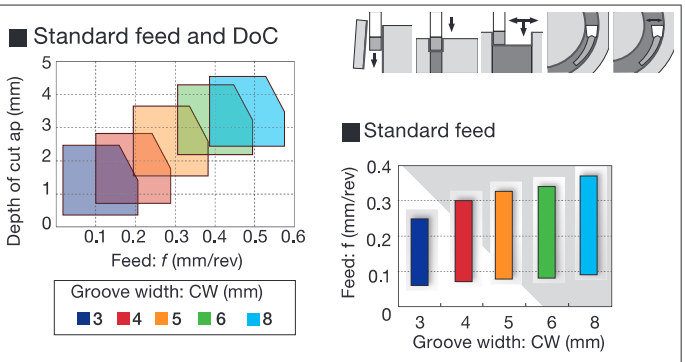


DTM type (2 corners)

F099 page

General purpose

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

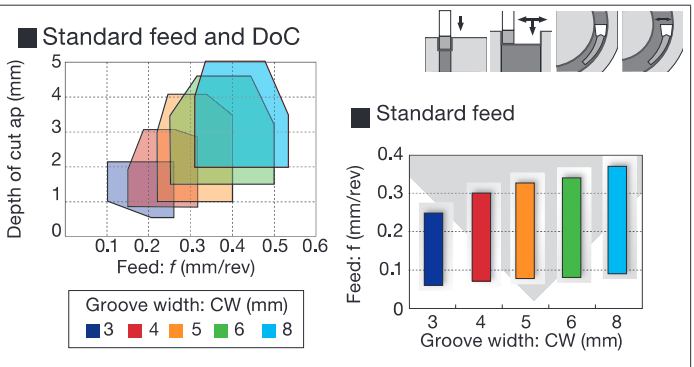


DTE type (2 corners)

F100 page

General purpose

Unique chipbreaker
makes chips shorter
Molded and ground in-
serts available
CW = 3 - 8 mm



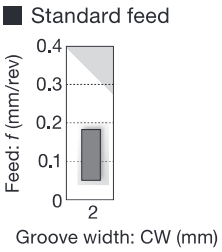
Small diameter internal grooving

DGIM type (2 corners)

F101 page

2 mm insert width only (For general purpose)

Unique chipbreaker for excellent chip control
Excellent fracture resistance due to optimum land on the cutting edge For general applications on steels & stainless steels
CW = 2 mm

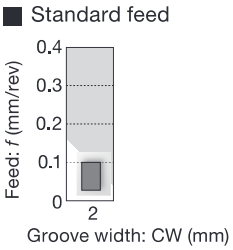


DGIS type (2 corners)

F101 page

2 mm insert width only (Lower cutting force)

Lower cutting force
Excellent fracture resistance due to optimum land on the cutting edge
Applicable for low carbon steels & stainless steels
CW = 2 mm

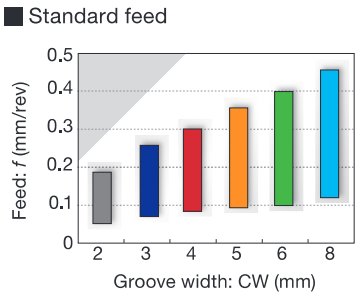


DGM type (2 corners) SGM type (1 corner)

F102, F103 page

1st choice for external grooving and parting

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

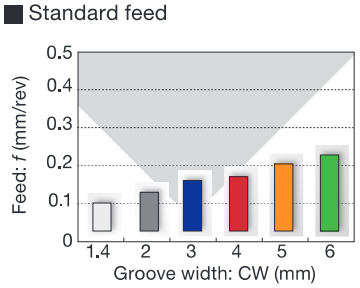


DGS type (2 corners) SGS type (1 corner)

F104, F105 page

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Well-designed edge with high strength
Handed insert available
CW = 1.4 - 6 mm



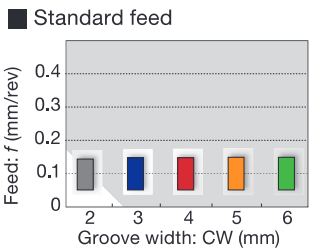
Small diameter internal grooving

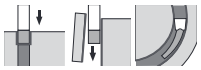
DGG type (2 corners)

F105 page

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish



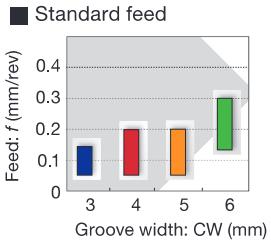


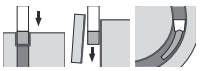
DGL type (2 corners)

F106 page

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often gives difficulties in chip control





Profiling and undercutting

DTR type (2 corners)

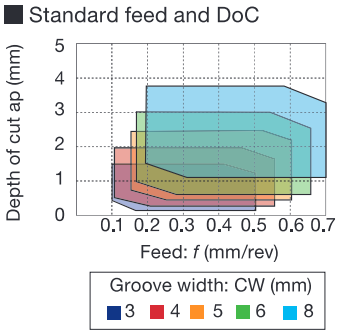
Molded

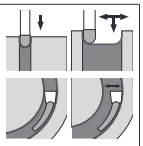
ground

F106, F107 page

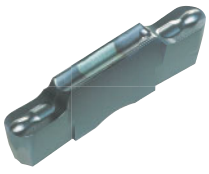
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 3 - 8 mm





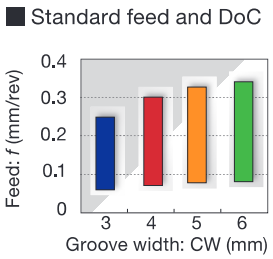
DTIU type (2 corners)

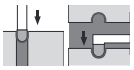


F107 page

Full radius type

Excellent chip control
For undercutting
CW = 3 - 6 mm





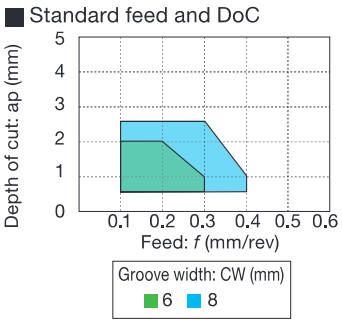
Aluminium wheel machining

DTA type (2 corners)

F108 page

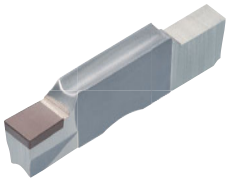
Full radius type

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



External grooving of hardened steel

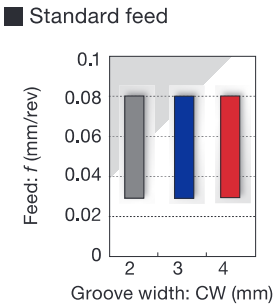
SGN-CBN type (1 corner)

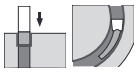


F108 page

Suitable for hardened steel machining

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 2 - 4 mm
(Tolerance: ±0.025 mm)



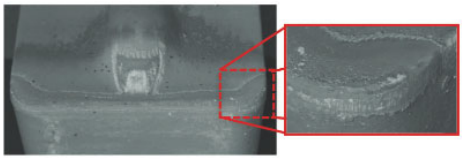


AH7025 performance

First choice for grooving of various materials
AH7025 grade - Tungaloy's unique coating technology for drastically improved reliability

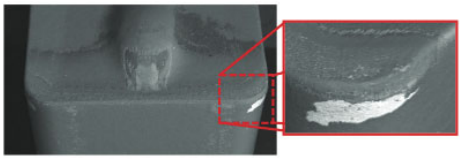
Tool life comparison

AH7025



Tool wear after 60 grooves

Conventional



Tool wear after 30 grooves

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

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

Alloy steel (SCM440) **P**

INSERT : DTE3-040 AH7025
Cutting Speed : Vc = 150 m/min
Feed : f = 0.17 mm/rev
Groove depth : 17 mm
Product series : External toolholder for grooving
Coolant : Wet

GRADE

AH7025 P M K S

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

AH725 P M S

- General purpose
- Newly developed coating with well controlled crystal structure and fracture resistance
- Improved adhesion strength

T515 K

- First recommended grade
- Exellent wear resistance in high-speed machining

T9225 P

- Suitable for steel machining at high speeds
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

T9125 P

- Suitable for steel machining at high speeds
- Improved 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
- 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

- Non-ferrous metal
- Titanium

TH10 N

- Non-ferrous metal

BX360 H

- For hardened steel cutting
- CBN content and grain size

STANDARD CUTTING CONDITIONS

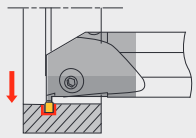
ISO	Workpiece material	Hardness	Priority	Grade	Cutting Speed *Vc* (m/min)
P	Steels S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225	80 - 300
		< 300 HB	Wear resistance	T9125	80 - 200
		< 300 HB	Wear resistance	GH130	50 - 120
		< 300 HB	Suface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Wear resistance	GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515, AH7025	50 - 180
		-	Wear resistance	GH130	50 - 180
	Ductile cast irons FCD450, etc. 450-10S, etc.	-	First choice	T515, AH7025	50 - 120
		-	Wear resistance	GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Grey cast iron FC250, etc. 250, etc.	< HRC 40	First choice	AH7025	20 - 60
		< HRC 40	Wear resistance	AH905	20 - 80
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	20 - 80
		< HRC 40	Wear resistance	AH7025, AH725	20 - 80
		< HRC 40	Suface quality	KS05F	20 - 60
H	Hardened steels SCM435, etc. SUJ2, etc.	> HRC 50	First choice	BX360	80 - 150

*Please see the page F109 - F112 for feed: *f* (mm/rev).

MY-T SERIES

CGTR/L

Internal grooving and turning toolholder



Right hand (R) shown.

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)

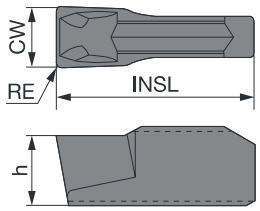
SPARE PARTS

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

Reference pages: Inserts →F115 - F119, Standard cutting conditions →F119

GE

For general grooving



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

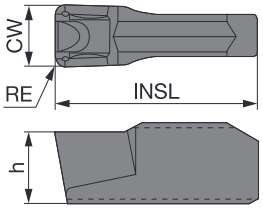
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$	RE	Coated				Cermet	INSL	h
			T9225	T9125	AH120	GH730	NS9530		
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 turning



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

★ : First choice
☆ : Second choice

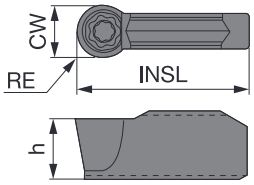
Designation	CW$^{+0.1}_{0}$	RE	Coated				Cermet	INSL	h
			T9225	T9125	AH120	GH730	NS9530		
GT30	3	0.4			●	●	●	10	3.5
GT40	4	0.4			●	●	●	10	4
GT50	5	0.4	●	●	●	●	●	12	4.5

●: Line up

Reference pages: Toolholders → F114, Standard cutting conditions → F119

GR

For profiling (full radius)



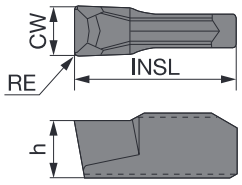
		T9225	T9125	AH120	GH730	NS9530
P	Steel	★	☆	★	★	★
M	Stainless	★		★	★	
K	Cast iron	☆		★	☆	☆
N	Non-ferrous					
S	Superalloys			☆		
H	Hard materials					

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated T9225	Coated T9125	Coated AH120	Coated GH730	Cermet NS9530	INSL	h
GR30	3	1.5			●	●	●	10	3.5
GR40	4	2	●	●	●	●	●	10	4
GR50	5	2.5	●	●	●	●	●	12	4.5

●: Line up

GF



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

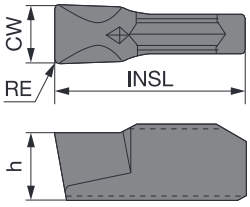
★ : First choice
☆ : Second choice

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

●: Line up

Reference pages: Toolholders → F114, Standard cutting conditions → F119

GN



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

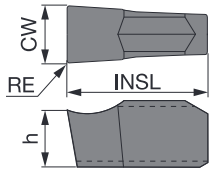
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated GH730	INSL	h
GN30	3	0.2	●	10	3.5
GN40	4	0.2	●	10	4
GN50	5	0.2	●	12	4.5

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

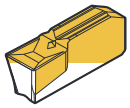
●: Line up

Reference pages: Toolholders → F114, Standard cutting conditions → F119

1 corner insert

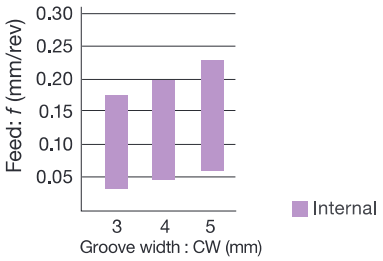
Internal grooving

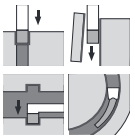
GN



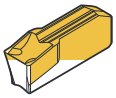
F117 page

1st choice for internal grooving
Low cutting force and good chip control for internal grooving
Low cutting force and good chip
CW = 3 - 5 mm



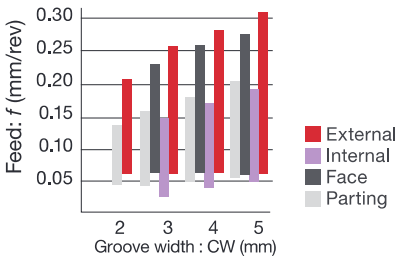


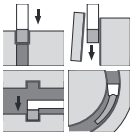
GE



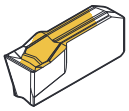
F115 page

1st choice for external grooving and parting
Excellent chip control
CW = 2 - 5 mm



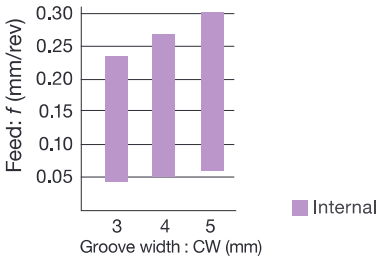


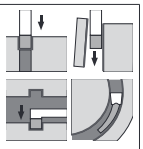
GF



F116 page

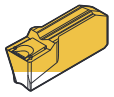
1st choice for face grooving
Low cutting force and good chip control for face grooving
CW = 3 - 5 mm





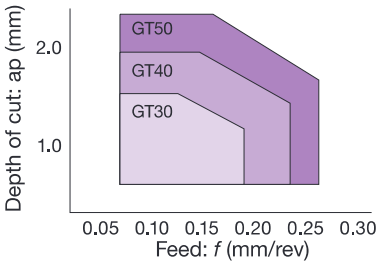
Grooving and turning

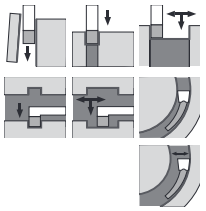
GT



F115 page

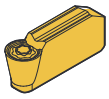
1st choice for traversing
Low cutting force and good chip control for traversing
CW = 3 - 5 mm





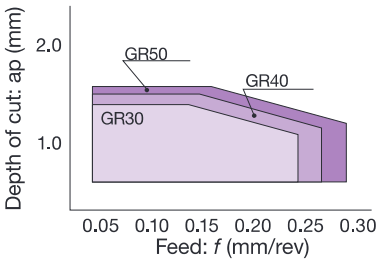
Profiling

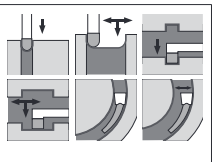
GR



F116 page

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

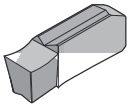




1 corner insert

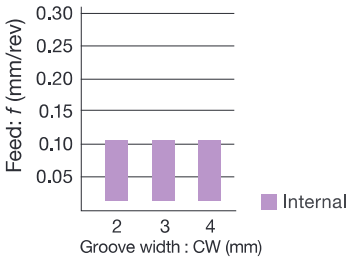
For aluminium and non-ferrius metal

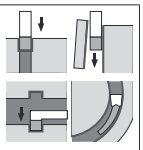
GE-AL



F117 page

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





STANDARD CUTTING CONDITIONS

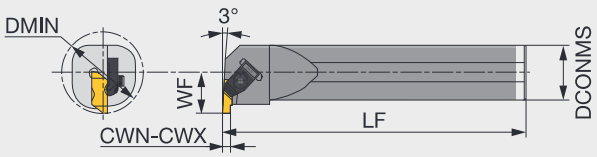
ISO	Workpiece material	Grade	Cutting Speed Vc (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		T9125	80 - 200
		NS9530	100 - 200
		GH730	50 - 180
	Low carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		T9125	80 - 180
		NS9530	80 - 180
		GH730	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		T9125	80 - 150
		NS9530	80 - 150
		GH730	50 - 120
M	Stainless steel	T9225	80 - 180
		T9125	80 - 150
		GH730	50 - 120
K	Grey iron, Ductile cast iron	T9225	80 - 250
		T9125	80 - 200
		GH730	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 F091.
When vibration occurs in turning, please use the lower limit value in the above table

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



Right hand (R) shown.

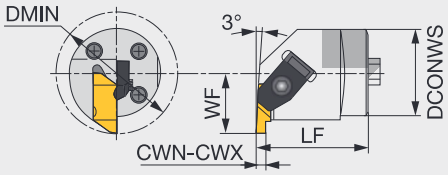
Designation	CWN	CWX	DMIN	DCONMS	LF	WF	Insert	Torque*
A25M-FLER/L3	1	3	34.9	25	300	17.7	FL*-3**L/R...	3
A32M-FLER/L3	1	3	44.45	32	350	22.1	FL*-3**L/R...	3
A40M-FLER3	1	3	50.8	40	350	24.5	FL*-3**L...	3

SPARE PARTS

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

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)

TUNGT-CLAMP
HS-FLER/L
Internal grooving and threading head, for S-570 shank



Right hand (R) shown.

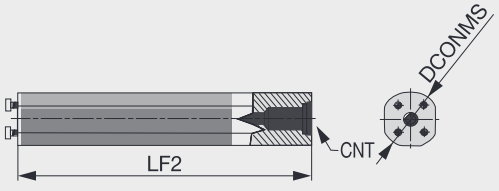
Designation	CWN	CWX	DMIN	DCONWS	LF	WF	Insert	Torque*
HS40-FLER3W	1	3	56.1	40	40.1	28	FL*-3**L...	3
HS50-FLER3W	1	3	70.1	50	41.9	35	FL*-3**L...	3

SPARE PARTS

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

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)

TUNGT-CLAMP
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

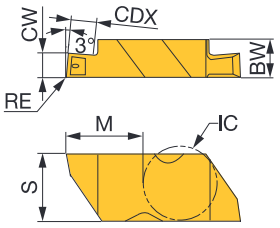
SPARE PARTS

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

Reference pages: Inserts, Standard cutting conditions → F121

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	BW	S	M
				AH110				
FLG-3M100R-CB	R	1	0.19	●	1.4	4.95	8.74	10.29
FLG-3M100L-CB	L	1	0.19	●	1.4	4.95	8.74	10.29
FLG-3M150R-CB	R	1.5	0.19	●	2.55	4.95	8.74	10.29
FLG-3M150L-CB	L	1.5	0.19	●	2.55	4.95	8.74	10.29
FLG-3M200R-CB	R	2	0.19	●	2.55	4.95	8.74	10.29
FLG-3M200L-CB	L	2	0.19	●	2.55	4.95	8.74	10.29
FLG-3M250R-CB	R	2.5	0.19	●	4.07	4.95	8.74	10.29
FLG-3M250L-CB	L	2.5	0.19	●	4.07	4.95	8.74	10.29
FLG-3M300R-CB	R	3	0.19	●	4.07	4.95	8.74	10.29
FLG-3M300L-CB	L	3	0.19	●	4.07	4.95	8.74	10.29

●: Line up

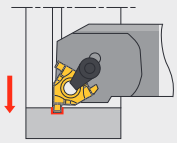
STANDARD CUTTING CONDITIONS

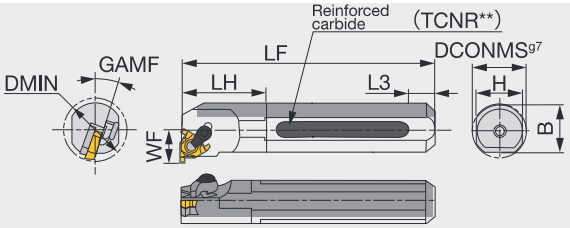
ISO	Workpiece material	Grade	Application	Cutting Speed *Vc* (m/min)	Feed *f* (mm/rev)
P	High carbon steel S45C, etc. C45, etc	AH110	Grooving	100 - 200	0.12 - 0.35
		AH725	Threading	80 - 180	-
	Alloy steel SCM435, etc. 34CrMo4, etc.	AH110	Grooving	50 - 80	0.12 - 0.3
		AH725	Threading	60 - 160	-
M	Stainless steel SUS304, etc. X5CrNi18-9, etc.	AH110	Grooving	50 - 150	0.1 - 0.2
		AH725	Threading	50 - 130	-
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

Reference pages: Toolholders → F120

CNR/L

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





Right hand (R) shown.

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 shank.
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)

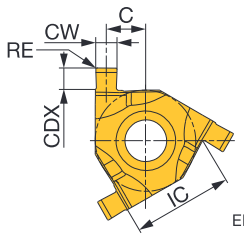
SPARE PARTS

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

Reference pages: Inserts, Standard cutting conditions → F123

INSERT

GTGN16



ER/IL shown.

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

★ : First choice
☆ : Second choice

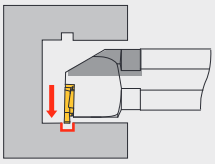
Designation	HAND	CW±0.03	RE	Coated						Insert size	CDX	IC	C	Shim	
				SH730										Dual-clamp toolholder: screw-on and clamp-on	Clamp-on toolholder
GTGN-16ER/IL100	L	1	0.1	●						16	1.25	9.53	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	R	1	0.1	●						16	1.25	9.53	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL120	L	1.2	0.1	●						16	1.3	9.53	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR120	R	1.2	0.1	●						16	1.3	9.53	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL140	L	1.4	0.1	●						16	1.5	9.53	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR140	R	1.4	0.1	●						16	1.5	9.53	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL170	L	1.7	0.1	●						16	1.7	9.53	3.67	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR170	R	1.7	0.1	●						16	1.7	9.53	3.67	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL195	L	1.95	0.1	●						16	1.7	9.53	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR195	R	1.95	0.1	●						16	1.7	9.53	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16ER/IL225	L	2.25	0.1	●						16	1.8	9.53	3.6	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR225	R	2.25	0.1	●						16	1.8	9.53	3.6	G16EL/IR-DT	G16EL/IR-S

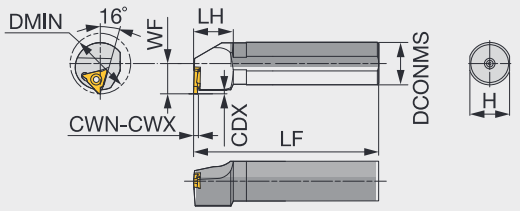
Note: GTGN insert can be used for both external and internal machining, but the tool hand is reversed.
Shim for GTGN depends on the toolholder type.

●: 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





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

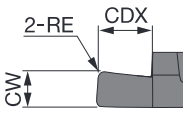
Use right-hand toolholders (SGTR) with left-hand inserts (GBL); and left-hand toolholders (SGTL) with right-hand inserts (GBR).
*Torque: Recommended clamping torque (N·m)

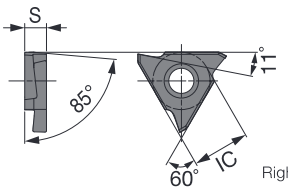
SPARE PARTS

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

INSERT

GBR/L32





Right hand (R) shown.

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

★ : First choice
☆ : Second choice

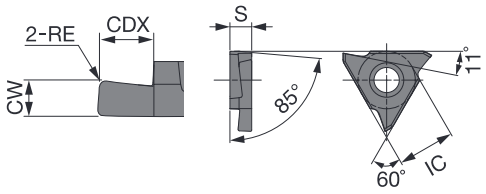
Designation	HAND	CW±0.025	RE	Coated AH710	Cermet NS9530	Uncoated KS05F	CDX	IC	S
GBR32033	R	0.33	0.03	●	●	●	0.8	9.53	3.18
GBL32033	L	0.33	0.03	●			0.8	9.53	3.18
GBR32050	R	0.5	0.05	●	●	●	1.2	9.53	3.18
GBL32050	L	0.5	0.05	●			1.2	9.53	3.18
GBR32075	R	0.75	0.05	●	●	●	2	9.53	3.18
GBL32075	L	0.75	0.05	●	●		2	9.53	3.18
GBR32095	R	0.95	0.05	●	●	●	2	9.53	3.18
GBL32095	L	0.95	0.05	●	●		2	9.53	3.18
GBR32100	R	1	0.05	●	●	●	2	9.53	3.18
GBL32100	L	1	0.05	●	●		2	9.53	3.18
GBR32125	R	1.25	0.2	●	●	●	2	9.53	3.18
GBL32125	L	1.25	0.2	●	●		2	9.53	3.18
GBR32145	R	1.45	0.2	●	●	●	2	9.53	3.18
GBL32145	L	1.45	0.2	●			2	9.53	3.18
GBR32150	R	1.5	0.2	●	●	●	2	9.53	3.18
GBL32150	L	1.5	0.2	●			2	9.53	3.18
GBR32200	R	2	0.2	●	●	●	2.5	9.53	3.18
GBL32200	L	2	0.2	●			2.5	9.53	3.18
GBR32250	R	2.5	0.2	●	●	●	2.5	9.53	3.18
GBL32250	L	2.5	0.2	●			2.5	9.53	3.18

●: Line up

Reference pages: Inserts → F124 - F126, Standard cutting conditions → F126

INSERT

GBR/L43



Right hand (R) shown.

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

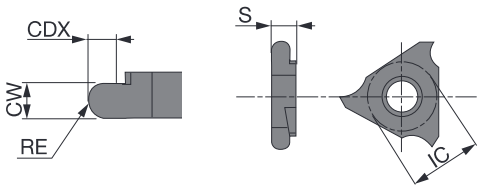
★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated AH710	Cermet NS9530	Uncoated KS05F	CDX	IC	S
GBR43125	R	1.25	0.2	●	●	●	2	12.7	4.76
GBL43125	L	1.25	0.2	●			2	12.7	4.76
GBR43145	R	1.45	0.2	●	●	●	2	12.7	4.76
GBL43145	L	1.45	0.2	●			2	12.7	4.76
GBR43150	R	1.50	0.2	●	●	●	3.5	12.7	4.76
GBL43150	L	1.50	0.2	●	●		3.5	12.7	4.76
GBR43175	R	1.75	0.2	●	●	●	3.5	12.7	4.76
GBL43175	L	1.75	0.2	●	●		3.5	12.7	4.76
GBR43185	R	1.85	0.2	●	●	●	3.5	12.7	4.76
GBL43185	L	1.85	0.2	●	●		3.5	12.7	4.76
GBR43200	R	2	0.2	●	●	●	3.5	12.7	4.76
GBL43200	L	2	0.2	●	●		3.5	12.7	4.76
GBR43230	R	2.3	0.2	●	●	●	3.5	12.7	4.76
GBL43230	L	2.3	0.2	●	●		3.5	12.7	4.76
GBR43250	R	2.5	0.3	●	●	●	5	12.7	4.76
GBL43250	L	2.5	0.3	●			5	12.7	4.76
GBR43265	R	2.65	0.3	●	●	●	5	12.7	4.76
GBL43265	L	2.65	0.3	●			5	12.7	4.76
GBR43280	R	2.8	0.3	●	●	●	5	12.7	4.76
GBL43280	L	2.8	0.3	●			5	12.7	4.76
GBR43300	R	3	0.3	●	●	●	5	12.7	4.76
GBL43300	L	3	0.3	●			5	12.7	4.76
GBR43330	R	3.3	0.3	●	●	●	5	12.7	4.76
GBL43330	L	3.3	0.3	●			5	12.7	4.76
GBR43350	R	3.5	0.3	●	●	●	5	12.7	4.76
GBL43350	L	3.5	0.3	●			5	12.7	4.76
GBR43400	R	4	0.4	●	●	●	5	12.7	4.76
GBL43400	L	4	0.4	●			5	12.7	4.76
GBR43430	R	4.3	0.4	●	●	●	5	12.7	4.76
GBL43430	L	4.3	0.4	●			5	12.7	4.76
GBR43450	R	4.5	0.4	●	●	●	5	12.7	4.76
GBL43450	L	4.5	0.4	●			5	12.7	4.76

●: Line up

Reference pages: Toolholders → F124

GBR/L43-R (full radius)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated AH710	Cermet NS9530	Uncoated KS05F	CDX	IC	S
GBR43050R	R	1	0.5	●	●	●	2	12.7	4.76
GBL43050R	L	1	0.5	●		●	2	12.7	4.76
GBR43075R	R	1.5	0.75	●	●	●	3.5	12.7	4.76
GBL43075R	L	1.5	0.75	●		●	3.5	12.7	4.76
GBR43100R	R	2	1	●	●	●	3.5	12.7	4.76
GBL43100R	L	2	1	●		●	3.5	12.7	4.76
GBR43125R	R	2.5	1.25	●	●	●	5	12.7	4.76
GBL43125R	L	2.5	1.25	●		●	5	12.7	4.76
GBR43150R	R	3	1.5	●	●	●	5	12.7	4.76
GBL43150R	L	3	1.5	●		●	5	12.7	4.76
GBR43200R	R	4	2	●	●	●	5	12.7	4.76
GBL43200R	L	4	2	●		●	5	12.7	4.76

●: Line up

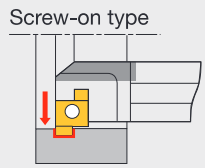
STANDARD CUTTING CONDITIONS

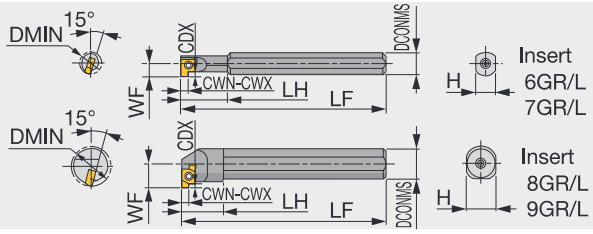
ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)
P	Carbon steels, Alloy steels S45C, SCM415, etc. C45, 18CrMo4, etc.	150 - 240HB	NS9530	100 - 200	0.02 - 0.25
		150 - 240HB	AH710	60 - 150	0.05 - 0.25
M	Stainless steels SUS304, etc. X5CrNi18-9, etc.	≤ 240HB	AH710	60 - 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 → F124

SNGR/L

Internal grooving





Right hand (R) shown.

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

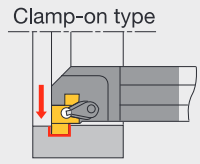
Note: Use right-hand holder (→NGR ・) with right-hand insert (→GR ・); and left-hand holder (→NGL ・) with left-hand insert →GL ・).
*Torque: Recommended clamping torque (N·m)

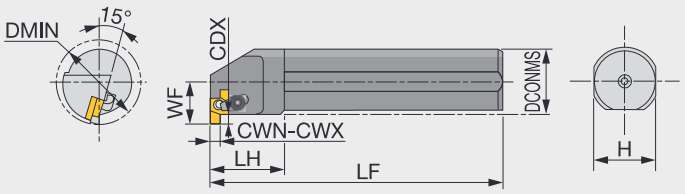
SPARE PARTS

Designation	Clamping screw	Wrench
SNGR/L***06	CSTB-2L040	T-6F
SNGR/L***07	CSTB-2.2S	T-7F
SNGR/L***08	CSTB-2.2	T-7F
SNGR/L***09	CSTB-2.5L080	T-8F
SNGR/L***06SC	CSTB-2L040	T-6F
SNGR/L***07SC	CSTB-2.2S	T-7F
SNGR/L***08SC	CSTB-2.2	T-7F
SNGR/L***09SC	CSTB-2.5L080	T-8F

CNGR/L

Internal grooving





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

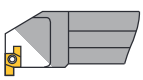
Note: Use right-hand holder (☐NGR ～) with right-hand insert (☐GR ～); and left-hand holder (☐NGL ～) with left-hand insert (☐GL ～).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamp set	Screw	Shim	Wrench
CNGR...	CSP22	DTS5-3.5	SGSR151	T-20F
CNGL...	CSP22	DTS5-3.5	SGSL151	T-20F

Optional parts for CNG type toolholder

When using as a screw-on type, please use the parts below.



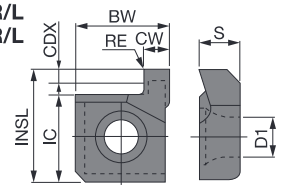
Designation	Clamping screw	Wrench
CNGR/L...	CSTB-3.5L	T-15F

Reference pages: Inserts → F128, Standard cutting conditions → F129

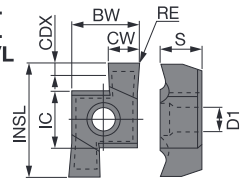
INSERT

**GR/L

6GR/L
7GR/L



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



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.025	RE	Coated NS9530	Uncoated TH10	Uncoated UX30	CDX	BW	S	IC	INSL	D1
6GR100	R	1	0.2	●	●	●	1.5	5.6	2.34	4.76	6.44	2.3
6GL100	L	1	0.2			●	1.5	5.6	2.34	4.76	6.44	2.3
6GR150	R	1.5	0.2	●	●	●	1.5	5.6	2.34	4.76	6.44	2.3
6GL150	L	1.5	0.2		●	●	1.5	5.6	2.34	4.76	6.44	2.3
6GR200	R	2	0.2	●	●	●	1.5	5.6	2.34	4.76	6.44	2.3
6GL200	L	2	0.2		●	●	1.5	5.6	2.34	4.76	6.44	2.3
7GR100	R	1	0.2	●	●	●	1.5	5.6	3.08	5.56	7.36	2.58
7GR150	R	1.5	0.2	●	●	●	1.5	5.6	3.08	5.56	7.36	2.58
7GR200	R	2	0.2	●	●	●	1.5	5.6	3.08	5.56	7.36	2.58
7GL200	L	2	0.2		●	●	1.5	5.6	3.08	5.56	7.36	2.58
8GR150	R	1.5	0.2	●	●	●	2	6.2	3.87	5.56	10.16	2.58
8GR200	R	2	0.2	●	●	●	2	6.2	3.87	5.56	10.16	2.58
8GL200	L	2	0.2		●		2	6.2	3.87	5.56	10.16	2.58
8GR250	R	2.5	0.2	●	●	●	2	6.2	3.87	5.56	10.16	2.58
8GL250	L	2.5	0.2		●	●	2	6.2	3.87	5.56	10.16	2.58
8GR300	R	3	0.2	●	●	●	2	6.2	3.87	5.56	10.16	2.58
8GL300	L	3	0.2		●	●	2	6.2	3.87	5.56	10.16	2.58
8GR350	R	3.5	0.2		●	●	2	6.2	3.87	5.56	10.16	2.58
9GR150	R	1.5	0.2	●	●	●	2	7.7	4.66	6.35	12.95	2.86
9GL150	L	1.5	0.2	●		●	2	7.7	4.66	6.35	12.95	2.86
9GR200	R	2	0.2	●	●	●	3	7.7	4.66	6.35	12.95	2.86
9GL200	L	2	0.2	●	●	●	3	7.7	4.66	6.35	12.95	2.86
9GR250	R	2.5	0.2	●	●	●	3	7.7	4.66	6.35	12.95	2.86
9GL250	L	2.5	0.2	●		●	3	7.7	4.66	6.35	12.95	2.86
9GR300	R	3	0.2	●	●	●	3	7.7	4.66	6.35	12.95	2.86
9GL300	L	3	0.2	●	●	●	3	7.7	4.66	6.35	12.95	2.86
9GR350	R	3.5	0.2	●	●	●	3	7.7	4.66	6.35	12.95	2.86
9GL350	L	3.5	0.2	●		●	3	7.7	4.66	6.35	12.95	2.86
15GR200	R	2	0.2	●	●	●	3	10.8	5.1	9.2	20.8	4.8
15GR250	R	2.5	0.2	●	●	●	3	10.8	5.1	9.2	20.8	4.8
15GR300	R	3	0.2	●	●	●	3	10.8	5.1	9.2	20.8	4.8
15GL300	L	3	0.2			●	3	10.8	5.1	9.2	20.8	4.8
15GR350	R	3.5	0.2	●	●	●	3	10.8	5.1	9.2	20.8	4.8
15GR400	R	4	0.2	●	●	●	4	10.8	5.1	9.2	20.8	4.8
15GR450	R	4.5	0.2		●	●	4	10.8	5.1	9.2	20.8	4.8
15GL450	L	4.5	0.2		●		4	10.8	5.1	9.2	20.8	4.8
15GR500	R	5	0.2		●	●	5	10.8	5.1	9.2	20.8	4.8

Note: Use right-hand holder (□NGR ～) with right-hand insert (□GR ～); and left-hand holder (□NGL ～) with left-hand insert (□GL ～).

●: Line up

Reference pages: Toolholders → F127, Standard cutting conditions → F129

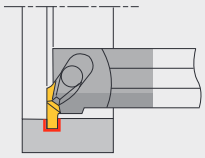
STANDARD CUTTING CONDITIONS

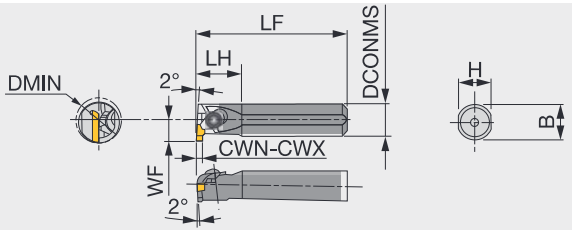
ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)
P	Medium carbon steels	NS9530	80 - 200	0.05 - 0.08
		UX30	60 - 150	0.05 - 0.08
K	Cast irons, Light alloys	TH10	60 - 150	0.05 - 0.08

Note: • Please use the above values as a guide for selecting cutting conditions.
• The values will vary for machining the diameter close to the minimum value or with long overhang of the toolholder. In that case, please reduce the above values to approximately half
• To help chip evacuation, please use water-soluble coolant. The coolant should sufficiently reach the cutting point. When coolant cannot be used, please reduce the above values (both speed and feed) to less than half.

CGXR/L

Internal grooving





Right hand (R) shown.

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 insart (GIR); and left-hand holder (L) with left-hand insart (GIL).
*Torque: Recommended clamping torque (N·m)

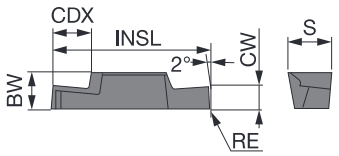
SPARE PARTS

Designation	Clamp set	Wrench1	Wrench2
CGXR/L0016/20	CSW-0	-	P-2.5T
CGXR/L0025/32/40	CSW-2	P-4	-
CGXR/L16SC	CSW-0	-	P-2.5T

Reference pages: Inserts, Standard cutting conditions → F130

INSERT

GIR/L



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05	RE	Coated	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

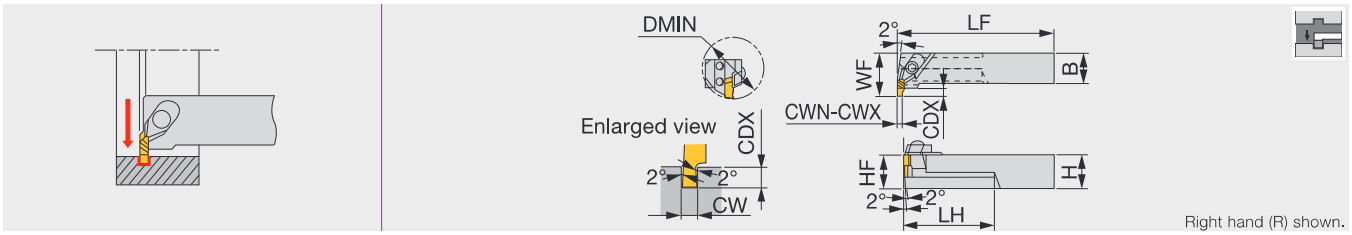
Use right-hand toolholders (CGXR~) with right-hand inserts (GIR); and left-hand toolholders (GX-****LI) with left-hand inserts (XGR).

● : 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
P	Carbon steels	NS9530	80 - 150	0.05 - 0.1	0.08 - 0.15	0.08 - 0.2
K	Cast irons, Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.15	0.08 - 0.2

Reference pages: Toolholders → F129



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-****RI) with left-hand inserts (XGL); and left-hand toolholders (GX-****LI) with right-hand inserts (XGR).
*Torque: Recommended clamping torque (N·m)

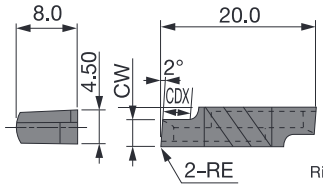
SPARE PARTS

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



Right hand (R) shown.

		Cermet		Uncoated	
		NS9530		TH10	UX30
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	NS9530	TH10	UX30	CDX
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...).

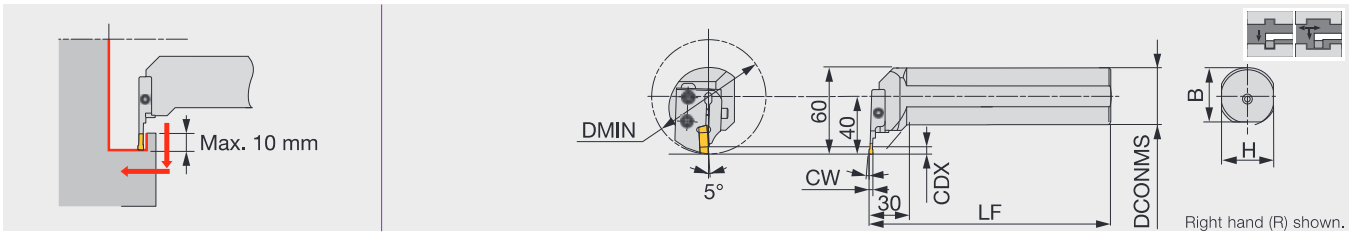
●: Line up

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

CGWTR/L0040-FLL/R3NP

Internal grooving and turning toolholder



Designation	CW	DMIN	CDX	DCONMS	LF	H	B	Insert	Shank	Blade	Torque*
CGWTR/L0040-FLL/R3NP	3	80	10	40	180	37.5	37	FLEX30L/R	CGWTR/L0040	FLL/R3NP	5

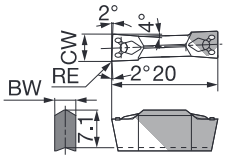
Please place an order with the designation of a set or a shank+a blade
Note: Use right-hand blades (CCWTR) with left-hand shanks (FLL3NP); and left-hand blades (CGWTL) with right-hand shanks (FLR3NP).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

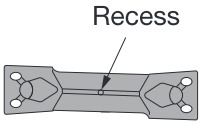
Designation	Clamping screw	Blade screw	Wrench
CGWTR/L0040-FLL/R3NP	CHHM5-18	CSHB-6	P-4

INSERT

FLEX(R/L)



Right hand (R) shown.



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

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.05	RE	T9225	T9125	NS9530	UX30	BW
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

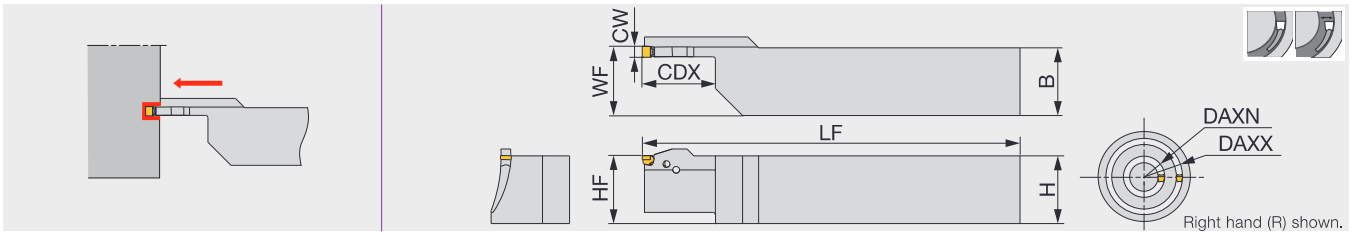
●: Line up

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
		T9125	80 - 200	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

EASYMCUT ULTI
ETFR/L

Face grooving and turning toolholder



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.

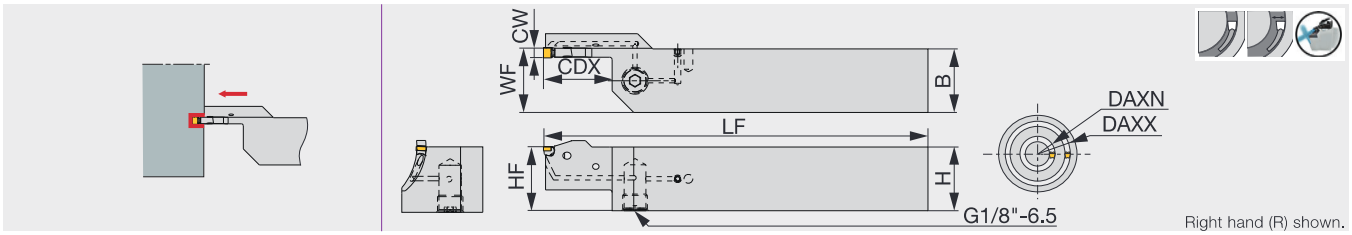
SPARE PARTS

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

EASYMCUT ULTI
ETFR-CHP

TUNGTJET URN

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.

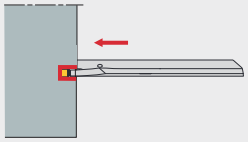
SPARE PARTS

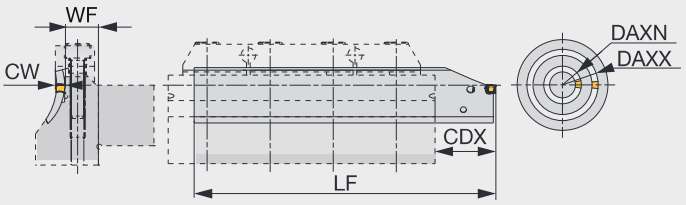
Designation	Wrench (Optional)
ETFR****-CHP	ECW-456EF

Reference pages: Inserts, Standard cutting conditions → F135 - F136, Parts for coolant hose → F198

EFPR/L

Face grooving blade





Right hand (R) shown.

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...

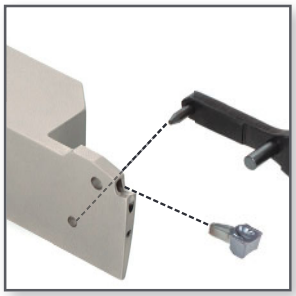
Wrench (ECW...) is not included. Please order it separately.

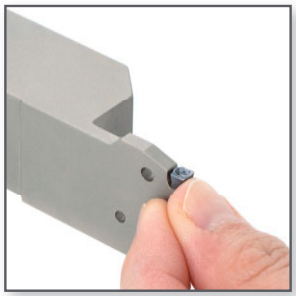
SPARE PARTS

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

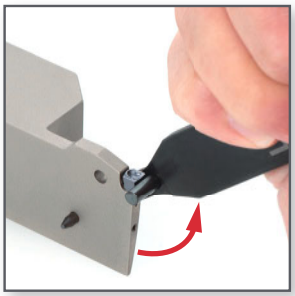
Procedure to clamp and unclanp insert

1. Put the insert in the Unclamp pocket

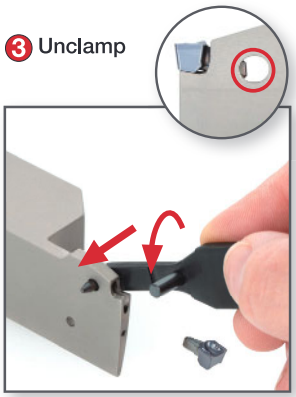




2. Turn the wrench Push the insert into the pocket to clamp

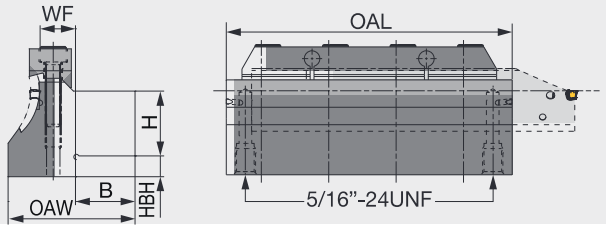


3. Unclamp



Reference pages: Inserts, Standard cutting conditions → F135 - F136

Tool block for EFP blades with high pressure coolant capability



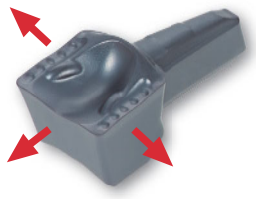
Designation	CW	DAXN	WF	H	B	HBH	OAW	OAL	Blade
CTBU25-030-4-CHP	4	30	13.6	25	23	8	49	110	EFPR/L-4-030035
CTBU25-035-4/5-CHP	4, 5	35	13.6	25	23	8	49	110	EFPR-4/5-035045
CTBU25-045-4/5-CHP	4, 5	45	13.6	25	23	8	49	110	EFPR-4/5-045055
CTBU25-055-4/5-CHP	4, 5	55	13.6	25	23	8	47	110	EFPR-4/5-055075
CTBU25-075-4/5-CHP	4, 5	75	13.6	25	23	8	45	110	EFPR-4/5-075120
CTBU25-120-4/5-CHP	4, 5	120	13.6	25	23	8	44	110	EFPR-4/5-120200
CTBU25-200-4/5-CHP	4, 5	200	13.6	25	23	8	41.5	110	EFPR-4/5-200500
CTBU25-045-6-CHP	6	45	13.6	25	23	8	51	110	EFPR-6-045055
CTBU25-055-6-CHP	6	55	13.6	25	23	8	49	110	EFPR-6-055075
CTBU25-075-6-CHP	6	75	13.6	25	23	8	47	110	EFPR-6-075120
CTBU25-120-6-CHP	6	120	13.6	25	23	8	46	110	EFPR-6-120200
CTBU25-200-6-CHP	6	200	13.6	25	23	8	43.5	110	EFPR/L-6-200500

SPARE PARTS

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

EASYMCUT ULTI - Chipbreaker Guide

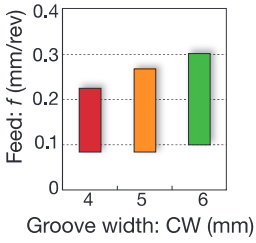
ETX type



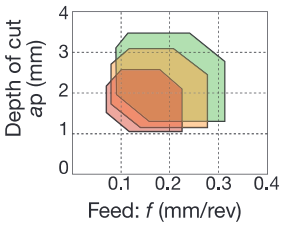
Multi-functional insert grooving and turning Suitable for light to medium cutting Well-balanced sharpness and strength

CW = 4 - 6 mm

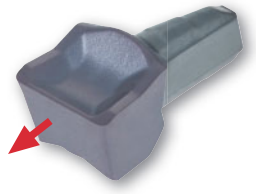
■ Standard feed



■ Standard feed and depth of cut for turning



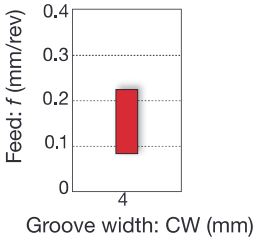
EGM type



1st choice for parting
High strength
Well-designed edge

CW = 4 mm

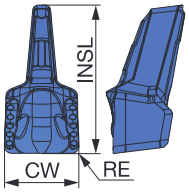
■ Standard feed



Reference pages: Inserts, Standard cutting conditions → F135 - F136
Parts for coolant hose → F198

INSERT

ETX



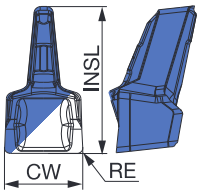
P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

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

● : Line up

EGM



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

★ : First choice
☆ : Second choice

Designation	CW±0.05	RE	Coated AH725	INSL
EGM4-030	4	0.3	●	8

● : Line up

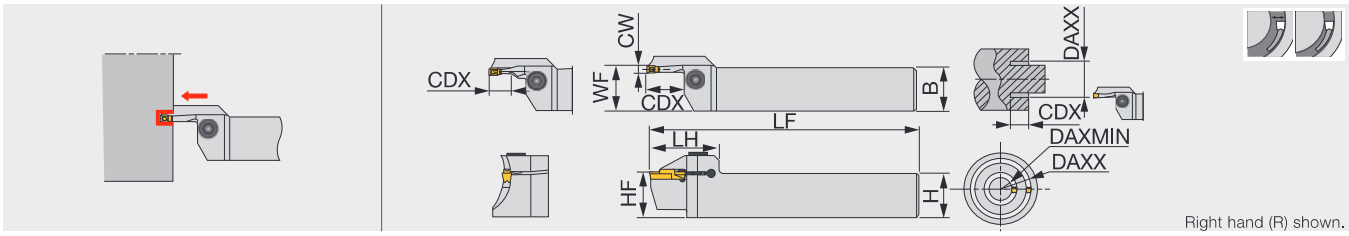
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Chipbreaker	Cutting speed *Vc* (m/min)
P	Low carbon steel S45C, etc. S15C, etc.	- 300 HB	AH725	ETX	80 - 180
		- 300 HB	AH725	EGM	80 - 180
	Carbon steel, Alloy steel S55C, etc. SCM440, etc.	- 300 HB	AH725	ETX	80 - 180
		- 300 HB	AH725	EGM	80 - 180
	Prehardened steel NAK80, etc. PX5, etc.	- 300 HB	AH725	ETX	80 - 180
		- 300 HB	AH725	EGM	80 - 180
M	Stainless steels SUS303, etc. SUS316, etc.	-	AH725	ETX	50 - 120
		-	AH725	EGM	50 - 120

Reference pages: Toolholders → F133 - F135

CTFR/L

Face grooving and turning toolholder



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

SPARE PARTS

Designation	Clamping screw	Wrench
CTFR/L2525-3T - 4T...	CM6X1X25-A	P-5
CTFR/L2525-5T - 6T...	CM8X1.25X25-A	P-6

INSERT

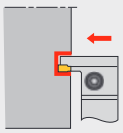
Designation	Seat size	Insert
CTFR/L2525-3T10-024035	3	DTF, DTX
CTFR/L2525-3T10-029040	3	DTF, DTX
CTFR/L2525-3T10-034050	3	DTF, DTX
CTFR/L2525-3T15-044070	3	DTF, DTX, DTR, DTE, DGG, DTM
CTFR/L2525-3T15-064100	3	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DGL, DTM
CTFR/L2525-4T10-022036	4	DTF, DTX
CTFR/L2525-4T20-028042	4	DTF, DTX, DTR
CTFR/L2525-4T20-034050	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFR/L2525-4T20-042070	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFR/L2525-4T20-062120	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFR/L2525-4T20-112200	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFR/L2525-5T25-...	5	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFR/L2525-6T25-...	6	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL

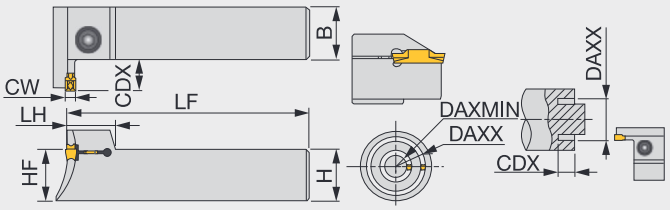
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

Reference pages: Inserts → F143 - F156, Standard cutting conditions → F157

CTFVR/L

Perpendicular toolholder for face grooving and turning





Right hand (R) shown.

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.
*Torque:Recommended 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

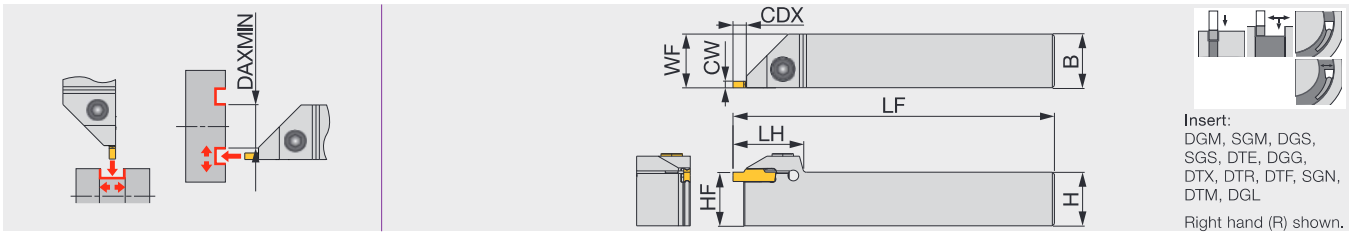
Designation	Seat size	Insert
CTFVR/L2525-3T10-024035	3	DTF, DTX
CTFVR/L2525-3T10-029040	3	DTF, DTX
CTFVR/L2525-3T10-034050	3	DTF, DTX, DTR
CTFVR/L2525-3T15-044060	3	DTF, DTX, DTE, DTR
CTFVR/L2525-3T15-054085	3	DTF, DTX, DTE, DGG, DTR, DTM
CTFVR/L2525-4T12-022040	4	DTF, DTX, DTR
CTFVR/L2525-4T15-032050	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFVR/L2525-4T15-042060	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFVR/L2525-4T15-052085	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DTM, DGL
CTFVR/L2525-5T20-...	5	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL
CTFVR/L2525-6T20-...	6	DTX, DTE, DGG, DGM, DGS, DTR, DTM, DGL

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

External
Internal
Face
Parting
Others

Reference pages: Inserts → F143 - F156, Standard cutting conditions → F157

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

(1)"WF" value is calculated with groove idth "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

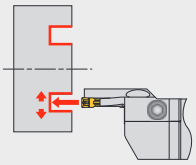
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61

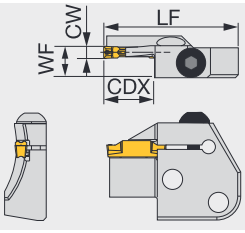
Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

Reference pages: Inserts → F143 - F156, Standard cutting conditions → F157

CAFR/L

Face grooving and turning blade





Insert:
CAFR/
L-3T12-040055:DTF
Seat size 3(2)-6:DTF(3),
DTE, DGG, DTX, DGS,
DGM, DTR, DTM, DGL
Shank:
CHFVR/L, CHSR/L
Right hand (R) shown.

Designation	CW	DAXMIN	DAXX	Seat size	CDX	LF	WF (1)	Torque*
CAFR/L-3T12-040055	3	40	55	3	12	45	10.4	5
CAFR/L-3T12-055075	3	55	75	3	12	45	10.4	5
CAFR/L-3T12-075100	3	75	100	3	12	45	10.4	5
CAFR/L-3T12-100140	3	100	140	3	12	45	10.4	5
CAFR/L-3T12-140200	3	140	200	3	12	45	10.4	5
CAFR/L-4T16-050070	4	50	70	4	16	45	10.5	5
CAFR/L-4T16-070100	4	70	100	4	16	45	10.5	5
CAFR/L-4T16-100150	4	100	150	4	16	45	10.5	5
CAFR/L-4T16-150250	4	150	250	4	16	45	10.5	5
CAFR/L-5T20-055080	5	55	80	5	20	49	10.5	5
CAFR/L-5T20-080120	5	80	120	5	20	49	10.5	5
CAFR/L-5T20-120180	5	120	180	5	20	49	10.5	5
CAFR/L-5T20-180300	5	180	300	5	20	49	10.5	5
CAFR/L-5T20-300000	5	300	∞	5	20	49	10.5	5
CAFR/L-6T25-060090	6	60	90	6	25	55	10.5	5
CAFR/L-6T25-090150	6	90	150	6	25	55	10.5	5
CAFR/L-6T25-150250	6	150	250	6	25	55	10.5	5
CAFR/L-6T25-250400	6	250	400	6	25	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.
Not compatible with TungModularSystem
(1)WF is calculated with the groove width (CW) in the above table.
(2) Not applicable to CAFR/L-3T12-040055
(3) Seat sizes of DTF are only 3 and 4.
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

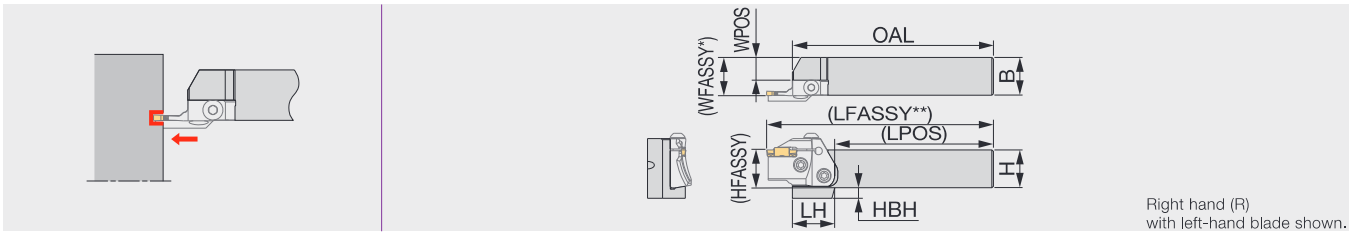
Designation	Clamping screw	Wrench
CAFR/L...	BHM6-20-A	P-4

Insert	Groove width CW	Face grooving Min. machining dia. DAXMIN
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / 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 → F143 - F156, Standard cutting conditions → F157

CHSR/L

Shank for CAER/L & CAFR/L blades



Designation	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Blade (option)
CHSR/L2020	20	20	133	105	35	10	20	12	CAFL/R...
CHSR/L2525	25	25	133	105	28	15	25	7	CAFL/R...
CHSR/L3232	32	32	153	105	28	22	32	-	CAFL/R...

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

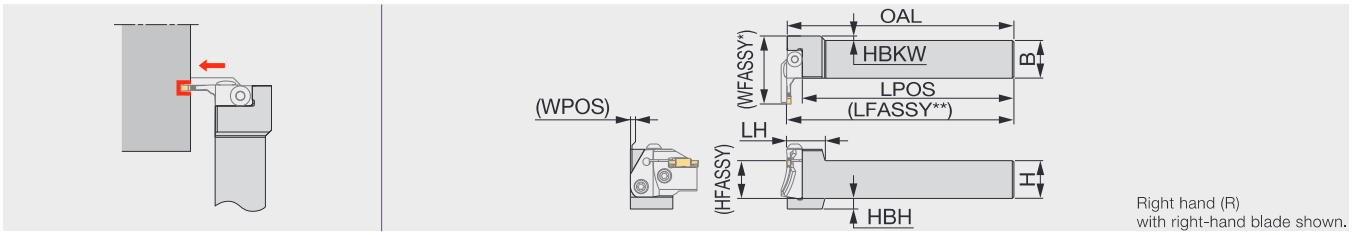
Not compatible with TungModularSystem

SPARE PARTS

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

CHFVR/L

Shank for CAER/L & CAFR/L blades



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

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

Not compatible with TungModularSystem

SPARE PARTS

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

Combination of blade and toolholder

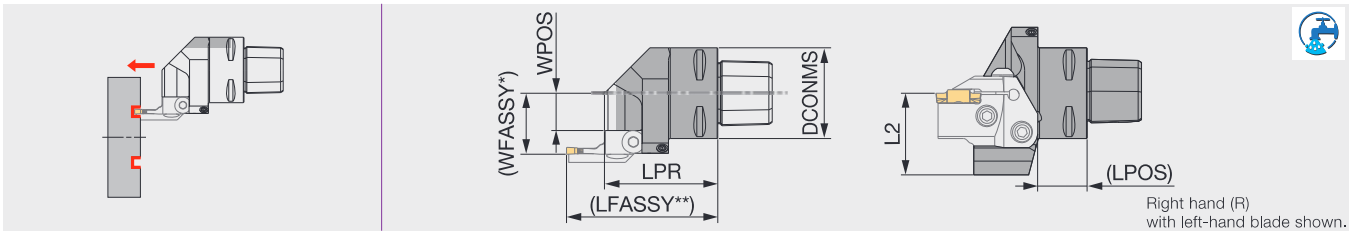
Designation	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

● : Corresponding

Reference pages: Inserts → F143 - F156, Standard cutting conditions → F157

C-CHSR/L

TungCap shank for CAER/L and CAFR/L blades



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

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

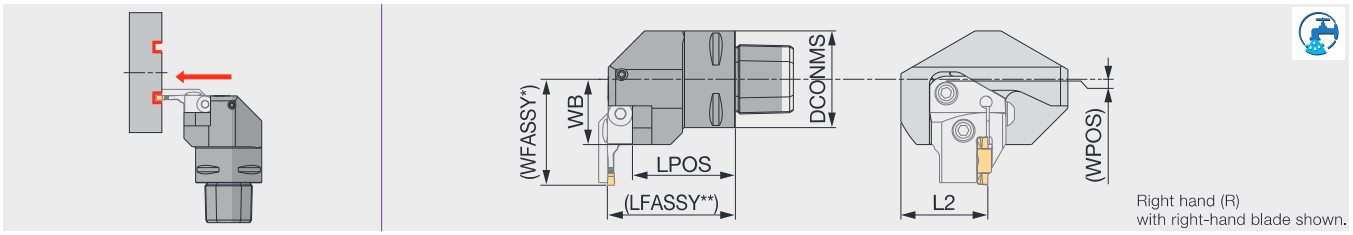
Applicable for 7 MPa coolant.
Not compatible with TungModularSystem

SPARE PARTS

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

C-CHFVR/L

TungCap shank for CAER/L and CAFR/L blades



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

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

Applicable for 7 MPa coolant.
Not compatible with TungModularSystem

SPARE PARTS

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

Combination of blade and toolholder

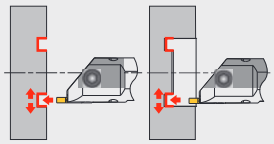
Designation	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

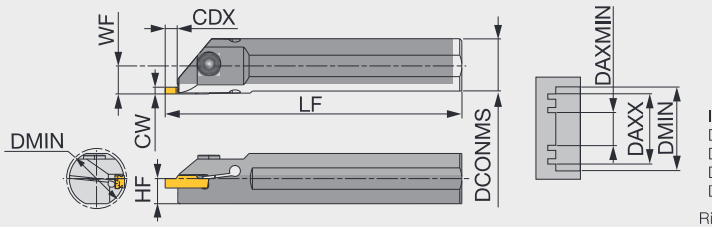
● : Corresponding

Reference pages: Inserts → F143 - F156, Standard cutting conditions → F157

CTIFR/L

External/Internal face grooving and turning toolholder





Insert:
DGM, DGS,
DGG, DTE,
DTF, DTX, DTR,
DTM, SGN, DGL

Right hand (R) shown.

Designation	CW	Seat size	CDX	DCONMS	LF(1)	HF	WF (1)	Torque*
CTIFR/L25-4T05-D270	4	3, 4	5.5	25	200	11.5	13.3	5
CTIFR/L32-4T05-D340	4	3, 4	5.5	32	250	15	16.8	5
CTIFR/L25-5T05-D270	6	5, 6	5.5	25	200	11.5	13.3	5
CTIFR/L32-5T05-D340	6	5, 6	5.5	32	250	15	16.8	5

(1) f is calculated with the groove width W 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

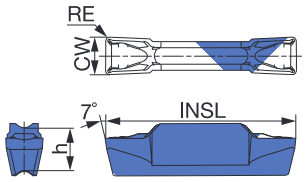
Seat size	Min. machining dia	
	DCONMS = 25 mm	DCONMS = 32 mm
3	26.3	33.3
4	26.8	33.8
5	26.3	33.3
6	26.8	33.8

Seat size	DAXMIN				DAXX
	DGM, DGS, SGN, DGL	DTE, DGG, DTM	DTF, DTX	DTR	
3	92	62	19	44	∞
4	37	42	20	32	∞
5	60	64	20	48	∞
6	57	61	23	48	∞

INSERT

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

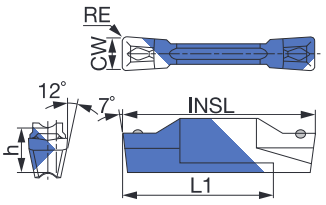
Designation	Seat size	CW±0.05	RE	Coated							Cermet					INSL	h
				T9225	T9125	AH7025	AH725	GH130			NS9530						
DTX3-030	3	3	0.3	●	●	●	●	●			●					20	5
DTX4-040	4	4	0.4	●	●	●	●	●			●					20	5
DTX5-040	5	5	0.4	●	●	●	●	●			●					25	5.5
DTX6-080	6	6	0.8			●	●	●								25	5

●: Line up

Reference pages: Inserts → F143 - F156, Standard cutting conditions → F157

DTF

Face grooving and turning



Right hand (R) shown.

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

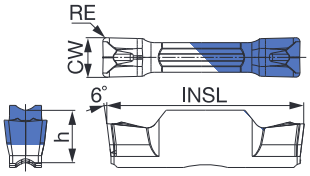
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated										Cermet						INSL	h	L1
					T9225	T9125	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

●: Line up

DTM

External face grooving and turning



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

★ : First choice
☆ : Second choice

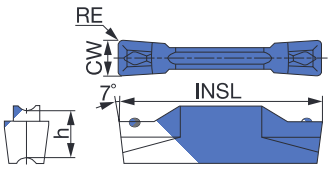
Designation	Seat size	CW±0.05	RE	Coated										INSL	h
				AH7025											
DTM3-030	3	3	0.3	●										20	5
DTM4-040	4	4	0.4	●										20	5
DTM4-080	4	4	0.8	●										20	5
DTM5-080	5	5	0.8	●										25	5.5
DTM6-080	6	6	0.8	●										25	5.5
DTM8-080	8	8	0.8	●										30	6.7

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

DTE

External face grooving and turning (for high precision)



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

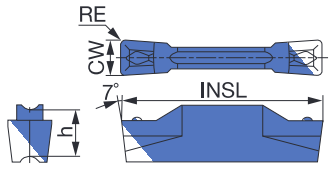
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated						Cermet						INSL	h
				T9225	T9125	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

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

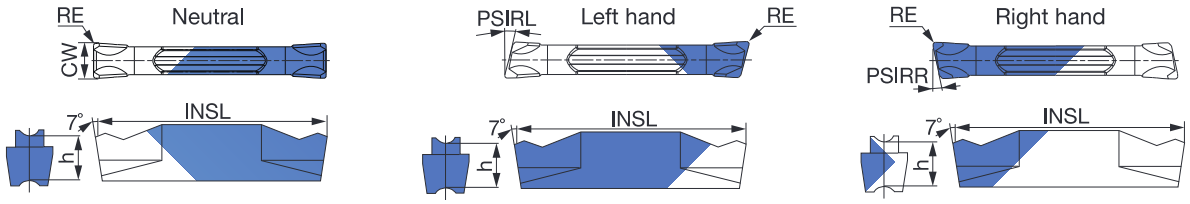
Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	T515	AH7025	AH725	GH130	NS9530							
DTE3-040	3	3	0.4	●	●	●	●	●	●	●						20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●						20	5
DTE5-040	5	5	0.4			●	●									25	5.5
DTE6-080	6	6	0.8			●	●									25	5.5

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

DGM

External grooving and parting, 2 corners



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

★ : First choice
☆ : Second choice

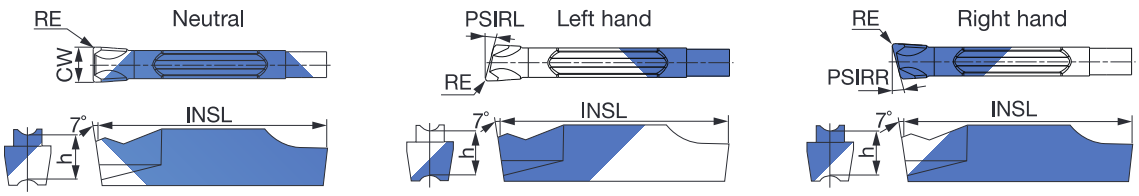
Designation	Seat size	HAND	CW±0.05	RE	Coated							Cermet			INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	AH905	GH130		NS9530						
DGM2-020	2	N	2	0.2	●	●	●	●		●		●			20	5	0°	0°
DGM2-020-6R	2	R	2	0.2			●	●		●					19.8	5	0°	6°
DGM2-020-6L	2	L	2	0.2			●	●		●					19.8	5	6°	0°
DGM2-020-8R	2	R	2	0.2			●	●		●					19.8	5	0°	8°
DGM2-020-8L	2	L	2	0.2			●	●		●					19.8	5	8	0°
DGM2-020-15R	2	R	2	0.2			●	●		●					19.8	5	0°	15°
DGM2-020-15L	2	L	2	0.2			●	●		●					19.8	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°
DGM3-020	3	N	3	0.2	●	●	●	●	●	●		●			20	5	0°	0°
DGM3-020-6R	3	R	3	0.2			●	●		●					19.9	5	0°	6°
DGM3-020-6L	3	L	3	0.2			●	●		●					19.9	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			●	●		●					19.9	5	0°	15°
DGM3-020-15L	3	L	3	0.2			●	●		●					19.9	5	15°	0°
DGM4-030	4	N	4	0.3	●	●	●	●	●	●		●			20	5	0°	0°
DGM4-030-4R	4	R	4	0.3			●	●		●					19.8	5	0°	4°
DGM4-030-4L	4	L	4	0.3			●	●		●					19.8	5	4°	0°
DGM4-030-15R	4	R	4	0.3			●	●		●					19.8	5	0°	15°
DGM4-030-15L	4	L	4	0.3			●	●		●					19.8	5	15°	0°
DGM5-030	5	N	5	0.3	●	●	●	●	●	●		●			25	5.5	0°	0°
DGM5-030-4R	5	R	5	0.3			●	●		●					24.9	5.5	0°	4°
DGM6-030	6	N	6	0.3	●	●	●	●	●	●					25	5.5	0°	0°
DGM8-040	8	N	8	0.4	●	●	●	●		●					30	6.7	0°	0°

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

SGM

External deep grooving and parting, 1 corner



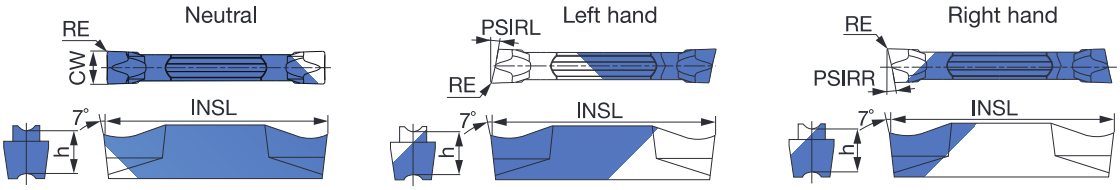
P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated			INSL	h	PSIRL	PSIRR
					AH7025	AH725	GH130				
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

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157



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				INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	GH130		NS9530							
DGS1.4-016	1	N	1.4	0.16			●	●	●						16	4.3	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●		●				20	5	0°	0°
DGS2-020-6R	2	R	2	0.2			●	●	●						19.95	5	0°	6°
DGS2-020-6L	2	L	2	0.2			●	●	●						19.95	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			●	●	●						19.95	5	0°	15°
DGS2-020-15L	2	L	2	0.2			●	●	●						19.95	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°
DGS3-020	3	N	3	0.2	●	●	●	●	●		●				20	5	0°	0°
DGS3-020-6R	3	R	3	0.2			●	●	●						19.9	5	0°	6°
DGS3-020-6L	3	L	3	0.2			●	●	●						19.9	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			●	●	●						19.9	5	0°	15°
DGS3-020-15L	3	L	3	0.2			●	●	●						19.9	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°
DGS4-030	4	N	4	0.3	●	●	●	●	●		●				20	5	0°	0°
DGS4-030-4R	4	R	4	0.3			●	●	●						19.8	5	0°	4°
DGS4-030-4L	4	L	4	0.3			●	●	●						19.85	5	4°	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°

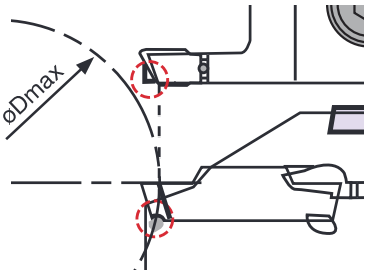
●: Line up

Caution

The tool will interfere with the workpiece when grooving

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

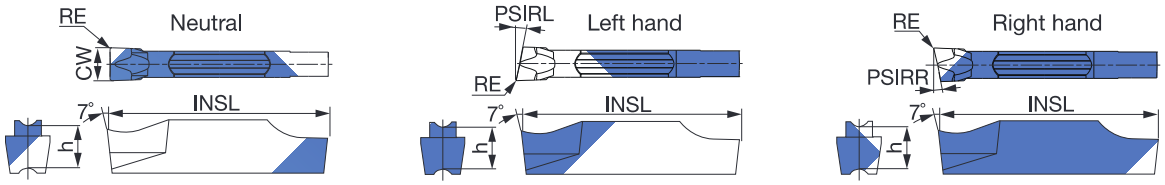
Designation	øDmax (mm)
DGS2-002-15R/L	28
DGS3-002-15R/L	29
SGS3-020-15R/L	103
SGS3-002-15R/L	34



Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

SGS

External deep grooving and parting, 1 corner



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

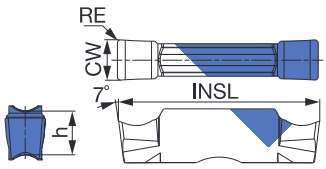
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated AH7025	Coated AH725	Coated GH130	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°

●: Line up

DGG

External grooving (for high precision)



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

★ : First choice
☆ : Second choice

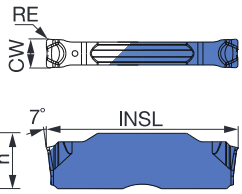
Designation	Seat size	CW±0.02	RE	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL	h
DGG200-020	2	2	0.2	●	●	●	20	5
DGG300-020	3	3	0.2	●	●	●	20	5
DGG400-040	4	4	0.4	●	●	●	20	5
DGG500-040	5	5	0.4	●	●	●	25	5.5
DGG600-040	6	6	0.4	●	●	●	25	5.5

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

DGL

External grooving and parting



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

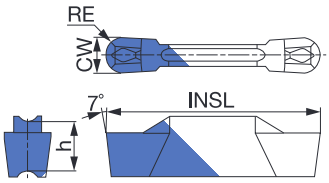
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated	INSL	h
				AH7025		
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

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

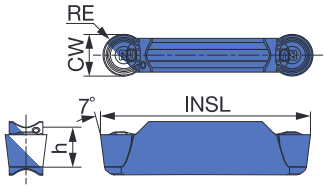
Designation	Seat size	CW±0.02	RE	Coated					Cermet		INSL	h
				T9225	T9125	AH7025	AH725	GH130	NS9530			
DTR300-150	3	3	1.5	●	●	●	●	●	●		20	5
DTR400-200	4	4	2	●	●	●	●	●	●		20	5
DTR478-239	5	4.78	2.39	●	●	●	●	●	●		25	5.5
DTR500-250	5	5	2.5	●	●	●	●	●	●		25	5.5
DTR600-300	6	6	3	●	●	●	●	●			25	5.5

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

DTR

Profiling and undercutting



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

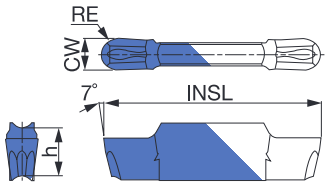
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated							Cermet				INSL	h
				T9225	T9125	AH7025	AH725	AH905	GH130		NS9530					
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

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

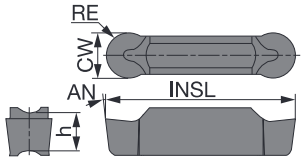
Designation	Seat size	CW±0.02	RE	Coated											INSL	h
				AH7025	AH725	GH130										
DTIU300-150	3	3	1.5	●	●	●									20	5
DTIU400-200	4	4	2	●	●	●									20	5
DTIU500-250	5	5	2.5	●	●	●									25	5.5
DTIU600-300	6	6	3	●	●	●									25	5.5

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

DTA

Aluminium wheel machining (for high precision)



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

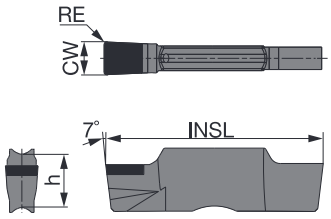
★ : First choice
☆ : Second choice

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

●: Line up

SGN

External grooving of hardened steel



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

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025	RE	CBN	INSL	h
				BX360		
SGN200-020	2	2	0.2	●	20	5
SGN300-020	3	3	0.2	●	20	5
SGN400-020	4	4	0.2	●	20	5

●: Line up

Reference pages: Toolholders → F137 - F143, Standard cutting conditions → F157

Face grooving and turning

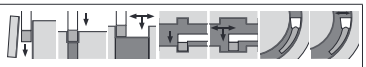
DTX type (2 corners)

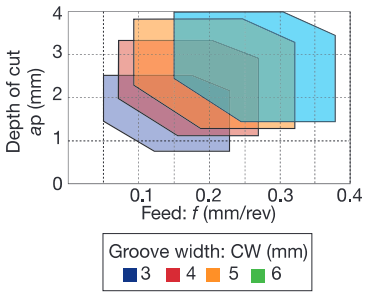
F143 page

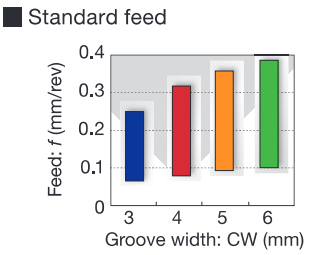
Multi-functional type

Well balanced sharpness and strength
Molded and ground insert available
Insert

CW = 3 - 6 mm







DTF type (2 corners)

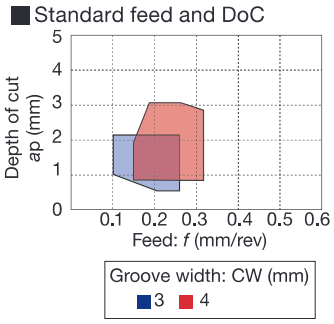
First choice

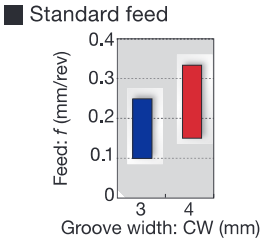
F144 page

1st choice for face grooving

Unique chipbreaker makes chips shorter
Molded and ground insert available

CW = 3 - 4 mm



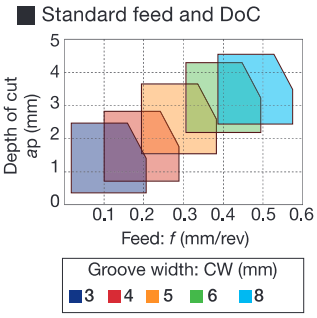


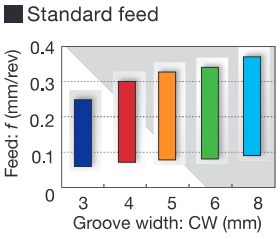
DTM type (2 corners)

F144 page

For general purpose

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





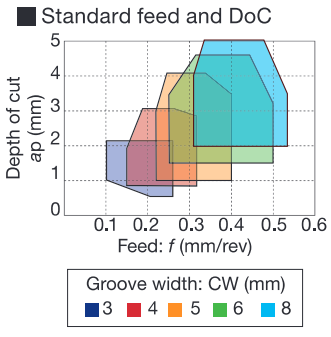
DTE type (2 corners)

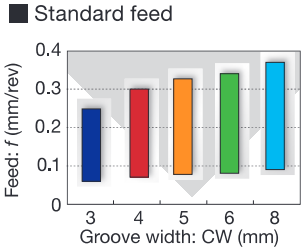
F145 page

For general purpose

Unique chipbreaker makes chips shorter
Molded and ground inserts available

CW = 3 - 8 mm





Grooving

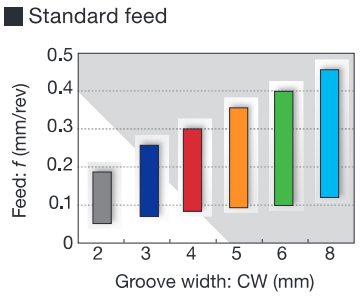
DGM type (2 corners) SGM type (1 corner)

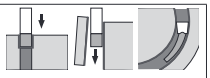
F146, F147

1st choice for external grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available

CW = 2 - 8 mm





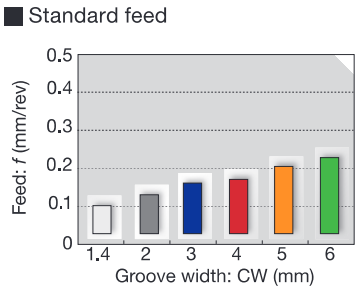
DGS type (2 corners) SGS type (1 corner)

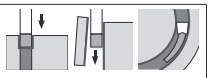
F148, F149

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
Handed insert available

CW = 1.4 - 6 mm



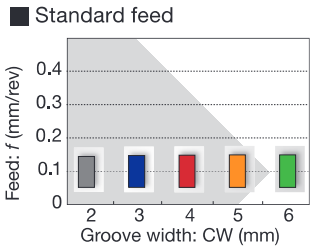


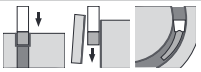
DGG type (2 corners)

F149

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish



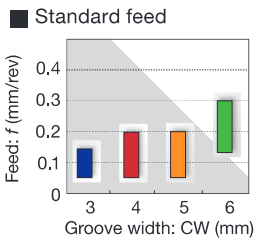


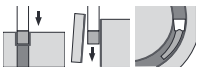
DGL type (2 corners)

F150

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Chipbreaker
Suitable for mild steel that often gives difficulties in chip control





Profiling and undercutting

DTR type (2 corners)

Molded

Ground

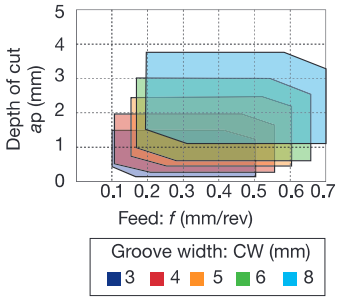
F150, F151 page

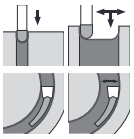
Full radius type

Excellent chip control
Molded and ground inserts available

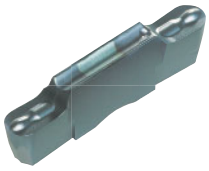
CW = 3 - 8 mm

Standard feed and DoC





DTIU type (2 corners)



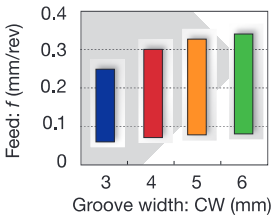
F151 page

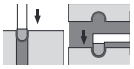
Full radius type

Excellent chip control

CW = 3 - 6 mm

Standard feed and DoC





Aluminium wheel machining

DTA type (2 corners)

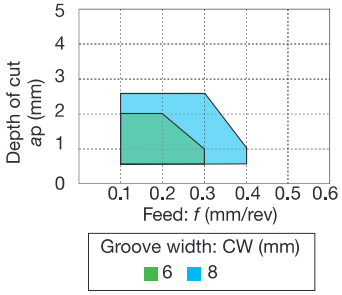
F152 page

Full radius type

Excellent chip control
For aluminium wheel profiling
Ground insert

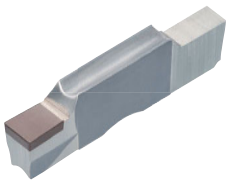
CW = 6 - 8 mm

Standard feed and DoC



External grooving of hardened steel

SGN-CBN type (1 corner)



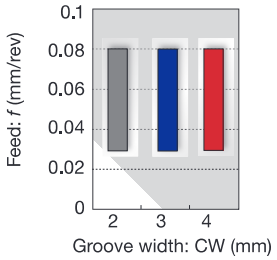
F152 page

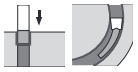
For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing

CW = 2 - 4 mm
(Tolerance: ±0.025 mm)

Standard feed





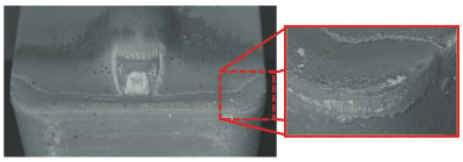
AH7025 Cutting performance

First choice grade for grooving application
New AH7025 grade - Drastically improved reliability with world's first coating technology

Tool life comparison in grooving

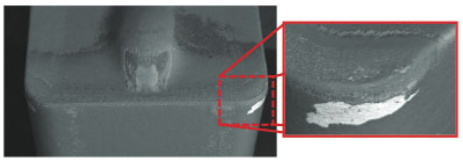
Alloy steel (SCM440) **P**

AH7025



No. of grooving: 60 pcs

Conventional grade



No. of grooving: 30 pcs

Insert : DTE3-040 AH7025
Cutting speed : *Vc* = 150 m/min
Feed : *f* = 0.17 mm/rev
Groove depth : 17 mm
Machining : External grooving
Coolant : Wet

Allows stable machining without peeling off, evenafter twice the cutting time versus the conventional grade.
→ The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations

Grade

AH7025 P M K S

- First recommended grade for general purpose
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- General purpose
- Newly developed coating with well controlled rystal structure and fracture resistance
- Improved adhesion strength

T515 K

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

T9225 P

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

T9125 P

- Suitable for steel machining at high speed
- Balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting
- 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

AH905 S

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

KS05F N S

- Recommended for non-ferrous materials
- For titanium

TH10 N

- Recommended for non-ferrous materials

BX360 H

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

STANDARD CUTTING CONDITIONS

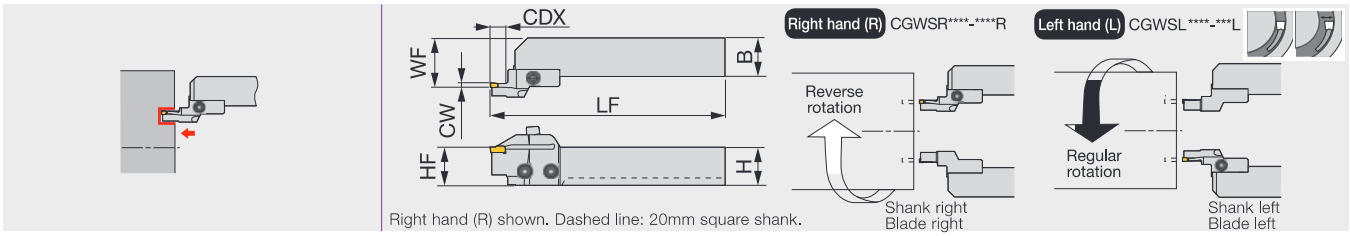
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (m/min)
P	Steels S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225	80 - 300
		< 300 HB	Wear resistance	T9125	80 - 200
		< 300 HB	Fracture resistance	GH130	50 - 120
		< 300 HB	Suface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Fracture resistance	GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515, AH7025	50 - 180
		-	Fracture resistance	GH130	50 - 180
	Ductile cast irons FCD450, etc. 450-10S, etc.	-	First choice	T515, AH7025	50 - 120
		-	Fracture resistance	GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Grey cast iron FC250, etc. 250, etc.	< HRC 40	First choice	AH7025	20 - 60
		< HRC 40	Wear resistance	AH905	20 - 80
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	20 - 80
		< HRC 40	Fracture resistance	AH7025, AH725	20 - 80
		< HRC 40	Suface quality	KS05F	20 - 60
H	Hardened steels SCM435, etc. SUJ2, etc.	> HRC 50	First choice	BX360	80 - 150

*Please see the page F153 - F155 for feed: *f* (mm/rev).

MY-T SERIES

#S/D##R/L+CGWSR/L

Blade for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)



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

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 blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set. Please check the stock and place an order with the designation of a set or a shank+a blade.
Note: Use right-hand blades (CGWSR~) with right-hand shanks ~(R); and left-hand blades (CGWSL~) with left-hand shanks (~L).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

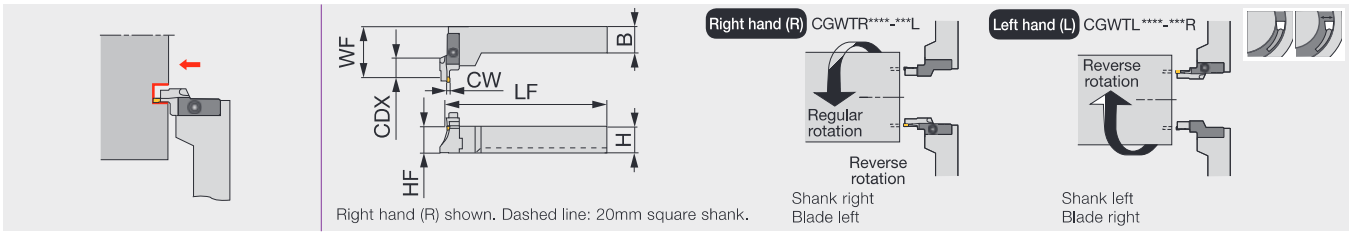
Designation	Clamping screw	Blade screw	Wrench
30S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

Reference pages: Inserts → F161 - F165, Standard cutting conditions → F165

MY-T SERIES

#S/D##R/L+CGWTR/L

Blade for face grooving and turning toolholders (CGWSR/L-#S/D, CGWTR/L-#S/D)



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

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 blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Use right-hand shanks (CGWTR~) with left-hand blades (~L); and left-hand shanks (CGWTL~) with right-hand blades (~R).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

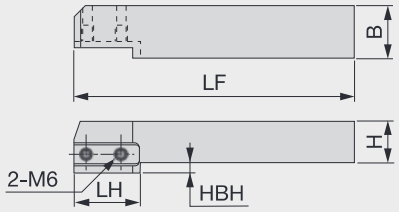
Designation	Clamping screw	Blade screw	Wrench
30S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

Reference pages: Inserts → F161 - F165, Standard cutting conditions → F165

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	-	-

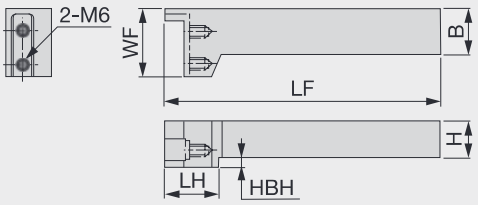
SPARE PARTS

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

MY-T SERIES

CGWTR/L

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



Right hand (R) shown.

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

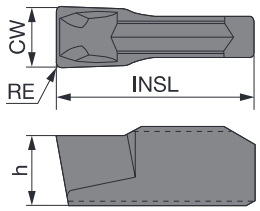
SPARE PARTS

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

Reference pages: Inserts → F161 - F165, Standard cutting conditions → F165

GE

For general grooving



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

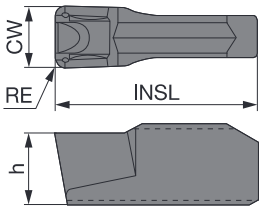
★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	AH120	GH730		NS9530						
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 turning



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

★ : First choice
☆ : Second choice

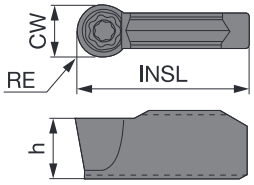
Designation	CW$^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	AH120	GH730		NS9530						
GT30	3	0.4			●	●		●					10	3.5
GT40	4	0.4			●	●		●					10	4
GT50	5	0.4	●	●	●	●		●					12	4.5

●: Line up

Reference pages: Toolholders → F158 - F160, Standard cutting conditions → F165

GR

For profiling (full radius)



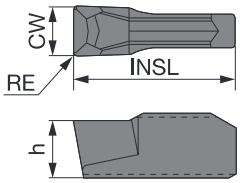
P	Steel	★	☆	★	★			★		
M	Stainless	★		★	★					
K	Cast iron	☆		★	☆			☆		
N	Non-ferrous									
S	Superalloys			☆						
H	Hard materials									

★ : First choice
☆ : Second choice

Designation	CW$^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	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



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

★ : First choice
☆ : Second choice

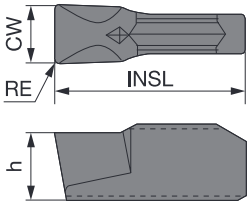
Designation	CW$^{+0.1}_{0}$	RE	Coated			Cermet						INSL	h
			GH730			NS9530							
GF30	3	0.2	●			●						10	3.5
GF40	4	0.2	●			●						10	4
GF50	5	0.2	●			●						12	4.5

●: Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F158 - F160, Standard cutting conditions → F165

GN



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

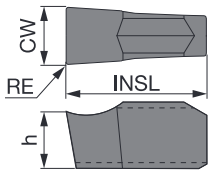
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated GH730	INSL	h
GN30	3	0.2	●	10	3.5
GN40	4	0.2	●	10	4
GN50	5	0.2	●	12	4.5

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

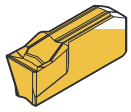
●: Line up

Reference pages: Toolholders → F158 - F160, Standard cutting conditions → F165

1 corner insert

Face grooving

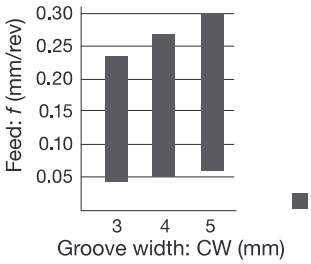
GF

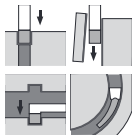


F162 page

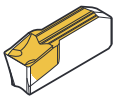
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 3 - 5 mm





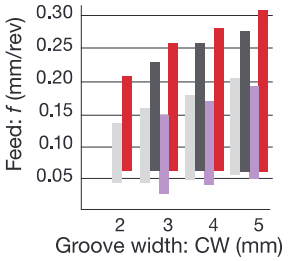
GE

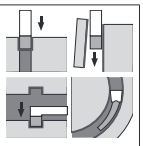


F161 page

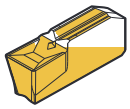
1st choice for external grooving and parting
Excellent chip control for grooving

CW = 2 - 5 mm





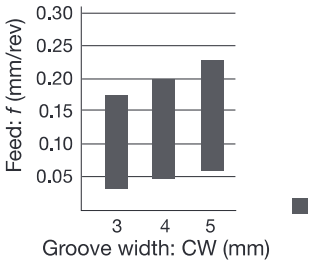
GN

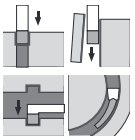


F163 page

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

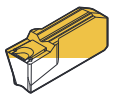
CW = 3 - 5 mm





External grooving and turning

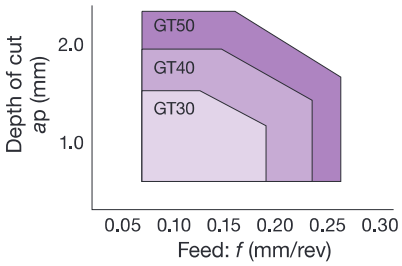
GT

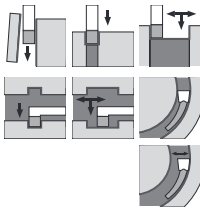


F161 page

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

CW = 3 - 5 mm





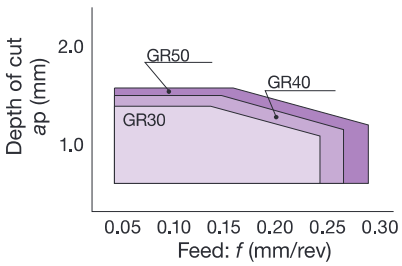
For profiling

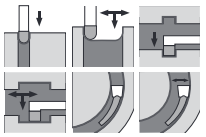
GR

F162 page

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

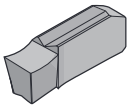
CW = 3 - 5 mm





For aluminium and non-ferrous metal

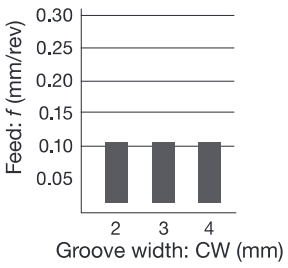
GE-AL

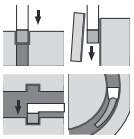


F163 page

Reduce cutting force and welding due to sharp chipbreaker

CW = 2 - 4 mm





STANDARD CUTTING CONDITIONS

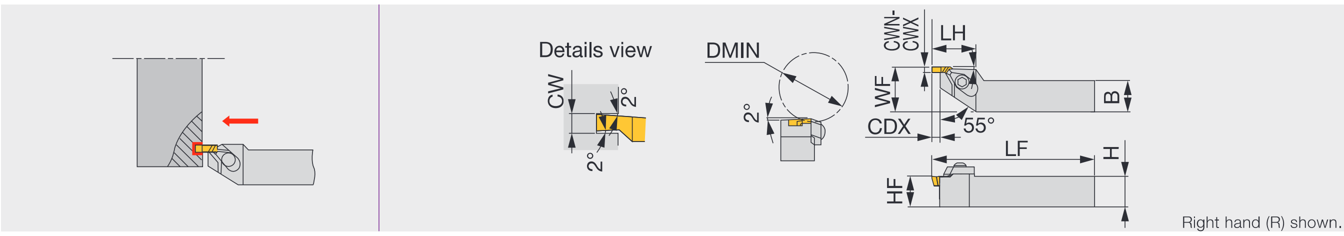
ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)
P	Low carbon steel (~ HB150)	T9225	80 - 300
		T9225	80 - 200
		NS9530	100 - 200
		GH730	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		NS9530	80 - 180
		GH730	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80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

1st choice for face grooving

Operation	Feed: *f* (mm/rev) Groove width 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**)	Depth of cut *ap* = 0.5 - 1.5 *f* = 0.06 - 0.2	Depth of cut *ap* = 0.5 - 2 *f* = 0.06 - 0.25	Depth of cut *ap* = 0.5 - 2.5 *f* = 0.06 - 0.27
Traversing (GR**)	Depth of cut *ap* = 0.5 - 1.4 *f* = 0.05 - 0.25	Depth of cut *ap* = 0.5 - 1.5 *f* = 0.05 - 0.26	Depth of cut *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, F091 page
When vibration occurs in turning, please use the lower limit value in the above table.

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

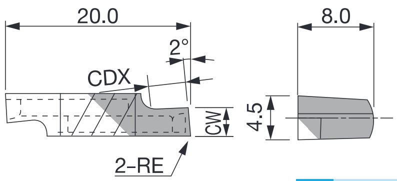
Use right-hand toolholders (GX-...RF) with left-hand inserts (XNL); and left-hand toolholders (GX-...LF)) with right-hand inserts (XNR).
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamp set	Clamping screw	Shim	Shim screw	Wrench
GX-2525RF	CP81A	RT-1	SL-3R	BHM4-8	P-4
GX-2525LF	CP81A	RT-1	SL-3L	BHM4-8	P-4

INSERT

XNR/L



Left hand (L) shown.

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

★ : First choice
☆ : Second choice

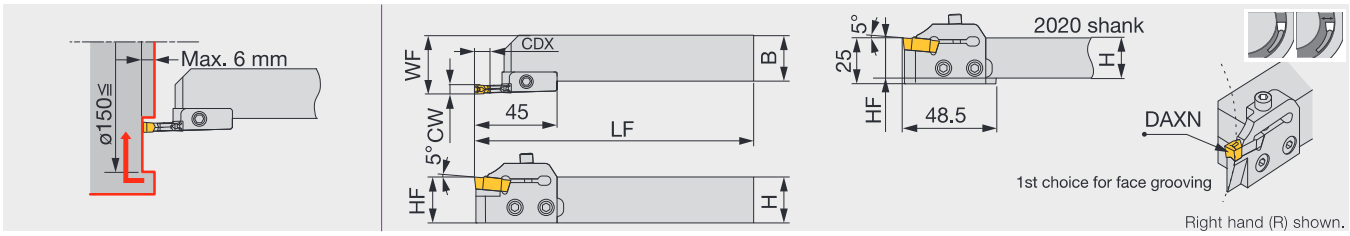
Designation	HAND	CW±0.05	RE	Cermet NS9530	Carbide TH10	CDX
XNR6310-02	R	1	0.2	●	●	1.5
XNL6310-02	L	1	0.2	●	●	1.5
XNR6315-02	R	1.5	0.2	●	●	2.3
XNL6315-02	L	1.5	0.2	●	●	2.3
XNR6320-02	R	2	0.2	●	●	3
XNL6320-02	L	2	0.2	●	●	3
XNR6325-02	R	2.5	0.2	●	●	3.8
XNL6325-02	L	2.5	0.2	●	●	3.8
XNR6330-02	R	3	0.2	●	●	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



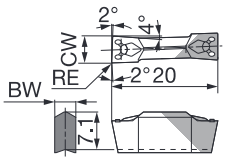
Designation	CW	DAXN	CDX	H	B	LF	HF	WF	Insert	Shank	Blade	Torque*
CGWSR/L2020-FLR/L5TP	5	150	6	20	20	152	20	27	FLEX50R/L	CGWSR/L2020	FLR/L5TP	5
CGWSR/L2525-FLR/L5TP	5	150	6	25	25	152	25	32	FLEX50R/L	CGWSR/L2525	FLR/L5TP	5

Toolholders are in stock with the designations of: a set of shank and blade; a shank; a blade. Combining the designations of a blade and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a blade.
Note: Use right-hand blades (CCWSR...) with right-hand shanks (FLR5TP); and left-hand blades (CGWSL...) with left-hand shanks (FLL5TP).
*Torque: Recommended clamping torque (N·m)

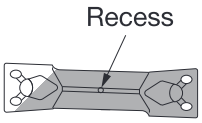
SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-FLR/L5TP	CHHM5-18	CSHB-6	P-4

INSERT
FLEX(R/L)



Right hand (R) shown.



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

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			Carbide		Uncoated				BW
				T9225	T9125		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
		T9125	80 - 200	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 deep grooving and parting blade

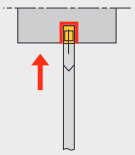


Fig.1

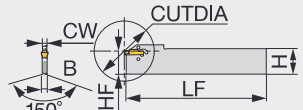
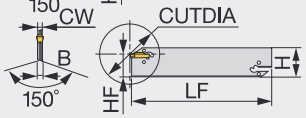


Fig.2



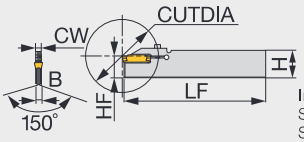


Fig.3

Insert:
Seat size 1:DGS1.4-016
Seat size 2-6:SGM, SGS, DGM, DGS, DTX, DGG
Seat size 8:DGM8-040

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.
• CUTDIA Max. parting dia
*Torque: Recommended clamping torque (N·m)
Wrench (CRW...) is not included. Please order it separately.

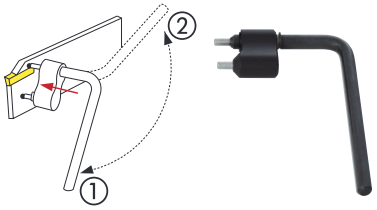
SPARE PARTS

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.

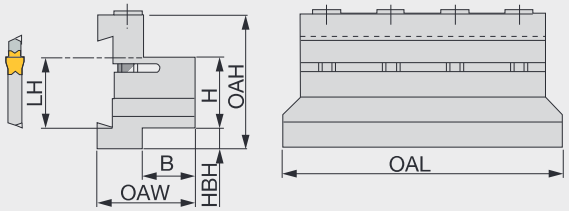


①→②: unclamp
②→①: clamp

Reference pages: Inserts → F170 - F182, Standard cutting conditions → F183
Tool block → F169, K030

TUNGCUT
CTBF

Tool block for CGP blades (fixed clamp)



Right hand (R) shown.

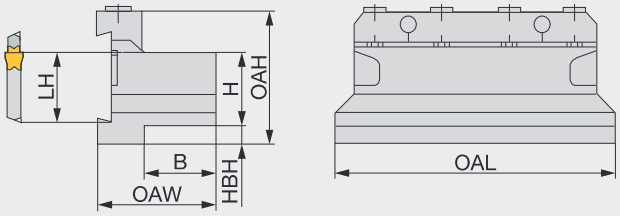
Designation	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)
CTBF25-45	25	22	110	38.1	25	66	40	CGP45...
CTBF32-45	32	28	120	38.1	18	66	45	CGP45...

SPARE PARTS

Designation	Clamping screw	Wrench
CTBF...	CM6X1.0X40-A	P-5

TUNGCUT
CTBU

Tool block for CGP and EGP blades



Right hand (R) shown.

Designation	H	B	OAL	LH	HBH	OAH	OAW	Blade (Optional)
CTBU20-26	20	21	86	21.4	9	43	38	CGP26...
CTBU25-26	25	23	110	21.4	5	45	43	CGP26...
CTBU20-32	20	19	100	24.8	13	50	38	CGP32...
CTBU25-32	25	23	110	24.8	8	50	42	CGP32...
CTBU32-32	32	29	110	24.8	5	54	48	CGP32...

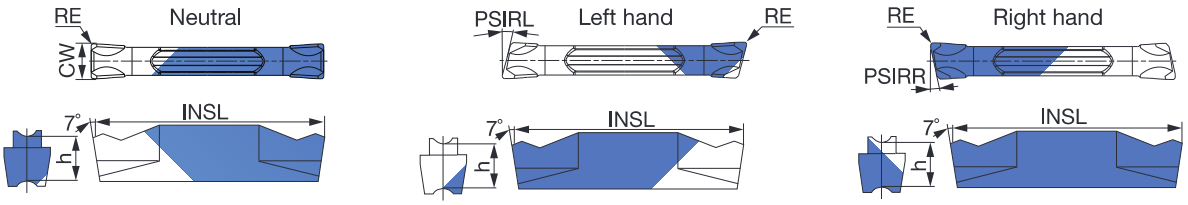
SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU20-26	CT-86	CM6X30-S	P-5
CTBU25-26	CT-105	CM6X30-S	P-5
CTBU20-32	CT-100	CM6X30-S	P-5
CTBU25-32	CT-110	CM6X30-S	P-5
CTBU32-32	CT-110	CM6X30-S	P-5

Reference pages: Blade → F168

DGM

External grooving and parting, 2 corners



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

★ : First choice
☆ : Second choice

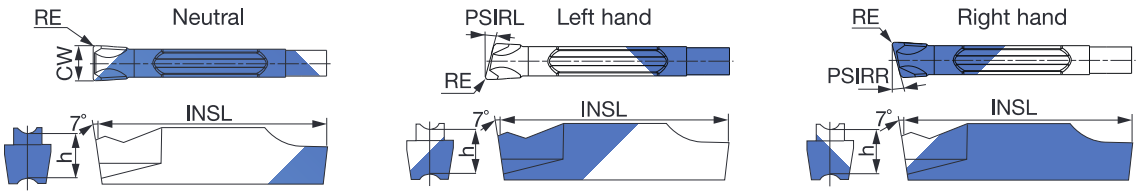
Designation	Seat size	HAND	CW±0.05	RE	Coated							Cermet				INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	AH905	GH130		NS9530							
DGM2-020	2	N	2	0.2	●	●	●	●		●		●				20	5	0°	0°
DGM2-020-6R	2	R	2	0.2			●	●		●						19.8	5	0°	6°
DGM2-020-6L	2	L	2	0.2			●	●		●						19.8	5	6°	0°
DGM2-020-8R	2	R	2	0.2			●	●		●						19.8	5	0°	8°
DGM2-020-8L	2	L	2	0.2			●	●		●						19.8	5	8	0°
DGM2-020-15R	2	R	2	0.2			●	●		●						19.8	5	0°	15°
DGM2-020-15L	2	L	2	0.2			●	●		●						19.8	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°
DGM3-020	3	N	3	0.2	●	●	●	●	●	●		●				20	5	0°	0°
DGM3-020-6R	3	R	3	0.2			●	●		●						19.9	5	0°	6°
DGM3-020-6L	3	L	3	0.2			●	●		●						19.9	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			●	●		●						19.9	5	0°	15°
DGM3-020-15L	3	L	3	0.2			●	●		●						19.9	5	15°	0°
DGM4-030	4	N	4	0.3	●	●	●	●	●	●		●				20	5	0°	0°
DGM4-030-4R	4	R	4	0.3			●	●		●						19.8	5	0°	4°
DGM4-030-4L	4	L	4	0.3			●	●		●						19.8	5	4°	0°
DGM4-030-15R	4	R	4	0.3			●	●		●						19.8	5	0°	15°
DGM4-030-15L	4	L	4	0.3			●	●		●						19.8	5	15°	0°
DGM5-030	5	N	5	0.3	●	●	●	●	●	●		●				25	5.5	0°	0°
DGM5-030-4R	5	R	5	0.3			●	●		●						24.9	5.5	0°	4°
DGM6-030	6	N	6	0.3	●	●	●	●	●	●						25	5.5	0°	0°
DGM8-040	8	N	8	0.4	●	●	●	●		●						30	6.7	0°	0°

●: Line up

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

SGM

External deep grooving and parting, 1 corner



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

★ : First choice
☆ : Second choice

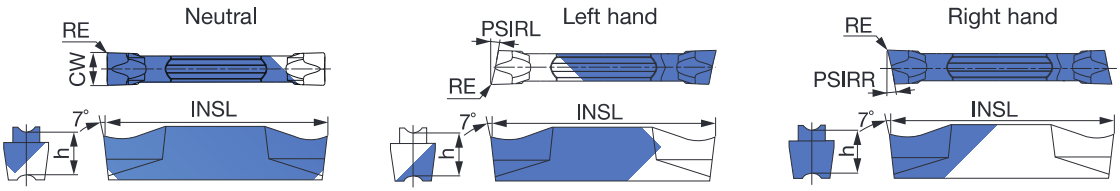
Designation	Seat size	HAND	CW±0.05	RE	Coated			INSL	h	PSIRL	PSIRR
					AH7025	AH725	GH130				
SGM2-020	2	N	2	0.2	●	●	●	20	5	0°	0°
SGM2-020-6R	2	R	2	0.2	●	●	●	20	5	0°	6°
SGM2-020-6L	2	L	2	0.2	●	●	●	20	5	6°	0°
SGM3-020	3	N	3	0.2	●	●	●	20	5	0°	0°
SGM3-020-6R	3	R	3	0.2	●	●	●	20	5	0°	6°
SGM3-020-6L	3	L	3	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

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

DGS

External grooving and parting, 2 corners



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

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05	RE	Coated						Cermet				INSL	h	PSIRL	PSIRR
					T9225	T9125	AH7025	AH725	GH130		NS9530							
DGS1.4-016	1	N	1.4	0.16			●	●	●						16	4.3	0°	0°
DGS2-020	2	N	2	0.2	●	●	●	●	●		●				20	5	0°	0°
DGS2-020-6R	2	R	2	0.2			●	●	●						19.95	5	0°	6°
DGS2-020-6L	2	L	2	0.2			●	●	●						19.95	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			●	●	●						19.95	5	0°	15°
DGS2-020-15L	2	L	2	0.2			●	●	●						19.95	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°
DGS3-020	3	N	3	0.2	●	●	●	●	●		●				20	5	0°	0°
DGS3-020-6R	3	R	3	0.2			●	●	●						19.9	5	0°	6°
DGS3-020-6L	3	L	3	0.2			●	●	●						19.9	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			●	●	●						19.9	5	0°	15°
DGS3-020-15L	3	L	3	0.2			●	●	●						19.9	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°
DGS4-030	4	N	4	0.3	●	●	●	●	●		●				20	5	0°	0°
DGS4-030-4R	4	R	4	0.3			●	●	●						19.8	5	0°	4°
DGS4-030-4L	4	L	4	0.3			●	●	●						19.85	5	4°	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°

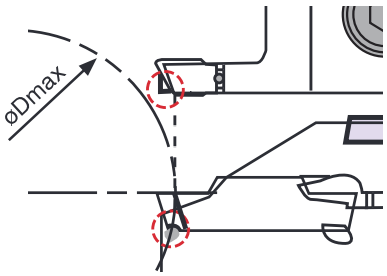
●: Line up

Caution

The tool will interfere with the workpiece when grooving

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

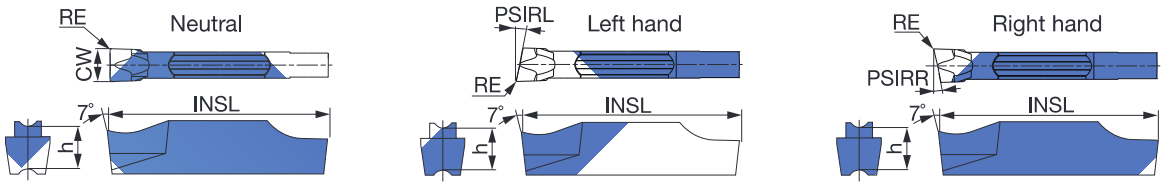
Designation	øDmax (mm)
DGS2-002-15R/L	28
DGS3-002-15R/L	29
SGS3-020-15R/L	103
SGS3-002-15R/L	34



Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

SGS

External deep grooving and parting, 1 corner



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 AH7025	Coated AH725	Coated GH130	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°

●: Line up

DGG

External face grooving (for high precision)

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

★ : First choice
☆ : Second choice

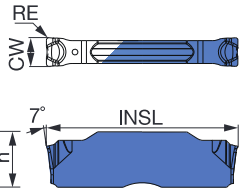
Designation	Seat size	CW±0.02	RE	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL	h
DGG200-020	2	2	0.2	●	●	●	20	5
DGG300-020	3	3	0.2	●	●	●	20	5
DGG400-040	4	4	0.4	●	●	●	20	5
DGG500-040	5	5	0.4	●	●	●	25	5.5
DGG600-040	6	6	0.4	●	●	●	25	5.5

●: Line up

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

DGL

External grooving and parting



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

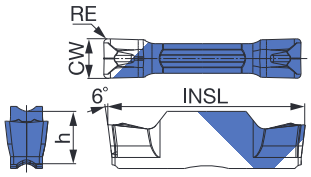
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated AH7025	INSL	h
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

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

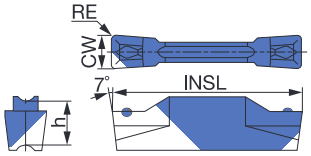
Designation	Seat size	CW±0.05	RE	Coated AH7025	INSL	h
DTM3-030	3	3	0.3	●	20	5
DTM4-040	4	4	0.4	●	20	5
DTM4-080	4	4	0.8	●	20	5
DTM5-080	5	5	0.8	●	25	5.5
DTM6-080	6	6	0.8	●	25	5.5
DTM8-080	8	8	0.8	●	30	6.7

●: Line up

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

DTE

External face grooving and turning (for high precision)



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

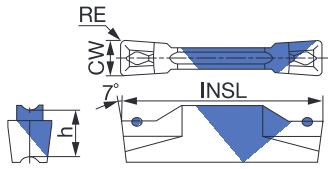
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated						Cermet						INSL	h
				T9225	T9125	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

DTE

External face grooving and turning



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

★ : First choice
☆ : Second choice

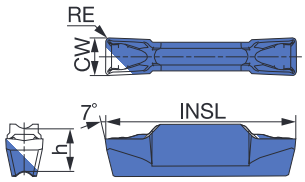
Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	T515	AH7025	AH725	GH130	NS9530							
DTE3-040	3	3	0.4	●	●	●	●	●	●	●						20	5
DTE4-040	4	4	0.4	●	●	●	●	●	●	●						20	5
DTE5-040	5	5	0.4			●	●									25	5.5
DTE6-080	6	6	0.8			●	●									25	5.5

●: Line up

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

DTX

External/Internal face grooving and turning



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

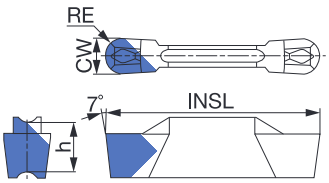
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated						Cermet						INSL	h
				T9225	T9125	AH7025	AH725	GH130		NS9530							
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

●: 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	T9125	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

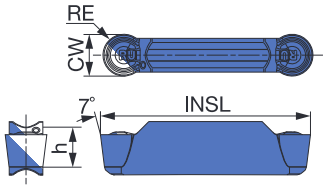
●: Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

DTR

Profiling and undercutting



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

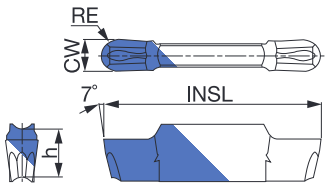
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05	RE	Coated							Cermet				INSL	h
				T9225	T9125	AH7025	AH725	AH905	GH130		NS9530					
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

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

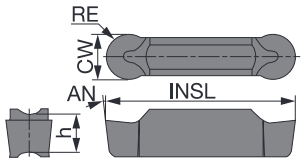
Designation	Seat size	CW±0.02	RE	Coated											INSL	h
				AH7025	AH725	GH130										
DTIU300-150	3	3	1.5	●	●	●									20	5
DTIU400-200	4	4	2	●	●	●									20	5
DTIU500-250	5	5	2.5	●	●	●									25	5.5
DTIU600-300	6	6	3	●	●	●									25	5.5

●: Line up

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

DTA

Aluminium wheel machining (for high precision)



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

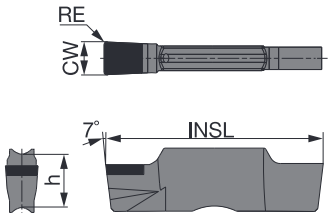
★ : First choice
☆ : Second choice

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

●: Line up

SGN

External grooving of hardened steel



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

★ : First choice
☆ : Second choice

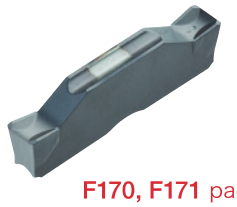
Designation	Seat size	CW±0.025	RE	CBN	INSL	h
				BX360		
SGN200-020	2	2	0.2	●	20	5
SGN300-020	3	3	0.2	●	20	5
SGN400-020	4	4	0.2	●	20	5

●: Line up

Reference pages: Toolholders → F168 - F169, Standard cutting conditions → F183

External grooving and parting

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

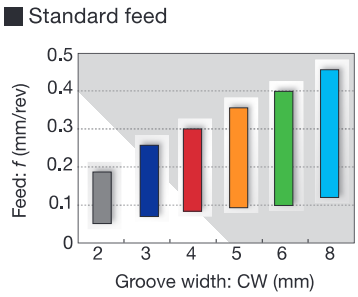


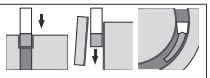
F170, F171 page

1st choice for external grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available

CW = 2 - 8 mm





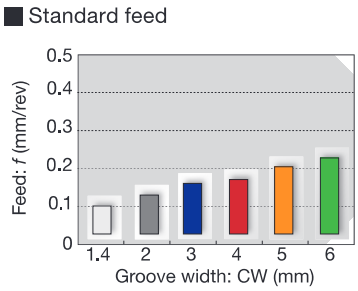
DGS type (2 corners) SGS type (1 corner)

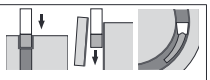
F172, F173 page

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available

CW = 1.4 - 6 mm



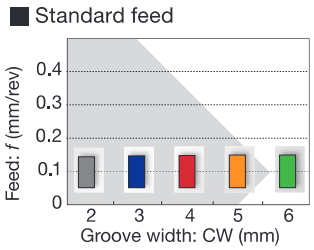


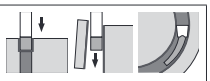
DGG type (2 corners)

F173 page

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish



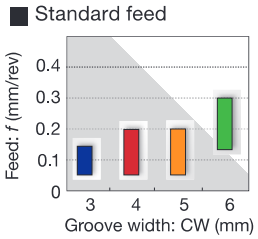


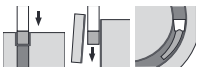
DGL type (2 corners)

F174 page

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel that often gives difficulties in chip control



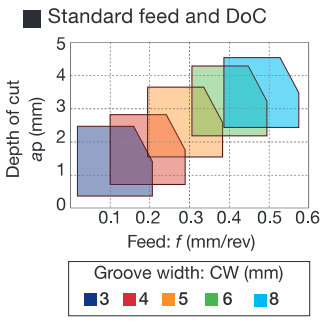


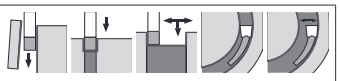
DTM type (2 corners)

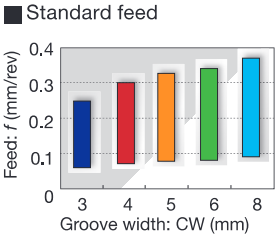
F174 page

For general purpose

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







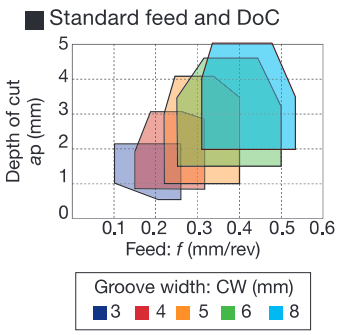
DTE type (2 corners)

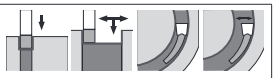
F175 page

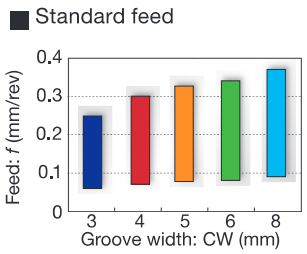
For general purpose

Unique chipbreaker makes chips shorter
Molded and ground inserts available

CW = 3 - 8 mm







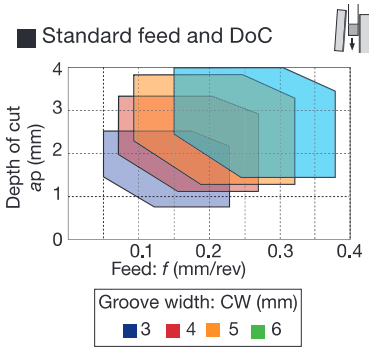
DTX type (2 corners)

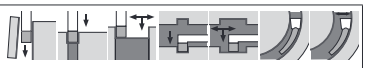
F176 page

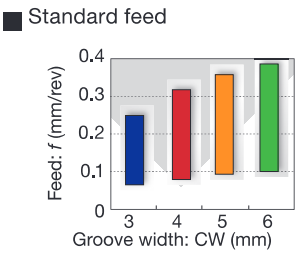
Multi-functional type

Well balanced sharpness and strength
Molded and ground insert available

CW = 3 - 6 mm







Profiling and undercutting

DTR type (2 corners)

Molded

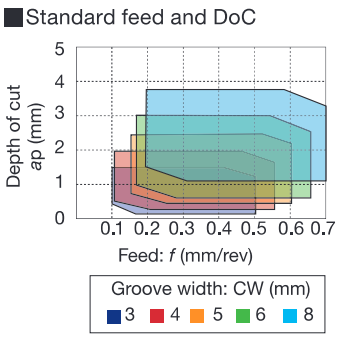
Ground

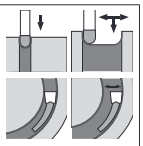
F176, F177 page

Full radius type

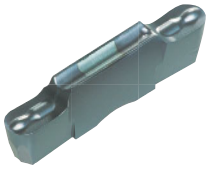
Excellent chip control
Molded and ground inserts available

CW = 3 - 8 mm





DTIU type (2 corners)

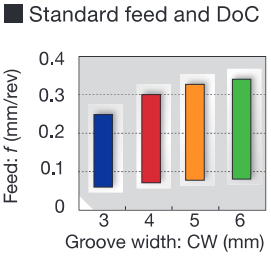


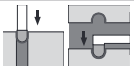
F177 page

Full radius type

Excellent chip control

CW = 3 - 6 mm





Aluminium wheel machining

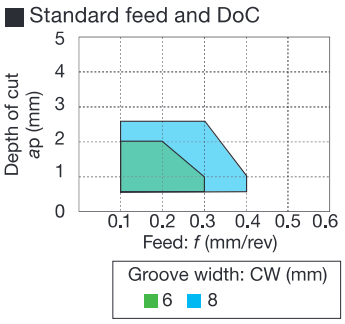
DTA type (2 corners)

F178 page

Full radius type

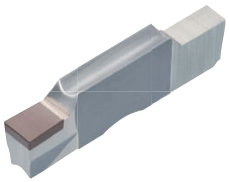
Excellent chip control
For aluminium wheel profiling
Ground insert

CW = 6 - 8 mm



External grooving of hardened steel

SGN-CBN type (1 corner)

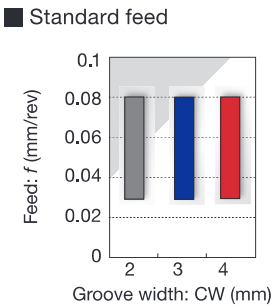


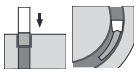
F178 page

For hardened steel cutting

Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing

CW = 2 - 4 mm
(Tolerance: ±0.025 mm)





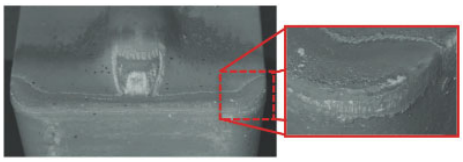
AH7025 Cutting performance

First choice grade for grooving application
New AH7025 grade - Drastically improved reliability with world's first coating technology

Tool life comparison in grooving

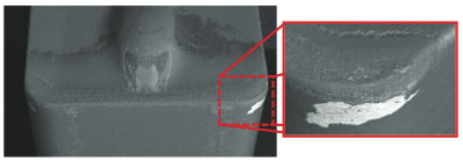
Alloy steel (SCM440) **P**

AH7025



No. of grooving: 60 pcs

Conventional grade



No. of grooving: 30 pcs

Insert : DTE3-040 AH7025
Cutting speed : V_c = 150 m/min
Feed : f = 0.17 mm/rev
Groove depth : 17 mm
Machining : External grooving
Coolant : Wet

Allows stable machining without peeling off, evenafter twice the cutting time versus the conventional grade.
→ The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations

Grade

AH7025 P M K S

- First recommended grade for general purpose
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- General purpose
- Newly developed coating with well controlled rystal structure and fracture resistance
- Improved adhesion strength

T515 K

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

T9225 P

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

T9125 P

- Suitable for steel machining at high speed
- Balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting
- 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

AH905 S

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

KS05F N S

- Recommended for non-ferrous materials
- For titanium

TH10 N

- Recommended for non-ferrous materials

BX360 H

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

STANDARD CUTTING CONDITIONS

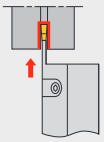
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (m/min)
P	Steels S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225	80 - 300
		< 300 HB	Wear resistance	T9125	80 - 200
		< 300 HB	Fracture resistance	GH130	50 - 120
		< 300 HB	Suface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Fracture resistance	GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515, AH7025	50 - 180
		-	Fracture resistance	GH130	50 - 180
	Ductile cast irons FCD450, etc. 450-10S, etc.	-	First choice	T515, AH7025	50 - 120
		-	Fracture resistance	GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Grey cast iron FC250, etc. 250, etc.	< HRC 40	First choice	AH7025	20 - 60
		< HRC 40	Wear resistance	AH905	20 - 80
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	20 - 80
		< HRC 40	Fracture resistance	AH7025, AH725	20 - 80
		< HRC 40	Suface quality	KS05F	20 - 60
H	Hardened steels SCM435, etc. SUJ2, etc.	> HRC 50	First choice	BX360	80 - 150

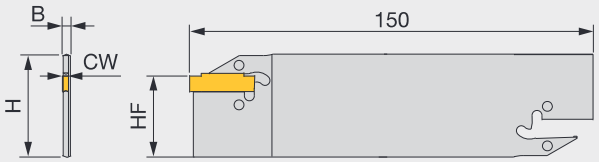
*Please see the page F179 - F181 for feed: *f* (mm/rev).

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

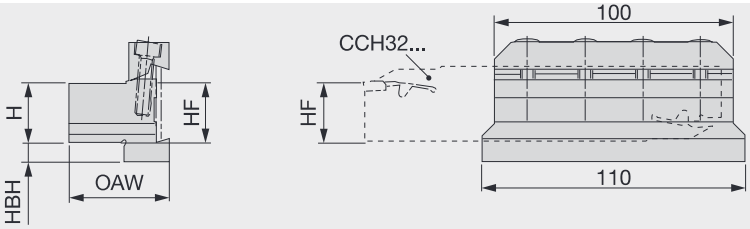
SPARE PARTS

Designation	Wrench (Optional)
CCH32-W...	CRW33

MY-T SERIES

CCBS-32

Tool block for CCH blade



Designation	H	HF	HBH	OAW	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

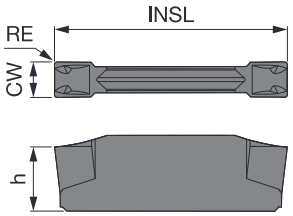
SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS**-32	CC-32	CM6X25	P-5

Reference pages: Inserts → F185 - F187, Standard cutting conditions → F186

WGE

For external grooving and parting



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

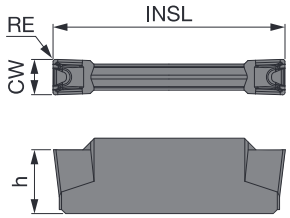
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	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 turning (External grooving and parting)



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

★ : First choice
☆ : Second choice

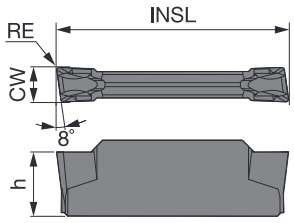
Designation	$CW^{+0.1}_{0}$	RE	Coated					Cermet					INSL	h
			T9225	T9125	AH120	GH730		NS9530						
WGT30	3	0.4	●	●		●		●					20	5.5
WGT40	4	0.4	●	●		●		●					25	5.7
WGT50	5	0.4	●	●	●	●		●					25	5.9

●: Line up

Reference pages: Toolholders → F184

WGE(R/L)

For parting (with hand)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	$CW^{+0.1}_{0}$	RE	Coated		INSL	h
				AH120	GH730		
WGE20R	R	2	0.2		●	20	4.7
WGE20L	L	2	0.2		●	20	4.7
WGE30R	R	3	0.2	●	●	20	5.5
WGE30L	L	3	0.2		●	20	5.5
WGE40R	R	4	0.2		●	25	5.7
WGE40L	L	4	0.2		●	25	5.7
WGE50R	R	5	0.2		●	25	5.9
WGE50L	L	5	0.2		●	25	5.9

●: Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Recommended grade	Cutting speed *Vc* (m/min)
P	Low carbon steels Alloy steels (~ HB150)	T9225	80 - 300
		T9125	80 - 200
		NS9530	100 - 200
		GH730	50 - 180
	Medium carbon steels Alloy steels (HB150 ~ 250)	T9225	80 - 220
		T9125	80 - 180
		NS9530	80 - 180
		GH730	50 - 150
	High carbon steels Alloy steels (HB250 ~)	T9225	80 - 220
		T9125	80 - 150
		NS9530	80 - 150
		GH730	50 - 150
M	Stainless steels	T9225	80 - 180
		T9125	80 - 150
		GH730	50 - 120
K	Grey and ductile cast irons	T9225	80 - 250
		T9125	80 - 200
		GH730	50 - 180

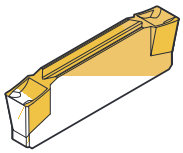
Operation	Feed: *f* (mm/rev) Groove width: CW (mm)			
	2	3	4	5
Grooving (WGE□□)	0.06 ~ 0.20	0.06 ~ 0.25	0.07 ~ 0.27	0.07 ~ 0.30
Parting-off (WGE□□R/L)	0.04 ~ 0.10	0.04 ~ 0.14	0.04 ~ 0.14	0.04 ~ 0.14
Turning (WGT□□)	-	*ap* = 0.5 ~ 1.5 *f* = 0.06 ~ 0.2	*ap* = 0.5 ~ 2.0 *f* = 0.06 ~ 0.25	*ap* = 0.5 ~ 2.5 *f* = 0.06 ~ 0.27

Reference pages: Toolholders → F184

2 corner insert

External grooving

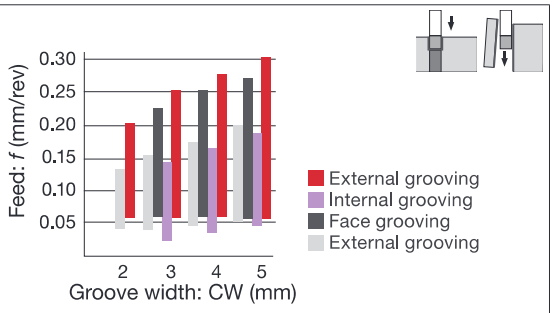
WGE



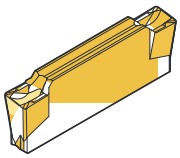
F185 page

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

CW = 2 - 5 mm



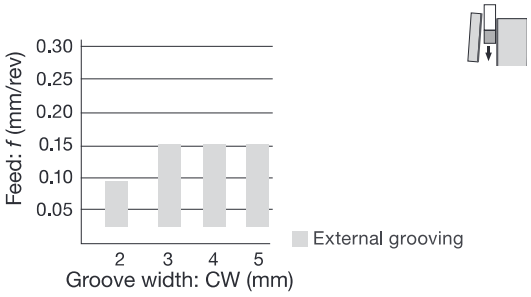
WGE R/L



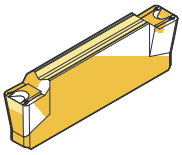
F186 page

Handed insert
Minimize burr generation when workpiece is cut off

CW = 2 - 5 mm



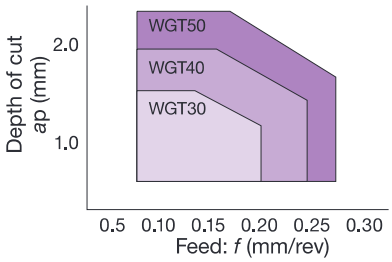
WGT



F185 page

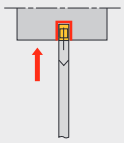
1st choice for turning
Low cutting force and good chip control for traversing

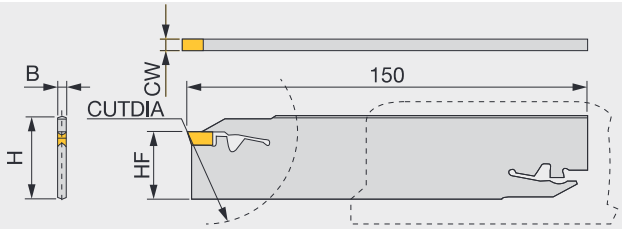
CW = 3 - 5 mm



CCH

External grooving and parting blade, for 1 corner inserts





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,GE50-AL

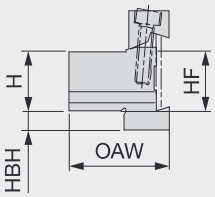
• CUTDIA Max. parting dia

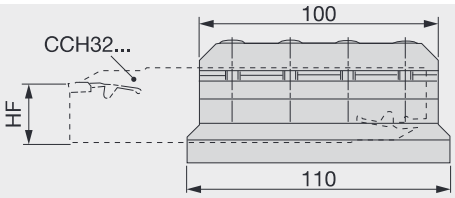
SPARE PARTS

Designation	Wrench
CCH32-...	CTL-2

CCBS-32

Tool block for CCH blade





Designation	H	HF	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

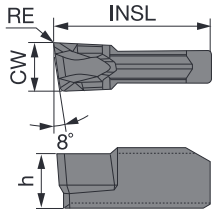
Designation	Clamp	Screw	Wrench
CCBS**-32	CC-32	CM6X25	P-5

Reference pages: Inserts → F189 - F193, Standard cutting conditions → F193

INSERT

GE-R/L

For parting (with hand)



Right hand (R) shown.

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

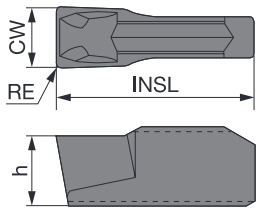
★ : First choice
☆ : Second choice

Designation	HAND	$CW^{+0.1}_{0}$	RE	Coated		INSL	h
				AH120	GH730		
GE30R	R	3	0.2	●	●	10	3.5
GE30L	L	3	0.2		●	10	3.5
GE40R	R	4	0.2	●	●	10	4
GE40L	L	4	0.2		●	10	4
GE50R	R	5	0.2		●	12	4.5
GE50L	L	5	0.2	●	●	12	4.5

●: Line up

GE

For general grooving



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

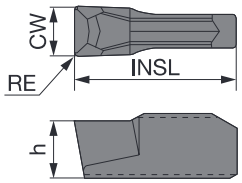
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated				Cermet	INSL	h
			T9225	T9125	AH120	GH730	NS9530		
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

Reference pages: Toolholders → F188, Standard cutting conditions → F193

GF



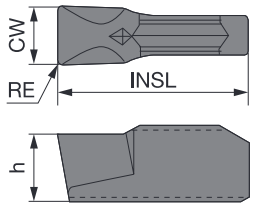
P	Steel	★	★
M	Stainless	★	
K	Cast iron	☆	☆
N	Non-ferrous		
S	Superalloys		
H	Hard materials		

★ : 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

GN



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

★ : First choice
☆ : Second choice

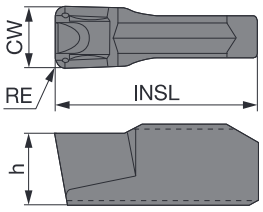
Designation	$CW^{+0.1}_{0}$	RE	Coated	INSL	h
			GH730		
GN30	3	0.2	●	10	3.5
GN40	4	0.2	●	10	4
GN50	5	0.2	●	12	4.5

●: Line up

Reference pages: Toolholders → F188, Standard cutting conditions → F193

GT

For turning



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

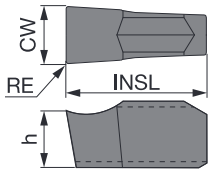
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$	RE	Coated				Cermet				INSL	h
			T9225	T9125	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

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	$CW^{+0.1}_{0}$	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

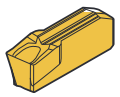
●: Line up

Reference pages: Toolholders → F188, Standard cutting conditions → F193

1 corner insert

External grooving

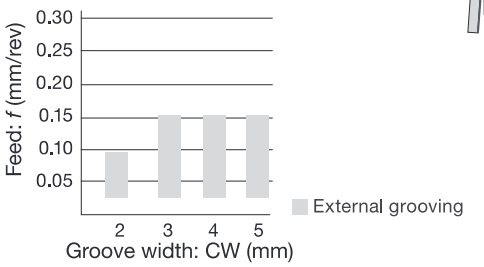
GE R/L



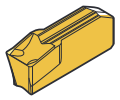
F189 page

Handed insert
Minimize burr generation when workpiece is cut off

CW = 3 - 5 mm



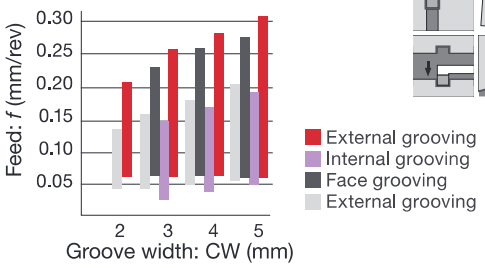
GE

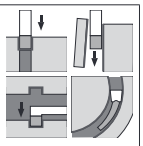


F189 page

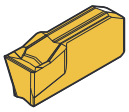
1st choice for external grooving and parting
Excellent chip control for grooving

CW = 2 - 5 mm





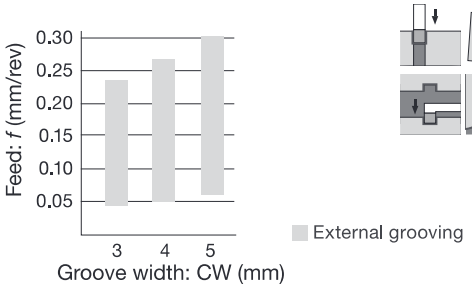
GF

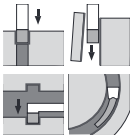


F190 page

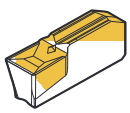
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 3 - 5 mm





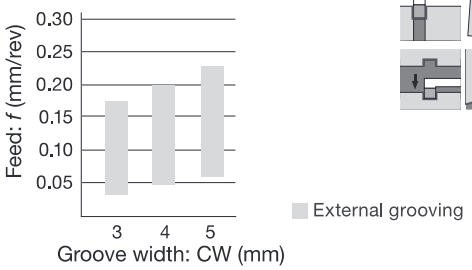
GN

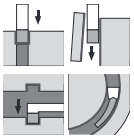


F190 page

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

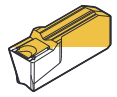
CW = 3 - 5 mm





1 corner insert

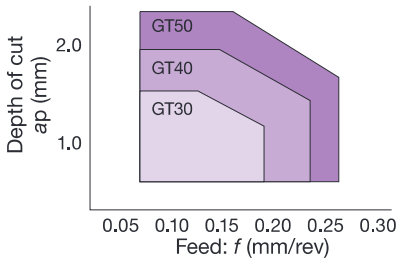
GT

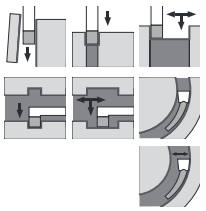


F191

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

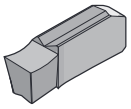
CW = 3 - 5 mm





For aluminium and non-ferrous metal

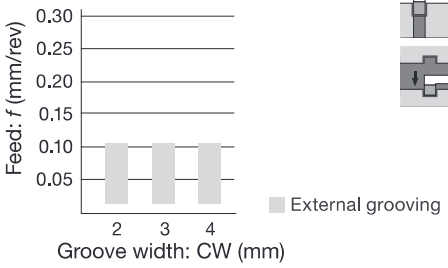
GE-AL

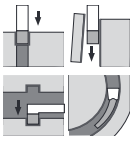


F191

Reduce cutting force and welding due to sharp chipbreaker

CW = 2 - 4 mm





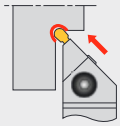
STANDARD CUTTING CONDITIONS

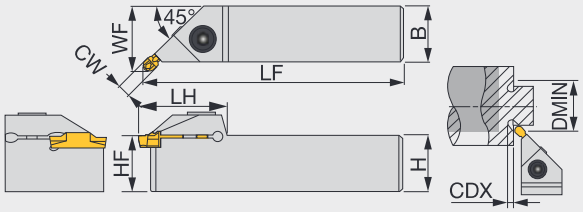
ISO	Workpiece material	Grades	Cutting speed *Vc* (m/min)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	80 - 300
		T9125	80 - 200
		NS9530	100 - 200
		GH730	50 - 180
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	80 - 220
		T9125	80 - 180
		NS9530	80 - 180
		GH730	50 - 150
	High carbon steel, Alloy steel (HB250 ~)	T9225	80 - 220
		T9125	80 - 150
		NS9530	80 - 150
		GH730	50 - 120
M	Stainless steel	T9225	80 - 180
		T9125	80 - 150
		GH730	50 - 120
K	Grey iron, Ductile cast iron	T9225	80 - 250
		T9125	80 - 200
		GH730	50 - 180
N	Aluminium alloy, Non-ferrous metal	KS05F	200 - 300

External

Operation	Feed: *f* (mm/rev) Groove width			
	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
Turning (GT**)	-	Depth of cut *ap* = 0.5 - 1.5 *f* = 0.06 - 0.2	Depth of cut *ap* = 0.5 - 2 *f* = 0.06 - 0.25	Depth of cut *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	0.03 - 0.1	-

TUNGCUT
CGEUR/L
External 45° undercutting toolholder





Right hand (R) shown.

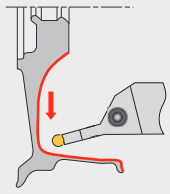
Designation	CW	DMIN	Seat size	CDX	H	B	LF	LH	HF	WF (1)	Insert	Torque*
CGEUR/L1616-3T02	3	32	3	2.8	16	16	110	30	16	19.3	DTIU...	5
CGEUR/L2020-3T02	3	32	3	2.8	20	20	125	30	20	23.3	DTIU...	5
CGEUR/L2525-3T02	3	32	3	2.8	25	25	150	30	25	28.3	DTIU...	5
CGEUR/L1616-4T02	4	32	4	2.8	16	16	110	31	16	19.5	DTIU...	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

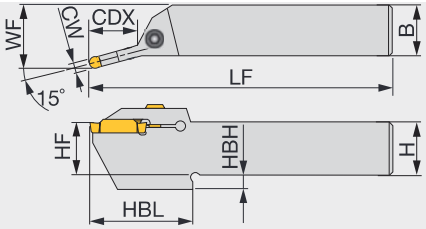
(1) "WF" value is calculated with groove width "CW" shown in the table.
*Torque: Recommended clamping torque (N·m)

SPARE PARTS

Designation	Clamping screw	Wrench
CGEUR/L****-3T02	CM5X0.8X16-A	P-4
CGEUR/L1616-4T02	CM6X1X16-A	P-5
CGEUR/L2020-4T02	CM6X1X20-A	P-5
CGEUR/L2525-4T02/6T03	CM6X1X25-A	P-5

TUNGCUT
CTER/L-15A
Square shank toolholder for profiling 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)

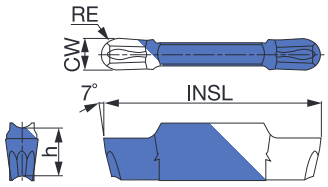
SPARE PARTS

Designation	Clamping screw	Wrench
CTER/L2525-****-15A	CM6X1X25-A	P-5

Reference pages: Inserts → F195 - F197, Standard cutting conditions → F196

DTIU

Profiling and undercutting (for high precision)



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

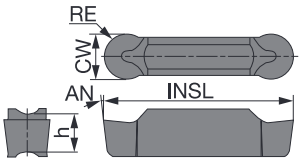
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02	RE	Coated AH7025	Coated AH725	Coated GH130	INSL	h
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

DTA

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 TH10	INSL	h	AN
DTA600-300	6	6	3	●	25	5.5	7
DTA800-400	8	8	4	●	30	6.7	10

●: Line up

Reference pages: Toolholders → F194, Standard cutting conditions → F196

STANDARD CUTTING CONDITIONS

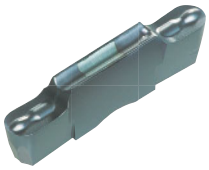
ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (m/min)
P	Steels S45C, SCM435, etc. C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Wear resistance	T9225	80 - 300
		< 300 HB	Wear resistance	T9125	80 - 200
		< 300 HB	Fracture resistance	GH130	50 - 120
		< 300 HB	Suface quality	NS9530	80 - 220
M	Stainless steel SUS303, SUS304, etc. X10CrNiS18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Fracture resistance	GH130	50 - 120
K	Grey cast iron FC250, etc. 250, etc.	-	First choice	T515, AH7025	50 - 180
		-	Fracture resistance	GH130	50 - 180
	Ductile cast irons FCD450, etc. 450-10S, etc.	-	First choice	T515, AH7025	50 - 120
		-	Fracture resistance	GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
		-	First choice	KS05F	100 - 600
S	Grey cast iron FC250, etc. 250, etc.	< HRC 40	First choice	AH7025	20 - 60
		< HRC 40	Wear resistance	AH905	20 - 80
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	20 - 80
		< HRC 40	Fracture resistance	AH7025, AH725	20 - 80
		< HRC 40	Suface quality	KS05F	20 - 60
H	Hardened steels SCM435, etc. SUJ2, etc.	> HRC 50	First choice	BX360	80 - 150

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

TUNGCUT - Chipbreaker Guide

Profiling and undercutting

DTIU type (2 corners)



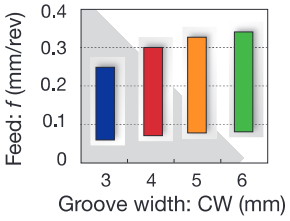
F195 page

Full radius type

Excellent chip control

CW = 3 - 6 mm

Standard feed and DoC



Aluminium wheel machining

DTA type (2 corners)

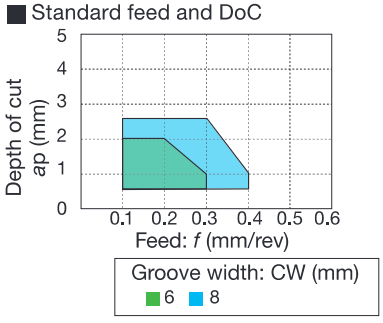
F195 page

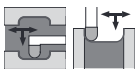
Full radius type

Excellent chip control
For aluminium wheel profiling
Ground insert

CW = 6 - 8 mm

Standard feed and DoC





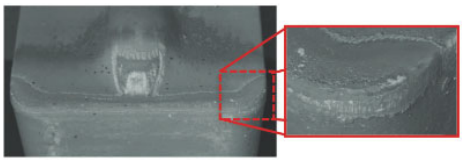
AH7025 Cutting performance

First choice grade for grooving application
New AH7025 grade - Drastically improved reliability with world's first coating technology

Tool life comparison in grooving

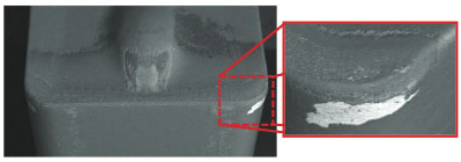
Alloy steel (SCM440) **P**

AH7025



No. of grooving: 60 pcs

Conventional grade



No. of grooving: 30 pcs

Insert : DTE3-040 AH7025
Cutting speed : V_c = 150 m/min
Feed : f = 0.17 mm/rev
Groove depth : 17 mm
Machining : External grooving
Coolant : Wet

Allows stable machining without peeling off, evenafter twice the cutting time versus the conventional grade.
→ The combination of Nano-multi-layered AlTiN Coating with high Al content and tough substrate provides highly efficient machining in various grooving operations

Grade

AH7025 P M K S

- First recommended grade for general purpose
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH725 P M S

- General purpose
- Newly developed coating with well controlled rystal structure and fracture resistance
- Improved adhesion strength

T515 K

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

T9225 P

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

T9125 P

- Suitable for steel machining at high speed
- Balance of wear and chipping resistance

NS9530 P

- Advanced cermet for finish cutting
- 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

AH905 S

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

KS05F N S

- Recommended for non-ferrous materials
- For titanium

TH10 N

- Recommended for non-ferrous materials

BX360 H

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

PARTS FOR COOLANT HOSE

Connecting hose

Fig.1

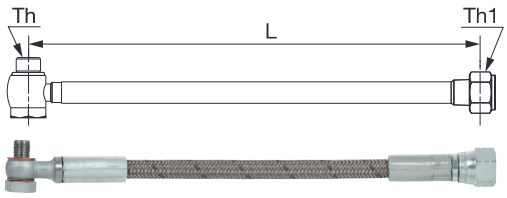
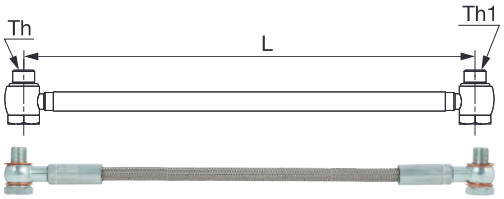
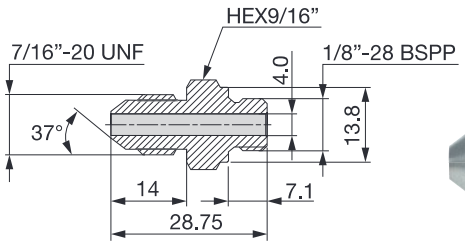


Fig.2



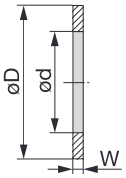
Designation	Length L	Screw Th	Screw Th1	Max. pressure (Mpa)	Fig.
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP	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

Adapter

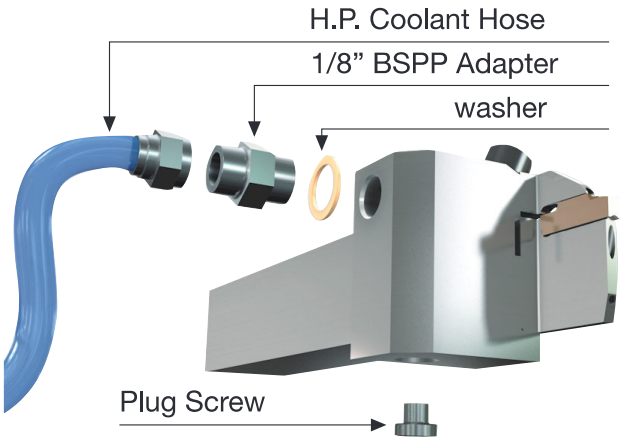


Designation
CHP-NIPPLE-G1/8-7/16UNF

Seal washer



Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	8	1
CHP-COPPER-SEAL5/16	11	8	1
CHP-COPPER-SEAL5/16-2.5	11	8	2.5



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