Parting, Grooving

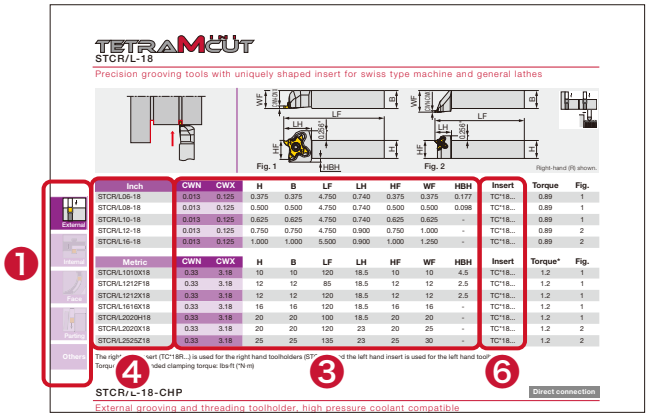
Parting, Grooving - Content structure

- 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).

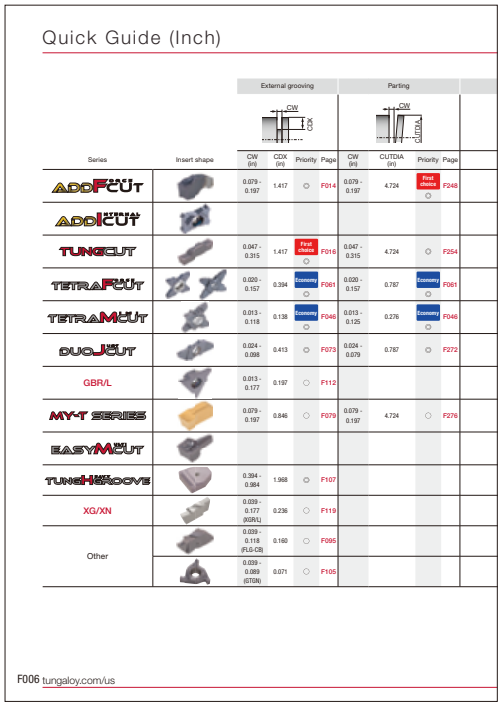


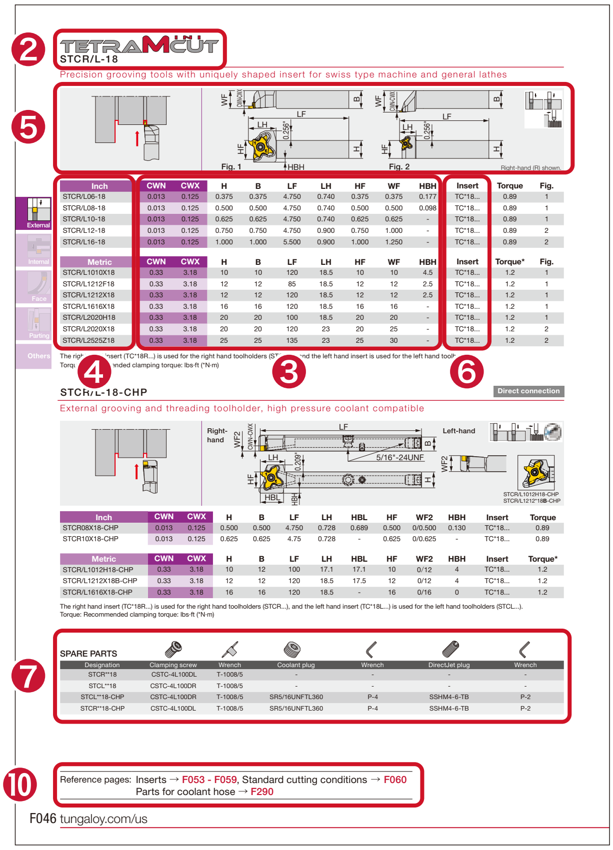
Method ②

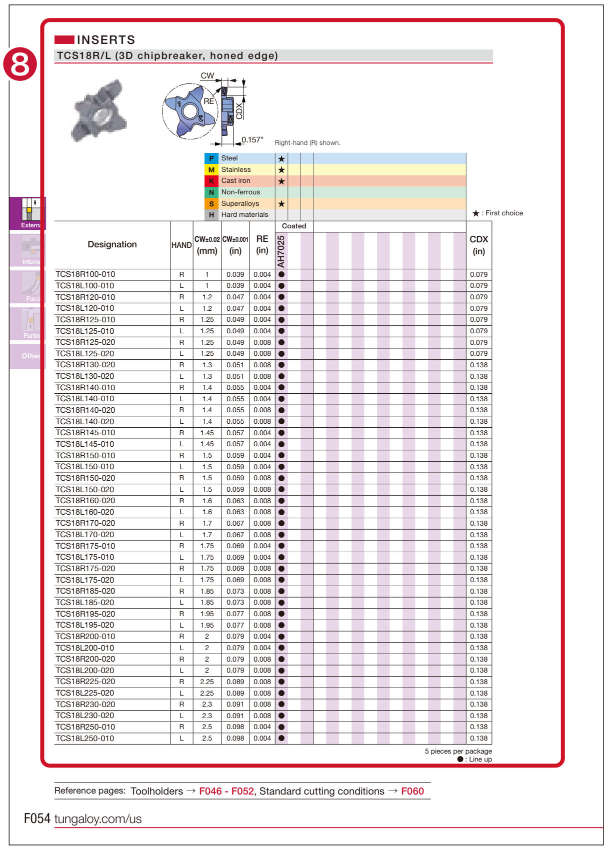
Select the tool series name on F004 - F005 and check the details on the product page.

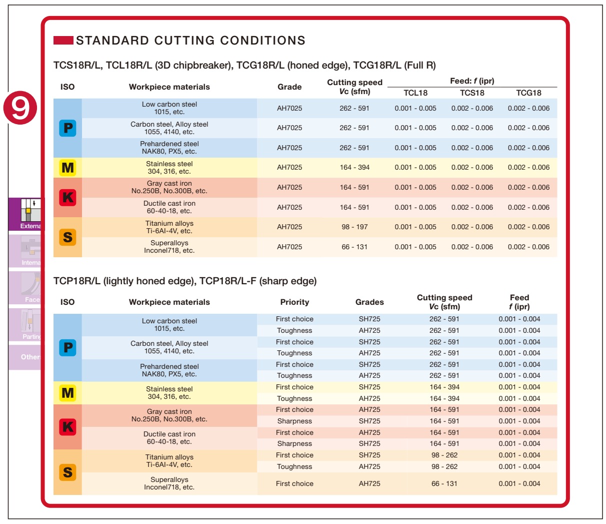
Method ③

Select the tool series or the tool specification from Quick Guide on F006 - F009 and see the details on each page.









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

→ STC**R** **08** -18

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

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

When ordering

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

External grooving

F014 page

Max. groove depth: 0.252" (6.4 mm)

Economy TETRAMINICUT F046 page

Economy TETRAFORCECUT F061 page

GBR/L F112 page

Max. groove depth: 1.969" (50 mm)

First choice TUNGCUT F016 page

ADDFORCECUT F014 page

DUOJUSTCUT F073 page

TUNGHEAVYGROOVE F107 page

MY-T SERIES F079 page

Internal grooving

F134 page

General internal grooving and turning

First choice ADDINTERNALCUT F134 page

TUNGCUT F140 page

ADDFORCECUT F136 page

MY-T SERIES F161 page

GBR/L F179 page

SNG / CNG F182 page

Face grooving

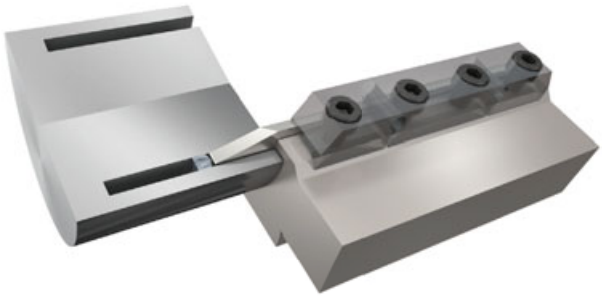
F190 page

First choice TUNGCUT F196 page

EASYMCUT F190 page

Economy TETRAMINICUT F223 page

MY-T SERIES F238 page



Parting

F248 page

General parting

First choice ADDFORCECUT F248 page

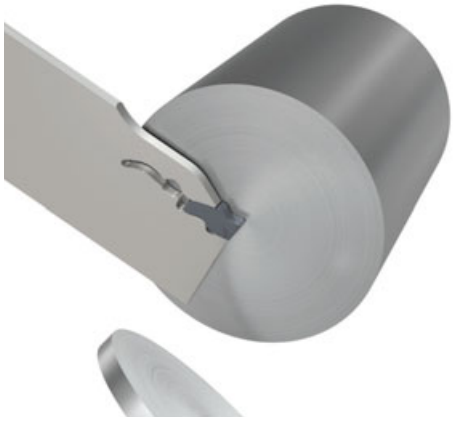
TUNGCUT F254 page

Economy TETRAFORCECUT F061 page

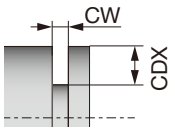
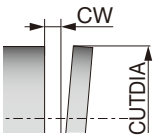
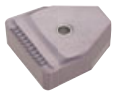
Economy TETRAMINICUT F046 page

DUOJUSTCUT F272 page

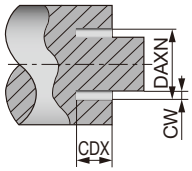
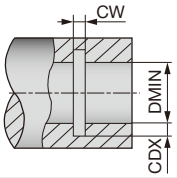
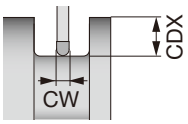
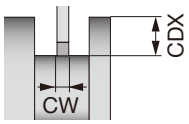
MY-T SERIES F276 page



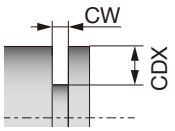
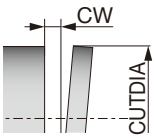
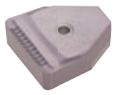
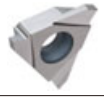
Quick Guide (Inch)

Series	Insert shape	External grooving				Parting			
									
		CW (in)	CDX (in)	Priority	Page	CW (in)	CUTDIA (in)	Priority	Page
ADDFORCECUT		0.079 - 0.197	1.417	◎	F014	0.079 - 0.197	4.724	First choice ◎	F248
ADDINTERNALCUT									
TUNGCUT		0.047 - 0.315	1.417	First choice ◎	F016	0.047 - 0.315	4.724	◎	F254
TETRAFORCECUT		0.020 - 0.157	0.394	Economy ◎	F061	0.020 - 0.157	0.787	Economy ◎	F061
TETRAMINICUT		0.013 - 0.118	0.138	Economy ◎	F046	0.013 - 0.125	0.276	Economy ◎	F046
DUOJUSTCUT		0.024 - 0.098	0.413	◎	F073	0.024 - 0.079	0.787	◎	F272
GBR/L		0.013 - 0.177	0.197	○	F112				
MY-T SERIES		0.079 - 0.197	0.846	○	F079	0.079 - 0.197	4.724	○	F276
EASYMULTICUT									
TUNGHEAVYGROOVE		0.394 - 0.984	1.968	◎	F107				
XG/XN		0.039 - 0.177 (XGR/L)	0.236	○	F119				
Other		0.039 - 0.118 (FLG-CB)	0.160	○	F095				
		0.039 - 0.089 (GTGN)	0.071	○	F105				

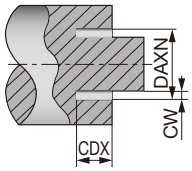
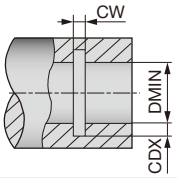
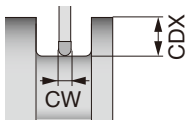
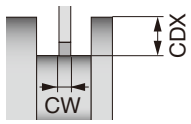
◎ : First choice
○ : Usable

	Face grooving					Internal grooving					Profiling (Full-R)				Turning			
																		
	CW (in)	CDX (in)	DAXN (in)	Priority	Page	CW (in)	CDX (in)	DMIN (in)	Priority	Page	CW (in)	CDX (in)	Priority	Page	CW (in)	CDX (in)	Priority	Page
						0.079 - 0.157	1.260	2.165	◎	F136								
						0.020 - 0.118	0.118	0.438	First choice ◎	F134								
	0.079 - 0.250	0.984	1.023	First choice ◎	F196	0.079 - 0.315	0.394	1.000	◎	F140	0.079 - 0.315	1.417	First choice ◎	F016 F286	0.079 - 0.315	1.417	First choice ◎	F016
											0.062 - 0.118	0.252	Economy ◎	F061				
	0.020 - 0.098	0.118	0.236	Economy ◎	F223						0.039 - 0.125	0.138	Economy ◎	F046				
															0.079 - 0.098 (JXDX)	0.276	◎	F073
						0.013 - 0.098 (GBR/L32)	0.098	1.38	○	F179	0.039 - 0.157	0.197	○	F112				
	0.118 - 0.197	0.866	1.181	○	F238	0.118 - 0.197	0.197	1.000	○	F161	0.118 - 0.197	0.846	○	F079	0.118 - 0.197	0.846	○	F079
	0.157 - 0.236	2.559	1.181	◎	F190													
						0.039 - 0.177 (XGR/L)	0.236	2.165	○	F188								
						0.039 - 0.118 (FLG-CB)	0.160	0.730	○	F167								
						0.039 - 0.089 (GTGN)	0.071	0.950	○	F177								

Quick Guide (Metric)

Series	Insert shape	External grooving				Parting			
									
		CW (mm)	CDX (mm)	Priority	Page	CW (mm)	CUTDIA (mm)	Priority	Page
ADDFORCECUT		2 - 5	33	◎	F014	2 - 5	120	First choice ◎	F248
ADDINTERNALCUT									
TUNGCUT		1.2 - 8	35	First choice ◎	F016	1.2 - 8	120	◎	F254
TETRAFORCECUT		0.5 - 4	10	Economy ◎	F061	0.5 - 4	20	Economy ◎	F061
TETRAMINICUT		0.33 - 3	3.5	Economy ◎	F046	0.33 - 3	7	Economy ◎	F046
DUOJUSTCUT		0.6 - 2.5	10.5	◎	F073	0.6 - 2	20	◎	F272
GBR/L		0.33 - 4.5	5	○	F112				
MY-T SERIES		2 - 5	25	○	F079	2 - 5	120	○	F276
EASYMULTICUT									
TUNGHEAVYGROOVE		10 - 25	50	◎	F107				
SNG / CNG									
XG/XN		1 - 4.5 (XGR/L)	6	○	F119				
Other		1 - 3 (FLG-CB)	4.07	○	F095				
		1 - 2.25 (GTGN)	1.8	○	F105				
		1.15 - 4.2 (GLR/L)	4	○	F117				

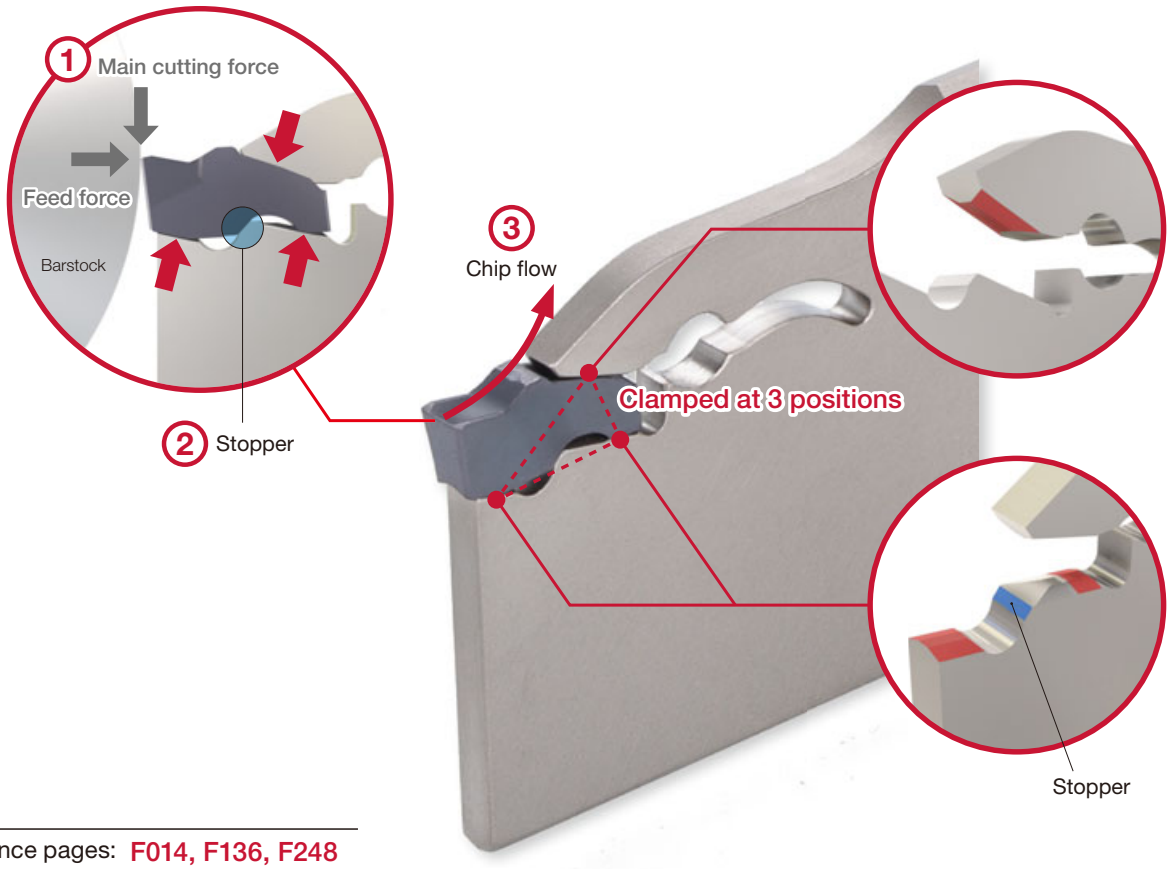
◎ : First choice
○ : Usable

	Face grooving					Internal grooving					Profiling (Full-R)				Turning			
																		
	CW (mm)	CDX (mm)	DAXN (mm)	Priority	Page	CW (mm)	CDX (mm)	DMIN (mm)	Priority	Page	CW (mm)	CDX (mm)	Priority	Page	CW (mm)	CDX (mm)	Priority	Page
						0.5 - 3	3	10.5	First choice ◎	F134								
	2 - 6	25	25	First choice ◎	F196	2 - 8	10	25	◎	F140	2 - 8	35	First choice ◎	F016 F286	2 - 8	35	First choice ◎	F016
											1.57 - 3	6.4	Economy ◎	F061				
	0.33 - 3	3	6	Economy ◎	F223						1 - 3.18	3.5	Economy ◎	F046				
															2 - 2.5 (JXDX)	6	◎	F073
						0.33 - 4.5	2.5	35	○	F179	1 - 4	5	○	F112				
	3 - 5	22	30	○	F238	3 - 5	6	25	○	F161	3 - 5	25	○	F079	3 - 5	25	○	F079
	4 - 6	65	30	◎	F190													
						1 - 3.5	3	8	○	F182								
	1 - 4.5 (XNR/L)	6	55	○	F246	1 - 4.5 (XGR/L)	6	55	○	F188								
						1 - 3 (FLG-CB)	4.07	34.9	○	F167								
						1 - 2.25 (GTGN)	1.8	24	○	F177								

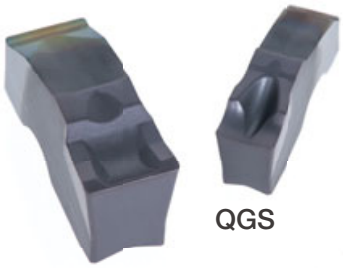
ADDFORCE CUT

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

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



Reference pages: F014, F136, F248

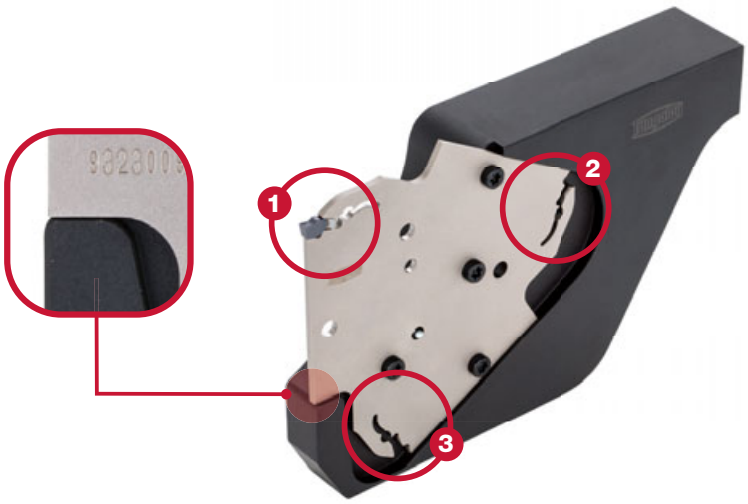


Strong holder design ensures tool stability and productivity gains during demanding cutting conditions

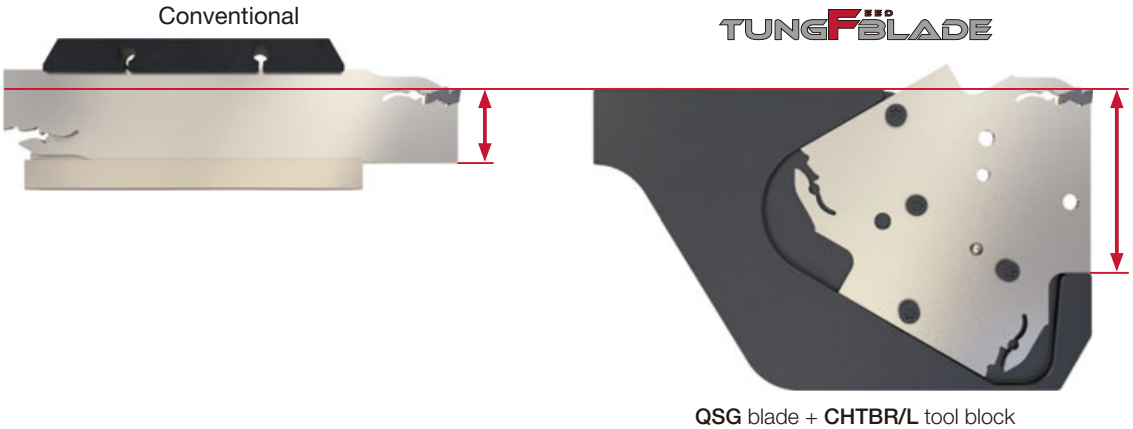
The blade provides reduced tooling cost with three insert pockets, while its strong backing beneath the insert withstands heavy cutting loads during machining.

Economical blade with three insert pockets.

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



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



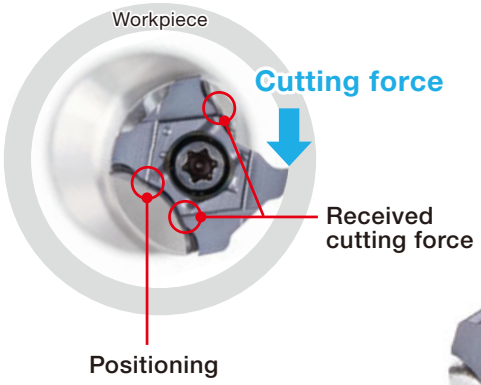
QSG blade + **CHTBR/L** tool block

Reference pages: F250 - F251, F259 - F260

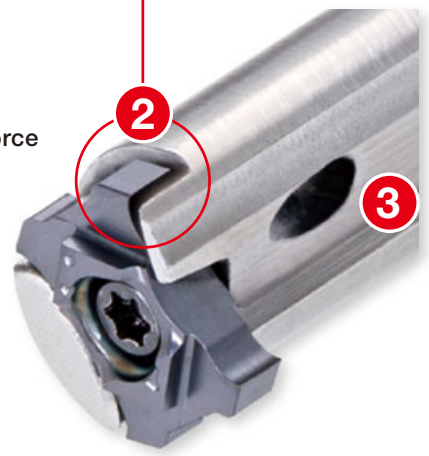
INTERNAL ADDICUT

Unique insert clamping system ensures high indexing repeatability and clamping rigidity

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

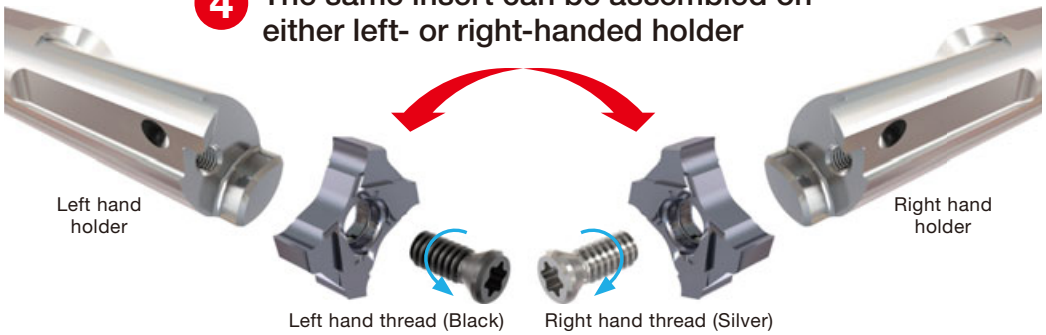


Protective pocket design for un-used cutting edges



Through coolant

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



Prevents the screw from loosening while machining

Reference pages: F134

TUNGCUT

Multi-functional grooving tool series with excellent versatility

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

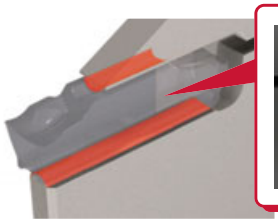
High-pressure coolant system improves chip flow and tool life.

High clamping rigidity

For stable tool life and accuracy

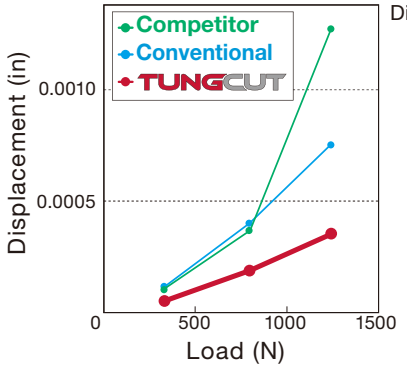
Clamping system

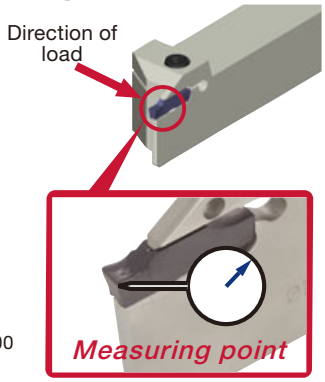
Stable and safe contact areas



High repeatability and durability due to long pocket!

Minimizes cutting edge displacement





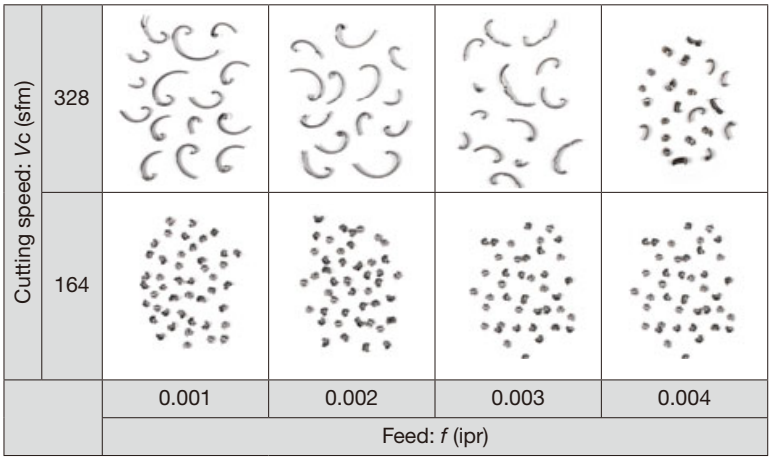
Excellent chip control at low feed rates

P **Bearing steel (52100)**

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

DGL

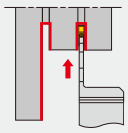
Workpiece material : SUJ2
Toolholder : CTER2525-3T09
Insert : DGL3-025
Cutting speed : *Vc* = 164, 328 sfm
Groove width : 0.118"

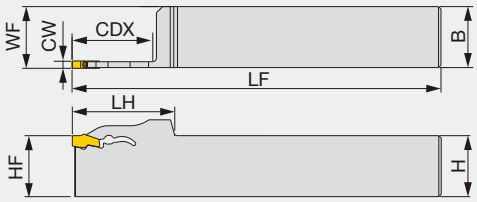


Reference pages: F016, F140, F196, F254, F286

QSER/L

External toolholders for grooving and parting





Right hand (R) shown.

Inch	CW	CDX	Seat size	H	B	LF	LH	HF	WF
QSER/L12-2T26	0.079	1.024	2	0.750	0.750	5.000	1.417	0.750	0.756
QSER/L12-2T33	0.079	1.299	2	0.750	0.750	5.000	1.654	0.750	0.756
QSER/L16-2T26	0.079	1.024	2	1.000	1.000	6.000	1.417	1.000	1.004
QSER/L16-2T33	0.079	1.299	2	1.000	1.000	6.000	1.654	1.000	1.004
QSER/L12-3T26	0.118	1.024	3	0.750	0.750	5.000	1.417	0.750	0.764
QSER/L12-3T33	0.118	1.299	3	0.750	0.750	5.000	1.654	0.750	0.764
QSER/L16-3T26	0.118	1.024	3	1.000	1.000	6.000	1.417	1.000	1.012
QSER/L16-3T33	0.118	1.299	3	1.000	1.000	6.000	1.654	1.000	1.012
QSER/L12-4T33	0.157	1.299	4	0.750	0.750	5.000	1.654	0.750	0.768
QSER/L16-4T33	0.157	1.299	4	1.000	1.000	6.000	1.654	1.000	1.016
QSER/L16-5T33	0.197	1.299	5	1.000	1.000	6.000	1.654	1.000	1.020
QSER/L16-6T36	0.236	1.417	6	1.000	1.000	6.000	1.890	1.000	1.016

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

SPARE PARTS

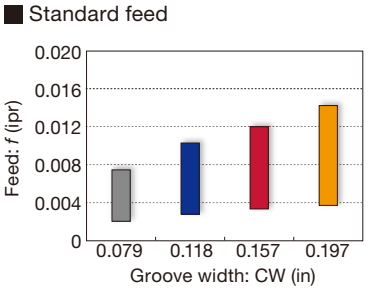
Designation	Wrench
QSER/L...	QL-39

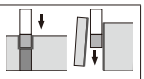
CHIPBREAKER GUIDE

QGM

First choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
CW = 0.079" - 0.197"

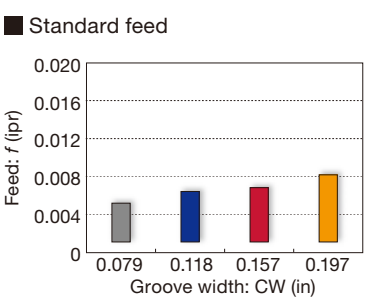


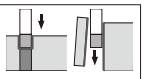


QGS

Lower cutting force and superior sharpness

Uniquely designed edge and chipbreaker
CW = 0.079" - 0.197"

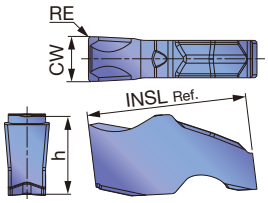




INSERTS

QGM

External deep grooving and parting



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

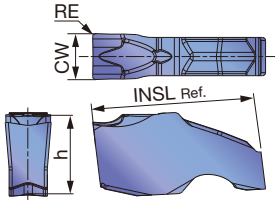
★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGM2-020	2	2	0.079	0.008	●	0.433	0.209
QGM3-020	3	3	0.118	0.008	●	0.433	0.209
QGM4-030	4	4	0.157	0.012	●	0.512	0.287
QGM5-030	5	5	0.197	0.012	●	0.512	0.287

●: Line up

QGS

External deep grooving and parting



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

★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGS2-020	2	2	0.079	0.008	●	0.433	0.209
QGS3-020	3	3	0.118	0.008	●	0.433	0.209
QGS4-030	4	4	0.157	0.012	●	0.512	0.287
QGS5-030	5	5	0.197	0.012	●	0.512	0.287

●: Line up

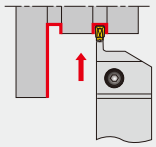
STANDARD CUTTING CONDITIONS

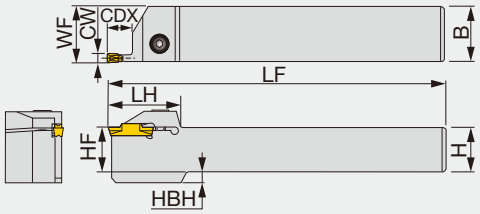
ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4140, etc.	< 300 HB	AH7025	164 - 591
M	Stainless steel 304, etc.	< 200 HB	AH7025	164 - 394
K	Gray cast iron No.250B, etc.	-	AH7025	164 - 591
	Ductile cast iron 65-45-12, etc.	-	AH7025	164 - 394
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	66 - 197
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	66 - 262

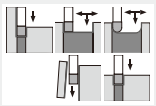
Please see page **F014** for feed: *f* (ipr).

CTER/L

External grooving, parting and turning toolholder







Right hand (R) shown.

Inch	CW	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque
CTER/L10-2T08	0.079	2	0.315	0.625	0.625	4.500	1.299	0.625	0.629	0.157	3.69
CTER/L12-2T08	0.079	2	0.315	0.750	0.750	5.000	1.299	0.750	0.754	-	3.69
CTER/L16-2T08	0.079	2	0.315	1.000	1.000	6.000	1.299	1.000	1.004	-	3.69
CTER/L10-2T12	0.079	2	0.472	0.625	0.625	4.500	1.260	0.625	0.629	0.157	3.69
CTER/L12-2T12	0.079	2	0.472	0.750	0.750	5.000	1.260	0.750	0.754	-	3.69
CTER/L16-2T12	0.079	2	0.472	1.000	1.000	6.000	1.260	1.000	1.004	-	3.69
CTER/L10-2T17	0.079	2	0.669	0.625	0.625	4.500	1.457	0.625	0.629	0.157	3.69
CTER/L12-2T17	0.079	2	0.669	0.750	0.750	5.000	1.457	0.750	0.754	-	3.69
CTER/L16-2T17	0.079	2	0.669	1.000	1.000	6.000	1.457	1.000	1.004	-	3.69
CTER/L10-3T09	0.118	3	0.354	0.625	0.625	4.500	1.260	0.625	0.637	0.157	3.69
CTER/L12-3T09	0.118	3	0.354	0.750	0.750	5.000	1.260	0.750	0.762	-	3.69
CTER/L16-3T09	0.118	3	0.354	1.000	1.000	6.000	1.260	1.000	1.012	-	3.69
CTER/L12-3T12	0.118	3	0.472	0.750	0.750	5.000	1.260	0.750	0.763	-	3.69
CTER/L16-3T12	0.118	3	0.472	1.000	1.000	6.000	1.260	1.000	1.011	-	3.69
CTER/L10-3T20	0.118	3	0.787	0.625	0.625	4.500	1.516	0.625	0.637	0.157	3.69
CTER/L12-3T20	0.118	3	0.787	0.750	0.750	5.000	1.516	0.750	0.762	-	3.69
CTER/L16-3T20	0.118	3	0.787	1.000	1.000	6.000	1.516	1.000	1.012	-	3.69
CTER/L16-3T25	0.118	3	0.984	1.000	1.000	6.000	1.752	1.000	1.012	-	3.69
CTER/L10-4T10	0.157	4	0.394	0.625	0.625	4.500	1.260	0.625	0.645	0.157	6.27
CTER/L12-4T10	0.157	4	0.394	0.750	0.750	5.000	1.260	0.750	0.770	-	6.27
CTER/L16-4T10	0.157	4	0.394	1.000	1.000	6.000	1.260	1.000	1.020	-	6.27
CTER/L12-4T15	0.157	4	0.590	0.750	0.750	5.000	1.299	0.750	0.771	-	6.27
CTER/L16-4T15	0.157	4	0.590	1.000	1.000	6.000	1.299	1.000	1.019	-	6.27
CTER/L10-4T25	0.157	4	0.984	0.625	0.625	4.500	1.772	0.625	0.645	0.157	6.27
CTER/L12-4T25	0.157	4	0.984	0.750	0.750	5.000	1.772	0.750	0.770	-	6.27
CTER/L16-4T25	0.157	4	0.984	1.000	1.000	6.000	1.772	1.000	1.020	-	6.27
CTER/L20-4T25	0.157	4	0.984	1.250	1.250	7.000	1.772	1.250	1.270	-	6.27
CTER/L12-5T12	0.197	5	0.472	0.750	0.750	5.000	1.457	0.750	0.769	-	6.27
CTER/L16-5T12	0.197	5	0.472	1.000	1.000	6.000	1.457	1.000	1.019	-	6.27
CTER/L16-5T20	0.197	5	0.787	1.000	1.000	6.000	1.457	1.000	1.023	-	6.27
CTER/L16-5T32	0.197	5	1.260	1.000	1.000	6.000	2.205	1.000	1.019	-	6.27
CTER/L20-5T32	0.197	5	1.260	1.250	1.250	7.000	2.205	1.250	1.269	-	6.27
CTER/L12-6T12	0.236	6	0.472	0.750	0.750	5.000	1.457	0.750	0.770	-	8.85
CTER/L16-6T12	0.236	6	0.472	1.000	1.000	6.000	1.457	1.000	1.020	0.276	8.85
CTER/L16-6T20	0.236	6	0.787	1.000	1.000	6.000	1.614	1.000	1.023	0.276	8.85
CTER/L16-6T32	0.236	6	1.260	1.000	1.000	6.000	2.205	1.000	1.020	0.276	8.85
CTER/L20-6T32	0.236	6	1.260	1.250	1.250	7.000	2.205	1.250	1.270	-	8.85
CTER/L16-8T16	0.315	8	0.630	1.000	1.000	6.000	1.850	1.000	1.039	0.276	8.85
CTER/L16-8T25	0.315	8	0.984	1.000	1.000	6.000	1.850	1.000	1.039	0.276	8.85
CTER/L20-8T25	0.315	8	0.984	1.250	1.250	7.000	1.850	1.250	1.289	-	8.85
CTER/L16-8T36	0.315	8	1.417	1.000	1.000	6.000	2.362	1.000	1.039	0.276	8.85
CTER/L20-8T36	0.315	8	1.417	1.250	1.250	7.000	2.362	1.250	1.289	-	8.85

Metric	CW	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque*
CTER/L1616-2T08	2	2	8	16	16	110	33	16	16.1	4	5
CTER/L2020-2T08	2	2	8	20	20	125	33	20	20.1	-	5
CTER/L2525-2T08	2	2	8	25	25	150	33	25	25.1	-	5
CTER/L1616-2T12	2	2	12	16	16	110	32	16	16.1	4	5
CTER/L2020-2T12	2	2	12	20	20	125	32	20	20.1	-	5
CTER/L2525-2T12	2	2	12	25	25	150	32	25	25.1	-	5
CTER/L1616-2T17	2	2	17	16	16	110	37	16	16.1	4	5
CTER/L2020-2T17	2	2	17	20	20	125	37	20	20.1	-	5
CTER/L2525-2T17	2	2	17	25	25	150	37	25	25.1	-	5
CTER/L2525-2T20	2	2	20	25	25	150	38.5	25	25.1	-	5
CTER/L1616-3T09	3	3	9	16	16	110	32	16	16.3	4	5
CTER/L2020-3T09	3	3	9	20	20	125	32	20	20.3	-	5
CTER/L2525-3T09	3	3	9	25	25	150	32	25	25.3	-	5
CTER/L1616-3T12	3	3	12	16	16	110	32	16	16.3	4	5
CTER/L2020-3T12	3	3	12	20	20	125	32	20	20.3	-	5
CTER/L2525-3T12	3	3	12	25	25	150	32	25	25.3	-	5
CTER/L1616-3T20	3	3	20	16	16	110	38.5	16	16.3	4	5

Metric	CW	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque*
CTER/L2020-3T20	3	3	20	20	20	125	38.5	20	20.3	-	5
CTER/L2525-3T20	3	3	20	25	25	150	38.5	25	25.3	-	5
CTER/L2525-3T25	3	3	25	25	25	150	44.5	25	25.3	-	5
CTER/L1616-4T10	4	4	10	16	16	110	32	16	16.5	4	8.5
CTER/L2020-4T10	4	4	10	20	20	125	32	20	20.5	-	8.5
CTER/L2525-4T10	4	4	10	25	25	150	32	25	25.5	-	8.5
CTER/L2020-4T15	4	4	15	20	20	125	33	20	20.5	-	8.5
CTER/L2525-4T15	4	4	15	25	25	150	33	25	25.5	-	8.5
CTER/L1616-4T25	4	4	25	16	16	110	45	16	16.5	4	8.5
CTER/L2020-4T25	4	4	25	20	20	125	45	20	20.5	-	8.5
CTER/L2525-4T25	4	4	25	25	25	150	45	25	25.5	-	8.5
CTER/L3232-4T25	4	4	25	32	32	170	45	32	32.5	-	8.5
CTER/L2020-5T12	5	5	12	20	20	125	37	20	20.6	-	8.5
CTER/L2525-5T12	5	5	12	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T17	5	5	17	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T20	5	5	20	25	25	150	37	25	25.6	-	8.5
CTER/L2525-5T32	5	5	32	25	25	150	56	25	25.6	-	8.5
CTER/L3232-5T32	5	5	32	32	32	170	56	32	32.6	-	8.5
CTER/L2020-6T12	6	6	12	20	20	125	37	20	20.6	-	12
CTER/L2525-6T12	6	6	12	25	25	150	37	25	25.6	7	12
CTER/L2525-6T16	6	6	16	25	25	150	39	25	25.6	7	12
CTER/L2525-6T20	6	6	20	25	25	150	41	25	25.6	7	12
CTER/L2525-6T25	6	6	25	25	25	150	47	25	25.6	7	12
CTER/L2525-6T32	6	6	32	25	25	150	56	25	25.6	7	12
CTER/L3232-6T32	6	6	32	32	32	170	56	32	32.6	-	12
CTER/L2525-8T16	8	8	16	25	25	150	47	25	26.1	7	12
CTER/L2525-8T25	8	8	25	25	25	150	47	25	26.1	7	12
CTER/L3232-8T25	8	8	25	32	32	170	47	32	33.1	-	12
CTER/L3232-8T32	8	8	32	32	32	170	56	32	33.1	-	12
CTER/L2525-8T36	8	8	36	25	25	150	60	25	26.1	7	12
CTER/L3232-8T36	8	8	36	32	32	170	60	32	33.1	-	12

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

SPARE PARTS

Designation	Clamping screw	Wrench
CTER/L10-2T08, CTER/L1616-2T08	CM5X0.8X16-A	P-4
CTER/L12-2T08, CTER/L2020-2T08	CM5X0.8X20-A	P-4
CTER/L16-2T08, CTER/L2525-2T08	CM5X0.8X25-A	P-4
CTER/L10-2T12, CTER/L1616-2T12	CM5X0.8X16-A	P-4
CTER/L12-2T12, CTER/L2020-2T12	CM5X0.8X20-A	P-4
CTER/L16-2T12, CTER/L2525-2T12	CM5X0.8X25-A	P-4
CTER/L10-2T17, CTER/L1616-2T17	CM5X0.8X16-A	P-4
CTER/L12-2T17, CTER/L2020-2T17	CM5X0.8X20-A	P-4
CTER/L16-2T17, CTER/L2525-2T17	CM5X0.8X25-A	P-4
CTER/L2525-2T20	CM5X0.8X25-A	P-4
CTER/L10-3T09, CTER/L1616-3T09	CM5X0.8X16-A	P-4
CTER/L12-3T09, CTER/L2020-3T09	CM5X0.8X20-A	P-4
CTER/L16-3T09, CTER/L2525-3T09	CM5X0.8X25-A	P-4
CTER/L1616-3T12	CM5X0.8X16-A	P-4
CTER/L12-3T12, CTER/L2020-3T12	CM5X0.8X20-A	P-4
CTER/L16-3T12, CTER/L2525-3T12	CM5X0.8X25-A	P-4
CTER/L10-3T20, CTER/L1616-3T20	CM5X0.8X16-A	P-4
CTER/L12-3T20, CTER/L2020-3T20	CM5X0.8X20-A	P-4
CTER/L16-3T20, CTER/L2525-3T20	CM5X0.8X25-A	P-4
CTER/L16-3T25, CTER/L2525-3T25	CM5X0.8X25-A	P-4
CTER/L10-4T10, CTER/L1616-4T10	CM6X1X16-A	P-5
CTER/L12-4T10, CTER/L2020-4T10	CM6X1X20-A	P-5
CTER/L16-4T10, CTER/L2525-4T10	CM6X1X25-A	P-5
CTER/L12-4T15, CTER/L2020-4T15	CM6X1X20-A	P-5

SPARE PARTS

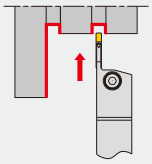
Designation	Clamping screw	Wrench
CTER/L16-4T15, CTER/L2525-4T15	CM6X1X25-A	P-5
CTER/L10-4T25, CTER/L1616-4T25	CM6X1X16-A	P-5
CTER/L12-4T25, CTER/L2020-4T25	CM6X1X20-A	P-5
CTER/L16-4T25, CTER/L2525-4T25	CM6X1X25-A	P-5
CTER/L20-4T25, CTER/L3232-4T25	CM6X1X25-A	P-5
CTER/L12-5T12, CTER/L2020-5T12	CM6X1X20-A	P-5
CTER/L16-5T12, CTER/L2525-5T12	CM6X1X25-A	P-5
CTER/L2525-5T17	CM6X1X25-A	P-5
CTER/L16-5T20, CTER/L2525-5T20	CM6X1X25-A	P-5
CTER/L16-5T32, CTER/L2525-5T32	CM6X1X25-A	P-5
CTER/L20-5T32, CTER/L3232-5T32	CM6X1X25-A	P-5
CTER/L12-6T12, CTER/L2020-6T12	CM8X1.25X20-A	P-6
CTER/L16-6T12, CTER/L2525-6T12	CM8X1.25X25-A	P-6
CTER/L2525-6T16	CM8X1.25X25-A	P-6
CTER/L16-6T20, CTER/L2525-6T20	CM8X1.25X25-A	P-6
CTER/L2525-6T25	CM8X1.25X25-A	P-6
CTER/L16-6T32, CTER/L2525-6T32	CM8X1.25X25-A	P-6
CTER/L20-6T32, CTER/L3232-6T32	CM8X1.25X25-A	P-6
CTER/L16-8T16, CTER/L2525-8T16	CM8X1.25X25-A	P-6
CTER/L16-8T25, CTER/L2525-8T25	CM8X1.25X25-A	P-6
CTER/L20-8T25, CTER/L3232-8T25	CM8X1.25X25-A	P-6
CTER/L3232-8T32	CM8X1.25X25-A	P-6
CTER/L16-8T36, CTER/L2525-8T36	CM8X1.25X25-A	P-6
CTER/L20-8T36, CTER/L3232-8T36	CM8X1.25X25-A	P-6

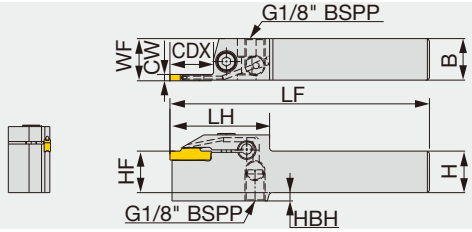
Reference pages: Inserts → F030 - F044, Standard cutting conditions → F045

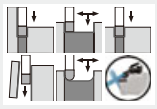
CTER/L-CHP

Tube connection

External grooving and parting toolholder, with high pressure coolant capability







Right hand (R) shown.

Inch	CW	Seat size	CDX	H	B	LF	LH	HF	WF (1)	HBH	Torque
CTER/L12-2T17-CHP	0.079	2	0.669	0.750	0.750	5.000	1.772	0.750	0.754	0.157	4.06
CTER/L16-2T17-CHP	0.079	2	0.669	1.000	1.000	6.000	1.772	1.000	1.004	-	4.06
CTER/L12-3T25-CHP	0.118	3	0.984	0.750	0.750	5.000	2.008	0.750	0.762	0.157	4.06
CTER/L16-3T25-CHP	0.118	3	0.984	1.000	1.000	6.000	2.008	1.000	1.012	-	4.06
CTER/L16-4T25-CHP	0.157	4	0.984	1.000	1.000	6.000	2.170	1.000	1.020	-	5.9
CTER/L16-5T32-CHP	0.197	5	1.260	1.000	1.000	6.000	2.323	1.000	1.022	-	5.9
CTER/L16-6T32-CHP	0.236	6	1.260	1.000	1.000	6.000	2.441	1.000	1.023	0.276	8.85

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

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

INCH SPARE PARTS


Designation	Clamping screw	Wrench
CTER/L12-2T17-CHP	CM5X0.8X20-A	P-4
CTER/L16-2T17-CHP	CM5X0.8X20-A	P-4
CTER/L12-3T25-CHP	CM5X0.8X25-A	P-4
CTER/L16-3T25-CHP	CM5X0.8X25-A	P-4
CTER/L16-4T25-CHP	CM6X1X16-A	P-5
CTER/L16-5T32-CHP	CM6X1X16-A	P-5
CTER/L16-6T32-CHP	CM8X1.25X20-A	P-6

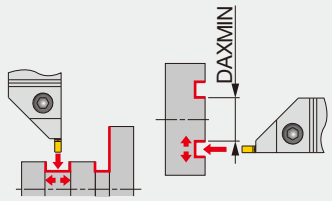
METRIC SPARE PARTS

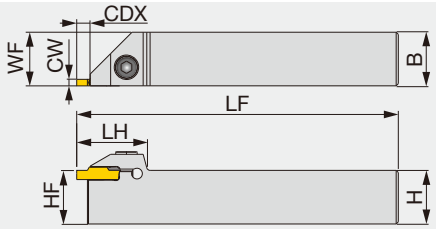

Designation	Clamping screw	Wrench
CTER/L2020-2T17-CHP	CM5x0.8x20-A	P-4
CTER/L2525-2T17-CHP	CM5x0.8x25-A	P-4
CTER/L2020-3T20-CHP	CM5x0.8x20-A	P-4
CTER/L2525-3T20-CHP	CM5x0.8x25-A	P-4
CTER/L2525-3T25-CHP	CM5x0.8x25-A	P-4
CTER/L2525-4T25-CHP	CM6x1x16-A	P-5
CTER/L2525-5T20-CHP	CM6x1x16-A	P-5
CTER/L2525-6T20-CHP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

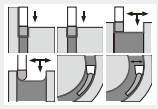
Reference pages: Inserts → F030 - F044, Standard cutting conditions → F045
Parts for coolant hose → F290

CTEFR/L

External face grooving and turning toolholder







Right hand (R) shown.

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

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

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

INCH SPARE PARTS

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

METRIC 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

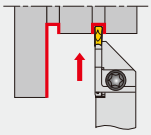
Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DGM / DGS / SGN / DGL	0.079	11.614
DGM / DGS / SGN / DGL	0.118	3.622
DGM / DGS / SGN / DGL	0.157	1.457
DGM / DGS / SGN / DGL	0.197	2.362
DGM / DGS / DGL	0.236	2.244
DTX / DTM / DTR	0.079	11.614
DTE / DGG / DTM	0.118	2.441
DTE / DGG / DTM	0.157	1.654
DTE / DGG / DTM	0.197	2.520
DTE / DGG / DTM	0.236	2.402
DTR	0.118	1.732
DTR	0.157	1.260
DTR	0.197	1.890
DTR	0.236	1.890
DTX	0.118	0.866
DTX	0.157	0.787
DTX	0.197	0.787
DTX	0.236	0.906
DTF	0.118	0.787
DTF	0.157	0.787

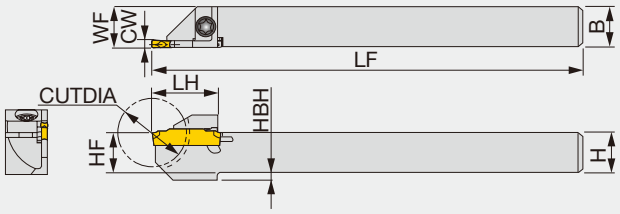
Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG /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

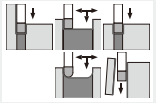
Reference pages: Inserts → F030 - F044, Standard cutting conditions → F045

JCTER/L

External grooving and parting toolholder, for Swiss lathes







Right hand (R) shown.

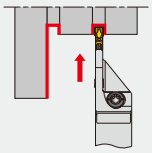
Inch	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF(1)	HBH	Torque
JCTER/L08-2T12	0.079	2	0.945	0.500	0.500	4.750	0.748	0.500	0.504	0.051	2.21
JCTER/L08-3T12	0.118	3	0.945	0.500	0.500	4.750	0.748	0.500	0.512	0.051	2.21
JCTER/L10-2T16	0.079	2	1.260	0.625	0.625	4.750	0.945	0.625	0.629	-	2.21
JCTER/L10-3T16	0.118	3	1.260	0.625	0.625	4.750	0.945	0.625	0.637	-	2.21

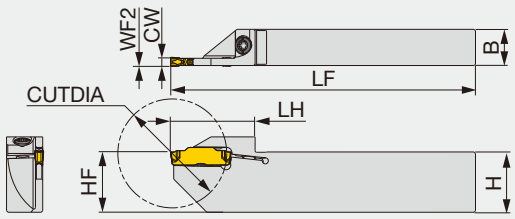
Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF(1)	HBH	Torque*
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	10.2	-	3
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	12.2	-	3
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	12.2	-	3
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	14.2	-	3
JCTER/L1616X1.4T16	1.4	1	32	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

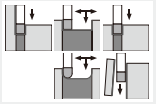
(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: lbs·ft (*N·m)

JCTER/L2012

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







Right hand (R) shown.

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

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

SPARE PARTS

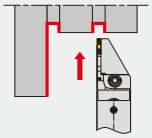
Designation	Clamping screw	Wrench
JCTER/L...	CSHB-4-A	T-15F

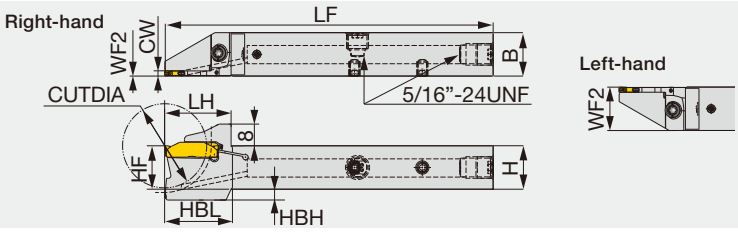
Reference pages: Inserts → F030 - F044, Standard cutting conditions → F045

JCTER/L-CHP

Direct connection

External grooving and parting toolholder, with high pressure coolant capability





Inch	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Torque
JCTER/L08X2T12-CHP	0.079	2	0.980	0.500	0.500	4.750	0.972	0.500	0 / 0.500	0.169	0.965	2.21
JCTER/L10X2T12-CHP	0.079	2	0.980	0.625	0.625	4.750	0.972	0.625	0 / 0.625	0.039	0.965	2.21
JCTER/L10X2T16-CHP	0.079	2	1.260	0.625	0.625	4.750	0.972	0.625	0 / 0.625	0.157	0.965	2.21
JCTER/L12X2T16-CHP	0.079	2	1.260	0.750	0.750	4.750	0.972	0.750	0 / 0.750	0.037	0.965	2.21

Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Torque*
JCTER/L1212X2T12-CHP	2	2	25	12	12	120	24.7	12	0/12	5	24.7	3
JCTER/L1616X2T12-CHP	2	2	25	16	16	120	24.7	16	0/16	1	24.5	3
JCTER/L1616X2T16-CHP	2	2	32	16	16	120	24.7	16	0/16	4	24.7	3
JCTER/L2020X2T16-CHP	2	2	32	20	20	120	24.7	20	0/20	-	-	3

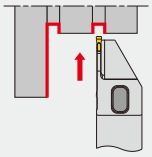
(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Torque: Recommended clamping torque: lbs·ft (*N·m)

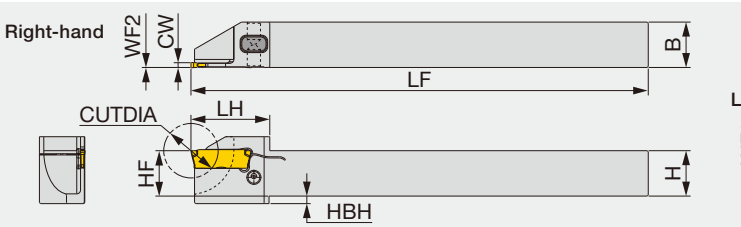
SPARE PARTS

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

JTTER/L

External grooving and parting toolholder, for Swiss lathes





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

(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Torque: Recommended clamping torque: N·m

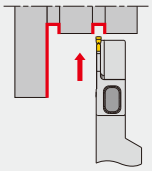
SPARE PARTS

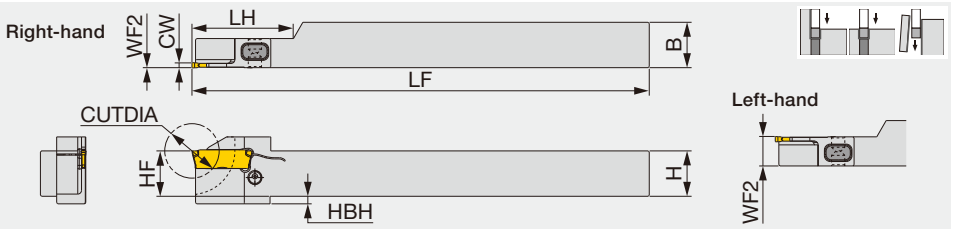
Designation	Clamping screw	Clamping pin	Wrench
JTTER/L1010...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1212...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1616...	SRM5-24145-RL	PIN-32121	P-2.5F

Reference pages: Inserts → F030 - F044, Standard cutting conditions → F045
Parts for coolant hose → F290

JTTER/L-S

External grooving and parting toolholder, for Swiss lathes (for sub spindle)





Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	Torque
JTTER/L1010H1.2D12-S	1.2	0.9	12	10	10	100	22.8	10	0/7.7	-	1.5
JTTER1212F1.2D16-S (2)	1.2	0.9	16	12	12	85	22.8	12	0	-	1.5
JTTER/L1212X1.2D16-S	1.2	0.9	16	12	12	120	26.8	12	0/7.7	-	1.5
JTTER/L1212X1.2D20-S	1.2	0.9	20	12	12	120	26.8	12	0/7.7	2	1.5
JTTER/L1616X1.2D20-S	1.2	0.9	20	16	16	120	26.8	16	0/7.7	-	1.5

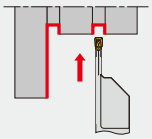
(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(2) No clamping screw from the insert side.
Torque: Recommended clamping torque: N·m

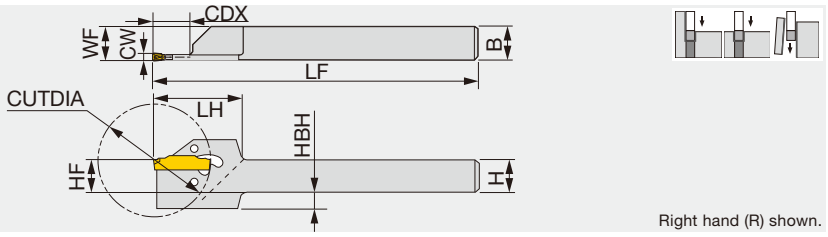
SPARE PARTS

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

CGER/L

External deep grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

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

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

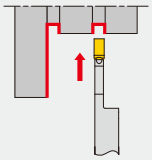
SPARE PARTS

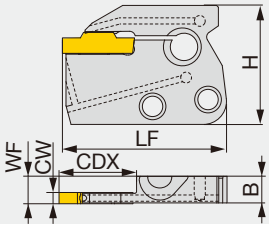
Designation	Wrench (Option)
CGER/L2020-1.4T14	CRW23
CGER/L****-2T17 - 4T19	CRW33

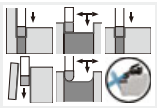
Reference pages: Inserts → F030 - F044, Standard cutting conditions → F045

CAER/L-CHP

External grooving and parting adapter, with high pressure coolant capability







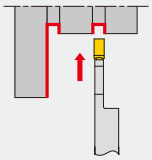
Right hand (R) shown.

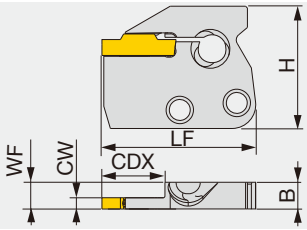
Metric	CW	Seat size	CDX	H	B	LF	WF (1)
CAER/L-2T16-CHP	2	2	16	33	7.2	41.5	7.3
CAER/L-2T20-CHP	2	2	20	33	7.2	45.5	7.3
CAER/L-3T16-CHP	3	3	16	33	7.2	41.5	7.4
CAER/L-3T20-CHP	3	3	20	33	7.2	45.5	7.5
CAER/L-4T16-CHP	4	4	16	33	7.2	41.5	7.7
CAER/L-4T20-CHP	4	4	20	33	7.2	45.5	7.7
CAER/L-5T20-CHP	5	5	20	33	7.2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

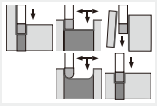
When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
(1) WF is calculated with the groove width (CW) in the above table.

CAER/L-MD

External grooving and parting adapter







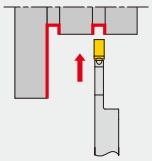
Right hand (R) shown.

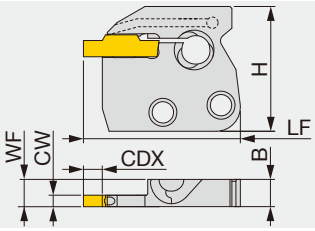
Metric	CW	Seat size	CDX	H	B	LF	WF (1)
CAER/L-2T16-MD	2	2	16	33	7.2	41.5	7.3
CAER/L-3T16-MD	3	3	16	33	7.2	41.5	7.4
CAER/L-4T16-MD	4	4	16	33	7.2	41.5	7.7
CAER/L-5T20-MD	5	5	20	33	7.2	46.3	7.8
CAER/L-6T20-MD	6	6	20	33	7.2	46.3	7.8
CAER/L-8T25-MD	8	8	25	33	7.2	51.1	8.3

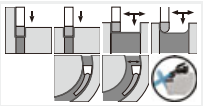
(1) WF is calculated with the groove width (CW) in the above table.

CAEFR/L-CHP

Face and external grooving adapter, with high pressure coolant capability







Right hand (R) shown.

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

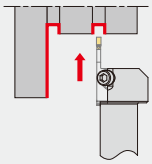
Use the right-hand insert for the right-hand holder with DTF insert.
(1) "WF" value is calculated with groove width "CW" shown in the table.

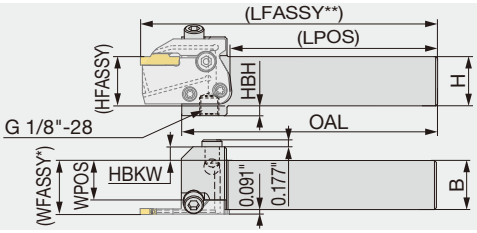
Reference pages: Inserts → F030 - F044, Shanks and toolholders → F024 - F026
Standard cutting conditions → F045, Technical Reference → L059

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190	CAE*R/L**-CHP, -MD	3.69
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200	CAE*R/L**-CHP, -MD	3.69

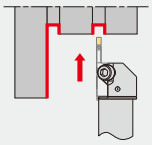
Metric	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	CAE*R/L**-CHP, -MD	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	CAE*R/L**-CHP, -MD	6.5

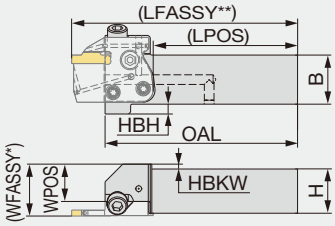
WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

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

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

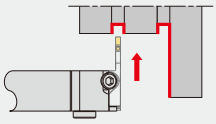
Shank	External grooving adapter		Face grooving adapter		External and face grooving adapter	
	CAER**-CHP, -MD	CAEL**-CHP, -MD	CAFR**-CHP	CAFL**-CHP	CAEFR**-CHP	CAEFL**-CHP
CHSR**-CHP (-MC)	●			●	●	
CHSL**-CHP (-MC)		●	●			●

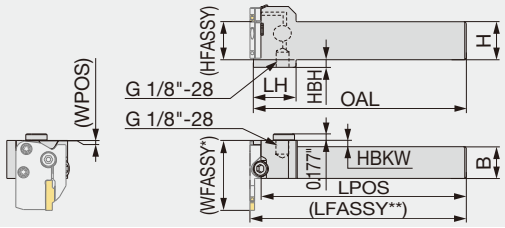
● : Corresponding

Reference pages: Inserts → F030 - F044, Adapters → F023, Standard cutting conditions → F045
Parts for coolant hose → F290, Technical Reference → L059

CHFVR/L-CHP

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





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

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431	CAE*L/R**-CHP, -MD	3.69
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200	CAE*L/R**-CHP, -MD	3.69

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

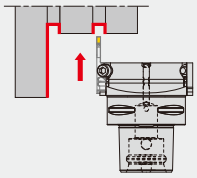
● : Corresponding

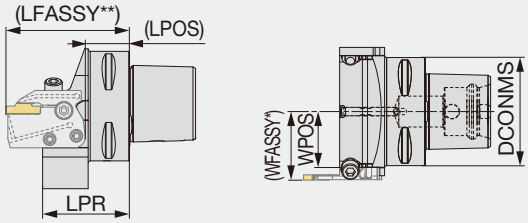
Reference pages: Inserts → F030 - F044, Adapters → F023, Standard cutting conditions → F045
Parts for coolant hose → F290, Technical Reference → L059

C*CHSN-CHP

Direct connection

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





Right-hand (R) adapter shown.

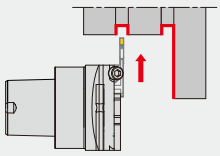
Metric	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque
C3CHSN19045-CHP	32	45	17.5	18.5	CAE*R/L**-CHP, -MD	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	CAE*R/L**-CHP, -MD	6.5
C5CHSN26047-CHP	50	47	22.5	26	CAE*R/L**-CHP, -MD	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	CAE*R/L**-CHP, -MD	6.5

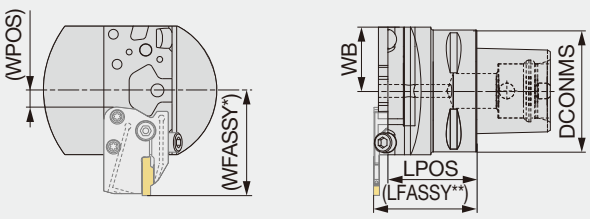
WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

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





Left-hand (L) adapter shown.

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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

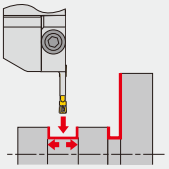
Recommended clamping torque (N·m)

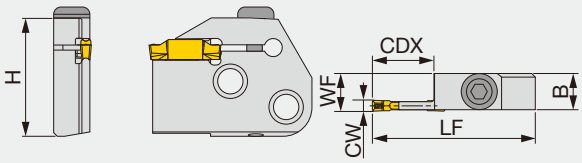
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

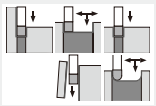
Reference pages: Inserts → F030 - F044, Adapters → F023, Standard cutting conditions → F045
Technical Reference → L059

CAER/L

External grooving, parting and turning adapter







Right hand (R) shown.

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

Torque: Recommended clamping torque: N·m
Not compatible with TungModularSystem
When groove depth is larger than insert length - 1.5 mm, please use 1-cornered insert.

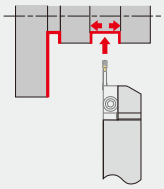
SPARE PARTS

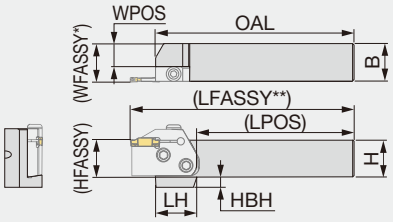
Designation	Clamping screw	Wrench
CAER/L...	BHM6-20-A	P-4

Reference pages: Inserts → F030 - F044, Shanks and toolholders → F028, F029
Standard cutting conditions → F045

CHSR/L

Shank for adapter





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

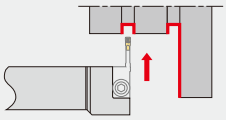
Inch	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Adapter (Option)
CHSR/L12-U	0.750	0.750	5.330	4.227	1.380	0.356	0.750	0.502	CAER/L...
CHSR/L16-U	1.000	1.000	5.330	4.227	1.100	0.606	1.000	0.280	CAER/L...
CHSR/L20-U	1.250	1.250	6.330	5.227	-	0.856	1.250	-	CAER/L...

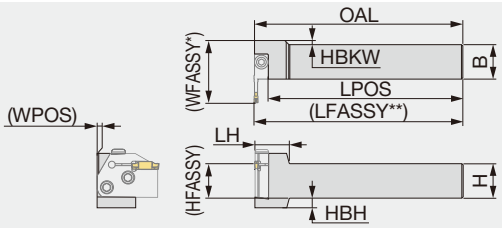
Metric	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Adapter (Option)
CHSR/L2020	20	20	133	105	35	10	20	12	CAER/L...
CHSR/L2525	25	25	133	105	28	15	25	7	CAER/L...
CHSR/L3232	32	32	153	125	-	22	32	-	CAER/L...

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Not compatible with TungModularSystem

CHFVR/L

Shank for adapter, perpendicularly mounted





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

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

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Not compatible with TungModularSystem

SPARE PARTS

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

Combination of adapter and shank

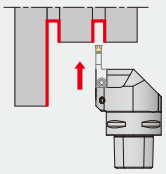
Shank	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

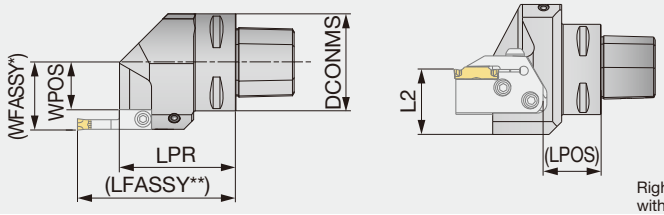
● : Corresponding

Reference pages: Inserts → F030 - F044, Adapters → F027, Standard cutting conditions → F045

C-CHSR/L

Toolholder with TungCap connection for adapter





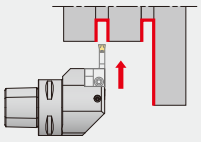
Right hand (R)
with right-hand adapter shown.

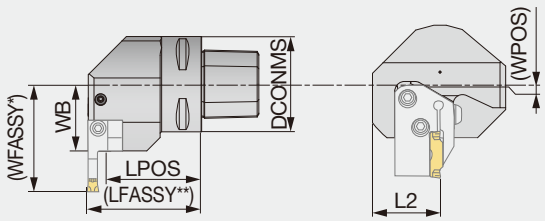
Metric	DCONMS	LPR	LPOS	L2	WPOS	Adapter (Option)
C3CHSR/L22050N	32	50	22.1	35	11.5	CAER/L...
C4CHSR/L27050N	40	50	22.1	36	16.5	CAER/L...
C5CHSR/L35060N	50	60	32.1	36	24.5	CAER/L...
C6CHSR/L45065N	63	65	32.1	41	34.5	CAER/L...

WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type. If needed, the coolant direction can be adjusted by the nozzle.
Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

C-CHFVR/L

Toolholder with TungCap connection for adapter, perpendicularly mounted





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

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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type. If needed, the coolant direction can be adjusted by the nozzle.
Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

SPARE PARTS

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

Combination of adapter and toolholder

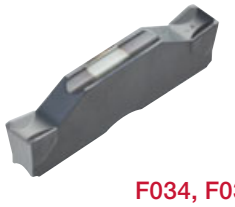
Toolholder	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

● : Corresponding

Reference pages: Inserts → F030 - F044, Adapters → F027, Standard cutting conditions → F045

External grooving and parting

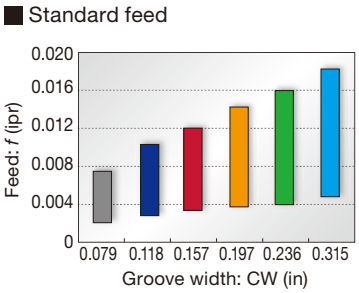
DGM type (2 corners) SGM type (1 corner)

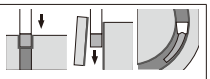


F034, F035

1st choice for grooving and parting

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



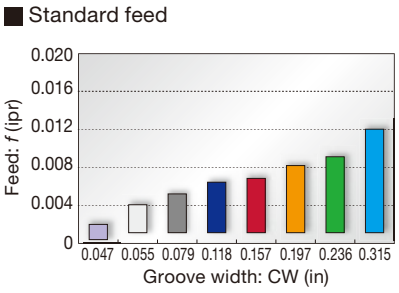


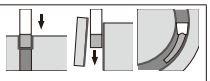
DGS type (2 corners) SGS type (1 corner)

F036, F037

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 0.047" - 0.315"



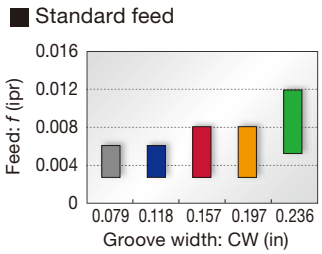


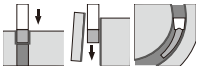
DGL type (2 corners)

F037

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel which often presents challenges in chip control
CW = 0.079" - 0.236"



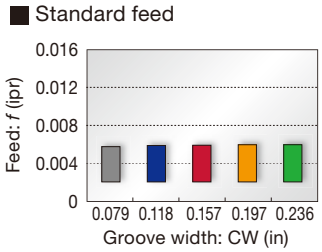


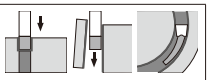
DGG type (2 corners)

F038

For non-ferrous materials and titanium

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



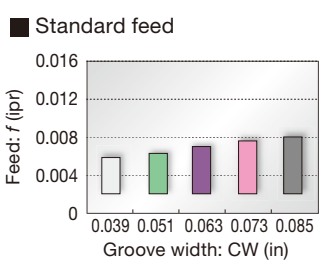


DGE type (2 corners)

F038

For high accurate and shallow groove

Excellent chip control
CW = 0.039" - 0.085"



External
Internal
Face
Parting
Others

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

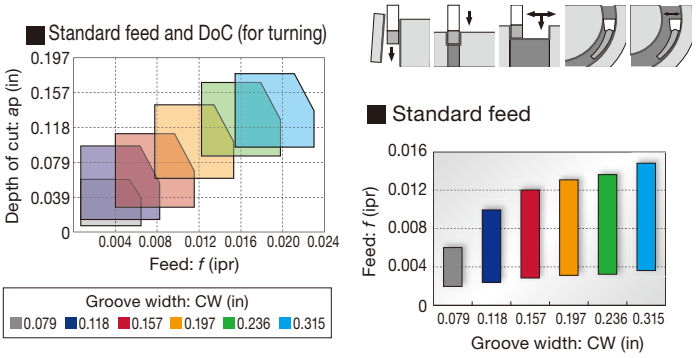
External and face grooving, and turning

DTM type (2 corners)

F039

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.079" - 0.315"

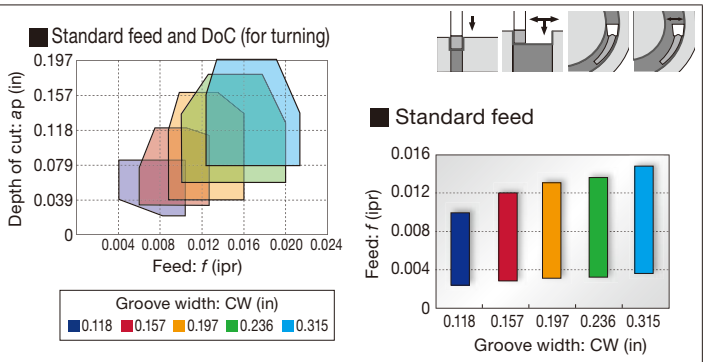


DTE type (2 corners)

F039, F040

General purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 0.104" - 0.315"



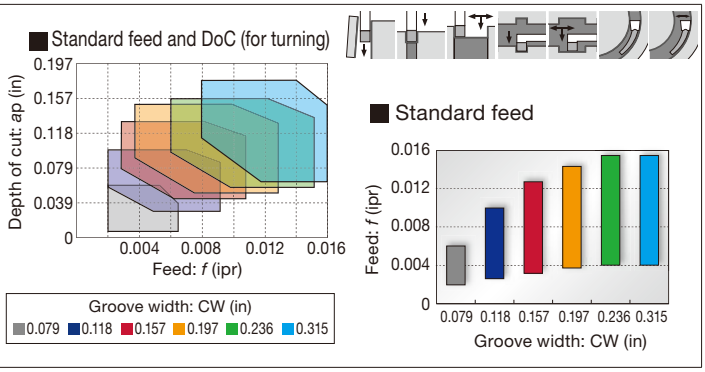
External, internal and face grooving, and turning

DTX type (2 corners)

F040

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.079" - 0.315"



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

Profiling and undercutting

DTR type (2 corners)
STR type (1 corner)

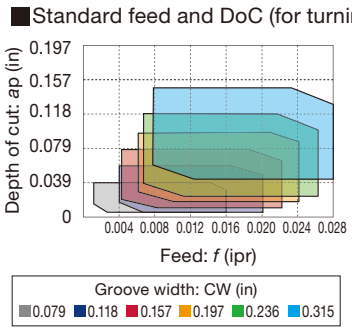
Molded
DTR, STR

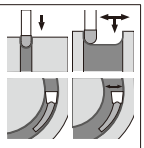
Ground
DTR

F041, F042

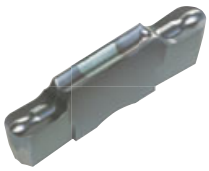
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.079" - 0.315"





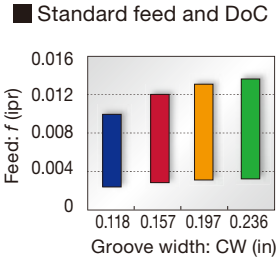
DTIU type
(2 corners)

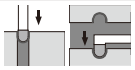


F042

Full radius type

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





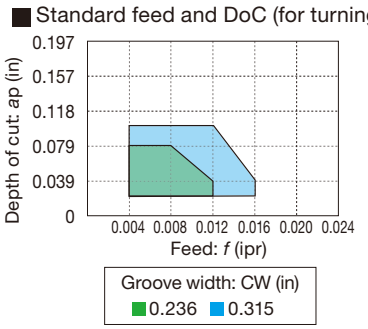
Aluminum wheel machining

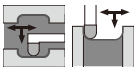
DTA type
(2 corners)

F043

Full radius type

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





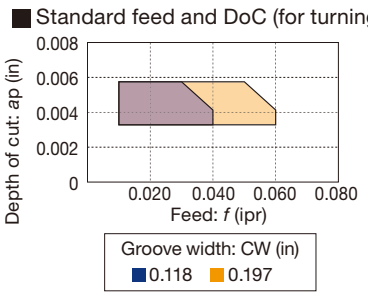
For high feed external and face turning of hardened steel parts

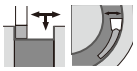
STH type
(1 corner)

F043

External and face turning of hardened steel parts

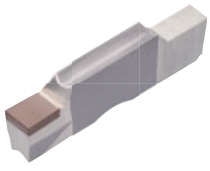
High efficiency machining using light D.O.C. and increased feeds
CW = 0.118", 0.197"





External grooving of hardened steel

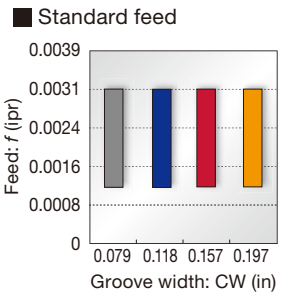
SGN-CBN type
(1 corner)

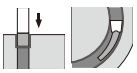


F044

For hardened steel cutting

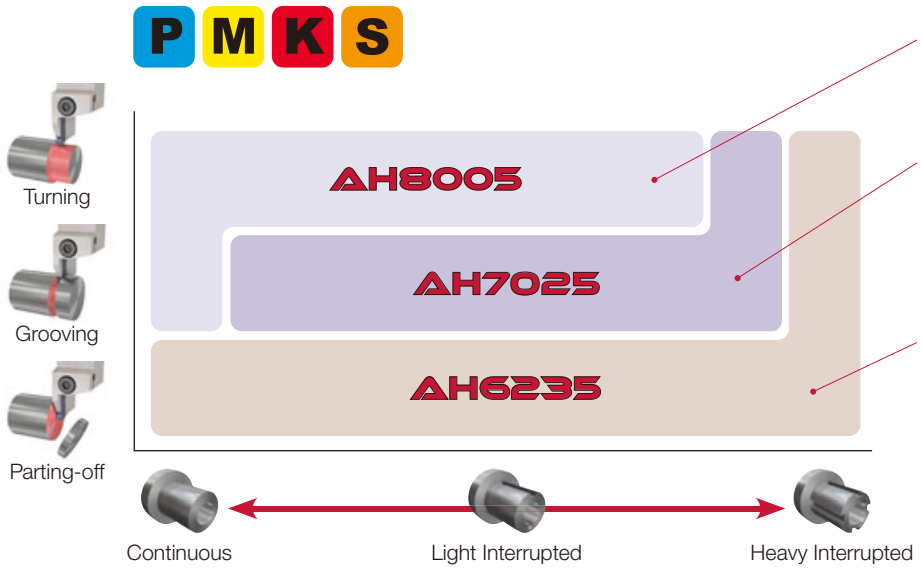
Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.197"
(Tol. ±0.001")





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

GRADE SELECTION



GRADES

AH8005 P M K S
- First choice for external, internal, and side-turning, continuous cuts

AH7025 P M K S
- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235 P M K
- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725 P M S
- General purpose PVD grade for high fracture resistance

T515 K
- First recommended grade for cast iron
- Excellent wear resistance in high speed machining

T9225 P
- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P
- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K
- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S
- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S
- Recommended for non-ferrous materials and titanium

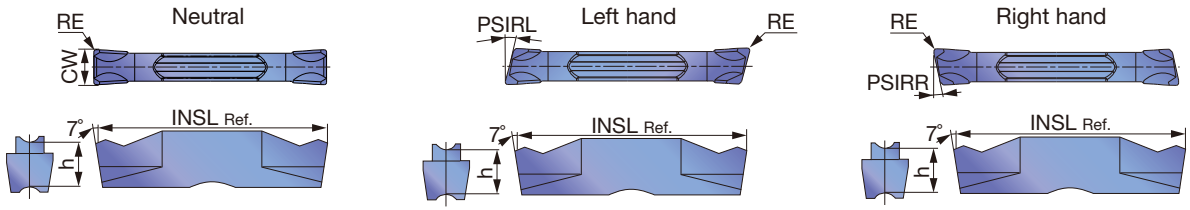
TH10 N
- Recommended for non-ferrous materials

BXA10 H
- Coated CBN grade designed for turning hardened steel parts

BX360 H
- Developed for grooving applications of hardened steel parts

DGM

External grooving and parting



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

★ : First choice
☆ : Second choice

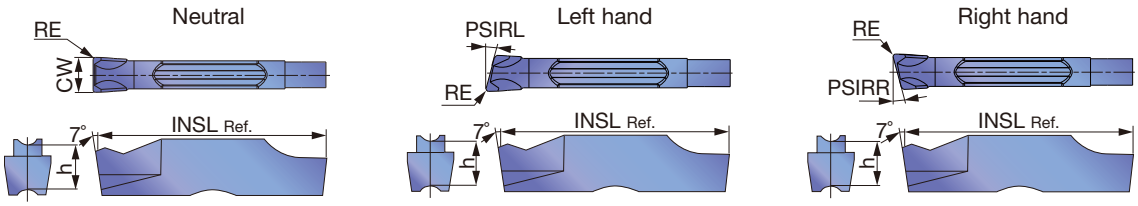
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet			Un-coated		INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530			KS05F					
DGM2-020	2	N	2	0.079	0.008	●	●	●	●		●	●	●			●		0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008		●	●			●							0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008		●	●			●							0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008		●	●			●							0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008		●	●			●							0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008		●	●			●							0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008		●	●			●							0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008			●			●							0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008			●			●							0.762	0.197	15°	0°
DGM2.39-020	2	N	2.39	0.094	0.008		●		●			●						0.787	0.197	0°	0°
DGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●			●		0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008		●	●			●							0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008		●	●			●							0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.008			●			●							0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.008			●			●							0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008		●	●			●							0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008		●	●			●							0.787	0.197	15°	0°
DGM3.18-020	3	N	3.18	0.125	0.008		●		●			●						0.787	0.197	0°	0°
DGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●			●		0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012		●	●			●							0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012		●	●			●							0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012		●	●			●							0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012		●	●			●							0.787	0.197	15°	0°
DGM4.76-040	5	N	4.76	0.187	0.016		●		●			●						0.984	0.217	0°	0°
DGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●			●		0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012		●	●			●							0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	●				●		0.984	0.217	0°	0°
DGM6.35-040	6	N	6.35	0.250	0.016		●		●			●						0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	●	●	●		●	●				●		1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

SGM

External deep grooving and parting



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

★ : First choice
☆ : Second choice

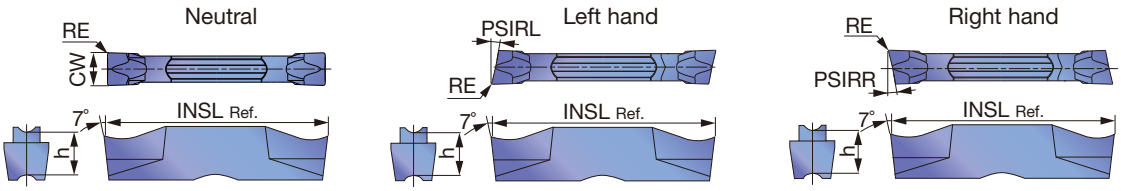
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated					Uncoated					INSL (in)	h (in)	PSIRL	PSIRR
						AH7025	AH725	AH8005	GH130	AH6235	KS05F								
SGM2-020	2	N	2	0.079	0.008	●	●	●	●	●	●					0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●		●							0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●		●							0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●					0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●		●							0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●		●							0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●		●							0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●		●							0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●					0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●		●							0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●		●							0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●					0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●					0.984	0.217	0°	0°
SGM8-040	8	N	8	0.315	0.016	●		●		●	●					1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

DGS

External grooving and parting



		T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F
P	Steel	★	★	☆	★	☆	★	★	
M	Stainless		★	☆	★	★	★		
K	Cast iron		★		★	☆	★	☆	☆
N	Non-ferrous								☆
S	Superalloys		★	☆	★				★
H	Hard materials								

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet			Uncoated			INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530			KS05F						
DGS1.2-003	0.9	N	1.2	0.047	0.0012			●										0.630	0.185	0°	0°
DGS1.4-005	1	N	1.4	0.055	0.002			●										0.630	0.169	0°	0°
DGS1.4-010	1	N	1.4	0.055	0.004			●										0.630	0.169	0°	0°
DGS1.4-016	1	N	1.4	0.055	0.006		●	●		●								0.630	0.169	0°	0°
DGS2-005	2	N	2	0.079	0.002			●										0.787	0.197	0°	0°
DGS2-010	2	N	2	0.079	0.004			●										0.787	0.197	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008		●	●		●								0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008		●	●		●								0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008			●		●								0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008			●		●								0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008		●	●		●								0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008		●	●		●								0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008			●		●								0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008			●		●								0.768	0.197	15°	0°
DGS2.39-020	2	N	2.39	0.094	0.008		●		●		●							0.787	0.197	0°	0°
DGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008		●	●		●								0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008		●	●		●								0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008			●		●								0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008			●		●								0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008		●	●		●								0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008		●	●		●								0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008			●		●								0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008			●		●								0.766	0.197	15°	0°
DGS3.18-020	3	N	3.18	0.125	0.008		●		●		●							0.787	0.197	0°	0°
DGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012		●	●		●								0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012		●	●		●								0.787	0.197	4°	0°
DGS4.76-040	5	N	4.76	0.187	0.016		●		●		●							0.984	0.217	0°	0°
DGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●			●			0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●				●			0.984	0.217	0°	0°
DGS6.35-040	6	N	6.35	0.250	0.016		●		●		●							0.984	0.217	0°	0°
DGS8-040	8	N	8	0.315	0.016		●		●		●				●			1.181	0.264	0°	0°

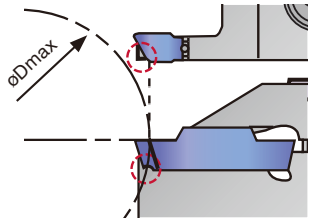
● : Line up

Caution

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

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

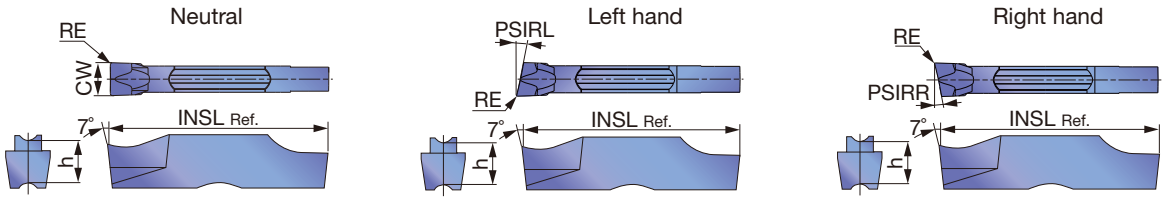
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338



Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

SGS

External deep grooving and parting



		AH7025	AH725	AH8005	GH130	AH6235	KS05F
P	Steel	★	☆	★	☆	★	
M	Stainless	★	☆	★	★	★	
K	Cast iron	★		★	☆	★	☆
N	Non-ferrous						☆
S	Superalloys	★	☆	★			★
H	Hard materials						

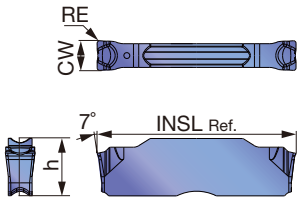
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated AH8005	Coated GH130	Coated AH6235	Uncoated KS05F	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●		●			0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●		●			0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●		●			0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●		●			0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS8-040	8	N	8	0.315	0.016	●		●		●		1.181	0.264	0°	0°

● : Line up

DGL

External grooving and parting



		AH7025	AH8005	AH6235
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	
H	Hard materials			

★ : First choice
☆ : Second choice

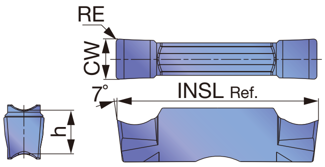
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Coated AH6235	INSL (in)	h (in)
DGL2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGL3-025	3	3	0.118	0.010	●	●	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	●	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	●	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	●	●	0.984	0.217

● : Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

DGG

External grooving (for high precision)



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

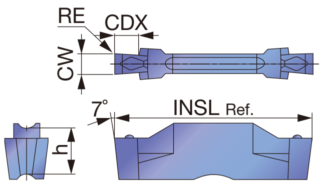
★ : First choice
☆ : Second choice

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

●: Line up

DGE

External grooving (for high precision)



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

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated: AH7025	Coated: AH725	Coated: GH130	Cermet: NS9530	CDX (in)	INSL (in)	h (in)
DGE100-000	2	1	0.039	0		●	●	●	0.098	0.787	0.197
DGE130-000	2	1.3	0.051	0		●	●	●	0.098	0.787	0.197
DGE160-010	2	1.6	0.063	0.004	●	●	●	●	0.098	0.787	0.197
DGE185-010	2	1.85	0.073	0.004	●	●	●	●	0.138	0.787	0.197
DGE215-015	2	2.15	0.085	0.006	●	●	●	●	0.138	0.787	0.197

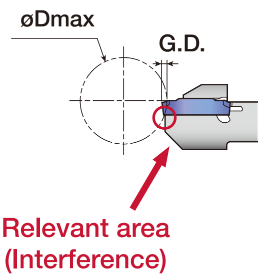
●: Line up

Caution

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

G.D = Groove depth

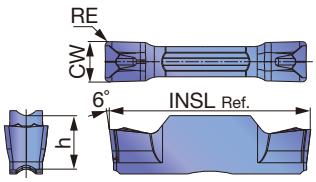
Designation	Max. groove depth (in)	øDmax (in) G.D. = 0.039	G.D. = 0.059	G.D. = 0.079	G.D. = 0.098	G.D. = 0.118
DGE100-000	0.079	∞	0.732	0.453	-	-
DGE130-000						
DGE160-010						
DGE185-010	0.118				0.346	0.276
DGE215-015						



Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

DTM

External face grooving and turning



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

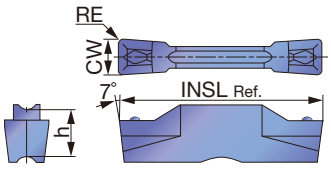
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Coated AH6235	INSL (in)	h (in)
DTM2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DTM3-030	3	3	0.118	0.012	●	●	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	●	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	●	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	●	●	0.984	0.217
DTM8-080	8	8	0.315	0.031	●	●	●	1.181	0.264

●: Line up

DTE

External face grooving and turning (for high precision)



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

★ : First choice
☆ : Second choice

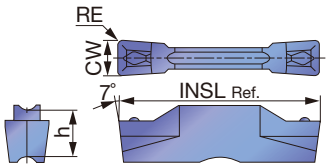
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTE265-015	3	2.65	0.104	0.006	●	●	●	●	●	0.787	0.197
DTE300-020	3	3	0.118	0.008	●	●	●	●	●	0.787	0.197
DTE300-040	3	3	0.118	0.016	●	●	●	●	●	0.787	0.197
DTE315-015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

●: Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

DTE

External face grooving and turning



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

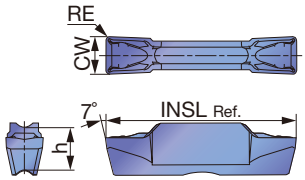
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet				INSL (in)	h (in)
					T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530					
DTE3-020	3	3	0.118	0.008			●		●		●					0.787	0.197
DTE3-040	3	3	0.118	0.016	●	●	●	●	●	●	●	●				0.787	0.197
DTE4-040	4	4	0.157	0.016	●	●	●	●	●	●	●	●				0.787	0.197
DTE4-080	4	4	0.157	0.031			●		●		●					0.787	0.197
DTE5-040	5	5	0.197	0.016		●	●		●		●					0.984	0.217
DTE5-080	5	5	0.197	0.031			●		●		●					0.984	0.217
DTE6-080	6	6	0.236	0.031		●	●		●		●					0.984	0.217

● : Line up

DTX

External, internal and face grooving, and turning



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

★ : First choice
☆ : Second choice

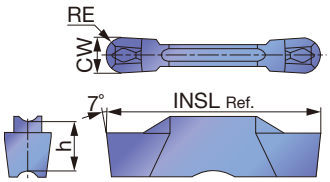
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet				Uncoated			INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530				KS05F				
DTX2-020	2	2	0.079	0.008		●		●		●					●			0.787	0.197
DTX3-030	3	3	0.118	0.012	●	●	●	●	●	●	●				●			0.787	0.197
DTX4-040	4	4	0.157	0.016	●	●	●	●	●	●	●				●			0.787	0.197
DTX5-040	5	5	0.197	0.016	●	●	●	●	●	●	●				●			0.984	0.217
DTX6-080	6	6	0.236	0.031		●	●	●	●	●					●			0.984	0.217
DTX8-080	8	8	0.315	0.031		●		●		●					●			1.181	0.264

● : Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

DTR

Profiling and undercutting (for high precision)



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

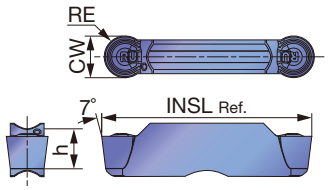
★ : First choice
☆ : Second choice

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

●: Line up

DTR

Profiling and undercutting



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

★ : First choice
☆ : Second choice

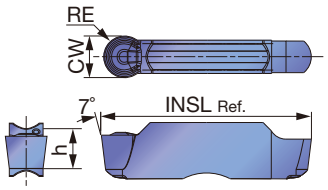
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet			Uncoated			INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530			KS05F				
DTR2-100	2	2	0.079	0.039		●		●			●				●			0.787	0.197
DTR3-150	3	3	0.118	0.059	●	●	●	●	●	●	●	●			●			0.787	0.197
DTR4-200	4	4	0.157	0.079	●	●	●	●	●	●	●	●			●			0.787	0.197
DTR5-250	5	5	0.197	0.098	●	●	●	●	●	●	●	●			●			0.984	0.217
DTR6-300	6	6	0.236	0.118	●	●	●	●		●	●				●			0.984	0.217
DTR8-400	8	8	0.315	0.157	●	●	●	●		●	●				●			1.181	0.264

● : Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

STR

Profiling and undercutting



		AH7025	AH8005	KS05F
P	Steel	★	★	
M	Stainless	★	★	
K	Cast iron	★	★	☆
N	Non-ferrous			☆
S	Superalloys	★	★	★
H	Hard materials			

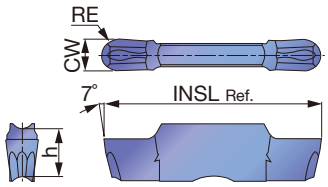
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Uncoated KS05F	INSL (in)	h (in)
STR2-100	2	2	0.079	0.039	●	●	●	0.787	0.197
STR3-150	3	3	0.118	0.059	●	●	●	0.787	0.197
STR4-200	4	4	0.157	0.079	●	●	●	0.787	0.197
STR5-250	5	5	0.197	0.098	●	●	●	0.984	0.217
STR6-300	6	6	0.236	0.118	●	●	●	0.984	0.217
STR8-400	8	8	0.315	0.157	●	●	●	1.181	0.264

●: Line up

DTIU

Profiling and undercutting (for high precision)



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

★ : First choice
☆ : Second choice

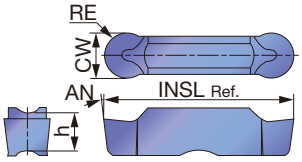
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)
DTIU300-150	3	3	0.118	0.059	●	●	●	0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●	0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●	0.984	0.217
DTIU600-300	6	6	0.236	0.118	●	●	●	0.984	0.217

●: Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

DTA

Aluminum wheel machining (for high precision)



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

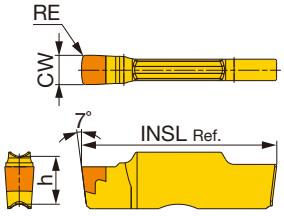
★ : First choice
☆ : Second choice

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

●: Line up

STH

External and face turning



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

★ : First choice

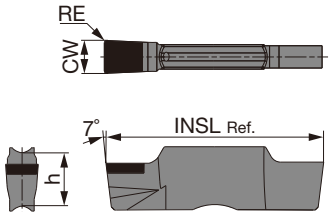
Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN BXA10	INSL (in)	h (in)
STH300-SR	3	3	0.118	0.012	●	0.787	0.197
STH500-SR	5	5	0.197	0.012	●	0.984	0.217

●: Line up

Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

SGN

External grooving



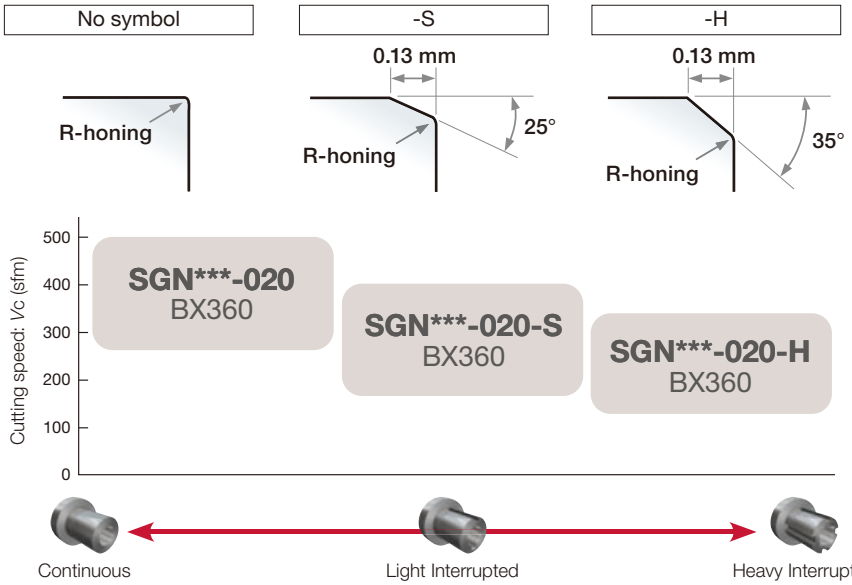
P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloys
H	Hard materials

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN	INSL (in)	h (in)	Condition		
					BX360			Continuous	Light interrupted	Heavy interrupted
SGN200-020	2	2	0.079	0.008	●	0.787	0.197	○		
SGN200-020-S	2	2	0.079	0.008	●	0.787	0.197		○	
SGN200-020-H	2	2	0.079	0.008	●	0.787	0.197			○
SGN300-020	3	3	0.118	0.008	●	0.787	0.197	○		
SGN300-020-S	3	3	0.118	0.008	●	0.787	0.197		○	
SGN300-020-H	3	3	0.118	0.008	●	0.787	0.197			○
SGN400-020	4	4	0.157	0.008	●	0.787	0.197	○		
SGN400-020-S	4	4	0.157	0.008	●	0.787	0.197		○	
SGN400-020-H	4	4	0.157	0.008	●	0.787	0.197			○
SGN500-020-S	5	5	0.197	0.008	●	0.984	0.217		○	
SGN500-020-H	5	5	0.197	0.008	●	0.984	0.217			○

●: Line up

Edge preparations



Reference pages: Toolholders → F016 - F029, Standard cutting conditions → F045

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Wear resistance	T9225, AH8005	262 - 984
		< 300 HB	Impact resistance	AH6235, GH130	164 - 394
		< 300 HB	Surface quality	NS9530	262 - 722
M	Stainless steel 303, 304, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Wear resistance	AH8005	164 - 394
		< 200 HB	Impact resistance	AH6235, GH130	164 - 394
K	Gray cast iron No.250B, etc.	-	First choice	T515	492 - 2297
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 591
	Ductile cast iron 65-45-12, etc.	-	First choice	T515	492 - 984
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	66 - 197
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	66 - 328
		< HRC 40	Impact resistance	AH7025, AH725	66 - 262

Please see page F030 - F032 for feed: *f* (ipr).

STH

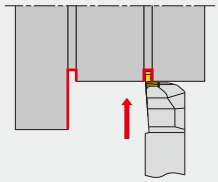
ISO	Grade	CW	Application	Cutting speed *Vc* (sfm)	Depth of cut *ap* (in)	Feed *f* (ipr)
H	BXA10	0.118"	External turning	328 - 755	0.003 - 0.005	0.016 - 0.039
			Face turning	328 - 755	0.003 - 0.005	0.016 - 0.031
		0.197"	External turning	328 - 755	0.003 - 0.005	0.020 - 0.059
			Face turning	328 - 755	0.003 - 0.005	0.020 - 0.031

SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
H	BX360	No symbol	Continuous	262 - 492	0.0012 - 0.0031
		-S	Light interrupted	164 - 394	0.0012 - 0.0031
		-H	Heavy interrupted	131 - 328	0.0012 - 0.0024

STCR/L-18

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



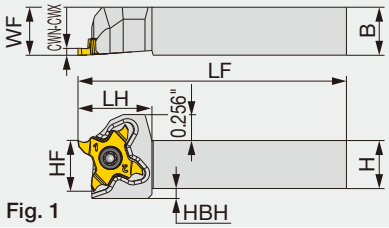


Fig. 1

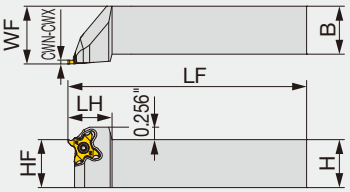
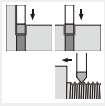


Fig. 2



Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque	Fig.
STCR/L06-18	0.013	0.125	0.375	0.375	4.750	0.740	0.375	0.375	0.177	TC*18...	0.89	1
STCR/L08-18	0.013	0.125	0.500	0.500	4.750	0.740	0.500	0.500	0.098	TC*18...	0.89	1
STCR/L10-18	0.013	0.125	0.625	0.625	4.750	0.740	0.625	0.625	-	TC*18...	0.89	1
STCR/L12-18	0.013	0.125	0.750	0.750	4.750	0.900	0.750	1.000	-	TC*18...	0.89	2
STCR/L16-18	0.013	0.125	1.000	1.000	5.500	0.900	1.000	1.250	-	TC*18...	0.89	2

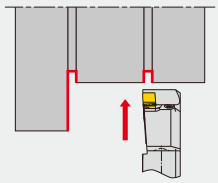
Metric	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC*18...	1.2	1
STCR/L1212F18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16	16	-	TC*18...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

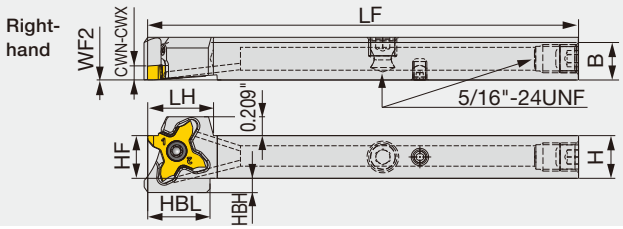
The right hand insert (TC*18R...) is used for the right hand toolholders (STCR...), and the left hand insert is used for the left hand toolholders (STCL...).
Torque: Recommended clamping torque: lbs·ft (*N·m)

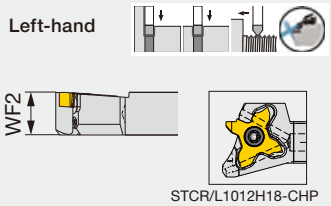
STCR/L-18-CHP

Direct connection

External grooving and threading toolholder, high pressure coolant compatible







STCR/L1012H18-CHP
STCR/L1212*18**B**-CHP

Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF2	HBH	Insert	Torque
STCR08X18-CHP	0.013	0.125	0.500	0.500	4.750	0.728	0.689	0.500	0/0.500	0.130	TC*18...	0.89
STCR10X18-CHP	0.013	0.125	0.625	0.625	4.75	0.728	-	0.625	0/0.625	-	TC*18...	0.89

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

The right hand insert (TC*18R...) is used for the right hand toolholders (STCR...), and the left hand insert (TC*18L...) is used for the left hand toolholders (STCL...).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

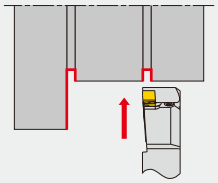
Designation	Clamping screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**18	CSTC-4L100DL	T-1008/5	-	-	-	-
STCL**18	CSTC-4L100DR	T-1008/5	-	-	-	-
STCL**18-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
STCR**18-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

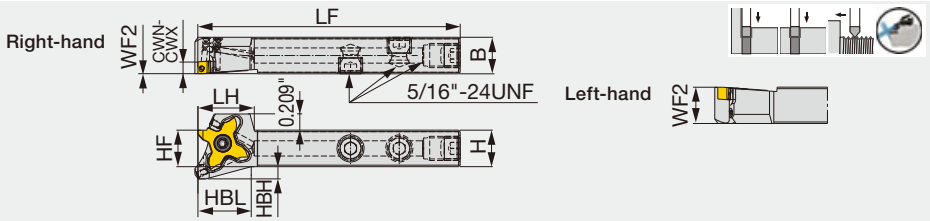
Reference pages: Inserts → F053 - F059, Standard cutting conditions → F060
Parts for coolant hose → F290

STCR/L-18-CHP

Tube connection

External grooving and threading toolholder. High pressure coolant capability.





Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF2(1)	HBH	Insert	Torque
STCR/L08F18-CHP	0.013	0.125	0.500	0.500	3.344	0.728	0.689	0.500	0/0.500	0.130	TC*18...	0.89

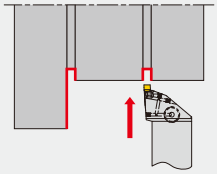
Metric	CWN	CWX	H	B	LF	LH	HBL	HF	WF2(1)	HBH	Insert	Torque*
STCR/L1212F18B-CHP	0.33	3.18	12	12	85	18.5	17.5	12	0/12	4	TC*18...	1.2

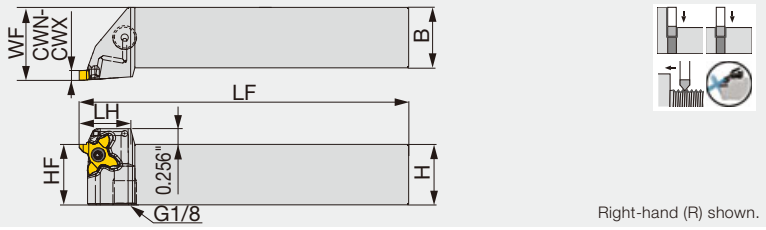
The right hand insert (TC*18R***) is used for the right hand toolholders (STCR***), and the left hand insert (TC*18L***) is used for the left hand toolholders (STCL***).
(1) "0/0.500" for the WF2 dimension indicates WF2 = 0 for the right handed tool, WF2 = 0.500 for the left handed tool.
Torque: Recommended clamping torque: lbs·ft (*N·m)

STCR/L-18-CHP

Tube connection

Threading tool - for external theading with high pressure coolant capability





Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L12-18-CHP	0.013	0.125	0.750	0.750	4.750	0.900	-	0.750	1.000	-	TC*18...	0.89
STCR/L16-18-CHP	0.013	0.125	1.000	1.000	5.500	0.900	-	1.000	1.250	-	TC*18...	0.89

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

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

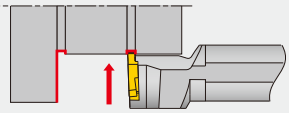
SPARE PARTS

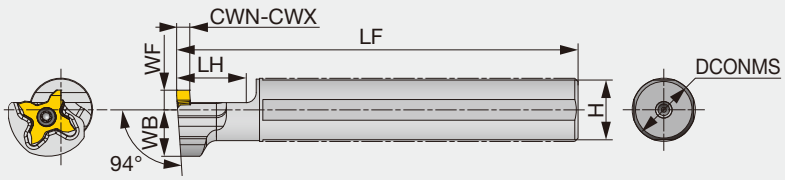
Designation	Clamping screw	Wrench	Coolant plug	Wrench
STCL08F18-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	-
STCR08F18-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	-
STCL1212F18B-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4
STCR1212F18B-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4
STCL**18-CHP	CSTC-4L100DR	T-1008/5	-	-
STCR**18-CHP	CSTC-4L100DL	T-1008/5	-	-

Reference pages: Inserts → F053 - F059, Standard cutting conditions → F060
Parts for coolant hose → F290

JS-STCL18

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





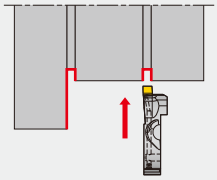
Left-hand (L) shown.

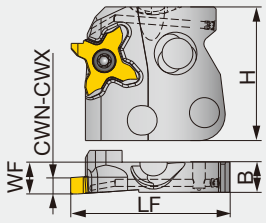
Metric	CWN	CWX	DCONMS	LF	LH	H	WB	WF	Insert	Torque
JS14H-STCL18	0.33	3.18	14	100	20	13	14	6	TC*18R...	1.2
JS159F-STCL18	0.33	3.18	15.875	85	20	15	14	6	TC*18R...	1.2
JS16F-STCL18	0.33	3.18	16	85	20	15	14	6	TC*18R...	1.2
JS19G-STCL18	0.33	3.18	19.05	90	20	18	14	6	TC*18R...	1.2
JS19X-STCL18	0.33	3.18	19.05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

The left hand toolholder (STCL...) is used with the right hand inserts (TC*18R...)
Torque: Recommended clamping torque: N·m

STCAR/L18-CHP

External grooving and threading adapter, with high pressure coolant capability





Right-hand (R) shown.

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

Use the right hand insert (TC*18R...) with the right hand adapter (STCAR...). Use the left hand insert (TC*18L...) with the left hand adapter (STCAL...).
Torque: Recommended clamping torque: N·m

SPARE PARTS

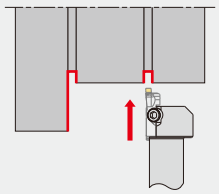
Designation	Clamping screw	Wrench
JS**STCL18	CSTC-4L100DL	T-1008/5
STCAL18-CHP	CSTC-4L100DR	T-1008/5
STCAR18-CHP	CSTC-4L100DL	T-1008/5

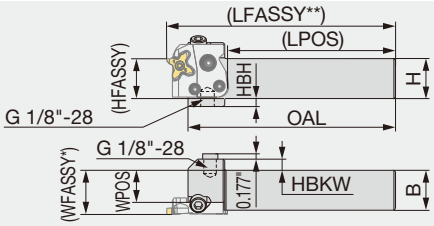
Reference pages: JS-STCL18: Inserts → F053 - F059, Standard cutting conditions → F060
STCAR/L18-CHP: Inserts → F053 - F059, Shanks and toolholders → F049 - F051
Standard cutting conditions → F060, Technical Reference → L059

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190	STCAR/L18-CHP	3.69
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200	STCAR/L18-CHP	3.69

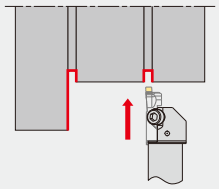
Metric	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L18-CHP	6.5

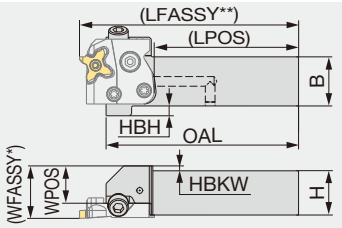
WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

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

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

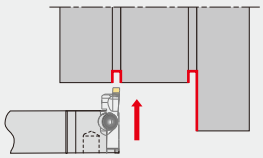
● : Corresponding

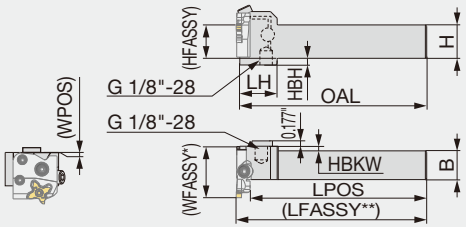
Reference pages: Inserts → F053 - F059, Adapters → F048, Standard cutting conditions → F060
Parts for coolant hose → F290, Technical Reference → L059

CHFVR/L-CHP

Tube connection

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





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

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431	STCAL/R18-CHP	3.69
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200	STCAL/R18-CHP	3.69

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

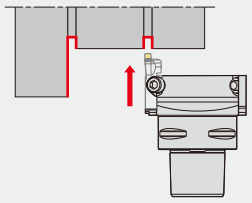
● : Corresponding

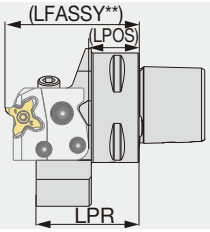
Reference pages: Inserts → F053 - F059, Adapters → F048, Standard cutting conditions → F060
Parts for coolant hose → F290, Technical Reference → L059

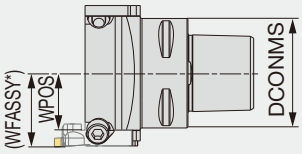
C*CHSN-CHP

Direct connection

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







Right-hand (R) adapter shown.

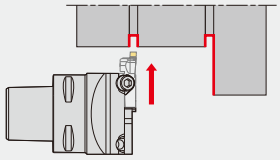
Metric	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L18-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L18-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L18-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L18-CHP	6.5

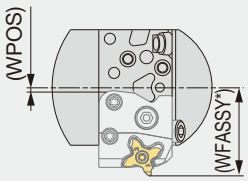
WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

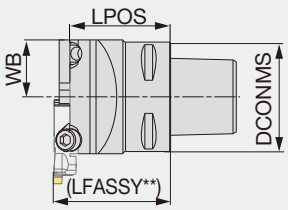
C*CHFVN-CHP

Direct connection

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







Left-hand (L) adapter shown.

Metric	DCONMS	LPOS	WB	WPOS	Adapter (Option)	Torque
C3CHFVN26040-CHP	32	40	26	1.5	STCAR/L18-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	STCAR/L18-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	STCAR/L18-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	STCAR/L18-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

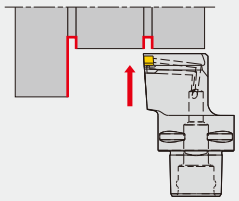
Recommended clamping torque (N·m)

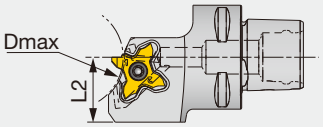
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

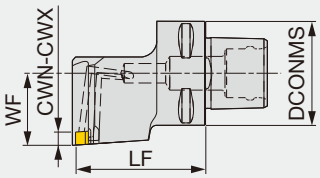
Reference pages: Inserts → F053 - F059, Adapters → F048, Standard cutting conditions → F060
Technical Reference → L059

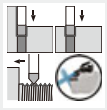
C-STCR/L-18-CHP

External grooving and threading toolholder, with high pressure coolant capability









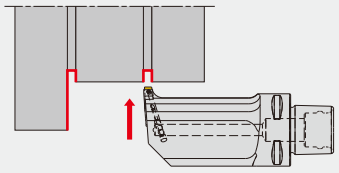
Right hand (R) shown.

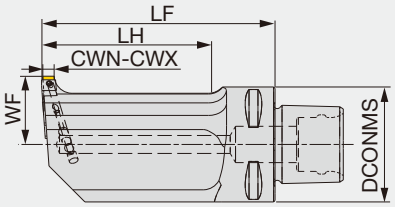
Metric	CWN	CWX	DCONMS	LF	L2	WF	Dmax	Insert	Torque
C3STCR/L22040-18-CHP	0.33	3.18	32	40	20	22	32	TC*18...	1.2
C4STCR/L27050-18-CHP	0.33	3.18	40	50	25	27	75 (1)	TC*18...	1.2

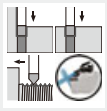
Applicable for 14 MPa coolant
Use the right hand insert (TC*18R...) with the right hand holder (STCR...). Use the left hand insert (TC*18L...) with the left hand holder (STCL...).
(1) The value for 3.5 mm groove depth. *Dmax* varies according to the grooving depth required.
Torque: Recommended clamping torque: N·m

C-STCFL-18-CHP

External grooving and threading toolholder, with high pressure coolant capability







Left hand (L) shown.

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

Applicable for 14 MPa coolant
Use the right hand insert (TC*18R...) with the left hand holder (STCFL...).
Torque: Recommended clamping torque: N·m

SPARE PARTS

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

Reference pages: Inserts → F053 - F059, Standard cutting conditions → F060

External grooving

TCS18 (4 corners)

F054, F055

First choice for O.D. grooving

General-purpose pressed-in 3D chipbreaker for smooth chip control

CW = 0.039" - 0.118"
CDX = 0.138"

TCL18 (4 corners)

F055

For lighter cutting action

Features pressed-in 3D chipbreaker with sharp cutting edge for light cutting action. Provides excellent chip control at low feed rates.

CW = 0.059" - 0.118"
CDX = 0.138"

TCG18 (4 corners)

F056, F057

For better chipping resistance

Features an optimum rake angle and edge preparation for a good balance of light cutting action and fracture resistance.

CW = 0.039" - 0.125"
CDX = 0.138"

TCP18 (4 corners)

F058, F059

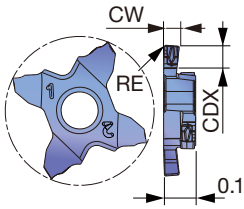
For higher surface quality

Featuring a large rake angle, providing light cutting action and better surface finish. TCP-F style insert is also available for sharp cutting edge.

CW = 0.013" - 0.118"
CDX = 0.138"

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

TCS18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCS18R100-010	R	1	0.039	0.004	●	0.079
TCS18L100-010	L	1	0.039	0.004	●	0.079
TCS18R120-010	R	1.2	0.047	0.004	●	0.079
TCS18L120-010	L	1.2	0.047	0.004	●	0.079
TCS18R125-010	R	1.25	0.049	0.004	●	0.079
TCS18L125-010	L	1.25	0.049	0.004	●	0.079
TCS18R125-020	R	1.25	0.049	0.008	●	0.079
TCS18L125-020	L	1.25	0.049	0.008	●	0.079
TCS18R130-020	R	1.3	0.051	0.008	●	0.138
TCS18L130-020	L	1.3	0.051	0.008	●	0.138
TCS18R140-010	R	1.4	0.055	0.004	●	0.138
TCS18L140-010	L	1.4	0.055	0.004	●	0.138
TCS18R140-020	R	1.4	0.055	0.008	●	0.138
TCS18L140-020	L	1.4	0.055	0.008	●	0.138
TCS18R145-010	R	1.45	0.057	0.004	●	0.138
TCS18L145-010	L	1.45	0.057	0.004	●	0.138
TCS18R150-010	R	1.5	0.059	0.004	●	0.138
TCS18L150-010	L	1.5	0.059	0.004	●	0.138
TCS18R150-020	R	1.5	0.059	0.008	●	0.138
TCS18L150-020	L	1.5	0.059	0.008	●	0.138
TCS18R160-020	R	1.6	0.063	0.008	●	0.138
TCS18L160-020	L	1.6	0.063	0.008	●	0.138
TCS18R170-020	R	1.7	0.067	0.008	●	0.138
TCS18L170-020	L	1.7	0.067	0.008	●	0.138
TCS18R175-010	R	1.75	0.069	0.004	●	0.138
TCS18L175-010	L	1.75	0.069	0.004	●	0.138
TCS18R175-020	R	1.75	0.069	0.008	●	0.138
TCS18L175-020	L	1.75	0.069	0.008	●	0.138
TCS18R185-020	R	1.85	0.073	0.008	●	0.138
TCS18L185-020	L	1.85	0.073	0.008	●	0.138
TCS18R195-020	R	1.95	0.077	0.008	●	0.138
TCS18L195-020	L	1.95	0.077	0.008	●	0.138
TCS18R200-010	R	2	0.079	0.004	●	0.138
TCS18L200-010	L	2	0.079	0.004	●	0.138
TCS18R200-020	R	2	0.079	0.008	●	0.138
TCS18L200-020	L	2	0.079	0.008	●	0.138
TCS18R225-020	R	2.25	0.089	0.008	●	0.138
TCS18L225-020	L	2.25	0.089	0.008	●	0.138
TCS18R230-020	R	2.3	0.091	0.008	●	0.138
TCS18L230-020	L	2.3	0.091	0.008	●	0.138
TCS18R250-010	R	2.5	0.098	0.004	●	0.138
TCS18L250-010	L	2.5	0.098	0.004	●	0.138

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F052, Standard cutting conditions → F060

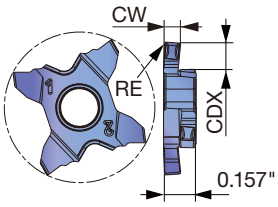
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCS18R250-020	R	2.5	0.098	0.008	●	0.138
TCS18L250-020	L	2.5	0.098	0.008	●	0.138
TCS18R250-030	R	2.5	0.098	0.012	●	0.138
TCS18L250-030	L	2.5	0.098	0.012	●	0.138
TCS18R265-030	R	2.65	0.104	0.012	●	0.138
TCS18L265-030	L	2.65	0.104	0.012	●	0.138
TCS18R280-030	R	2.8	0.110	0.012	●	0.138
TCS18L280-030	L	2.8	0.110	0.012	●	0.138
TCS18R300-010	R	3	0.118	0.004	●	0.138
TCS18L300-010	L	3	0.118	0.004	●	0.138
TCS18R300-020	R	3	0.118	0.008	●	0.138
TCS18L300-020	L	3	0.118	0.008	●	0.138
TCS18R300-030	R	3	0.118	0.012	●	0.138
TCS18L300-030	L	3	0.118	0.012	●	0.138

5 pieces per package
● : Line up

TCL18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

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

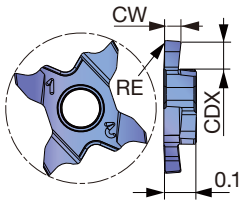
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCL18R150-010	R	1.5	0.059	0.004	●	0.138
TCL18L150-010	L	1.5	0.059	0.004	●	0.138
TCL18R150-020	R	1.5	0.059	0.008	●	0.138
TCL18L150-020	L	1.5	0.059	0.008	●	0.138
TCL18R175-020	R	1.75	0.069	0.008	●	0.138
TCL18L175-020	L	1.75	0.069	0.008	●	0.138
TCL18R200-010	R	2	0.079	0.004	●	0.138
TCL18L200-010	L	2	0.079	0.004	●	0.138
TCL18R200-020	R	2	0.079	0.008	●	0.138
TCL18L200-020	L	2	0.079	0.008	●	0.138
TCL18R250-030	R	2.5	0.098	0.012	●	0.138
TCL18L250-030	L	2.5	0.098	0.012	●	0.138
TCL18R300-010	R	3	0.118	0.004	●	0.138
TCL18L300-010	L	3	0.118	0.004	●	0.138
TCL18R300-020	R	3	0.118	0.008	●	0.138
TCL18L300-020	L	3	0.118	0.008	●	0.138
TCL18R300-030	R	3	0.118	0.012	●	0.138
TCL18L300-030	L	3	0.118	0.012	●	0.138

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F052, Standard cutting conditions → F060

TCG18R/L (honed edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated	CDX (in)
					AH7025	
TCG18R100-010	R	1	0.039	0.004	●	0.079
TCG18L100-010	L	1	0.039	0.004	●	0.079
TCG18R120-010	R	1.2	0.047	0.004	●	0.079
TCG18L120-010	L	1.2	0.047	0.004	●	0.079
TCG18R125-010	R	1.25	0.049	0.004	●	0.079
TCG18L125-010	L	1.25	0.049	0.004	●	0.079
TCG18R125-020	R	1.25	0.049	0.008	●	0.079
TCG18L125-020	L	1.25	0.049	0.008	●	0.079
TCG18R130-020	R	1.3	0.051	0.008	●	0.079
TCG18L130-020	L	1.3	0.051	0.008	●	0.079
TCG18R140-010	R	1.4	0.055	0.004	●	0.138
TCG18L140-010	L	1.4	0.055	0.004	●	0.138
TCG18R140-020	R	1.4	0.055	0.008	●	0.138
TCG18L140-020	L	1.4	0.055	0.008	●	0.138
TCG18R145-010	R	1.45	0.057	0.004	●	0.138
TCG18L145-010	L	1.45	0.057	0.004	●	0.138
TCG18R145-020	R	1.45	0.057	0.008	●	0.138
TCG18L145-020	L	1.45	0.057	0.008	●	0.138
TCG18R150-010	R	1.5	0.059	0.004	●	0.138
TCG18L150-010	L	1.5	0.059	0.004	●	0.138
TCG18R150-020	R	1.5	0.059	0.008	●	0.138
TCG18L150-020	L	1.5	0.059	0.008	●	0.138
TCG18R160-020	R	1.6	0.063	0.008	●	0.138
TCG18L160-020	L	1.6	0.063	0.008	●	0.138
TCG18R170-020	R	1.7	0.067	0.008	●	0.138
TCG18L170-020	L	1.7	0.067	0.008	●	0.138
TCG18R175-010	R	1.75	0.069	0.004	●	0.138
TCG18L175-010	L	1.75	0.069	0.004	●	0.138
TCG18R175-020	R	1.75	0.069	0.008	●	0.138
TCG18L175-020	L	1.75	0.069	0.008	●	0.138
TCG18R185-020	R	1.85	0.073	0.008	●	0.138
TCG18L185-020	L	1.85	0.073	0.008	●	0.138
TCG18R195-020	R	1.95	0.077	0.008	●	0.138
TCG18L195-020	L	1.95	0.077	0.008	●	0.138
TCG18R200-010	R	2	0.079	0.004	●	0.138
TCG18L200-010	L	2	0.079	0.004	●	0.138
TCG18R200-020	R	2	0.079	0.008	●	0.138
TCG18L200-020	L	2	0.079	0.008	●	0.138
TCG18R225-020	R	2.25	0.089	0.008	●	0.138
TCG18L225-020	L	2.25	0.089	0.008	●	0.138
TCG18R230-020	R	2.3	0.091	0.008	●	0.138
TCG18L230-020	L	2.3	0.091	0.008	●	0.138
TCG18R250-010	R	2.5	0.098	0.004	●	0.138
TCG18L250-010	L	2.5	0.098	0.004	●	0.138

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F052, Standard cutting conditions → F060

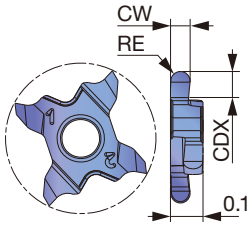
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCG18R250-020	R	2.5	0.098	0.008	●	0.138
TCG18L250-020	L	2.5	0.098	0.008	●	0.138
TCG18R250-030	R	2.5	0.098	0.012	●	0.138
TCG18L250-030	L	2.5	0.098	0.012	●	0.138
TCG18R265-030	R	2.65	0.104	0.012	●	0.138
TCG18L265-030	L	2.65	0.104	0.012	●	0.138
TCG18R280-030	R	2.8	0.110	0.012	●	0.138
TCG18L280-030	L	2.8	0.110	0.012	●	0.138
TCG18R300-010	R	3	0.118	0.004	●	0.138
TCG18L300-010	L	3	0.118	0.004	●	0.138
TCG18R300-020	R	3	0.118	0.008	●	0.138
TCG18L300-020	L	3	0.118	0.008	●	0.138
TCG18R300-030	R	3	0.118	0.012	●	0.138
TCG18L300-030	L	3	0.118	0.012	●	0.138

5 pieces per package
● : Line up

TCG18R/L (Full R, honed edge)



Right-hand (R) shown.

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

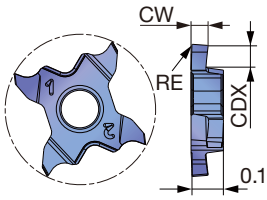
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)
TCG18R100-050	R	1	0.039	0.020	●	0.079
TCG18L100-050	L	1	0.039	0.020	●	0.079
TCG18R158-079	R	1.58	0.062	0.031	●	0.138
TCG18L158-079	L	1.58	0.062	0.031	●	0.138
TCG18R200-100	R	2	0.079	0.039	●	0.138
TCG18L200-100	L	2	0.079	0.039	●	0.138
TCG18R239-120	R	2.39	0.094	0.047	●	0.138
TCG18L239-120	L	2.39	0.094	0.047	●	0.138
TCG18R300-150	R	3	0.118	0.059	●	0.138
TCG18L300-150	L	3	0.118	0.059	●	0.138
TCG18R318-159	R	3.18	0.125	0.063	●	0.138
TCG18L318-159	L	3.18	0.125	0.063	●	0.138

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F052, Standard cutting conditions → F060

TCP18R/L (lightly honed edge)



Right-hand (R) shown.

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

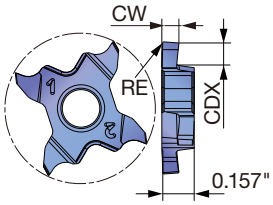
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated	CDX (in)
					AH725	
TCP18R033-005	R	0.33	0.013	0.002	●	0.031
TCP18L033-005	L	0.33	0.013	0.002	●	0.031
TCP18R043-005	R	0.43	0.017	0.002	●	0.047
TCP18L043-005	L	0.43	0.017	0.002	●	0.047
TCP18R050-005	R	0.5	0.020	0.002	●	0.047
TCP18L050-005	L	0.5	0.020	0.002	●	0.047
TCP18R075-005	R	0.75	0.030	0.002	●	0.079
TCP18L075-005	L	0.75	0.030	0.002	●	0.079
TCP18R095-005	R	0.95	0.037	0.002	●	0.079
TCP18L095-005	L	0.95	0.037	0.002	●	0.079
TCP18R100-010	R	1	0.039	0.004	●	0.079
TCP18L100-010	L	1	0.039	0.004	●	0.079
TCP18R120-010	R	1.2	0.047	0.004	●	0.079
TCP18L120-010	L	1.2	0.047	0.004	●	0.079
TCP18R125-010	R	1.25	0.049	0.004	●	0.079
TCP18L125-010	L	1.25	0.049	0.004	●	0.079
TCP18R140-010-35	R	1.4	0.055	0.004	●	0.138
TCP18L140-010-35	L	1.4	0.055	0.004	●	0.138
TCP18R145-010	R	1.45	0.057	0.004	●	0.079
TCP18L145-010	L	1.45	0.057	0.004	●	0.079
TCP18R145-010-35	R	1.45	0.057	0.004	●	0.138
TCP18L145-010-35	L	1.45	0.057	0.004	●	0.138
TCP18R150-010	R	1.5	0.059	0.004	●	0.079
TCP18L150-010	L	1.5	0.059	0.004	●	0.079
TCP18R150-010-35	R	1.5	0.059	0.004	●	0.138
TCP18L150-010-35	L	1.5	0.059	0.004	●	0.138
TCP18R175-010	R	1.75	0.069	0.004	●	0.079
TCP18L175-010	L	1.75	0.069	0.004	●	0.079
TCP18R175-010-35	R	1.75	0.069	0.004	●	0.138
TCP18L175-010-35	L	1.75	0.069	0.004	●	0.138
TCP18R200-010	R	2	0.079	0.004	●	0.098
TCP18L200-010	L	2	0.079	0.004	●	0.098
TCP18R200-010-35	R	2	0.079	0.004	●	0.138
TCP18L200-010-35	L	2	0.079	0.004	●	0.138
TCP18R250-010	R	2.5	0.098	0.004	●	0.098
TCP18L250-010	L	2.5	0.098	0.004	●	0.098
TCP18R250-010-35	R	2.5	0.098	0.004	●	0.138
TCP18L250-010-35	L	2.5	0.098	0.004	●	0.138
TCP18R300-010	R	3	0.118	0.004	●	0.098
TCP18L300-010	L	3	0.118	0.004	●	0.098
TCP18R300-010-35	R	3	0.118	0.004	●	0.138
TCP18L300-010-35	L	3	0.118	0.004	●	0.138

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F052, Standard cutting conditions → F060

TCP18R/L-F (sharp edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CDX (in)
TCP18R033F-005	R	0.33	0.013	0.002	●	0.031
TCP18L033F-005	L	0.33	0.013	0.002	●	0.031
TCP18R043F-005	R	0.43	0.017	0.002	●	0.047
TCP18L043F-005	L	0.43	0.017	0.002	●	0.047
TCP18R050F-005	R	0.5	0.020	0.002	●	0.047
TCP18L050F-005	L	0.5	0.020	0.002	●	0.047
TCP18R075F-005	R	0.75	0.030	0.002	●	0.079
TCP18L075F-005	L	0.75	0.030	0.002	●	0.079
TCP18R095F-005	R	0.95	0.037	0.002	●	0.079
TCP18L095F-005	L	0.95	0.037	0.002	●	0.079
TCP18R100F-005	R	1	0.039	0.002	●	0.079
TCP18R100F-010	R	1	0.039	0.004	●	0.079
TCP18L100F-010	L	1	0.039	0.004	●	0.079
TCP18R120F-005	R	1.2	0.047	0.002	●	0.079
TCP18R120F-010	R	1.2	0.047	0.004	●	0.079
TCP18L120F-010	L	1.2	0.047	0.004	●	0.079
TCP18R125F-005	R	1.25	0.049	0.002	●	0.079
TCP18R125F-010	R	1.25	0.049	0.004	●	0.079
TCP18L125F-010	L	1.25	0.049	0.004	●	0.079
TCP18R140F-010-35	R	1.4	0.055	0.004	●	0.138
TCP18R145F-005-35	R	1.45	0.057	0.002	●	0.138
TCP18R145F-010	R	1.45	0.057	0.004	●	0.079
TCP18L145F-010	L	1.45	0.057	0.004	●	0.079
TCP18R145F-010-35	R	1.45	0.057	0.004	●	0.138
TCP18L145F-010-35	L	1.45	0.057	0.004	●	0.138
TCP18R150F-005-35	R	1.5	0.059	0.002	●	0.138
TCP18R150F-010	R	1.5	0.059	0.004	●	0.079
TCP18L150F-010	L	1.5	0.059	0.004	●	0.079
TCP18R150F-010-35	R	1.5	0.059	0.004	●	0.138
TCP18L150F-010-35	L	1.5	0.059	0.004	●	0.138
TCP18R175F-005-35	R	1.75	0.069	0.002	●	0.138
TCP18R175F-010	R	1.75	0.069	0.004	●	0.079
TCP18L175F-010	L	1.75	0.069	0.004	●	0.079
TCP18R175F-010-35	R	1.75	0.069	0.004	●	0.138
TCP18L175F-010-35	L	1.75	0.069	0.004	●	0.138
TCP18R200F-005-35	R	2	0.079	0.002	●	0.138
TCP18R200F-010	R	2	0.079	0.004	●	0.098
TCP18L200F-010	L	2	0.079	0.004	●	0.098
TCP18R200F-010-35	R	2	0.079	0.004	●	0.138
TCP18L200F-010-35	L	2	0.079	0.004	●	0.138
TCP18R250F-010	R	2.5	0.098	0.004	●	0.098
TCP18L250F-010	L	2.5	0.098	0.004	●	0.098
TCP18R250F-010-35	R	2.5	0.098	0.004	●	0.138
TCP18L250F-010-35	L	2.5	0.098	0.004	●	0.138
TCP18R300F-010	R	3	0.118	0.004	●	0.098
TCP18L300F-010	L	3	0.118	0.004	●	0.098
TCP18R300F-010-35	R	3	0.118	0.004	●	0.138
TCP18L300F-010-35	L	3	0.118	0.004	●	0.138

5 pieces per package
● : Line up

Reference pages: Toolholders → F046 - F052, Standard cutting conditions → F060

STANDARD CUTTING CONDITIONS

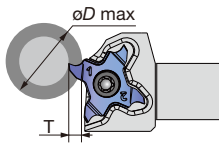
TCS18R/L, TCL18R/L (3D chipbreaker), TCG18R/L (honed edge), TCG18R/L (Full R)

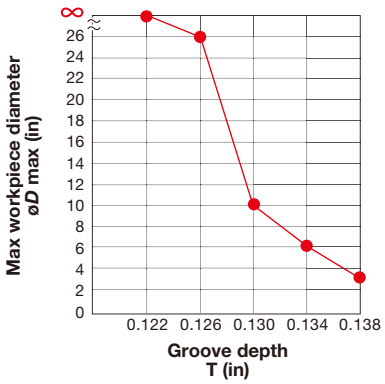
ISO	Workpiece materials	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)		
				TCL18	TCS18	TCG18
P	Low carbon steel 1015, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
P	Carbon steel, Alloy steel 1055, 4140, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
P	Prehardened steel NAK80, PX5, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
M	Stainless steel 304, 316, etc.	AH7025	164 - 394	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
K	Gray cast iron No.250B, No.300B, etc.	AH7025	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
K	Ductile cast iron 60-40-18, etc.	AH7025	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 197	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
S	Superalloys Inconel718, etc.	AH7025	66 - 131	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006

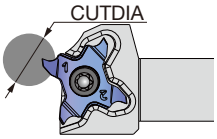
TCP18R/L (lightly honed edge), TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steel 1015, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Low carbon steel 1015, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
P	Carbon steel, Alloy steel 1055, 4140, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Carbon steel, Alloy steel 1055, 4140, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
P	Prehardened steel NAK80, PX5, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Prehardened steel NAK80, PX5, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
M	Stainless steel 304, 316, etc.	First choice	SH725	164 - 394	0.001 - 0.004
M	Stainless steel 304, 316, etc.	Toughness	AH725	164 - 394	0.001 - 0.004
K	Gray cast iron No.250B, No.300B, etc.	First choice	AH725	164 - 591	0.001 - 0.004
K	Gray cast iron No.250B, No.300B, etc.	Sharpness	SH725	164 - 591	0.001 - 0.004
K	Ductile cast iron 60-40-18, etc.	First choice	AH725	164 - 591	0.001 - 0.004
K	Ductile cast iron 60-40-18, etc.	Sharpness	SH725	164 - 591	0.001 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	98 - 262	0.001 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	Toughness	AH725	98 - 262	0.001 - 0.004
S	Superalloys Inconel718, etc.	First choice	AH725	66 - 131	0.001 - 0.004

Precautions of processing







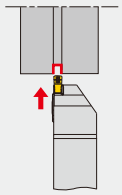
Max workpiece diameter CUTDIA (in)
0.276

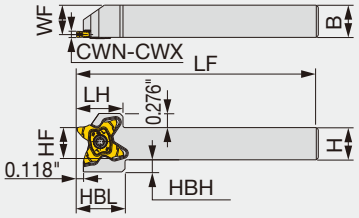
***Groove depth and max workpiece diameter (øDmax)**

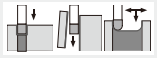
Maximum workpiece diameter is limited relative to depth of cut in order to avoid collision between insert and workpiece.

STCR/L-27

External toolholders for grooving, parting







Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L06-27	0.020	0.125	0.375	0.375	5.000	0.906	0.945	0.375	0.315	0.374	TC*27...	1.84
STCR/L08-27	0.020	0.125	0.500	0.500	5.000	0.906	0.945	0.500	0.440	0.287	TC*27...	1.84
STCR/L10-27	0.020	0.125	0.625	0.625	5.000	0.906	0.945	0.625	0.570	0.236	TC*27...	1.84
STCR/L12-27	0.020	0.125	0.750	0.750	5.000	0.906	0.945	0.750	0.690	0.118	TC*27...	1.84
STCR/L16-27	0.020	0.125	1.000	1.000	5.500	0.906	-	1.000	0.940	-	TC*27...	1.84

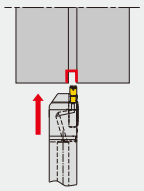
Metric	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque*
STCR/L1010-27	0.5	3.18	10	10	120	23	24	10	8.5	9.5	TC*27...	2.5
STCR/L1212-27	0.5	3.18	12	12	120	23	24	12	10.5	8	TC*27...	2.5
STCR/L1616-27	0.5	3.18	16	16	120	23	24	16	14.5	6	TC*27...	2.5
STCR/L2020-27	0.5	3.18	20	20	120	23	24	20	18.5	2	TC*27...	2.5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

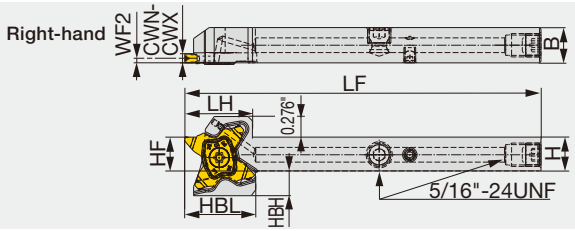
Torque: Recommended clamping torque: lbs·ft (*N·m)

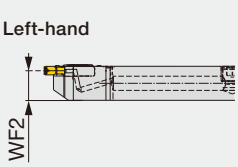
STCR/L-27-CHP

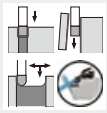
Direct connection

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









Inch	CWN	CWX	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Insert	Torque
STCR/L08-27-CHP	0.020	0.125	0.500	0.500	4.750	0.906	0.500	0.059/0.441	0.287	0.945	TC*27...	1.84

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

- Make sure to avoid tool interferences when used on Swiss machines
(1) The above WF2 value is valid when an insert width of CW = 0.118" (3 mm) is mounted.
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

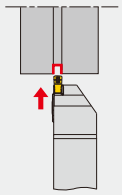
Designation	Screw	Wrench	Coolant plug	Wrench	DirectJet plug	Wrench
STCR**-27	SR16-212-01397L	T-2010/5	-	-	-	-
STCL**-27	SR16-212-01397	T-2010/5	-	-	-	-
STCR**-27-CHP	SR16-212-01397L	T-2010/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
STCL**-27-CHP	SR16-212-01397	T-2010/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

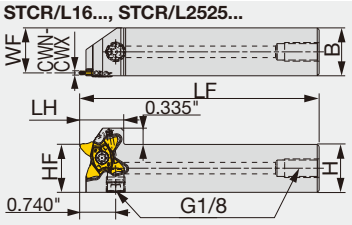
Reference pages: Inserts → F067 - F071, Standard cutting conditions → F072
Parts for coolant hose → F290

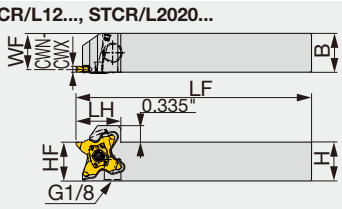
STCR/L-27-CHP

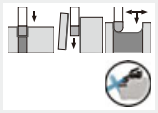
Tube connection

External grooving and parting toolholder, with high pressure coolant capability









Right-hand (R) shown.

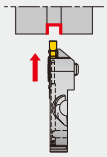
Inch	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque
STCR/L12-27-CHP	0.020	0.125	0.750	0.750	5.000	0.906	0.750	0.690	TC*27...	1.84
STCR/L16-27-CHP	0.020	0.125	1.000	1.000	4.920	0.906	1.000	0.940	TC*27...	1.84

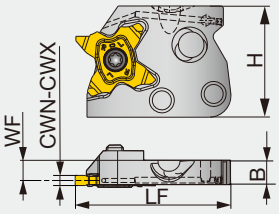
Metric	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque*
STCR/L2020-27-CHP	0.5	3.18	20	20	120	23	20	18.5	TC*27...	2.5
STCR/L2525-27-CHP	0.5	3.18	25	25	125	23	25	23.5	TC*27...	2.5

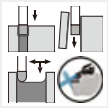
Torque: Recommended clamping torque: lbs·ft (*N·m)

STCAR/L27-CHP

External grooving and parting adapter, with high pressure coolant capability







Right-hand (R) shown.

Metric	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

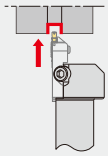
Designation	Screw	Wrench
STCR**-27-CHP	SR16-212-01397L	T-2010/5
STCL**-27-CHP	SR16-212-01397	T-2010/5
STCAR27-CHP	SR16-212-01397L	T-2010/5
STCAL27-CHP	SR16-212-01397	T-2010/5

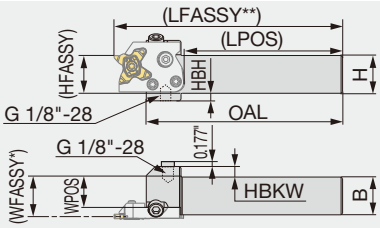
Reference pages: STCR/L-27-CHP: Inserts → F067 - F071, Standard cutting conditions → F072
Parts for coolant hose → F290
STCAR/L27-CHP: Inserts → F067 - F071, Shanks and toolholders → F063 - F065
Standard cutting conditions → F072, Technical Reference → L059

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190	STCAR/L27-CHP	3.69
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200	STCAR/L27-CHP	3.69

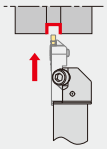
Metric	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L27-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L27-CHP	6.5

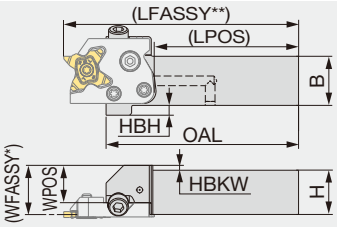
WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page **L059** for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

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

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page **L059** for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

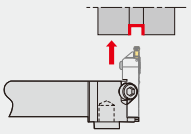
Combination of adapter and shank

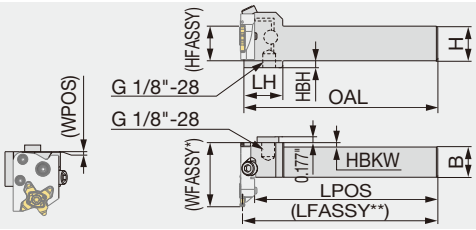
Shank	Adapter	
	STCAR27-CHP	STCAL27-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

● : Corresponding

Reference pages: Inserts → F067 - F071, Adapters → F062, Standard cutting conditions → F072
Parts for coolant hose → F290, Technical Reference → L059

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





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

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431	STCAL/R27-CHP	3.69
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200	STCAL/R27-CHP	3.69

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

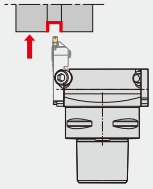
● : Corresponding

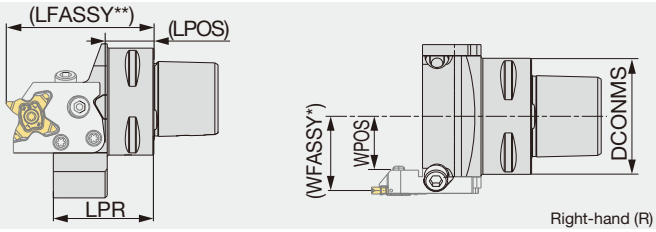
Reference pages: Inserts → F067 - F071, Adapters → F062, Standard cutting conditions → F072
Parts for coolant hose → F290, Technical Reference → L059

C*CHSN-CHP

Direct connection

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





Right-hand (R) adapter shown.

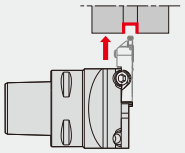
Metric	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L27-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L27-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L27-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L27-CHP	6.5

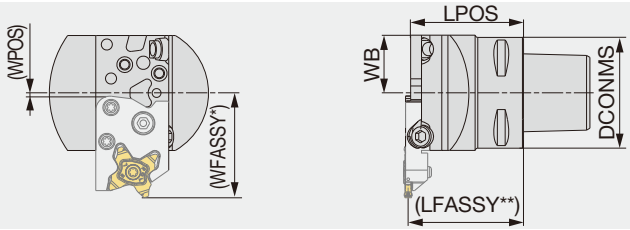
WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

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





Left-hand (L) adapter shown.

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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS






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

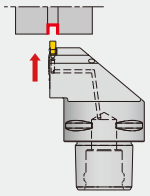
Recommended clamping torque (N·m)

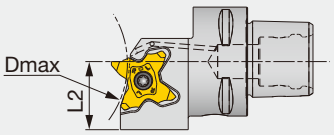
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

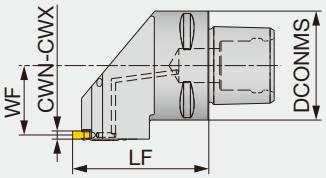
Reference pages: Inserts → F067 - F071, Adapters → F062, Standard cutting conditions → F072
Technical Reference → L059

C-STCR/L-27-CHP

External grooving toolholder, with high pressure coolant capability







Right hand (R) shown.

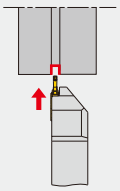
Metric	CWN	CWX	DCONMS	LF	L2	WF	Dmax	Insert	Torque
C4STCR/L27050-27-CHP	0.5	3.18	40	50	25	25.5	68 (1)	TC*27R/L...	2.5

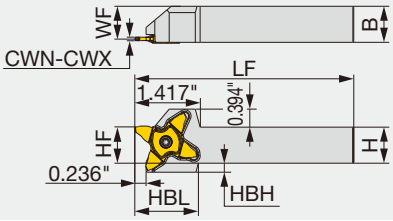
Applicable for 14 MPa coolant
(1) The value for 6.4 mm groove depth. *Dmax* varies according to the grooving depth required.
Torque: Recommended clamping torque: N·m

External
Internal
Face
Parting
Others

STCR/L-38

External grooving and parting toolholder





Right hand (R) shown.

Inch	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque
STCR/L12-38	0.059	0.157	0.750	0.750	5.000	0.750	0.670	0.234	1.378	TCL38...	1.84
STCR/L16-38	0.059	0.157	1.000	1.000	5.500	1.000	0.920	-	-	TCL38...	1.84
STCR/L20-38	0.059	0.157	1.250	1.250	5.500	1.250	1.170	-	-	TCL38...	1.84

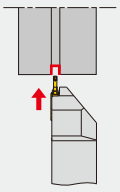
Metric	CWN	CWX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque*
STCR/L2020-38	1.5	4	20	20	120	20	18.1	5	35	TCL38...	2.5
STCR/L2525-38	1.5	4	25	25	135	25	23.1	-	-	TCL38...	2.5
STCR/L3232-38	1.5	4	32	32	135	32	30.1	-	-	TCL38...	2.5

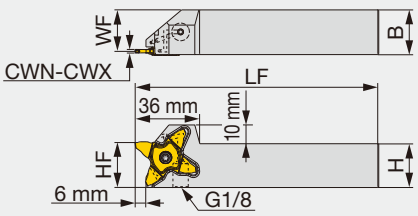
Torque: Recommended clamping torque: lbs·ft (*N·m)

STCR/L-38-CHP

Tube connection

External grooving and parting toolholder, with high pressure coolant capability





Right hand (R) shown.

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

Torque: Recommended clamping torque: N·m

SPARE PARTS

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

Reference pages: Inserts → F067 - F071, Standard cutting conditions → F072
Parts for coolant hose → F290

External grooving and parting

TCS27 (4 corners)

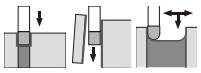
F068, F069

First choice for grooving

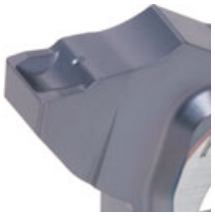
For general machining

Lower cutting force and superior sharpness

CW = 0.020" - 0.125"
CDX = 0.252"



TCM27 (4 corners)



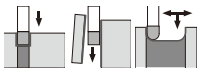
F070, F071

For higher efficiency

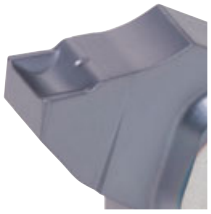
For high feed machining

Well-designed edge with high strength and fracture resistance

CW = 0.059" - 0.125"
CDX = 0.252"



TCL27 (4 corners)

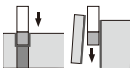


F067

For lighter cutting action

Extremely sharp cutting edge
A large dimple geometry eliminates chip jamming

CW = 0.059" - 0.118"
CDX = 0.252"



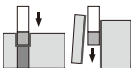
TCL38 (4 corners)

F071

For lighter cutting action

Sharp edge for light cutting action
Excellent chip control at low feeds

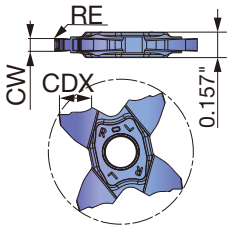
CW = 0.059" - 0.157"
CDX = 0.394"

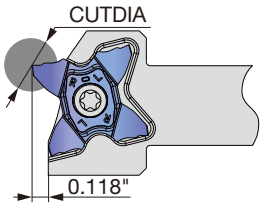


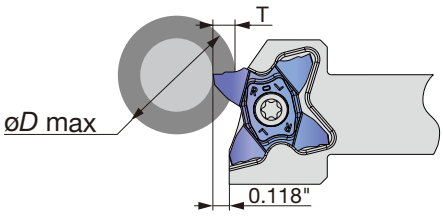
Please see page F*** for the product details.

INSERTS

TCL27 (for grooving and parting off)







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

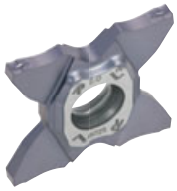
★ : First choice

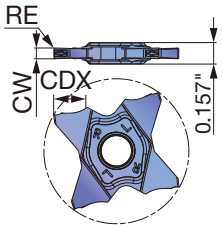
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
							T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCL27-150-015	1.5	0.059	0.006	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCL27-200-020	2	0.079	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCL27-250-020	2.5	0.098	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCL27-300-020	3	0.118	0.008	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

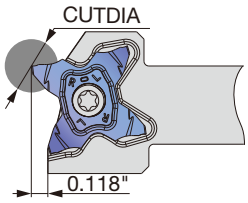
5 pieces per package
● : Line up

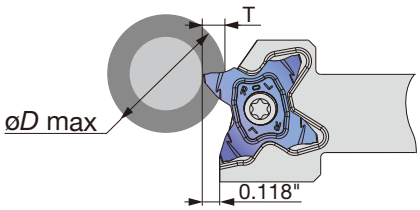
Reference pages: Toolholders → F061 - F066, Standard cutting conditions → F072

TCS27 (for grooving and parting off)









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

★ : First choice

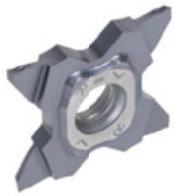
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725			CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
									T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCS27-050-000	0.5	0.020	0	●			0.039	0.079	∞	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.020	0.002	●			0.098	0.197	∞	-	-	-	-	-	-	-	-	-
TCS27-075-010	0.75	0.030	0.004	●			0.098	0.197	∞	-	-	-	-	-	-	-	-	-
TCS27-080-000	0.8	0.031	0	●			0.063	0.126	∞	-	-	-	-	-	-	-	-	-
TCS27-100-006	1	0.039	0.002	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCS27-100-010	1	0.039	0.004	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCS27-104-000	1.04	0.041	0	●			0.079	0.157	∞	-	-	-	-	-	-	-	-	-
TCS27-120-000	1.2	0.047	0	●			0.079	0.157	∞	-	-	-	-	-	-	-	-	-
TCS27-125-010	1.25	0.049	0.004	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCS27-125-020	1.25	0.049	0.008	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCS27-140-000	1.4	0.055	0	●			0.079	0.157	∞	-	-	-	-	-	-	-	-	-
TCS27-147-000	1.47	0.058	0	●			0.098	0.197	∞	-	-	-	-	-	-	-	-	-
TCS27-150-010	1.5	0.059	0.004	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-150-020	1.5	0.059	0.008	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-157-015	1.57	0.062	0.006	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-170-010	1.7	0.067	0.004	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-175-010	1.75	0.069	0.004	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-175-020	1.75	0.069	0.008	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-178-018	1.78	0.070	0.007	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-185-020	1.85	0.073	0.008	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-196-015	1.96	0.077	0.006	●			0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCS27-200-010	2	0.079	0.004	●			0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCS27-200-020	2	0.079	0.008	●			0.252	0.504	∞	23.622	11.024	7.087	5.118	4.134	3.346	2.362	1.969	1.181
TCS27-222-015	2.22	0.087	0.006	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCS27-230-020	2.3	0.091	0.008	●			0.138	0.276	∞	23.622	-	-	-	-	-	-	-	-
TCS27-239-015	2.39	0.094	0.006	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-247-020	2.47	0.097	0.008	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-250-010	2.5	0.098	0.004	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-250-030	2.5	0.098	0.012	●			0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCS27-270-010	2.7	0.106	0.004	●			0.244	0.488	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCS27-287-020	2.87	0.113	0.008	●			0.244	0.488	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	-
TCS27-300-000	3	0.118	0	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-020	3	0.118	0.008	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-030	3	0.118	0.012	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-300-040	3	0.118	0.016	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165
TCS27-315-015	3.15	0.124	0.006	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677
TCS27-318-020	3.18	0.125	0.008	●			0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.677

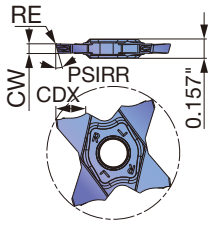
5 pieces per package

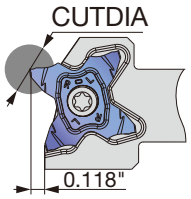
● : Line up

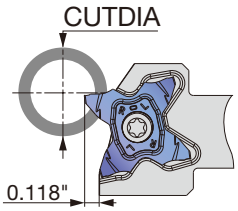
Reference pages: Toolholders → F061 - F066, Standard cutting conditions → F072

TCS27-R/L (for parting off)









Right hand (R) shown.

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

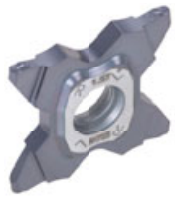
★ : First choice

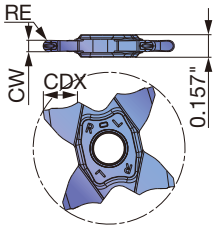
Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	PSIRL	PSIRR	Max. parting off dia. (CUTDIA) (in) Solid bar	Tube
TCS27-100-15R	R	1	0.039	0.002	●	0.138	0°	15°	0.276	23.622
TCS27-100-15L	L	1	0.039	0.002	●	0.138	15°	0°	0.276	23.622
TCS27-150-6R	R	1.5	0.059	0.002	●	0.224	0°	6°	0.449	1.378
TCS27-150-6L	L	1.5	0.059	0.002	●	0.224	6°	0°	0.449	1.378
TCS27-150-15R	R	1.5	0.059	0.002	●	0.224	0°	15°	0.449	1.378
TCS27-150-15L	L	1.5	0.059	0.002	●	0.224	15°	0°	0.449	1.378
TCS27-200-6R	R	2	0.079	0.004	●	0.252	0°	6°	0.504	1.181
TCS27-200-6L	L	2	0.079	0.004	●	0.252	6°	0°	0.504	1.181
TCS27-200-15R	R	2	0.079	0.004	●	0.252	0°	15°	0.504	1.181
TCS27-200-15L	L	2	0.079	0.004	●	0.252	15°	0°	0.504	1.181

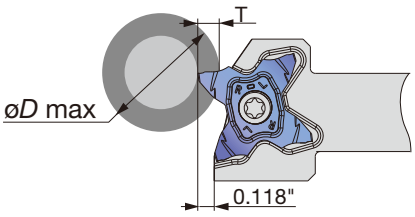
5 pieces per package

● : Line up

TCS27 (for grooving and profiling, full R)







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

★ : First choice

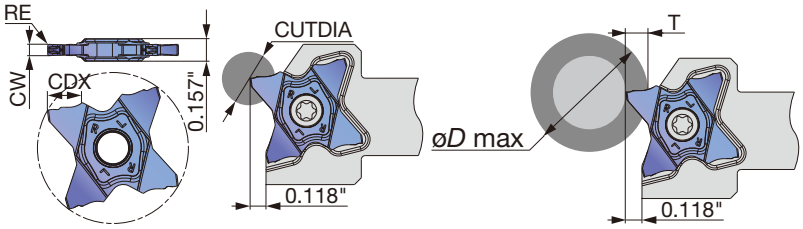
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	Relation of groove depth (T) and Max. diameter (øD max) (in) T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCS27-157-079	1.57	0.062	0.031	●	0.118	∞	-	-	-	-	-	-	-	-	-
TCS27-200-100	2	0.079	0.039	●	0.118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

5 pieces per package

● : Line up

Reference pages: Toolholders → F061 - F066, Standard cutting conditions → F072

TCM27 (for grooving and parting off)



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

★ : First choice

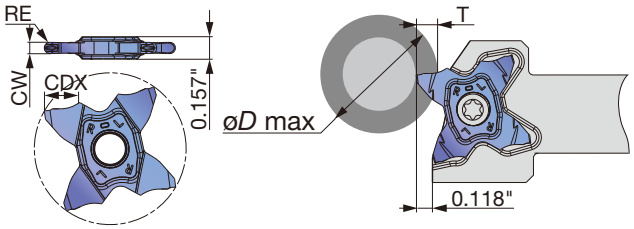
Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated			CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
				AH725					T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCM27-150-010	1.5	0.059	0.004	●			0.224	0.449	∞	23.622	11.024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

5 pieces per package

● : Line up

Reference pages: Toolholders → F061 - F066, Standard cutting conditions → F072

TCM27 (for grooving and profiling, full R)



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

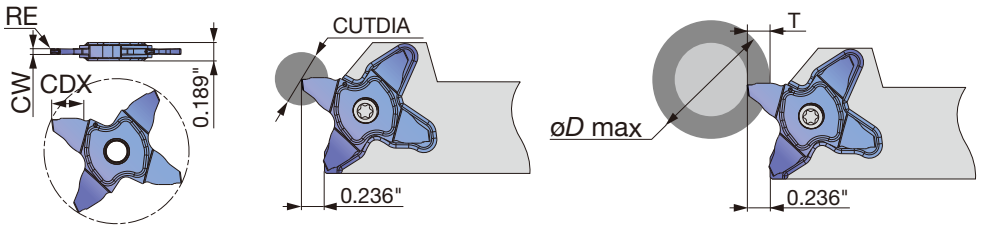
★ : First choice

Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)									
							T≤0.118	T≤0.138	T≤0.157	T≤0.177	T≤0.197	T≤0.217	T≤0.224	T≤0.236	T≤0.244	T≤0.252
TCM27-157-079	1.57	0.062	0.031	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-200-100	2	0.079	0.039	●	0.118	0.236	∞	-	-	-	-	-	-	-	-	-
TCM27-239-120	2.39	0.094	0.047	●	0.224	0.449	∞	23.622	11.024	7.087	5.118	1.969	1.378	-	-	-
TCM27-300-150	3	0.118	0.059	●	0.252	0.504	∞	23.622	11.024	7.087	5.315	4.134	3.740	3.346	3.071	2.165

5 pieces per package

● : Line up

TCL38 (for grooving and parting off)



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

★ : First choice

Designation	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	CUTDIA (in)	Relation of groove depth (T) and Max. diameter (øD max) (in)					
							T ≤ 0.197	T ≤ 0.236	T ≤ 0.276	T ≤ 0.315	T ≤ 0.354	T ≤ 0.394
TCL38-150-020	1.5	0.059	0.008	●	0.354	0.709	∞	37.402	12.402	7.480	1.772	-
TCL38-200-020	2	0.079	0.008	●	0.354	0.709	∞	37.402	12.402	7.480	1.772	-
TCL38-300-020	3	0.118	0.008	●	0.394	0.787	∞	37.402	12.402	7.480	5.118	1.969
TCL38-400-030	4	0.157	0.012	●	0.394	0.787	∞	37.402	12.402	7.480	5.118	1.969

5 pieces per package

● : Line up

Reference pages: Toolholders → F061 - F066, Standard cutting conditions → F072

STANDARD CUTTING CONDITIONS

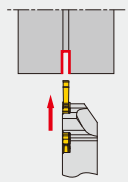
TCL27, TCS27, TCM27

ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)						Depth of cut for profiling (with full radius insert)
				Grooving, Parting-off			Parting-off (with hand)	Profiling (with full radius insert)		
				TCL27	TCS27	TCM27	TCS27	TCS27	TCM27	
P	Carbon steel 1045 etc.	AH725	328 - 656	0.001 - 0.005	0.002 - 0.006	0.002 - 0.010	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
	Alloy steel 4140, etc.	AH725	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.010	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
M	Stainless steel 304, etc.	AH725	328 - 492	0.001 - 0.005	0.002 - 0.006	0.002 - 0.008	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
K	Gray cast iron No.250B, etc.	AH725	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.010	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
	Ductile cast iron 60-40-18, etc.	AH725	164 - 394	0.001 - 0.005	0.002 - 0.006	0.002 - 0.008	0.002 - 0.005	0.002 - 0.004	0.002 - 0.006	0.020
S	Titanium alloys Ti-6Al-4V, etc.	AH725	98 - 197	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006	0.002 - 0.005	0.002 - 0.004	0.002 - 0.004	0.020
	Superalloys Inconel718, etc.	AH725	66 - 164	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006	0.002 - 0.005	0.002 - 0.004	0.002 - 0.004	0.020

TCL38

ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)
				Grooving, Parting-off
				TCL38
P	Carbon steel 1045 etc.	AH7025	262 - 591	0.001 - 0.007
	Alloy steel 4140, etc.	AH7025	164 - 591	0.001 - 0.007
M	Stainless steel 304, etc.	AH7025	164 - 492	0.001 - 0.006
K	Gray cast iron No.250B, etc.	AH7025	164 - 591	0.001 - 0.006
	Ductile cast iron 60-40-18, etc.	AH7025	164 - 394	0.001 - 0.006
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 197	0.001 - 0.006
	Superalloys Inconel718, etc.	AH7025	66 - 164	0.001 - 0.006

Parting-off and grooving toolholders



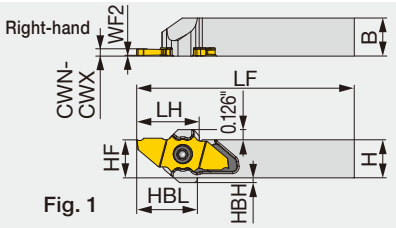


Fig. 1

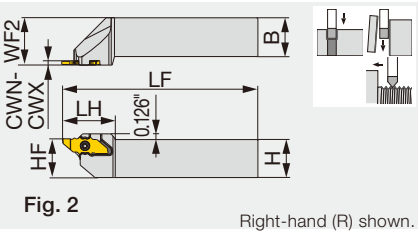


Fig. 2

Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque	Fig.
JSXXR/L063	0.024	0.098	0.375	0.375	4.750	0.774	0.375	0.008/0.367	0.748	0.120	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L083	0.024	0.098	0.500	0.500	4.750	0.774	0.500	0.008/0.492	0.748	0.060	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103	0.024	0.098	0.625	0.625	4.750	0.774	0.625	0.008/0.617	-	-	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L123	0.024	0.098	0.750	0.750	3.950	0.886	0.750	0.008/0.742	-	-	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L163	0.024	0.098	1.000	1.000	5.350	1.339	1.000	1.250	-	-	JX**06...,12...,16..., 20...	0.89	2

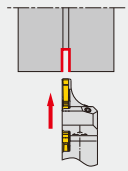
Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque*	Fig.
JSXXR/L1010X09	0.6	2.5	10	10	120	19.65	10	0.2/9.8	19	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09	0.6	2.5	12	12	85	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09	0.6	2.5	12	12	120	19.65	12	0.2/11.8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

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20...inserts, and 0.157" (4 mm) shorter for JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/H/X-CHP

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

Direct connection **Tube connection**



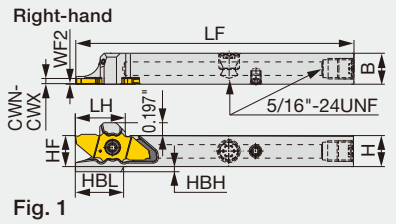


Fig. 1

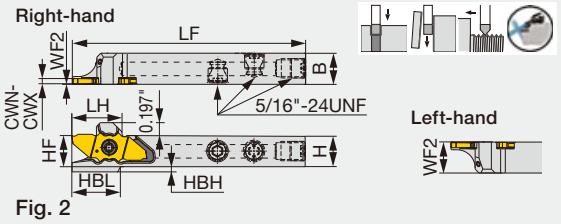


Fig. 2

Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque	Fig.
JSXXR/L083F-CHP	0.024	0.098	0.500	0.500	3.344	0.764	0.500	0.008/0.492	0.736	0.051	JX**06...,12...,16..., 20...	0.89	2
JSXXR/L083X-CHP(3)	0.024	0.098	0.500	0.500	4.750	0.764	0.500	0.008/0.492	0.736	0.051	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103X-CHP(3)	0.024	0.098	0.625	0.625	4.750	0.764	0.625	0.008/0.617	-	-	JX**06...,12...,16..., 20...	0.89	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP(3)	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP(3)	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-CHP(3),(4)	0.6	2.5	16	16	120	19.4	16	0.2	18.7	2.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP(3)	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20... inserts, and 0.157" (4 mm) shorter for JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
(4) To be replaced with the new design
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

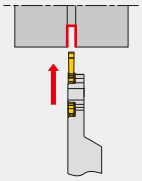
SPARE PARTS

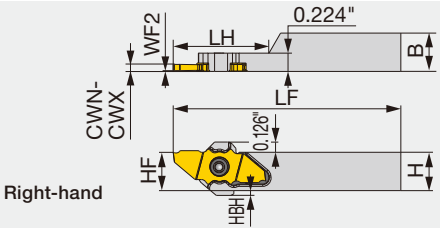
Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**09	CSTC-4L100DL	T-1008/5	-	-	-	-
JSXXL**09	CSTC-4L100DR	T-1008/5	-	-	-	-
JSXXR**F**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H/X**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**H/X**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

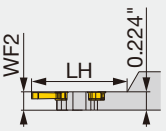
Reference pages: Inserts → F076, F077, Standard cutting conditions → F078
Parts for coolant hose → F290

JSXXR/L-S

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







Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque
JSXXR/L063-S	0.024	0.098	0.375	0.375	4.750	1.030	0.383	0.008/0.217	0.120	JX**06...,12...,16...(3)	0.89
JSXXR/L083-S	0.024	0.098	0.500	0.500	4.750	1.030	0.500	0.008/0.217	0.060	JX**06...,12...,16...(3)	0.89

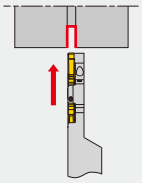
Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*
JSXXR/L1010X09-S	0.6	2.5	10	10	120	26	10	0.2/5.5	3	JX**06...,12...,16...(3)	1.2
JSXXR/L1212F09-S	0.6	2.5	12	12	85	26	12	0.2/5.5	1.5	JX**06...,12...,16...(3)	1.2
JSXXR/L1212X09-S	0.6	2.5	12	12	120	30	12	0.2/5.5	1.5	JX**06...,12...,16...(3)	1.2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

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 0.079" (2 mm) shorter than the above value with JX**12... and JX**20... inserts; 0.157" (4 mm) shorter with JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(3) JX**20... insert will not fit.
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/X-S-CHP

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

Direct connection **Tube connection**



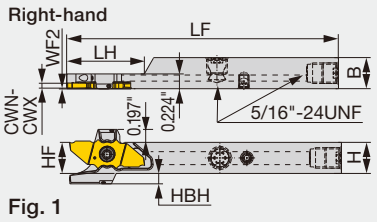


Fig. 1

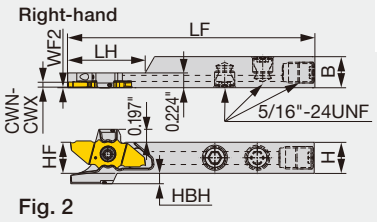
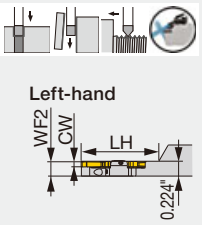


Fig. 2



Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque	Fig.
JSXXR/L083F-S-CHP	0.024	0.098	0.500	0.500	3.344	1.024	0.500	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	2
JSXXR/L083X-S-CHP	0.024	0.098	0.500	0.500	4.750	1.181	0.500	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103X-S-CHP	0.024	0.098	0.625	0.625	4.750	1.181	0.625	0.008/0.217	-	JX**06...,12...,16..., 20...	0.89	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*	Fig.
JSXXR1212F09-S-CHP(4)	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP(3),(4)	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP(3)	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-S-CHP(3),(4)	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP(3)	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 0.079" (2 mm) shorter than the above value with JX**12... and JX**20... inserts; 0.157" (4 mm) shorter with JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
(4) To be replaced with the new design
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

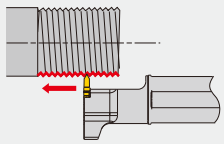
SPARE PARTS

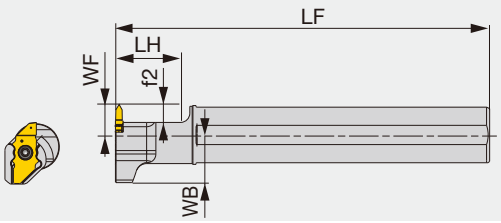
Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**-S	CSTC-4L055DL	T-1008/5	-	-	-	-
JSXXL**-S	CSTC-4L055DR	T-1008/5	-	-	-	-
JSXXR**F**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**X**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**X**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

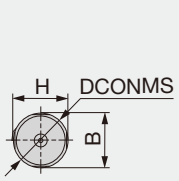
Reference pages: Inserts → F076, F077, Standard cutting conditions → F078
Parts for coolant hose → F290

JS-SXXL09

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







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

Torque: Recommended clamping torque: N·m
(1) When using JX..06... insert, both WF and f2 sizes will be 2 mm shorter than the values provided above.

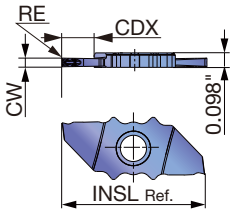
SPARE PARTS


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

Reference pages: Inserts → F076, F077, Standard cutting conditions → F078

INSERTS

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



Right-hand (R) shown.

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

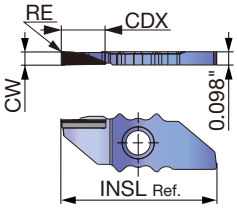
★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	CDX* (in)	INSL (in)
JXPS06R06F	R	0.6	0.024	0.002	●	0.236	0.138	0.827
JXPS06L06F	L	0.6	0.024	0.002	●	0.236	0.138	0.827
JXPS12R08F	R	0.8	0.031	0.002	●	0.472	0.256	0.984
JXPS12L08F	L	0.8	0.031	0.002	●	0.472	0.256	0.984
JXPS12R10F	R	1	0.039	0.002	●	0.472	0.256	0.984
JXPS12L10F	L	1	0.039	0.002	●	0.472	0.256	0.984
JXPS12R15F	R	1.5	0.059	0.002	●	0.472	0.256	0.984
JXPS12L15F	L	1.5	0.059	0.002	●	0.472	0.256	0.984
JXPS16R15F	R	1.5	0.059	0.002	●	0.630	0.335	1.142
JXPS16L15F	L	1.5	0.059	0.002	●	0.630	0.335	1.142
JXPS20R20F	R	2	0.079	0.002	●	0.787	0.413	1.299
JXPS20L20F	L	2	0.079	0.002	●	0.787	0.413	1.299

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

● : Line up

JXDX**R-F (PCD insert)



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

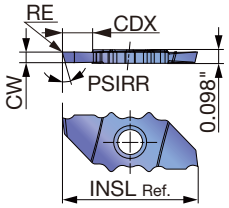
★ : First choice

Designation	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	PCD DX110	CDX (in)	INSL (in)
JXDX12R20F	R	2	0.079	< 0.0039	●	0.236	0.984
JXDX12R25F	R	2.5	0.098	< 0.0039	●	0.256	0.984
JXDX16R25F	R	2.5	0.098	< 0.0039	●	0.276	1.142

● : Line up

Reference pages: Toolholders → F073 - F075, Standard cutting conditions → F078

JXPG**R/L-F (Sharp edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	CDX* (in)	INSL (in)	PSIRR
JXPG06R10F	R	1	0.039	0.002	●	0.236	0.138	0.827	0°
JXPG06L10F	L	1	0.039	0.002	●	0.236	0.138	0.827	0°
JXPG06R15F	R	1.5	0.059	0.002	●	0.236	0.138	0.827	0°
JXPG06L15F	L	1.5	0.059	0.002	●	0.236	0.138	0.827	0°
JXPG06R10F-15	R	1	0.039	0.002	●	0.236	0.138	0.827	15°
JXPG06L10F-15	L	1	0.039	0.002	●	0.236	0.138	0.827	15°
JXPG06R15F-15	R	1.5	0.059	0.002	●	0.236	0.138	0.827	15°
JXPG06L15F-15	L	1.5	0.059	0.002	●	0.236	0.138	0.827	15°
JXPG12R15F	R	1.5	0.059	0.002	●	0.472	0.256	0.984	0°
JXPG12L15F	L	1.5	0.059	0.002	●	0.472	0.256	0.984	0°
JXPG12R20F	R	2	0.079	0.002	●	0.472	0.256	0.984	0°
JXPG12L20F	L	2	0.079	0.002	●	0.472	0.256	0.984	0°
JXPG12R15F-15	R	1.5	0.059	0.002	●	0.472	0.256	0.984	15°
JXPG12L15F-15	L	1.5	0.059	0.002	●	0.472	0.256	0.984	15°
JXPG12R20F-15	R	2	0.079	0.002	●	0.472	0.256	0.984	15°
JXPG12L20F-15	L	2	0.079	0.002	●	0.472	0.256	0.984	15°
JXPG16R15F	R	1.5	0.059	0.002	●	0.630	0.335	1.142	0°
JXPG16L15F	L	1.5	0.059	0.002	●	0.630	0.335	1.142	0°
JXPG16R20F	R	2	0.079	0.002	●	0.630	0.335	1.142	0°
JXPG16L20F	L	2	0.079	0.002	●	0.630	0.335	1.142	0°
JXPG16R15F-15	R	1.5	0.059	0.002	●	0.630	0.335	1.142	15°
JXPG16L15F-15	L	1.5	0.059	0.002	●	0.630	0.335	1.142	15°
JXPG16R20F-15	R	2	0.079	0.002	●	0.630	0.335	1.142	15°
JXPG16L20F-15	L	2	0.079	0.002	●	0.630	0.335	1.142	15°
JXPG20R15F	R	1.5	0.059	0.002	●	0.787	0.413	1.299	0°
JXPG20L15F	L	1.5	0.059	0.002	●	0.787	0.413	1.299	0°
JXPG20R20F	R	2	0.079	0.002	●	0.787	0.413	1.299	0°
JXPG20L20F	L	2	0.079	0.002	●	0.787	0.413	1.299	0°
JXPG20R15F-15	R	1.5	0.059	0.002	●	0.787	0.413	1.299	15°
JXPG20L15F-15	L	1.5	0.059	0.002	●	0.787	0.413	1.299	15°
JXPG20R20F-15	R	2	0.079	0.002	●	0.787	0.413	1.299	15°
JXPG20L20F-15	L	2	0.079	0.002	●	0.787	0.413	1.299	15°

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

● : Line up

Reference pages: Toolholders → F073 - F075, Standard cutting conditions → F078

STANDARD CUTTING CONDITIONS

Parting, Grooving

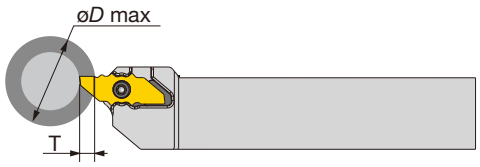
ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steels 1015, etc.	SH725	164 - 656	0.00039 - 0.0020
P	Carbon steels, Alloy steels 1055, etc., 4140, etc.	SH725	164 - 656	0.00039 - 0.0020
P	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 656	0.00039 - 0.0020
M	Stainless steels 304, etc.	SH725	164 - 656	0.00039 - 0.0020
N	Aluminum alloys 5056, 6061, etc.	SH725	492 - 656	0.00039 - 0.0020
N	Copper alloy C2600, C280C, etc.	SH725	328 - 656	0.00039 - 0.0020
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262	0.00039 - 0.0020
S	Superalloys Inconel718, etc.	SH725	98 - 262	0.00039 - 0.0020

For aluminum and non-ferrous metal PCD insert

ISO	Workpiece materials	Grades	Operation	Cutting speed *Vc* (sfm)	Feed *f* (ipr)	Depth of cut *ap* (in)
N	Aluminum alloys 5056, 6061, etc.	DX110	Grooving	328 - 984	0.0012 - 0.0059	-
N		DX110	Turning	328 - 984	0.0012 - 0.0059	< 0.236

Maximum grooving depths (T) in relation to workpiece diameters (ø*D* max) without interference

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



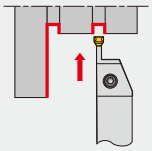
Grooving depths (T) and workpiece diameters (ø*D* max) for each insert

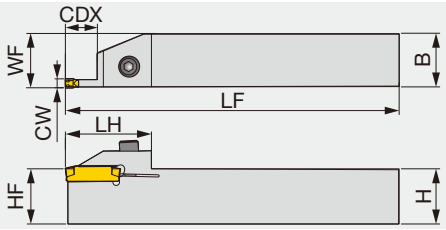
Designation	T≤0.039	T≤0.079	T≤0.098	T≤0.118	T≤0.138	T≤0.157	T≤0.197	T≤0.217	T≤0.236	T≤0.256	T≤0.276	T≤0.295	T≤0.315	T≤0.335	T≤0.354	T≤0.374	T≤0.394	T≤0.413
JXP*06...	∞	∞	7.874	2.362	1.181	-	-	-	-	-	-	-	-	-	-	-	-	-
JXP*12...	∞	∞	∞	∞	∞	∞	∞	3.937	2.362	1.378	-	-	-	-	-	-	-	-
JXP*16...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	7.874	3.543	1.969	0.984	-	-	-	-
JXP*20...	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	7.874	3.150	1.969	0.984

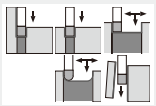
(Unit: inch)

CGWSR/L-W

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







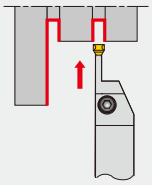
Right hand (R) shown.

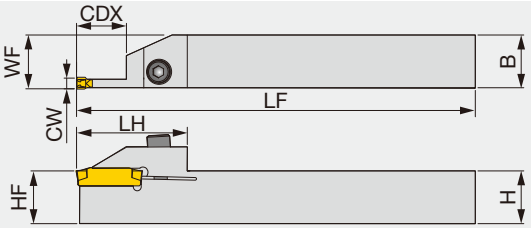
Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGWSR/L1616-W30	3	12	16	16	125	34	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30	3	12	20	20	150	34	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30	3	12	25	25	150	34	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40	4	13	20	20	150	39	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40	4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

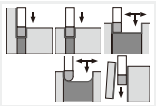
Torque: Recommended clamping torque: N·m

CGWSR/L-W-L

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







Right hand (R) shown.

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGWSR/L1616-W20-L	2	15	16	16	125	37	16	16.2	WGE20, WGE20R/L	5
CGWSR/L2020-W20-L	2	15	20	20	150	37	20	20.2	WGE20, WGE20R/L	5
CGWSR/L2525-W20-L	2	15	25	25	150	37	25	25.2	WGE20, WGE20R/L	5
CGWSR/L1616-W30-L	3	16.5, 17.5(1)	16	16	125	37	16	16.4	WG*30, WGE30R/L	5
CGWSR/L2020-W30-L	3	16.5, 17.5(1)	20	20	150	37	20	20.4	WG*30, WGE30R/L	5
CGWSR/L2525-W30-L	3	16.5, 17.5(1)	25	25	150	37	25	25.4	WG*30, WGE30R/L	5
CGWSR/L2020-W40-L	4	21, 21.5(1)	20	20	150	42	20	20.4	WG*40, WGE40R/L	5
CGWSR/L2525-W40-L	4	21, 21.5(1)	25	25	150	42	25	25.4	WG*40, WGE40R/L	5
CGWSR/L2020-W50-L	5	21	20	20	150	42	20	20.4	WG*50, WGE50R/L	5
CGWSR/L2525-W50-L	5	21	25	25	150	42	25	25.4	WG*50, WGE50R/L	5

Torque: Recommended clamping torque: N·m
(1) The value is true when using the WGR insert.

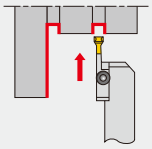
SPARE PARTS

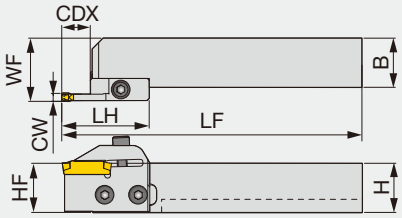
Designation	Clamping screw	Wrench
CGWSR/L****-W...	CHHM5-18	P-4

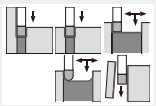
Reference pages: Inserts → F086 - F088, Standard cutting conditions → F088

CGWSR/L-WG

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







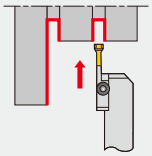
Right hand (R) shown.
Dashed line: 20mm square shank.

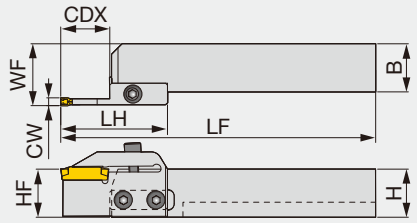
Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Adapter	Torque
CGWSR/L2020-W30GR/L	3	12	20	20	150.5	43.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L	5
CGWSR/L2525-W30GR/L	3	12	25	25	150.5	43.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L	5
CGWSR/L2020-W40GR/L	4	13	20	20	151.5	44.5	20	26.9	WG*40, WGE40R/L	CGWSR/L2020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

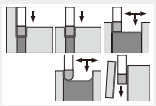
Note: Use right-hand adapters (R) with right-hand shanks (R); and left-hand adapters (L) with left-hand shanks (L).
Torque: Recommended clamping torque: N·m

CGWSR/L-WG-L

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







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

Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Shank	Adapter	Torque
CGWSR/L2020-W20GR/L-L	2	15	20	20	153.5	46.5	20	26.7	WGE20, WGE20R/L	CGWSR/L2020	W20GR/L-L	5
CGWSR/L2525-W20GR/L-L	2	15	25	25	153.5	46.5	25	31.7	WGE20, WGE20R/L	CGWSR/L2525	W20GR/L-L	5
CGWSR/L2020-W30GR/L-L	3	16.5, 17.5(1)	20	20	157.5	50.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L-L	5
CGWSR/L2525-W30GR/L-L	3	16.5, 17.5(1)	25	25	157.5	50.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L-L	5
CGWSR/L2020-W40GR/L-L	4	21, 21.5(1)	20	20	162.5	55.5	20	26.9	WG*40, WGE40R/L	CGWSR/L2020	W40GR/L-L	5
CGWSR/L2525-W40GR/L-L	4	21, 21.5(1)	25	25	162.5	55.5	25	31.9	WG*40, WGE40R/L	CGWSR/L2525	W40GR/L-L	5
CGWSR/L2020-W50GR/L-L	5	21	20	20	162.5	55.5	20	26.9	WG*50, WGE50R/L	CGWSR/L2020	W50GR/L-L	5
CGWSR/L2525-W50GR/L-L	5	21	25	25	162.5	55.5	25	31.9	WG*50, WGE50R/L	CGWSR/L2525	W50GR/L-L	5

Note: Use right-hand adapters (R) with right-hand shanks (R); and left-hand adapters (L) with left-hand shanks (L).
Torque: Recommended clamping torque: N·m
(1) The value is true when using the WGR insert.

SPARE PARTS



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

Combination of adapter and shank

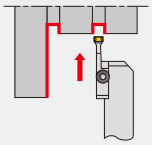
Shank	Adapter	
	**GR, **GR-L	**GL, **GL-L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

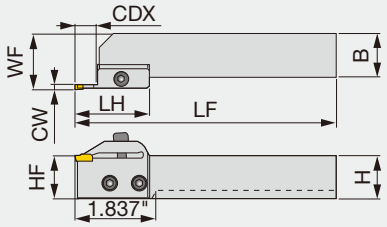
● : Corresponding

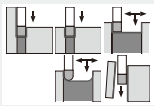
Reference pages: Inserts → F086 - F088, Shanks → F085, Standard cutting conditions → F088

CGWSR/L-G

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







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

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

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

Note: For diameter compensation values in traversing, see page F129.
Use right-hand adapters (R) with right-hand shanks (R); and left-hand adapters (L) with left-hand shanks (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS



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

Combination of adapter and shank

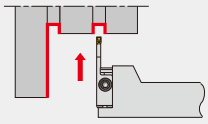
Shank	Adapter	
	**GR, **GR-L	**GL, **GL-L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

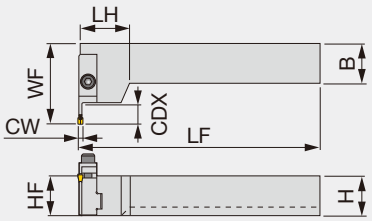
● : Corresponding

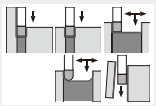
Reference pages: Inserts → F089 - F094, Shanks → F085, Standard cutting conditions → F094

CGWTR/L-G

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







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

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

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

Note: For diameter compensation values in traversing, see page F129.
Use left-hand adapters (L) with right-hand shanks (R); and right-hand adapters (R) with left-hand shanks (L).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS



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

Combination of adapter and shank

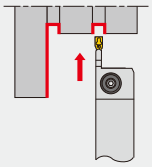
Shank	Adapter	
	**GR, **GR-L	**GL, **GL-L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

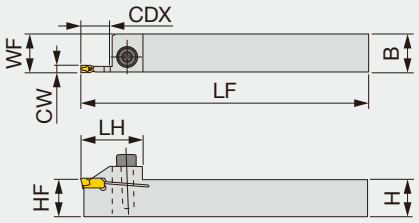
● : Corresponding

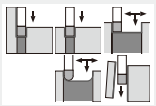
Reference pages: Inserts → F089 - F094, Shanks → F085, Standard cutting conditions → F094

CGSSR/L

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







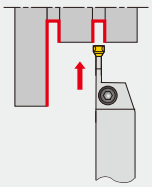
Right hand (R) shown.

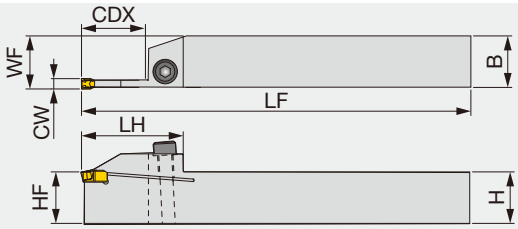
Metric	CW	CDX	H	B	LF	LH	HF	WF	Insert	Torque
CGSSR/L1616-20	2	16	16	16	125	27	16	16.2	GE20, GE20-AL	5
CGSSR/L2020-20	2	16	20	20	150	27	20	20.2	GE20, GE20-AL	5
CGSSR/L2525-20	2	16	25	25	150	27	25	25.2	GE20, GE20-AL	5
CGSSR/L1616-30	3	12	16	16	125	27	16	16.5	G*30,GE30R/L,GE30-AL	5
CGSSR/L2020-30	3	12	20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

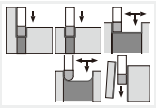
Torque: Recommended clamping torque: N·m

CGSSR/L-D

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







Right hand (R) shown.

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

Torque: Recommended clamping torque: N·m

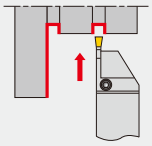
SPARE PARTS

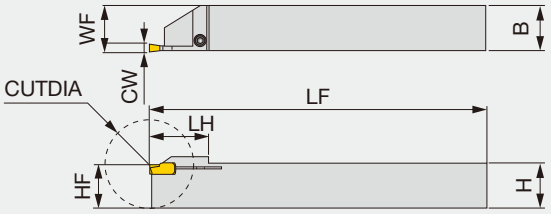
Designation	Clamping screw	Wrench
CGSSR/L...	CHHM5-18	P-4

Reference pages: Inserts → F089 - F094, Standard cutting conditions → F094

JCGSSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

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

Torque: Recommended clamping torque: N·m

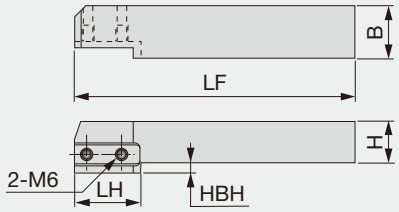
SPARE PARTS

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

Reference pages: Inserts → F089 - F094, Standard cutting conditions → F094

CGWSR/L

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



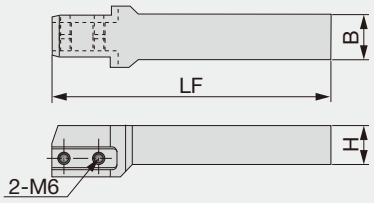
Right hand (R) shown.

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

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

CGWSRL

Shank of toolholders. Vertical type with offset

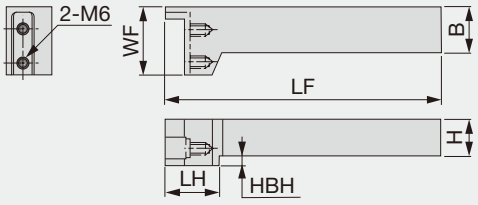


Inch	H	B	LF
CGWSRL12	0.75	0.75	5.40
CGWSRL16	1.00	1.00	5.40

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

CGWTR/L

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



Right hand (R) shown.

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

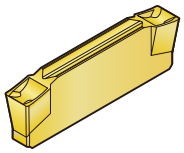
Metric	H	B	LF	LH	WF	HBH
CGWTR/L2020	20	20	150	30.5	37	5
CGWTR/L2525	25	25	150	-	37	-

SPARE PARTS

Designation	Adapter screw
CGW...	CSHB-6

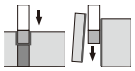
External grooving and parting

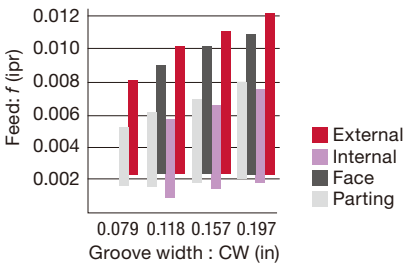
WGE



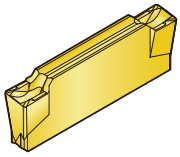
F087

1st choice for external grooving and parting
Excellent chip control for grooving
CW = 0.079" - 0.197"



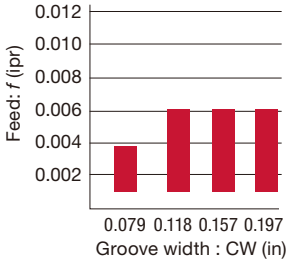


WGE R/L



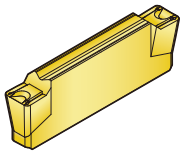
F087

Handed insert
Minimize burr generation when workpiece is cut off
CW = 0.079" - 0.197"



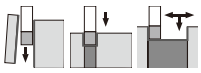
External grooving and turning

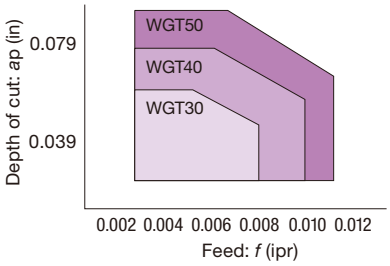
WGT



F088

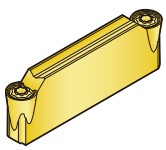
1st choice for turning
Low cutting force and good chip control for traversing
CW = 0.118" - 0.197"





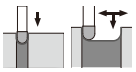
Profiling

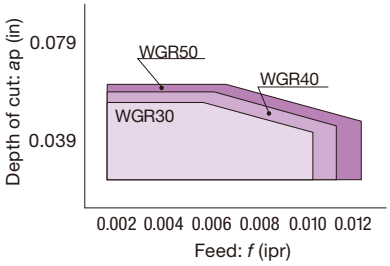
WGR



F088

Low cutting force and good chip control for profiling
CW = 0.118" - 0.197"



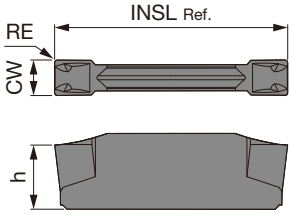


Please see page F*** for the product details.

INSERTS (2 corners)

WGE

For external grooving and parting



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

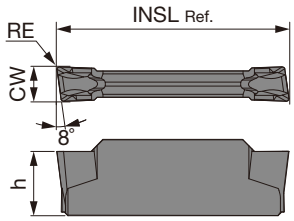
★ : First choice
☆ : Second choice

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

● : Line up

WGE(R/L)

For parting off (handed inserts)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

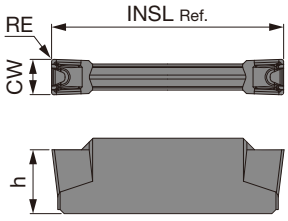
Designation	HAND	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
WGE20R	R	2	0.079	0.008		●	0.787	0.185
WGE20L	L	2	0.079	0.008		●	0.787	0.185
WGE30R	R	3	0.118	0.008	●	●	0.787	0.217
WGE30L	L	3	0.118	0.008		●	0.787	0.217
WGE40R	R	4	0.157	0.008		●	0.984	0.224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

● : Line up

Reference pages: Toolholders → F079, F080, Standard cutting conditions → F088

WGT

For external grooving, parting, and turning



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

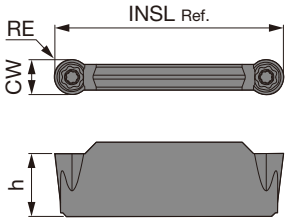
★ : First choice
☆ : Second choice

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

● : Line up

WGR

For profiling (full radius)



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

★ : First choice
☆ : Second choice

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

● : Line up

STANDARD CUTTING CONDITIONS (for 2 corner inserts)

ISO	Workpiece material	Recommended grade	Cutting speed *Vc* (sfm)
P	Low carbon steels Alloy steels (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730, AH120	164 - 591
	Medium carbon steels Alloy steels (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730, AH120	164 - 492
	High carbon steels Alloy steels (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730, AH120	164 - 492
M	Stainless steels	GH730, AH120	164 - 394
K	Gray and ductile cast irons	GH730, AH120	164 - 591

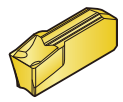
Operation	Feed: *f* (ipr) Groove width: CW 2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (WGE□□)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting (WGE□□R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Turning (WGT□□)	-	*ap* = 0.020 - 0.059 *f* = 0.0024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

Note: For diameter compensation values in traversing, see page F129.

Reference pages: Toolholders → F079, F080

External grooving and parting

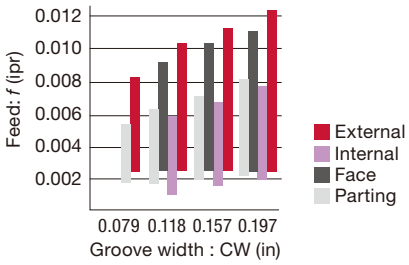
GE

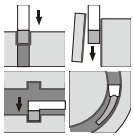


F091

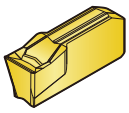
1st choice for external grooving and parting
Excellent chip control

CW = 0.079" - 0.197"





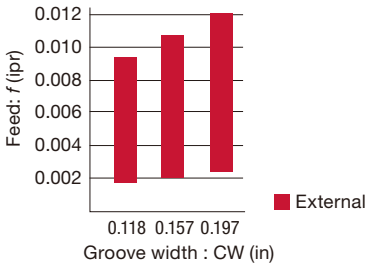
GF

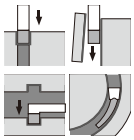


F092

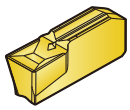
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 0.118" - 0.197"





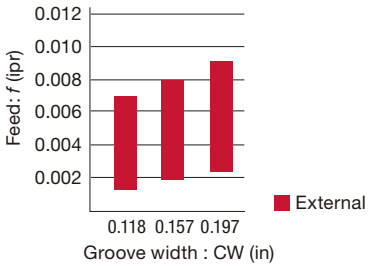
GN

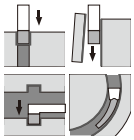


F093

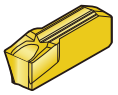
1st choice for internal grooving
Low cutting force and good chip control for internal grooving

CW = 0.118" - 0.197"





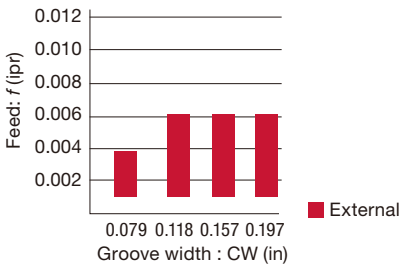
GE R/L



F093

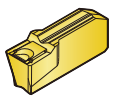
Handed insert
Minimize burr generation when workpiece is cut off

CW = 0.118" - 0.197"



External grooving and turning

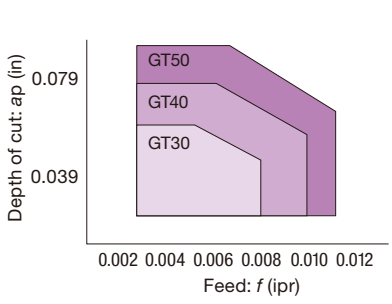
GT

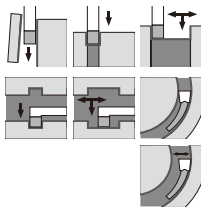


F091

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

CW = 0.118" - 0.197"

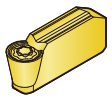




Please see page F*** for the product details.

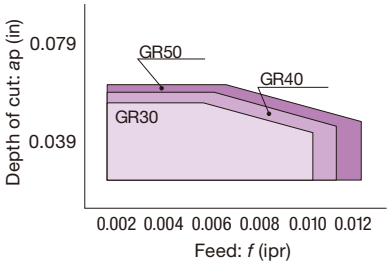
Profiling

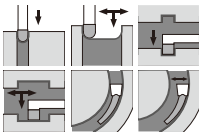
GR



F092

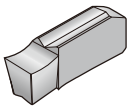
Full radius type
Low cutting force and good chip control for profiling
CW = 0.118" - 0.197"





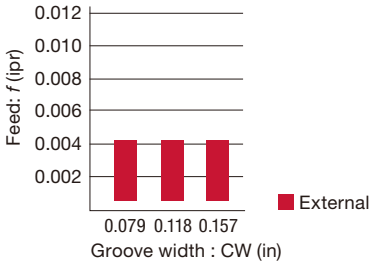
For aluminum and non-ferrous metal

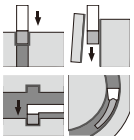
GE-AL



F094

Reduce cutting force and welding due to sharp chipbreaker
CW = 0.079" - 0.157"





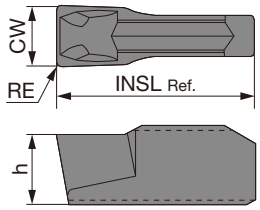
External
Internal
Face
Parting
Others

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

INSERTS (1 corner)

GE

For external grooving and parting



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

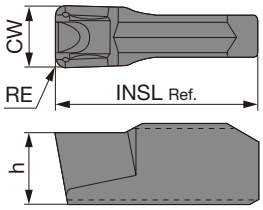
★ : First choice
☆ : Second choice

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

● : Line up

GT

For external grooving and turning



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

★ : First choice
☆ : Second choice

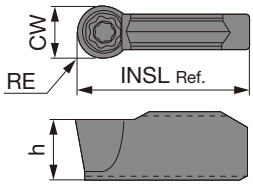
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GT30	3	0.118	0.016		●	●	●	0.394	0.138
GT40	4	0.157	0.016		●	●	●	0.394	0.157
GT50	5	0.197	0.016	●	●	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F081 - F084, Standard cutting conditions → F094

GR

For profiling (full radius)



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

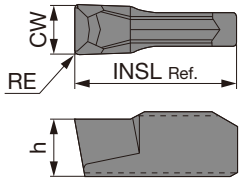
★ : First choice
☆ : Second choice

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

● : Line up

GF

For face grooving



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

★ : First choice
☆ : Second choice

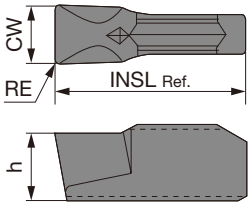
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated			Cermet									INSL (in)	h (in)
				GH730			NS9530										
GF30	3	0.118	0.008	●			●									0.394	0.138
GF40	4	0.157	0.008	●			●									0.394	0.157
GF50	5	0.197	0.008	●			●									0.472	0.177

● : Line up

Reference pages: Toolholders → F081 - F084, Standard cutting conditions → F094

GN

For internal grooving



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

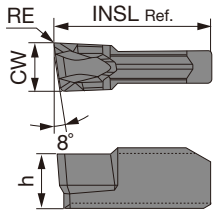
★ : First choice
☆ : Second choice

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

● : Line up

GE-R/L

For parting off (handed inserts)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

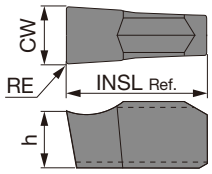
Designation	HAND	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
GE30R	R	3	0.118	0.008	●	●	0.394	0.138
GE30L	L	3	0.118	0.008		●	0.394	0.138
GE40R	R	4	0.157	0.008	●	●	0.394	0.157
GE40L	L	4	0.157	0.008		●	0.394	0.157
GE50R	R	5	0.197	0.008		●	0.472	0.177
GE50L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

● : Line up

Reference pages: Toolholders → F081 - F084, Standard cutting conditions → F094

GE-AL

For aluminum and non-ferrous metal



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

★ : First choice
☆ : Second choice

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

● : Line up

STANDARD CUTTING CONDITIONS (for 1 corner inserts)

ISO	Workpiece material	Grades	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730, AH120	164 - 591
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730, AH120	164 - 492
	High carbon steel, Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730, AH120	164 - 394
M	Stainless steel	GH730, AH120	164 - 394
K	Gray iron, Ductile cast iron	GH730, AH120	164 - 591
N	Aluminum alloy, Non-ferrous metal	KS05F	656 - 984

For External

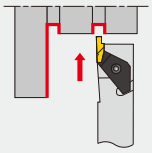
Operation	Feed: *f* (ipr) Groove width: CW 2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (GE**)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting off (GE**R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Traversing (GT**)	-	*ap* = 0.020 - 0.059 *f*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

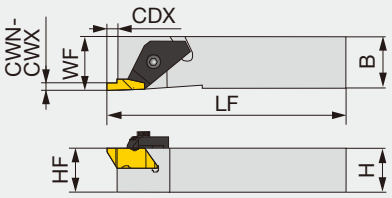
For diameter compensation values in traversing, see page F129.

Reference pages: Toolholders → F081 - F084

FLASR/L

External grooving and threading toolholder, for Swiss lathes





Right hand (R) shown.

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

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

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: lbs·ft (*N·m)

INCH SPARE PARTS

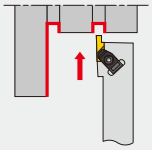
Designation	Clamp	Clamping screw	Wrench
FLASR-082D	TF-182	S-310	7/64HEX
FLASL-082D	TF-183	S-310	7/64HEX
FLASR-102B, FLASR-103B	TF-184	S-412	5/32HEX
FLASL-103B	TF-185	S-412	5/32HEX

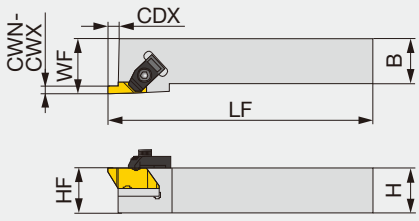
METRIC SPARE PARTS

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

FLSR/L

External grooving and threading toolholder, for Swiss lathes





Right hand (R) shown.

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

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

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: lbs·ft (*N·m)

INCH SPARE PARTS

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

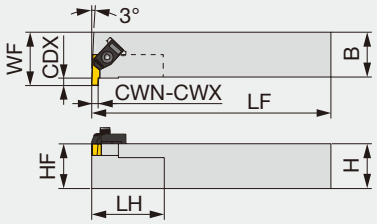
METRIC SPARE PARTS

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

Reference pages: Inserts → F097 - F104, Standard cutting conditions → F104

FLER/L

External toolholders for grooving & threading



Right hand (R) shown.

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

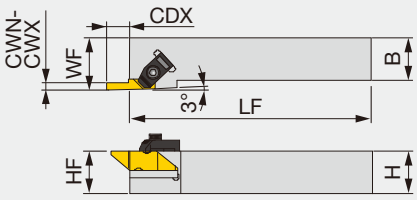
The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

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

FLSR/LT

External toolholders for grooving & threading



Right hand (R) shown.

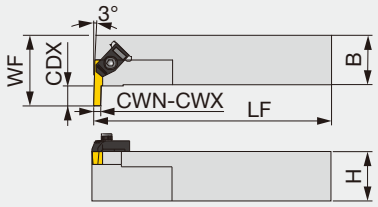
Inch	CWN	CWX	CDX	HF	H	B	LF	WF	Insert	Torque
FLSR/LT-163D	0.094	0.189	0.440	1.000	1.000	1.000	6.000	1.250	FLGT-3R/L...	2.21
FLSR/LT-203D	0.094	0.189	0.440	1.250	1.250	1.250	6.000	1.500	FLGT-3R/L...	2.21

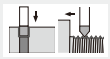
The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

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

Reference pages: Inserts → F097 - F104, Standard cutting conditions → F104





Right hand (R) shown.

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

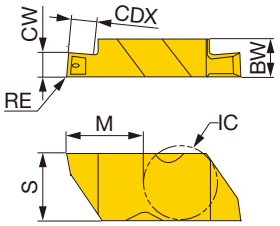
The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

SPARE PARTS

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

INSERTS

FLG-CB (With chipbreaker, metric width)



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

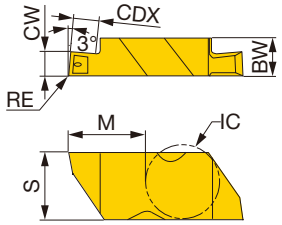
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Inserts → F097 - F104, Standard cutting conditions → F104

FLG-CB (With chipbreaker)



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

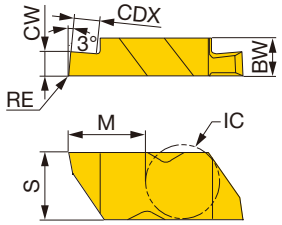
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F095 - F097, Standard cutting conditions → F104

FLG



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

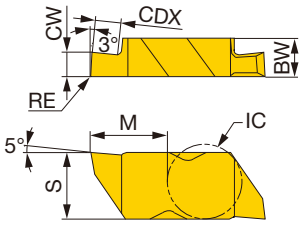
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F095 - F097, Standard cutting conditions → F104

FLGP (Positive rake)



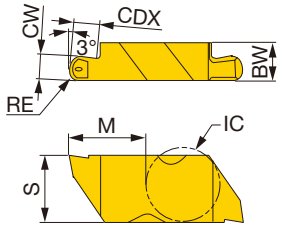
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

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

● : Line up

FLR-CB (Full nose radius, with chipbreaker)



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

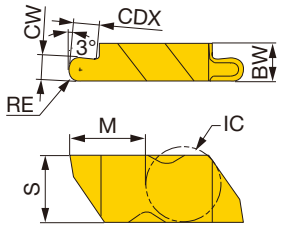
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F095 - F097, Standard cutting conditions → F104

FLR (Full nose radius)



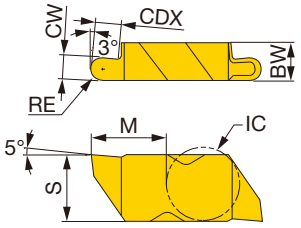
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	☆		
H	Hard materials			

★ : First choice
☆ : Second choice

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

● : Line up

FLRP (Full nose radius and positive rake)



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

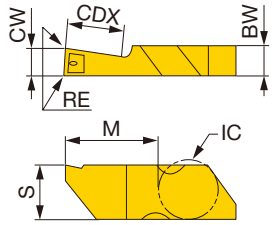
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F095 - F097, Standard cutting conditions → F104

FLGD-CB (Single edge deep, with chipbreaker)



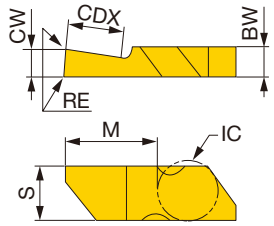
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

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

● : Line up

FLGD (Single edge deep)



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

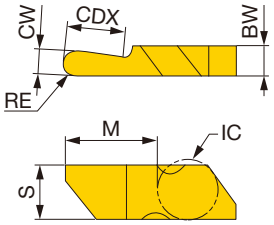
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F095 - F097, Standard cutting conditions → F104

FLRD (Full nose radius, single edge deep)



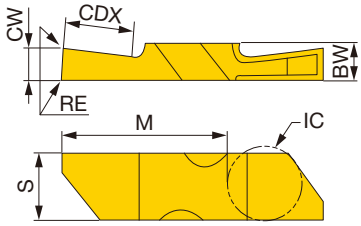
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

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

● : Line up

FLGT (Double end deep)



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

★ : First choice
☆ : Second choice

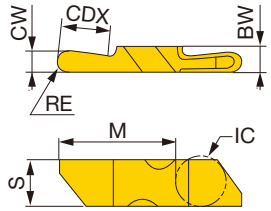
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGT-3094R	R	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3094L	L	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3125R	R	3.18	0.125	0.005 - 0.010	●	0.437	0.3750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

*Fits FLSLT/RT toolholders

● : Line up

Reference pages: Toolholders → F095 - F097, Standard cutting conditions → F104

FLRT (Double end deep FNR)



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

★ : First choice
☆ : Second choice

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

*Fits FLSLT/RT toolholders

● : Line up

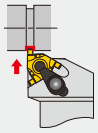
STANDARD CUTTING CONDITIONS

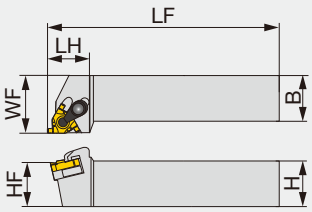
ISO	Workpiece material	Grade	Application	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	High carbon steel 1045, etc.	AH110	Grooving	328 - 656	0.005 - 0.014
	Alloy steel 4137, etc.	AH110	Grooving	164 - 262	0.005 - 0.012
M	Stainless steel 304, etc.	AH110	Grooving	164 - 492	0.004 - 0.008
K	Gray cast iron No.250B, etc.	AH110	Grooving	164 - 591	0.004 - 0.010
	Ductile cast iron 60-40-18, etc.	AH110	Grooving	164 - 394	0.004 - 0.010

Reference pages: Toolholders → F095 - F097

CER/L

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





Right hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF	Insert	Torque
CER/L123DT	0.039	0.089	0.750	0.750	5.000	0.870	0.750	1.000	GTGN-16...	2.58
CER/L163DT	0.039	0.089	1.000	1.000	6.000	1.000	1.000	1.250	GTGN-16...	2.58
CER203DT	0.039	0.089	1.250	1.250	6.000	1.250	1.250	1.500	GTGN-16...	2.58

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

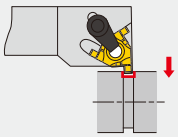
Note: A clamp set consists of a clamp and a clamping screw. A shim set consists of a shim and a shim screw to secure the shim to the toolholder.
Standard shims can be used on both right- and left-hand toolholders. Please use either of the sides depending on the tool hand.
When using grooving inserts,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

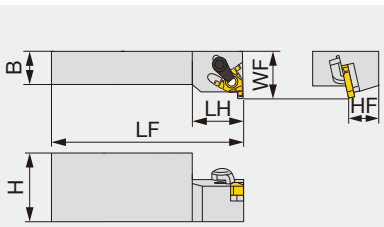
SPARE PARTS

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 and grooving toolholder, for Swiss lathes





Right hand (R) shown.

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

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

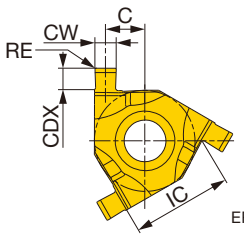
SPARE PARTS

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 → F106

INSERT

GTGN16



ER/IL shown.

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

★ : First choice
☆ : Second choice

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

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

● : Line up

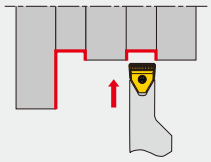
STANDARD CUTTING CONDITIONS

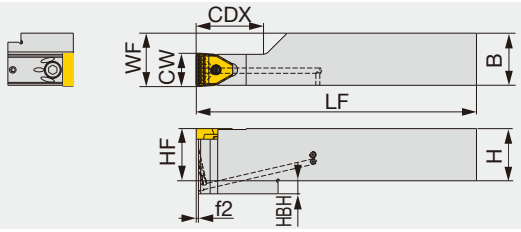
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045, 4140, etc.	SH730	164 - 492	0.002 - 0.004
M	Stainless steel 304, 316, etc.	SH730	98 - 394	0.002 - 0.004
S	Heat-resistant alloys, Titanium alloys, etc. Ti-6Al-4V, etc.	SH730	98 - 131	0.002 - 0.004

Reference pages: Toolholders → F105

FPGR

External grooving toolholder





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

Metric	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: lbs·ft (*N·m)
CDX, LF, f2 are dimensions when PSGM insert is attached. When mounting PSGB insert, the dimensions will be 0.197" (5 mm) longer.

SPARE PARTS

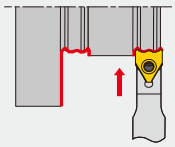


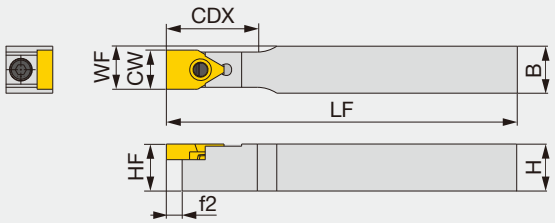

Designation	Lever	Clamping screw	Spring	Wrench
FPGR**-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGR**-20T..., 25T...	FCL8	FCS6	BP-9	P-5

Reference pages: Inserts → F110, F111, Standard cutting conditions → F111

FPGN

External profile grooving toolholder





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

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

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

SPARE PARTS

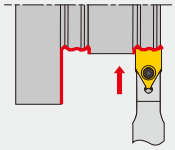


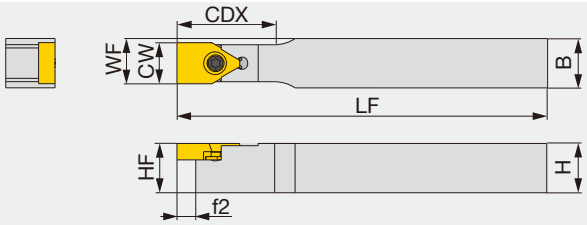

Designation	Lever	Clamping screw	Spring	Wrench
FPGN**-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGN**-20T..., 25T...	FCL8	FCS6	BP-9	P-5

Reference pages: Inserts → F110, F111, Standard cutting conditions → F111

SPGN

External profile grooving toolholder





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

Metric	CW	CDX	H	B	LF	HF	WF	f2	Insert (1)	Torque*
SPGN1212X-10T20	10	25	12	12	125	12	11	5.5	PSGB10	2.3
SPGN1616X-10T20	10	25	16	16	125	16	13	5.5	PSGB10	2.3
SPGN2020K-10T20	10	25	20	20	130	20	15	5.5	PSGB10	2.3
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: lbs·ft (*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

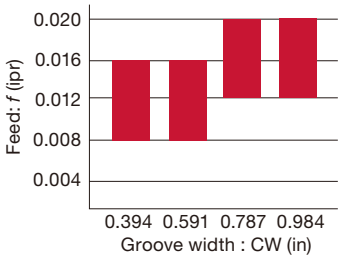
Reference pages: Inserts → F110, F111, Standard cutting conditions → F111

CHIPBREAKER GUIDE

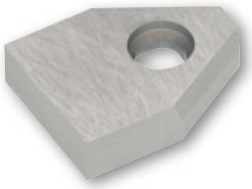
PSGM

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

CW = 0.394" - 0.984"



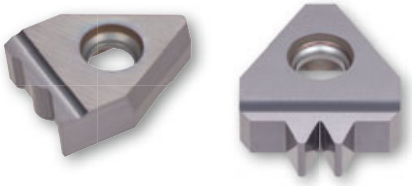
PSGB



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

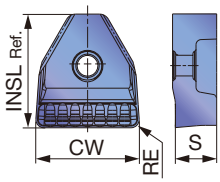
CW = 0.394" - 0.984"

Specially tailored inserts (example)



INSERTS

PSGM



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

★ : First choice
☆ : Second choice

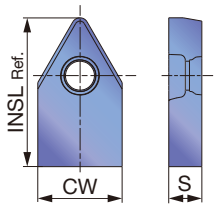
Designation	CW* (mm)	CW** (in)	RE (in)	Coated AH725	INSL (in)	S (in)
PSGM10-08	10	0.394	0.031	●	0.433	0.157
PSGM15-15	15	0.591	0.059	●	0.591	0.197
PSGM20-20	20	0.787	0.079	●	0.866	0.256
PSGM25-20	25	0.984	0.079	●	0.866	0.256

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

● : Line up

Reference pages: Toolholders → F107 - F109

PSGB



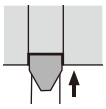
P	Steel	☆	★
M	Stainless		★
K	Cast iron	★	
N	Non-ferrous	★	
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	CW±0.025 (mm)	CW±0.001 (in)	Uncoated TH10	Uncoated UX30	INSL (in)	S (in)
PSGB10	10.2	0.402	●	●	0.709	0.157
PSGB15	15.2	0.598	●	●	0.787	0.197
PSGB20	20.2	0.795	●	●	1.063	0.256
PSGB25	25.2	0.992	●	●	1.063	0.256

● : Line up

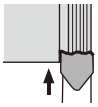
STANDARD CUTTING CONDITIONS



Wide grooving (PSGM insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed *Vc* (sfm)
P	Alloy steel 4140, etc.	< 300	AH725	164 - 591

	Groove width: CW (in) 0.394	0.591	0.787	0.984
Feed: *f* (ipr)	0.008 - 0.016	0.008 - 0.016	0.012 - 0.020	0.012 - 0.020

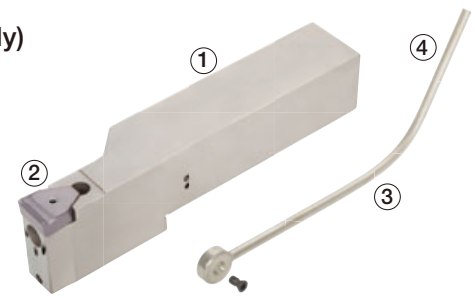


Wide profile grooving (PSGB insert)

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed *Vc* (sfm)
P	Carbon steel 1045, etc.	< 200	UX30	164 - 492
	Alloy steel 4140, etc.	< 300	UX30	164 - 394
M	Stainless steel 303, etc.	< 200	UX30	164 - 394
K	Gray cast iron No.250B, etc.	-	TH10	164 - 492
	Ductile cast irons 65-45-12, etc.	-	TH10	164 - 394
N	Aluminum alloy Si < 12%, etc.	-	TH10	328 - 1640

Spare parts for internal coolant supply attachment (Order separately)

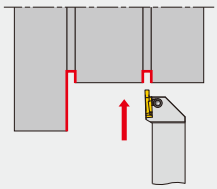
No.	Parts name	Designation	Note
①	Body	FPGR...	-
②	Insert	PSGM...	-
③	Coolant supply attachment	SGCU-341	-
④	Connector	Commercial items can be used	G 1/8 thread
			NPT 1/8 thread

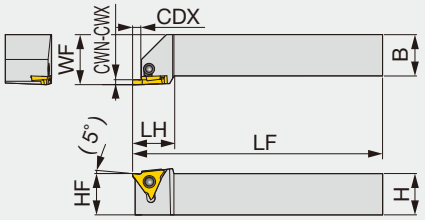


Reference pages: Toolholders → F107 - F109

TGTSR/L

External grooving toolholder, for 3 corner insert





Right hand (R) shown.

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

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

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

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

SPARE PARTS

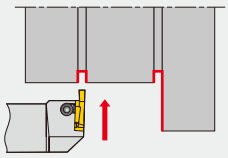


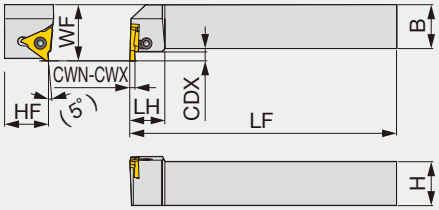
Designation	Clamp	Clamping screw	Wrench
TGTSR16-3	CP900	MCS520-2.5	P-2.5
TGTSR16-4...	CP910	MCS520-2.5	P-2.5
TGTSR/L*****16	CP900	MCS520-2.5	P-2.5
TGTSR/L*****22...	CP910	MCS520-2.5	P-2.5

Reference pages: Inserts → F114 - F116, Standard cutting conditions → F116

TGTTR/L

External grooving with tangential pocket, for 3 corner insert





Right hand (R) shown.

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

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

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

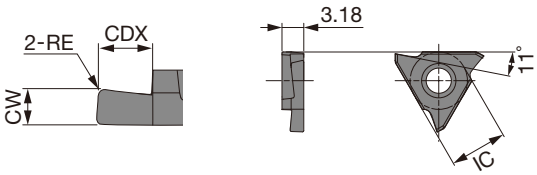
SPARE PARTS



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 → F114 - F116, Standard cutting conditions → F116

GBR/L32



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

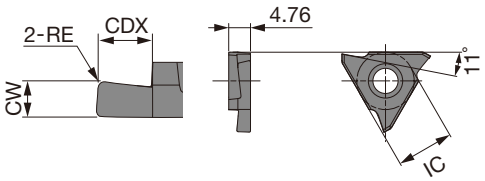
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	AH710	NS9530	KS05F	CDX (in)	IC (mm)
GBR32033	R	0.33	0.013	0.0012	●	●	●	0.031	9.53
GBL32033	L	0.33	0.013	0.0012	●			0.031	9.53
GBR32050	R	0.5	0.020	0.002	●	●	●	0.047	9.53
GBL32050	L	0.5	0.020	0.002	●			0.047	9.53
GBR32075	R	0.75	0.030	0.002	●	●	●	0.079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

● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F112, F113, Standard cutting conditions → F116

GBR/L43



Right hand (R) shown.
Unit: mm

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

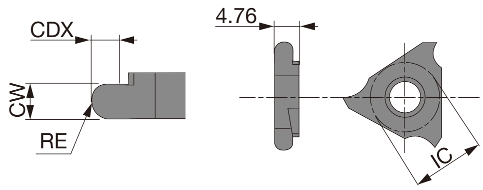
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F112, F113, Standard cutting conditions → F116

GBR/L43-R(full radius)



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

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

● : Line up

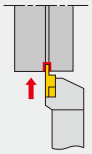
STANDARD CUTTING CONDITIONS

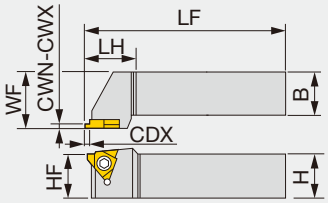
ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Carbon steels, Alloy steels 1045, etc. 4140, etc.	150 - 240HB	NS9530	328 - 656	0.001 - 0.010
		150 - 240HB	AH710	197 - 492	0.002 - 0.010
M	Stainless steel 304, etc.	≤ 240HB	AH710	197 - 492	0.002 - 0.006
K	Cast irons No.250B, etc.	Tensile strength ≤ 350 N/mm^2	AH710	197 - 492	0.002 - 0.006
N	Non-ferrous metal Aluminum, etc.	-	KS05F	656 - 984	0.002 - 0.006

Reference pages: Toolholders → F112, F113

SGTR/L

External grooving toolholder, for 3 corner inserts





Right hand (R) shown.

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

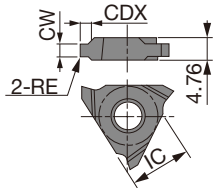
Torque: Recommended clamping torque: N·m

SPARE PARTS

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

INSERTS

GOR/L (For O-ring)



Right hand (R) shown.
Unit: mm

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

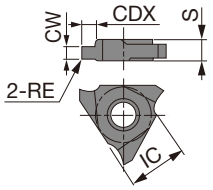
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Inserts → F117, F118, Standard cutting conditions → F118

GLR/L (For lock ring)



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

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

● : Line up

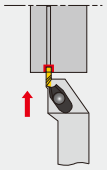
STANDARD CUTTING CONDITIONS

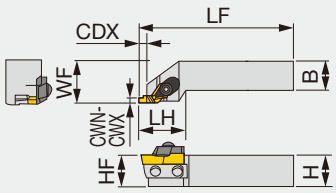
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)		
				CW < 0.079"	CW = 0.079" - 0.157"	CW > 0.157"
P	Carbon steel	NS9530	262 - 656	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010
		UX30	197 - 492	0.002 - 0.004	0.003 - 0.008	0.003 - 0.010

Reference pages: Toolholders → F117

GX-R/LE

External grooving toolholder, for 2 corner inserts





Right hand (R) shown.

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

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

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

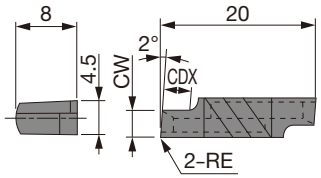
SPARE PARTS

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

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

INSERTS

XGR/L



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

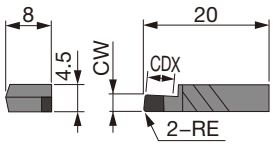
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Cermet NS9530	Uncoated TH10	Uncoated UX30	CDX (in)
XGR6310-02	R	1	0.039	0.008	●	●	●	0.059
XGL6310-02	L	1	0.039	0.008	●	●	●	0.059
XGR6315-02	R	1.5	0.059	0.008	●	●	●	0.091
XGL6315-02	L	1.5	0.059	0.008	●	●	●	0.091
XGR6320-02	R	2	0.079	0.008	●	●	●	0.118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

● : Line up

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

Reference pages: Inserts → F119, F120, Standard cutting conditions → F120

XGR/L-QBN



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

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

● : Line up

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

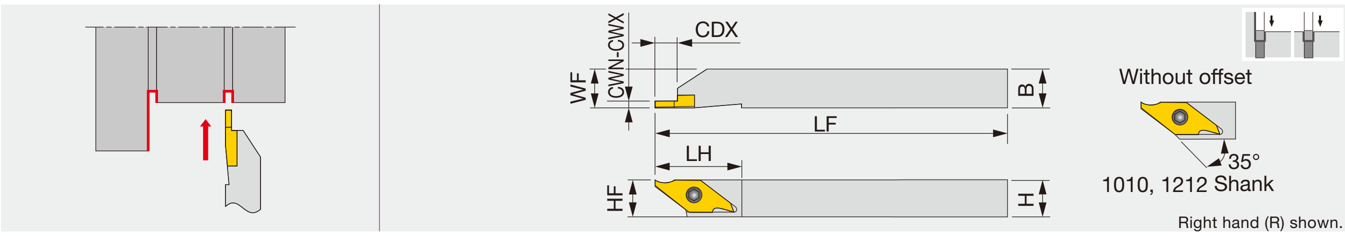
STANDARD CUTTING CONDITIONS

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

Reference pages: Toolholders → F119

JSVGR/L

External grooving toolholder, for Swiss lathes

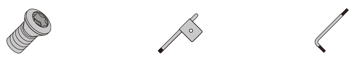


Inch	CWN	CWX	CDX	H	B	LF	LH	HF	WF	Insert	Torque
JSVGR/L062.5	0.013	0.079	0.028 - 0.217	0.375	0.375	5	0.875	0.375	0.375	JVGR/L...	1.70
JSVGR/L082.5	0.013	0.079	0.028 - 0.217	0.500	0.500	5	0.875	0.500	0.500	JVGR/L...	1.70
JSVGR/L102.5	0.013	0.079	0.028 - 0.217	0.625	0.625	5	0.875	0.625	0.625	JVGR/L...	1.70

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

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

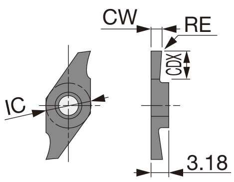
SPARE PARTS



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

INSERT

JVG (with hand, sharp edge)



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

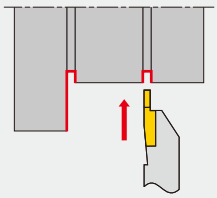
Designation	HAND	$CW^{+0.05}_{0}$ (mm)	$CW^{+0.002}_{0}$ (in)	RE (in)	Coated SH725	Coated J740	Cermet NS9530	Uncoated TH10	CDX (in)	IC (mm)
JVGR033F	R	0.33	0.013	0	●	●		●	0.028	7.94
JVGL033F	L	0.33	0.013	0	●				0.028	7.94
JVGR050F	R	0.5	0.020	0	●	●		●	0.043	7.94
JVGL050F	L	0.5	0.020	0	●				0.043	7.94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

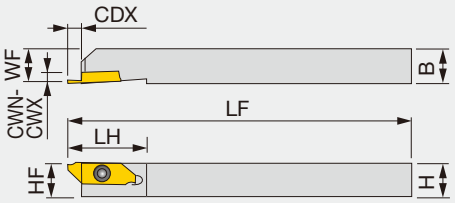
● : Line up

Reference pages: Standard cutting conditions → F128

JSXGR/L

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





Without offset

1010, 1212 Shank

Right hand (R) shown.

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

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

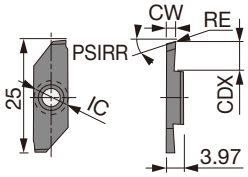
SPARE PARTS



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

INSERT

JXG (with hand, sharp edge)



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

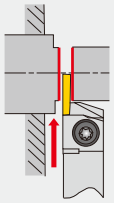
Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated J740	Uncoated TH10	CDX (mm)	IC (mm)	PSIRR
JXGR8070FA	R	0.028	0.7	0	●	●	4.5	8	15°
JXGL8070FA	L	0.028	0.7	0	●	●	4.5	8	15°
JXGR8070FA-005	R	0.028	0.7	0.05	●		4.5	8	15°
JXGR8100FA	R	0.039	1	0	●	●	6	8	15°
JXGL8100FA	L	0.039	1	0	●	●	6	8	15°
JXGR8100FA-005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

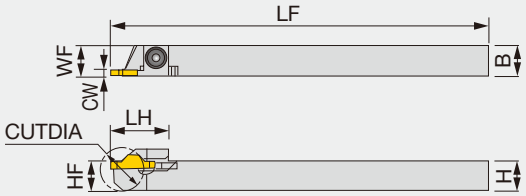
● : Line up

Reference pages: Standard cutting conditions → F128

JCCWSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

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

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

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

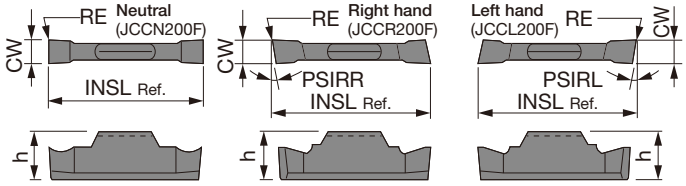
SPARE PARTS



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

INSERT

JCC (Sharp edge)



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

★ : First choice
☆ : Second choice

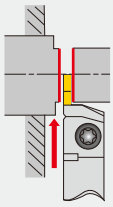
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated	Uncoated	INSL (mm)	h (mm)	PSIRL	PSIRR
					J740	TH10				
JCCN200F	N	2	0.079	0	●	●	15	4.8	0°	0°
JCCN200F-005	N	2	0.079	0.002	●		15	4.8	0°	0°
JCCR200F	R	2	0.079	0	●	●	15	4.8	0°	15°
JCCL200F	L	2	0.079	0	●	●	15	4.8	15°	0°
JCCR200F-005	R	2	0.079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

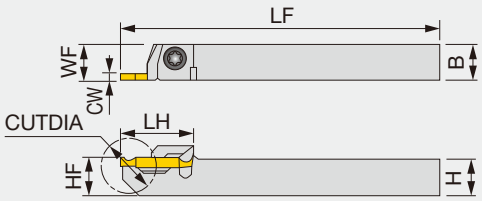
● : Line up

Reference pages: Standard cutting conditions → F128

JCGWSR/L

External grooving and parting toolholder, for Swiss lathes





Right hand (R) shown.

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

Torque: Recommended clamping torque: N·m

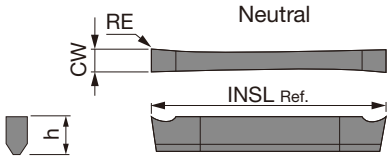
SPARE PARTS

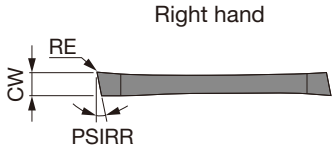


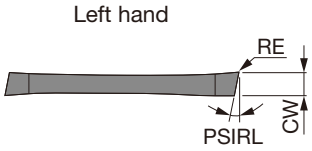
Designation	Clamping screw	Wrench 1	Wrench 2 (Optional)
JCGWSR/L...	CSTB-4S	T-15F	(T-15L)

INSERT

JCGN (Sharp edge)







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

★ : First choice
☆ : Second choice

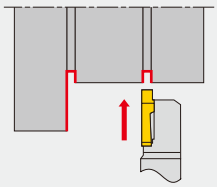
Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated J740	Uncoated TH10	INSL (mm)	h (mm)	PSIRL	PSIRR
JCGN200F	N	0.079	2	0.05	●	●	20	3	0°	0°
JCGN200FR	R	0.079	2	0.05	●	●	20	3	0°	8°
JCGN200FL	L	0.079	2	0.05	●	●	20	3	8°	0°

● : Line up

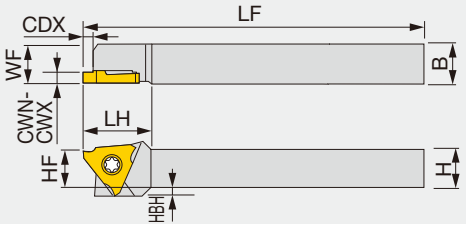
Reference pages: Standard cutting conditions → F128

JSTGR/L

External grooving toolholder, for Swiss lathes



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



Right hand (R) shown.

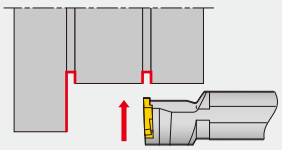
Inch	CWN	CWX	CDX	H	B	LF	LH	HF	WF	HBH	Insert	Torque
JSTGR/L063	0.013	0.118	0.028 - 0.102	0.375	0.375	5	0.75	0.375	0.375	0.100	JTGR/L3...	0.89
JSTGR/L083	0.013	0.118	0.028 - 0.102	0.500	0.500	5	0.75	0.500	0.500	-	JTGR/L3...	0.89
JSTGR/L103	0.013	0.118	0.028 - 0.102	0.625	0.625	5	0.75	0.625	0.625	-	JTGR/L3...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

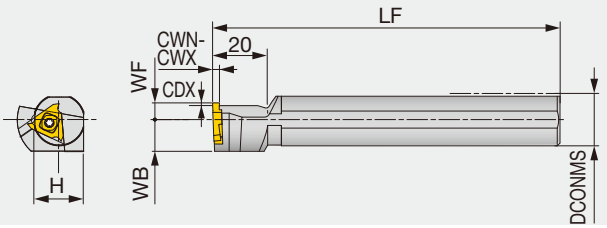
Metric	CWN	CWX	CDX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*
JSTGR/L1010X3	0.33	3	0.7 - 2.6	10	10	120	18.5	10	10	2	JTGR/L3...	1.2
JSTGR/L1212F3	0.33	3	0.7 - 2.6	12	12	85	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1212X3	0.33	3	0.7 - 2.6	12	12	120	18.5	12	12	-	JTGR/L3...	1.2
JSTGR/L1616X3	0.33	3	0.7 - 2.6	16	16	120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

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

JS-TGL3

External grooving toolholder, for Swiss lathes





Left hand (L) shown.
Unit: mm

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

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

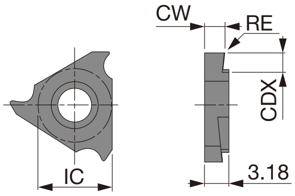
SPARE PARTS



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

Reference pages: Inserts → F126, F127, Standard cutting conditions → F128

JTG (Sharp edge)



Right hand (R) shown.
Unit: mm

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

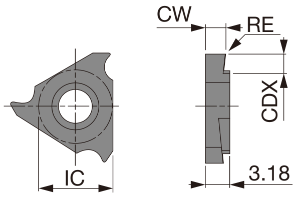
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F125, Standard cutting conditions → F128

JTG (Sharp edge)



Right hand (R) shown.
Unit: mm

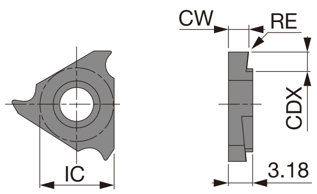
		SH725	J740	NS9530	TH10
P	Steel	★	★	★	☆
M	Stainless	★	★		
K	Cast iron			☆	★
N	Non-ferrous				★
S	Superalloys				★
H	Hard materials				

★ : First choice
☆ : Second choice

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

● : Line up

JTG (honed edge)



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

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

● : Line up

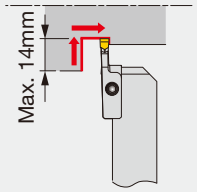
Reference pages: Toolholders → F125, Standard cutting conditions → F128

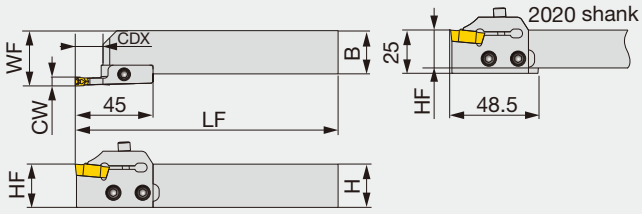
STANDARD CUTTING CONDITIONS (J-Series grooving tool)

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

CGWSR/L-FLR/L#GP

External grooving and turning toolholder





Right hand (R) shown.
Unit: mm

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

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

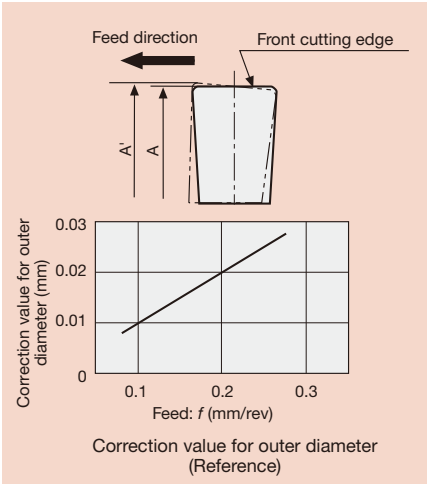
SPARE PARTS



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

Caution

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

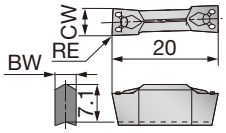


Correction value for outer diameter (Reference)

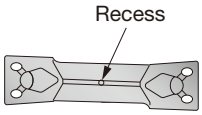
Reference pages: Inserts, Standard cutting conditions → F130

INSERT

FLEX(R/L)



Right hand (R) shown.
Unit: mm



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				Cermet				Uncoated				
		T9225				NS9530				UX30				
P	Steel	★				★				★				
M	Stainless	★								★				
K	Cast iron	☆				☆								
N	Non-ferrous													
S	Superalloys													
H	Hard materials													

★ : First choice
☆ : Second choice

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

● : Line up

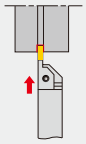
STANDARD CUTTING CONDITIONS

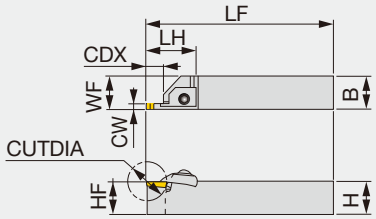
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Turning
P	Carbon steel	T9225	262 - 984	0.002 - 0.010	0.004 - 0.012
		NS9530	262 - 656	0.002 - 0.010	0.004 - 0.012
		UX30	197 - 492	0.002 - 0.010	0.004 - 0.012

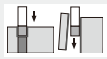
Reference pages: Toolholders → F129

CTWR/L

External grooving and parting toolholder, for 2 corner inserts







Right hand (R) shown.

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

Torque: Recommended clamping torque: N·m

SPARE PARTS

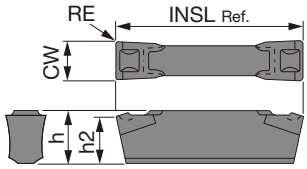




Designation	Clamp	Pin	Clamping screw	Washer	Wrench
CTWR2020-3	CTC-3R	BP-360	CTS-M6	CDW6	P-4
CTWL2020-3	CTC-3L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-3	CTC-3R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-3	CTC-3L	BP-360	CTS-M6	CDW6	P-4
CTWR2020-4	CTC-4R	BP-360	CTS-M6	CDW6	P-4
CTWL2020-4	CTC-4L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-4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

INSERT

CTD



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

★ : First choice
☆ : Second choice

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

● : Line up

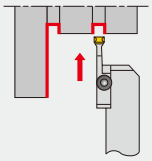
STANDARD CUTTING CONDITIONS

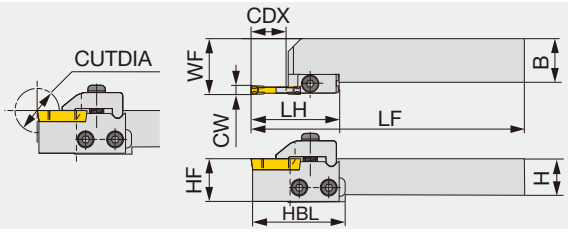
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Parting off
P	Carbon steel	AH725	262 - 591	0.003 - 0.012	0.003 - 0.006
M	Stainless steel	AH725	164 - 394	0.003 - 0.010	0.003 - 0.004

MY-T SERIES

CGWSR/L-CGD

External grooving and parting toolholder





Right hand (R) shown.

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

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

SPARE PARTS

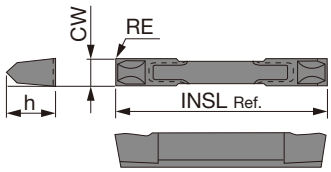





Designation	Adapter	Clamp	Clamping screw	Adapter screw	Spring pin	Spring	Wrench
CGWSR****-CGDR2	TCR2	CCR2	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL2	TCL2	CCL2	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR3	TCR3	CCR3	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL3	TCL3	CCL3	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR4	TCR4	CCR4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

INSERT

CGD



		GH330 (Coated)	NS9530 (Cermet)	UX30 (Uncoated)
P	Steel	☆	★	★
M	Stainless	★		★
K	Cast iron		☆	
N	Non-ferrous			
S	Superalloys			
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	GH330 (Coated)	NS9530 (Cermet)	UX30 (Uncoated)	INSL (mm)	h (mm)
CGD200	0.079	2	0.2	●	●	●	20	3.25
CGD300	0.118	3	0.2	●	●	●	28.6	6.3
CGD400	0.157	4	0.2	●	●	●	28.6	6.3
CGD500	0.197	5	0.2	●	●	●	28.6	6.3
CGD600	0.236	6	0.2	●	●	●	28.6	8.5
CGD700	0.276	7	0.2	●		●	28.6	8.5
CGD800	0.315	8	0.2	●		●	28.6	8.5

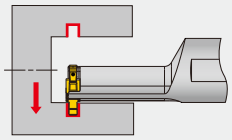
● : Line up

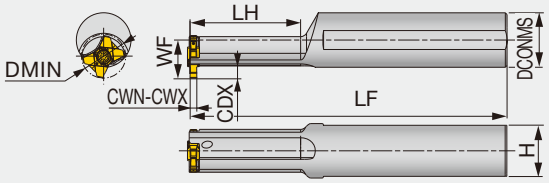
STANDARD CUTTING CONDITIONS

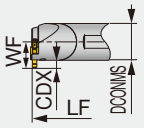
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr) Grooving	Feed: *f* (ipr) Parting off
P	Carbon steel	GH330	230 - 591	0.003 - 0.012	0.003 - 0.006
		NS9530	262 - 656	0.003 - 0.012	0.003 - 0.006
		UX30	197 - 492	0.003 - 0.012	0.003 - 0.006

A/E-STCIR/L

Internal grooving toolholder







Right hand (R) shown.

Inch	Material	CWN	CWX	DMIN	DCONMS	LH	LF	WF	H	Insert	Torque
A08-STCIR/L10-D07U	Steel	0.020	0.118	0.438	0.500	0.984	4.000	0.339	0.475	TCIG10...	0.74
A08-STCIR/L10-D08U	Steel	0.020	0.118	0.500	0.500	1.220	4.000	0.339	0.475	TCIG10...	0.74
E08-STCIR/L10-D10U	Carbide	0.020	0.118	0.625	0.500	-	5.000	0.339	0.475	TCIG10...	0.74
A10-STCIR/L12-D09U	Steel	0.039	0.118	0.563	0.625	1.299	4.500	0.441	0.600	TCIG12...	0.96
A10-STCIR/L12-D11U	Steel	0.039	0.118	0.688	0.625	1.614	4.500	0.441	0.600	TCIG12...	0.96
E10-STCIR/L12-D13U	Carbide	0.039	0.118	0.813	0.625	-	6.000	0.441	0.600	TCIG12...	0.96

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

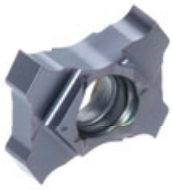
Torque: Recommended clamping torque: lbs·ft (*N·m)

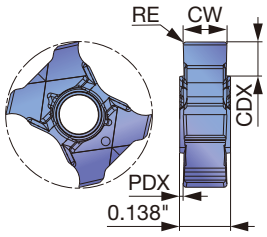
SPARE PARTS

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

INSERT

TCIG





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

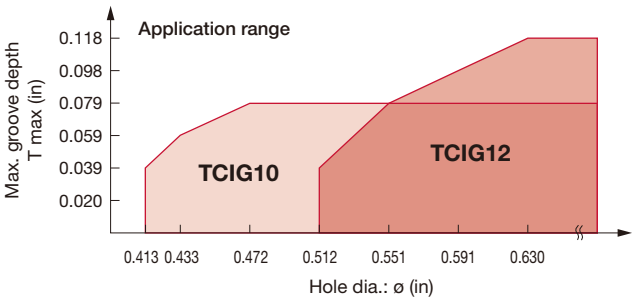
★ : First choice

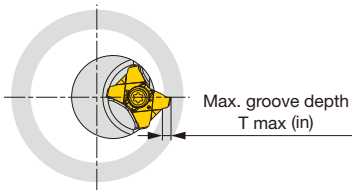
Designation	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	PDX (in)
TCIG10-050-005	0.5	0.020	0.002	●	0.039	0.059
TCIG10-122-008	1.22	0.048	0.003	●	0.079	0.045
TCIG10-142-008	1.42	0.056	0.003	●	0.079	0.041
TCIG10-150-010	1.5	0.059	0.004	●	0.079	0.039
TCIG10-172-008	1.72	0.068	0.003	●	0.079	0.035
TCIG10-200-010	2	0.079	0.004	●	0.079	0.030
TCIG10-250-020	2.5	0.098	0.008	●	0.079	0.020
TCIG10-300-020	3	0.118	0.008	●	0.079	0.010
TCIG12-100-010	1	0.039	0.004	●	0.098	0.049
TCIG12-150-010	1.5	0.059	0.004	●	0.118	0.039
TCIG12-197-008	1.97	0.078	0.003	●	0.118	0.030
TCIG12-200-020	2	0.079	0.008	●	0.118	0.030
TCIG12-224-008	2.24	0.088	0.003	●	0.118	0.025
TCIG12-250-020	2.5	0.098	0.008	●	0.118	0.020
TCIG12-277-015	2.77	0.109	0.006	●	0.118	0.015
TCIG12-300-020	3	0.118	0.008	●	0.118	0.010

● : Line up

Shallower groove depths (T max) for smaller bores

Maximum groove depths (T max) for TCIG10 inserts are smaller than the CDX value shown above when the grooving bore diameter is < 0.472" (12 mm); and for TCIG12, when the bore diameter is < 0.630" (16 mm).
See the chart below for T max values in relation to the given bore diameter.



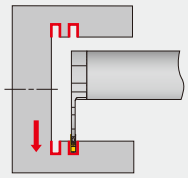


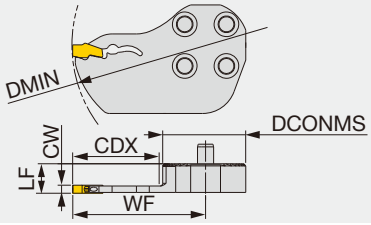
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045, 4140, etc.	< 300 HB	First choice	98 - 262	0.0004 - 0.002
M	Stainless steel 304, 316, etc.	< 200 HB	First choice	98 - 164	0.0004 - 0.002
S	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	33 - 164	0.0004 - 0.002

S-QSIR/L-H

Internal grooving head





Left hand (L) shown.

Inch	CW	CDX	DMIN	DCONMS*	Seat size	LF	WF	Shank
S25-QSIR/L2T26D550-H	0.079	1.024	2.165	0.984	2	0.335	1.579	D1.00
S25-QSIR/L3T26D550-H	0.118	1.024	2.165	0.984	3	0.354	1.579	D1.00
S32-QSIR/L3T32D700-H	0.118	1.260	2.756	1.260	3	0.433	1.953	D1.25
S32-QSIR/L4T32D700-H	0.157	1.260	2.756	1.260	4	0.453	1.953	D1.25

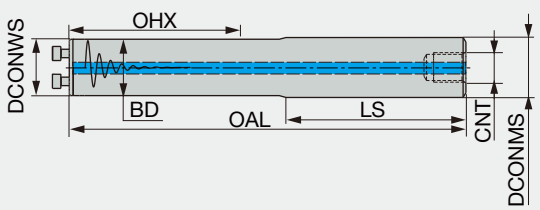
DCONMS*: Mounting part diameter on the shank

SPARE PARTS

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

Straight Shank

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



Inch	Material	DCONWS*	DCONMS	BD	OAL	LS	OHX	CNT
D1.00-L10.2-7D-C	Steel	0.984	1.000	0.984	10.200	6.830	6.200	G1/4
D1.00-L13.21-10D-C	Steel	0.984	1.000	0.984	13.210	8.650	9.200	G1/4
D1.25-L12.48-7D-C	Steel	1.260	1.250	1.260	12.480	7.370	7.500	G3/8
D1.25-L16.24-10D-C	Steel	1.260	1.250	1.260	16.240	9.670	11.200	G3/8

DCONWS*: Mounting part diameter on the head

SPARE PARTS

Designation	Clamping screw	Wrench
D1.00...	SR M4X12DIN912	HW 3.0
D1.25...	SR M5X12 DIN912	HW 4.0

Reference pages: Inserts → F138, F139, Standard cutting conditions → F139

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

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

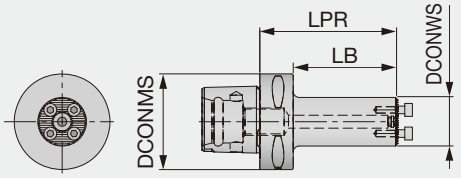


Fig. 1

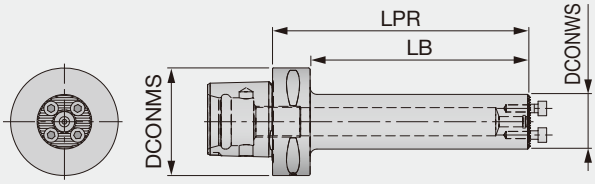


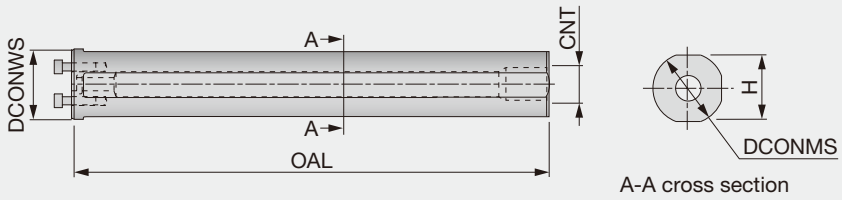
Fig. 2

Metric	Material	DCONWS*	DCONMS	LPR	LB	Fig
C4-SH-D25-2.5D-CHP	Steel	25 (0.984")	40	55	35	1
C4-SH-D32-2.5D-CHP	Steel	32 (1.260")	40	75	55	1
C6-SH-D25-5D-E-CHP	Carbide	25 (0.984")	63	115	93	2
C6-SH-D32-5D-E-CHP	Carbide	32 (1.260")	63	150	128	2

DCONWS*: Mounting part diameter on the head

D#4D-SH

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

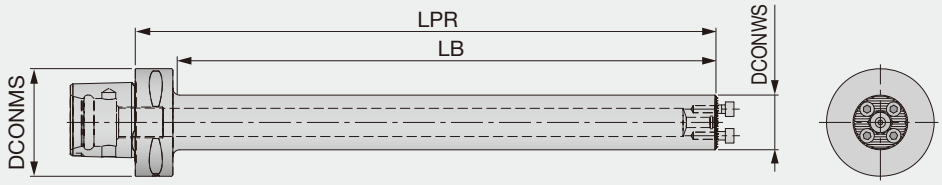


Inch	Material	DCONWS*	DCONMS	OAL	CNT	H
D1.00-L7.2-4D-SH	Steel	1.000	1.000	7.200	UNF-2B 1/2"-20	0.921
D1.25-L8.74-4D-SH	Steel	1.250	1.250	8.740	UNF-2B 1/2"-20	1.142

DCONWS*: Mounting part diameter on the head

C6-9D-C

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



Metric	Material	DCONWS*	DCONMS	LPR	LB	WT (kg)
C6-D25-L230-9D-C	Steel	25 (0.984")	63	230.5	200.1	1.65
C6-D32-L288-9D-C	Steel	32 (1.260")	63	288.5	259.5	2.73

DCONWS*: Mounting part diameter on the head

SPARE PARTS

Designation	Clamping screw	Wrench
C4/C6**D25... D1.00...	SR M4X12DIN912	HW 3.0
C4/C6**D32... D1.25...	SR M5X12 DIN912	HW 4.0

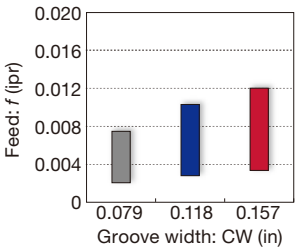
Reference pages: Inserts → F138, F139, Standard cutting conditions → F139

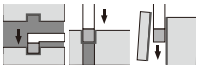
CHIPBREAKER GUIDE

QGM

First choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
CW = 0.079" - 0.157"

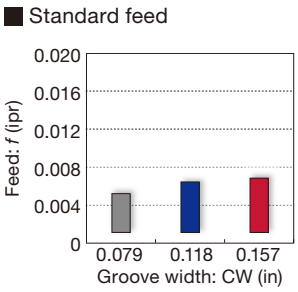


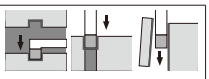


QGS

Lower cutting force and superior sharpness

Uniquely designed edge and chipbreaker
CW = 0.079" - 0.157"

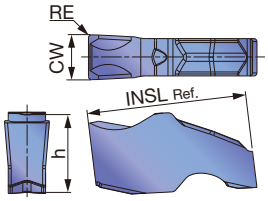




INSERTS

QGM

External/internal deep grooving and parting



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

★ : First choice

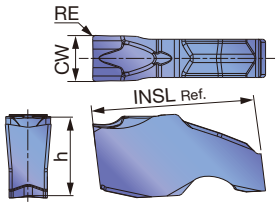
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGM2-020	2	2	0.079	0.008	●	0.433	0.209
QGM3-020	3	3	0.118	0.008	●	0.433	0.209
QGM4-030	4	4	0.157	0.012	●	0.512	0.287

●: Line up

Reference pages: Toolholders → F136, F137

QGS

External/internal deep grooving and parting



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

★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGS2-020	2	2	0.079	0.008	●	0.433	0.209
QGS3-020	3	3	0.118	0.008	●	0.433	0.209
QGS4-030	4	4	0.157	0.012	●	0.512	0.287

●: Line up

STANDARD CUTTING CONDITIONS

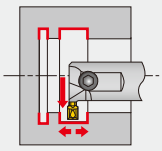
ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4140, etc.	< 300 HB	AH7025	164 - 591
M	Stainless steel 304, etc.	< 200 HB	AH7025	164 - 394
K	Gray cast iron No.250B, etc.	-	AH7025	164 - 591
	Ductile cast iron 65-45-12, etc.	-	AH7025	164 - 394
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	66 - 197

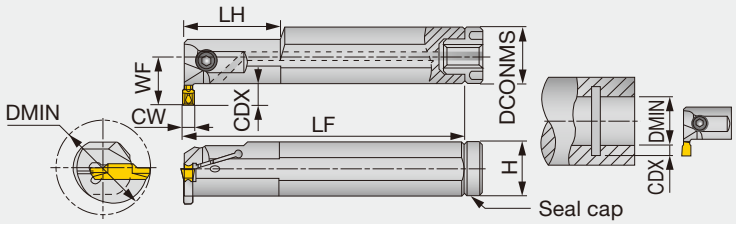
Please see page F138 for feed: *f* (ipr).

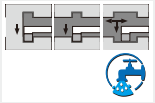
Reference pages: Toolholders → F136, F137

CTIR/L

Internal grooving and turning toolholder







Right hand (R) shown.

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

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

INCH SPARE PARTS

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

When using the inserts that are not in the above

Insert	Groove width CW (in)	Min. diameter DMIN (in)
DGM / DGS / SGN / DGL / DTM	0.079	1.969
DGM / DGS / SGN / DGL / DTM	0.118	1.969
DGM / DGS / SGN / DTM / DGL	0.157	1.969
DGM / DGS / DTM / DGL	0.197	2.362
DGM / DGS / DTM / DGL	0.236	2.362
DGM / DGS / DTM	0.315	2.756
DTE / DGG	0.118	1.575
DTE / DGG	0.157	1.575
DTE / DGG	0.197	1.969
DTE / DGG	0.236	1.969
DTE / DGG	0.315	2.441
DTR	0.079	1.772
DTR	0.118	1.496
DTR	0.157	1.496
DTR	0.197	1.693
DTR	0.236	1.811
DTR	0.315	2.205

External
Internal
Face
Parting
Others

Reference pages: Inserts → F142 - F159, Standard cutting conditions → F160

Metric	CW	DMIN	Seat size	CDX	DCONMS	H	LF (1)	LH	WF	Insert	Torque
CTIR/L16-2T08-D250	2	25	2	8	16	14	125	-	16.5	DGIM..., DGIS..., DTX...	5
CTIR/L20-2T06-D250	2	25	2	6	20	18	160	40	15.8	DGIM..., DGIS..., DTX...	5
CTIR/L20-3T06-D250	3	25	3	6	20	18	160	40	15.8	DTI..., DTX...	5
CTIR/L25-3T05-D250	3	25	3	5.1	25	23	200	40	17.5	DTI..., DTX...	5
CTIR/L25-3T08-D320	3	32	3	8	25	23	200	40	21.5	DTI..., DTX...	5
CTIR/L32-3T10-D400	3	40	3	10	32	30	250	60	27	DTI..., DTX...	5
CTIR/L20-4T06-D250	4	25	4	6	20	18	160	40	15.8	DTI..., DTX...	5
CTIR/L25-4T08-D320	4	32	4	8	25	23	200	40	21.5	DTI..., DTX...	5
CTIR/L32-4T04-D310	4	31	4	4	32	30	250	60	20.8	DTI..., DTX...	5
CTIR/L32-4T10-D400	4	40	4	10	32	30	250	60	27	DTI..., DTX...	5
CTIR/L25-5T05-D310	5	31	5	5	25	23	200	60	17.3	DTI..., DTX...	8.5
CTIR/L32-5T10-D400	5	40	5	10	32	30	250	60	27	DTI..., DTX...	8.5
CTIR/L32-6T04-D310	6	31	6	4	32	30	250	60	20.8	DTI..., DTX...	8.5
CTIR/L32-6T10-D400	6	40	6	10	32	30	250	60	27	DTI..., DTX...	8.5
CTIR/L32-8T05-D370	8	37	8	5	32	30	250	60	21.3	DTI..., DTX...	8.5
CTIR/L40-8T05-D420	8	42	8	5.8	40	38	300	65	25.8	DTI..., DTX...	8.5

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

METRIC SPARE PARTS

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

When using the inserts that are not in the above

Insert	Groove width CW (mm)	Min. diameter DMIN (mm)
DGM / DGS / SGN / DGL / DTM	2	50
DGM / DGS / SGN / DGL / DTM	3	50
DGM / DGS / SGN / DTM / DGL	4	50
DGM / DGS / DTM / DGL	5	60
DGM / DGS / DTM / DGL	6	60
DGM / DGS / DTM	8	70
DTE / DGG	3	40
DTE / DGG	4	40
DTE / DGG	5	50
DTE / DGG	6	50
DTE / DGG	8	62
DTR	2	45
DTR	3	38
DTR	4	38
DTR	5	43
DTR	6	46
DTR	8	56

Reference pages: Inserts → F142 - F159, Standard cutting conditions → F160

Internal grooving and turning

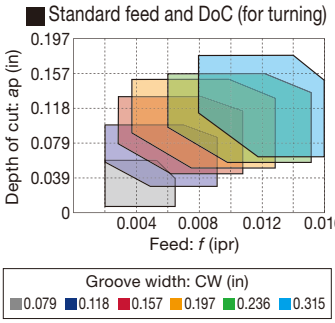
DTX type (2 corners)

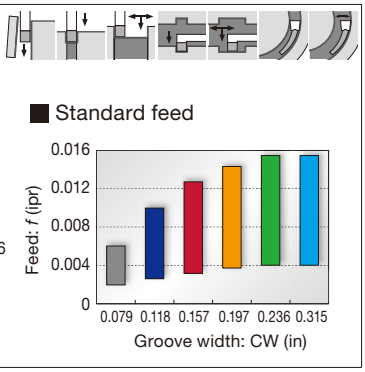
First choice

F147

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.079" - 0.315"



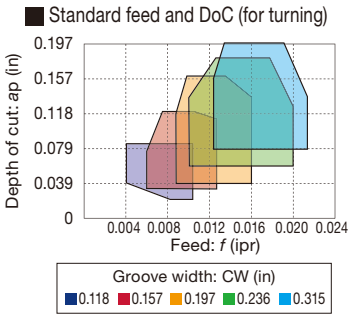


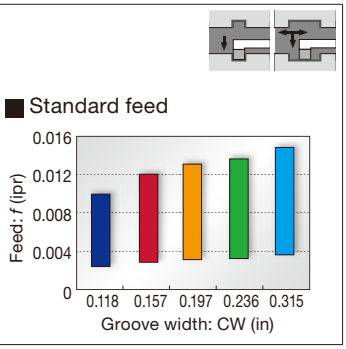
DTI type (2 corners)

F148, F149

For general purpose I.D. grooving

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



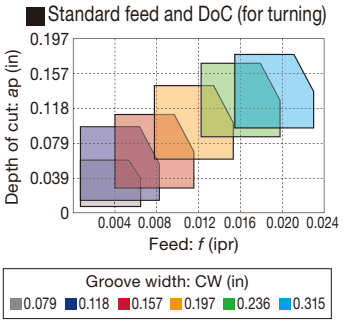


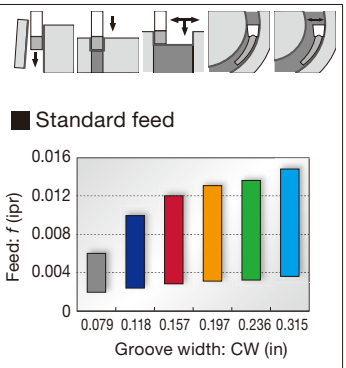
DTM type (2 corners)

F149

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.079" - 0.315"



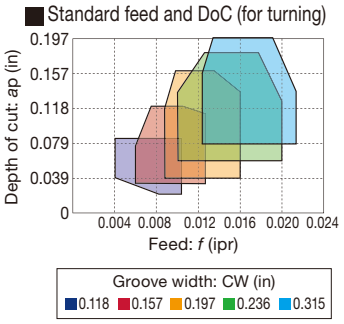


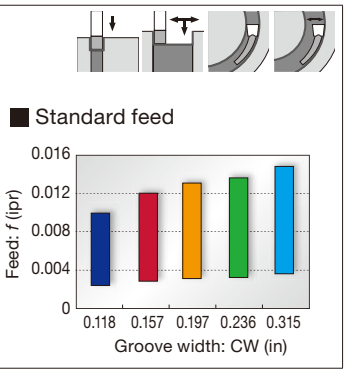
DTE type (2 corners)

F154, F155

General purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 0.104" - 0.315"





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

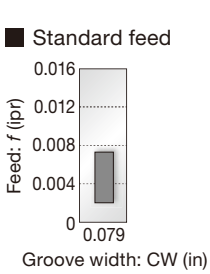
Small diameter internal grooving

DGIM type (2 corners)

F147

2 mm insert width only (For general purpose)

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

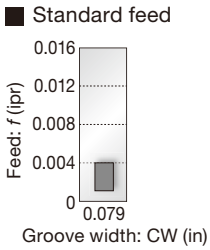


DGIS type (2 corners)

F148

2 mm insert width only (Lower cutting force)

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

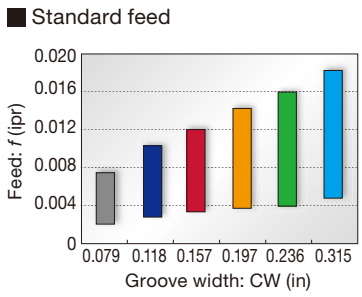


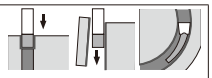
DGM type (2 corners) SGM type (1 corner)

F150, F151

1st choice for grooving and parting

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



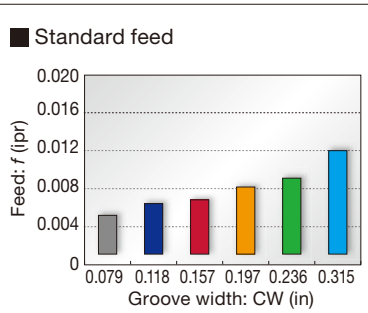


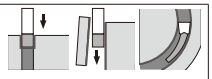
DGS type (2 corners) SGS type (1 corner)

F152, F153

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 0.079" - 0.315"





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

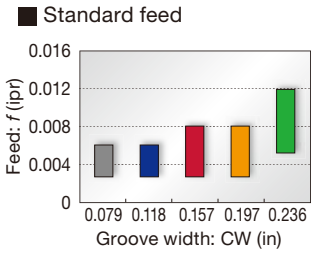
Small diameter internal grooving

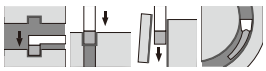
DGL type (2 corners)

F154

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel which often presents challenges in chip control
CW = 0.079" - 0.236"



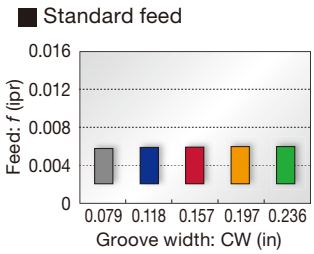


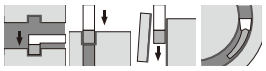
DGG type (2 corners)

F155

For non-ferrous materials and titanium

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





Profiling and undercutting

DTR type (2 corners)
STR type (1 corner)

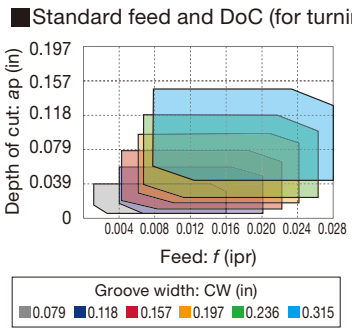
Molded
DTR, STR

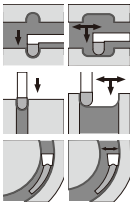
Ground
DTR

F156, F157

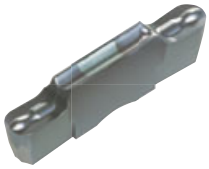
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.079" - 0.315"





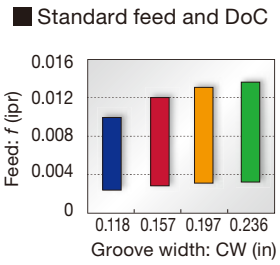
DTIU type (2 corners)

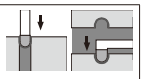


F157

Full radius type

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





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

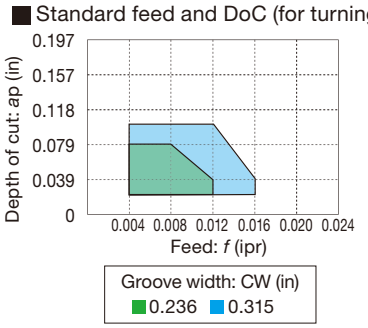
Aluminum wheel machining

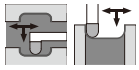
DTA type (2 corners)

F158

Full radius type

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





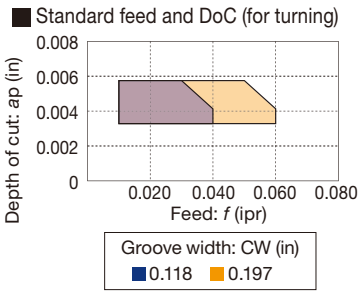
For high feed external/internal/face turning of hardened steel parts

STH type (1 corner)

F158

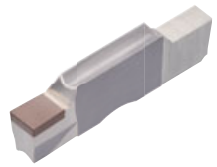
External and face turning of hardened steel parts

High efficiency machining using light D.O.C. and increased feeds
CW = 0.118", 0.197"



External/internal grooving of hardened steel

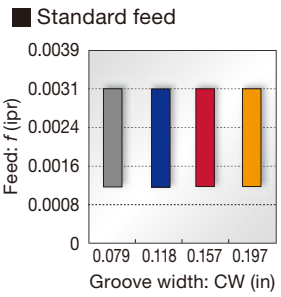
SGN-CBN type (1 corner)

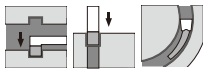


F159

For hardened steel cutting

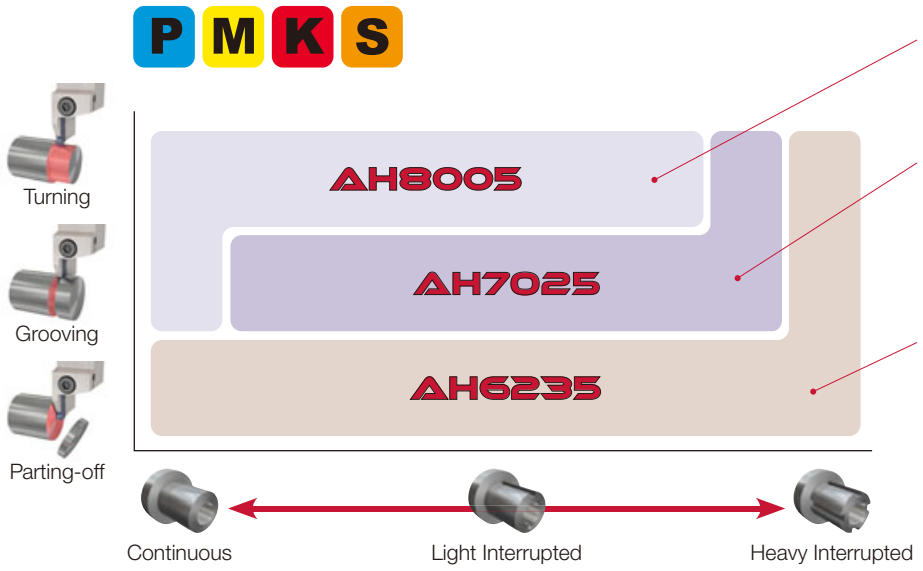
Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.197"
(Tol. ±0.001")





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

GRADE SELECTION



AH8005
- Continuous cutting, First choice
- External and Internal, Turning

AH7025
- Light interrupted cutting, First choice
- A mix of continuous and interrupted cuts

AH6235
- Heavy interrupted cutting, First choice
- Facing, Parting

GRADES

AH8005 P M K S
- First choice for external, internal, and side-turning, continuous cuts

AH7025 P M K S
- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235 P M K
- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725 P M S
- General purpose PVD grade for high fracture resistance

T515 K
- First recommended grade for cast iron
- Excellent wear resistance in high speed machining

T9225 P
- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P
- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K
- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S
- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S
- Recommended for non-ferrous materials and titanium

TH10 N
- Recommended for non-ferrous materials

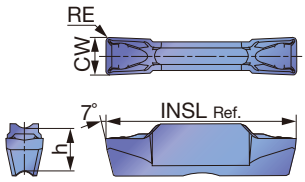
BXA10 H
- Coated CBN grade designed for turning hardened steel parts

BX360 H
- Developed for grooving applications of hardened steel parts

INSERTS

DTX

External/internal/face grooving and turning



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

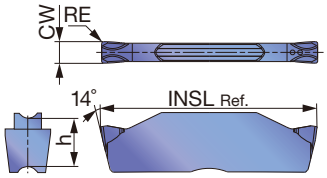
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet				Uncoated				INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530				KS05F					
DTX2-020	2	2	0.079	0.008		●		●		●					●				0.787	0.197
DTX3-030	3	3	0.118	0.012	●	●	●	●	●	●	●				●				0.787	0.197
DTX4-040	4	4	0.157	0.016	●	●	●	●	●	●	●				●				0.787	0.197
DTX5-040	5	5	0.197	0.016	●	●	●	●	●	●	●				●				0.984	0.217
DTX6-080	6	6	0.236	0.031		●	●	●	●	●					●				0.984	0.217
DTX8-080	8	8	0.315	0.031		●		●		●					●				1.181	0.264

● : Line up

DGIM

Small diameter internal grooving



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

★ : First choice
☆ : Second choice

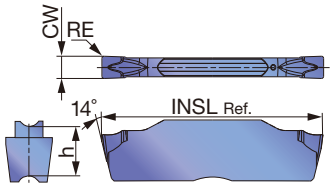
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet								INSL (in)	h (in)
					T9225	AH7025	AH725	GH130			NS9530									
DGIM2-020	2	2	0.079	0.008	●	●	●	●			●								0.787	0.197

●: Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DGIS

Small diameter internal grooving



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

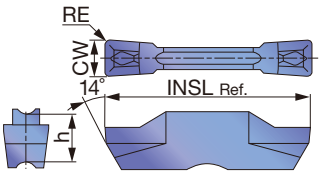
★ : First choice
☆ : Second choice

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

●: Line up

DTI

Internal grooving and turning (for high precision)



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

★ : First choice
☆ : Second choice

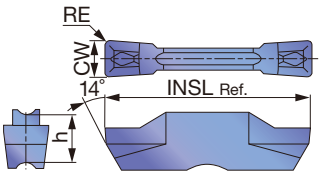
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated							Cermet					INSL (in)	h (in)
					T9225	AH7025	AH725	GH130				NS9530						
DTI300-040	3	3	0.118	0.016	●	●	●	●				●					0.787	0.197
DTI400-040	4	4	0.157	0.016	●	●	●	●				●					0.787	0.197
DTI400-080	4	4	0.157	0.031	●	●	●	●				●				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

●: Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DTI

Internal grooving and turning



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

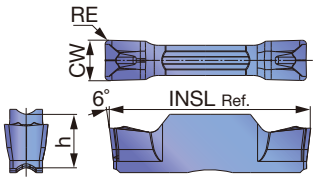
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet				INSL (in)	h (in)
					T9225	AH7025	AH725	GH130				NS9530					
DTI3-040	3	3	0.118	0.016	●	●	●	●				●				0.787	0.197
DTI4-040	4	4	0.157	0.016	●	●	●	●				●				0.787	0.197

●: Line up

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

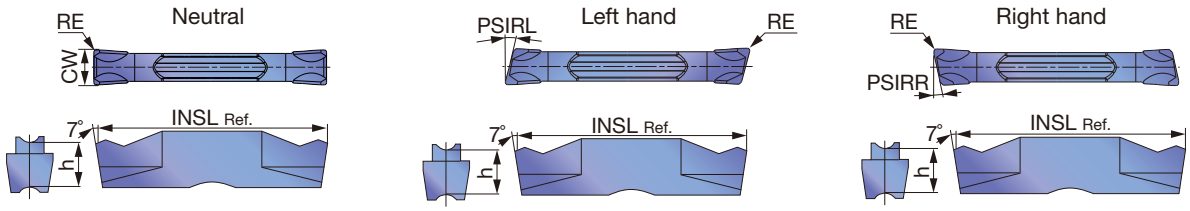
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated											INSL (in)	h (in)
					AH7025	AH8005	AH6235										
DTM2-020	2	2	0.079	0.008	●	●	●									0.787	0.197
DTM3-030	3	3	0.118	0.012	●	●	●									0.787	0.197
DTM4-040	4	4	0.157	0.016	●	●	●									0.787	0.197
DTM4-080	4	4	0.157	0.031	●	●	●									0.787	0.197
DTM5-080	5	5	0.197	0.031	●	●	●									0.984	0.217
DTM6-080	6	6	0.236	0.031	●	●	●									0.984	0.217
DTM8-080	8	8	0.315	0.031	●	●	●									1.181	0.264

● : Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DGM

External/internal grooving and parting



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

★ : First choice
☆ : Second choice

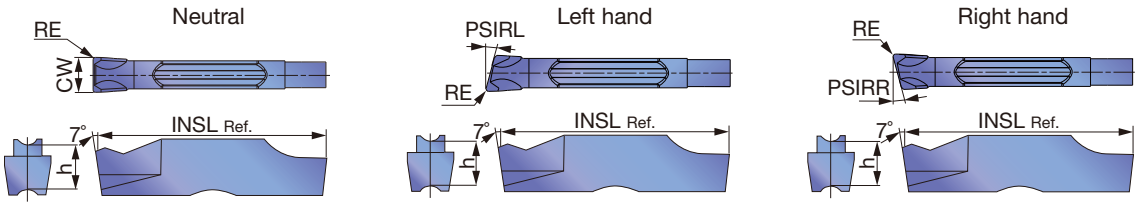
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated T9225	Coated AH7025	Coated AH725	Coated AH8005	Coated AH905	Coated GH130	Coated AH6235	Cermet NS9530	Uncoated KS05F	INSL (in)	h (in)	PSIRL	PSIRR
DGM2-020	2	N	2	0.079	0.008	●	●	●	●		●	●	●	●	0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008		●	●			●				0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008		●	●			●				0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008		●	●			●				0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008		●	●			●				0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008		●	●			●				0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008		●	●			●				0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008			●			●				0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008			●			●				0.762	0.197	15°	0°
DGM2.39-020	2	N	2.39	0.094	0.008		●		●			●			0.787	0.197	0°	0°
DGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008		●	●			●				0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008		●	●			●				0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.008			●			●				0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.008			●			●				0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008		●	●			●				0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008		●	●			●				0.787	0.197	15°	0°
DGM3.18-020	3	N	3.18	0.125	0.008		●		●			●			0.787	0.197	0°	0°
DGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012		●	●			●				0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012		●	●			●				0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012		●	●			●				0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012		●	●			●				0.787	0.197	15°	0°
DGM4.76-040	5	N	4.76	0.187	0.016		●		●			●			0.984	0.217	0°	0°
DGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●	●	0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012		●	●			●				0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	●		●	0.984	0.217	0°	0°
DGM6.35-040	6	N	6.35	0.250	0.016		●		●			●			0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	●	●	●		●	●		●	1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

SGM

External/internal deep grooving and parting



		AH7025	AH725	AH8005	GH130	AH6235	KS05F
P	Steel	★	☆	★	☆	★	
M	Stainless	★	☆	★	★	★	
K	Cast iron	★		★	☆	★	☆
N	Non-ferrous						☆
S	Superalloys	★	☆	★			★
H	Hard materials						

★ : First choice
☆ : Second choice

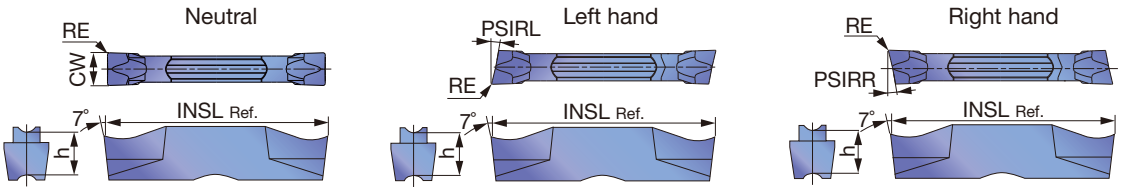
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH725	Coated AH8005	Coated GH130	Coated AH6235	Uncoated KS05F	INSL (in)	h (in)	PSIRL	PSIRR
SGM2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●		●			0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●		●			0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGM8-040	8	N	8	0.315	0.016	●		●		●	●	1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DGS

External/internal grooving and parting



		T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F
P	Steel	★	★	☆	★	☆	★	★	
M	Stainless		★	☆	★	★	★		
K	Cast iron		★		★	☆	★	☆	☆
N	Non-ferrous								☆
S	Superalloys		★	☆	★				★
H	Hard materials								

★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet			Uncoated			INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530			KS05F						
DGS2-005	2	N	2	0.079	0.002			●										0.787	0.197	0°	0°
DGS2-010	2	N	2	0.079	0.004			●										0.787	0.197	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008		●	●		●								0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008		●	●		●								0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008			●		●								0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008			●		●								0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008		●	●		●								0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008		●	●		●								0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008			●		●								0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008			●		●								0.768	0.197	15°	0°
DGS2.39-020	2	N	2.39	0.094	0.008		●		●		●							0.787	0.197	0°	0°
DGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008		●	●		●								0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008		●	●		●								0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008			●		●								0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008			●		●								0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008		●	●		●								0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008		●	●		●								0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008			●		●								0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008			●		●								0.766	0.197	15°	0°
DGS3.18-020	3	N	3.18	0.125	0.008		●		●		●							0.787	0.197	0°	0°
DGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012		●	●		●								0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012		●	●		●								0.787	0.197	4°	0°
DGS4.76-040	5	N	4.76	0.187	0.016		●		●		●							0.984	0.217	0°	0°
DGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●			●			0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●				●			0.984	0.217	0°	0°
DGS6.35-040	6	N	6.35	0.250	0.016		●		●		●							0.984	0.217	0°	0°
DGS8-040	8	N	8	0.315	0.016		●		●		●				●			1.181	0.264	0°	0°

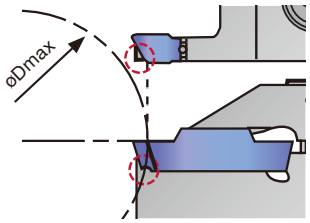
● : Line up

Caution

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

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

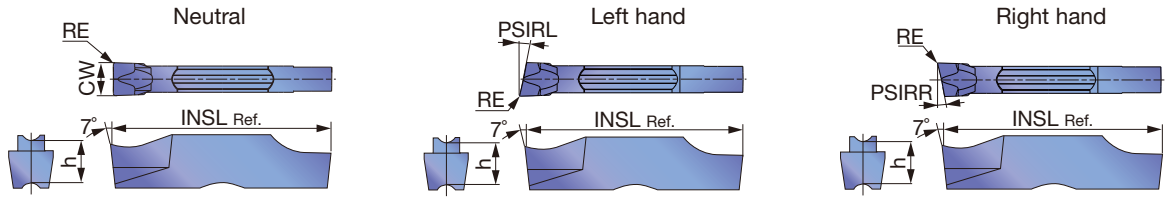
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338



Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

SGS

External/internal deep grooving and parting



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

★ : First choice
☆ : Second choice

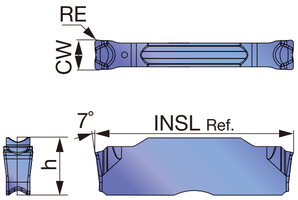
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated					Uncoated				INSL (in)	h (in)	PSIRL	PSIRR
						AH7025	AH725	AH8005	GH130	AH6235	KS05F							
SGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●				0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●		●						0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●		●						0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●		●						0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●		●						0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●				0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●		●						0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●		●						0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●		●						0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●		●						0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●		●						0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●		●						0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●		●						0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●		●						0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●				0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●				0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●				0.984	0.217	0°	0°
SGS8-040	8	N	8	0.315	0.016	●		●		●					1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DGL

External/internal grooving and parting



Material		AH7025	AH8005	AH6235
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	
H	Hard materials			

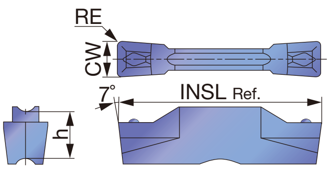
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Coated AH6235	INSL (in)	h (in)
DGL2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGL3-025	3	3	0.118	0.010	●	●	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	●	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	●	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	●	●	0.984	0.217

●: Line up

DTE

External/internal/face grooving and turning (for high precision)



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

★ : First choice
☆ : Second choice

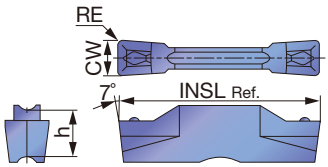
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTE265-015	3	2.65	0.104	0.006	●	●	●	●	●	0.787	0.197
DTE300-020	3	3	0.118	0.008	●	●	●	●	●	0.787	0.197
DTE300-040	3	3	0.118	0.016	●	●	●	●	●	0.787	0.197
DTE315-015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

●: Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DTE

External/internal/face grooving and turning



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

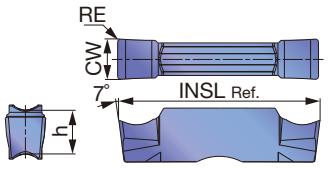
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet					INSL (in)	h (in)
					T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530						
DTE3-020	3	3	0.118	0.008			●		●		●						0.787	0.197
DTE3-040	3	3	0.118	0.016	●	●	●	●	●	●	●	●					0.787	0.197
DTE4-040	4	4	0.157	0.016	●	●	●	●	●	●	●	●					0.787	0.197
DTE4-080	4	4	0.157	0.031			●		●		●						0.787	0.197
DTE5-040	5	5	0.197	0.016		●	●		●		●						0.984	0.217
DTE5-080	5	5	0.197	0.031			●		●		●						0.984	0.217
DTE6-080	6	6	0.236	0.031		●	●		●		●						0.984	0.217

● : Line up

DGG

External/internal grooving (for high precision)



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

★ : First choice
☆ : Second choice

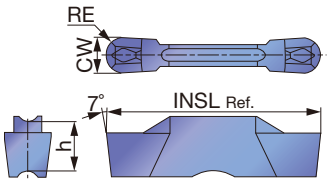
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated			Cermet			Uncoated					INSL (in)	h (in)
					AH7025			NS9530			KS05F						
DGG200-020	2	2	0.079	0.008	●			●			●					0.787	0.197
DGG300-020	3	3	0.118	0.008	●			●			●					0.787	0.197
DGG400-040	4	4	0.157	0.016	●			●			●					0.787	0.197
DGG500-040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

●: Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DTR

Profiling and undercutting (for high precision)



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

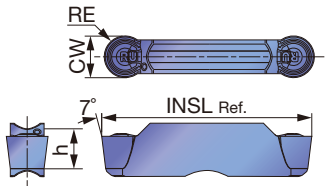
★ : First choice
☆ : Second choice

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

●: Line up

DTR

Profiling and undercutting



		T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530	KS05F
P	Steel	★	★	☆	★		☆	★	★	
M	Stainless		★	☆	★		★	★		
K	Cast iron		★		★	☆	☆	★	☆	☆
N	Non-ferrous									☆
S	Superalloys		★	☆	★	★				★
H	Hard materials									

★ : First choice
☆ : Second choice

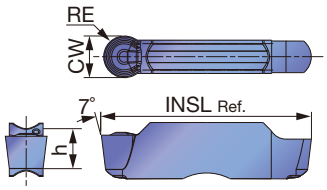
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet	Uncoated	INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530	KS05F		
DTR2-100	2	2	0.079	0.039		●		●			●		●	0.787	0.197
DTR3-150	3	3	0.118	0.059	●	●	●	●	●	●	●	●	●	0.787	0.197
DTR4-200	4	4	0.157	0.079	●	●	●	●	●	●	●	●	●	0.787	0.197
DTR5-250	5	5	0.197	0.098	●	●	●	●	●	●	●	●	●	0.984	0.217
DTR6-300	6	6	0.236	0.118	●	●	●	●		●	●		●	0.984	0.217
DTR8-400	8	8	0.315	0.157	●	●	●	●		●	●		●	1.181	0.264

● : Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

STR

Profiling and undercutting



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

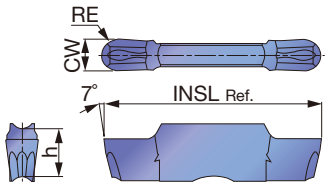
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Uncoated				INSL (in)	h (in)
					AH7025	AH8005					KS05F					
STR2-100	2	2	0.079	0.039	●	●					●				0.787	0.197
STR3-150	3	3	0.118	0.059	●	●					●				0.787	0.197
STR4-200	4	4	0.157	0.079	●	●					●				0.787	0.197
STR5-250	5	5	0.197	0.098	●	●					●				0.984	0.217
STR6-300	6	6	0.236	0.118	●	●					●				0.984	0.217
STR8-400	8	8	0.315	0.157	●	●					●				1.181	0.264

●: 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

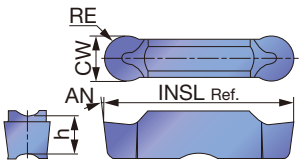
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated										INSL (in)	h (in)
					AH7025	AH725	GH130									
DTIU300-150	3	3	0.118	0.059	●	●	●								0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●								0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●								0.984	0.217
DTIU600-300	6	6	0.236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

●: Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

DTA

Aluminum wheel machining (for high precision)



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

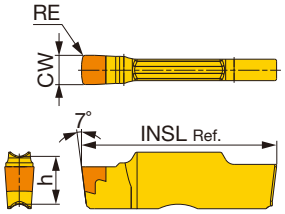
★ : First choice
☆ : Second choice

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

●: Line up

STH

External/internal/face turning



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

★ : First choice

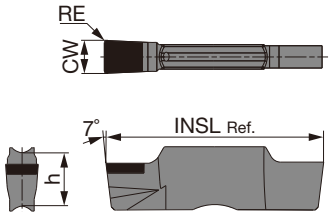
Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN BXA10	INSL (in)	h (in)
STH300-SR	3	3	0.118	0.012	●	0.787	0.197
STH500-SR	5	5	0.197	0.012	●	0.984	0.217

●: Line up

Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

SGN

External/internal grooving



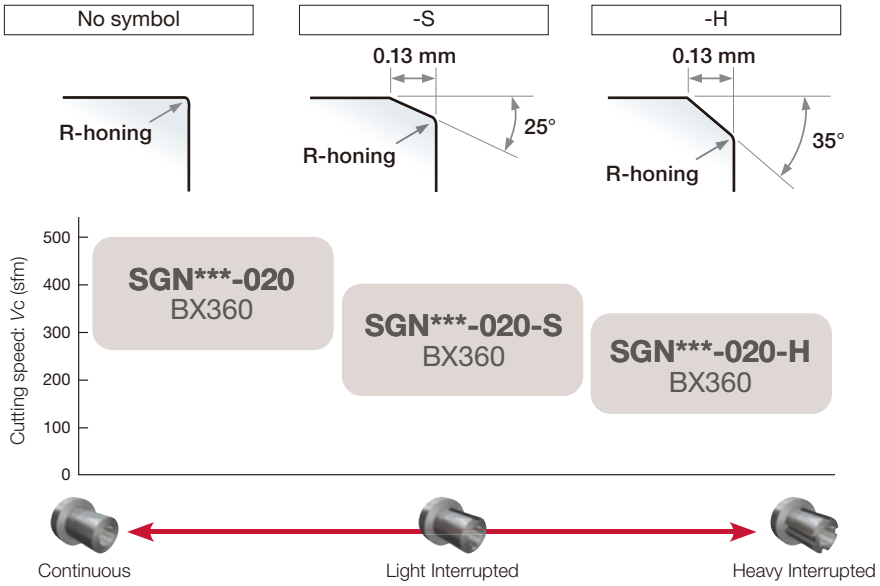
P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	
S	Superalloys	
H	Hard materials	★

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN	INSL (in)	h (in)	Condition		
					BX360			Continuous	Light interrupted	Heavy interrupted
SGN200-020	2	2	0.079	0.008	●	0.787	0.197	○		
SGN200-020-S	2	2	0.079	0.008	●	0.787	0.197		○	
SGN200-020-H	2	2	0.079	0.008	●	0.787	0.197			○
SGN300-020	3	3	0.118	0.008	●	0.787	0.197	○		
SGN300-020-S	3	3	0.118	0.008	●	0.787	0.197		○	
SGN300-020-H	3	3	0.118	0.008	●	0.787	0.197			○
SGN400-020	4	4	0.157	0.008	●	0.787	0.197	○		
SGN400-020-S	4	4	0.157	0.008	●	0.787	0.197		○	
SGN400-020-H	4	4	0.157	0.008	●	0.787	0.197			○
SGN500-020-S	5	5	0.197	0.008	●	0.984	0.217		○	
SGN500-020-H	5	5	0.197	0.008	●	0.984	0.217			○

●: Line up

Edge preparations



Reference pages: Toolholders → F140, F141, Standard cutting conditions → F160

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Wear resistance	T9225, AH8005	262 - 984
		< 300 HB	Impact resistance	AH6235, GH130	164 - 394
		< 300 HB	Surface quality	NS9530	262 - 722
M	Stainless steel 303, 304, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Wear resistance	AH8005	164 - 394
		< 200 HB	Impact resistance	AH6235, GH130	164 - 394
K	Gray cast iron No.250B, etc.	-	First choice	T515	492 - 2297
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 591
	Ductile cast iron 65-45-12, etc.	-	First choice	T515	492 - 984
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	66 - 197
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	66 - 328
		< HRC 40	Impact resistance	AH7025, AH725	66 - 262

Please see page F142 - F145 for feed: *f* (ipr).

STH

ISO	Grade	CW	Application	Cutting speed *Vc* (sfm)	Depth of cut *ap* (in)	Feed *f* (ipr)
H	BXA10	0.118"	External turning	328 - 755	0.003 - 0.005	0.016 - 0.039
			Face turning	328 - 755	0.003 - 0.005	0.016 - 0.031
		0.197"	External turning	328 - 755	0.003 - 0.005	0.020 - 0.059
			Face turning	328 - 755	0.003 - 0.005	0.020 - 0.031

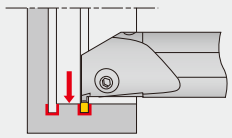
SGN

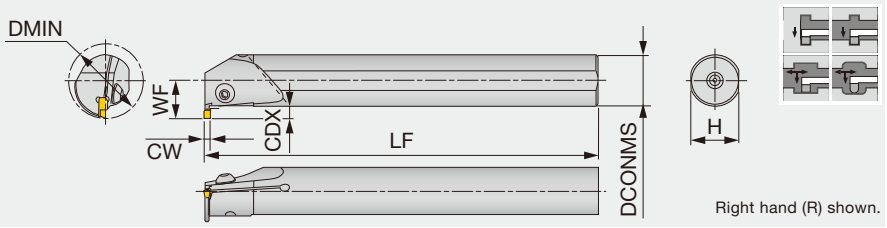
ISO	Grade	Edge preparation	Workpiece condition	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
H	BX360	No symbol	Continuous	262 - 492	0.0012 - 0.0031
		-S	Light interrupted	164 - 394	0.0012 - 0.0031
		-H	Heavy interrupted	131 - 328	0.0012 - 0.0024

MY-T SERIES

CGTR/L

Internal grooving and turning toolholder





Inch	CW	DMIN	CDX	DCONMS	H	LF	WF	Insert	Torque
A12Q-CGTR30U	0.118	1.000	0.138	0.750	0.709	7.090	0.571	G*30, GE30-AL	2.21
A16R-CGTR/L30U	0.118	1.260	0.197	1.000	0.961	7.870	0.728	G*30, GE30-AL	2.21
A16R-CGTR40U	0.157	1.260	0.197	1.000	0.961	7.870	0.728	G*40, GE40-AL	2.21

Metric	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: lbs·ft (*N·m)

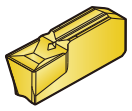
SPARE PARTS


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

Reference pages: Inserts → F162 - F165, Standard cutting conditions → F166

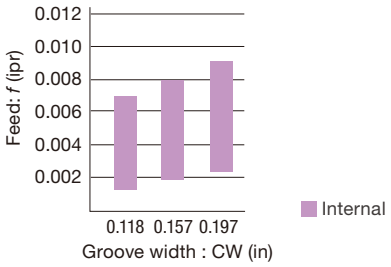
Internal grooving

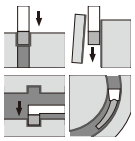
GN



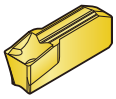
F165

1st choice for internal grooving
Low cutting force and good chip control for internal grooving
CW = 0.118" - 0.197"



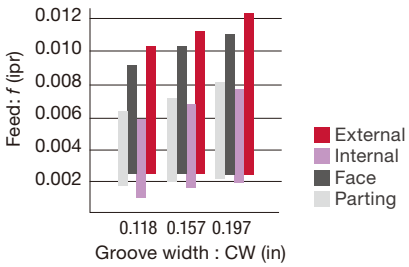


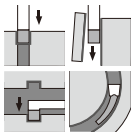
GE



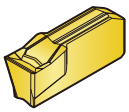
F163

1st choice for external grooving and parting
Excellent chip control
CW = 0.118" - 0.197"



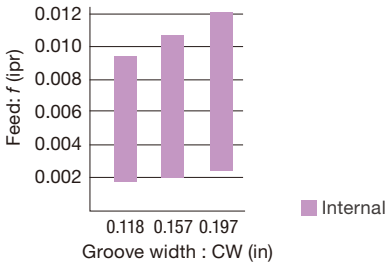


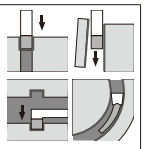
GF



F164

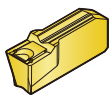
1st choice for face grooving
Low cutting force and good chip control for face grooving
CW = 0.118" - 0.197"





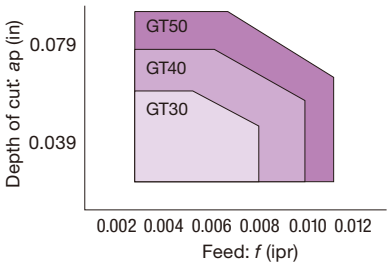
Grooving and turning

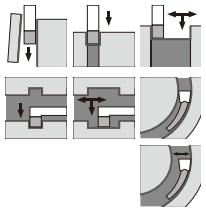
GT



F163

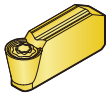
1st choice for turning
Low cutting force and good chip control for traversing
CW = 0.118" - 0.197"





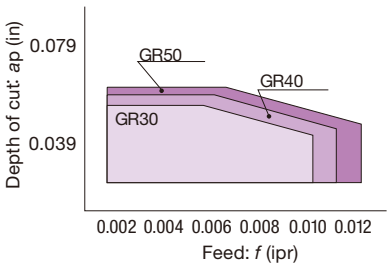
Profiling

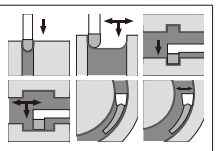
GR



F164

Full radius type
Low cutting force and good chip control for profiling
CW = 0.118" - 0.197"

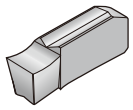




Please see page F*** for the product details.

For aluminum and non-ferrous metal

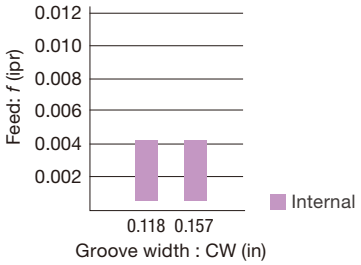
GE-AL

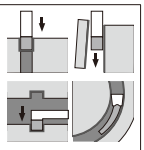


F165

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.118" - 0.157"



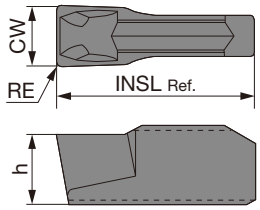


Please see page F*** for the product details.

INSERTS

GE

For external grooving and parting



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

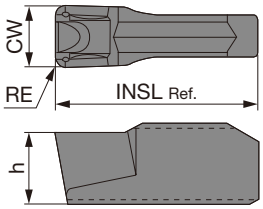
★ : First choice
☆ : Second choice

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

● : Line up

GT

For external grooving and turning



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

★ : First choice
☆ : Second choice

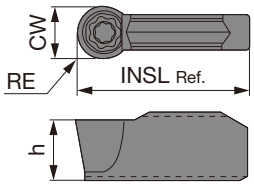
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GT30	3	0.118	0.016		●	●	●	0.394	0.138
GT40	4	0.157	0.016		●	●	●	0.394	0.157
GT50	5	0.197	0.016	●	●	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F161, Standard cutting conditions → F166

GR

For profiling (full radius)



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

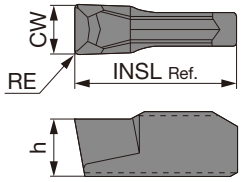
★ : First choice
☆ : Second choice

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

● : Line up

GF

For face grooving



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

★ : First choice
☆ : Second choice

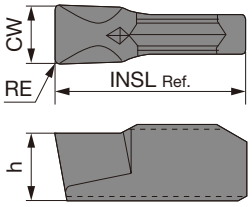
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated			Cermet							INSL (in)	h (in)
				GH730			NS9530								
GF30	3	0.118	0.008	●			●							0.394	0.138
GF40	4	0.157	0.008	●			●							0.394	0.157
GF50	5	0.197	0.008	●			●							0.472	0.177

● : Line up

Reference pages: Toolholders → F161, Standard cutting conditions → F166

GN

For internal grooving



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

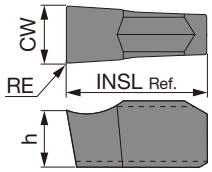
★ : First choice
☆ : Second choice

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

● : Line up

GE-AL

For aluminum and non-ferrous metal



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

★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F161, Standard cutting conditions → F166

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730, AH120	164 - 591
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730, AH120	164 - 492
	High carbon steel, Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730, AH120	164 - 394
M	Stainless steel	GH730, AH120	164 - 394
K	Gray iron, Ductile cast iron	GH730, AH120	164 - 591
N	Aluminum alloy, Non-ferrous metal	KS05F	656 - 984

Internal

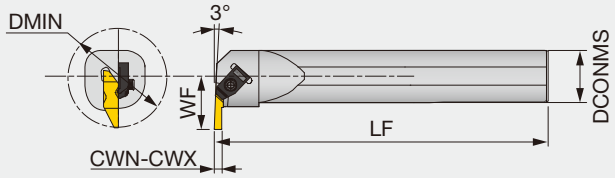
Operation	Feed: *f* (ipr) Groove width: CW		
	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Internal grooving (GE**)	0.0016 - 0.006	0.002 - 0.006	0.002 - 0.006
Internal grooving (GN**)	0.0016 - 0.006	0.002 - 0.007	0.002 - 0.008
Internal traversing (GT**)	*ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	*ap* = 0.020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

For diameter compensation values in traversing, see page F129.
When vibration occurs in turning, please use the lower limit value in the above table

TUNGT-CLAMP

A-FLER/LT

Internal grooving and threading toolholder



Right hand (R) shown.

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

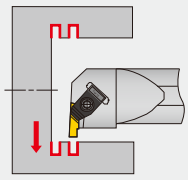
Note: The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.
Torque: Recommended clamping torque: lbs·ft

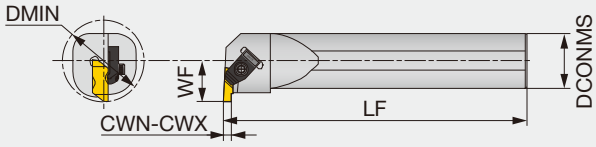
SPARE PARTS

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

A_M-FLER/L

Internal grooving and threading toolholder





Right hand (R) shown.

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

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

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

INCH SPARE PARTS

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

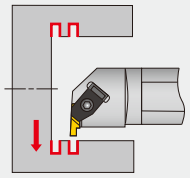
METRIC SPARE PARTS

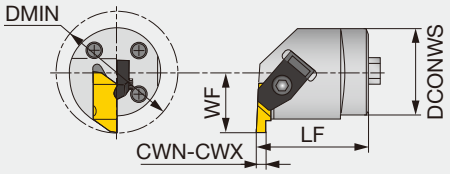
Designation	Clamp	Clamping screw	Wrench
A**M-FLER3	TF-73	S-412	5/32HEX
A**M-FLEL3	TF-72	S-412	5/32HEX

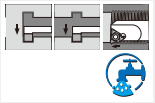
Reference pages: Inserts → F169 - F176, Standard cutting conditions → F176

HS-FLER/L

Internal grooving and threading head, for S-570 shank







Right hand (R) shown.

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

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

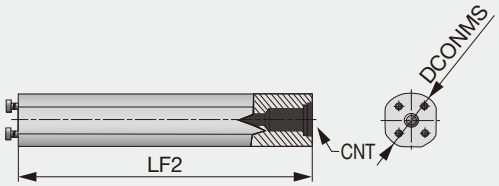
SPARE PARTS



Designation	Clamp	Clamping screw	Wrench
HS**-FLER3W	TF-73	S-412	5/32HEX

S-570

Steel shank for head exchangeable tools



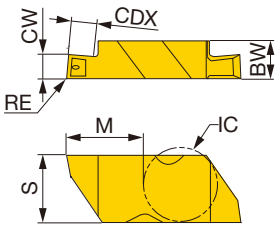
Metric	DCONMS	LF2	CNT
S-570-40M-40	40	273	1/2-14NPT
S-570-50M-50	50	366	1/2-14NPT

SPARE PARTS


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

Reference pages: Inserts → F169 - F176, Standard cutting conditions → F176

FLG-CB (With chipbreaker, metric width)



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

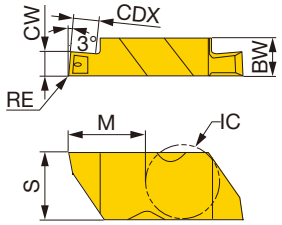
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLG-CB (With chipbreaker)



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

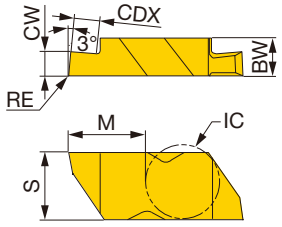
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLG



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

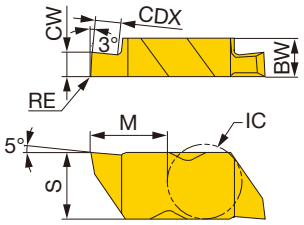
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLGP (Positive rake)



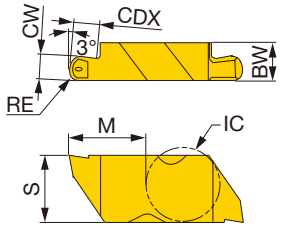
P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

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

● : Line up

FLR-CB (Full nose radius, with chipbreaker)



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

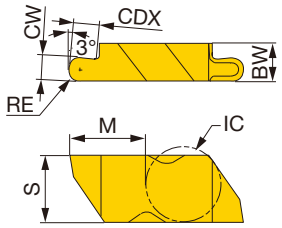
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLR (Full nose radius)



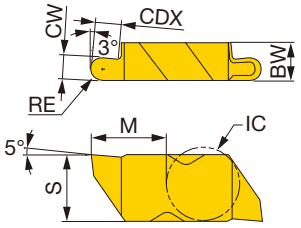
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	☆		
H	Hard materials			

★ : First choice
☆ : Second choice

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

● : Line up

FLRP (Full nose radius and positive rake)



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

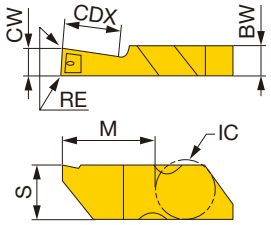
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLGD-CB (Single edge deep, with chipbreaker)



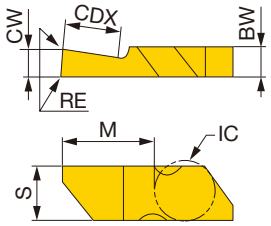
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	☆
H	Hard materials	

★ : First choice
☆ : Second choice

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

● : Line up

FLGD (Single edge deep)



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

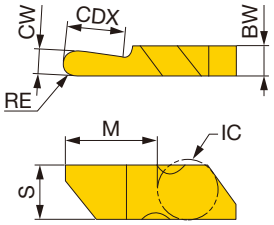
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLRD (Full nose radius, single edge deep)



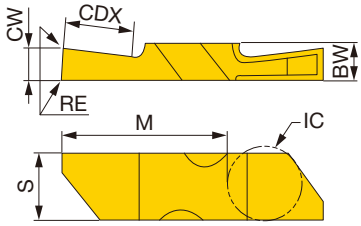
P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous			
S	Superalloys	☆		
H	Hard materials			

★ : First choice
☆ : Second choice

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

● : Line up

FLGT (Double end deep)



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

★ : First choice
☆ : Second choice

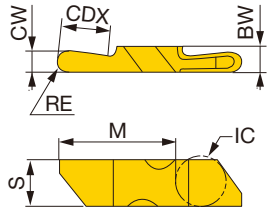
Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated AH110	CDX (in)	IC (in)	BW (in)	S (in)	M (in)
FLGT-3094R	R	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3094L	L	2.39	0.094	0.005 - 0.010	●	0.275	0.3750	0.195	0.344	0.8550
FLGT-3125R	R	3.18	0.125	0.005 - 0.010	●	0.437	0.3750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

*Fits FLSLT/RT toolholders

● : Line up

Reference pages: Toolholders → F167, F168, Standard cutting conditions → F176

FLRT (Double end deep FNR)



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

★ : First choice
☆ : Second choice

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

*Fits FLSLT/RT toolholders

● : Line up

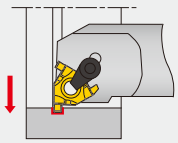
STANDARD CUTTING CONDITIONS

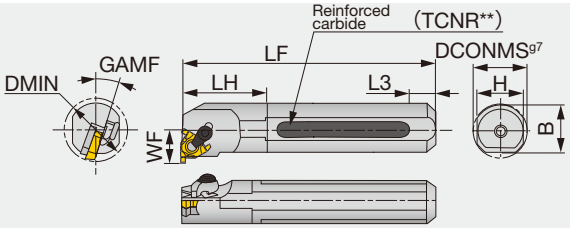
ISO	Workpiece material	Grade	Application	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	High carbon steel 1045, etc.	AH110	Grooving	328 - 656	0.005 - 0.014
	Alloy steel 4137, etc.	AH110	Grooving	164 - 262	0.005 - 0.012
M	Stainless steel 304, etc.	AH110	Grooving	164 - 492	0.004 - 0.008
K	Gray cast iron No.250B, etc.	AH110	Grooving	164 - 591	0.004 - 0.010
	Ductile cast iron 60-40-18, etc.	AH110	Grooving	164 - 394	0.004 - 0.010

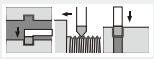
Reference pages: Toolholders → F167, F168

CNR/L

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







Right hand (R) shown.

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

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

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

SPARE PARTS



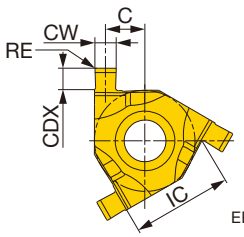



Designation	Clamp set	Clamping screw	Shim screw	Shim (Optional)	Wrench1	Wrench2
S**-CNR3DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16EL/IR-DT	P-3.5	T-15F
TCNR002**16DT	CSP16	CSTB-3.5ST	DTS5-3.5	G16EL/IR-DT	P-3.5	T-15F
CNR00***16	CSP16	-	-	G16EL/IR-S	-	T-15F
CNL00***16	CSP16	-	-	G16ER/IL-S	-	T-15F

Reference pages: Inserts, Standard cutting conditions → F178

INSERT

GTGN16



ER/IL shown.

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

★ : First choice
☆ : Second choice

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

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

● : Line up

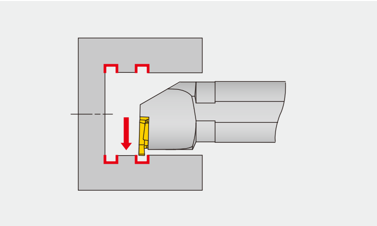
STANDARD CUTTING CONDITIONS

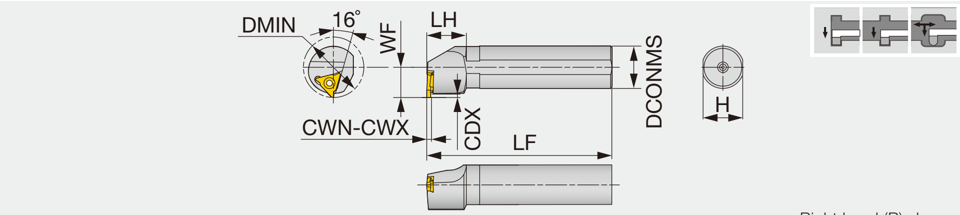
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Steel 1045, 4140, etc.	SH730	164 - 492	0.002 - 0.004
M	Stainless steel 304, 316, etc.	SH730	98 - 492	0.002 - 0.004
S	Heat-resistant alloys, Titanium alloys, etc. Ti-6Al-4V, etc.	SH730	98 - 328	0.002 - 0.004

Reference pages: Toolholders → F177

S-SGTR/L

Internal grooving





Right hand (R) shown.

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

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

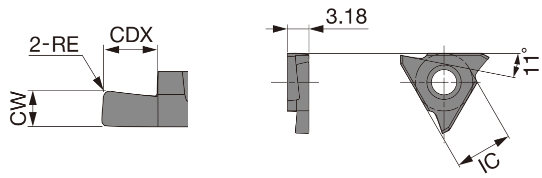
Use right-hand toolholders (SGTR) with left-hand inserts (GBL); and left-hand toolholders (SGTL) with right-hand inserts (GBR).
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

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

INSERTS

GBR/L32



Right hand (R) shown.
Unit: mm

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

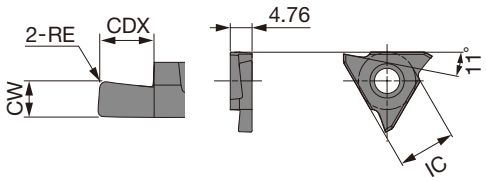
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Inserts → F179 - F181, Standard cutting conditions → F181

GBR/L43



Right hand (R) shown.
Unit: mm

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

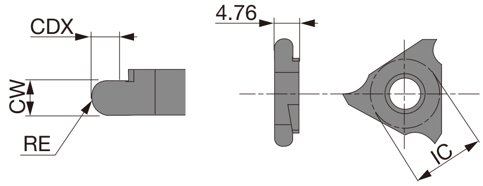
★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F179

GBR/L43-R (full radius)



Right hand (R) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

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

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting speed Vc (sfm)	Feed *f* (ipr)
P	Carbon steels, Alloy steels 1045, etc. 4140, etc.	150 - 240HB	NS9530	328 - 656	0.001 - 0.010
		150 - 240HB	AH710	197 - 492	0.002 - 0.010
M	Stainless steel 304, etc.	≤ 240HB	AH710	197 - 492	0.002 - 0.006
K	Cast irons No.250B, etc.	Tensile strength ≤ 350 N/mm^2	AH710	197 - 492	0.002 - 0.006
N	Non-ferrous metal Aluminum, etc.	-	KS05F	656 - 984	0.002 - 0.006

Reference pages: Toolholders → F179

Toolholders for internal grooving, with through coolant

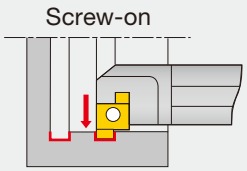
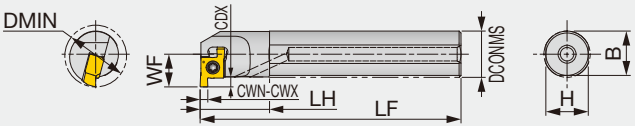


Fig. 1

Fig. 2



Right hand (R) shown.

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

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

SPARE PARTS

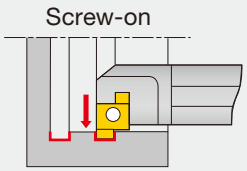
Designation	Clamping screw	Wrench
A**-SNGR06-D...	CSTB-2L040	T-6F
A**-SNGR07-D...	CSTB-2.2S	T-7F
A**-SNGR08-D...	CSTB-2.2	T-7F
A**-SNGR09-D...	CSTB-2.5L080	T-8F
E**-SNGR07-D...	CSTB-2.2S	T-7F
E**-SNGR08-D...	CSTB-2.2	T-7F
E**-SNGR09-D...	CSTB-2.5L080	T-8F

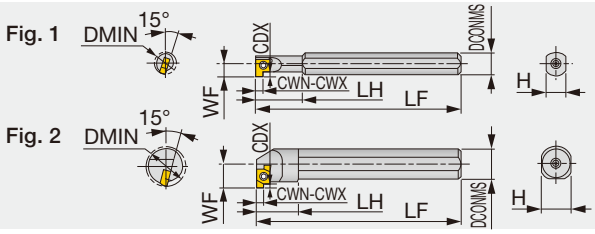
External
Internal
Face
Parting
Others

Reference pages: Inserts → F184, F185, Standard cutting conditions → F186

SNGR/L

Toolholders for internal grooving





Right hand (R) shown.

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

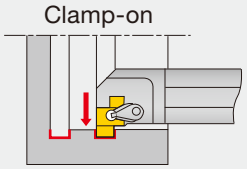
Note: Use the right-hand insert (☐GR) with the right-hand holder (☐NGR), and use the left-hand insert (☐GL) with the left-hand holder (☐NGL).
Torque: Recommended clamping torque: N·m

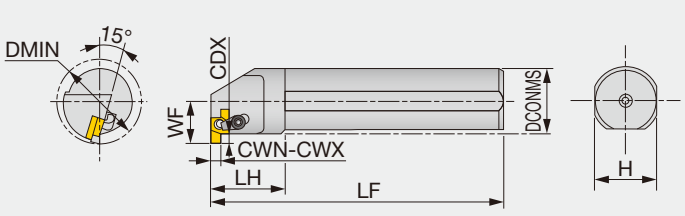
SPARE PARTS

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

CNGR/L

Toolholders for internal grooving





Right hand (R) shown.

Metric	CWN	CWX	DMIN	CDX	DCONMS	H	LF	LH	WF	Insert	Torque
CNGR/L25S15	2	5	32	5	25	23	250	30	18.1	15GR/L...	7
CNGR/L32T15	2	5	40	5	32	30	300	35	22.1	15GR/L...	7
CNGR/L40U15	2	5	48	5	40	38	350	45	26.1	15GR/L...	7

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

SPARE PARTS

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

Optional parts for CNG holders

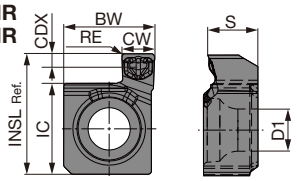
Use the following parts for screw clamp options.

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

Reference pages: Inserts → F184, F185, Standard cutting conditions → F186

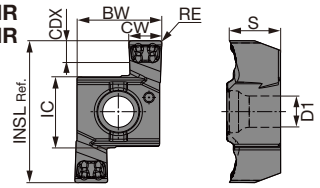
**GMR/L

6GMR
7GMR



Single edge

8GMR
9GMR



Double edge

Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Coated AH7025	CDX (mm)	BW (in)	S (in)	IC (in)	INSL (in)	D1 (in)
6GMR100-015	R	0.039	1	0.15	●	1.5	0.219	0.092	0.187	0.254	0.091
7GMR200-020	R	0.079	2	0.2	●	1.5	0.219	0.121	0.219	0.290	0.102
8GMR150-020	R	0.059	1.5	0.2	●	2	0.242	0.152	0.219	0.400	0.102
9GMR200-020	R	0.079	2	0.2	●	3	0.305	0.183	0.250	0.510	0.113
9GMR300-020	R	0.118	3	0.2	●	3	0.305	0.183	0.250	0.510	0.113

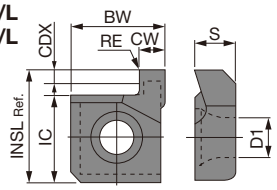
● : Line up

External
Internal
Face
Parting
Others

Reference pages: Toolholders → F182, F183, Standard cutting conditions → F186

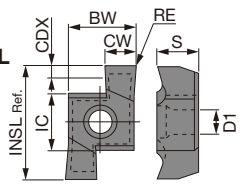
**GR/L

6GR/L
7GR/L



Single edge

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



Double edge

Right hand (R) shown.

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.001 (in)	CW±0.025 (mm)	RE (mm)	Cermet NS9530	Uncoated TH10	Uncoated UX30	CDX (mm)	BW (in)	S (in)	IC (in)	INSL (in)	D1 (in)
6GR100	R	0.039	1	0.2	●	●	●	1.5	0.220	0.092	0.187	0.254	0.098
6GL100	L	0.039	1	0.2			●	1.5	0.220	0.092	0.187	0.254	0.098
6GR150	R	0.059	1.5	0.2	●	●	●	1.5	0.220	0.092	0.187	0.254	0.098
6GL150	L	0.059	1.5	0.2		●	●	1.5	0.220	0.092	0.187	0.254	0.098
6GR200	R	0.079	2	0.2	●	●	●	1.5	0.220	0.092	0.187	0.254	0.098
6GL200	L	0.079	2	0.2		●	●	1.5	0.220	0.092	0.187	0.254	0.098
7GR100	R	0.039	1	0.2	●	●	●	1.5	0.220	0.121	0.219	0.290	0.102
7GR150	R	0.059	1.5	0.2	●	●	●	1.5	0.220	0.121	0.219	0.290	0.102
7GR200	R	0.079	2	0.2	●	●	●	1.5	0.220	0.121	0.219	0.290	0.102
7GL200	L	0.079	2	0.2		●	●	1.5	0.220	0.121	0.219	0.290	0.102
8GR150	R	0.059	1.5	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GR200	R	0.079	2	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GL200	L	0.079	2	0.2		●		2	0.244	0.152	0.219	0.400	0.102
8GR250	R	0.098	2.5	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GL250	L	0.098	2.5	0.2		●	●	2	0.244	0.152	0.219	0.400	0.102
8GR300	R	0.118	3	0.2	●	●	●	2	0.244	0.152	0.219	0.400	0.102
8GL300	L	0.118	3	0.2		●	●	2	0.244	0.152	0.219	0.400	0.102
8GR350	R	0.138	3.5	0.2		●	●	2	0.244	0.152	0.219	0.400	0.102
9GR150	R	0.059	1.5	0.2	●	●	●	2	0.303	0.183	0.250	0.510	0.114
9GL150	L	0.059	1.5	0.2	●		●	2	0.303	0.183	0.250	0.510	0.114
9GR200	R	0.079	2	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.114
9GL200	L	0.079	2	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.114
9GR250	R	0.098	2.5	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.114
9GL250	L	0.098	2.5	0.2	●		●	3	0.303	0.183	0.250	0.510	0.114
9GR300	R	0.118	3	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.114
9GL300	L	0.118	3	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.114
9GR350	R	0.138	3.5	0.2	●	●	●	3	0.303	0.183	0.250	0.510	0.114
9GL350	L	0.138	3.5	0.2	●		●	3	0.303	0.183	0.250	0.510	0.114
15GR200	R	0.079	2	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GR250	R	0.098	2.5	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GR300	R	0.118	3	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GL300	L	0.118	3	0.2			●	3	0.425	0.201	0.362	0.819	0.189
15GR350	R	0.138	3.5	0.2	●	●	●	3	0.425	0.201	0.362	0.819	0.189
15GR400	R	0.157	4	0.2	●	●	●	4	0.425	0.201	0.362	0.819	0.189
15GR450	R	0.177	4.5	0.2		●	●	4	0.425	0.201	0.362	0.819	0.189
15GL450	L	0.177	4.5	0.2		●		4	0.425	0.201	0.362	0.819	0.189
15GR500	R	0.197	5	0.2		●	●	5	0.425	0.201	0.362	0.819	0.189

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

● : Line up

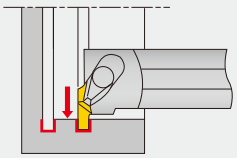
Reference pages: Toolholders → F182, F183, Standard cutting conditions → F186

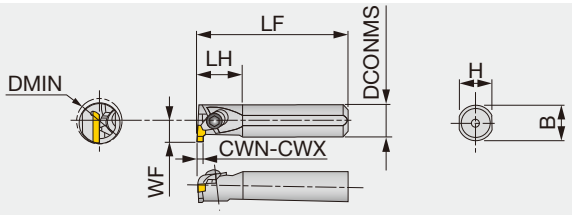
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)	Feed rate: *f* (ipr) **GMR...	Feed rate: *f* (ipr) **GR/L...
P	Carbon steel 1045, etc.	AH7025	262 - 591	0.0012 - 0.0047	-
		NS9530	262 - 656	-	0.002 - 0.0059
		UX30	131 - 492	-	0.002 - 0.0059
	Alloy steel 4137, etc.	AH7025	262 - 591	0.0012 - 0.0047	-
		NS9530	262 - 656	-	0.002 - 0.0059
		UX30	131 - 492	-	0.002 - 0.0059
M	Stainless steel 304, etc.	AH7025	164 - 394	0.0012 - 0.0047	-
		UX30	131 - 328	-	0.0012 - 0.0039
K	Gray cast irons No.250B, etc.	AH7025	164 - 722	0.0012 - 0.0047	-
		TH10	197 - 656	-	0.002 - 0.0059
	Ductile cast irons 60-40-18, etc.	AH7025	164 - 591	0.0012 - 0.0047	-
		TH10	131 - 525	-	0.002 - 0.0059
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 262	0.0012 - 0.0047	-
		TH10	66 - 164	-	0.002 - 0.0031
	Superalloys Inconel718, etc.	AH7025	66 - 197	0.0012 - 0.0047	-
		TH10	33 - 98	-	0.0012 - 0.0031

CGXR/L

Internal grooving





Right hand (R) shown.

Metric	Material	CWN	CWX	DMIN	CDX	DCONMS	H	B	LF	LH	WF	Insert	Torque
CGXR/L0016	Steel	1	3	20	3	16	15	15.5	150	24	11.3	GIR/L52...	2.2
CGXR/L0020	Steel	1	3	24	3	20	18	19	180	30	13.3	GIR/L52...	2.2
CGXR/L0025	Steel	1	5	32	5.3	25	23	24	200	38	18	GIR/L63...	5
CGXR/L0032	Steel	1	5	40	5.3	32	30	31	250	48	23	GIR/L63...	5
CGXR/L0040	Steel	1	5	48	5.3	40	37	38.5	300	60	27	GIR/L63...	5
CGXR/L16SC	Carbide	1	3	20	3	16	15	-	200	24	11.3	GIR/L52...	2.2

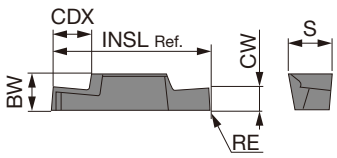
Note: Use right-hand holder (CGXR) with right-hand insert (GIR); and left-hand holder (L) with left-hand insert (GIL).
Torque: Recommended clamping torque: N·m

SPARE PARTS

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

INSERT

GIR/L



Right hand (R) shown.

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

★ : First choice
☆ : Second choice

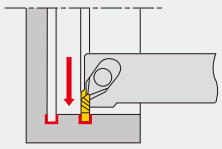
Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	Cermet NS9530	Uncoated TH10	CDX (mm)	INSL (mm)	BW (mm)	S (mm)
GIR5210-02	R	0.039	1	0.2	●	●	1.5	15	3.5	4.4
GIL5210-02	L	0.039	1	0.2	●	●	1.5	15	3.5	4.4
GIR5215-02	R	0.059	1.5	0.2	●	●	2.3	15	3.5	4.4
GIL5215-02	L	0.059	1.5	0.2	●	●	2.3	15	3.5	4.4
GIR5220-02	R	0.079	2	0.2	●	●	3	15	3.5	4.4
GIL5220-02	L	0.079	2	0.2	●	●	3	15	3.5	4.4
GIR5225-02	R	0.098	2.5	0.2	●	●	3	15	3.5	4.4
GIL5225-02	L	0.098	2.5	0.2		●	3	15	3.5	4.4
GIR5230-02	R	0.118	3	0.2	●	●	3	15	3.5	4.4
GIL5230-02	L	0.118	3	0.2		●	3	15	3.5	4.4
GIR6310-02	R	0.039	1	0.2	●	●	1.5	24	5.5	6.4
GIL6310-02	L	0.039	1	0.2		●	1.5	24	5.5	6.4
GIR6315-02	R	0.059	1.5	0.2	●	●	2.3	24	5.5	6.4
GIL6315-02	L	0.059	1.5	0.2	●	●	2.3	24	5.5	6.4
GIR6320-02	R	0.079	2	0.2	●	●	3	24	5.5	6.4
GIL6320-02	L	0.079	2	0.2	●	●	3	24	5.5	6.4
GIR6325-02	R	0.098	2.5	0.2	●	●	3.8	24	5.5	6.4
GIL6325-02	L	0.098	2.5	0.2	●	●	3.8	24	5.5	6.4
GIR6330-02	R	0.118	3	0.2	●	●	4.5	24	5.5	6.4
GIL6330-02	L	0.118	3	0.2	●	●	4.5	24	5.5	6.4
GIR6335-02	R	0.138	3.5	0.2	●	●	5.3	24	5.5	6.4
GIL6335-02	L	0.138	3.5	0.2	●	●	5.3	24	5.5	6.4
GIR6340-02	R	0.157	4	0.2	●	●	5.3	24	5.5	6.4
GIL6340-02	L	0.157	4	0.2	●	●	5.3	24	5.5	6.4
GIR6345-02	R	0.177	4.5	0.2	●	●	5.3	24	5.5	6.4
GIL6345-02	L	0.177	4.5	0.2		●	5.3	24	5.5	6.4
GIR6350-02	R	0.197	5	0.2	●	●	5.3	24	5.5	6.4
GIL6350-02	L	0.197	5	0.2		●	5.3	24	5.5	6.4

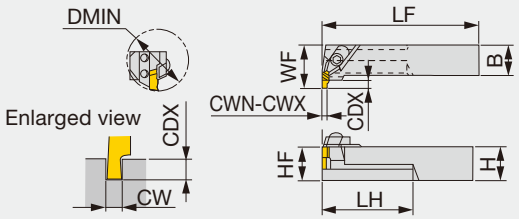
Use right-hand toolholders (CGXR〜) with right-hand inserts (GIR); and left-hand toolholders (GX-****LI) with left-hand inserts (XGR).

● : Line up

STANDARD CUTTING CONDITIONS

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





Right hand (R) shown.

Inch	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque
GX-1212RIU	0.039	0.177	2.165	0.059 - 0.236	0.750	0.75	6.30	2.36	0.75	1.37	XGL63...	3.69
GX-1616RIU	0.039	0.177	2.165	0.059 - 0.236	1.00	1.00	7.87	1.96	1.00	1.37	XGL63...	3.69

Metric	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque*
GX-2525R/LI	1	4.5	55	1.5 - 6	25	25	200	70	25	35	XGL/R63...	5

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

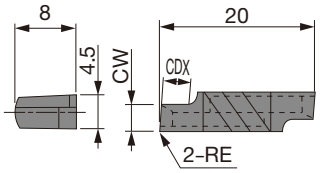
SPARE PARTS

Designation	Clamp set	Clamp screw	Shim	Shim screw	Wrench
GX-1212RIU	CP81B	RT-1	SL-7R	BHM4-8	P-4
GX-2525RI	CP81B	RT-1	SL-2R	BHM3-8	P-4
GX-1616RIU, GX-2525LI	CP81B	RT-1	SL-2L	BHM3-8	P-4

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

INSERT

XGR/L



Right hand (R) shown.
Unit: mm

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

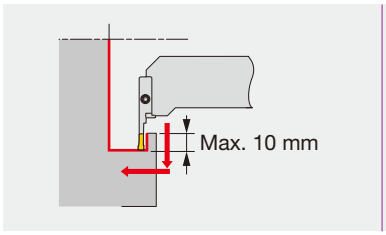
Use right-hand toolholders (GX-****RI) with left-hand inserts (XGL...)
left-hand toolholders (GX-****LI) with right-hand inserts (XGR...).

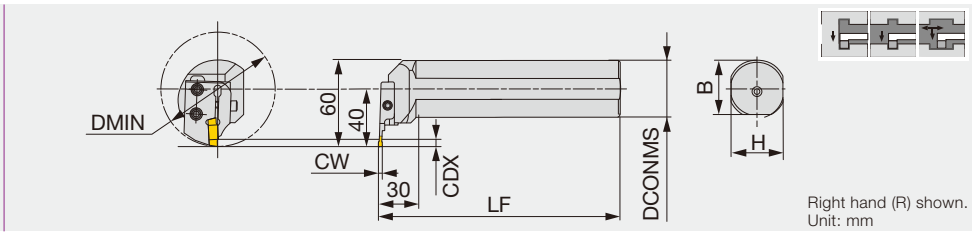
● : Line up

STANDARD CUTTING CONDITIONS

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

MY-T SERIES
CGWTR/L0040-FLL/R3NP
Internal grooving and turning toolholder





Right hand (R) shown.
Unit: mm

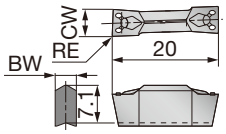
Metric	CW	DMIN	CDX	DCONMS	LF	H	B	Insert	Shank	Adapter	Torque
CGWTR/L0040-FLL/R3NP	3	80	10	40	180	37.5	37	FLEX30L/R	CGWTR/L0040	FLL/R3NP	5

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

SPARE PARTS

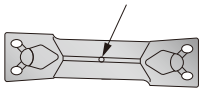
Designation	Clamping screw	Adapter screw	Wrench
CGWTR/L0040-FLL/R3NP	CHHM5-18	CSHB-6	P-4

INSERT
FLEX(R/L)



Right hand (R) shown.
Unit: mm

Recess



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

★ : First choice
☆ : Second choice

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

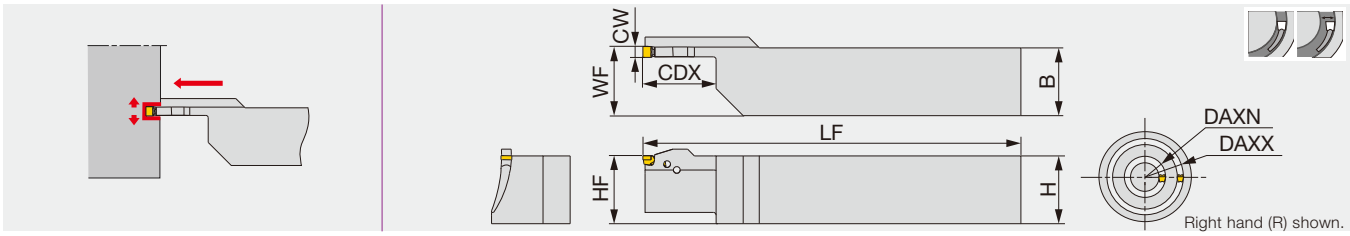
● : Line up

STANDARD CUTTING CONDITIONS

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

ETFR/L

Face grooving and turning toolholder



Inch	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert
ETFR/L12-4T15-030035	0.157	1.181	1.378	0.591	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T15-030035	0.157	1.181	1.378	0.591	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T22-035045	0.157	1.378	1.772	0.866	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T22-035045	0.157	1.378	1.772	0.866	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T25-045055	0.157	1.772	2.165	0.984	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T25-045055	0.157	1.772	2.165	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T25-055075	0.157	2.165	2.953	0.984	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T25-055075	0.157	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L12-4T25-075120	0.157	2.953	4.724	0.984	0.750	0.750	5.000	0.750	0.770	E**4...
ETFR/L16-4T25-075120	0.157	2.953	4.724	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L16-4T25-120200	0.157	4.724	7.874	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L16-4T25-200500	0.157	7.874	19.685	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR/L16-5T25-035045	0.197	1.378	1.772	0.984	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T25-045055	0.197	1.772	2.165	0.984	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T25-055075	0.197	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T32-075120	0.197	2.953	4.724	1.260	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T32-120200	0.197	4.724	7.874	1.260	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-5T32-200500	0.197	7.874	19.685	1.260	1.000	1.000	6.000	1.000	1.020	ETX5...
ETFR/L16-6T25-040055	0.236	1.575	2.165	0.984	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T25-055075	0.236	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T32-075120	0.236	2.953	4.724	1.260	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T32-120200	0.236	4.724	7.874	1.260	1.000	1.000	6.000	1.000	1.020	ETX6...
ETFR/L16-6T32-200500	0.236	7.874	19.685	1.260	1.000	1.000	6.000	1.000	1.020	ETX6...

Metric	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

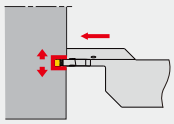
Designation	Wrench (Optional)
ETFR/L...	ECW-456EF

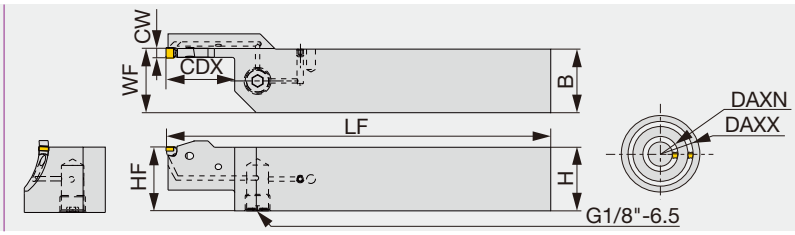
Reference pages: Inserts → F194, F195, Standard cutting conditions → F195

ETFR-CHP

Tube connection

Face grooving and turning toolholder, with high pressure coolant capability





Right hand (R) shown.

Inch	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert
ETFR16-4T15-030035-CHP	0.157	1.181	1.378	0.591	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T22-035045-CHP	0.157	1.378	1.772	0.866	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-045055-CHP	0.157	1.772	2.165	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-055075-CHP	0.157	2.165	2.953	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-075120-CHP	0.157	2.953	4.724	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-120200-CHP	0.157	4.724	7.874	0.984	1.000	1.000	6.000	1.000	1.020	E**4...
ETFR16-4T25-200500-CHP	0.157	7.874	19.685	0.984	1.000	1.000	6.000	1.000	1.020	E**4...

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

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

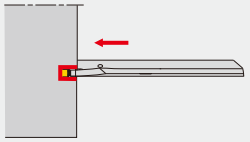
SPARE PARTS

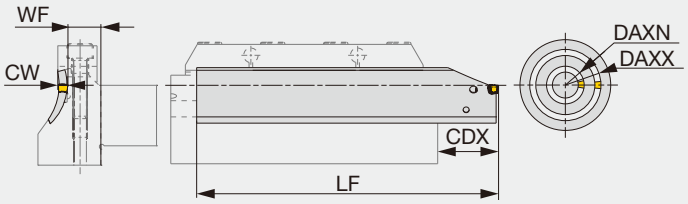
Designation	Wrench (Optional)
ETFR/L...	ECW-456EF

Reference pages: Inserts → F194, F195, Standard cutting conditions → F195
Parts for coolant hose → F290

EFPR/L

Face grooving blade





Right hand (R) shown.

Metric	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.

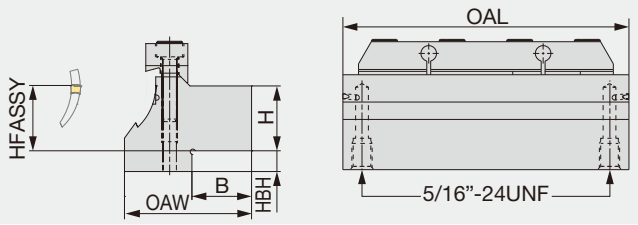
SPARE PARTS

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

Reference pages: Inserts → F194, F195, Standard cutting conditions → F195

CTBU-CHP for EFPR/L

Tool block for EFP blades with high pressure coolant capability



Inch	CW	DAXN	H	B	HFASSY	HBH	OAW	OAL	Blade
CTBU16-030-4U-CHP	0.157	1.181	1.000	0.905	1.000	0.299	1.929	4.331	EFPR/L-4-030035
CTBU16-035-4/5U-CHP	0.157, 0.197	1.378	1.000	0.905	1.000	0.299	1.929	4.331	EFPR/L-4/5-035045
CTBU16-045-4/5U-CHP	0.157, 0.197	1.772	1.000	0.905	1.000	0.299	1.929	4.331	EFPR/L-4/5-045055
CTBU16-055-4/5U-CHP	0.157, 0.197	2.165	1.000	0.905	1.000	0.299	1.850	4.331	EFPR/L-4/5-055075
CTBU16-075-4/5U-CHP	0.157, 0.197	2.953	1.000	0.905	1.000	0.299	1.771	4.331	EFPR/L-4/5-075120
CTBU16-120-4/5U-CHP	0.157, 0.197	4.724	1.000	0.905	1.000	0.299	1.732	4.331	EFPR/L-4/5-120200
CTBU16-200-4/5U-CHP	0.157, 0.197	7.874	1.000	0.905	1.000	0.299	1.633	4.331	EFPR/L-4/5-200500
CTBU16-045-6U-CHP	0.236	1.772	1.000	0.905	1.000	0.299	2.007	4.331	EFPR/L-6-045055
CTBU16-055-6U-CHP	0.236	2.165	1.000	0.905	1.000	0.299	1.929	4.331	EFPR/L-6-055075
CTBU16-075-6U-CHP	0.236	2.953	1.000	0.905	1.000	0.299	1.850	4.331	EFPR/L-6-075120
CTBU16-120-6U-CHP	0.236	4.724	1.000	0.905	1.000	0.299	1.811	4.331	EFPR/L-6-120200
CTBU16-200-6U-CHP	0.236	7.874	1.000	0.905	1.000	0.299	1.712	4.331	EFPR/L-6-200500

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

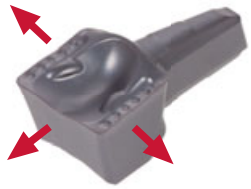
SPARE PARTS

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

Reference pages: Inserts → F194, F195, Standard cutting conditions → F195
Parts for coolant hose → F290

CHIPBREAKER GUIDE

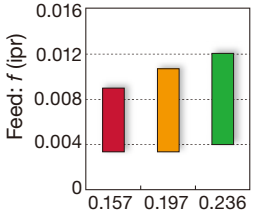
ETX type



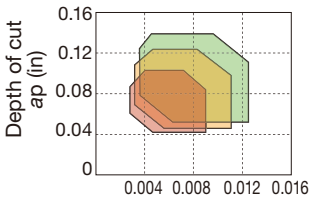
Multi-functional insert
Grooving and turning suitable for light to medium cutting
Well-balanced sharpness and strength

CW = 0.157" - 0.236"

■ Standard feed



■ Standard feed and depth of cut for turning

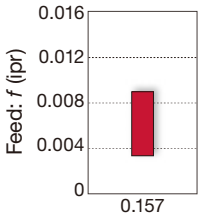


EGM type

1st choice for parting
High strength
Well-designed edge

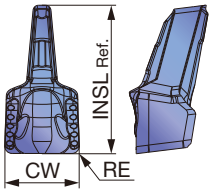
CW = 0.157"

■ Standard feed



INSERTS

ETX



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

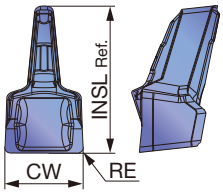
★ : First choice
☆ : Second choice

Designation	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH725	INSL (in)
ETX4-040	4	0.157	0.016	●	0.315
ETX5-040	5	0.197	0.016	●	0.394
ETX6-040	6	0.236	0.016	●	0.472

● : Line up

Reference pages: Toolholders → F190 - F193

EGM



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

★ : First choice
☆ : Second choice

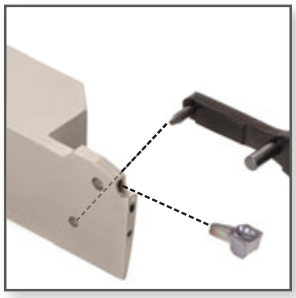
Designation	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH725	INSL (in)
EGM4-030	4	0.157	0.012	●	0.315

● : Line up

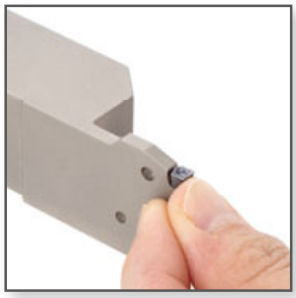
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Chipbreaker	Cutting speed *Vc* (sfm)
P	Low carbon steel 1018, 1020, 1026, etc.	- 300 HB	AH725	ETX	262 - 591
		- 300 HB	AH725	EGM	262 - 591
	Carbon steel, Alloy steel 1045, 1055, etc.	- 300 HB	AH725	ETX	262 - 591
		- 300 HB	AH725	EGM	262 - 591
	Prehardened steel NAK80, PX5, etc.	- 300 HB	AH725	ETX	262 - 591
		- 300 HB	AH725	EGM	262 - 591
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	-	AH725	ETX	164 - 394
		-	AH725	EGM	164 - 394

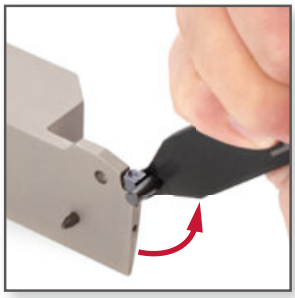
Procedure to clamp and unclanp insert



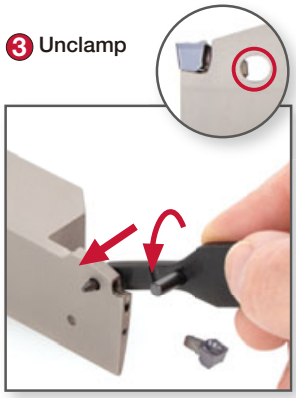
1 Put the insert in the Unclamp pocket



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



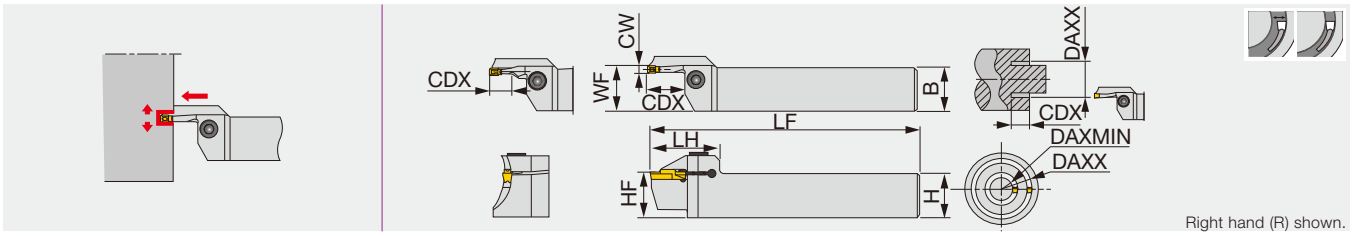
3 Unclamp



Reference pages: Toolholders → F190 - F193

CTFR/L

Face grooving and turning toolholder



Right hand (R) shown.

Metric	CW	DAXMIN	DAXX	Seat size	CDX	H	B	LF	LH	HF	WF (1)	Torque
CTFR/L2525-3T10-024035	3	24	35	3	10	25	25	150	38	25	25.5	5
CTFR/L2525-3T10-029040	3	29	40	3	10	25	25	150	38	25	25.5	5
CTFR/L2525-3T10-034050	3	34	50	3	10	25	25	150	38	25	25.5	5
CTFR/L2525-3T15-044070	3	44	70	3	15	25	25	150	38	25	25.5	5
CTFR/L2525-3T15-064100	3	64	100	3	15	25	25	150	38	25	25.5	5
CTFR/L2525-4T10-022036	4	22	36	4	10	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-028042	4	28	42	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-034050	4	34	50	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-042070	4	42	70	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-062120	4	62	120	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-4T20-112200	4	112	200	4	20	25	25	150	39	25	25.6	5
CTFR/L2525-5T25-050080	5	50	80	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-5T25-070110	5	70	110	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-5T25-100150	5	100	150	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-5T25-140200	5	140	200	5	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-048070	6	48	70	6	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-058100	6	58	100	6	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-088180	6	88	180	6	25	25	25	150	49	25	25.6	12
CTFR/L2525-6T25-168400	6	168	400	6	25	25	25	150	49	25	25.6	12

When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.
Max. groove depth will be 15 mm with DTF insert.
Use the right-hand insert for the right-hand holder with DTF insert.
(1) WF is calculated with the groove width (CW) in the above table.
Torque: Recommended clamping torque: N·m

SPARE PARTS


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

INSERT

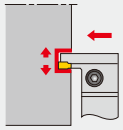
Designation	Seat size	Insert
CTFR/L2525-3T10-024035	3	DTF, DTX
CTFR/L2525-3T10-029040	3	DTF, DTX
CTFR/L2525-3T10-034050	3	DTF, DTX
CTFR/L2525-3T15-044070	3	DTF, DTX, DTR, DTE, DGG, DTM
CTFR/L2525-3T15-064100	3	DTF, DTX, DTE, DGG, DGM, DGS, DTR, SGN, DGL, DTM
CTFR/L2525-4T10-022036	4	DTF, DTX
CTFR/L2525-4T20-028042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

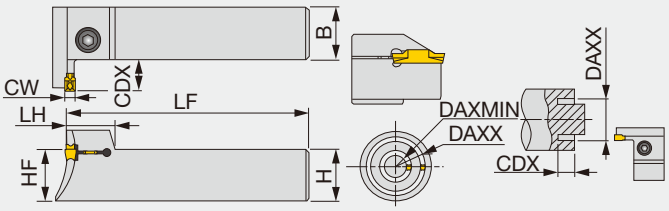
Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3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

Reference pages: Inserts → F207 - F221, Standard cutting conditions → F222

CTFVR/L

Face grooving and turning perpendicular toolholder





Right hand (R) shown.

Metric	CW	DAXMIN	DAXX	Seat size	CDX	H	B	LF	LH	HF	Torque
CTFVR/L2525-3T10-024035	3	24	35	3	10	25	25	150	18	25	5
CTFVR/L2525-3T10-029040	3	29	40	3	10	25	25	150	18	25	5
CTFVR/L2525-3T10-034050	3	34	50	3	10	25	25	150	18	25	5
CTFVR/L2525-3T15-044060	3	44	60	3	15	25	25	150	18	25	5
CTFVR/L2525-3T15-054085	3	54	85	3	15	25	25	150	18	25	5
CTFVR/L2525-4T12-022040	4	22	40	4	12	25	25	150	18.5	25	8.5
CTFVR/L2525-4T15-032050	4	32	50	4	15	25	25	150	18.5	25	8.5
CTFVR/L2525-4T15-042060	4	42	60	4	15	25	25	150	18.5	25	8.5
CTFVR/L2525-4T15-052085	4	52	85	4	15	25	25	150	18.5	25	8.5
CTFVR/L2525-5T20-050080	5	50	80	5	20	25	25	150	22	25	12
CTFVR/L2525-5T20-070110	5	70	110	5	20	25	25	150	22	25	12
CTFVR/L2525-5T20-100150	5	100	150	5	20	25	25	150	22	25	12
CTFVR/L2525-5T20-140200	5	140	200	5	20	25	25	150	22	25	12
CTFVR/L2525-6T20-048085	6	48	85	6	20	25	25	150	22	25	12
CTFVR/L2525-6T20-073150	6	73	150	6	20	25	25	150	22	25	12
CTFVR/L2525-6T20-138250	6	138	250	6	20	25	25	150	22	25	12

When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended
Max. groove depth will be 15 mm with DTF insert.
Use the right-hand insert for the right-hand holder with DTF insert.
Torque: Recommended clamping torque: N·m

SPARE PARTS

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

INSERT

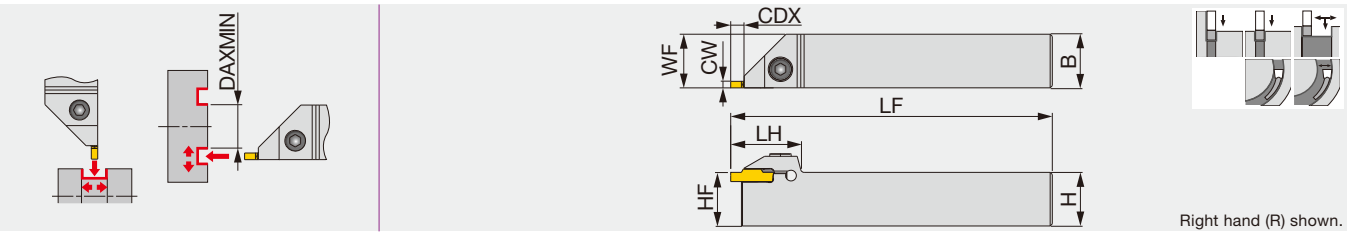
Designation	Seat size	Insert
CTFVR/L2525-3T10-024035	3	DTF, DTX
CTFVR/L2525-3T10-029040	3	DTF, DTX
CTFVR/L2525-3T10-034050	3	DTF, DTX, DTR
CTFVR/L2525-3T15-044060	3	DTF, DTX, DTR
CTFVR/L2525-3T15-054085	3	DTF, DTX, DTE, DGG, DTR, DTM
CTFVR/L2525-4T12-022040	4	DTF, DTX, DTR
CTFVR/L2525-4T15-032050	4	DTF,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

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

Reference pages: Inserts → F207 - F221, Standard cutting conditions → F222

CTEFR/L

External face grooving and turning toolholder



Right hand (R) shown.

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

Metric	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: lbs·ft (*N·m)

INCH SPARE PARTS

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

METRIC 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

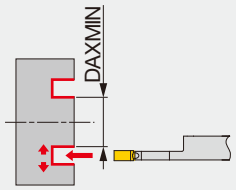
Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DGM / DGS / SGN / DGL	0.079	11.614
DGM / DGS / SGN / DGL	0.118	3.622
DGM / DGS / SGN / DGL	0.157	1.457
DGM / DGS / SGN / DGL	0.197	2.362
DGM / DGS / DGL	0.236	2.244
DTX / DTM / DTR	0.079	11.614
DTE / DGG / DTM	0.118	2.441
DTE / DGG / DTM	0.157	1.654
DTE / DGG / DTM	0.197	2.520
DTE / DGG / DTM	0.236	2.402
DTR	0.118	1.732
DTR	0.157	1.260
DTR	0.197	1.890
DTR	0.236	1.890
DTX	0.118	0.866
DTX	0.157	0.787
DTX	0.197	0.787
DTX	0.236	0.906
DTF	0.118	0.787
DTF	0.157	0.787

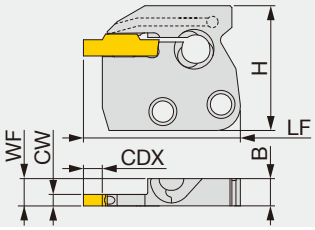
Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG /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

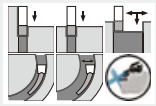
Reference pages: Inserts → F207 - F221, Standard cutting conditions → F222

CAEFR/L-CHP

Face and external grooving adapter, with high pressure coolant capability







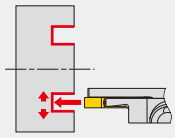
Right hand (R) shown.

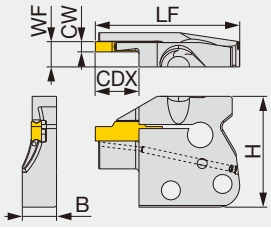
Metric	CW	Seat size	CDX	H	B	LF	WF (1)
CAEFR/L-4T04-CHP	4	2,3,4	4.8	33	7.2	41.5	7.7
CAEFR/L-6T04-CHP	6	5,6	4.8	33	7.2	46.3	7.8

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

CAFR/L-CHP

Face grooving and turning adapter, with high pressure coolant capability





Right hand (R) shown.

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

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
Max. groove depth will be 15 mm with DTF insert.
Use the right-hand insert for the right-hand holder with DTF insert.
(1) WF is calculated with the groove width (CW) in the above table.

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

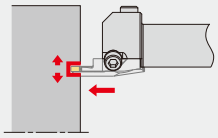
Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	22
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	20
DTF	4	20

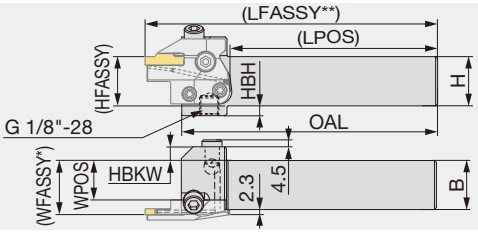
Reference pages: Inserts → F207 - F221, Shanks and toolholders → F200 - F202
Standard cutting conditions → F222, Technical Reference → L059

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190	CA*FL/R**-CHP	3.69
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200	CA*FL/R**-CHP	3.69

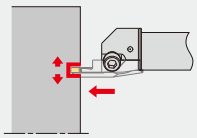
Metric	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	CA*FL/R**-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	CA*FL/R**-CHP	6.5

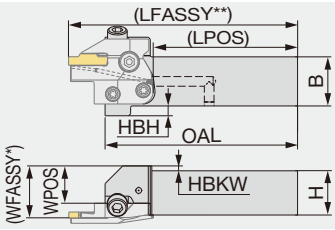
WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

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

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

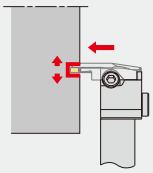
● : Corresponding

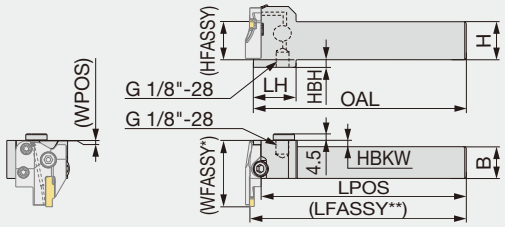
Reference pages: Inserts → F207 - F221, Adapters → F199, Standard cutting conditions → F222
Parts for coolant hose → F290, Technical Reference → L059

CHFVR/L-CHP

Tube connection

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





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

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431	CA*FR/L**-CHP	3.69
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200	CA*FR/L**-CHP	3.69

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

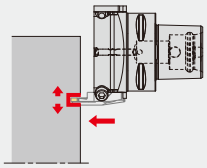
● : Corresponding

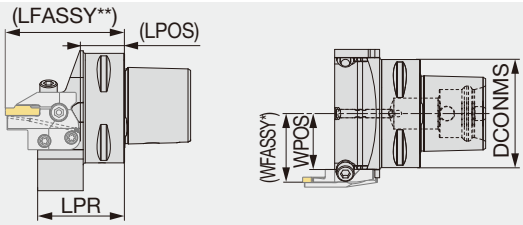
Reference pages: Inserts → F207 - F221, Adapters → F199, Standard cutting conditions → F222
Parts for coolant hose → F290, Technical Reference → L059

C*CHSN-CHP

Direct connection

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





Left-hand (L) adapter shown.

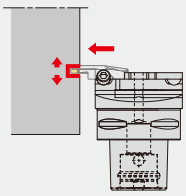
Metric	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque
C3CHSN19045-CHP	32	45	17.5	18.5	CA*FR/L**-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	CA*FR/L**-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	CA*FR/L**-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	CA*FR/L**-CHP	6.5

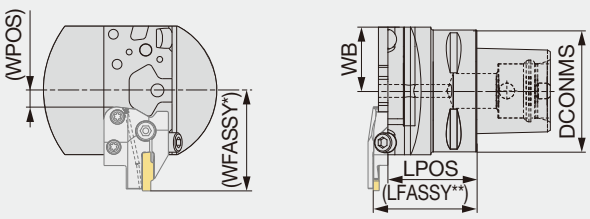
WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

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





Right-hand (R) adapter shown.

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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

Recommended clamping torque (N·m)

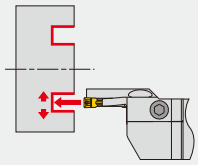
Clamping screw	Torque (N·m)
SR M5-04451	2.5
SR M6X12DIN6912	6.5
SR M6X20-XT	6.5

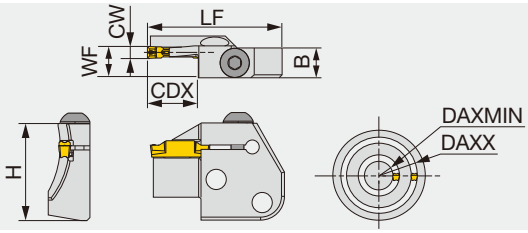
External
Internal
Face
Parting
Others

Reference pages: Inserts → F207 - F221, Adapters → F199, Standard cutting conditions → F222
Technical Reference → L059

CAFR/L

Face grooving and turning adapter





Right hand (R) shown.

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

When groove depth is larger than (insert length - 1.5 mm), please use 1-cornered insert.
Max. groove depth will be 15 mm with DTF insert.
Use the right-hand insert for the right-hand holder with DTF insert.
Not compatible with TungModularSystem
(1) WF is calculated with the groove width (CW) in the above table.
Torque: Recommended clamping torque: N·m

SPARE PARTS

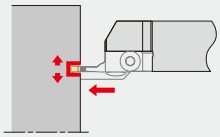
Designation	Clamping screw	Wrench
CAFR/L...	BHM6-20-A	P-4

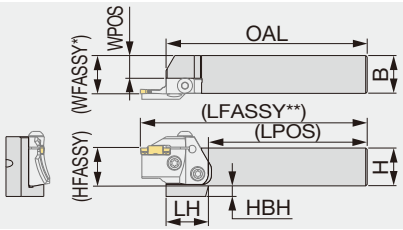
Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3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

Reference pages: Inserts → F207 - F221, Shanks and toolholders → F204, F205
Standard cutting conditions → F222

CHSR/L

Shank for adapter





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

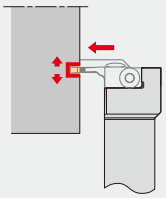
Inch	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Adapter (Option)
CHSR/L12-U	0.750	0.750	5.330	4.227	1.380	0.356	0.750	0.502	CAFL/R...
CHSR/L16-U	1.000	1.000	5.330	4.227	1.100	0.606	1.000	0.280	CAFL/R...
CHSR/L20-U	1.250	1.250	6.330	5.227	-	0.856	1.250	-	CAFL/R...

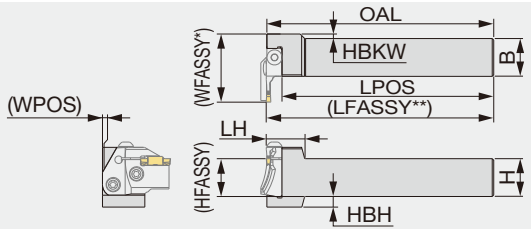
Metric	H	B	OAL	LPOS	LH	WPOS	HFASSY	HBH	Adapter (Option)
CHSR/L2020	20	20	133	105	35	10	20	12	CAFL/R...
CHSR/L2525	25	25	133	105	28	15	25	7	CAFL/R...
CHSR/L3232	32	32	153	125	-	22	32	-	CAFL/R...

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Not compatible with TungModularSystem

CHFVR/L

Shank for adapter, perpendicularly mounted





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

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

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Not compatible with TungModularSystem

SPARE PARTS

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

Combination of adapter and shank

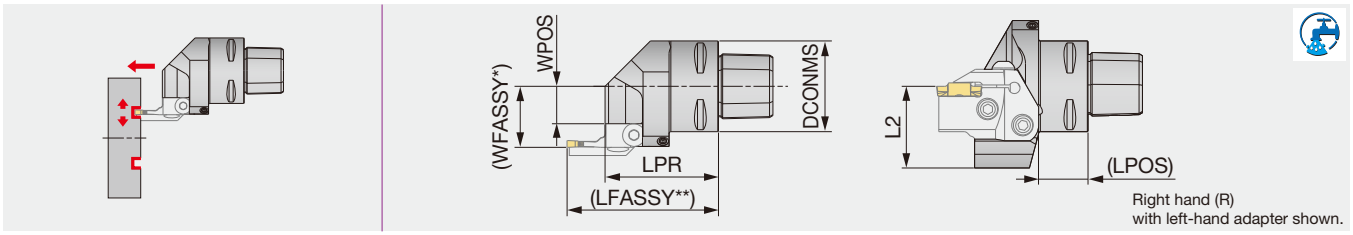
Shank	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

● : Corresponding

Reference pages: Inserts → F207 - F221, Adapters → F203, Standard cutting conditions → F222

C-CHSR/L

Toolholder with TungCap connection for adapter

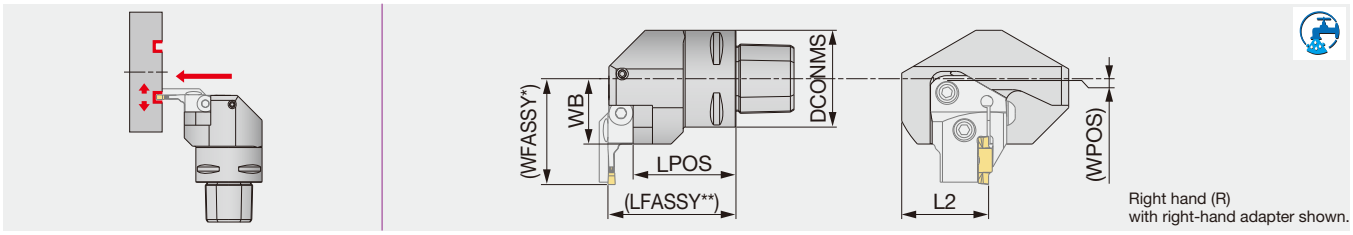


Metric	DCONMS	LPR	LPOS	L2	WPOS	Adapter (Option)
C3CHSR/L22050N	32	50	22.1	35	11.5	CAFL/R...
C4CHSR/L27050N	40	50	22.1	36	16.5	CAFL/R...
C5CHSR/L35060N	50	60	32.1	36	24.5	CAFL/R...
C6CHSR/L45065N	63	65	32.1	41	34.5	CAFL/R...

WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type. If needed, the coolant direction can be adjusted by the nozzle.
Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

C-CHFVR/L

Toolholder with TungCap connection for adapter, perpendicularly mounted



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

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type. If needed, the coolant direction can be adjusted by the nozzle.
Applicable for 7 MPa coolant. Not compatible with TungModularSystem.

SPARE PARTS

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

Combination of adapter and toolholder

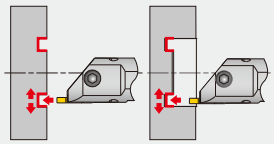
Toolholder	External grooving adapter		Face grooving adapter	
	CAER...	CAEL...	CAFR...	CAFL...
C*CHSR...	●			●
C*CHSL...		●	●	
C*CHFVR...		●	●	
C*CHFVL...	●			●

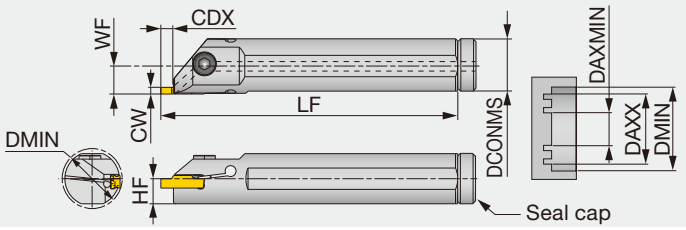
● : Corresponding

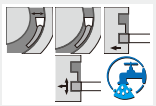
Reference pages: Inserts → F207 - F221, Adapters → F203, Standard cutting conditions → F222

CTIFR/L

External/Internal face grooving and turning toolholder







Right hand (R) shown.

Inch	CW	Seat size	CDX	DCONMS	LF	HF	WF (1)	Torque
CTIFR/L16-4T05-D17	0.157	2, 3, 4	0.217	1.000	8.000	0.450	0.531	3.69
CTIFR/L20-4T05-D22	0.157	2, 3, 4	0.217	1.250	10.000	0.590	0.656	3.69
CTIFR/L16-5T05-D17	0.236	5, 6	0.217	1.000	8.000	0.450	0.531	3.69
CTIFR/L20-5T05-D22	0.236	5, 6	0.217	1.250	10.000	0.590	0.656	3.69

Metric	CW	Seat size	CDX	DCONMS	LF	HF	WF (1)	Torque*
CTIFR/L25-4T05-D270	4	2, 3, 4	5.5	25	200	11.5	13.3	5
CTIFR/L32-4T05-D340	4	2, 3, 4	5.5	32	250	15	16.8	5
CTIFR/L25-5T05-D270	6	5, 6	5.5	25	200	11.5	13.3	5
CTIFR/L32-5T05-D340	6	5, 6	5.5	32	250	15	16.8	5

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

INCH SPARE PARTS



Designation	Clamping screw	Wrench	Seal cap
CTIFR/L16...	CM6X1X16-A	P-5	CA-25
CTIFR/L20...	CM6X1X20-A	P-5	CA-32

Seat size	Min. machining dia.: DMIN (in)	
	DCONMS = 1.000"	DCONMS = 1.250"
2	11.772	11.772
3	1.035	1.311
4	1.055	1.331
5	1.035	1.311
6	1.055	1.331

Insert	Groove width CW (in)	Face grooving Min. machining dia. DAXMIN (in)
DGM / DGS / SGN / DGL	0.079	11.614
DGM / DGS / SGN / DGL	0.118	3.622
DGM / DGS / SGN / DGL	0.157	1.457
DGM / DGS / SGN / DGL	0.197	2.362
DGM / DGS / DGL	0.236	2.244
DTX / DTM / DTR	0.079	11.614
DTE / DGG / DTM	0.118	2.441
DTE / DGG / DTM	0.157	1.654
DTE / DGG / DTM	0.197	2.520
DTE / DGG / DTM	0.236	2.402
DTR	0.118	1.732
DTR	0.157	1.260
DTR	0.197	1.890
DTR	0.236	1.890
DTX	0.118	0.866
DTX	0.157	0.787
DTX	0.197	0.787
DTX	0.236	0.906
DTF	0.118	0.787
DTF	0.157	0.787

METRIC SPARE PARTS



Designation	Clamping screw	Wrench	Seal cap
CTIFR/L25...	CM6X1X16-A	P-5	CA-25
CTIFR/L32...	CM6X1X20-A	P-5	CA-32

Seat size	Min. machining dia.: DMIN (mm)	
	DCONMS = 25 mm	DCONMS = 32 mm
2	299	299
3	26.3	33.3
4	26.8	33.8
5	26.3	33.3
6	26.8	33.8

Insert	Groove width CW (mm)	Face grooving Min. machining dia. DAXMIN (mm)
DGM / DGS / SGN / DGL	2	295
DGM / DGS / SGN / DGL	3	92
DGM / DGS / SGN / DGL	4	37
DGM / DGS / SGN / DGL	5	60
DGM / DGS / DGL	6	57
DTX / DTM / DTR	2	295
DTE / DGG / DTM	3	62
DTE / DGG / DTM	4	42
DTE / DGG / DTM	5	64
DTE / DGG / DTM	6	61
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 → F207 - F221, Standard cutting conditions → F222

Face grooving and turning

DTF type (2 corners)

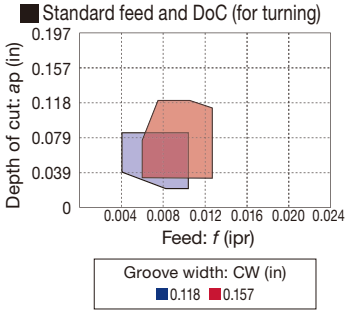
First choice

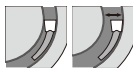
F211

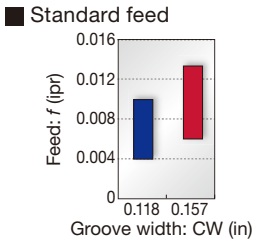
1st choice for face grooving

Unique chipbreaker makes chips shorter
Molded and ground insert available

CW = 0.118" - 0.157"





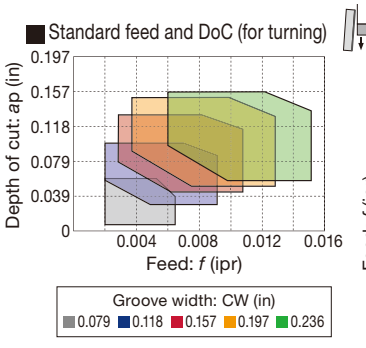


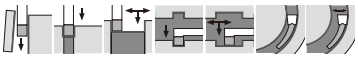
DTX type (2 corners)

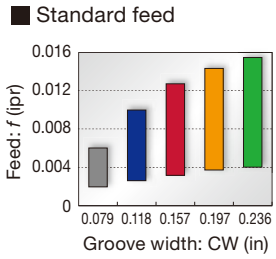
F211

Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.079" - 0.236"





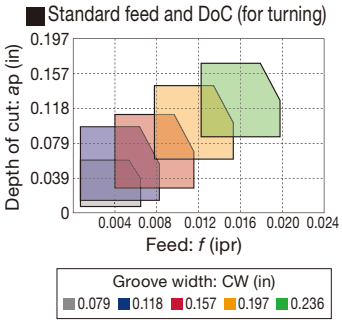


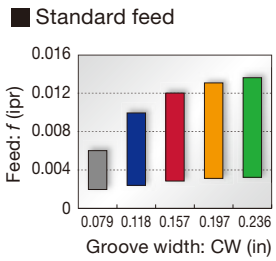
DTM type (2 corners)

F212

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.079" - 0.236"



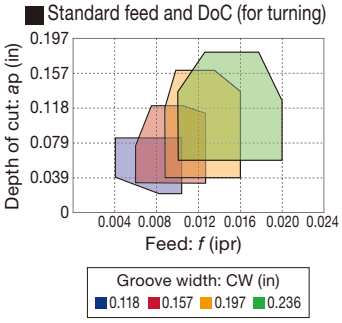


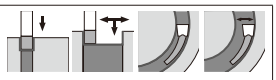
DTE type (2 corners)

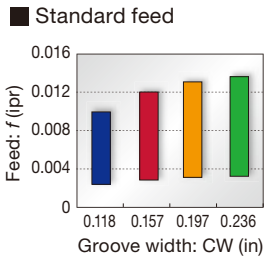
F212, F213

General purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 0.104" - 0.236"

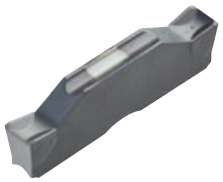






Please see page F*** for the product details.

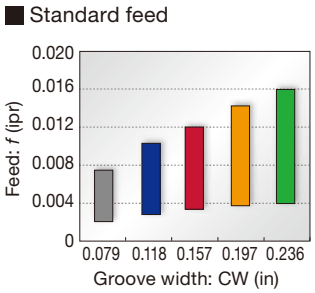
DGM type (2 corners) SGM type (1 corner)

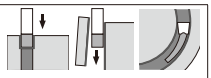


F214, F215

1st choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 0.079" - 0.250"



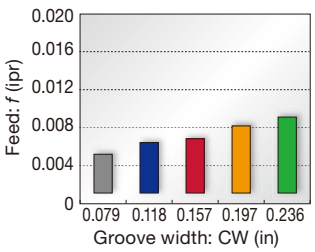


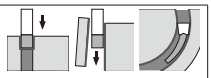
DGS type (2 corners) SGS type (1 corner)

F216, F217

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
CW = 0.079" - 0.250"



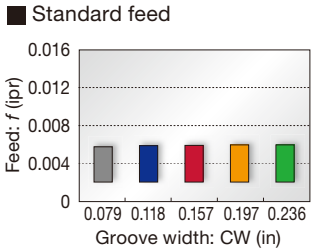


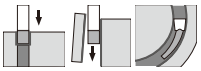
DGG type (2 corners)

F217

For non-ferrous materials and titanium

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



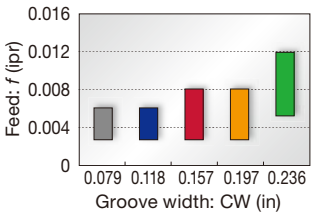


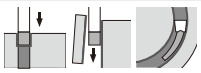
DGL type (2 corners)

F218

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel which often presents challenges in chip control
CW = 0.079" - 0.236"





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

Profiling and undercutting

DTR type (2 corners)
STR type (1 corner)

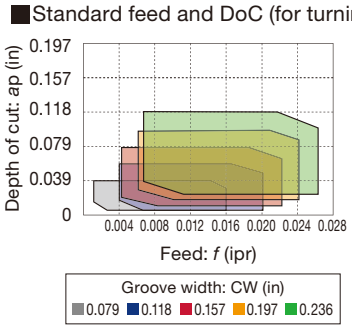
Molded
DTR, STR

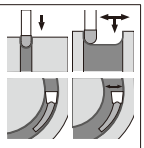
Ground
DTR

F218, F219

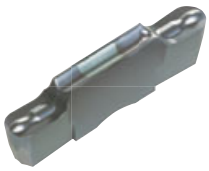
Full radius type

Excellent chip control
Molded and ground inserts available
CW = 0.079" - 0.236"





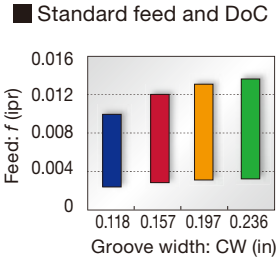
DTIU type
(2 corners)

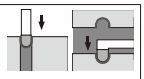


F220

Full radius type

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





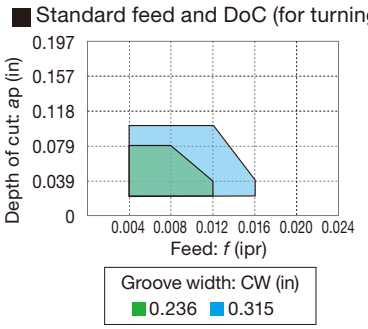
Aluminum wheel machining

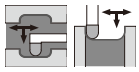
DTA type
(2 corners)

F220

Full radius type

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





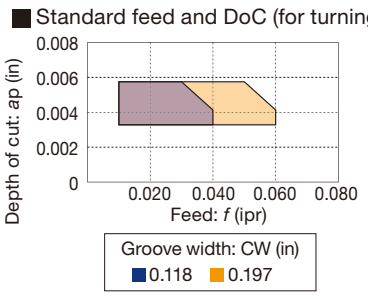
For high feed external and face turning of hardened steel parts

STH type
(1 corner)

F221

External and face turning of hardened steel parts

High efficiency machining using light D.O.C. and increased feeds
CW = 0.118", 0.197"



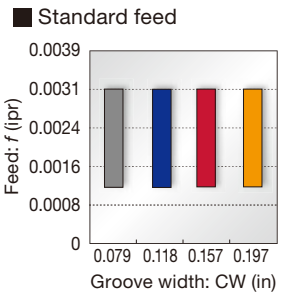
External grooving of hardened steel

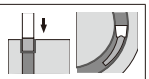
SGN-CBN type
(1 corner)

F221

For hardened steel cutting

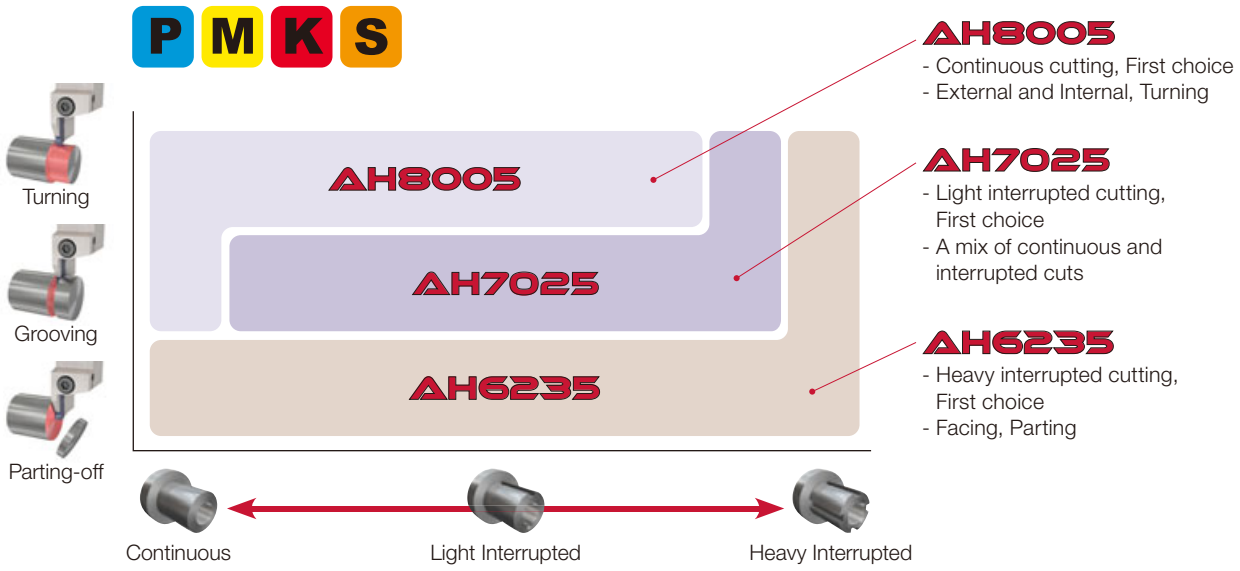
Optimum cutting edge shape for grooving of hardened steels
High tolerance width for finishing
CW = 0.079" - 0.197"
(Tol. ±0.001")





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

GRADE SELECTION



GRADES

AH8005 P M K S
- First choice for external, internal, and side-turning, continuous cuts

AH7025 P M K S
- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235 P M K
- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725 P M S
- General purpose PVD grade for high fracture resistance

T515 K
- First recommended grade for cast iron
- Excellent wear resistance in high speed machining

T9225 P
- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P
- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K
- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S
- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S
- Recommended for non-ferrous materials and titanium

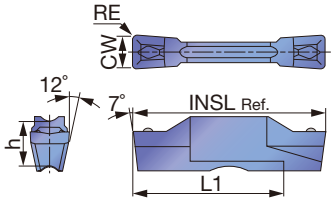
TH10 N
- Recommended for non-ferrous materials

BXA10 H
- Coated CBN grade designed for turning hardened steel parts

BX360 H
- Developed for grooving applications of hardened steel parts

DTF

Face grooving and turning



Right hand (R) shown.

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

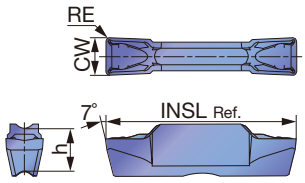
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)	L1 (in)
						T9225	AH7025	AH725	GH130			NS9530								
DTF3-040-R	3	R	3	0.118	0.016	●	●	●	●			●						0.787	0.197	0.630
DTF3-040-L	3	L	3	0.118	0.016	●	●	●	●			●						0.787	0.197	0.630
DTF4-040-R	4	R	4	0.157	0.016	●	●	●	●			●						0.787	0.197	0.630
DTF4-040-L	4	L	4	0.157	0.016	●	●	●	●			●						0.787	0.197	0.630

●: Line up

DTX

External, internal and face grooving, and turning



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

★ : First choice
☆ : Second choice

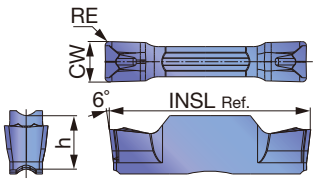
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet				Uncoated				INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530				KS05F					
DTX2-020	2	2	0.079	0.008		●		●		●					●				0.787	0.197
DTX3-030	3	3	0.118	0.012	●	●	●	●	●	●	●				●				0.787	0.197
DTX4-040	4	4	0.157	0.016	●	●	●	●	●	●	●				●				0.787	0.197
DTX5-040	5	5	0.197	0.016	●	●	●	●	●	●	●				●				0.984	0.217
DTX6-080	6	6	0.236	0.031		●	●	●	●	●					●				0.984	0.217

● : Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

DTM

External face grooving and turning



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

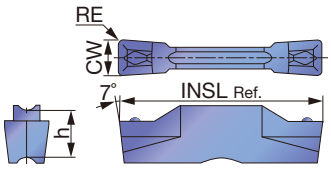
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Coated AH6235	INSL (in)	h (in)
DTM2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DTM3-030	3	3	0.118	0.012	●	●	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	●	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	●	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	●	●	0.984	0.217

● : Line up

DTE

External face grooving and turning (for high precision)



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

★ : First choice
☆ : Second choice

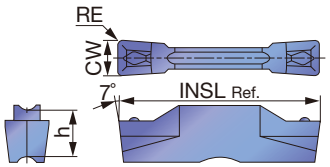
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTE265-015	3	2.65	0.104	0.006	●	●	●	●	●	0.787	0.197
DTE300-020	3	3	0.118	0.008	●	●	●	●	●	0.787	0.197
DTE300-040	3	3	0.118	0.016	●	●	●	●	●	0.787	0.197
DTE315-015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

●: Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

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

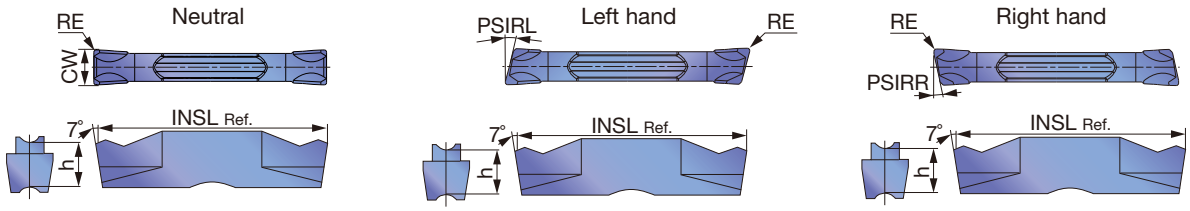
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530							
DTE3-020	3	3	0.118	0.008			●		●		●							0.787	0.197
DTE3-040	3	3	0.118	0.016	●	●	●	●	●	●	●	●						0.787	0.197
DTE4-040	4	4	0.157	0.016	●	●	●	●	●	●	●	●						0.787	0.197
DTE4-080	4	4	0.157	0.031			●		●		●							0.787	0.197
DTE5-040	5	5	0.197	0.016		●	●		●		●							0.984	0.217
DTE5-080	5	5	0.197	0.031			●		●		●							0.984	0.217
DTE6-080	6	6	0.236	0.031		●	●		●		●							0.984	0.217

● : Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

DGM

External/face grooving and parting



		T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530	KS05F
P	Steel	★	★	☆	★		☆	★	★	
M	Stainless		★	☆	★		★	★		
K	Cast iron		★		★	☆	☆	★	☆	☆
N	Non-ferrous									☆
S	Superalloys		★	☆	★	★				★
H	Hard materials									

★ : First choice
☆ : Second choice

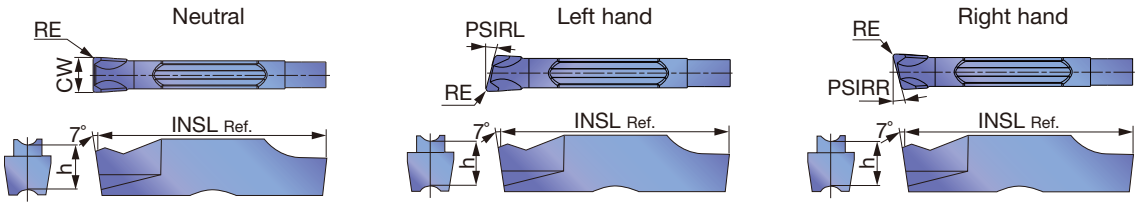
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet		Un-coated		INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530		KS05F					
DGM2-020	2	N	2	0.079	0.008	●	●	●	●		●	●	●		●		0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008		●	●			●						0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008		●	●			●						0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008		●	●			●						0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008		●	●			●						0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008		●	●			●						0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008		●	●			●						0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008			●			●						0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008			●			●						0.762	0.197	15°	0°
DGM2.39-020	2	N	2.39	0.094	0.008		●		●			●					0.787	0.197	0°	0°
DGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●		●		0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008		●	●			●						0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008		●	●			●						0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.008			●			●						0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.008			●			●						0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008		●	●			●						0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008		●	●			●						0.787	0.197	15°	0°
DGM3.18-020	3	N	3.18	0.125	0.008		●		●			●					0.787	0.197	0°	0°
DGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●		●		0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012		●	●			●						0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012		●	●			●						0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012		●	●			●						0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012		●	●			●						0.787	0.197	15°	0°
DGM4.76-040	5	N	4.76	0.187	0.016		●		●			●					0.984	0.217	0°	0°
DGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●		●		0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012		●	●			●						0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	●			●		0.984	0.217	0°	0°
DGM6.35-040	6	N	6.35	0.250	0.016		●		●			●					0.984	0.217	0°	0°

● : Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

SGM

External/face deep grooving and parting



		AH7025	AH725	AH8005	GH130	AH6235	KS05F
P	Steel	★	☆	★	☆	★	
M	Stainless	★	☆	★	★	★	
K	Cast iron	★		★	☆	★	☆
N	Non-ferrous						☆
S	Superalloys	★	☆	★			★
H	Hard materials						

★ : First choice
☆ : Second choice

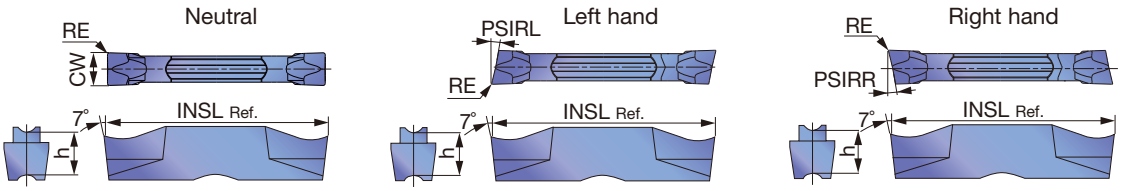
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated					Uncoated				INSL (in)	h (in)	PSIRL	PSIRR
						AH7025	AH725	AH8005	GH130	AH6235	KS05F							
SGM2-020	2	N	2	0.079	0.008	●	●	●	●	●	●				0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●		●						0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●		●						0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●				0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●		●						0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●		●						0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●		●						0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●		●						0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●				0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●		●						0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●		●						0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●				0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●				0.984	0.217	0°	0°

● : Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

DGS

External/face 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	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet			Uncoated			INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530			KS05F						
DGS2-005	2	N	2	0.079	0.002			●										0.787	0.197	0°	0°
DGS2-010	2	N	2	0.079	0.004			●										0.787	0.197	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008		●	●		●								0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008		●	●		●								0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008			●		●								0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008			●		●								0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008		●	●		●								0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008		●	●		●								0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008			●		●								0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008			●		●								0.768	0.197	15°	0°
DGS2.39-020	2	N	2.39	0.094	0.008		●		●		●							0.787	0.197	0°	0°
DGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008		●	●		●								0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008		●	●		●								0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008			●		●								0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008			●		●								0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008		●	●		●								0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008		●	●		●								0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008			●		●								0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008			●		●								0.766	0.197	15°	0°
DGS3.18-020	3	N	3.18	0.125	0.008		●		●		●							0.787	0.197	0°	0°
DGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●			●			0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012		●	●		●								0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012		●	●		●								0.787	0.197	4°	0°
DGS4.76-040	5	N	4.76	0.187	0.016		●		●		●							0.984	0.217	0°	0°
DGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●			●			0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●				●			0.984	0.217	0°	0°
DGS6.35-040	6	N	6.35	0.250	0.016		●		●		●							0.984	0.217	0°	0°

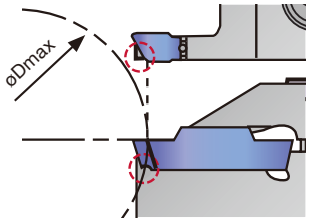
● : Line up

Caution

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

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

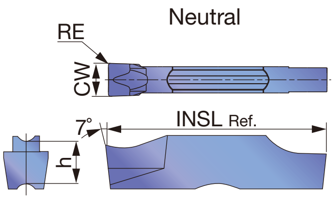
Designation	øDmax (in)
DGS2-002-15R/L	1.102
DGS3-002-15R/L	1.141
SGS3-020-15R/L	4.055
SGS3-002-15R/L	1.338

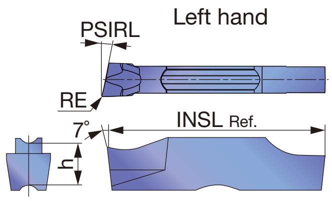


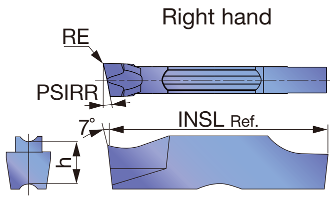
Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

SGS

External/face deep grooving and parting







		AH7025	AH725	AH8005	GH130	AH6235	KS05F
P	Steel	★	☆	★	☆	★	
M	Stainless	★	☆	★	★	★	
K	Cast iron	★		★	☆	★	☆
N	Non-ferrous						☆
S	Superalloys	★	☆	★			★
H	Hard materials						

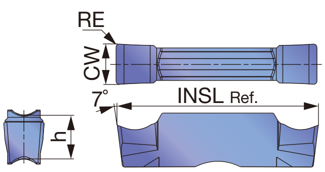
★ : First choice
☆ : Second choice

Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	AH725	AH8005	GH130	AH6235	Uncoated KS05F	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●		●			0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●		●			0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●		●			0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●		●			0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°

● : Line up

DGG

External/face grooving (for high precision)



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

★ : First choice
☆ : Second choice

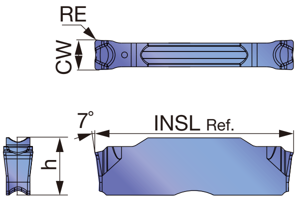
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Cermet NS9530	Uncoated KS05F	INSL (in)	h (in)
DGG200-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGG300-020	3	3	0.118	0.008	●	●	●	0.787	0.197
DGG400-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DGG500-040	5	5	0.197	0.016	●	●	●	0.984	0.217
DGG600-040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

●: Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

DGL

External/face grooving and parting



	Workpiece material	AH7025	AH8005	AH6235
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	
H	Hard materials			

★ : First choice
☆ : Second choice

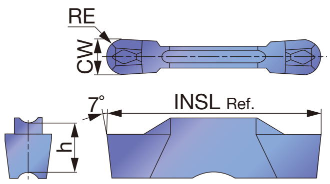
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	AH8005	AH6235	INSL (in)	h (in)
DGL2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DGL3-025	3	3	0.118	0.010	●	●	●	0.787	0.197
DGL4-030	4	4	0.157	0.012	●	●	●	0.787	0.197
DGL5-030	5	5	0.197	0.012	●	●	●	0.984	0.217
DGL6-080	6	6	0.236	0.031	●	●	●	0.984	0.217

● : Line up

External
Internal
Face
Parting
Others

DTR

Profiling and undercutting (for high precision)



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

★ : First choice
☆ : Second choice

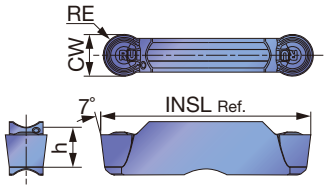
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTR300-150	3	3	0.118	0.059	●	●	●	●	●	0.787	0.197
DTR400-200	4	4	0.157	0.079	●	●	●	●	●	0.787	0.197
DTR478-239	5	4.78	0.188	0.094	●	●	●	●	●	0.984	0.217
DTR500-250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

●: Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

DTR

Profiling and undercutting



		T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530	KS05F
P	Steel	★	★	☆	★		☆	★	★	
M	Stainless		★	☆	★		★	★		
K	Cast iron		★		★	☆	☆	★	☆	☆
N	Non-ferrous									☆
S	Superalloys		★	☆	★	★				★
H	Hard materials									

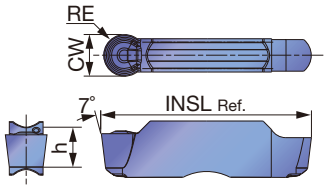
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet		Uncoated		INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530		KS05F			
DTR2-100	2	2	0.079	0.039		●		●			●			●		0.787	0.197
DTR3-150	3	3	0.118	0.059	●	●	●	●	●	●	●	●		●		0.787	0.197
DTR4-200	4	4	0.157	0.079	●	●	●	●	●	●	●	●		●		0.787	0.197
DTR5-250	5	5	0.197	0.098	●	●	●	●	●	●	●	●		●		0.984	0.217
DTR6-300	6	6	0.236	0.118	●	●	●	●		●	●			●		0.984	0.217

● : Line up

STR

Profiling and undercutting



		AH7025	AH8005	KS05F
P	Steel	★	★	
M	Stainless	★	★	
K	Cast iron	★	★	☆
N	Non-ferrous			☆
S	Superalloys	★	★	★
H	Hard materials			

★ : First choice
☆ : Second choice

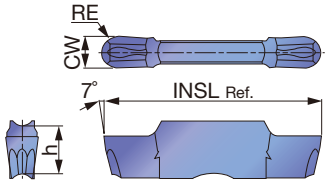
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated		Uncoated							INSL (in)	h (in)
					AH7025	AH8005	KS05F								
STR2-100	2	2	0.079	0.039	●	●	●							0.787	0.197
STR3-150	3	3	0.118	0.059	●	●	●							0.787	0.197
STR4-200	4	4	0.157	0.079	●	●	●							0.787	0.197
STR5-250	5	5	0.197	0.098	●	●	●							0.984	0.217
STR6-300	6	6	0.236	0.118	●	●	●							0.984	0.217

●: Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

DTIU

Profiling and undercutting (for high precision)



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

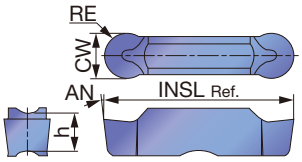
★ : First choice
☆ : Second choice

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

●: Line up

DTA

Aluminum wheel machining (for high precision)



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

★ : First choice
☆ : Second choice

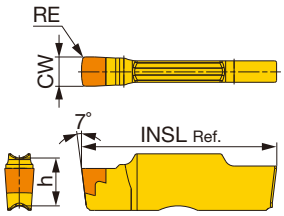
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Uncoated TH10	INSL (in)	h (in)	AN
DTA600-300	6	6	0.236	0.118	●	0.984	0.217	7°

●: Line up

Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

STH

External and face turning



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

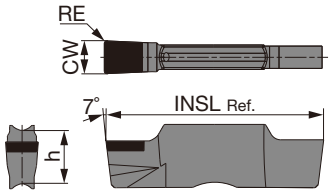
★ : First choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN	INSL (in)	h (in)
					BXA10		
STH300-SR	3	3	0.118	0.012	●	0.787	0.197
STH500-SR	5	5	0.197	0.012	●	0.984	0.217

●: Line up

SGN

External/face grooving



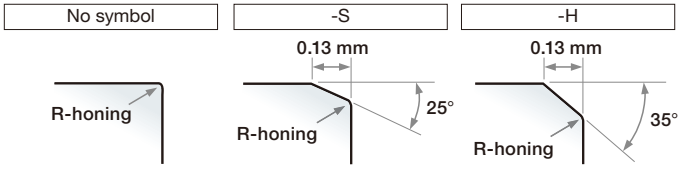
P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloys
H	Hard materials

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	CBN	INSL (in)	h (in)	Condition		
					BX360			Continuous	Light interrupted	Heavy interrupted
SGN200-020	2	2	0.079	0.008	●	0.787	0.197	○		
SGN200-020-S	2	2	0.079	0.008	●	0.787	0.197		○	
SGN200-020-H	2	2	0.079	0.008	●	0.787	0.197			○
SGN300-020	3	3	0.118	0.008	●	0.787	0.197	○		
SGN300-020-S	3	3	0.118	0.008	●	0.787	0.197		○	
SGN300-020-H	3	3	0.118	0.008	●	0.787	0.197			○
SGN400-020	4	4	0.157	0.008	●	0.787	0.197	○		
SGN400-020-S	4	4	0.157	0.008	●	0.787	0.197		○	
SGN400-020-H	4	4	0.157	0.008	●	0.787	0.197			○
SGN500-020-S	5	5	0.197	0.008	●	0.984	0.217		○	
SGN500-020-H	5	5	0.197	0.008	●	0.984	0.217			○

●: Line up

Edge preparations



Reference pages: Toolholders → F196 - F206, Standard cutting conditions → F222

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Wear resistance	T9225, AH8005	262 - 984
		< 300 HB	Impact resistance	AH6235, GH130	164 - 394
		< 300 HB	Surface quality	NS9530	262 - 722
M	Stainless steel 303, 304, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Wear resistance	AH8005	164 - 394
		< 200 HB	Impact resistance	AH6235, GH130	164 - 394
K	Gray cast iron No.250B, etc.	-	First choice	T515	492 - 2297
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 591
	Ductile cast iron 65-45-12, etc.	-	First choice	T515	492 - 984
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	66 - 197
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	66 - 328
		< HRC 40	Impact resistance	AH7025, AH725	66 - 262

Please see page F207 - F209 for feed: *f* (ipr).

STH

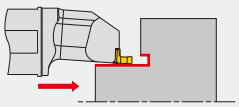
ISO	Grade	CW	Application	Cutting speed *Vc* (sfm)	Depth of cut *ap* (in)	Feed *f* (ipr)
H	BXA10	0.118"	External turning	328 - 755	0.003 - 0.005	0.016 - 0.039
			Face turning	328 - 755	0.003 - 0.005	0.016 - 0.031
		0.197"	External turning	328 - 755	0.003 - 0.005	0.020 - 0.059
			Face turning	328 - 755	0.003 - 0.005	0.020 - 0.031

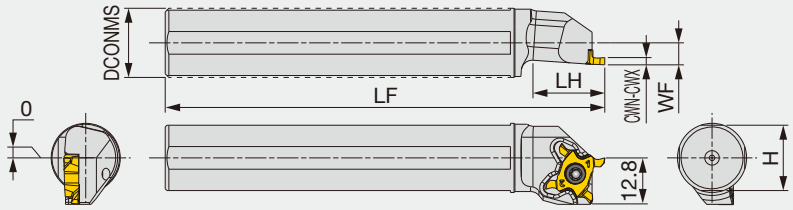
SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
H	BX360	No symbol	Continuous	262 - 492	0.0012 - 0.0031
		-S	Light interrupted	164 - 394	0.0012 - 0.0031
		-H	Heavy interrupted	131 - 328	0.0012 - 0.0024

JS-STCFL18

Face grooving toolholder with round shank





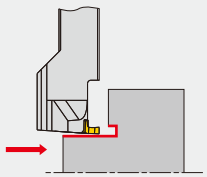
Left-hand (L) shown.

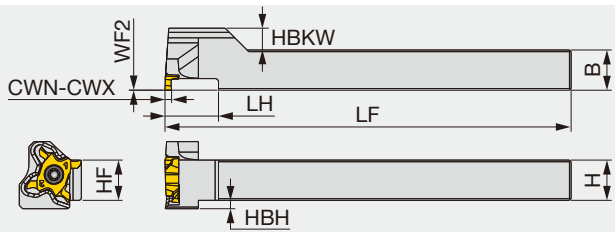
Metric	CWN	CWX	DCONMS	LF	LH	H	WF	Insert	Torque
JS16F-STCFL18	0.33	3.18	16	85	20	15	6	TCF18L...	1.2
JS19G-STCFL18	0.33	3.18	19.05	90	20	18	6	TCF18L...	1.2
JS19X-STCFL18	0.33	3.18	19.05	120	20	18	6	TCF18L...	1.2
JS20G-STCFL18	0.33	3.18	20	90	20	19	6	TCF18L...	1.2
JS20X-STCFL18	0.33	3.18	20	120	20	19	6	TCF18L...	1.2
JS22X-STCFL18	0.33	3.18	22	120	20	21	6	TCF18L...	1.2
JS25H-STCFL18	0.33	3.18	25	100	20	24	6	TCF18L...	1.2
JS254X-STCFL18	0.33	3.18	25.4	120	20	24.5	6	TCF18L...	1.2

Note: The left hand insert (L) is used for the left hand toolholders (L).
Torque: Recommended clamping torque: N·m

STCFVR-18

Face grooving toolholder with square shank, for Swiss lathes





Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF2	HBKW	HBH	Insert	Torque
STCFVR06-18	0.013	0.125	0.375	0.375	4.016	0.472	0.375	0	0.354	0.177	TCF18L...	0.89
STCFVR08-18	0.013	0.125	0.500	0.500	4.764	0.630	0.500	0	0.228	0.098	TCF18L...	0.89
STCFVR10-18	0.013	0.125	0.625	0.625	4.764	0.787	0.625	0	0.106	-	TCF18L...	0.89

Metric	CWN	CWX	H	B	LF	LH	HF	WF2	HBKW	HBH	Insert	Torque*
STCFVR1010H18	0.33	3.18	10	10	100	12	10	0	8.5	4.5	TCF18L...	1.2
STCFVR1212F18	0.33	3.18	12	12	85	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1212X18	0.33	3.18	12	12	120	16	12	0	6.5	2.5	TCF18L...	1.2
STCFVR1616X18	0.33	3.18	16	16	120	20	16	0	2.5	0	TCF18L...	1.2

Note: The left hand insert (L) is used for the right hand toolholders (R).
Torque: Recommended clamping torque: lbs·ft (*N·m)

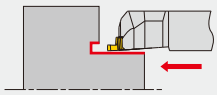
SPARE PARTS

Designation	Clamping screw	Wrench
JS**-STCFL18, STCFVR**18	CSTC-4L100DR	T-1008/5

Reference pages: Inserts → F229, F230, Standard cutting conditions → F237

STCR/L-18

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



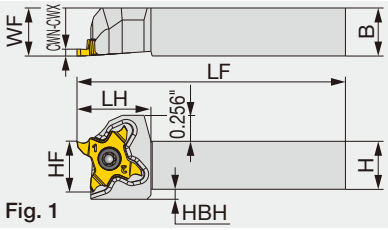


Fig. 1

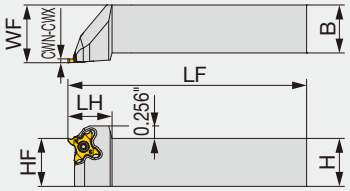
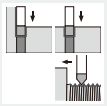


Fig. 2



Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque	Fig.
STCR/L06-18	0.013	0.125	0.375	0.375	4.750	0.740	0.375	0.375	0.177	TC*18...	0.89	1
STCR/L08-18	0.013	0.125	0.500	0.500	4.750	0.740	0.500	0.500	0.098	TC*18...	0.89	1
STCR/L10-18	0.013	0.125	0.625	0.625	4.750	0.740	0.625	0.625	-	TC*18...	0.89	1
STCR/L12-18	0.013	0.125	0.750	0.750	4.750	0.900	0.750	1.000	-	TC*18...	0.89	2
STCR/L16-18	0.013	0.125	1.000	1.000	5.500	0.900	1.000	1.250	-	TC*18...	0.89	2

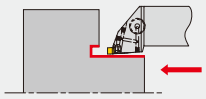
Metric	CWN	CWX	H	B	LF	LH	HF	WF	HBH	Insert	Torque*	Fig.
STCR/L1010X18	0.33	3.18	10	10	120	18.5	10	10	4.5	TC*18...	1.2	1
STCR/L1212F18	0.33	3.18	12	12	85	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1212X18	0.33	3.18	12	12	120	18.5	12	12	2.5	TC*18...	1.2	1
STCR/L1616X18	0.33	3.18	16	16	120	18.5	16	16	-	TC*18...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

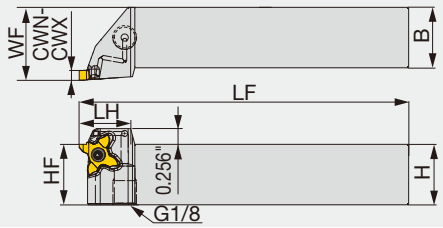
The right hand insert (TC*18R...) is used for the right hand toolholders (STCR...), and the left hand insert is used for the left hand toolholders
Torque: Recommended clamping torque: lbs·ft (*N·m)

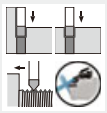
STCR/L-18-CHP

Tube connection

Threading tool - for external theading with high pressure coolant capability







Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF	LH	HBL	HF	WF	HBH	Insert	Torque
STCR/L12-18-CHP	0.013	0.125	0.750	0.750	4.750	0.900	-	0.750	1.000	-	TC*18...	0.89
STCR/L16-18-CHP	0.013	0.125	1.000	1.000	5.500	0.900	-	1.000	1.250	-	TC*18...	0.89

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

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

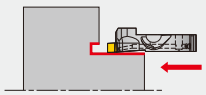
SPARE PARTS

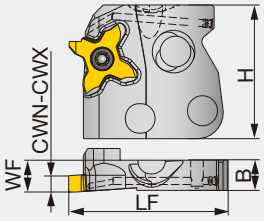
Designation	Clamping screw	Wrench
STCL**18, STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18, STCR**18-CHP	CSTC-4L100DL	T-1008/5

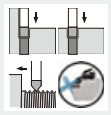
Reference pages: STCR/L-18: Inserts → F229 - F236, Standard cutting conditions → F237
STCR/L-18-CHP: Inserts → F229 - F236, Standard cutting conditions → F237
Parts for coolant hose → F290

STCAR/L18-CHP

External grooving and threading adapter, with high pressure coolant capability







Right-hand (R) shown.

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

Use the right hand insert (TC*18R...) with the right hand adapter (STCAR...). Use the left hand insert (TC*18L...) with the left hand adapter (STCAL...).
Torque: Recommended clamping torque: N·m

SPARE PARTS

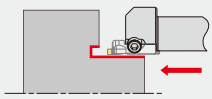
Designation	Clamping screw	Wrench
STCAL18-CHP	CSTC-4L100DR	T-1008/5
STCAR18-CHP	CSTC-4L100DL	T-1008/5

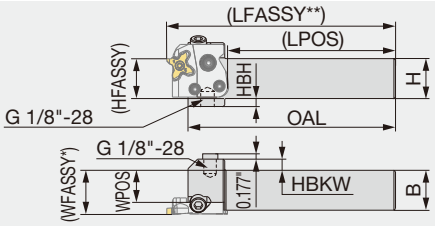
Reference pages: STCAR/L18-CHP: Inserts → F229 - F236, Shanks and toolholders → F226 - F228
Standard cutting conditions → F237, Technical Reference → L059

CHSR/L-CHP

Tube connection

Shank for adapter, with high pressure coolant capability





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

Inch	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHSR/L12-CHP	0.750	0.750	5.000	4.035	0.560	0.510	0.750	0.190	STCAR/L18-CHP	3.69
CHSR/L16-CHP	1.000	1.000	5.000	4.035	0.810	0.260	1.000	0.200	STCAR/L18-CHP	3.69

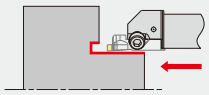
Metric	H	B	OAL	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque*
CHSR/L2020-CHP	20	20	130	105.5	15.1	12	20	10	STCAR/L18-CHP	6.5
CHSR/L2525-CHP	25	25	130	105.5	20.1	7	25	5	STCAR/L18-CHP	6.5

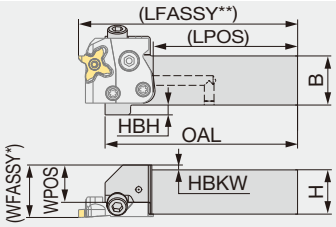
WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

CHSR/L-CHP-MC

Direct connection

Shank for adapter, with high pressure coolant capability





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

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

WFASSY* : Shank (WPOS) + adapter (WF)
LFASSY** : Shank (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

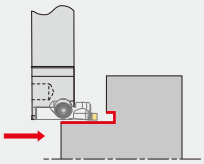
Shank	Adapter	
	STCAR18-CHP	STCAL18-CHP
CHSR**-CHP (-MC)	●	
CHSL**-CHP (-MC)		●
CHFVR**-CHP		●
CHFVL**-CHP	●	

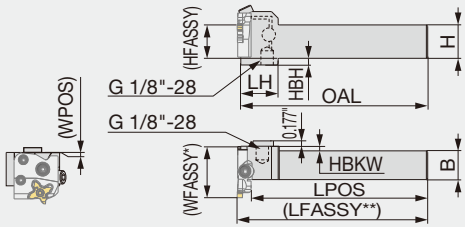
● : Corresponding

Reference pages: Inserts → F229 - F236, Adapters → F225, Standard cutting conditions → F237
Parts for coolant hose → F290, Technical Reference → L059

CHFVR/L-CHP

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





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

Inch	H	B	OAL	LH	LPOS	WPOS	HBKW	HFASSY	HBH	Adapter (Option)	Torque
CHFVR/L12-CHP	0.750	0.750	5.500	1.100	5.307	0.020	0.234	0.750	0.431	STCAL/R18-CHP	3.69
CHFVR/L16-CHP	1.000	1.000	5.500	1.100	5.307	0.020	-	1.000	0.200	STCAL/R18-CHP	3.69

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

WFASSY* : Shank (WPOS) + adapter (LF)
LFASSY** : Shank (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: lbs·ft (*N·m)
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

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

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

Combination of adapter and shank

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

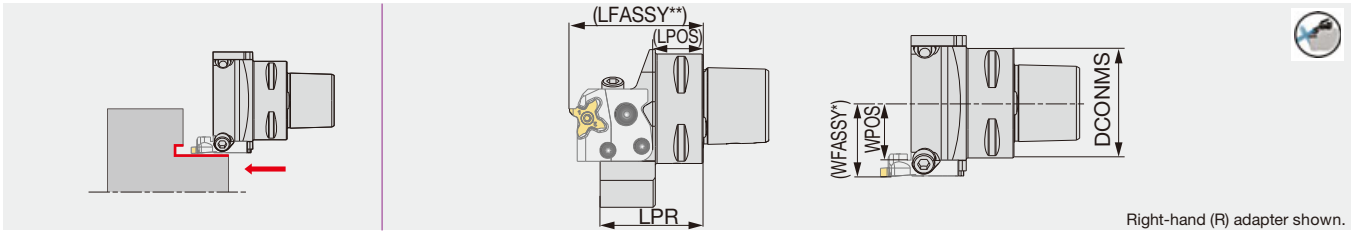
● : Corresponding

Reference pages: Inserts → F229 - F236, Adapters → F225, Standard cutting conditions → F237
Parts for coolant hose → F290, Technical Reference → L059

C*CHSN-CHP

Direct connection

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



Right-hand (R) adapter shown.

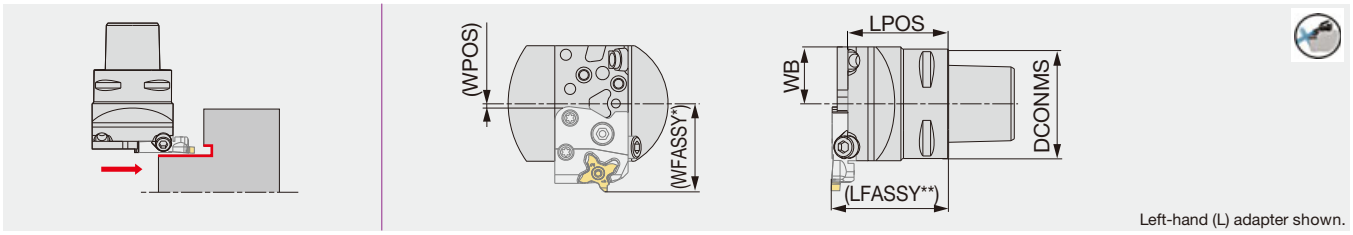
Metric	DCONMS	LPR	LPOS	WPOS	Adapter (Option)	Torque
C3CHSN19045-CHP	32	45	17.5	18.5	STCAR/L18-CHP	6.5
C4CHSN21047-CHP	40	46.5	21.5	21	STCAR/L18-CHP	6.5
C5CHSN26047-CHP	50	47	22.5	26	STCAR/L18-CHP	6.5
C6CHSN33050-CHP	63	50	24.5	32.5	STCAR/L18-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (WF)
LFASSY** : Toolholder (LPOS) + adapter (LF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

C*CHFVN-CHP

Direct connection

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



Left-hand (L) adapter shown.

Metric	DCONMS	LPOS	WB	WPOS	Adapter (Option)	Torque
C3CHFVN26040-CHP	32	40	26	1.5	STCAR/L18-CHP	6.5
C4CHFVN26046-CHP	40	46	26	1.5	STCAR/L18-CHP	6.5
C5CHFVN26046-CHP	50	46	26	1.5	STCAR/L18-CHP	6.5
C6CHFVN33046-CHP	63	46	33	8.5	STCAR/L18-CHP	6.5

WFASSY* : Toolholder (WPOS) + adapter (LF)
LFASSY** : Toolholder (LPOS) + adapter (WF)
The LFASSY or WFASSY value may change depending on the adapter type.
Torque: Recommended clamping torque: N·m
Applicable for 30 MPa coolant
Please see page L059 for instructions on installing and removing the adapter or the insert.

SPARE PARTS

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

Recommended clamping torque (N·m)

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

Reference pages: Inserts → F229 - F236, Adapters → F225, Standard cutting conditions → F237
Technical Reference → L059

Face grooving

TCF18 (4 corners)

F230

First choice for face grooving

Provides light cutting action and excellent surface finish.
Provides superior chip evacuation for face grooving operations.

CW = 0.020" - 0.098"
CDX = 0.118"

External grooving

TCS18 (4 corners)

F230, F231

First choice for O.D. grooving

General-purpose pressed-in 3D chipbreaker for smooth chip control

CW = 0.039" - 0.118"
CDX = 0.118"

TCL18 (4 corners)

F232

For lighter cutting action

Features pressed-in 3D chipbreaker with sharp cutting edge for light cutting action. Provides excellent chip control at low feed rates.

CW = 0.059" - 0.118"
CDX = 0.118"

TCG18 (4 corners)

F233, F234

For better chipping resistance

Features an optimum rake angle and edge preparation for a good balance of light cutting action and fracture resistance.

CW = 0.039" - 0.125"
CDX = 0.118"

TCP18 (4 corners)

F235, F236

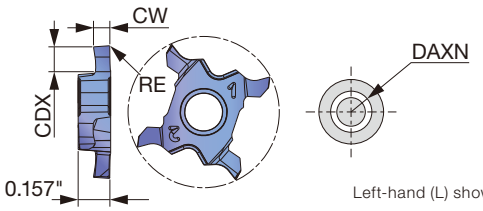
For higher surface quality

Featuring a large rake angle, providing light cutting action and better surface finish. TCP-F style insert is also available for sharp cutting edge.

CW = 0.013" - 0.118"
CDX = 0.118"

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

TCF18L (Face grooving, sharp edge)



Left-hand (L) shown.

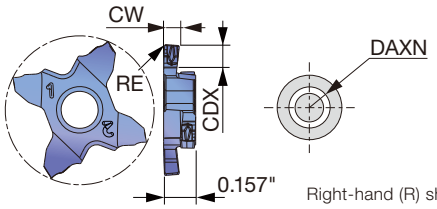
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★: First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CDX (in)	DAXN (in)
TCF18L050F-005	L	0.5	0.020	0.002	●	0.039	0.236
TCF18L100F-005	L	1	0.039	0.002	●	0.098	0.236
TCF18L150F-005	L	1.5	0.059	0.002	●	0.098	0.236
TCF18L200F-005	L	2	0.079	0.002	●	0.118	0.236
TCF18L250F-005	L	2.5	0.098	0.002	●	0.118	0.236

5 pieces per package
●: Line up

TCS18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	DAXN (in)
TCS18R100-010	R	1	0.039	0.004	●	0.079	2.559
TCS18L100-010	L	1	0.039	0.004	●	0.079	2.559
TCS18R120-010	R	1.2	0.047	0.004	●	0.079	2.559
TCS18L120-010	L	1.2	0.047	0.004	●	0.079	2.559
TCS18R125-010	R	1.25	0.049	0.004	●	0.079	2.559
TCS18L125-010	L	1.25	0.049	0.004	●	0.079	2.559
TCS18R125-020	R	1.25	0.049	0.008	●	0.079	2.559
TCS18L125-020	L	1.25	0.049	0.008	●	0.079	2.559
TCS18R130-020	R	1.3	0.051	0.008	●	0.118	2.559
TCS18L130-020	L	1.3	0.051	0.008	●	0.118	2.559
TCS18R140-010	R	1.4	0.055	0.004	●	0.118	2.559
TCS18L140-010	L	1.4	0.055	0.004	●	0.118	2.559
TCS18R140-020	R	1.4	0.055	0.008	●	0.118	2.559
TCS18L140-020	L	1.4	0.055	0.008	●	0.118	2.559
TCS18R145-010	R	1.45	0.057	0.004	●	0.118	2.559
TCS18L145-010	L	1.45	0.057	0.004	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

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

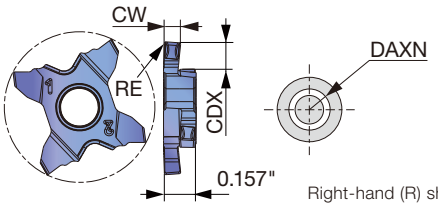
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	DAXN (in)
TCS18R150-010	R	1.5	0.059	0.004	●	0.118	2.559
TCS18L150-010	L	1.5	0.059	0.004	●	0.118	2.559
TCS18R150-020	R	1.5	0.059	0.008	●	0.118	2.559
TCS18L150-020	L	1.5	0.059	0.008	●	0.118	2.559
TCS18R160-020	R	1.6	0.063	0.008	●	0.118	2.559
TCS18L160-020	L	1.6	0.063	0.008	●	0.118	2.559
TCS18R170-020	R	1.7	0.067	0.008	●	0.118	2.559
TCS18L170-020	L	1.7	0.067	0.008	●	0.118	2.559
TCS18R175-010	R	1.75	0.069	0.004	●	0.118	2.559
TCS18L175-010	L	1.75	0.069	0.004	●	0.118	2.559
TCS18R175-020	R	1.75	0.069	0.008	●	0.118	2.559
TCS18L175-020	L	1.75	0.069	0.008	●	0.118	2.559
TCS18R185-020	R	1.85	0.073	0.008	●	0.118	2.559
TCS18L185-020	L	1.85	0.073	0.008	●	0.118	2.559
TCS18R195-020	R	1.95	0.077	0.008	●	0.118	2.559
TCS18L195-020	L	1.95	0.077	0.008	●	0.118	2.559
TCS18R200-010	R	2	0.079	0.004	●	0.118	2.559
TCS18L200-010	L	2	0.079	0.004	●	0.118	2.559
TCS18R200-020	R	2	0.079	0.008	●	0.118	2.559
TCS18L200-020	L	2	0.079	0.008	●	0.118	2.559
TCS18R225-020	R	2.25	0.089	0.008	●	0.118	2.559
TCS18L225-020	L	2.25	0.089	0.008	●	0.118	2.559
TCS18R230-020	R	2.3	0.091	0.008	●	0.118	2.559
TCS18L230-020	L	2.3	0.091	0.008	●	0.118	2.559
TCS18R250-010	R	2.5	0.098	0.004	●	0.118	2.559
TCS18L250-010	L	2.5	0.098	0.004	●	0.118	2.559
TCS18R250-020	R	2.5	0.098	0.008	●	0.118	2.559
TCS18L250-020	L	2.5	0.098	0.008	●	0.118	2.559
TCS18R250-030	R	2.5	0.098	0.012	●	0.118	2.559
TCS18L250-030	L	2.5	0.098	0.012	●	0.118	2.559
TCS18R265-030	R	2.65	0.104	0.012	●	0.118	2.559
TCS18L265-030	L	2.65	0.104	0.012	●	0.118	2.559
TCS18R280-030	R	2.8	0.110	0.012	●	0.118	2.559
TCS18L280-030	L	2.8	0.110	0.012	●	0.118	2.559
TCS18R300-010	R	3	0.118	0.004	●	0.118	2.559
TCS18L300-010	L	3	0.118	0.004	●	0.118	2.559
TCS18R300-020	R	3	0.118	0.008	●	0.118	2.559
TCS18L300-020	L	3	0.118	0.008	●	0.118	2.559
TCS18R300-030	R	3	0.118	0.012	●	0.118	2.559
TCS18L300-030	L	3	0.118	0.012	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

TCL18R/L (3D chipbreaker, honed edge)



Right-hand (R) shown.

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

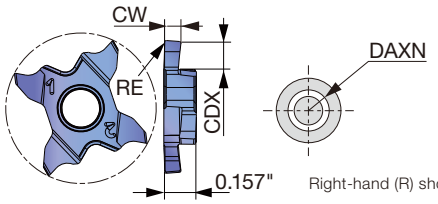
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	DAXN (in)
TCL18R150-010	R	1.5	0.059	0.004	●	0.118	2.559
TCL18L150-010	L	1.5	0.059	0.004	●	0.118	2.559
TCL18R150-020	R	1.5	0.059	0.008	●	0.118	2.559
TCL18L150-020	L	1.5	0.059	0.008	●	0.118	2.559
TCL18R175-020	R	1.75	0.069	0.008	●	0.118	2.559
TCL18L175-020	L	1.75	0.069	0.008	●	0.118	2.559
TCL18R200-010	R	2	0.079	0.004	●	0.118	2.559
TCL18L200-010	L	2	0.079	0.004	●	0.118	2.559
TCL18R200-020	R	2	0.079	0.008	●	0.118	2.559
TCL18L200-020	L	2	0.079	0.008	●	0.118	2.559
TCL18R250-030	R	2.5	0.098	0.012	●	0.118	2.559
TCL18L250-030	L	2.5	0.098	0.012	●	0.118	2.559
TCL18R300-010	R	3	0.118	0.004	●	0.118	2.559
TCL18L300-010	L	3	0.118	0.004	●	0.118	2.559
TCL18R300-020	R	3	0.118	0.008	●	0.118	2.559
TCL18L300-020	L	3	0.118	0.008	●	0.118	2.559
TCL18R300-030	R	3	0.118	0.012	●	0.118	2.559
TCL18L300-030	L	3	0.118	0.012	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

TCG18R/L (honed edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	DAXN (in)
TCG18R100-010	R	1	0.039	0.004	●	0.079	2.559
TCG18L100-010	L	1	0.039	0.004	●	0.079	2.559
TCG18R120-010	R	1.2	0.047	0.004	●	0.079	2.559
TCG18L120-010	L	1.2	0.047	0.004	●	0.079	2.559
TCG18R125-010	R	1.25	0.049	0.004	●	0.079	2.559
TCG18L125-010	L	1.25	0.049	0.004	●	0.079	2.559
TCG18R125-020	R	1.25	0.049	0.008	●	0.079	2.559
TCG18L125-020	L	1.25	0.049	0.008	●	0.079	2.559
TCG18R130-020	R	1.3	0.051	0.008	●	0.079	2.559
TCG18L130-020	L	1.3	0.051	0.008	●	0.079	2.559
TCG18R140-010	R	1.4	0.055	0.004	●	0.118	2.559
TCG18L140-010	L	1.4	0.055	0.004	●	0.118	2.559
TCG18R140-020	R	1.4	0.055	0.008	●	0.118	2.559
TCG18L140-020	L	1.4	0.055	0.008	●	0.118	2.559
TCG18R145-010	R	1.45	0.057	0.004	●	0.118	2.559
TCG18L145-010	L	1.45	0.057	0.004	●	0.118	2.559
TCG18R145-020	R	1.45	0.057	0.008	●	0.118	2.559
TCG18L145-020	L	1.45	0.057	0.008	●	0.118	2.559
TCG18R150-010	R	1.5	0.059	0.004	●	0.118	2.559
TCG18L150-010	L	1.5	0.059	0.004	●	0.118	2.559
TCG18R150-020	R	1.5	0.059	0.008	●	0.118	2.559
TCG18L150-020	L	1.5	0.059	0.008	●	0.118	2.559
TCG18R160-020	R	1.6	0.063	0.008	●	0.118	2.559
TCG18L160-020	L	1.6	0.063	0.008	●	0.118	2.559
TCG18R170-020	R	1.7	0.067	0.008	●	0.118	2.559
TCG18L170-020	L	1.7	0.067	0.008	●	0.118	2.559
TCG18R175-010	R	1.75	0.069	0.004	●	0.118	2.559
TCG18L175-010	L	1.75	0.069	0.004	●	0.118	2.559
TCG18R175-020	R	1.75	0.069	0.008	●	0.118	2.559
TCG18L175-020	L	1.75	0.069	0.008	●	0.118	2.559
TCG18R185-020	R	1.85	0.073	0.008	●	0.118	2.559
TCG18L185-020	L	1.85	0.073	0.008	●	0.118	2.559
TCG18R195-020	R	1.95	0.077	0.008	●	0.118	2.559
TCG18L195-020	L	1.95	0.077	0.008	●	0.118	2.559
TCG18R200-010	R	2	0.079	0.004	●	0.118	2.559
TCG18L200-010	L	2	0.079	0.004	●	0.118	2.559
TCG18R200-020	R	2	0.079	0.008	●	0.118	2.559
TCG18L200-020	L	2	0.079	0.008	●	0.118	2.559
TCG18R225-020	R	2.25	0.089	0.008	●	0.118	2.559
TCG18L225-020	L	2.25	0.089	0.008	●	0.118	2.559
TCG18R230-020	R	2.3	0.091	0.008	●	0.118	2.559
TCG18L230-020	L	2.3	0.091	0.008	●	0.118	2.559
TCG18R250-010	R	2.5	0.098	0.004	●	0.118	2.559
TCG18L250-010	L	2.5	0.098	0.004	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

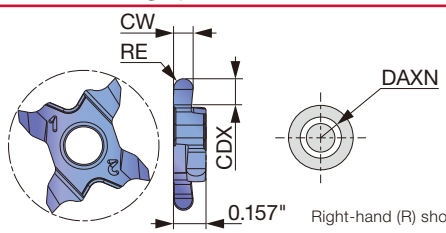
P	Steel	★
M	Stainless	★
K	Cast iron	★
N	Non-ferrous	
S	Superalloys	★
H	Hard materials	

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	DAXN (in)
TCG18R250-020	R	2.5	0.098	0.008	●	0.118	2.559
TCG18L250-020	L	2.5	0.098	0.008	●	0.118	2.559
TCG18R250-030	R	2.5	0.098	0.012	●	0.118	2.559
TCG18L250-030	L	2.5	0.098	0.012	●	0.118	2.559
TCG18R265-030	R	2.65	0.104	0.012	●	0.118	2.559
TCG18L265-030	L	2.65	0.104	0.012	●	0.118	2.559
TCG18R280-030	R	2.8	0.110	0.012	●	0.118	2.559
TCG18L280-030	L	2.8	0.110	0.012	●	0.118	2.559
TCG18R300-010	R	3	0.118	0.004	●	0.118	2.559
TCG18L300-010	L	3	0.118	0.004	●	0.118	2.559
TCG18R300-020	R	3	0.118	0.008	●	0.118	2.559
TCG18L300-020	L	3	0.118	0.008	●	0.118	2.559
TCG18R300-030	R	3	0.118	0.012	●	0.118	2.559
TCG18L300-030	L	3	0.118	0.012	●	0.118	2.559

5 pieces per package
● : Line up

TCG18R/L (Full R, honed edge)



Right-hand (R) shown.

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

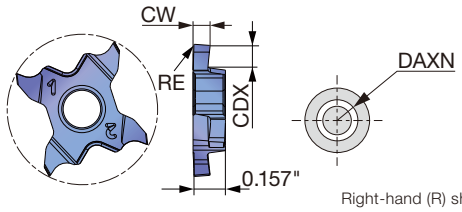
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH7025	CDX (in)	DAXN (in)
TCG18R100-050	R	1	0.039	0.020	●	0.079	2.559
TCG18L100-050	L	1	0.039	0.020	●	0.079	2.559
TCG18R158-079	R	1.58	0.062	0.031	●	0.118	2.559
TCG18L158-079	L	1.58	0.062	0.031	●	0.118	2.559
TCG18R200-100	R	2	0.079	0.039	●	0.118	2.559
TCG18L200-100	L	2	0.079	0.039	●	0.118	2.559
TCG18R239-120	R	2.39	0.094	0.047	●	0.118	2.559
TCG18L239-120	L	2.39	0.094	0.047	●	0.118	2.559
TCG18R300-150	R	3	0.118	0.059	●	0.118	2.559
TCG18L300-150	L	3	0.118	0.059	●	0.118	2.559
TCG18R318-159	R	3.18	0.125	0.063	●	0.118	2.559
TCG18L318-159	L	3.18	0.125	0.063	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

TCP18R/L (lightly honed edge)



Right-hand (R) shown.

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

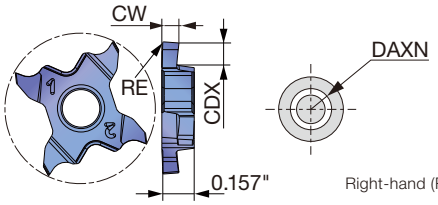
★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated AH725	CDX (in)	DAXN (in)
TCP18R033-005	R	0.33	0.013	0.002	●	0.031	2.559
TCP18L033-005	L	0.33	0.013	0.002	●	0.031	2.559
TCP18R043-005	R	0.43	0.017	0.002	●	0.047	2.559
TCP18L043-005	L	0.43	0.017	0.002	●	0.047	2.559
TCP18R050-005	R	0.5	0.020	0.002	●	0.047	2.559
TCP18L050-005	L	0.5	0.020	0.002	●	0.047	2.559
TCP18R075-005	R	0.75	0.030	0.002	●	0.079	2.559
TCP18L075-005	L	0.75	0.030	0.002	●	0.079	2.559
TCP18R095-005	R	0.95	0.037	0.002	●	0.079	2.559
TCP18L095-005	L	0.95	0.037	0.002	●	0.079	2.559
TCP18R100-010	R	1	0.039	0.004	●	0.079	2.559
TCP18L100-010	L	1	0.039	0.004	●	0.079	2.559
TCP18R120-010	R	1.2	0.047	0.004	●	0.079	2.559
TCP18L120-010	L	1.2	0.047	0.004	●	0.079	2.559
TCP18R125-010	R	1.25	0.049	0.004	●	0.079	2.559
TCP18L125-010	L	1.25	0.049	0.004	●	0.079	2.559
TCP18R140-010-35	R	1.4	0.055	0.004	●	0.118	2.559
TCP18L140-010-35	L	1.4	0.055	0.004	●	0.118	2.559
TCP18R145-010	R	1.45	0.057	0.004	●	0.079	2.559
TCP18L145-010	L	1.45	0.057	0.004	●	0.079	2.559
TCP18R145-010-35	R	1.45	0.057	0.004	●	0.118	2.559
TCP18L145-010-35	L	1.45	0.057	0.004	●	0.118	2.559
TCP18R150-010	R	1.5	0.059	0.004	●	0.079	2.559
TCP18L150-010	L	1.5	0.059	0.004	●	0.079	2.559
TCP18R150-010-35	R	1.5	0.059	0.004	●	0.118	2.559
TCP18L150-010-35	L	1.5	0.059	0.004	●	0.118	2.559
TCP18R175-010	R	1.75	0.069	0.004	●	0.079	2.559
TCP18L175-010	L	1.75	0.069	0.004	●	0.079	2.559
TCP18R175-010-35	R	1.75	0.069	0.004	●	0.118	2.559
TCP18L175-010-35	L	1.75	0.069	0.004	●	0.118	2.559
TCP18R200-010	R	2	0.079	0.004	●	0.098	2.559
TCP18L200-010	L	2	0.079	0.004	●	0.098	2.559
TCP18R200-010-35	R	2	0.079	0.004	●	0.118	2.559
TCP18L200-010-35	L	2	0.079	0.004	●	0.118	2.559
TCP18R250-010	R	2.5	0.098	0.004	●	0.098	2.559
TCP18L250-010	L	2.5	0.098	0.004	●	0.098	2.559
TCP18R250-010-35	R	2.5	0.098	0.004	●	0.118	2.559
TCP18L250-010-35	L	2.5	0.098	0.004	●	0.118	2.559
TCP18R300-010	R	3	0.118	0.004	●	0.098	2.559
TCP18L300-010	L	3	0.118	0.004	●	0.098	2.559
TCP18R300-010-35	R	3	0.118	0.004	●	0.118	2.559
TCP18L300-010-35	L	3	0.118	0.004	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

TCP18R/L-F (sharp edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.02 (mm)	CW±0.001 (in)	RE (in)	Coated	CDX (in)	DAXN (in)
					SH725		
TCP18R033F-005	R	0.33	0.013	0.002	●	0.031	2.559
TCP18L033F-005	L	0.33	0.013	0.002	●	0.031	2.559
TCP18R043F-005	R	0.43	0.017	0.002	●	0.047	2.559
TCP18L043F-005	L	0.43	0.017	0.002	●	0.047	2.559
TCP18R050F-005	R	0.5	0.020	0.002	●	0.047	2.559
TCP18L050F-005	L	0.5	0.020	0.002	●	0.047	2.559
TCP18R075F-005	R	0.75	0.030	0.002	●	0.079	2.559
TCP18L075F-005	L	0.75	0.030	0.002	●	0.079	2.559
TCP18R095F-005	R	0.95	0.037	0.002	●	0.079	2.559
TCP18L095F-005	L	0.95	0.037	0.002	●	0.079	2.559
TCP18R100F-005	R	1	0.039	0.002	●	0.079	2.559
TCP18R100F-010	R	1	0.039	0.004	●	0.079	2.559
TCP18L100F-010	L	1	0.039	0.004	●	0.079	2.559
TCP18R120F-005	R	1.2	0.047	0.002	●	0.079	2.559
TCP18R120F-010	R	1.2	0.047	0.004	●	0.079	2.559
TCP18L120F-010	L	1.2	0.047	0.004	●	0.079	2.559
TCP18R125F-005	R	1.25	0.049	0.002	●	0.079	2.559
TCP18R125F-010	R	1.25	0.049	0.004	●	0.079	2.559
TCP18L125F-010	L	1.25	0.049	0.004	●	0.079	2.559
TCP18R140F-010-35	R	1.4	0.055	0.004	●	0.118	2.559
TCP18R145F-005-35	R	1.45	0.057	0.002	●	0.118	2.559
TCP18R145F-010	R	1.45	0.057	0.004	●	0.079	2.559
TCP18L145F-010	L	1.45	0.057	0.004	●	0.079	2.559
TCP18R145F-010-35	R	1.45	0.057	0.004	●	0.118	2.559
TCP18L145F-010-35	L	1.45	0.057	0.004	●	0.118	2.559
TCP18R150F-005-35	R	1.5	0.059	0.002	●	0.118	2.559
TCP18R150F-010	R	1.5	0.059	0.004	●	0.079	2.559
TCP18L150F-010	L	1.5	0.059	0.004	●	0.079	2.559
TCP18R150F-010-35	R	1.5	0.059	0.004	●	0.118	2.559
TCP18L150F-010-35	L	1.5	0.059	0.004	●	0.118	2.559
TCP18R175F-005-35	R	1.75	0.069	0.002	●	0.118	2.559
TCP18R175F-010	R	1.75	0.069	0.004	●	0.079	2.559
TCP18L175F-010	L	1.75	0.069	0.004	●	0.079	2.559
TCP18R175F-010-35	R	1.75	0.069	0.004	●	0.118	2.559
TCP18L175F-010-35	L	1.75	0.069	0.004	●	0.118	2.559
TCP18R200F-005-35	R	2	0.079	0.002	●	0.118	2.559
TCP18R200F-010	R	2	0.079	0.004	●	0.098	2.559
TCP18L200F-010	L	2	0.079	0.004	●	0.098	2.559
TCP18R200F-010-35	R	2	0.079	0.004	●	0.118	2.559
TCP18L200F-010-35	L	2	0.079	0.004	●	0.118	2.559
TCP18R250F-010	R	2.5	0.098	0.004	●	0.098	2.559
TCP18L250F-010	L	2.5	0.098	0.004	●	0.098	2.559
TCP18R250F-010-35	R	2.5	0.098	0.004	●	0.118	2.559
TCP18L250F-010-35	L	2.5	0.098	0.004	●	0.118	2.559
TCP18R300F-010	R	3	0.118	0.004	●	0.098	2.559
TCP18L300F-010	L	3	0.118	0.004	●	0.098	2.559
TCP18R300F-010-35	R	3	0.118	0.004	●	0.118	2.559
TCP18L300F-010-35	L	3	0.118	0.004	●	0.118	2.559

5 pieces per package
● : Line up

Reference pages: Toolholders → F223 - F228, Standard cutting conditions → F237

STANDARD CUTTING CONDITIONS

TCF18L (Face grooving)

ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steel 1015, etc.	SH725	98 - 328	0.0004 - 0.0016
P	Carbon steel, Alloy steel 1055, 4140, etc.	SH725	98 - 328	0.0004 - 0.0016
P	Prehardened steel NAK80, PX5, etc.	SH725	98 - 328	0.0004 - 0.0016
M	Stainless steel 304, 316, etc.	SH725	98 - 328	0.0004 - 0.0016
K	Gray cast iron No.250B, No.300B, etc.	SH725	98 - 328	0.0004 - 0.0016
K	Ductile cast iron 60-40-18, etc.	SH725	98 - 328	0.0004 - 0.0016
S	Titanium alloys Ti-6Al-4V, etc.	SH725	66 - 131	0.0004 - 0.0016
S	Superalloys Inconel718, etc.	SH725	33 - 98	0.0004 - 0.0016

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

ISO	Workpiece materials	Grade	Cutting speed *Vc* (sfm)	Feed: *f* (ipr)		
				TCL18	TCS18	TCG18
P	Low carbon steel 1015, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
P	Carbon steel, Alloy steel 1055, 4140, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
P	Prehardened steel NAK80, PX5, etc.	AH7025	262 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
M	Stainless steel 304, 316, etc.	AH7025	164 - 394	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
K	Gray cast iron No.250B, No.300B, etc.	AH7025	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
K	Ductile cast iron 60-40-18, etc.	AH7025	164 - 591	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
S	Titanium alloys Ti-6Al-4V, etc.	AH7025	98 - 197	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006
S	Superalloys Inconel718, etc.	AH7025	66 - 131	0.001 - 0.005	0.002 - 0.006	0.002 - 0.006

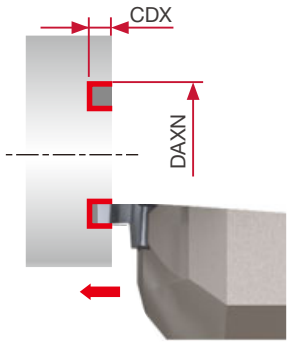
TCP18R/L (lightly honed edge), TCP18R/L-F (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steel 1015, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Low carbon steel 1015, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
P	Carbon steel, Alloy steel 1055, 4140, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Carbon steel, Alloy steel 1055, 4140, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
P	Prehardened steel NAK80, PX5, etc.	First choice	SH725	262 - 591	0.001 - 0.004
P	Prehardened steel NAK80, PX5, etc.	Toughness	AH725	262 - 591	0.001 - 0.004
M	Stainless steel 304, 316, etc.	First choice	SH725	164 - 394	0.001 - 0.004
M	Stainless steel 304, 316, etc.	Toughness	AH725	164 - 394	0.001 - 0.004
K	Gray cast iron No.250B, No.300B, etc.	First choice	AH725	164 - 591	0.001 - 0.004
K	Gray cast iron No.250B, No.300B, etc.	Sharpness	SH725	164 - 591	0.001 - 0.004
K	Ductile cast iron 60-40-18, etc.	First choice	AH725	164 - 591	0.001 - 0.004
K	Ductile cast iron 60-40-18, etc.	Sharpness	SH725	164 - 591	0.001 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	98 - 262	0.001 - 0.004
S	Titanium alloys Ti-6Al-4V, etc.	Toughness	AH725	98 - 262	0.001 - 0.004
S	Superalloys Inconel718, etc.	First choice	AH725	66 - 131	0.001 - 0.004

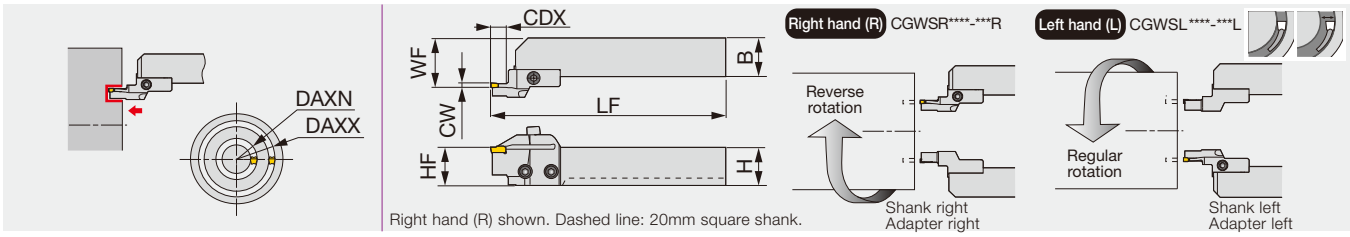
Precautions of processing

Minimum diameter for face grooving

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



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



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

Metric	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert	Shank	Torque
30S3040R/L	3	30	40	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S4050R/L	3	40	50	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S5065R/L	3	50	65	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S6590R/L	3	65	90	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S90150R/L	3	90	150	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
30S150500R/L	3	150	500	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...	5
40S3545R/L	4	35	45	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S4555R/L	4	45	55	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S5580R/L	4	55	80	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S80140R/L	4	80	140	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40S140500R/L	4	140	500	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D3545R/L	4	35	45	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D4555R/L	4	45	55	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D5580R/L	4	55	80	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D80140R/L	4	80	140	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
40D140500R/L	4	140	500	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...	5
50S3545R/L	5	35	45	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S4555R/L	5	45	55	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S5575R/L	5	55	75	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S75130R/L	5	75	130	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50S130500R/L	5	130	500	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...	5
50D3545R/L	5	35	45	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D4555R/L	5	45	55	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D5575R/L	5	55	75	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D75130R/L	5	75	130	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5
50D130500R/L	5	130	500	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...	5

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

SPARE PARTS

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

Combination of adapter and shank

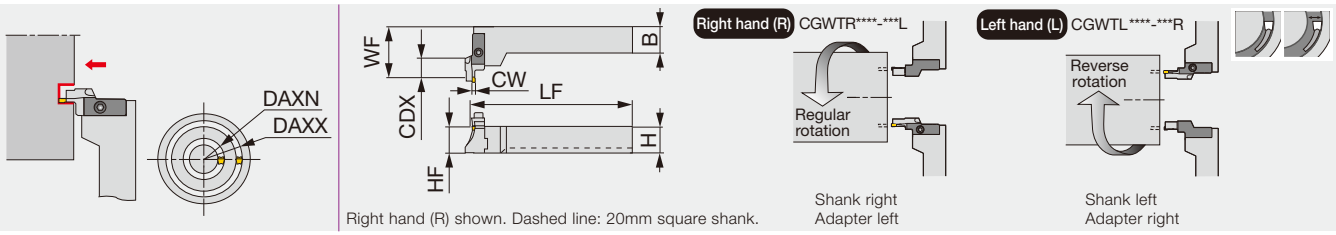
Shank	Adapter	
	S/DR	**S/D**L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

● : Corresponding

Reference pages: Inserts → F241 - F244, Shanks → F240, Standard cutting conditions → F245

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

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



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

Metric	CW	DAXN	DAXX	CDX	H	B	LF	HF	WF	Insert	Shank	Torque
30S3040R/L	3	30	40	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S4050R/L	3	40	50	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S5065R/L	3	50	65	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S6590R/L	3	65	90	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S90150R/L	3	90	150	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
30S150500R/L	3	150	500	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...	5
40S3545R/L	4	35	45	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S4555R/L	4	45	55	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S5580R/L	4	55	80	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S80140R/L	4	80	140	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40S140500R/L	4	140	500	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...	5
40D3545R/L	4	35	45	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D4555R/L	4	45	55	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D5580R/L	4	55	80	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D80140R/L	4	80	140	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
40D140500R/L	4	140	500	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...	5
50S3545R/L	5	35	45	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S4555R/L	5	45	55	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S5575R/L	5	55	75	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S75130R/L	5	75	130	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50S130500R/L	5	130	500	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...	5
50D3545R/L	5	35	45	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D4555R/L	5	45	55	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D5575R/L	5	55	75	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D75130R/L	5	75	130	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5
50D130500R/L	5	130	500	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...	5

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

SPARE PARTS



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

Combination of adapter and shank

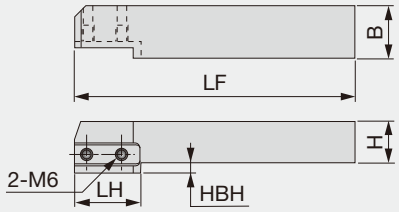
Shank	Adapter	
	S/DR	**S/D**L
CGWSR...	●	
CGWSL...		●
CGWTR...		●
CGWTL...	●	

● : Corresponding

Reference pages: Inserts → F241 - F244, Shanks → F240, Standard cutting conditions → F245

CGWSR/L

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



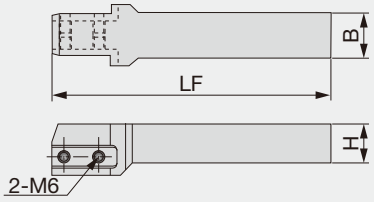
Right hand (R) shown.

Inch	H	B	LF	LH	HBH
CGWSR/L12	0.75	0.75	5.40	1.310	0.250
CGWSR/L16	1.00	1.00	5.40	-	-

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

CGWSRL

Shank of toolholders. Vertical type with offset

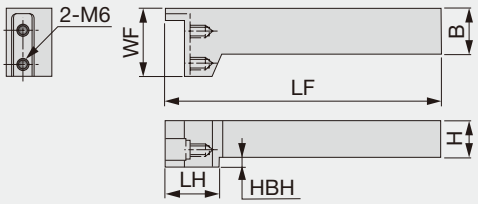


Inch	H	B	LF
CGWSRL12	0.75	0.75	5.40
CGWSRL16	1.00	1.00	5.40

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

CGWTR/L

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



Right hand (R) shown.

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

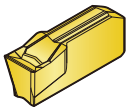
Metric	H	B	LF	LH	WF	HBH
CGWTR/L2020	20	20	150	30.5	37	5
CGWTR/L2525	25	25	150	-	37	-

SPARE PARTS

Designation	Adapter screw
CGW...	CSHB-6

Face grooving

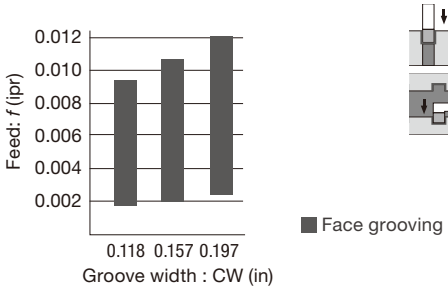
GF

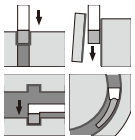


F243

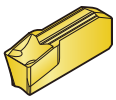
1st choice for face grooving
Low cutting force and good chip control for face grooving

CW = 0.118" - 0.197"





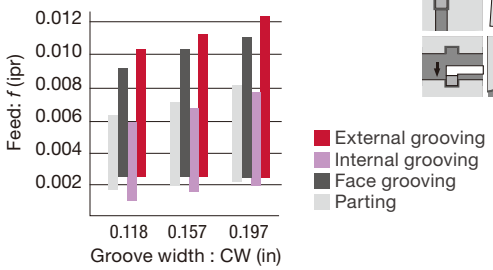
GE

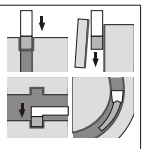


F242

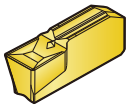
1st choice for external grooving and parting
Excellent chip control for grooving

CW = 0.118" - 0.197"





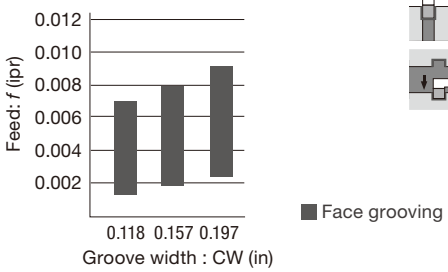
GN

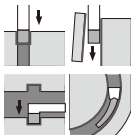


F244

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

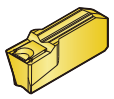
CW = 0.118" - 0.197"





External grooving and turning

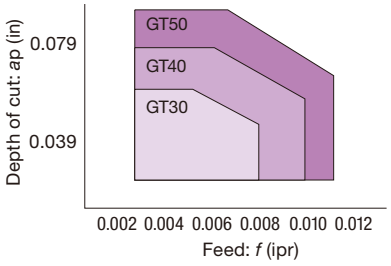
GT

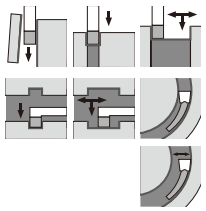


F242

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

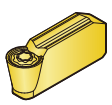
CW = 0.118" - 0.197"





For profiling

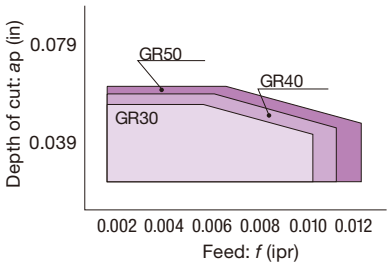
GR

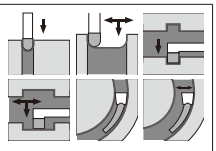


F243

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

CW = 0.118" - 0.197"

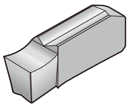




Please see page F*** for the product details.

For aluminum and non-ferrous metal

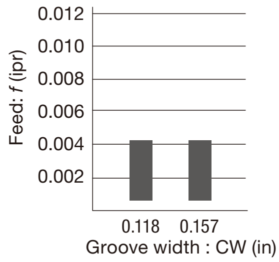
GE-AL

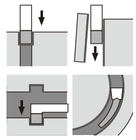


F244

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.118" - 0.157"



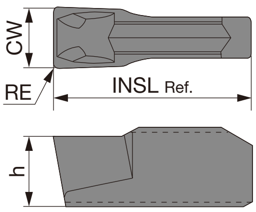


Please see page F*** for the product details.

INSERTS

GE

For external grooving and parting



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

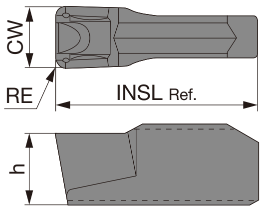
★ : First choice
☆ : Second choice

Designation	CW +0.1/0 (mm)	CW +0.004/0 (in)	RE (in)	Coated			Cermet	INSL (in)	h (in)
				T9225	AH120	GH730	NS9530		
GE30	3	0.118	0.008	●	●	●	●	0.394	0.138
GE40	4	0.157	0.008	●	●	●	●	0.394	0.157
GE50	5	0.197	0.008	●	●	●	●	0.472	0.177

● : Line up

GT

For external grooving and turning



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

★ : First choice
☆ : Second choice

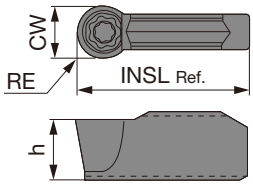
Designation	CW +0.1/0 (mm)	CW +0.004/0 (in)	RE (in)	Coated			Cermet	INSL (in)	h (in)
				T9225	AH120	GH730	NS9530		
GT30	3	0.118	0.016		●	●	●	0.394	0.138
GT40	4	0.157	0.016		●	●	●	0.394	0.157
GT50	5	0.197	0.016	●	●	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F238 - F240, Standard cutting conditions → F245

GR

For profiling (full radius)



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

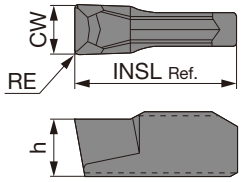
★ : First choice
☆ : Second choice

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

● : Line up

GF

For face grooving



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

★ : First choice
☆ : Second choice

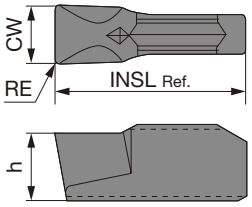
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated			Cermet									INSL (in)	h (in)
				GH730			NS9530										
GF30	3	0.118	0.008	●			●									0.394	0.138
GF40	4	0.157	0.008	●			●									0.394	0.157
GF50	5	0.197	0.008	●			●									0.472	0.177

● : Line up

Reference pages: Toolholders → F238 - F240, Standard cutting conditions → F245

GN

For internal grooving



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

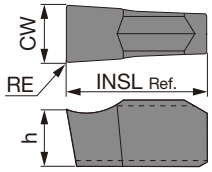
★ : First choice
☆ : Second choice

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

● : Line up

GE-AL

For aluminum and non-ferrous metal



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

★ : First choice
☆ : Second choice

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

● : Line up

Reference pages: Toolholders → F238 - F240

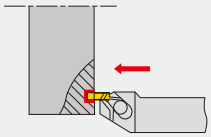
STANDARD CUTTING CONDITIONS

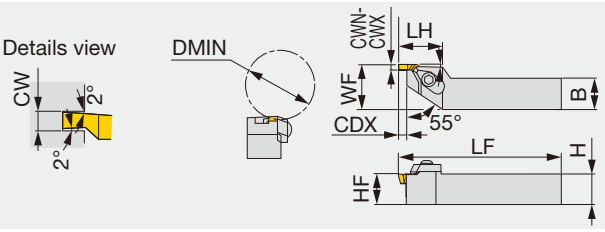
ISO	Workpiece material	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730, AH120	164 - 591
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730, AH120	164 - 492
	High carbon steel, Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730, AH120	164 - 394
M	Stainless steel	GH730, AH120	164 - 394
K	Gray iron, Ductile cast iron	GH730, AH120	164 - 591
N	Aluminum alloy, Non-ferrous metal	KS05F	656 - 984

For face grooving

Operation	Feed: *f* (ipr) Groove width: CW		
	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Face grooving (GE**)	0.0024 - 0.009	0.0024 - 0.009	0.0028 - 0.010
Face grooving (GF**)	0.0016 - 0.010	0.0020 - 0.010	0.0020 - 0.012
Traversing (GT**)	*ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	*ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	*ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Traversing (GR**)	*ap* = 0.020 - 0.055 *f* = 0.002 - 0.010	*ap* = 0.020 - 0.059 *f* = 0.002 - 0.010	*ap* = 0.020 - 0.063 *f* = 0.002 - 0.012
Grooving for Aluminum alloys (GE**-AL)	0.0012 - 0.004	0.0012 - 0.004	-

For diameter compensation values in traversing, F129 page
When vibration occurs in turning, please use the lower limit value in the above table.





Right hand (R) shown.

Metric	CWN	CWX	DMIN	CDX	H	B	LF	LH	HF	WF	Insert	Torque
GX-2525R/LF	1	4.5	55	1.5 - 6	25	25	150	35	25	32	XNL/R63...	5

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

SPARE PARTS

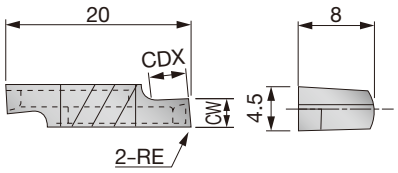




Designation	Clamp set	Clamping screw	Shim	Shim screw	Wrench
GX-2525RF	CP81A	RT-1	SL-3R	BHM4-8	P-4
GX-2525LF	CP81A	RT-1	SL-3L	BHM4-8	P-4

INSERT

XNR/L



Left hand (L) shown.
Unit: mm

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

★ : First choice
☆ : Second choice

Designation	HAND	CW±0.002 (in)	CW±0.05 (mm)	RE (mm)	Cermet NS9530	Uncoated TH10	CDX (mm)
XNR6310-02	R	0.039	1	0.2	●	●	1.5
XNL6310-02	L	0.039	1	0.2	●	●	1.5
XNR6315-02	R	0.059	1.5	0.2	●	●	2.3
XNL6315-02	L	0.059	1.5	0.2	●	●	2.3
XNR6320-02	R	0.079	2	0.2	●	●	3
XNL6320-02	L	0.079	2	0.2	●	●	3
XNR6325-02	R	0.098	2.5	0.2	●	●	3.8
XNL6325-02	L	0.098	2.5	0.2	●	●	3.8
XNR6330-02	R	0.118	3	0.2	●	●	4.5
XNL6330-02	L	0.118	3	0.2	●	●	4.5
XNR6335-02	R	0.138	3.5	0.2	●	●	5.3
XNL6335-02	L	0.138	3.5	0.2	●	●	5.3
XNR6340-02	R	0.157	4	0.2	●	●	6
XNL6340-02	L	0.157	4	0.2	●	●	6
XNR6345-02	R	0.177	4.5	0.2	●	●	6
XNL6345-02	L	0.177	4.5	0.2	●	●	6

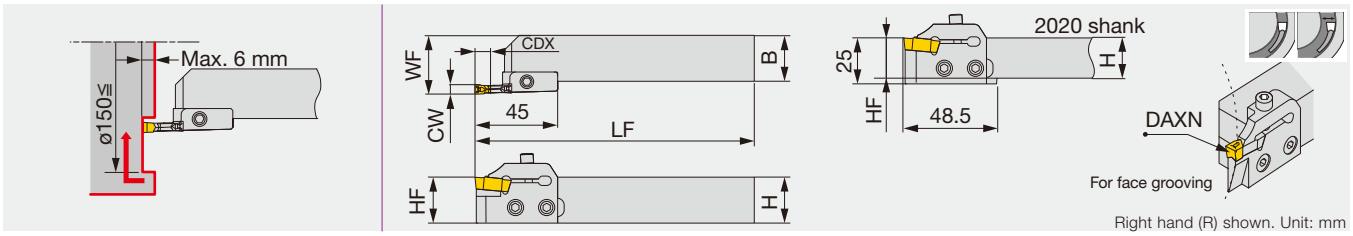
● : Line up

STANDARD CUTTING CONDITIONS

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

CGWSR/L-FLR/L5TP

Face grooving and turning toolholder



Right hand (R) shown. Unit: mm

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

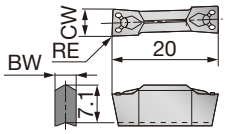
Toolholders are in stock with the designations of: a set of shank and adapter; a shank; a adapter. Combining the designations of a adapter and a shank will make the designation of a set.
Please check the stock and place an order with the designation of a set or a shank+a adapter.
Note: Use right-hand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

SPARE PARTS

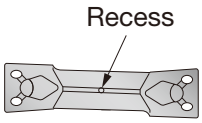
Designation	Clamping screw	Adapter screw	Wrench
CGWSR/L****-FLR/L5TP	CHHM5-18	CSHB-6	P-4

INSERT

FLEX(R/L)



Right hand (R) shown.
Unit: mm



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

★ : First choice
☆ : Second choice

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

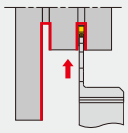
● : Line up

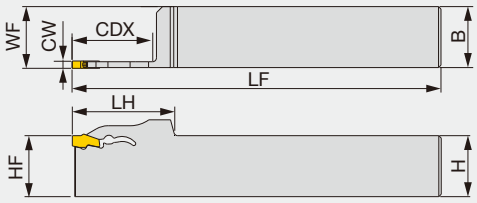
STANDARD CUTTING CONDITIONS

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

QSER/L

External toolholders for grooving and parting





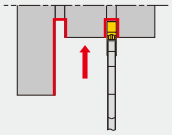
Right hand (R) shown.

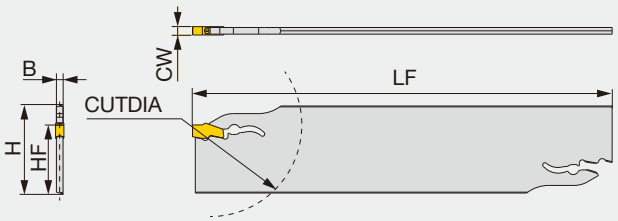
Inch	CW	CDX	Seat size	H	B	LF	LH	HF	WF
QSER/L12-2T26	0.079	1.024	2	0.750	0.750	5.000	1.417	0.750	0.756
QSER/L12-2T33	0.079	1.299	2	0.750	0.750	5.000	1.654	0.750	0.756
QSER/L16-2T26	0.079	1.024	2	1.000	1.000	6.000	1.417	1.000	1.004
QSER/L16-2T33	0.079	1.299	2	1.000	1.000	6.000	1.654	1.000	1.004
QSER/L12-3T26	0.118	1.024	3	0.750	0.750	5.000	1.417	0.750	0.764
QSER/L12-3T33	0.118	1.299	3	0.750	0.750	5.000	1.654	0.750	0.764
QSER/L16-3T26	0.118	1.024	3	1.000	1.000	6.000	1.417	1.000	1.012
QSER/L16-3T33	0.118	1.299	3	1.000	1.000	6.000	1.654	1.000	1.012
QSER/L12-4T33	0.157	1.299	4	0.750	0.750	5.000	1.654	0.750	0.768
QSER/L16-4T33	0.157	1.299	4	1.000	1.000	6.000	1.654	1.000	1.016
QSER/L16-5T33	0.197	1.299	5	1.000	1.000	6.000	1.654	1.000	1.020
QSER/L16-6T36	0.236	1.417	6	1.000	1.000	6.000	1.890	1.000	1.016

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

QSP

Blades for external deep grooving and parting





Metric	CW	CUTDIA	Seat size	H	B	LF	HF
QSP26-2D	2	52	2	26	1.8	150	21.4
QSP32-2D	2	66	2	32	1.8	150	24.8
QSP26-3D	3	75	3	26	2.4	150	21.4
QSP32-3D	3	120	3	32	2.4	150	24.8
QSP26-4D	4	80	4	26	3.2	150	21.4
QSP32-4D	4	120	4	32	3.2	150	24.9
QSP32-5D	5	120	5	32	4	150	24.9

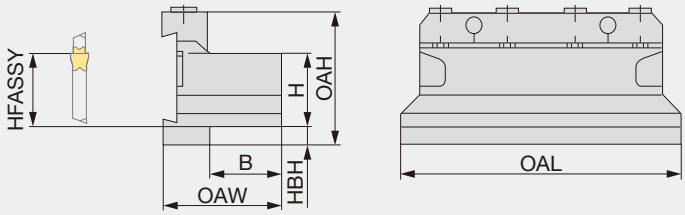
SPARE PARTS

Designation	Wrench
QS...	QL-39

Reference pages: Inserts → F252, F253, Standard cutting conditions → F253

CTBU

Tool block for QSP blades



Inch	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU12-26-U	0.750	0.827	3.386	0.750	0.354	1.693	1.496	QSP26...
CTBU16-26-U	1.000	0.906	4.331	1.000	0.197	1.772	1.654	QSP26...
CTBU12-32-U	0.750	0.748	3.937	0.750	0.512	1.969	1.496	QSP32...
CTBU16-32-U	1.000	0.906	4.331	1.000	0.315	1.969	1.654	QSP32...
CTBU20-32-U	1.250	1.142	4.331	1.250	0.197	2.126	1.890	QSP32...

Metric	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU20-26	20	21	86	20	9	43	38	QSP26...
CTBU25-26	25	23	110	25	5	45	43	QSP26...
CTBU20-32	20	19	100	20	13	50	38	QSP32...
CTBU25-32	25	23	110	25	8	50	42	QSP32...
CTBU32-32	32	29	110	32	5	54	48	QSP32...

INCH SPARE PARTS

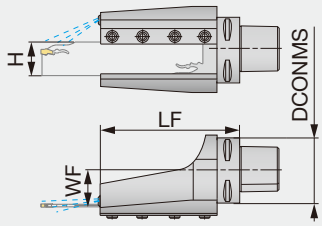
Designation	Clamp	Clamping screw	Wrench
CTBU12-26-U	CT-86	CM6X30-S	P-5
CTBU16-26-U	CT-100	CM6X30-S	P-5
CTBU12-32-U	CT-105	CM6X30-S	P-5
CTBU16-32-U	CT-110	CM6X30-S	P-5
CTBU20-32-U	CT-110	CM6X30-S	P-5

METRIC SPARE PARTS

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

C-TBK-R/L

Toolholder with TungCap connection for parting-off blade



Right hand (R) shown.

Metric	DCONMS	WF	LF	H
C6TBK-32R/L	63	32	138	32

Applicable for 3 MPa coolant

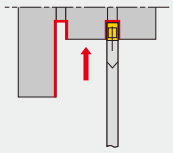
SPARE PARTS

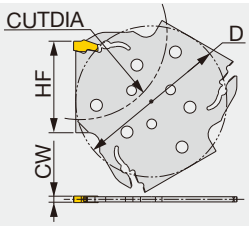
Designation	Clamp	Clamping screw	Wrench	Coolant parts
C6TBK-32R/L	BK32-9WEDG	SRM6X16DIN912-12.9	HW5.0	EZ125

Reference pages: Inserts → F252, F253, Standard cutting conditions → F253

QSG

Parting-off and external grooving blade





Metric	CW	Seat size	CUTDIA	HF	D
QSG52-2T	2	2	52	27	48.3
QSG82-2T	2	2	82	42	69.3
QSG52-3T	3	3	52	27	48.3
QSG82-3T	3	3	82	42	69.3
QSG120-3T	3	3	120	61	88
QSG52-4T	4	4	52	27	69.3
QSG82-4T	4	4	82	42	69.3
QSG120-4T	4	4	120	61	88
QSG120-5T	5	5	120	61	88

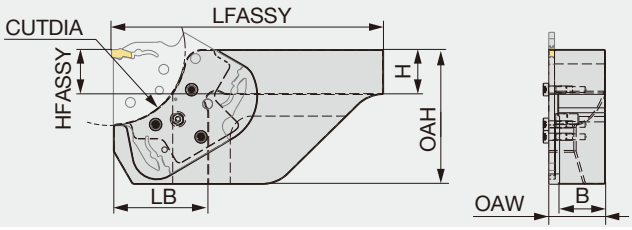
SPARE PARTS

Designation	Wrench
QSG...	QL-39

Reference pages: Inserts → F252, F253, Standard cutting conditions → F253

CHTBR/L

Tool block for QSG blade



Right hand (R) shown.

Inch	CUTDIA	H	B	LFASSY	HFASSY	OAH	OAW	LB
CHTBR/L12-52	2.047	0.750	0.770	4.000	0.750	1.968	1.000	1.457
CHTBR/L16-52	2.047	1.000	1.020	5.000	1.000	1.968	1.250	1.457
CHTBR/L12-82	3.228	0.750	0.770	5.500	0.750	2.953	1.000	2.087
CHTBR/L16-82	3.228	1.000	1.020	6.000	1.000	2.953	1.250	2.087
CHTBR/L16-120	4.724	1.000	1.020	6.500	1.000	3.937	1.250	2.638
CHTBR/L20-120	4.724	1.250	1.270	6.500	1.250	3.937	1.500	2.638

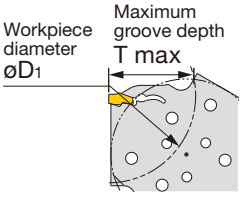
Metric	CUTDIA	H	B	LFASSY	HFASSY	OAH	OAW	LB
CHTBR/L2020-52	52	20	20.5	100	20	50	26.5	37
CHTBR/L2525-52	52	25	25.5	125	25	50	31.5	37
CHTBR/L2020-82	82	20	20.5	140	20	75	26.5	53
CHTBR/L2525-82	82	25	25.5	150	25	75	31.5	53
CHTBR/L2525-120	120	25	25.5	165	25	100	31.5	67
CHTBR/L3232-120	120	32	32.5	165	32	100	38.5	67

The blade clamping screw heads protrude out for as much as 0.122" (3.1 mm) over the insert cutting edge point.
Maintain the clearance from the chucking device to avoid interference.

SPARE PARTS



Designation	Clamping screw	Grip	Torx bit
CHTBR/L...	SR ISO 14580 M4X10	SW6-SD	BLDT20/S7



Maximum groove depth (T max) as function of workpiece diameter (øD1)

Designation	øD1 (in)																	
CHTBR/L**-52	2.087	2.126	2.165	2.205	2.283	2.362	2.441	2.559	2.677	2.835	3.071	3.307	3.622	4.016	4.528	5.236	6.260	7.795
CHTBR/L**-82	4.094	4.252	4.409	4.567	4.764	5.000	5.276	5.591	5.945	6.378	6.929	7.559	8.346	9.331	10.630	12.323	14.764	18.425
CHTBR/L**-120	8.071	8.425	8.819	9.252	9.724	10.276	10.945	11.693	12.559	13.583	14.803	16.299	18.189	20.551	23.661	27.913	34.055	43.780
T max (in)	0.827	0.787	0.748	0.709	0.669	0.630	0.591	0.551	0.512	0.472	0.433	0.394	0.354	0.315	0.276	0.236	0.197	0.157

Designation	øD1 (in)												
CHTBR/L**-82	3.268	3.307	3.307	3.346	3.386	3.425	3.504	3.543	3.622	3.701	3.780	3.858	3.976
CHTBR/L**-120	5.669	5.787	5.906	6.024	6.142	6.299	6.457	6.614	6.811	7.008	7.244	7.480	7.756
T max (in)	1.339	1.299	1.260	1.220	1.181	1.142	1.102	1.063	1.024	0.984	0.945	0.906	0.866

Designation	øD1 (in)																
CHTBR/L**-120	4.764	4.803	4.843	4.882	4.921	4.961	5.000	5.039	5.079	5.118	5.157	5.236	5.276	5.354	5.433	5.512	5.591
T max (in)	2.165	2.047	1.969	1.890	1.850	1.811	1.772	1.732	1.693	1.654	1.614	1.575	1.535	1.496	1.457	1.417	1.378

Reference pages: Inserts → F252, F253, Standard cutting conditions → F253

CHIPBREAKER GUIDE

QGM

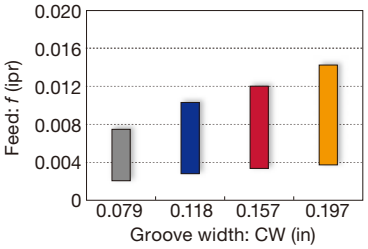
First choice for grooving and parting

Smooth chip evacuation
Well-designed edge with high strength
CW = 0.079" - 0.197"

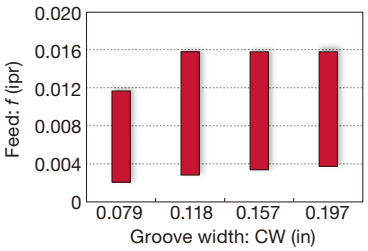
TUNGFEED BLADE

Enables high feed machining when combined with extremely rigid TungFeed-Blade toolholder
CW = 0.079" - 0.197"
CUTDIA = ø2.047", ø3.228", ø4.724"

■ Standard feed



■ Recommended feed when using TungFeed-Blade

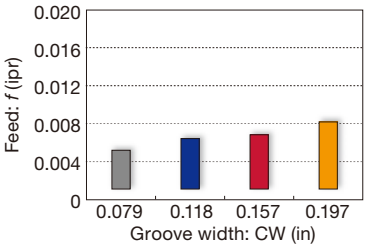


QGS

Lower cutting force and superior sharpness

Uniquely designed edge and chipbreaker
CW = 0.079" - 0.197"

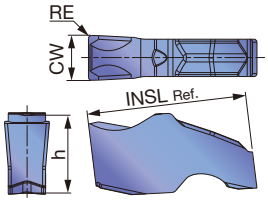
■ Standard feed



INSERTS

QGM

External deep grooving and parting



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

★ : First choice

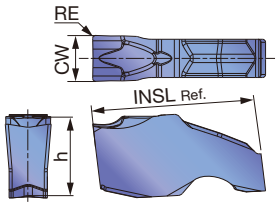
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGM2-020	2	2	0.079	0.008	●	0.433	0.209
QGM3-020	3	3	0.118	0.008	●	0.433	0.209
QGM4-030	4	4	0.157	0.012	●	0.512	0.287
QGM5-030	5	5	0.197	0.012	●	0.512	0.287

●: Line up

Reference pages: Toolholders → F248 - F251

QGS

External deep grooving and parting



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

★ : First choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	INSL (in)	h (in)
QGS2-020	2	2	0.079	0.008	●	0.433	0.209
QGS3-020	3	3	0.118	0.008	●	0.433	0.209
QGS4-030	4	4	0.157	0.012	●	0.512	0.287
QGS5-030	5	5	0.197	0.012	●	0.512	0.287

●: Line up

STANDARD CUTTING CONDITIONS

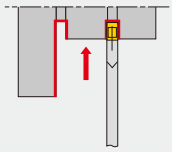
ISO	Workpiece material	Hardness	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4140, etc.	< 300 HB	AH7025	164 - 591
M	Stainless steel 304, etc.	< 200 HB	AH7025	164 - 394
K	Gray cast iron No.250B, etc.	-	AH7025	164 - 591
	Ductile cast iron 65-45-12, etc.	-	AH7025	164 - 394
S	Superalloys Inconel718, etc.	< HRC 40	AH7025	66 - 197
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	AH7025	66 - 262

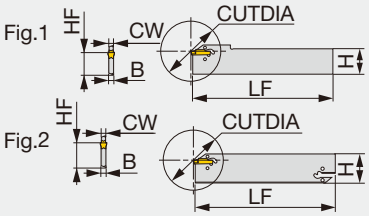
Please see page F252 for feed: *f* (ipr).

Reference pages: Toolholders → F248 - F251

CGP

External deep grooving and parting blade





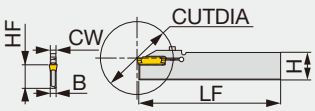
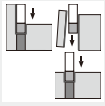


Fig.3



Metric	CW	Seat size	CUTDIA	H	B	LF	HF	Fig.	Torque
CGP26-1.4S	1.4	1	26	26	1	150	21.4	1	-
CGP32-1.4D	1.4	1	26	32	1	150	24.8	2	-
CGP26-2S	2	2	40	26	1.8	150	21.4	1	-
CGP32-2D	2	2	50	32	1.8	150	24.8	2	-
CGP26-3S	3	3	50	26	2.4	150	21.4	1	-
CGP32-3D	3	3	100	32	2.4	150	24.8	2	-
CGP26-4S	4	4	80	26	3.2	150	21.4	1	-
CGP32-4D	4	4	100	32	3.2	150	24.9	2	-
CGP45-4D	4	4	120	45	3.2	150	38.1	2	-
CGP32-5D	5	5	120	32	4	150	24.9	2	-
CGP32-6D	6	6	120	32	5.2	150	24.9	2	-
CGP32-8S-CL	8	8	80	32	6.2	150	24.9	3	3

When depth is deeper than (insert length - 1.5mm), 1 corner type is recommended.
Wrench (CRW...) is not included. Please order it separately.
Torque: Recommended clamping torque: N·m

SPARE PARTS

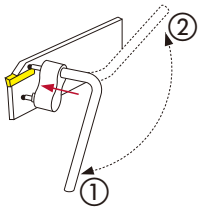


Designation	Clamping screw	Wrench	Wrench (Optional)
CGP**-1.4*	-	-	CRW23
CGP**-2/3/4/5/6	-	-	CRW33
CGP32-8S-CL	CM4X0.7X20-M0-A	P-3	-

Caution

Newly developed clamp

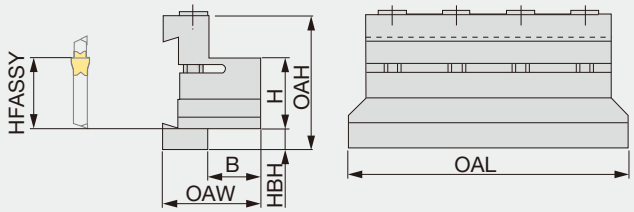
Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.



①→②: unclamp
②→①: clamp

CTBF

Tool block for CGP blade, mono block



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

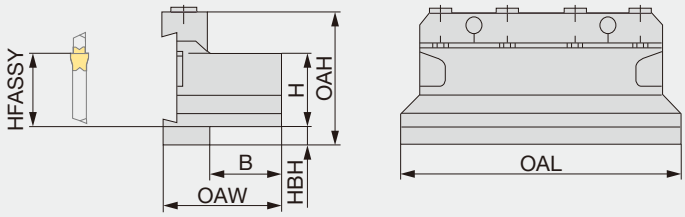
SPARE PARTS


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

Reference pages: Inserts → F261 - F270, Tool blocks → F254, F255, Standard cutting conditions → F271

CTBU

Tool block for CGP blade



Inch	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU12-26-U	0.750	0.827	3.386	0.750	0.354	1.693	1.496	CGP26...
CTBU16-26-U	1.000	0.906	4.331	1.000	0.197	1.772	1.654	CGP26...
CTBU12-32-U	0.750	0.748	3.937	0.750	0.512	1.969	1.496	CGP32...
CTBU16-32-U	1.000	0.906	4.331	1.000	0.315	1.969	1.654	CGP32...
CTBU20-32-U	1.250	1.142	4.331	1.250	0.197	2.126	1.890	CGP32...

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

INCH SPARE PARTS

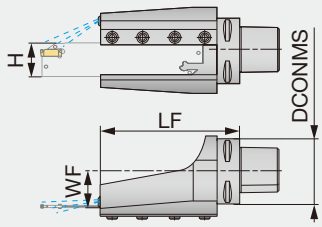
Designation	Clamp	Clamping screw	Wrench
CTBU12-26-U	CT-86	CM6X30-S	P-5
CTBU16-26-U	CT-100	CM6X30-S	P-5
CTBU12-32-U	CT-105	CM6X30-S	P-5
CTBU16-32-U	CT-110	CM6X30-S	P-5
CTBU20-32-U	CT-110	CM6X30-S	P-5

METRIC SPARE PARTS

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

C-TBK-R/L

Toolholder with TungCap connection for parting-off blade



Right hand (R) shown.

Metric	DCONMS	WF	LF	H
C6TBK-32R/L	63	32	138	32

Applicable for 3 MPa coolant

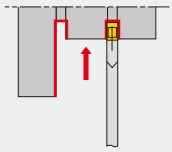
SPARE PARTS

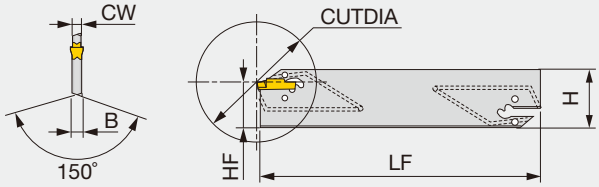
Designation	Clamp	Clamping screw	Wrench	Coolant parts
C6TBK-32R/L	BK32-9WEDG	SRM6X16DIN912-12.9	HW5.0	EZ125

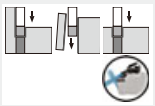
Reference pages: Inserts → F261 - F270, Blades → F254, Standard cutting conditions → F271

CGP32-CHP

External deep grooving and parting blade, with high pressure coolant capability







Metric	CW	Seat size	CUTDIA	H	B	LF	HF
CGP32-2D-CHP	2	2	50	32	1.8	150	24.8
CGP32-3D-CHP	3	3	90	32	2.5	150	24.8
CGP32-4D-CHP	4	4	90	32	3.2	150	24.9
CGP32-5D-CHP	5	5	110	32	4	150	24.9
CGP32-6D-CHP	6	6	110	32	5.2	150	24.9

When depth is deeper than (insert length - 1.5mm), 1 corner type is recommended.
Wrench (CRW...) is not included. Please order it separately.

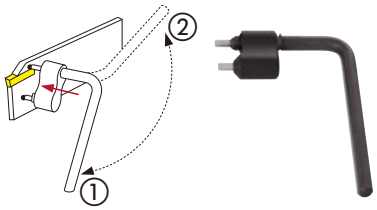
SPARE PARTS

Designation	Sealing screw	Wrench (Optional)
CGP32-*D-CHP	SGC340	CRW33

Caution

Newly developed clamp

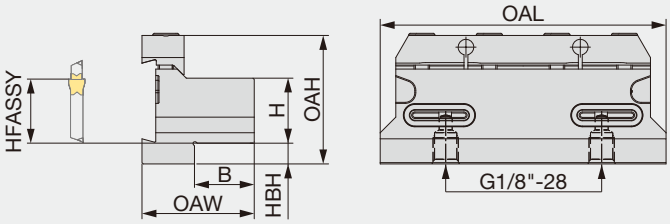
Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.



①→②: unclamp
②→①: clamp

CTBU-CHP

Tool block for CGP-CHP blade, with high pressure coolant capability



Inch	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU16-32-U-CHP	1.000	0.906	4.331	1.000	0.315	1.97	1.654	CGP32-*D-CHP

Metric	H	B	OAL	HFASSY	HBH	OAH	OAW	Blade (Optional)
CTBU25-32-CHP	25	23	110	25	8	50	43.2	CGP32-*D-CHP

Applicable for 14 MPa coolant

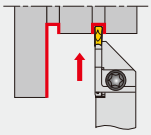
SPARE PARTS

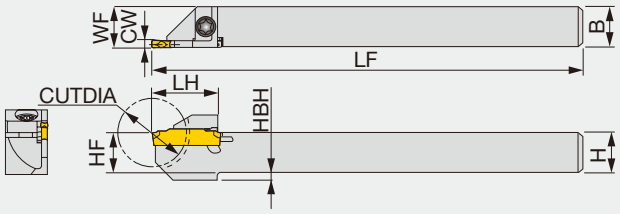
Designation	Clamping screw	Clamp	Wrench	O-ring
CTBU...	SRM6X16DIN912-12.9	CT-110	P-5	OR14X2.5NN

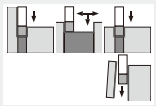
Reference pages: Inserts → F261 - F270, Standard cutting conditions → F271
Parts for coolant hose → F290

JCTER/L

External grooving and parting toolholder, for Swiss lathes







Right hand (R) shown.

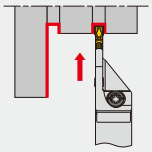
Inch	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF(1)	HBH	Torque
JCTER/L08-2T12	0.079	2	0.945	0.500	0.500	4.750	0.748	0.500	0.504	0.079	2.21
JCTER/L08-3T12	0.118	3	0.945	0.500	0.500	4.750	0.748	0.500	0.512	0.079	2.21
JCTER/L10-2T16	0.079	2	1.260	0.625	0.625	4.750	0.945	0.625	0.629	-	2.21
JCTER/L10-3T16	0.118	3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

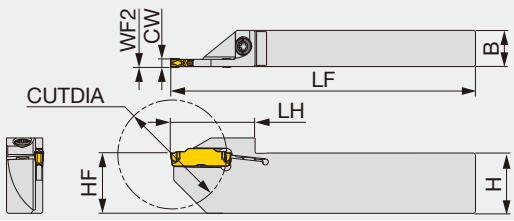
Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF(1)	HBH	Torque*
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	10.2	-	3
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	12.2	-	3
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	12.2	-	3
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	14.2	-	3
JCTER/L1616X1.4T16	1.4	1	32	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

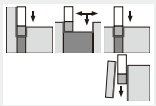
(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: lbs·ft (*N·m)

JCTER/L2012

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







Right hand (R) shown.

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

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

SPARE PARTS

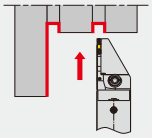
Designation	Clamping screw	Wrench
JCTER/L...	CSHB-4-A	T-15F

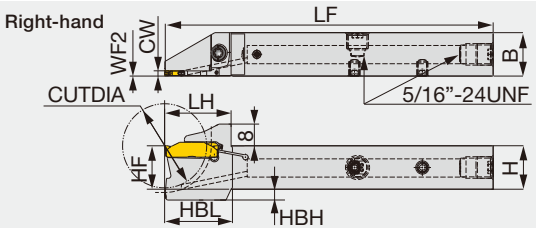
Reference pages: Inserts → F261 - F270, Standard cutting conditions → F271

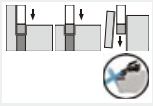
JCTER/L-CHP

Direct connection

External grooving and parting toolholder, with high pressure coolant capability







Inch	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Torque
JCTER/L08X2T12-CHP	0.079	2	0.980	0.500	0.500	4.750	0.972	0.500	0 / 0.500	0.169	0.965	2.21
JCTER/L10X2T12-CHP	0.079	2	0.980	0.625	0.625	4.750	0.972	0.625	0 / 0.625	0.039	0.965	2.21
JCTER/L10X2T16-CHP	0.079	2	1.260	0.625	0.625	4.750	0.972	0.625	0 / 0.625	0.157	0.965	2.21
JCTER/L12X2T16-CHP	0.079	2	1.260	0.750	0.750	4.750	0.972	0.750	0 / 0.750	0.037	0.965	2.21

Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	HBL	Torque*
JCTER/L1212X2T12-CHP	2	2	25	12	12	120	24.7	12	0/12	5	24.7	3
JCTER/L1616X2T12-CHP	2	2	25	16	16	120	24.7	16	0/16	1	24.5	3
JCTER/L1616X2T16-CHP	2	2	32	16	16	120	24.7	16	0/16	4	24.7	3
JCTER/L2020X2T16-CHP	2	2	32	20	20	120	24.7	20	0/20	-	-	3

(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Torque: Recommended clamping torque: lbs·ft (*N·m)

SPARE PARTS

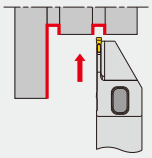


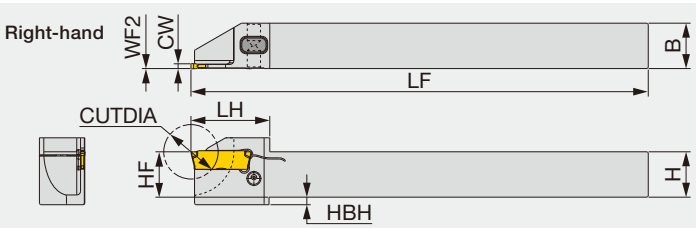



Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JCTER/L...	CSHB-4-A	T-15F	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

JTTER/L

External grooving and parting toolholder, for Swiss lathes





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

(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Torque: Recommended clamping torque: N·m

SPARE PARTS



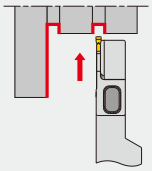
Designation	Clamping screw	Clamping pin	Wrench
JTTER/L1010...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1212...	SSM3.5x0.35	PIN-SL-TC	P-2F
JTTER/L1616...	SRM5-24145-RL	PIN-32121	P-2.5F

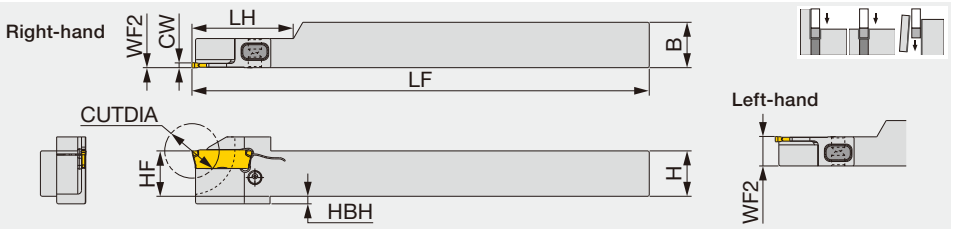
External
Internal
Face
Parting
Others

Reference pages: Inserts → F261 - F270, Standard cutting conditions → F271
Parts for coolant hose → F290

JTTER/L-S

External grooving and parting toolholder, for Swiss lathes (for sub spindle)





Metric	CW	Seat size	CUTDIA	H	B	LF	LH	HF	WF2(1)	HBH	Torque
JTTER/L1010H1.2D12-S	1.2	0.9	12	10	10	100	22.8	10	0/7.7	-	1.5
JTTER1212F1.2D16-S (2)	1.2	0.9	16	12	12	85	22.8	12	0	-	1.5
JTTER/L1212X1.2D16-S	1.2	0.9	16	12	12	120	26.8	12	0/7.7	-	1.5
JTTER/L1212X1.2D20-S	1.2	0.9	20	12	12	120	26.8	12	0/7.7	2	1.5
JTTER/L1616X1.2D20-S	1.2	0.9	20	16	16	120	26.8	16	0/7.7	-	1.5

(1) "WF2" value is calculated with groove width "CW" shown in the table. The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(2) No clamping screw from the insert side.
Torque: Recommended clamping torque: N·m

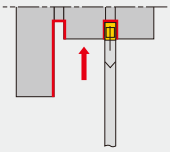
SPARE PARTS

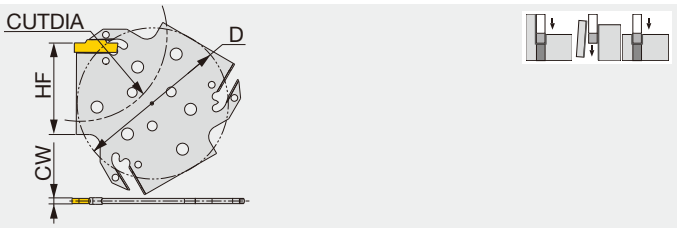


Designation	Clamping screw	Clamping pin	Wrench
JTTER/L**-S	SSM3.5x0.35	PIN-SL-TC	P-2F

CHGP

Parting-off and external grooving blade





Metric	CW	Seat size	CUTDIA	HF	D
CHGP52-2T	2	2	52	27	48.3
CHGP52-3T	3	3	52	27	48.3
CHGP82-3T	3	3	82	42	69.3
CHGP82-4T	4	4	82	42	69.3

When depth is deeper than insert length - 1.5mm, 1 corner type is recommended.

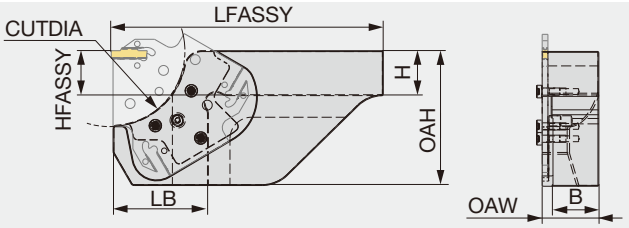
SPARE PARTS

Designation	Wrench (Option)
CHGP...	CRW33

Reference pages: Inserts → F261 - F270, Tool blocks → F260, Standard cutting conditions → F271

CHTBR/L

Tool block for CHGP blade



Right hand (R) shown.

Inch	CUTDIA	H	B	LFASSY	HFASSY	OAH	OAW	LB
CHTBR/L12-52	2.047	0.750	0.770	4.000	0.750	1.968	1.000	1.457
CHTBR/L16-52	2.047	1.000	1.020	5.000	1.000	1.968	1.250	1.457
CHTBR/L12-82	3.228	0.750	0.770	5.500	0.750	2.953	1.000	2.087
CHTBR/L16-82	3.228	1.000	1.020	6.000	1.000	2.953	1.250	2.087

Metric	CUTDIA	H	B	LFASSY	HFASSY	OAH	OAW	LB
CHTBR/L2020-52	52	20	20.5	100	20	50	26.5	37
CHTBR/L2525-52	52	25	25.5	125	25	50	31.5	37
CHTBR/L2020-82	82	20	20.5	140	20	75	26.5	53
CHTBR/L2525-82	82	25	25.5	150	25	75	31.5	53

The blade clamping screw heads protrude out for as much as 0.122" (3.1 mm) over the insert cutting edge point.
Maintain the clearance from the chucking device to avoid interference.

SPARE PARTS

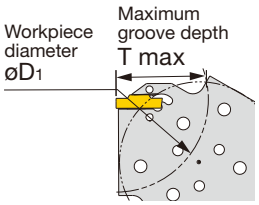


Designation	Clamping screw	Grip	Torx bit
CHTBR/L...	SR ISO 14580 M4X10	SW6-SD	BLDT20/S7

Maximum groove depth (T max) as function of workpiece diameter (øD1)

Designation	øD1 (in)																	
CHTBR/L**-52	2.087	2.126	2.165	2.205	2.283	2.362	2.441	2.559	2.677	2.835	3.071	3.307	3.622	4.016	4.528	5.236	6.260	7.795
CHTBR/L**-82	4.094	4.252	4.409	4.567	4.764	5.000	5.276	5.591	5.945	6.378	6.929	7.559	8.346	9.331	10.630	12.323	14.764	18.425
T max (in)	0.827	0.787	0.748	0.709	0.669	0.630	0.591	0.551	0.512	0.472	0.433	0.394	0.354	0.315	0.276	0.236	0.197	0.157

Designation	øD1 (in)											
CHTBR/L**-82	3.268	3.307	3.346	3.386	3.425	3.504	3.543	3.622	3.701	3.780	3.858	3.976
T max (in)	1.339	1.299	1.220	1.181	1.142	1.102	1.063	1.024	0.984	0.945	0.906	0.866

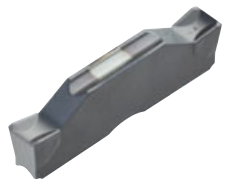


External
Internal
Face
Parting
Others

Reference pages: Inserts → F261 - F270, Blades → F259, Standard cutting conditions → F271

External grooving and parting

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



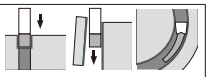
F264, F265

1st choice for grooving and parting

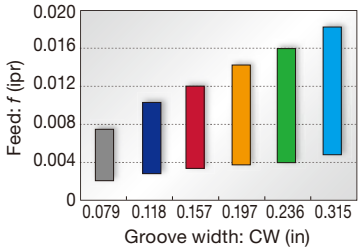
Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
CW = 0.079" - 0.315"

TungFeed-Blade

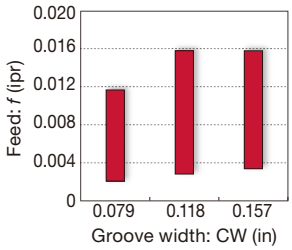
Enables high feed machining when combined with extremely rigid TungFeed-Blade toolholder
CW = 0.079" - 0.157"
CUTDIA = ø2.047", ø3.228"



■ Standard feed



■ Recommended feed when using TungFeed-Blade

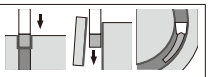


DGS type (2 corners) SGS type (1 corner)

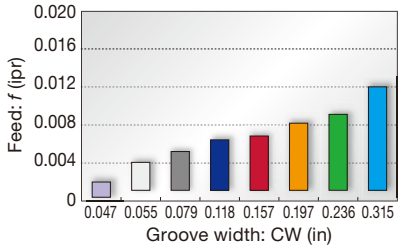
F266, F267

Lower cutting force and superior sharpness

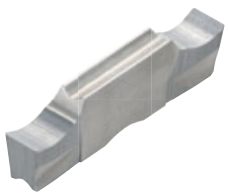
Unique-designed edge and chipbreaker
Handed insert available
CW = 0.047" - 0.315"



■ Standard feed



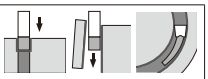
DGG type (2 corners)



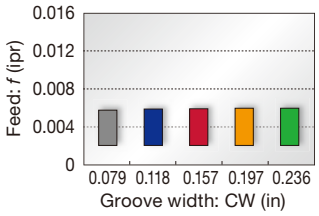
F268

For non-ferrous materials and titanium

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



■ Standard feed

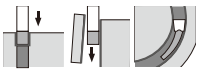


DGL type (2 corners)

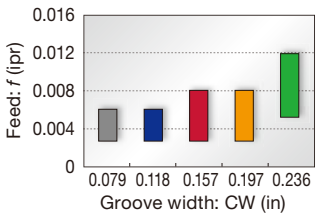
F268

1st choice for mild steel

Chipbreaker with excellent chip control at low feed
Suitable for mild steel which often presents challenges in chip control
CW = 0.079" - 0.236"



■ Standard feed



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

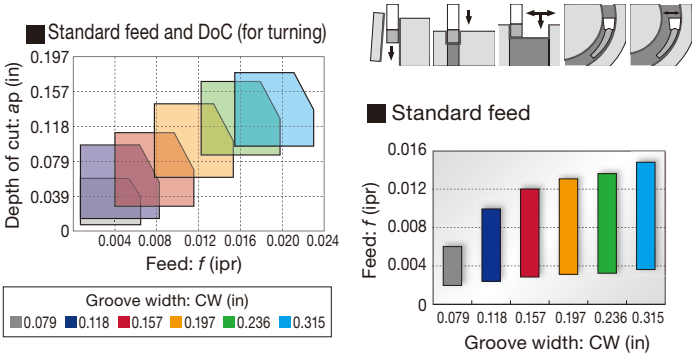
External grooving and parting

DTM type (2 corners)

F269

General purpose

1st choice for grooving and turning
Suitable for light to medium cutting
Excellent chip control in machining steel, alloy steel, stainless steel, and heat-resistant alloy
CW = 0.079" - 0.315"



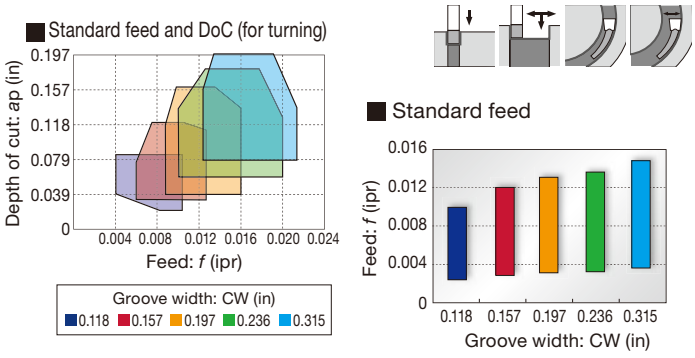
External grooving, turning and parting

DTE type (2 corners)

F269, F270

General purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
CW = 0.104" - 0.315"

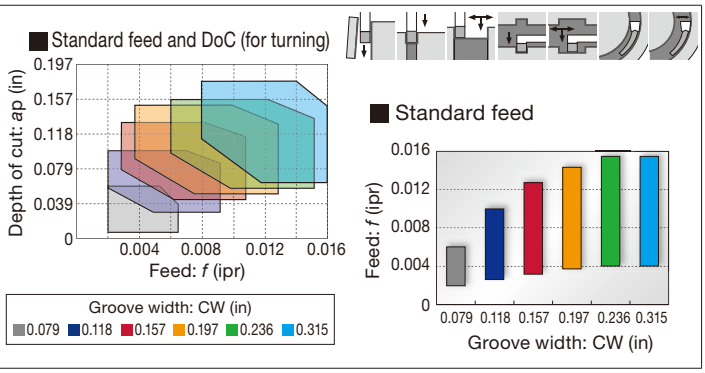


DTX type (2 corners)

F270

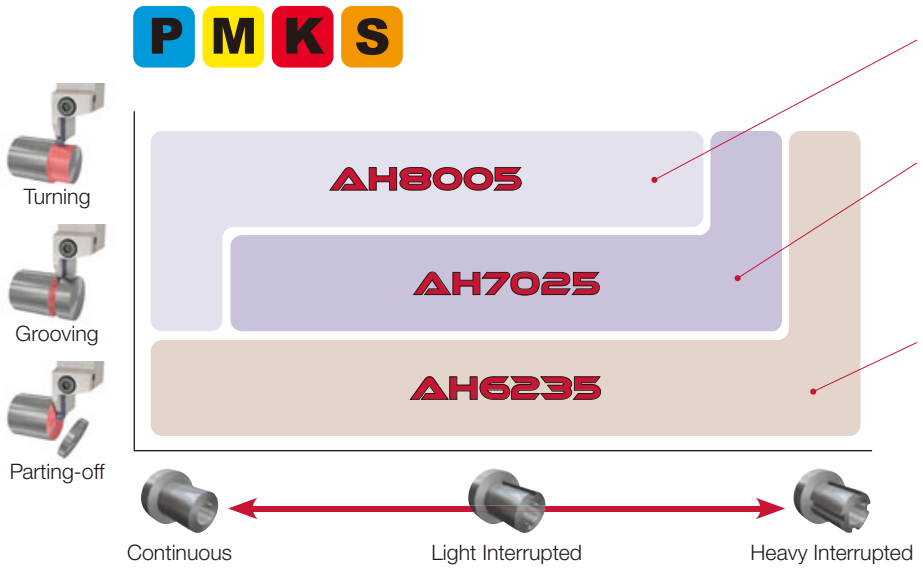
Multi-functional type

Well balanced sharpness and strength
Multi-functional insert
CW = 0.079" - 0.315"



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

GRADE SELECTION



GRADES

AH8005 P M K S
- First choice for external, internal, and side-turning, continuous cuts

AH7025 P M K S
- First choice for light interrupted cuts or a mix of continuous and interrupted cuts
- New PVD coating with high Al content provides excellent adhesion strength
- Improved wear and chipping resistance

AH6235 P M K
- First choice for heavy interrupted cuts, as well as parting and facing applications

AH725 P M S
- General purpose PVD grade for high fracture resistance

T515 K
- First recommended grade for cast iron
- Excellent wear resistance in high speed machining

T9225 P
- Suitable for steel machining at high speeds
- New CVD coating and substrate deliver an outstanding balance of wear and chipping resistance

NS9530 P
- Advanced cermet for finish cutting of steel
- Innovative grade with incredible fracture and high wear resistance

GH130 P M K
- Recommended for interrupted machining
- TiCNO PVD coating layer with high wear resistance
- High hardness wear resistance

AH905 S
- Remarkable for machining of heat resistant alloys
- Exclusive coating layer improves adhesion strength and wear resistance

KS05F N S
- Recommended for non-ferrous materials and titanium

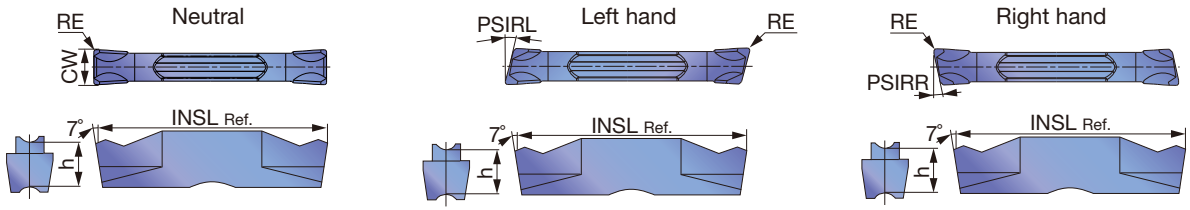
TH10 N
- Recommended for non-ferrous materials

BXA10 H
- Coated CBN grade designed for turning hardened steel parts

BX360 H
- Developed for grooving applications of hardened steel parts

DGM

External grooving and parting



		T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530	KS05F
P	Steel	★	★	☆	★		☆	★	★	
M	Stainless		★	☆	★		★	★		
K	Cast iron		★		★	☆	☆	★	☆	☆
N	Non-ferrous									☆
S	Superalloys		★	☆	★	★				★
H	Hard materials									

★ : First choice
☆ : Second choice

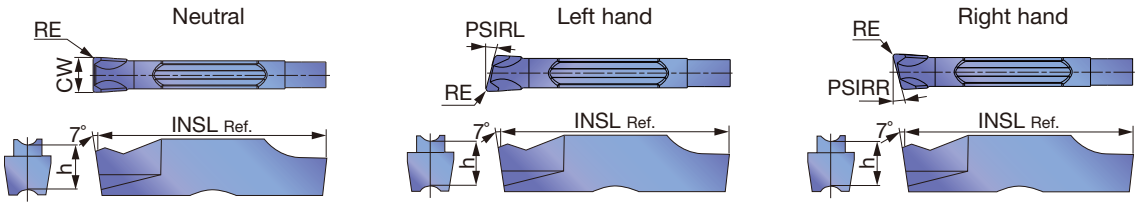
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet		Un-coated		INSL (in)	h (in)	PSIRL	PSIRR
						T9225	AH7025	AH725	AH8005	AH905	GH130	AH6235	NS9530		KS05F					
DGM2-020	2	N	2	0.079	0.008	●	●	●	●		●	●	●		●		0.787	0.197	0°	0°
DGM2-020-6R	2	R	2	0.079	0.008		●	●			●						0.787	0.197	0°	6°
DGM2-020-6L	2	L	2	0.079	0.008		●	●			●						0.787	0.197	6°	0°
DGM2-020-8R	2	R	2	0.079	0.008		●	●			●						0.787	0.197	0°	8°
DGM2-020-8L	2	L	2	0.079	0.008		●	●			●						0.787	0.197	8°	0°
DGM2-020-15R	2	R	2	0.079	0.008		●	●			●						0.787	0.197	0°	15°
DGM2-020-15L	2	L	2	0.079	0.008		●	●			●						0.787	0.197	15°	0°
DGM2-002-15R	2	R	2	0.079	0.0008			●			●						0.762	0.197	0°	15°
DGM2-002-15L	2	L	2	0.079	0.0008			●			●						0.762	0.197	15°	0°
DGM2.39-020	2	N	2.39	0.094	0.008		●		●			●					0.787	0.197	0°	0°
DGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●		●		0.787	0.197	0°	0°
DGM3-020-6R	3	R	3	0.118	0.008		●	●			●						0.787	0.197	0°	6°
DGM3-020-6L	3	L	3	0.118	0.008		●	●			●						0.787	0.197	6°	0°
DGM3-002-6R	3	R	3	0.118	0.008			●			●						0.766	0.197	0°	6°
DGM3-002-6L	3	L	3	0.118	0.008			●			●						0.766	0.197	6°	0°
DGM3-020-15R	3	R	3	0.118	0.008		●	●			●						0.787	0.197	0°	15°
DGM3-020-15L	3	L	3	0.118	0.008		●	●			●						0.787	0.197	15°	0°
DGM3.18-020	3	N	3.18	0.125	0.008		●		●			●					0.787	0.197	0°	0°
DGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●		●		0.787	0.197	0°	0°
DGM4-030-4R	4	R	4	0.157	0.012		●	●			●						0.787	0.197	0°	4°
DGM4-030-4L	4	L	4	0.157	0.012		●	●			●						0.787	0.197	4°	0°
DGM4-030-15R	4	R	4	0.157	0.012		●	●			●						0.787	0.197	0°	15°
DGM4-030-15L	4	L	4	0.157	0.012		●	●			●						0.787	0.197	15°	0°
DGM4.76-040	5	N	4.76	0.187	0.016		●		●			●					0.984	0.217	0°	0°
DGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●		●		0.984	0.217	0°	0°
DGM5-030-4R	5	R	5	0.197	0.012		●	●			●						0.984	0.217	0°	4°
DGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	●			●		0.984	0.217	0°	0°
DGM6.35-040	6	N	6.35	0.250	0.016		●		●			●					0.984	0.217	0°	0°
DGM8-040	8	N	8	0.315	0.016	●	●	●	●		●	●			●		1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

SGM

External deep grooving and parting



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

★ : First choice
☆ : Second choice

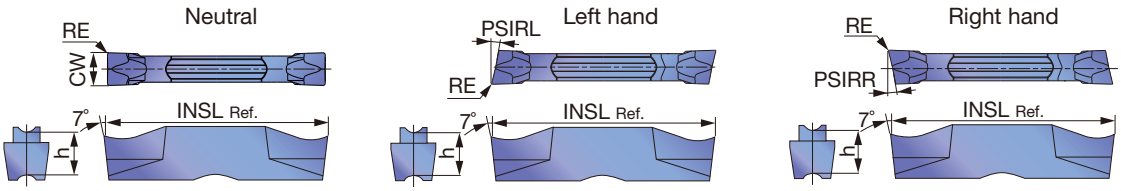
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated					Uncoated					INSL (in)	h (in)	PSIRL	PSIRR
						AH7025	AH725	AH8005	GH130	AH6235	KS05F								
SGM2-020	2	N	2	0.079	0.008	●	●	●	●	●	●					0.787	0.197	0°	0°
SGM2-020-6R	2	R	2	0.079	0.008	●	●		●							0.787	0.197	0°	6°
SGM2-020-6L	2	L	2	0.079	0.008	●	●		●							0.787	0.197	6°	0°
SGM3-020	3	N	3	0.118	0.008	●	●	●	●	●	●					0.787	0.197	0°	0°
SGM3-020-6R	3	R	3	0.118	0.008	●	●		●							0.787	0.197	0°	6°
SGM3-020-6L	3	L	3	0.118	0.008	●	●		●							0.787	0.197	6°	0°
SGM3-020-15R	3	R	3	0.118	0.008	●	●		●							0.787	0.197	0°	15°
SGM3-020-15L	3	L	3	0.118	0.008	●	●		●							0.787	0.197	15°	0°
SGM4-030	4	N	4	0.157	0.012	●	●	●	●	●	●					0.787	0.197	0°	0°
SGM4-030-4R	4	R	4	0.157	0.012	●	●		●							0.787	0.197	0°	4°
SGM4-030-4L	4	L	4	0.157	0.012	●	●		●							0.787	0.197	4°	0°
SGM5-030	5	N	5	0.197	0.012	●	●	●	●	●	●					0.984	0.217	0°	0°
SGM6-030	6	N	6	0.236	0.012	●	●	●	●	●	●					0.984	0.217	0°	0°
SGM8-040	8	N	8	0.315	0.016	●		●		●	●					1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

DGS

External grooving and parting



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

★ : First choice
☆ : Second choice

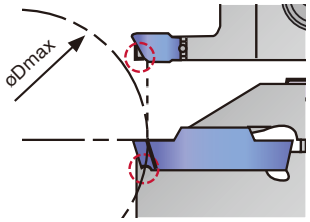
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	T9225	AH7025	AH725	AH8005	GH130	AH6235	NS9530	KS05F	INSL (in)	h (in)	PSIRL	PSIRR
DGS1.2-003	0.9	N	1.2	0.047	0.0012			●						0.630	0.185	0°	0°
DGS1.4-005	1	N	1.4	0.055	0.002			●						0.630	0.169	0°	0°
DGS1.4-010	1	N	1.4	0.055	0.004			●						0.630	0.169	0°	0°
DGS1.4-016	1	N	1.4	0.055	0.006		●	●		●				0.630	0.169	0°	0°
DGS2-005	2	N	2	0.079	0.002			●						0.787	0.197	0°	0°
DGS2-010	2	N	2	0.079	0.004			●						0.787	0.197	0°	0°
DGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGS2-020-6R	2	R	2	0.079	0.008		●	●		●				0.787	0.197	0°	6°
DGS2-020-6L	2	L	2	0.079	0.008		●	●		●				0.787	0.197	6°	0°
DGS2-002-6R	2	R	2	0.079	0.0008			●		●				0.768	0.197	0°	6°
DGS2-002-6L	2	L	2	0.079	0.0008			●		●				0.768	0.197	6°	0°
DGS2-020-15R	2	R	2	0.079	0.008		●	●		●				0.787	0.197	0°	15°
DGS2-020-15L	2	L	2	0.079	0.008		●	●		●				0.787	0.197	15°	0°
DGS2-002-15R	2	R	2	0.079	0.0008			●		●				0.768	0.197	0°	15°
DGS2-002-15L	2	L	2	0.079	0.0008			●		●				0.768	0.197	15°	0°
DGS2.39-020	2	N	2.39	0.094	0.008		●		●		●			0.787	0.197	0°	0°
DGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGS3-020-6R	3	R	3	0.118	0.008		●	●		●				0.787	0.197	0°	6°
DGS3-020-6L	3	L	3	0.118	0.008		●	●		●				0.787	0.197	6°	0°
DGS3-002-6R	3	R	3	0.118	0.0008			●		●				0.766	0.197	0°	6°
DGS3-002-6L	3	L	3	0.118	0.0008			●		●				0.766	0.197	6°	0°
DGS3-020-15R	3	R	3	0.118	0.008		●	●		●				0.787	0.197	0°	15°
DGS3-020-15L	3	L	3	0.118	0.008		●	●		●				0.787	0.197	15°	0°
DGS3-002-15R	3	R	3	0.118	0.0008			●		●				0.766	0.197	0°	15°
DGS3-002-15L	3	L	3	0.118	0.0008			●		●				0.766	0.197	15°	0°
DGS3.18-020	3	N	3.18	0.125	0.008		●		●		●			0.787	0.197	0°	0°
DGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	●	●	0.787	0.197	0°	0°
DGS4-030-4R	4	R	4	0.157	0.012		●	●		●				0.787	0.197	0°	4°
DGS4-030-4L	4	L	4	0.157	0.012		●	●		●				0.787	0.197	4°	0°
DGS4.76-040	5	N	4.76	0.187	0.016		●		●		●			0.984	0.217	0°	0°
DGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	●	●	0.984	0.217	0°	0°
DGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●		●	0.984	0.217	0°	0°
DGS6.35-040	6	N	6.35	0.250	0.016		●		●		●			0.984	0.217	0°	0°
DGS8-040	8	N	8	0.315	0.016		●		●		●		●	1.181	0.264	0°	0°

● : Line up

Caution

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

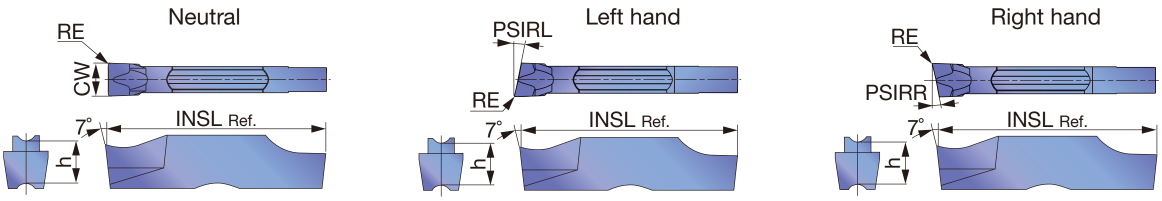
Designation	øDmax (in)	Designation	øDmax (in)
DGM2-002-15R/L	1.102	DGS2-002-15R/L	1.102
DGM3-002-15R/L	1.141	DGS3-002-15R/L	1.141
DGM4-030-15R/L	1.181	SGS3-020-15R/L	4.055
SGM3-020-15R/L	4.055	SGS3-002-15R/L	1.338



Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

SGS

External deep grooving and parting



		AH7025	AH725	AH8005	GH130	AH6235	KS05F
P	Steel	★	☆	★	☆	★	
M	Stainless	★	☆	★	★	★	
K	Cast iron	★		★	☆	★	☆
N	Non-ferrous						☆
S	Superalloys	★	☆	★			★
H	Hard materials						

★ : First choice
☆ : Second choice

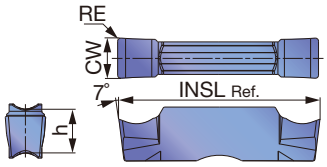
Designation	Seat size	HAND	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	AH725	AH8005	GH130	AH6235	Uncoated KS05F	INSL (in)	h (in)	PSIRL	PSIRR
SGS2-020	2	N	2	0.079	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS2-020-6R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	6°
SGS2-020-6L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	6°	0°
SGS2-020-15R	2	R	2	0.079	0.008	●	●		●			0.787	0.197	0°	15°
SGS2-020-15L	2	L	2	0.079	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-020	3	N	3	0.118	0.008	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS3-020-6R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	6°
SGS3-020-6L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	6°	0°
SGS3-002-6R	3	R	3	0.118	0.0008		●		●			0.780	0.197	0°	6°
SGS3-002-6L	3	L	3	0.118	0.0008		●		●			0.780	0.197	6°	0°
SGS3-020-15R	3	R	3	0.118	0.008	●	●		●			0.787	0.197	0°	15°
SGS3-020-15L	3	L	3	0.118	0.008	●	●		●			0.787	0.197	15°	0°
SGS3-002-15R	3	R	3	0.118	0.0008		●		●			0.780	0.197	0°	15°
SGS3-002-15L	3	L	3	0.118	0.0008		●		●			0.780	0.197	15°	0°
SGS4-030	4	N	4	0.157	0.012	●	●	●	●	●	●	0.787	0.197	0°	0°
SGS5-030	5	N	5	0.197	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS6-030	6	N	6	0.236	0.012	●	●	●	●	●	●	0.984	0.217	0°	0°
SGS8-040	8	N	8	0.315	0.016	●		●		●		1.181	0.264	0°	0°

● : Line up

Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

DGG

External grooving and parting (for high precision)



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

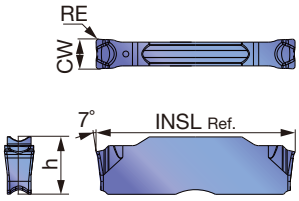
★ : First choice
☆ : Second choice

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

●: Line up

DGL

External grooving and parting



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

★ : First choice
☆ : Second choice

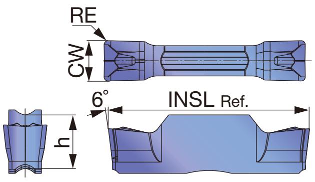
Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated											INSL (in)	h (in)
					AH7025	AH8005	AH6235										
DGL2-020	2	2	0.079	0.008	●	●	●									0.787	0.197
DGL3-025	3	3	0.118	0.010	●	●	●									0.787	0.197
DGL4-030	4	4	0.157	0.012	●	●	●									0.787	0.197
DGL5-030	5	5	0.197	0.012	●	●	●									0.984	0.217
DGL6-080	6	6	0.236	0.031	●	●	●									0.984	0.217

● : Line up

Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

DTM

External/face grooving, turning and parting



		AH7025	AH8005	AH6235
P	Steel	★	★	★
M	Stainless	★	★	★
K	Cast iron	★	★	★
N	Non-ferrous			
S	Superalloys	★	★	
H	Hard materials			

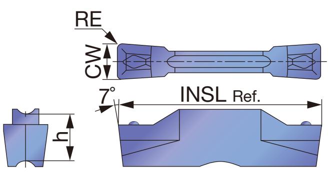
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated AH7025	Coated AH8005	Coated AH6235	INSL (in)	h (in)
DTM2-020	2	2	0.079	0.008	●	●	●	0.787	0.197
DTM3-030	3	3	0.118	0.012	●	●	●	0.787	0.197
DTM4-040	4	4	0.157	0.016	●	●	●	0.787	0.197
DTM4-080	4	4	0.157	0.031	●	●	●	0.787	0.197
DTM5-080	5	5	0.197	0.031	●	●	●	0.984	0.217
DTM6-080	6	6	0.236	0.031	●	●	●	0.984	0.217
DTM8-080	8	8	0.315	0.031	●	●	●	1.181	0.264

●: Line up

DTE

External/face grooving, turning and parting (for high precision)



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

★ : First choice
☆ : Second choice

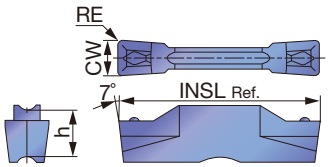
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated T9225	Coated AH7025	Coated AH725	Coated GH130	Cermet NS9530	INSL (in)	h (in)
DTE265-015	3	2.65	0.104	0.006	●	●	●	●	●	0.787	0.197
DTE300-020	3	3	0.118	0.008	●	●	●	●	●	0.787	0.197
DTE300-040	3	3	0.118	0.016	●	●	●	●	●	0.787	0.197
DTE315-015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

●: Line up

Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

DTE

External/face grooving, turning and parting



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

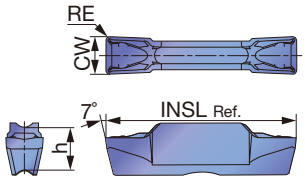
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet						INSL (in)	h (in)
					T9225	T515	AH7025	AH725	AH8005	GH130	AH6235	NS9530							
DTE3-020	3	3	0.118	0.008			●		●		●							0.787	0.197
DTE3-040	3	3	0.118	0.016	●	●	●	●	●	●	●	●						0.787	0.197
DTE4-040	4	4	0.157	0.016	●	●	●	●	●	●	●	●						0.787	0.197
DTE4-080	4	4	0.157	0.031			●		●		●							0.787	0.197
DTE5-040	5	5	0.197	0.016		●	●		●		●							0.984	0.217
DTE5-080	5	5	0.197	0.031			●		●		●							0.984	0.217
DTE6-080	6	6	0.236	0.031		●	●		●		●							0.984	0.217

● : Line up

DTX

External/internal/face grooving, turning and parting



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

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated							Cermet				Uncoated				INSL (in)	h (in)
					T9225	AH7025	AH725	AH8005	GH130	AH6235		NS9530				KS05F					
DTX2-020	2	2	0.079	0.008		●		●		●						●				0.787	0.197
DTX3-030	3	3	0.118	0.012	●	●	●	●	●	●		●				●				0.787	0.197
DTX4-040	4	4	0.157	0.016	●	●	●	●	●	●		●				●				0.787	0.197
DTX5-040	5	5	0.197	0.016	●	●	●	●	●	●		●				●				0.984	0.217
DTX6-080	6	6	0.236	0.031		●	●	●	●	●						●				0.984	0.217
DTX8-080	8	8	0.315	0.031		●		●		●						●				1.181	0.264

● : Line up

Reference pages: Toolholders → F254 - F260, Standard cutting conditions → F271

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Wear resistance	T9225, AH8005	262 - 984
		< 300 HB	Impact resistance	AH6235, GH130	164 - 394
		< 300 HB	Surface quality	NS9530	262 - 722
M	Stainless steel 303, 304, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Wear resistance	AH8005	164 - 394
		< 200 HB	Impact resistance	AH6235, GH130	164 - 394
K	Gray cast iron No.250B, etc.	-	First choice	T515	492 - 2297
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 591
	Ductile cast iron 65-45-12, etc.	-	First choice	T515	492 - 984
		-	Impact resistance	AH8005, AH7025, AH6235, GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	66 - 197
		< HRC 40	Impact resistance	AH7025, AH725, AH6235	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	66 - 328
		< HRC 40	Impact resistance	AH7025, AH725	66 - 262

Please see page F261, F262 for feed: *f* (ipr).

STH

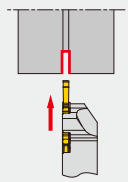
ISO	Grade	CW	Application	Cutting speed *Vc* (sfm)	Depth of cut *ap* (in)	Feed *f* (ipr)
H	BXA10	0.118"	External turning	328 - 755	0.003 - 0.005	0.016 - 0.039
			Face turning	328 - 755	0.003 - 0.005	0.016 - 0.031
		0.197"	External turning	328 - 755	0.003 - 0.005	0.020 - 0.059
			Face turning	328 - 755	0.003 - 0.005	0.020 - 0.031

SGN

ISO	Grade	Edge preparation	Workpiece condition	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
H	BX360	No symbol	Continuous	262 - 492	0.0012 - 0.0031
		-S	Light interrupted	164 - 394	0.0012 - 0.0031
		-H	Heavy interrupted	131 - 328	0.0012 - 0.0024

JSXXR/L

Parting-off and grooving toolholders



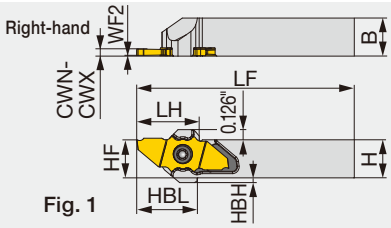


Fig. 1

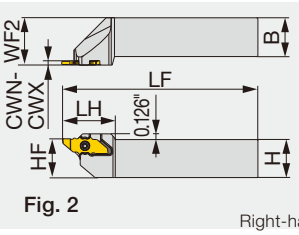
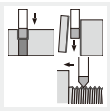


Fig. 2



Right-hand (R) shown.

Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque	Fig.
JSXXR/L063	0.024	0.098	0.375	0.375	4.750	0.774	0.375	0.008/0.367	0.748	0.120	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L083	0.024	0.098	0.500	0.500	4.750	0.774	0.500	0.008/0.492	0.748	0.060	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103	0.024	0.098	0.625	0.625	4.750	0.774	0.625	0.008/0.617	-	-	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L123	0.024	0.098	0.750	0.750	3.950	0.886	0.750	0.008/0.742	-	-	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L163	0.024	0.098	1.000	1.000	5.350	1.339	1.000	1.250	-	-	JX**06...,12...,16..., 20...	0.89	2

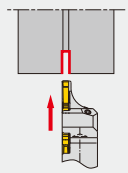
Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque*	Fig.
JSXXR/L1010X09	0.6	2.5	10	10	120	19.65	10	0.2/9.8	19	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09	0.6	2.5	12	12	85	19.65	12	0.2/11.8	19	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09	0.6	2.5	12	12	120	19.65	12	0.2/11.8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

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20...inserts, and 0.157" (4 mm) shorter for JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/H/X-CHP

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

Direct connection **Tube connection**



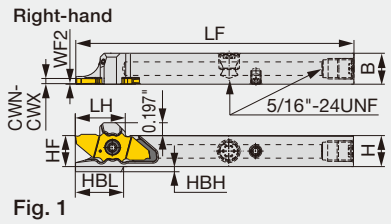


Fig. 1

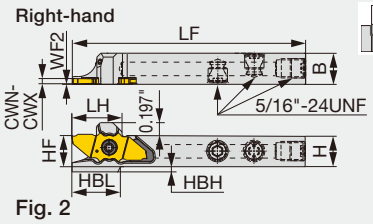
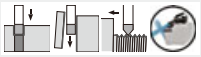
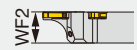


Fig. 2





Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque	Fig.
JSXXR/L083F-CHP	0.024	0.098	0.500	0.500	3.344	0.764	0.500	0.008 / 0.492	0.736	0.051	JX**06...,12...,16..., 20...	0.89	2
JSXXR/L083X-CHP(3)	0.024	0.098	0.500	0.500	4.750	0.764	0.500	0.008 / 0.492	0.736	0.051	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103X-CHP(3)	0.024	0.098	0.625	0.625	4.750	0.764	0.625	0.008 / 0.617	-	-	JX**06...,12...,16..., 20...	0.89	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBL(1)	HBH	Insert	Torque*	Fig.
JSXXR/L1012H09-CHP(3)	0.6	2.5	10	12	102	19.2	10	0.2/11.8	18.7	3	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212F09-CHP	0.6	2.5	12	12	85	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-CHP(3)	0.6	2.5	12	12	120	19.4	12	0.2/11.8	18.8	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-CHP(3),(4)	0.6	2.5	16	16	120	19.4	16	0.2	18.7	2.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-CHP(3)	0.6	2.5	16	16	120	19.4	16	0.2/15.8	18.7	-	JX**06...,12...,16..., 20...	1.2	1

Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 0.079" (2 mm) shorter than the above values with JX**12... and JX**20... inserts, and 0.157" (4 mm) shorter for JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
(4) To be replaced with the new design
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

SPARE PARTS



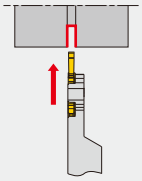


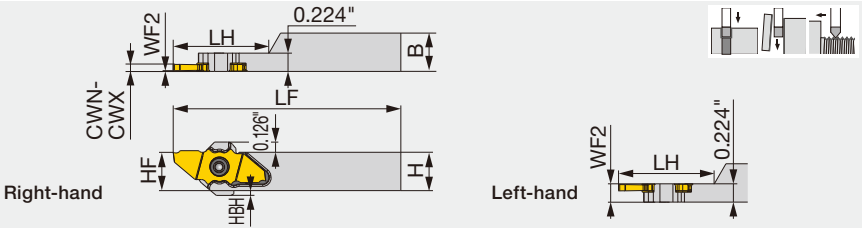

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**09	CSTC-4L100DL	T-1008/5	-	-	-	-
JSXXL**09	CSTC-4L100DR	T-1008/5	-	-	-	-
JSXXR**F**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**H/X**-CHP	CSTC-4L100DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**H/X**-CHP	CSTC-4L100DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

Reference pages: Inserts → F274, F275, Standard cutting conditions → F275
Parts for coolant hose → F290

JSXXR/L-S

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





Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque
JSXXR/L063-S	0.024	0.098	0.375	0.375	4.750	1.030	0.383	0.008/0.217	0.120	JX**06...,12...,16...(3)	0.89
JSXXR/L083-S	0.024	0.098	0.500	0.500	4.750	1.030	0.500	0.008/0.217	0.060	JX**06...,12...,16...(3)	0.89

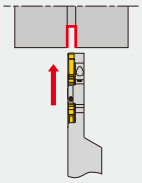
Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*
JSXXR/L1010X09-S	0.6	2.5	10	10	120	26	10	0.2/5.5	3	JX**06...,12...,16...(3)	1.2
JSXXR/L1212F09-S	0.6	2.5	12	12	85	26	12	0.2/5.5	1.5	JX**06...,12...,16...(3)	1.2
JSXXR/L1212X09-S	0.6	2.5	12	12	120	30	12	0.2/5.5	1.5	JX**06...,12...,16...(3)	1.2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

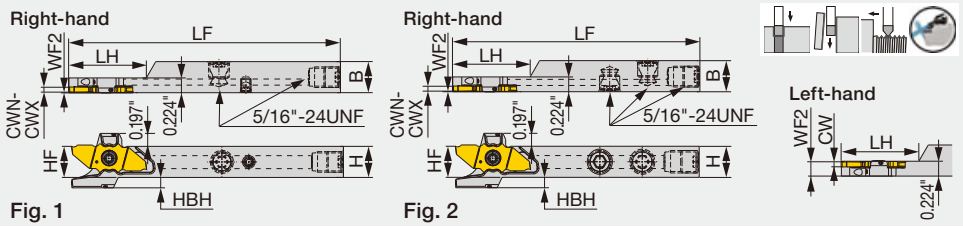
Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 0.079" (2 mm) shorter than the above value with JX**12... and JX**20... inserts; 0.157" (4 mm) shorter with JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(3) JX**20... insert will not fit.
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

JSXXR/L-F/X-S-CHP

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

Direct connection **Tube connection**





Inch	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque	Fig.
JSXXR/L083F-S-CHP	0.024	0.098	0.500	0.500	3.344	1.024	0.500	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	2
JSXXR/L083X-S-CHP	0.024	0.098	0.500	0.500	4.750	1.181	0.500	0.008/0.217	0.051	JX**06...,12...,16..., 20...	0.89	1
JSXXR/L103X-S-CHP	0.024	0.098	0.625	0.625	4.750	1.181	0.625	0.008/0.217	-	JX**06...,12...,16..., 20...	0.89	1

Metric	CWN	CWX	H	B	LF(1)	LH(1)	HF	WF2(2)	HBH	Insert	Torque*	Fig.
JSXXR1212F09-S-CHP(4)	0.6	2.5	12	12	85	26	12	0.2	4	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212F09B-S-CHP	0.6	2.5	12	12	85	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	2
JSXXR/L1212X09-S-CHP(3),(4)	0.6	2.5	12	12	120	30	12	0.2/5.5	4	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1212X09B-S-CHP(3)	0.6	2.5	12	12	120	30	12	0.2/5.5	2	JX**06...,12...,16..., 20...	1.2	1
JSXXR1616X09-S-CHP(3),(4)	0.6	2.5	16	16	120	30	16	0.2	1.5	JX**06...,12...,16..., 20...	1.2	1
JSXXR/L1616X09B-S-CHP(3)	0.6	2.5	16	16	120	30	16	0.2/5.5	-	JX**06...,12...,16..., 20...	1.2	1

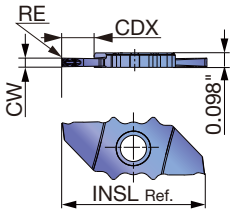
Torque: Recommended clamping torque: lbs·ft (*N·m)
(1) LF (Functional Length) and LH (Head Length) values shown above are true with JX**16... insert. Both LF and LH will be 0.079" (2 mm) shorter than the above value with JX**12... and JX**20... inserts; 0.157" (4 mm) shorter with JX**06... insert.
(2) The first value before "/" indicates the WF2 for the right-hand holder and the second value after "/" for the left-hand holder.
(3) Compatible to the direct internal coolant supply system without the use of external coolant hose.
(4) To be replaced with the new design
Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
JSXXR**-S	CSTC-4L055DL	T-1008/5	-	-	-	-
JSXXL**-S	CSTC-4L055DR	T-1008/5	-	-	-	-
JSXXR**F**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXL**F**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	-	-
JSXXR**X**-S-CHP	CSTC-4L055DL	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2
JSXXL**X**-S-CHP	CSTC-4L055DR	T-1008/5	SR5/16UNFTL360	P-4	SSHM4-6-TB	P-2

Reference pages: Inserts → F274, F275, Standard cutting conditions → F275
Parts for coolant hose → F290

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



Right-hand (R) shown.

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

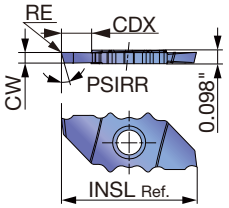
★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	CDX* (in)	INSL (in)
JXPS06R06F	R	0.6	0.024	0.002	●	0.236	0.138	0.827
JXPS06L06F	L	0.6	0.024	0.002	●	0.236	0.138	0.827
JXPS12R08F	R	0.8	0.031	0.002	●	0.472	0.256	0.984
JXPS12L08F	L	0.8	0.031	0.002	●	0.472	0.256	0.984
JXPS12R10F	R	1	0.039	0.002	●	0.472	0.256	0.984
JXPS12L10F	L	1	0.039	0.002	●	0.472	0.256	0.984
JXPS12R15F	R	1.5	0.059	0.002	●	0.472	0.256	0.984
JXPS12L15F	L	1.5	0.059	0.002	●	0.472	0.256	0.984
JXPS16R15F	R	1.5	0.059	0.002	●	0.630	0.335	1.142
JXPS16L15F	L	1.5	0.059	0.002	●	0.630	0.335	1.142
JXPS20R20F	R	2	0.079	0.002	●	0.787	0.413	1.299
JXPS20L20F	L	2	0.079	0.002	●	0.787	0.413	1.299

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

● : Line up

JXPG**R/L-F (Sharp edge)



Right-hand (R) shown.

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

★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated SH725	CUTDIA (in)	CDX* (in)	INSL (in)	PSIRR
JXPG06R10F	R	1	0.039	0.002	●	0.236	0.138	0.827	0°
JXPG06L10F	L	1	0.039	0.002	●	0.236	0.138	0.827	0°
JXPG06R15F	R	1.5	0.059	0.002	●	0.236	0.138	0.827	0°
JXPG06L15F	L	1.5	0.059	0.002	●	0.236	0.138	0.827	0°
JXPG06R10F-15	R	1	0.039	0.002	●	0.236	0.138	0.827	15°
JXPG06L10F-15	L	1	0.039	0.002	●	0.236	0.138	0.827	15°
JXPG06R15F-15	R	1.5	0.059	0.002	●	0.236	0.138	0.827	15°
JXPG06L15F-15	L	1.5	0.059	0.002	●	0.236	0.138	0.827	15°

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

● : Line up

Reference pages: Toolholders → F272, F273

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

★ : First choice

Designation	HAND	CW±0.025 (mm)	CW±0.001 (in)	RE (in)	Coated	CUTDIA (in)	CDX* (in)	INSL (in)	PSIRR
					SH725				
JXPG12R15F	R	1.5	0.059	0.002	●	0.472	0.256	0.984	0°
JXPG12L15F	L	1.5	0.059	0.002	●	0.472	0.256	0.984	0°
JXPG12R20F	R	2	0.079	0.002	●	0.472	0.256	0.984	0°
JXPG12L20F	L	2	0.079	0.002	●	0.472	0.256	0.984	0°
JXPG12R15F-15	R	1.5	0.059	0.002	●	0.472	0.256	0.984	15°
JXPG12L15F-15	L	1.5	0.059	0.002	●	0.472	0.256	0.984	15°
JXPG12R20F-15	R	2	0.079	0.002	●	0.472	0.256	0.984	15°
JXPG12L20F-15	L	2	0.079	0.002	●	0.472	0.256	0.984	15°
JXPG16R15F	R	1.5	0.059	0.002	●	0.630	0.335	1.142	0°
JXPG16L15F	L	1.5	0.059	0.002	●	0.630	0.335	1.142	0°
JXPG16R20F	R	2	0.079	0.002	●	0.630	0.335	1.142	0°
JXPG16L20F	L	2	0.079	0.002	●	0.630	0.335	1.142	0°
JXPG16R15F-15	R	1.5	0.059	0.002	●	0.630	0.335	1.142	15°
JXPG16L15F-15	L	1.5	0.059	0.002	●	0.630	0.335	1.142	15°
JXPG16R20F-15	R	2	0.079	0.002	●	0.630	0.335	1.142	15°
JXPG16L20F-15	L	2	0.079	0.002	●	0.630	0.335	1.142	15°
JXPG20R15F	R	1.5	0.059	0.002	●	0.787	0.413	1.299	0°
JXPG20L15F	L	1.5	0.059	0.002	●	0.787	0.413	1.299	0°
JXPG20R20F	R	2	0.079	0.002	●	0.787	0.413	1.299	0°
JXPG20L20F	L	2	0.079	0.002	●	0.787	0.413	1.299	0°
JXPG20R15F-15	R	1.5	0.059	0.002	●	0.787	0.413	1.299	15°
JXPG20L15F-15	L	1.5	0.059	0.002	●	0.787	0.413	1.299	15°
JXPG20R20F-15	R	2	0.079	0.002	●	0.787	0.413	1.299	15°
JXPG20L20F-15	L	2	0.079	0.002	●	0.787	0.413	1.299	15°

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

● : Line up

STANDARD CUTTING CONDITIONS

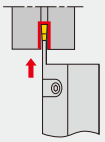
Parting, Grooving

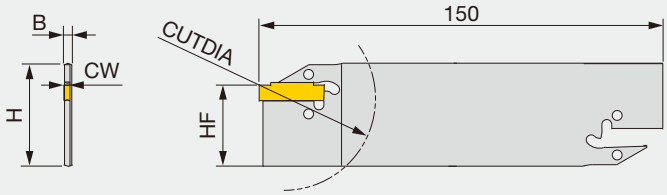
ISO	Workpiece materials	Grades	Cutting speed *Vc* (sfm)	Feed *f* (ipr)
P	Low carbon steels 1015, etc.	SH725	164 - 656	0.00039 - 0.0020
P	Carbon steels, Alloy steels 1055, etc., 4140, etc.	SH725	164 - 656	0.00039 - 0.0020
P	Free cutting steels SUH22, SUH23, etc.	SH725	164 - 656	0.00039 - 0.0020
M	Stainless steels 304, etc.	SH725	164 - 656	0.00039 - 0.0020
N	Aluminum alloys 5056, 6061, etc.	SH725	492 - 656	0.00039 - 0.0020
N	Copper alloy C2600, C280C, etc.	SH725	328 - 656	0.00039 - 0.0020
S	Titanium alloys Ti-6Al-4V, etc.	SH725	98 - 262	0.00039 - 0.0020
S	Superalloys Inconel718, etc.	SH725	98 - 262	0.00039 - 0.0020

Reference pages: Toolholders → F272, F273

CCH-W

External grooving and parting blade, for 2 corner inserts





Unit: mm

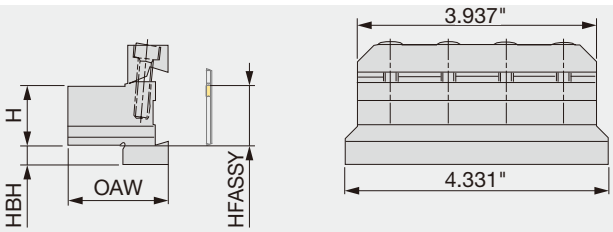
Metric	CW	CUTDIA	H	B	HF	Insert
CCH32-W20	2	33	32	1.6	24.6	WGE20, WGE20R/L
CCH32-W30	3	33	32	2.2	24.6	WG*30, WGE30R/L
CCH32-W40	4	42	32	3.2	24.5	WG*40, WGE40R/L
CCH32-W50	5	42	32	4.2	24.3	WG*50, WGE50R/L

SPARE PARTS

Designation	Wrench (Optional)
CCH32-W...	CRW33

CCBS-32

Tool block for CCH blade



Inch	H	HFASSY	HBH	OAW	Blade
CCBS12-32-U	0.750	0.750	0.550	1.490	CCH32...
CCBS16-32-U	1.000	1.000	0.300	1.660	CCH32...
CCBS20-32-U	1.250	1.250	0.210	1.660	CCH32...

Metric	H	HFASSY	HBH	OAW	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

Blade sold separately.

SPARE PARTS



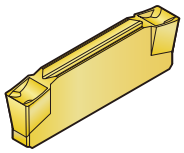
Designation	Clamp	Screw	Wrench
CCBS...	CC-32	CM6X25	P-5

External
Internal
Face
Parting
Others

Reference pages: Inserts → F277 - F279, Standard cutting conditions → F279

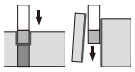
External grooving and parting

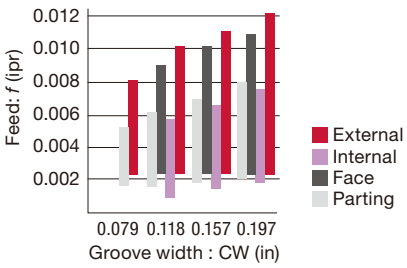
WGE



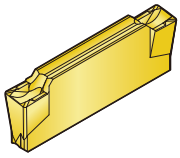
F278

1st choice for external grooving and parting
Excellent chip control for grooving
CW = 0.079" - 0.197"



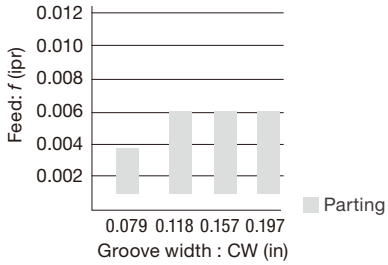


WGE R/L

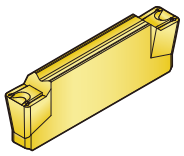


F279

Handed insert
Minimize burr generation when workpiece is cut off
CW = 0.079" - 0.197"

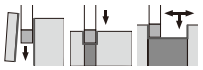


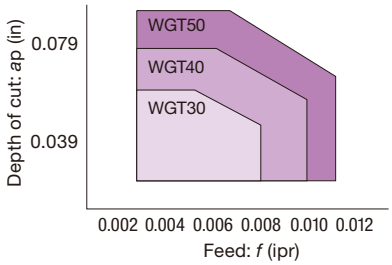
WGT



F278

1st choice for turning
Low cutting force and good chip control for traversing
CW = 0.118" - 0.197"



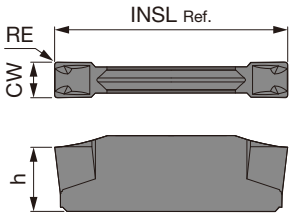


Please see page F*** for the product details.

INSERTS (2 corners)

WGE

For external grooving and parting



P	Steel	★	★	★				★			
M	Stainless		★	★							
K	Cast iron		★	☆				☆			
N	Non-ferrous										
S	Superalloys		☆								
H	Hard materials										

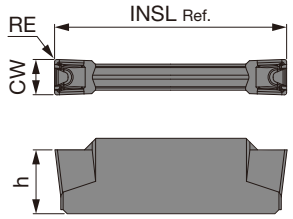
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
WGE20	2	0.079	0.008	●	●	●	●	0.787	0.185
WGE30	3	0.118	0.008	●	●	●	●	0.787	0.217
WGE40	4	0.157	0.008	●	●	●	●	0.984	0.224
WGE50	5	0.197	0.008	●	●	●	●	0.984	0.232

● : Line up

WGT

For external grooving, parting and turning



P	Steel	★	★	★				★			
M	Stainless		★	★							
K	Cast iron		★	☆				☆			
N	Non-ferrous										
S	Superalloys		☆								
H	Hard materials										

★ : First choice
☆ : Second choice

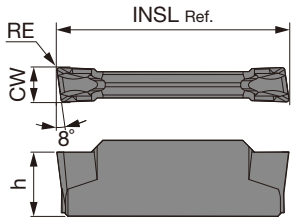
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
WGT30	3	0.118	0.016	●		●	●	0.787	0.217
WGT40	4	0.157	0.016	●		●	●	0.984	0.224
WGT50	5	0.197	0.016	●	●	●	●	0.984	0.232

● : Line up

Reference pages: Toolholders → F276

WGE(R/L)

For parting off (handed inserts)



Right hand (R) shown.

P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	☆
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

Designation	HAND	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
WGE20R	R	2	0.079	0.008		●	0.787	0.185
WGE20L	L	2	0.079	0.008		●	0.787	0.185
WGE30R	R	3	0.118	0.008	●	●	0.787	0.217
WGE30L	L	3	0.118	0.008		●	0.787	0.217
WGE40R	R	4	0.157	0.008		●	0.984	0.224
WGE40L	L	4	0.157	0.008		●	0.984	0.224
WGE50R	R	5	0.197	0.008		●	0.984	0.232
WGE50L	L	5	0.197	0.008		●	0.984	0.232

● : Line up

STANDARD CUTTING CONDITIONS (for 2 corner inserts)

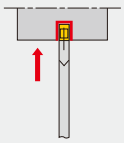
ISO	Workpiece material	Recommended grade	Cutting speed *Vc* (sfm)
P	Low carbon steels Alloy steels (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730, AH120	164 - 591
	Medium carbon steels Alloy steels (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730, AH120	164 - 492
	High carbon steels Alloy steels (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730, AH120	164 - 492
M	Stainless steels	GH730, AH120	164 - 394
K	Gray and ductile cast irons	GH730, AH120	164 - 591

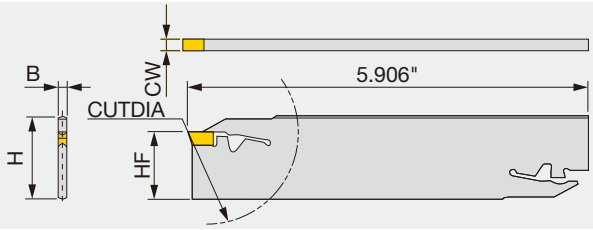
Operation	Feed: *f* (ipr) Groove width: CW 2 mm (0.079")	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (WGE□□)	0.0024 - 0.008	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting off (WGE□□R/L)	0.0016 - 0.004	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Turning (WGT□□)	-	*ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	*ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	*ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011

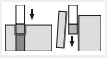
Reference pages: Toolholders → F276

CCH

External grooving and parting blade, for 1 corner inserts







Inch	CW	CUTDIA	H	B	HF	Insert
CCH26-30	0.118	2.76	0.979	0.087	0.843	GE30,GE30R/L,GE30-AL
CCH26-40	0.157	2.76	0.968	0.126	0.837	GE40,GE40R/L,GE40-AL
CCH32-30U	0.118	3.94	1.230	0.087	0.968	GE30,GE30R/L,GE30-AL
CCH32-40U	0.157	3.94	1.220	0.126	0.963	GE40,GE40R/L,GE40-AL
CCH32-50U	0.197	4.72	1.210	0.165	0.958	GE50,GE50R/L

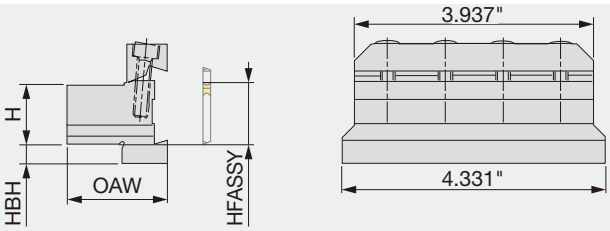
Metric	CW	CUTDIA	H	B	HF	Insert
CCH32-30	3	100	32	2.2	24.6	GE30,GE30R/L,GE30-AL
CCH32-40	4	100	32	3.2	24.5	GE40,GE40R/L,GE40-AL
CCH32-50	5	120	32	4.2	24.3	GE50,GE50R/L

SPARE PARTS

Designation	Wrench
CCH...	CTL-2

CCBS-32

Tool block for CCH blade



Inch	H	HFASSY	HBH	OAW	Blade
CCBS12-32-U	0.750	0.750	0.550	1.490	CCH32...
CCBS16-32-U	1.000	1.000	0.300	1.660	CCH32...
CCBS20-32-U	1.250	1.250	0.210	1.660	CCH32...

Metric	H	HFASSY	HBH	OAW	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

Blade sold separately.



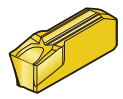
SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS...	CC-32	CM6X25	P-5

Reference pages: Inserts → F281 - F285, Standard cutting conditions → F285

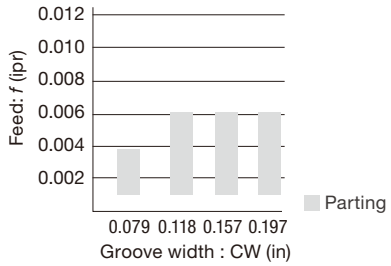
External grooving and parting

GE R/L

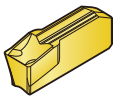


F282

Handed insert
Minimize burr generation when workpiece is cut off
CW = 0.118" - 0.197"

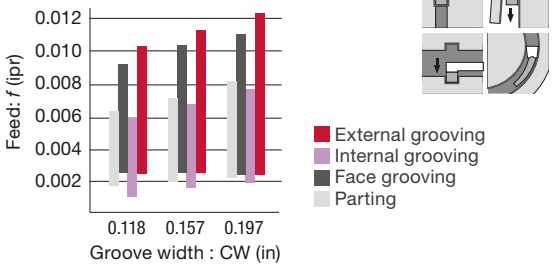


GE

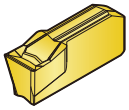


F283

1st choice for external grooving and parting
Excellent chip control for grooving
CW = 0.118" - 0.197"

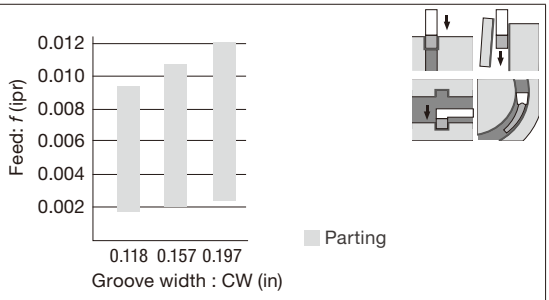


GF

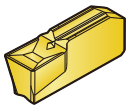


F283

1st choice for face grooving
Low cutting force and good chip control for face grooving
CW = 0.118" - 0.197"

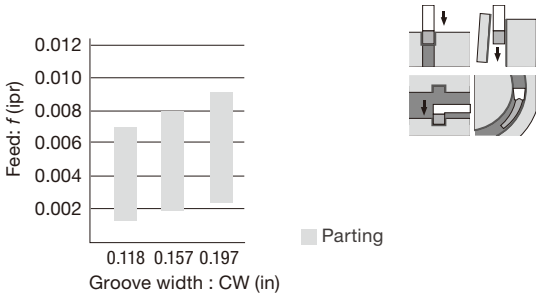


GN



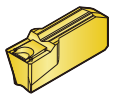
F284

1st choice for internal grooving
Low cutting force and good chip control for internal grooving
CW = 0.118" - 0.197"



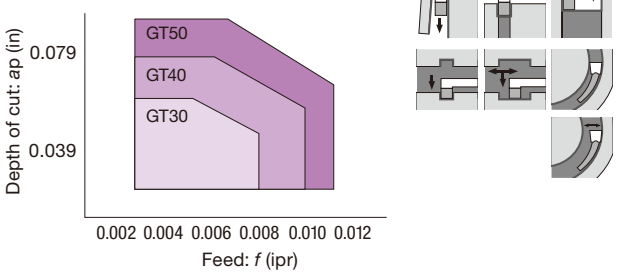
External grooving and turning

GT



F284

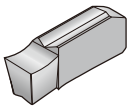
1st choice for turning
Low cutting force and good chip control for traversing
CW = 0.118" - 0.197"



Please see page F*** for the product details.

For aluminum and non-ferrous metal

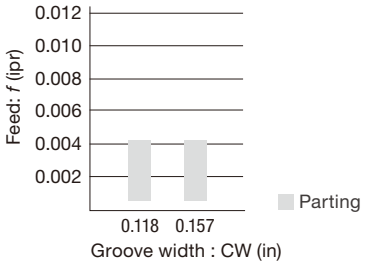
GE-AL

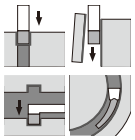


F285

Reduce cutting force and welding due to sharp chipbreaker

CW = 0.118" - 0.157"



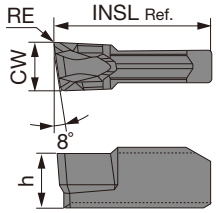


Please see page F*** for the product details.

INSERTS (1 corner)

GE-R/L

For parting off (handed inserts)



Right hand (R) shown.

P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	☆
N	Non-ferrous		
S	Superalloys	☆	
H	Hard materials		

★ : First choice
☆ : Second choice

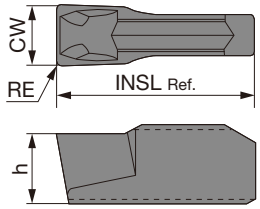
Designation	HAND	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated AH120	Coated GH730	INSL (in)	h (in)
GE30R	R	3	0.118	0.008	●	●	0.394	0.138
GE30L	L	3	0.118	0.008		●	0.394	0.138
GE40R	R	4	0.157	0.008	●	●	0.394	0.157
GE40L	L	4	0.157	0.008		●	0.394	0.157
GE50R	R	5	0.197	0.008		●	0.472	0.177
GE50L	L	5	0.197	0.008	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F280, Standard cutting conditions → F285

GE

For external grooving and parting



P	Steel	★	★	★				★			
M	Stainless		★	★							
K	Cast iron		★	☆				☆			
N	Non-ferrous										
S	Superalloys		☆								
H	Hard materials										

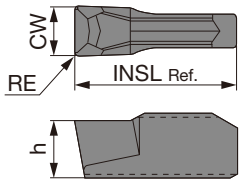
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated						Cermet						INSL (in)	h (in)
				T9225	AH120	GH730				NS9530							
GE30	3	0.118	0.008	●	●	●				●						0.394	0.138
GE40	4	0.157	0.008	●	●	●				●						0.394	0.157
GE50	5	0.197	0.008	●	●	●				●						0.472	0.177

● : Line up

GF

For face grooving



P	Steel	★			★						
M	Stainless	★									
K	Cast iron	☆			☆						
N	Non-ferrous										
S	Superalloys										
H	Hard materials										

★ : First choice
☆ : Second choice

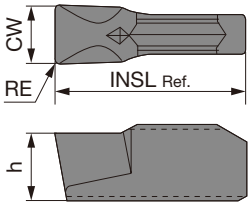
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated			Cermet									INSL (in)	h (in)
				GH730			NS9530										
GF30	3	0.118	0.008	●			●									0.394	0.138
GF40	4	0.157	0.008	●			●									0.394	0.157
GF50	5	0.197	0.008	●			●									0.472	0.177

● : Line up

Reference pages: Toolholders → F280, Standard cutting conditions → F285

GN

For internal grooving



P	Steel	★
M	Stainless	★
K	Cast iron	☆
N	Non-ferrous	
S	Superalloys	
H	Hard materials	

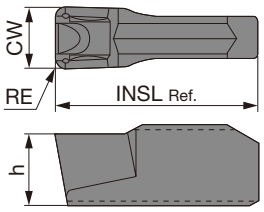
★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated GH730	INSL (in)	h (in)
GN30	3	0.118	0.008	●	0.394	0.138
GN40	4	0.157	0.008	●	0.394	0.157
GN50	5	0.197	0.008	●	0.472	0.177

● : Line up

GT

For external grooving and turning



P	Steel	★	★	★	★
M	Stainless		★	★	
K	Cast iron		★	☆	☆
N	Non-ferrous				
S	Superalloys		☆		
H	Hard materials				

★ : First choice
☆ : Second choice

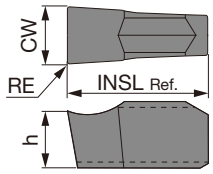
Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Coated T9225	Coated AH120	Coated GH730	Cermet NS9530	INSL (in)	h (in)
GT30	3	0.118	0.016		●	●	●	0.394	0.138
GT40	4	0.157	0.016		●	●	●	0.394	0.157
GT50	5	0.197	0.016	●	●	●	●	0.472	0.177

● : Line up

Reference pages: Toolholders → F280

GE-AL

For aluminum and non-ferrous metal



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	$CW^{+0.1}_{0}$ (mm)	$CW^{+0.004}_{0}$ (in)	RE (in)	Uncoated KS05F	INSL (in)	h (in)
GE30-AL	3	0.118	0.008	●	0.394	0.138
GE40-AL	4	0.157	0.008	●	0.394	0.157

● : Line up

STANDARD CUTTING CONDITIONS (for 1 corner inserts)

ISO	Workpiece material	Grades	Cutting speed *Vc* (sfm)
P	Low carbon steel, Alloy steel (~ HB150)	T9225	262 - 984
		NS9530	328 - 656
		GH730, AH120	164 - 591
	Medium carbon steel, Alloy steel (HB150 ~ 250)	T9225	262 - 722
		NS9530	262 - 591
		GH730, AH120	164 - 492
	High carbon steel, Alloy steel (HB250 ~)	T9225	262 - 722
		NS9530	262 - 492
		GH730, AH120	164 - 394
M	Stainless steel	GH730, AH120	164 - 394
K	Gray iron, Ductile cast iron	GH730, AH120	164 - 591
N	Aluminum alloy, Non-ferrous metal	KS05F	656 - 984

For Parting off

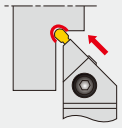
Operation	Feed: *f* (ipr) Groove width: CW		
	3 mm (0.118")	4 mm (0.157")	5 mm (0.197")
Grooving (GE**)	0.0024 - 0.010	0.0028 - 0.011	0.0028 - 0.012
Parting off (GE**R/L)	0.0016 - 0.006	0.0016 - 0.006	0.0016 - 0.006
Traversing (GT**)	*ap* = 0.020 - 0.059 *f* = 0.0024 - 0.008	*ap* = 0.020 - 0.079 *f* = 0.0024 - 0.010	*ap* = 0.020 - 0.098 *f* = 0.0024 - 0.011
Parting off for Aluminum alloys (GE**-AL)	0.0012 - 0.004	0.0012 - 0.004	-

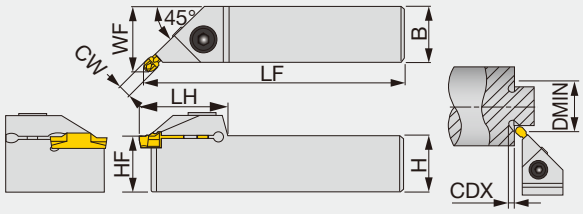
For diameter compensation values in traversing, see page F129.

Reference pages: Toolholders → F280

CGEUR/L

External 45° undercutting toolholder





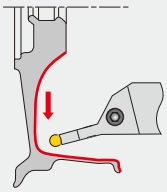
Right hand (R) shown.

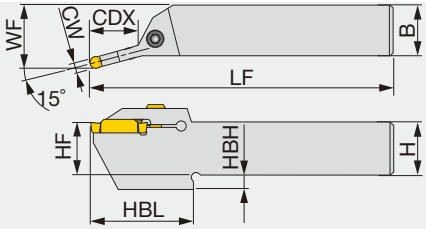
Metric	CW	DMIN	Seat size	CDX	H	B	LF	LH	HF	WF (1)	Insert	Torque
CGEUR/L1616-3T02	3	32	3	2.8	16	16	110	30	16	19.3	DTIU...	5
CGEUR/L2020-3T02	3	32	3	2.8	20	20	125	30	20	23.3	DTIU...	5
CGEUR/L2525-3T02	3	32	3	2.8	25	25	150	30	25	28.3	DTIU...	5
CGEUR/L1616-4T02	4	32	4	2.8	16	16	110	31	16	19.5	DTIU...	8.5
CGEUR/L2020-4T02	4	32	4	2.8	20	20	125	31	20	23.5	DTIU...	8.5
CGEUR/L2525-4T02	4	32	4	2.8	25	25	150	31	25	28.5	DTIU...	8.5
CGEUR/L2525-6T03	6	34	5, 6	3.4	25	25	150	35	25	28.9	DTIU...	8.5

(1) "WF" value is calculated with groove width "CW" shown in the table.
Torque: Recommended clamping torque: N·m

CTER/L-15A

Square shank toolholder for profiling aluminum wheel





Right hand (R) shown.

Metric	CW	Seat size	CDX	H	B	LF	HF	WF	HBH	HBL	Insert	Torque
CTER/L2525-6T25-15A	6	6	25	25	25	150	25	32.2	7	50.5	DTA...	5
CTER/L2525-8T30-15A	8	8	30	25	25	150	25	32.9	7	55	DTA...	5

Torque: Recommended clamping torque: N·m

SPARE PARTS

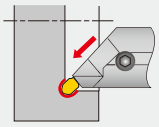

Designation	Clamping screw	Wrench
CGEUR/L****-3T02	CM5X0.8X16-A	P-4
CGEUR/L1616-4T02	CM6X1X16-A	P-5
CGEUR/L2020-4T02	CM6X1X20-A	P-5
C**R/L2525-...	CM6X1X25-A	P-5

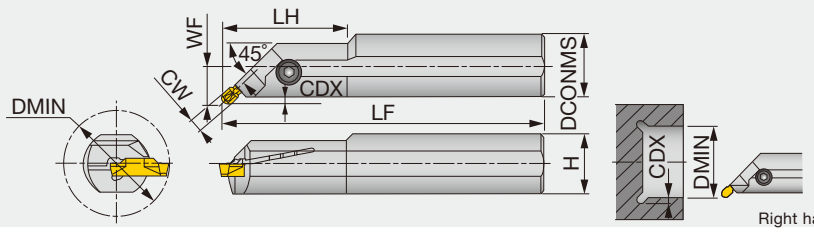
External
Internal
Face
Parting
Others

Reference pages: Inserts → F288, F289, Standard cutting conditions → F289

CGIUR/L

Internal 45° undercutting toolholder





Right hand (R) shown.

Metric	CW	DMIN	Seat size	CDX	DCONMS	H	LF	LH	WF (1)	Insert	Torque
CGIUR/L20-3T02-D380	3	38	3	2.8	20	19	160	-	12.8	DTIU...	5
CGIUR/L25-3T02-D380	3	38	3	2.8	25	23	200	40	14.8	DTIU...	5
CGIUR/L20-4T02-D380	4	38	4	2.8	20	19	160	-	12.9	DTIU...	5
CGIUR/L25-4T02-D460	4	46	4	2.8	25	23	200	40	14.9	DTIU...	5
CGIUR/L25-6T02-D460	6	46	5, 6	2.8	25	23	200	-	15.2	DTIU...	8.5

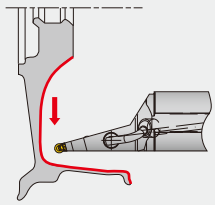
(1) WF is calculated with the groove width CW in the above table.
Torque: Recommended clamping torque: N·m

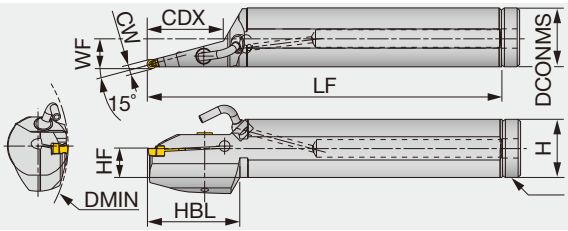
SPARE PARTS

Designation	Clamping screw	Wrench
CGIUR/L20-3T02-D380	CM5X0.8X12-A	P-4
CGIUR/L25-3T02-D380	CM5X0.8X16-A	P-4
CGIUR/L**-4T02-D...	CM5X0.8X16-A	P-4
CGIUR/L25-6T02-D460	CM6X1X25-A	P-5

CGIUR/L-15A

Round-shank toolholder for profiling aluminum wheel





Right hand (R) shown.

Metric	CW	DMIN	Seat size	CDX	DCONMS	H	WF	LF	HF	HBL	Insert	Seal cap	Torque
CGIUR/L40-6T50-D160-15A	6	160	6	50	40	38.5	19.7	320	19	60	DTA...	CA-40	5
CGIUR/L40-8T83-D160-15A	8	160	8	83	40	38.5	20.5	320	19	85	DTA...	CA-40	5
CGIUR/L50-6T85-D200-15A	6	200	6	85	50	48.5	25.2	350	23.5	85	DTA...	-	5
CGIUR/L50-8T85-D200-15A	8	200	8	85	50	48.5	25.9	350	23.5	85	DTA...	-	5

Torque: Recommended clamping torque: N·m

SPARE PARTS

Designation	Clamping screw	Wrench	Seal cap
CGIUR/L**-15A	CM6X1X25-A	P-5	CA-40

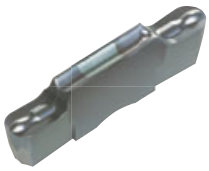
NOZZLE

Coolant pipe	Coolant nozzle
PNZ5	CNZ125

Reference pages: Inserts → F288, F289, Standard cutting conditions → F289

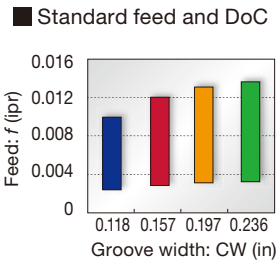
Profiling and undercutting

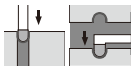
DTIU type (2 corners)



Full radius type

Excellent chip control for undercutting
CW = 0.118" - 0.236"





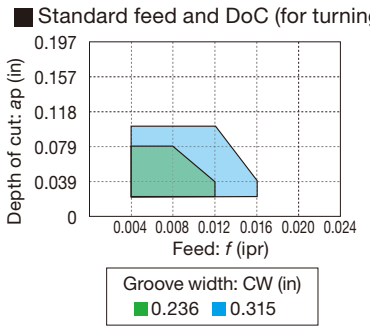
External
Internal
Face
Parting
Others

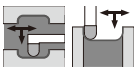
Aluminum wheel machining

DTA type (2 corners)

Full radius type

Excellent chip control
For aluminum wheel profiling
Ground insert
CW = 0.236" - 0.315"

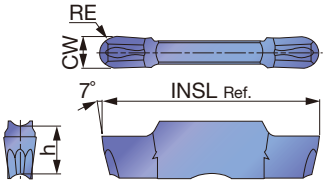




INSERTS

DTIU

Profiling and undercutting (for high precision)



P	Steel	★	☆	☆
M	Stainless	★	☆	★
K	Cast iron	★		☆
N	Non-ferrous			
S	Superalloys	★	☆	
H	Hard materials			

★ : First choice
☆ : Second choice

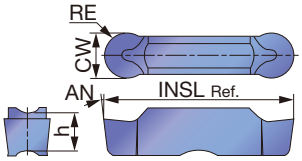
Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Coated AH7025	Coated AH725	Coated GH130	INSL (in)	h (in)
DTIU300-150	3	3	0.118	0.059	●	●	●	0.787	0.197
DTIU400-200	4	4	0.157	0.079	●	●	●	0.787	0.197
DTIU500-250	5	5	0.197	0.098	●	●	●	0.984	0.217
DTIU600-300	6	6	0.236	0.118	●	●	●	0.984	0.217

●: Line up

Reference pages: Toolholders → F286, F287

DTA

Aluminum wheel machining (for high precision)



P	Steel	
M	Stainless	
K	Cast iron	
N	Non-ferrous	★
S	Superalloys	
H	Hard materials	

★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.02 (mm)	CW±0.0008 (in)	RE (in)	Uncoated TH10	INSL (in)	h (in)	AN
DTA600-300	6	6	0.236	0.118	●	0.984	0.217	7°
DTA800-400	8	8	0.315	0.157	●	1.181	0.264	10°

●: Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Impact resistance	GH130	164 - 394
M	Stainless steel 303, 304, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Impact resistance	GH130	164 - 394
K	Gray cast iron No.250B, etc.	-	First choice	AH7025	492 - 2297
		-	Impact resistance	GH130	164 - 591
	Ductile cast iron 65-45-12, etc.	-	First choice	AH7025	492 - 984
		-	Impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH7025, AH725	66 - 197
		< HRC 40	Impact resistance	GH130	66 - 131
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	Impact resistance	AH7025, AH725	66 - 262

Please see page F288 for feed: *f* (ipr).

Reference pages: Toolholders → F286, F287

PARTS FOR COOLANT HOSE

Connecting hose

Fig.1

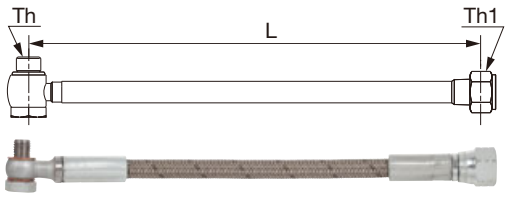
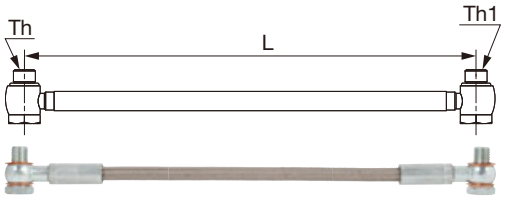
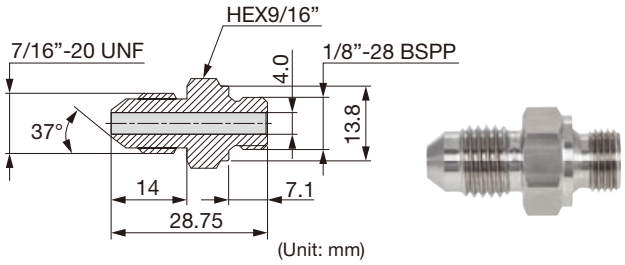


Fig.2



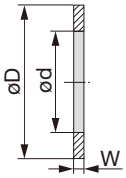
Metric	Length L	Screw Th	Screw Th1	Max. pressure MPa (PSI)	Fig.
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26 (3771)	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26 (3771)	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF	20 (2901)	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP	20 (2901)	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	26 (3771)	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP	26 (3771)	2

Connector



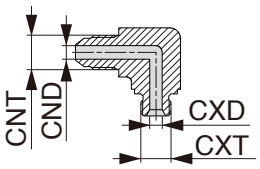
Metric
CHP-NIPPLE-G1/8-7/16UNF

Seal washer



Metric	øD	ød	W
CHP-COPPER-SEAL1/8	15	10	1
CHP-COPPER-SEAL5/16	11.9	8.15	1.35
CHP-COPPER-SEAL5/16-2.5	9.4	8	2.5

Connector elbow



Metric	CNT	CND	CXT	CXD
CHP-ELBOW-90-G1/8-7/16UNF	7/16"-20 UNF	4.4	1/8"-28 BSPP	4
CHP-ELBOW-90-5/16-7/16UNF	7/16"-20 UNF	4.4	5/16"-24 UNF	4